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Near-Backscattering, Spherical Analyzers for RIXS : A Compilation of Viable Reflections in Si, Ge, LiNbO₃, Sapphire and Quartz

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H																	He
Li	Be											B	C	N	O	F	Ne
Na	Mg											Al	Si	P	S	Cl	Ar
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
Cs	Ba	Lu	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
Fr	Ra	Lr	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Cn	Uut	Fl	Uup	Lv	Uuo	
			La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	
			Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	

Point to an element for available absorption edges / emission lines

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Introduction

The tables presented here are a compilation of data pertinent to near-backscattering, spherical analyzers for Resonant Inelastic X-ray Scattering (RIXS) measurements. They contain viable crystal reflections for absorption edge- and emission line energies in the hard x-ray range, together with reflection strength- and resolution information. They assume a sample-analyzer-detector geometry based on a Rowland circle with a position-sensitive (strip-) detector as described under [Detector-Analyzer Geometry]. Crystal materials included are **Si**, **Ge**, **Lithium Niobate (LiNbO₃)**, **Sapphire (Al₂O₃)** and **Quartz (SiO₂)**.

Structure factors involved in generating the reflection data were calculated for room temperature (RT=293.15 K), using Debye-Waller factors e^{-2M} with

$$e^{-M} = \sqrt{e^{-2M}} = e^{-B_{RT} \left(\frac{\sin \Theta}{\lambda} \right)^2} \quad (0)$$

where $\sin\Theta/\lambda$ is proportional to the momentum transfer, and mean-square atomic vibrational amplitudes B_{RT} were derived from x-ray diffraction measurements. In particular, the following vibrational amplitudes B_{RT} and associated Debye temperatures Θ_D were used:

	B_{RT}	Θ_D
	[Å ²]	[K]
Si	0.4632 ³⁾	530.82
Ge	0.5661 ⁴⁾	290.03
LiNbO ₃	Li: 0.5264 ⁵⁾ Nb: 0.4174 O: 0.5738	1118.44 298.90 643.27
Al ₂ O ₃	Al: 0.1921 ⁶⁾ O: 0.2271	897.40 1122.51
SiO ₂	Si: 0.4874 ⁷⁾ O: 0.9949	516.38 476.16

References

- ³⁾ M. Deutsch, M. Hart, Phys. Rev. B31, 3846 (1985)
⁴⁾ M. Deutsch, M. Hart, Phys. Rev. B42, 1248 (1990)
⁵⁾ B. Etschmann, N. Ishizawa, Powder Diffr. 16, 81 (2001)
⁶⁾ A. Kirfel, K. Eichhorn, Acta Cryst. A46, 271 (1990)
⁷⁾ Y. Le Page, L.D. Calvert, E.J. Gabe, J. Phys. Chem. Solids, 41, 721 (1980)

Tables

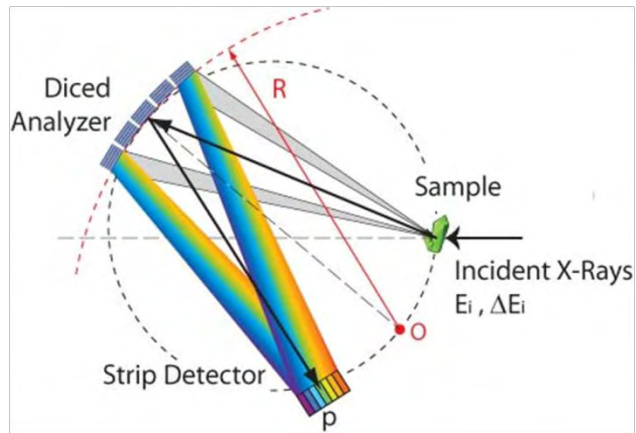
The tables are compilation of near-backscattering reflections in Si, Ge, Lithium Niobate (LiNbO_3), Sapphire (Al_2O_3) and Quartz (SiO_2) in the angular range of 70° to 90° . Tables are divided into two groups of crystals Si and Ge at the top (underplayed in yellow), Lithium Niobate, Sapphire and Quartz at the bottom. Within these two groups reflections are arranged from top to bottom by strength, according to the integrated reflectivity $\int I_R d\Theta$. For Lithium Niobate, Sapphire and Quartz all equivalent reflections are listed, while for Si and Ge equivalent reflections are only listed if their indices are not simple permutations or inversions of the parent reflection.

For the present calculations, some crystallographic data were taken from the software package "XOP"⁸⁾, atomic scattering factors were taken from the database at the Center for X-Ray Optics (CXRO) at Lawrence Berkeley Nat'l Lab⁹⁾.

References

- ⁸⁾ Sanchez del Rio and R. J. Dejus, "Status of XOP: an x-ray optics software toolkit" SPIE Proceedings Vol. 5536 (2004) pp.171-174, <http://dx.doi.org/10.1117/12.560903>
- ⁹⁾ B.L. Henke, E.M. Gullikson, and J.C. Davis. "X-ray interactions: photoabsorption, scattering, transmission, and reflection at $E=50\text{-}30000$ eV, $Z=1\text{-}92$ ", Atomic Data and Nuclear Data Tables Vol. **54** (no.2), 181-342 (July 1993).

Sample-Analyzer-Detector Geometry



Sample-Analyzer-Detector Arrangement in Rowland Geometry

Focused, monochromatic x-rays (Energy E_i , Band Pass ΔE_i) are incident on the sample. Scattered photons are diffracted from a diced, spherical (Radius R), nearly perfect crystal analyzer. The resulting focal spot is energy dispersive in the diffraction plane of the analyzer. A position sensitive (strip-) detector (pitch p) is placed at the focal spot, recording energy loss spectra. For the present tables, the detector pitch is assumed to be $p = 50 \mu\text{m}$ (Dectris “Mythen” - Detector) while the analyzer radius is $R = 2\text{m}$.

References

- ¹⁾ S. Huotari, F. Albergamo, G. Vanko et al., Review of Scientific Instruments **77** (5), 053102 (2006)
- ²⁾ S. Huotari, G. Vanko, F. Albergamo et al., Journal of Synchrotron Radiation **12**, 467 (2005)

Quantities Listed in the Tables

Backscattering Energy, E_B

X-ray energy for which the incident beam is reflected at a Bragg angle of $\Theta_B = 90^\circ$. These are the lowest energy photons that can be reflected by the analyzer.

$$E_B = \frac{hc}{2d_{hkl}}$$

Integrated Reflectivity, $\int I_R d\Theta$

As a measure of the reflection strength the dynamical reflectivity is numerically integrated over the whole rocking curve.

Angular Reflection (Darwin-) Width, W

Intrinsic, dynamical (Darwin-) width associated with a symmetric reflection in a perfect crystal

Change in Energy with Angle, $dE/d\Theta = E_i \cot \Theta$

From the differential Bragg law, this quantity serves as conversion factor from angular width to energy width. It is included for guidance in units of meV/ μ rad

Intrinsic Energy Resolution, ΔE

Energy resolution of the analyzer reflection due to its intrinsic (Darwin-) width W

$$\Delta E = E_i \cot(\Theta_B) W$$

Geometric Contribution to the Energy Resolution, ΔE_g

Geometric Contribution to the Energy Resolution, based on the analyzer radius R and the detector pitch p :

$$\Delta E_g = E_i \cot(\Theta_B) \frac{p}{2R}$$

For the present tables, the detector pitch is assumed to be $p = 50 \mu\text{m}$ (Dectris “Mythen” - Detector) while the analyzer radius is $R = 2\text{m}$.

Combined Intrinsic and Geometric Energy Resolution, ΔE_t

$$\Delta E_t = \sqrt{\Delta E^2 + \Delta E_g^2}$$

(Note: The total energy resolution of a RIXS setup also contains contributions from the incident energy band pass, beam size at the sample and possible others. These additional contributions are not addressed in the current document)

Symbols

E_i	Incident Photon Energy
Θ_B	Bragg (Incident) Angle
E_B	Backscattering Energy ($\Theta_B = 90^\circ$)
d_{hkl}	Diffraction Plane Spacing
$\int I_R d\Theta$	Integrated Reflectivity, Measure of Reflection Strength
W	Angular (Darwin-) Width of the Reflection
ΔE	Intrinsic Energy Resolution
ΔE_g	Geometric Contribution to the Energy Resolution
ΔE_t	Combined Intrinsic and Geometric Energy Resolution

$$hc = 12.39841904 \text{ keV}\text{\AA}$$

$$1 \text{ \AA} = 0.1 \text{ nm} = 10^{-10} \text{ m} = 10^{-7} \text{ mm}$$

Ei =	4.966	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(1,3,3)	4.776	74.12	112.9	119.2	1.413	168.37	17.66	169.29
LiNbO3	(0,-3,6)	4.96	87.14	344.8	358.1	0.248	88.73	3.1	88.78
	Equiv. Refl.: (3,0,6), (-3,3,6)								
LiNbO3	(0,3,6)	4.96	87.14	329.5	346.7	0.248	85.91	3.1	85.96
	Equiv. Refl.: (3,-3,6), (-3,0,6)								
LiNbO3	(0,3,-6)	4.96	87.14	230.8	358.1	0.248	88.73	3.1	88.78
	Equiv. Refl.: (3,-3,-6), (-3,0,-6)								
LiNbO3	(0,-3,-6)	4.96	87.14	222.6	346.7	0.248	85.91	3.1	85.96
	Equiv. Refl.: (3,0,-6), (-3,3,-6)								
Quartz	(0,3,-2)	4.936	83.74	117.8	114	0.545	62.09	6.81	62.46
	Equiv. Refl.: (0,-3,2), (3,0,2), (3,-3,-2), (-3,0,-2), (-3,3,2)								
Quartz	(0,3,2)	4.936	83.74	92.9	95.3	0.545	51.9	6.81	52.34
	Equiv. Refl.: (0,-3,-2), (3,0,-2), (3,-3,2), (-3,0,2), (-3,3,-2)								
LiNbO3	(0,1,-10)	4.683	70.56	87.8	92	1.752	161.2	21.91	162.68
	Equiv. Refl.: (1,-1,-10), (-1,0,-10)								
LiNbO3	(2,2,0)	4.817	75.92	82.9	96.5	1.246	120.17	15.57	121.17
	Equiv. Refl.: (2,-4,0), (4,-2,0), (-2,4,0), (-2,-2,0), (-4,2,0)								
LiNbO3	(0,-1,10)	4.683	70.56	80.9	92	1.752	161.2	21.91	162.68
	Equiv. Refl.: (1,0,10), (-1,1,10)								
Quartz	(0,1,-4)	4.814	75.78	57.7	55.5	1.258	69.89	15.73	71.64
	Equiv. Refl.: (0,-1,4)								
Quartz	(1,0,4)	4.814	75.78	57.6	55.5	1.258	69.86	15.73	71.61
	Equiv. Refl.: (1,-1,-4), (-1,0,-4), (-1,1,4)								
LiNbO3	(1,1,9)	4.69	70.81	21.8	39.8	1.728	68.76	21.6	72.07
	Equiv. Refl.: (1,1,-9), (1,-2,9), (1,-2,-9), (2,-1,9), (2,-1,-9), (-1,2,9), (-1,2,-9), (-1,-1,9), (-1,-1,-9), (-2,1,9), (-2,1,-9)								
Sapph	(0,2,-8)	4.861	78.22	14.4	22.8	1.036	23.64	12.95	26.95
	Equiv. Refl.: (0,-2,8), (2,0,8), (2,-2,-8), (-2,0,-8), (-2,2,8)								
Quartz	(0,1,4)	4.814	75.78	11	15.8	1.258	19.83	15.73	25.31
	Equiv. Refl.: (0,-1,-4), (1,0,-4), (1,-1,4), (-1,0,4), (-1,1,-4)								
LiNbO3	(1,2,-7)	4.83	76.58	6.7	24	1.185	28.49	14.81	32.11
	Equiv. Refl.: (1,-3,7), (2,1,7), (2,-3,-7), (3,-1,7), (3,-2,-7), (-1,3,-7), (-1,-2,7), (-2,3,7), (-2,-1,-7), (-3,1,-7), (-3,2,7)								

Ei =	4.511	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	ΘB	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Ge	(0,0,4)	4.383	76.32	256.839	250.54	1.0976	274.99	13.72	275.33
Equiv. Refl.: (0,4,0), (4,0,0)									
Quartz	(0,-2,3)	4.509	88.34	935.641	852.6	0.131	111.3	1.63	111.32
Quartz	(0,2,-3)	4.509	88.34	935.635	852.6	0.131	111.3	1.63	111.32
Quartz	(-2,0,-3)	4.509	88.34	935.508	852.5	0.131	111.29	1.63	111.3
Quartz	(2,0,3)	4.509	88.34	935.507	852.5	0.131	111.29	1.63	111.3
Quartz	(-2,2,3)	4.509	88.34	935.499	852.5	0.131	111.29	1.63	111.3
Quartz	(2,-2,-3)	4.509	88.34	935.486	852.5	0.131	111.29	1.63	111.3
Quartz	(0,-2,-3)	4.509	88.34	265.546	308.2	0.131	40.23	1.63	40.27
Quartz	(0,2,3)	4.509	88.34	265.541	308.2	0.131	40.23	1.63	40.27
Quartz	(-2,-2,-3)	4.509	88.34	265.474	308.1	0.131	40.22	1.63	40.25
Quartz	(-2,0,3)	4.509	88.34	265.454	308.1	0.131	40.22	1.63	40.25
Quartz	(2,-2,3)	4.509	88.34	265.366	308.1	0.131	40.22	1.63	40.25
Quartz	(2,0,-3)	4.509	88.34	265.357	308.1	0.131	40.22	1.63	40.25
Quartz	(3,-1,-2)	4.486	83.94	125.565	128.6	0.479	61.61	5.99	61.9
Quartz	(3,-2,2)	4.486	83.94	125.561	128.6	0.479	61.61	5.99	61.9
Quartz	(-2,3,-2)	4.486	83.94	125.556	128.6	0.479	61.6	5.99	61.89
Quartz	(-2,-1,2)	4.486	83.94	125.553	128.6	0.479	61.6	5.99	61.89
Quartz	(-1,3,2)	4.486	83.94	125.547	128.6	0.479	61.6	5.99	61.89
Quartz	(-1,-2,-2)	4.486	83.94	125.542	128.6	0.479	61.6	5.99	61.89
Quartz	(-3,1,2)	4.486	83.94	122.896	128.6	0.479	61.61	5.99	61.9
Quartz	(-3,2,-2)	4.486	83.94	122.892	128.6	0.479	61.61	5.99	61.9
Quartz	(1,-3,-2)	4.486	83.94	122.883	128.6	0.479	61.6	5.99	61.89
Quartz	(1,2,2)	4.486	83.94	122.878	128.6	0.479	61.6	5.99	61.89
Quartz	(2,-3,2)	4.486	83.94	122.871	128.6	0.479	61.6	5.99	61.89
Quartz	(2,1,-2)	4.486	83.94	122.867	128.6	0.479	61.6	5.99	61.89
Sapph	(1,2,-4)	4.415	78.13	111.203	109.9	0.948	104.19	11.85	104.87
Equiv. Refl.: (1,-3,4), (2,1,4), (2,-3,-4), (3,-1,4), (3,-2,-4), (-1,3,-4), (-1,-2,4), (-2,3,4), (-2,-1,-4), (-3,1,-4), (-3,2,4)									
Quartz	(2,-3,-2)	4.486	83.94	79.571	86.7	0.479	41.54	5.99	41.96
Quartz	(2,1,2)	4.486	83.94	79.57	86.7	0.479	41.53	5.99	41.96
Quartz	(-3,1,-2)	4.486	83.94	79.559	86.7	0.479	41.53	5.99	41.96
Quartz	(-3,2,2)	4.486	83.94	79.547	86.7	0.479	41.53	5.99	41.96
Quartz	(1,2,-2)	4.486	83.94	79.537	86.7	0.479	41.52	5.99	41.95
Equiv. Refl.: (1,-3,2)									
Quartz	(-2,3,2)	4.486	83.94	65.17	86.7	0.479	41.54	5.99	41.96
Quartz	(-2,-1,-2)	4.486	83.94	65.169	86.7	0.479	41.53	5.99	41.96
Quartz	(3,-1,2)	4.486	83.94	65.164	86.7	0.479	41.53	5.99	41.96
Quartz	(3,-2,-2)	4.486	83.94	65.152	86.7	0.479	41.53	5.99	41.96
Quartz	(-1,-2,2)	4.486	83.94	65.14	86.7	0.479	41.52	5.99	41.95
Quartz	(-1,3,-2)	4.486	83.94	65.139	86.7	0.479	41.52	5.99	41.95
Quartz	(-1,2,-3)	4.267	71.08	26.008	29	1.546	44.81	19.33	48.8
Equiv. Refl.: (-1,-1,3)									
Quartz	(2,-1,-3)	4.267	71.08	26.004	29	1.546	44.8	19.33	48.79
Quartz	(2,-1,3)	4.267	71.08	25.997	29	1.546	44.79	19.33	48.79
Quartz	(-1,2,3)	4.267	71.08	25.996	29	1.546	44.79	19.33	48.79
Quartz	(-1,-1,-3)	4.267	71.08	25.995	29	1.546	44.79	19.33	48.79

Ei =	4.511	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(1,1,-3)	4.267	71.08	22.15	29	1.546	44.81	19.33	48.8
	Equiv. Refl.: (1,-2,3)								
Quartz	(-2,1,3)	4.267	71.08	22.145	29	1.546	44.8	19.33	48.79
Quartz	(1,1,3)	4.267	71.08	22.142	29	1.546	44.79	19.33	48.79
	Equiv. Refl.: (1,-2,-3)								
Quartz	(-2,1,-3)	4.267	71.08	22.138	29	1.546	44.79	19.33	48.79
Quartz	(0,3,0)	4.371	75.69	20.522	28.1	1.151	32.39	14.39	35.44
	Equiv. Refl.: (0,-3,0), (3,0,0), (3,-3,0), (-3,0,0), (-3,3,0)								
LiNbO3	(1,2,5)	4.305	72.62	6.463	25.1	1.412	35.43	17.65	39.59
	Equiv. Refl.: (1,-3,-5), (2,1,-5), (2,-3,5), (3,-1,-5), (3,-2,5), (-1,3,5), (-1,-2,-5), (-2,3,-5), (-2,-1,5), (-3,1,5), (-3,2,-5)								

Ei =	4.505	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Ge	(0,0,4)	4.383	76.64	263.082	256.74	1.0698	274.65	13.37	274.97
Equiv. Refl.: (0,4,0), (4,0,0)									
Quartz	(3,-1,-2)	4.486	84.71	143.805	147.4	0.417	61.53	5.22	61.75
Quartz	(3,-2,2)	4.486	84.71	143.8	147.4	0.417	61.53	5.22	61.75
Quartz	(-2,3,-2)	4.486	84.71	143.795	147.4	0.417	61.52	5.22	61.74
Quartz	(-2,-1,2)	4.486	84.71	143.791	147.4	0.417	61.52	5.22	61.74
Quartz	(-1,3,2)	4.486	84.71	143.785	147.4	0.417	61.52	5.22	61.74
Quartz	(-1,-2,-2)	4.486	84.71	143.779	147.4	0.417	61.52	5.22	61.74
Quartz	(-3,1,2)	4.486	84.71	140.742	147.4	0.417	61.53	5.22	61.75
Quartz	(-3,2,-2)	4.486	84.71	140.737	147.4	0.417	61.53	5.22	61.75
Quartz	(1,-3,-2)	4.486	84.71	140.726	147.4	0.417	61.52	5.22	61.74
Quartz	(1,2,2)	4.486	84.71	140.721	147.4	0.417	61.52	5.22	61.74
Quartz	(2,-3,2)	4.486	84.71	140.712	147.4	0.417	61.52	5.22	61.74
Quartz	(2,1,-2)	4.486	84.71	140.709	147.4	0.417	61.52	5.22	61.74
Sapph	(1,2,-4)	4.415	78.5	114.811	113.5	0.917	104.06	11.46	104.69
Equiv. Refl.: (1,-3,4), (2,1,4), (2,-3,-4), (3,-1,4), (3,-2,-4), (-1,3,-4), (-1,-2,4), (-2,3,4), (-2,-1,-4), (-3,1,-4), (-3,2,4)									
Quartz	(2,-3,-2)	4.486	84.71	91.12	99.4	0.417	41.48	5.22	41.81
Quartz	(2,1,2)	4.486	84.71	91.119	99.4	0.417	41.48	5.22	41.81
Quartz	(-3,1,-2)	4.486	84.71	91.107	99.4	0.417	41.48	5.22	41.8
Quartz	(-3,2,2)	4.486	84.71	91.093	99.4	0.417	41.47	5.22	41.8
Quartz	(1,-3,2)	4.486	84.71	91.082	99.3	0.417	41.47	5.22	41.79
Quartz	(1,2,-2)	4.486	84.71	91.081	99.3	0.417	41.47	5.22	41.79
Quartz	(-2,3,2)	4.486	84.71	74.595	99.4	0.417	41.48	5.22	41.81
Quartz	(-2,-1,-2)	4.486	84.71	74.594	99.4	0.417	41.48	5.22	41.81
Quartz	(3,-1,2)	4.486	84.71	74.589	99.4	0.417	41.48	5.22	41.8
Quartz	(3,-2,-2)	4.486	84.71	74.575	99.4	0.417	41.47	5.22	41.8
Quartz	(-1,-2,2)	4.486	84.71	74.561	99.3	0.417	41.47	5.22	41.79
Quartz	(-1,3,-2)	4.486	84.71	74.56	99.3	0.417	41.47	5.22	41.79
Quartz	(-1,-1,3)	4.267	71.3	26.324	29.4	1.525	44.75	19.06	48.64
Quartz	(-1,2,-3)	4.267	71.3	26.323	29.4	1.525	44.75	19.06	48.64
Quartz	(2,-1,-3)	4.267	71.3	26.319	29.3	1.525	44.74	19.06	48.63
Quartz	(2,-1,3)	4.267	71.3	26.313	29.3	1.525	44.74	19.06	48.63
Quartz	(-1,2,3)	4.267	71.3	26.311	29.3	1.525	44.74	19.06	48.63
Equiv. Refl.: (-1,-1,-3)									
Quartz	(1,1,-3)	4.267	71.3	22.411	29.4	1.525	44.75	19.06	48.64
Quartz	(1,-2,3)	4.267	71.3	22.41	29.4	1.525	44.75	19.06	48.64
Quartz	(-2,1,3)	4.267	71.3	22.405	29.3	1.525	44.74	19.06	48.63
Quartz	(1,1,3)	4.267	71.3	22.402	29.3	1.525	44.74	19.06	48.63
Equiv. Refl.: (1,-2,-3)									
Quartz	(-2,1,-3)	4.267	71.3	22.399	29.3	1.525	44.74	19.06	48.63
Quartz	(0,3,0)	4.371	75.99	20.959	28.8	1.124	32.35	14.05	35.27
Equiv. Refl.: (0,-3,0), (3,0,0), (3,-3,0), (-3,0,0), (-3,3,0)									
LiNbO3	(1,2,5)	4.305	72.87	6.548	25.5	1.389	35.39	17.36	39.42
Equiv. Refl.: (1,-3,-5), (2,1,-5), (2,-3,5), (3,-1,-5), (3,-2,5), (-1,3,5), (-1,-2,-5), (-2,3,-5), (-2,-1,5), (-3,1,5), (-3,2,-5)									

Ei =	4.932	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(1,3,3)	4.776	75.57	124.4891	131.82	1.2691	167.3	15.86	168.05
	Equiv. Refl.: (3,1,3), (3,3,1)								
LiNbO3	(2,2,0)	4.817	77.59	94.116	109.9	1.085	119.28	13.56	120.05
	Equiv. Refl.: (2,-4,0), (4,-2,0), (-2,4,0), (-2,-2,0), (-4,2,0)								
LiNbO3	(0,1,-10)	4.683	71.71	93.532	98.2	1.63	160.04	20.37	161.33
	Equiv. Refl.: (1,-1,-10), (-1,0,-10)								
LiNbO3	(0,-1,10)	4.683	71.71	86.115	98.2	1.63	160.04	20.37	161.33
	Equiv. Refl.: (1,0,10), (-1,1,10)								
Quartz	(0,-1,4)	4.814	77.43	65.402	63.2	1.099	69.43	13.74	70.77
Quartz	(0,1,-4)	4.814	77.43	65.401	63.2	1.099	69.43	13.74	70.77
Quartz	(1,0,4)	4.814	77.43	65.365	63.1	1.099	69.4	13.74	70.74
	Equiv. Refl.: (-1,0,-4)								
Quartz	(-1,1,4)	4.814	77.43	65.36	63.1	1.099	69.39	13.74	70.74
Quartz	(1,-1,-4)	4.814	77.43	65.359	63.1	1.099	69.39	13.74	70.74
LiNbO3	(1,1,9)	4.69	71.98	23.102	42.6	1.604	68.3	20.05	71.18
	Equiv. Refl.: (1,1,-9), (1,-2,9), (1,-2,-9), (2,-1,9), (2,-1,-9), (-1,2,9), (-1,2,-9), (-1,-1,9), (-1,-1,-9), (-2,1,9), (-2,1,-9)								
Sapph	(0,2,-8)	4.861	80.29	17.376	27.8	0.844	23.49	10.55	25.75
	Equiv. Refl.: (0,-2,8), (2,0,8), (2,-2,-8), (-2,0,-8), (-2,2,8)								
Quartz	(-1,0,4)	4.814	77.43	12.456	17.9	1.099	19.7	13.74	24.02
Quartz	(-1,1,-4)	4.814	77.43	12.453	17.9	1.099	19.7	13.74	24.02
Quartz	(1,0,-4)	4.814	77.43	12.452	17.9	1.099	19.7	13.74	24.02
Quartz	(1,-1,4)	4.814	77.43	12.447	17.9	1.099	19.7	13.74	24.02
Quartz	(0,-1,-4)	4.814	77.43	12.444	17.9	1.099	19.69	13.74	24.01
Quartz	(0,1,4)	4.814	77.43	12.443	17.9	1.099	19.69	13.74	24.01
Sapph	(1,2,5)	4.641	70.22	9.968	15.6	1.774	27.66	22.17	35.45
	Equiv. Refl.: (1,-3,-5), (2,1,-5), (2,-3,5), (3,-1,-5), (3,-2,5), (-1,3,5), (-1,-2,-5), (-2,3,-5), (-2,-1,5), (-3,1,5), (-3,2,-5)								
LiNbO3	(1,2,-7)	4.83	78.35	7.631	27.8	1.017	28.31	12.71	31.03
	Equiv. Refl.: (1,-3,7), (2,1,7), (2,-3,-7), (3,-1,7), (3,-2,-7), (-1,3,-7), (-1,-2,7), (-2,3,7), (-2,-1,-7), (-3,1,-7), (-3,2,7)								

Ei =	5.465	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Ge	(2,2,4)	5.368	79.2	188.7	179.2	1.042	186.83	13.03	187.29
LiNbO3	(0,0,-12)	5.366	79.08	140.2	128.9	1.054	135.81	13.17	136.44
LiNbO3	(0,0,12)	5.366	79.08	105.9	128.9	1.054	135.81	13.17	136.44
LiNbO3	(1,3,4)	5.323	76.91	72.9	79.3	1.271	100.8	15.88	102.04
	Equiv. Refl.: (3,-4,4), (4,-3,4), (-1,4,4), (-3,-1,4), (-4,1,4)								
LiNbO3	(0,2,10)	5.266	74.49	71.1	74.9	1.517	113.65	18.96	115.22
	Equiv. Refl.: (2,-2,10), (-2,0,10)								
Sapph	(2,2,3)	5.405	81.47	70.5	70.8	0.819	58.04	10.24	58.93
	Equiv. Refl.: (2,2,-3), (2,-4,3), (2,-4,-3), (4,-2,3), (4,-2,-3), (-2,4,3), (-2,4,-3), (-2,-2,3), (-2,-2,-3), (-4,2,3), (-4,2,-3)								
LiNbO3	(1,-4,-4)	5.323	76.91	66.7	79.3	1.271	100.8	15.88	102.04
	Equiv. Refl.: (3,1,-4), (4,-1,-4), (-1,-3,-4), (-3,4,-4), (-4,3,-4)								
LiNbO3	(0,-2,-10)	5.266	74.49	64.4	74.9	1.517	113.65	18.96	115.22
	Equiv. Refl.: (2,0,-10), (-2,2,-10)								
Quartz	(-1,4,1)	5.377	79.7	50.9	47.4	0.993	47.06	12.41	48.66
	Equiv. Refl.: (-1,-3,-1), (-3,4,-1), (-3,-1,1)								
Quartz	(4,-1,-1)	5.377	79.7	50.8	47.4	0.993	47.05	12.41	48.66
	Equiv. Refl.: (4,-3,1)								
Quartz	(1,3,1)	5.377	79.7	45.4	47.4	0.993	47.06	12.41	48.67
	Equiv. Refl.: (1,-4,-1), (3,1,-1), (3,-4,1), (-4,1,1), (-4,3,-1)								
Quartz	(0,2,-4)	5.435	84.02	44.1	49.7	0.573	28.48	7.16	29.36
	Equiv. Refl.: (0,-2,4), (2,0,4), (2,-2,-4), (-2,0,-4), (-2,2,4)								
Quartz	(4,-1,0)	5.253	74	44	40.6	1.567	63.56	19.59	66.51
	Equiv. Refl.: (4,-3,0), (-1,4,0), (-1,-3,0), (-3,4,0), (-3,-1,0)								
Quartz	(1,3,0)	5.253	74	43	40.6	1.567	63.56	19.59	66.51
	Equiv. Refl.: (1,-4,0), (3,1,0), (3,-4,0), (-4,1,0), (-4,3,0)								
Quartz	(2,-1,4)	5.236	73.37	39.6	36	1.633	58.82	20.41	62.26
	Equiv. Refl.: (2,-1,-4), (-1,2,4), (-1,2,-4), (-1,-1,4), (-1,-1,-4)								
Quartz	(1,1,4)	5.236	73.37	36.5	36	1.633	58.84	20.41	62.28
	Equiv. Refl.: (1,1,-4), (1,2,-3), (1,-2,4), (1,-2,-4), (1,-3,3), (2,1,3), (2,-3,-3), (-2,1,4), (-2,1,-4), (-3,1,-3), (-3,2,3)								
Quartz	(3,-1,3)	5.167	71	35.9	34	1.882	64	23.52	68.19
	Equiv. Refl.: (3,-2,-3), (-1,3,-3), (-1,-2,3), (-2,3,3), (-2,-1,-3)								
Sapph	(2,2,0)	5.211	72.48	27.8	28.9	1.725	49.88	21.57	54.34
	Equiv. Refl.: (2,-4,0), (4,-2,0), (-2,4,0), (-2,-2,0), (-4,2,0)								
Quartz	(4,-2,1)	5.176	71.28	17.4	18.5	1.852	34.27	23.15	41.36
	Equiv. Refl.: (4,-2,-1), (-2,4,1), (-2,4,-1), (-2,-2,1), (-2,-2,-1)								
Quartz	(2,2,1)	5.176	71.28	16.5	18.5	1.852	34.27	23.15	41.35
	Equiv. Refl.: (2,2,-1), (2,-4,1), (2,-4,-1), (-4,2,1), (-4,2,-1)								
Sapph	(1,3,1)	5.445	85.12	14.9	28.6	0.466	13.35	5.83	14.56
	Equiv. Refl.: (1,-4,-1), (3,1,-1), (3,-4,1), (4,-1,-1), (4,-3,1), (-1,4,1), (-1,-3,-1), (-3,4,-1), (-3,-1,1), (-4,1,1), (-4,3,-1)								
Quartz	(3,-1,-3)	5.167	71	14.8	15.7	1.882	29.48	23.52	37.71
	Equiv. Refl.: (3,-2,3), (-1,3,3), (-1,-2,-3), (-2,3,-3), (-2,-1,3)								
Quartz	(1,2,3)	5.167	71	12.4	15.7	1.882	29.46	23.52	37.7
	Equiv. Refl.: (1,-3,-3), (2,1,-3), (2,-3,3), (-3,1,3), (-3,2,-3)								
Quartz	(0,2,4)	5.435	84.02	11.7	20.3	0.573	11.65	7.16	13.68
	Equiv. Refl.: (0,-2,-4), (2,0,-4), (2,-2,4), (-2,0,4), (-2,2,-4)								
Quartz	(1,3,-1)	5.377	79.7	11.3	14.3	0.993	14.18	12.41	18.84
	Equiv. Refl.: (1,-4,1), (3,1,1), (3,-4,-1), (-4,1,-1), (-4,3,1)								

Ei =	5.465	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	 IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(1,2,-7)	5.197	71.97	8.4	12.4	1.779	22.13	22.23	31.37
	Equiv. Refl.: (1,-3,7), (2,1,7), (2,-3,-7), (3,-1,7), (3,-2,-7), (-1,3,-7), (-1,-2,7), (-2,3,7), (-2,-1,-7), (-3,1,-7), (-3,2,7)								
Quartz	(4,-1,1)	5.377	79.7	8	14.3	0.993	14.18	12.41	18.84
	Equiv. Refl.: (4,-3,-1), (-1,4,-1), (-1,-3,1), (-3,4,1), (-3,-1,-1)								
Sapph	(0,3,6)	5.345	77.98	3.5	8.1	1.164	9.46	14.55	17.35
	Equiv. Refl.: (0,3,-6), (0,-3,6), (0,-3,-6), (3,0,6), (3,0,-6), (3,-3,6), (3,-3,-6), (-3,0,6), (-3,0,-6), (-3,3,6), (-3,3,-6)								

Ei =	4.952	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Ge	(1,3,3)	4.776	74.7	117.2406	123.92	1.3551	167.93	16.94	168.78
	Equiv. Refl.: (3,1,3), (3,3,1)								
Quartz	(-3,3,2)	4.936	85.45	162.281	157.1	0.394	61.92	4.93	62.11
Quartz	(-3,0,-2)	4.936	85.45	162.277	157.1	0.394	61.91	4.93	62.11
Quartz	(0,3,-2)	4.936	85.45	162.273	157.1	0.394	61.92	4.93	62.11
	Equiv. Refl.: (0,-3,2)								
Quartz	(3,-3,-2)	4.936	85.45	162.269	157.1	0.394	61.92	4.93	62.11
Quartz	(3,0,2)	4.936	85.45	162.265	157.1	0.394	61.91	4.93	62.11
Quartz	(-3,3,-2)	4.936	85.45	127.882	131.3	0.394	51.77	4.93	52.01
Quartz	(3,-3,2)	4.936	85.45	127.881	131.3	0.394	51.77	4.93	52.01
Quartz	(-3,0,2)	4.936	85.45	127.875	131.3	0.394	51.77	4.93	52
Quartz	(3,0,-2)	4.936	85.45	127.873	131.3	0.394	51.77	4.93	52
Quartz	(0,3,2)	4.936	85.45	127.831	131.3	0.394	51.76	4.93	51.99
	Equiv. Refl.: (0,-3,-2)								
LiNbO3	(0,1,-10)	4.683	71.03	90.052	94.4	1.703	160.72	21.28	162.13
	Equiv. Refl.: (-1,0,-10)								
LiNbO3	(1,-1,-10)	4.683	71.03	90.051	94.4	1.703	160.72	21.28	162.13
LiNbO3	(2,2,0)	4.817	76.58	86.981	101.4	1.182	119.8	14.77	120.71
	Equiv. Refl.: (2,-4,0), (4,-2,0), (-2,4,0), (-2,-2,0), (-4,2,0)								
LiNbO3	(0,-1,10)	4.683	71.03	82.956	94.4	1.703	160.72	21.28	162.13
	Equiv. Refl.: (1,0,10)								
LiNbO3	(-1,1,10)	4.683	71.03	82.955	94.4	1.703	160.72	21.28	162.13
Quartz	(0,-1,4)	4.814	76.43	60.508	58.3	1.195	69.7	14.94	71.28
Quartz	(0,1,-4)	4.814	76.43	60.507	58.3	1.195	69.7	14.94	71.28
Quartz	(1,0,4)	4.814	76.43	60.474	58.3	1.195	69.67	14.94	71.25
	Equiv. Refl.: (-1,0,-4)								
Quartz	(-1,1,4)	4.814	76.43	60.469	58.3	1.195	69.66	14.94	71.25
Quartz	(1,-1,-4)	4.814	76.43	60.468	58.3	1.195	69.66	14.94	71.25
LiNbO3	(1,1,9)	4.69	71.28	22.276	40.9	1.678	68.57	20.97	71.7
	Equiv. Refl.: (1,1,-9), (1,-2,9), (1,-2,-9), (2,-1,9), (2,-1,-9), (-1,2,9), (-1,2,-9), (-1,-1,9), (-1,-1,-9), (-2,1,9), (-2,1,-9)								
Sapph	(0,2,-8)	4.861	79.02	15.389	24.5	0.961	23.58	12.01	26.46
	Equiv. Refl.: (0,-2,8), (2,0,8), (2,-2,-8), (-2,0,-8), (-2,2,8)								
Quartz	(-1,0,4)	4.814	76.43	11.549	16.6	1.195	19.78	14.94	24.79
Quartz	(1,0,-4)	4.814	76.43	11.546	16.6	1.195	19.78	14.94	24.79
	Equiv. Refl.: (-1,1,-4)								
Quartz	(1,-1,4)	4.814	76.43	11.541	16.6	1.195	19.78	14.94	24.78
Quartz	(0,-1,-4)	4.814	76.43	11.538	16.5	1.195	19.77	14.94	24.78
Quartz	(0,1,4)	4.814	76.43	11.537	16.5	1.195	19.77	14.94	24.78
LiNbO3	(1,2,-7)	4.83	77.28	7.011	25.4	1.118	28.42	13.98	31.67
	Equiv. Refl.: (1,-3,7), (2,1,7), (2,-3,-7), (3,-1,7), (3,-2,-7), (-1,3,-7), (-1,-2,7), (-2,3,7), (-2,-1,-7), (-3,1,-7), (-3,2,7)								

Ei =	4.945	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Ge	(1,3,3)	4.776	75	119.6299	126.53	1.3255	167.71	16.57	168.52
	Equiv. Refl.: (3,1,3), (3,3,1)								
Quartz	(-3,3,2)	4.936	86.62	218.422	211.5	0.292	61.83	3.65	61.94
Quartz	(-3,0,-2)	4.936	86.62	218.417	211.5	0.292	61.83	3.65	61.94
Quartz	(0,3,-2)	4.936	86.62	218.412	211.5	0.292	61.83	3.65	61.94
	Equiv. Refl.: (0,-3,2)								
Quartz	(3,-3,-2)	4.936	86.62	218.406	211.5	0.292	61.83	3.65	61.94
Quartz	(3,0,2)	4.936	86.62	218.402	211.5	0.292	61.83	3.65	61.94
Quartz	(-3,3,-2)	4.936	86.62	172.111	176.9	0.292	51.7	3.65	51.83
Quartz	(3,-3,2)	4.936	86.62	172.109	176.9	0.292	51.7	3.65	51.83
Quartz	(-3,0,2)	4.936	86.62	172.102	176.9	0.292	51.7	3.65	51.83
Quartz	(3,0,-2)	4.936	86.62	172.098	176.9	0.292	51.7	3.65	51.83
Quartz	(0,3,2)	4.936	86.62	172.042	176.8	0.292	51.69	3.65	51.81
	Equiv. Refl.: (0,-3,-2)								
LiNbO3	(0,1,-10)	4.683	71.26	91.224	95.7	1.677	160.48	20.97	161.85
	Equiv. Refl.: (1,-1,-10), (-1,0,-10)								
LiNbO3	(2,2,0)	4.817	76.92	89.287	104.2	1.149	119.62	14.36	120.48
	Equiv. Refl.: (-2,-2,0)								
LiNbO3	(2,-4,0)	4.817	76.92	89.286	104.2	1.149	119.62	14.36	120.48
	Equiv. Refl.: (4,-2,0), (-2,4,0), (-4,2,0)								
LiNbO3	(0,-1,10)	4.683	71.26	84.02	95.7	1.677	160.48	20.97	161.85
	Equiv. Refl.: (1,0,10), (-1,1,10)								
Quartz	(0,-1,4)	4.814	76.78	62.093	59.9	1.162	69.61	14.53	71.1
Quartz	(0,1,-4)	4.814	76.78	62.092	59.9	1.162	69.61	14.53	71.1
Quartz	(1,0,4)	4.814	76.78	62.058	59.9	1.162	69.57	14.53	71.07
	Equiv. Refl.: (-1,0,-4)								
Quartz	(-1,1,4)	4.814	76.78	62.053	59.9	1.162	69.57	14.53	71.07
Quartz	(1,-1,-4)	4.814	76.78	62.052	59.9	1.162	69.57	14.53	71.07
LiNbO3	(1,1,9)	4.69	71.53	22.554	41.4	1.652	68.47	20.65	71.52
	Equiv. Refl.: (1,1,-9), (1,-2,9), (1,-2,-9), (2,-1,9), (2,-1,-9), (-1,2,9), (-1,2,-9), (-1,-1,9), (-1,-1,-9), (-2,1,9), (-2,1,-9)								
Sapph	(0,2,-8)	4.861	79.45	16.002	25.6	0.921	23.54	11.52	26.21
	Equiv. Refl.: (0,-2,8), (2,0,8), (2,-2,-8), (-2,0,-8), (-2,2,8)								
Quartz	(-1,0,4)	4.814	76.78	11.842	17	1.162	19.75	14.53	24.52
Quartz	(-1,1,-4)	4.814	76.78	11.84	17	1.162	19.75	14.53	24.52
Quartz	(1,0,-4)	4.814	76.78	11.839	17	1.162	19.75	14.53	24.52
Quartz	(1,-1,4)	4.814	76.78	11.834	17	1.162	19.75	14.53	24.52
Quartz	(0,-1,-4)	4.814	76.78	11.831	17	1.162	19.74	14.53	24.51
Quartz	(0,1,4)	4.814	76.78	11.83	17	1.162	19.74	14.53	24.51
LiNbO3	(1,2,-7)	4.83	77.64	7.209	26.2	1.084	28.38	13.55	31.44
	Equiv. Refl.: (1,-3,7), (2,1,7), (2,-3,-7), (3,-1,7), (3,-2,-7), (-1,3,-7), (-1,-2,7), (-2,3,7), (-2,-1,-7), (-3,1,-7), (-3,2,7)								

Ei =	5.427	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	ΘB	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[°]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Ge	(2,2,4)	5.368	81.56	242.2334	230.49	0.8054	185.64	10.07	185.92
	Equiv. Refl.: (2,4,2), (4,2,2)								
LiNbO3	(0,0,-12)	5.366	81.41	178.706	164.5	0.82	134.85	10.25	135.24
LiNbO3	(0,0,12)	5.366	81.41	134.629	164.5	0.82	134.85	10.25	135.24
Sapph	(2,2,3)	5.405	84.79	115.433	116.5	0.495	57.65	6.18	57.98
	Equiv. Refl.: (2,2,-3), (2,-4,3), (2,-4,-3), (4,-2,3), (4,-2,-3), (-2,4,3), (-2,4,-3), (-2,-2,3), (-2,-2,-3), (-4,2,3), (-4,2,-3)								
LiNbO3	(1,3,4)	5.323	78.77	85.119	92.8	1.078	100.08	13.47	100.98
	Equiv. Refl.: (3,-4,4), (4,-3,4), (-1,4,4), (-3,-1,4), (-4,1,4)								
LiNbO3	(0,2,10)	5.266	76.01	78.993	83.4	1.352	112.84	16.9	114.1
	Equiv. Refl.: (2,-2,10), (-2,0,10)								
LiNbO3	(1,-4,-4)	5.323	78.77	77.813	92.8	1.078	100.08	13.47	100.98
	Equiv. Refl.: (3,1,-4), (4,-1,-4), (-1,-3,-4), (-3,4,-4), (-4,3,-4)								
LiNbO3	(0,-2,-10)	5.266	76.01	71.497	83.4	1.352	112.84	16.9	114.1
	Equiv. Refl.: (2,0,-10), (-2,2,-10)								
Quartz	(-1,4,1)	5.377	82.22	67.446	63	0.742	46.74	9.27	47.65
	Equiv. Refl.: (-1,-3,-1)								
Quartz	(-3,4,-1)	5.377	82.22	67.444	63	0.742	46.74	9.27	47.65
Quartz	(-3,-1,1)	5.377	82.22	67.441	63	0.742	46.74	9.27	47.65
Quartz	(4,-1,-1)	5.377	82.22	67.433	63	0.742	46.73	9.27	47.64
	Equiv. Refl.: (4,-3,1)								
LiNbO3	(1,2,8)	5.131	71	62.5	67.2	1.868	125.63	23.35	127.78
	Equiv. Refl.: (2,-3,8), (3,-2,8), (-1,3,8), (-2,-1,8), (-3,1,8)								
LiNbO3	(1,-3,-8)	5.131	71	60.636	67.2	1.868	125.63	23.35	127.78
	Equiv. Refl.: (2,1,-8), (3,-1,-8), (-1,-2,-8), (-2,3,-8), (-3,2,-8)								
Quartz	(1,3,1)	5.377	82.22	60.099	63	0.742	46.74	9.27	47.65
	Equiv. Refl.: (1,-4,-1)								
Quartz	(3,-4,1)	5.377	82.22	60.098	63	0.742	46.74	9.27	47.65
Quartz	(3,1,-1)	5.377	82.22	60.094	63	0.742	46.74	9.27	47.65
Quartz	(-4,1,1)	5.377	82.22	60.087	63	0.742	46.73	9.27	47.64
	Equiv. Refl.: (-4,3,-1)								
Quartz	(4,-1,0)	5.253	75.46	48.56	44.9	1.407	63.13	17.59	65.53
	Equiv. Refl.: (4,-3,0), (-1,4,0), (-1,-3,0), (-3,4,0), (-3,-1,0)								
Quartz	(1,3,0)	5.253	75.46	47.449	44.9	1.407	63.13	17.59	65.53
	Equiv. Refl.: (1,-4,0), (3,1,0), (3,-4,0), (-4,1,0), (-4,3,0)								
Quartz	(-1,2,4)	5.236	74.77	43.358	39.5	1.478	58.45	18.47	61.3
Quartz	(-1,-1,-4)	5.236	74.77	43.357	39.5	1.478	58.45	18.47	61.3
Quartz	(-1,2,-4)	5.236	74.77	43.348	39.5	1.478	58.44	18.47	61.29
Quartz	(-1,-1,4)	5.236	74.77	43.341	39.5	1.478	58.43	18.47	61.28
Quartz	(2,-1,4)	5.236	74.77	43.332	39.5	1.478	58.42	18.47	61.27
	Equiv. Refl.: (2,-1,-4)								
Quartz	(1,1,4)	5.236	74.77	39.968	39.5	1.478	58.45	18.47	61.3
	Equiv. Refl.: (1,-2,-4)								
Quartz	(1,-2,4)	5.236	74.77	39.962	39.5	1.478	58.44	18.47	61.29
Quartz	(1,1,-4)	5.236	74.77	39.955	39.5	1.478	58.43	18.47	61.28
Quartz	(-2,1,4)	5.236	74.77	39.948	39.5	1.478	58.42	18.47	61.27
	Equiv. Refl.: (-2,1,-4)								
Quartz	(-3,2,3)	5.167	72.2	39.03	36.5	1.742	63.57	21.78	67.2

Ei =	5.427	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Quartz	(-3,1,-3)	5.167	72.2	39.029	36.5	1.742	63.57	21.78	67.2
Quartz	(2,-3,-3)	5.167	72.2	39.022	36.5	1.742	63.56	21.78	67.19
Quartz	(2,1,3)	5.167	72.2	39.019	36.5	1.742	63.56	21.78	67.19
Quartz	(1,-3,3)	5.167	72.2	39.017	36.5	1.742	63.56	21.78	67.18
Quartz	(1,2,-3)	5.167	72.2	39.015	36.5	1.742	63.55	21.78	67.18
Quartz	(3,-1,3)	5.167	72.2	38.462	36.5	1.742	63.57	21.78	67.2
Equiv. Refl.: (3,-2,-3)									
Quartz	(-2,3,3)	5.167	72.2	38.455	36.5	1.742	63.56	21.78	67.19
Quartz	(-2,-1,-3)	5.167	72.2	38.452	36.5	1.742	63.56	21.78	67.19
Quartz	(-1,3,-3)	5.167	72.2	38.449	36.5	1.742	63.56	21.78	67.18
Quartz	(-1,-2,3)	5.167	72.2	38.448	36.5	1.742	63.55	21.78	67.18
Sapph	(2,2,0)	5.211	73.8	30.074	31.4	1.577	49.55	19.71	53.32
Equiv. Refl.: (2,-4,0), (4,-2,0), (-2,4,0), (-2,-2,0), (-4,2,0)									
Quartz	(-2,4,-1)	5.176	72.5	18.641	19.9	1.711	34.04	21.39	40.2
Equiv. Refl.: (-2,-2,1)									
Quartz	(4,-2,1)	5.176	72.5	18.64	19.9	1.711	34.04	21.39	40.2
Equiv. Refl.: (4,-2,-1)									
Quartz	(-2,4,1)	5.176	72.5	18.636	19.9	1.711	34.04	21.39	40.2
Quartz	(-2,-2,-1)	5.176	72.5	18.635	19.9	1.711	34.04	21.39	40.2
Quartz	(2,2,-1)	5.176	72.5	17.692	19.9	1.711	34.04	21.39	40.2
Equiv. Refl.: (2,-4,1), (-4,2,1)									
Quartz	(-4,2,-1)	5.176	72.5	17.691	19.9	1.711	34.04	21.39	40.2
Quartz	(2,-4,-1)	5.176	72.5	17.688	19.9	1.711	34.04	21.39	40.2
Quartz	(2,2,1)	5.176	72.5	17.687	19.9	1.711	34.04	21.39	40.2
Quartz	(3,-1,-3)	5.167	72.2	15.809	16.8	1.742	29.28	21.78	36.49
Quartz	(3,-2,3)	5.167	72.2	15.808	16.8	1.742	29.28	21.78	36.49
Quartz	(-1,-2,-3)	5.167	72.2	15.794	16.8	1.742	29.26	21.78	36.47
Quartz	(-1,3,3)	5.167	72.2	15.792	16.8	1.742	29.26	21.78	36.47
Equiv. Refl.: (-2,3,-3)									
Quartz	(-2,-1,3)	5.167	72.2	15.79	16.8	1.742	29.25	21.78	36.47
Quartz	(3,-4,-1)	5.377	82.22	14.918	19	0.742	14.09	9.27	16.86
Quartz	(3,1,1)	5.377	82.22	14.916	19	0.742	14.09	9.27	16.86
Quartz	(-4,1,-1)	5.377	82.22	14.913	19	0.742	14.08	9.27	16.86
Quartz	(-4,3,1)	5.377	82.22	14.911	19	0.742	14.08	9.27	16.86
Quartz	(1,3,-1)	5.377	82.22	14.909	19	0.742	14.08	9.27	16.86
Equiv. Refl.: (1,-4,1)									
Quartz	(-3,1,3)	5.167	72.2	13.252	16.8	1.742	29.28	21.78	36.49
Quartz	(-3,2,-3)	5.167	72.2	13.251	16.8	1.742	29.28	21.78	36.49
Quartz	(1,2,3)	5.167	72.2	13.238	16.8	1.742	29.26	21.78	36.47
Quartz	(1,-3,-3)	5.167	72.2	13.236	16.8	1.742	29.26	21.78	36.47
Quartz	(2,-3,3)	5.167	72.2	13.235	16.8	1.742	29.26	21.78	36.47
Quartz	(2,1,-3)	5.167	72.2	13.233	16.8	1.742	29.25	21.78	36.47
Quartz	(-3,4,1)	5.377	82.22	10.552	19	0.742	14.09	9.27	16.86
Quartz	(-3,-1,-1)	5.377	82.22	10.551	19	0.742	14.09	9.27	16.86
Quartz	(4,-1,1)	5.377	82.22	10.547	19	0.742	14.08	9.27	16.86
Quartz	(4,-3,-1)	5.377	82.22	10.546	19	0.742	14.08	9.27	16.86
Quartz	(-1,4,-1)	5.377	82.22	10.544	19	0.742	14.08	9.27	16.86
Equiv. Refl.: (-1,-3,1)									
Sapph	(1,2,-7)	5.197	73.25	9.025	13.5	1.634	21.98	20.42	30
Equiv. Refl.: (1,-3,7), (2,1,7), (2,-3,-7), (3,-1,7), (3,-2,-7), (-1,3,-7), (-1,-2,7), (-2,3,7), (-2,-1,-7), (-3,1,-7), (-3,2,7)									
Sapph	(0,3,6)	5.345	80.04	4.183	9.9	0.953	9.39	11.92	15.17

Equiv. Refl.: (0,3,-6), (0,-3,6), (0,-3,-6), (3,0,6), (3,0,-6), (3,-3,6), (3,-3,-6), (-3,0,6), (-3,0,-6)
(-3,3,6), (-3,3,-6)

Ei =	5.989	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(3,3,3)	5.694	71.94	60.8	61.8	1.953	120.75	24.42	123.19
	Equiv. Refl.: (1,1,5)								
Si	(3,3,3)	5.931	82.03	61.9	61.3	0.839	51.45	10.48	52.51
	Equiv. Refl.: (1,1,5)								
Sapph	(2,2,6)	5.946	83.17	123	110	0.718	78.92	8.97	79.42
	Equiv. Refl.: (2,2,-6), (2,-4,6), (2,-4,-6), (4,-2,6), (4,-2,-6), (-2,4,6), (-2,4,-6), (-2,-2,6), (-2,-2,-6), (-4,2,6), (-4,2,-6)								
LiNbO3	(1,1,12)	5.882	79.14	86.5	84.1	1.149	96.58	14.36	97.64
	Equiv. Refl.: (1,-2,12), (2,-1,12), (-1,2,12), (-1,-1,12), (-2,1,12)								
Quartz	(0,4,-1)	5.94	82.65	78.1	70.9	0.773	54.8	9.66	55.64
	Equiv. Refl.: (0,-4,1), (4,0,1), (4,-4,-1), (-4,0,-1), (-4,4,1)								
LiNbO3	(1,1,-12)	5.882	79.14	70.6	84.1	1.149	96.58	14.36	97.64
	Equiv. Refl.: (1,-2,-12), (2,-1,-12), (-1,2,-12), (-1,-1,-12), (-2,1,-12)								
Quartz	(0,1,5)	5.917	81.12	70.3	63.1	0.935	59.01	11.69	60.16
	Equiv. Refl.: (0,-1,-5), (1,0,-5), (1,-1,5), (-1,0,5), (-1,1,-5)								
LiNbO3	(1,2,-10)	5.791	75.21	63.9	66.3	1.581	104.84	19.76	106.69
	Equiv. Refl.: (2,-3,-10), (3,-2,-10), (-1,3,-10), (-2,-1,-10), (-3,1,-10)								
LiNbO3	(1,-3,10)	5.791	75.21	61.5	66.3	1.581	104.84	19.76	106.69
	Equiv. Refl.: (2,1,10), (3,-1,10), (-1,-2,10), (-2,3,10), (-3,2,10)								
LiNbO3	(0,-4,-2)	5.633	70.16	59.4	58.4	2.161	126.13	27.02	128.99
	Equiv. Refl.: (4,0,-2), (-4,4,-2)								
LiNbO3	(0,-4,4)	5.842	77.3	57.2	62.7	1.35	84.63	16.87	86.29
	Equiv. Refl.: (4,0,4), (-4,4,4)								
LiNbO3	(0,4,-4)	5.842	77.3	55.5	62.7	1.35	84.63	16.87	86.29
	Equiv. Refl.: (4,-4,-4), (-4,0,-4)								
LiNbO3	(0,4,2)	5.633	70.16	54.5	58.4	2.161	126.13	27.02	128.99
	Equiv. Refl.: (4,-4,2), (-4,0,2)								
Sapph	(0,0,12)	5.727	73.01	48.7	44.1	1.83	80.81	22.88	83.98
	Equiv. Refl.: (0,0,-12)								
Quartz	(4,-1,-2)	5.732	73.16	34.3	30.5	1.812	55.3	22.65	59.76
	Equiv. Refl.: (4,-3,2), (-1,4,2), (-1,-3,-2), (-3,4,-2), (-3,-1,2)								
Quartz	(1,3,2)	5.732	73.16	32.6	30.5	1.812	55.29	22.65	59.75
	Equiv. Refl.: (1,-4,-2), (3,1,-2), (3,-4,2), (-4,1,2), (-4,3,-2)								
Sapph	(0,2,10)	5.642	70.4	32.2	30.1	2.132	64.14	26.65	69.46
	Equiv. Refl.: (0,-2,-10), (2,0,-10), (2,-2,10), (-2,0,10), (-2,2,-10)								
Sapph	(1,3,4)	5.75	73.77	26.5	26.4	1.743	46.09	21.79	50.98
	Equiv. Refl.: (1,-4,-4), (3,1,-4), (3,-4,4), (4,-1,-4), (4,-3,4), (-1,4,4), (-1,-3,-4), (-3,4,-4), (-3,-1,4), (-4,1,4), (-4,3,-4)								
Quartz	(3,1,2)	5.732	73.16	21.2	19.7	1.812	35.68	22.65	42.26
	Equiv. Refl.: (3,-4,-2), (-4,1,-2), (-4,3,2)								
Quartz	(1,3,-2)	5.732	73.16	21.1	19.7	1.812	35.66	22.65	42.25
	Equiv. Refl.: (1,-4,2)								
Quartz	(0,1,-5)	5.917	81.12	20.2	22.4	0.935	21	11.69	24.03
	Equiv. Refl.: (0,-1,5), (1,0,5), (1,-1,-5), (-1,0,-5), (-1,1,5)								
Quartz	(0,4,0)	5.828	76.68	18.5	19.4	1.418	27.52	17.72	32.74
	Equiv. Refl.: (0,-4,0), (4,0,0), (4,-1,2), (4,-3,-2), (4,-4,0), (-1,4,-2), (-1,-3,2), (-3,4,2), (-3,-1,-2), (-4,0,0), (-4,4,0)								
Quartz	(0,4,1)	5.94	82.65	11.4	16.2	0.773	12.48	9.66	15.78
	Equiv. Refl.: (0,-4,-1), (4,0,-1), (4,-4,1), (-4,0,1), (-4,4,-1)								

Ei =	5.989	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,3,7)	5.91	80.71	10.8	26.3	0.98	25.74	12.25	28.51
	Equiv. Refl.: (1,-4,-7), (3,1,-7), (3,-4,7), (4,-1,-7), (4,-3,7), (-1,4,7), (-1,-3,-7), (-3,4,-7), (-3,-1,7), (-4,1,7), (-4,3,-7)								
Sapph	(1,3,-5)	5.926	81.68	7.2	12.9	0.875	11.27	10.94	15.71
	Equiv. Refl.: (1,-4,5), (3,1,5), (3,-4,-5), (4,-1,5), (4,-3,-5), (-1,4,-5), (-1,-3,5), (-3,4,5), (-3,-1,-5), (-4,1,-5), (-4,3,5)								

Ei =	5.415	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	ΘB	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[°]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Ge	(2,2,4)	5.368	82.46	271.5288	258.55	0.7166	185.27	8.96	185.48
	Equiv. Refl.: (2,4,2), (4,2,2)								
LiNbO3	(0,0,-12)	5.366	82.3	199.459	183.7	0.733	134.55	9.16	134.86
Sapph	(2,2,3)	5.405	86.45	169.315	171.1	0.336	57.52	4.2	57.68
	Equiv. Refl.: (2,2,-3), (2,-4,3), (2,-4,-3), (4,-2,3), (4,-2,-3), (-2,4,3), (-2,4,-3), (-2,-2,3), (-2,-2,-3), (-4,2,3), (-4,2,-3)								
LiNbO3	(0,0,12)	5.366	82.3	150.111	183.7	0.733	134.55	9.16	134.86
LiNbO3	(1,3,4)	5.323	79.42	90.467	98.8	1.011	99.85	12.64	100.64
	Equiv. Refl.: (3,-4,4), (4,-3,4), (-3,-1,4)								
LiNbO3	(-1,4,4)	5.323	79.42	90.466	98.8	1.011	99.85	12.64	100.64
	Equiv. Refl.: (-4,1,4)								
LiNbO3	(1,-4,-4)	5.323	79.42	82.675	98.8	1.011	99.85	12.64	100.64
	Equiv. Refl.: (3,1,-4), (4,-1,-4), (-1,-3,-4), (-3,4,-4), (-4,3,-4)								
LiNbO3	(0,2,10)	5.266	76.53	82.086	86.8	1.297	112.59	16.22	113.75
	Equiv. Refl.: (2,-2,10), (-2,0,10)								
Quartz	(-1,4,1)	5.377	83.21	77.358	72.3	0.645	46.64	8.06	47.33
	Equiv. Refl.: (-1,-3,-1)								
Quartz	(-3,4,-1)	5.377	83.21	77.356	72.3	0.645	46.64	8.06	47.33
Quartz	(-3,-1,1)	5.377	83.21	77.353	72.3	0.645	46.64	8.06	47.33
Quartz	(4,-1,-1)	5.377	83.21	77.343	72.3	0.645	46.63	8.06	47.32
	Equiv. Refl.: (4,-3,1)								
LiNbO3	(1,3,-2)	5.093	70.13	74.867	76.2	1.957	149.04	24.46	151.03
	Equiv. Refl.: (3,-4,-2), (4,-3,-2), (-1,4,-2), (-3,-1,-2), (-4,1,-2)								
LiNbO3	(-2,2,-10)	5.266	76.53	74.272	86.8	1.297	112.59	16.22	113.75
LiNbO3	(0,-2,-10)	5.266	76.53	74.271	86.8	1.297	112.59	16.22	113.75
	Equiv. Refl.: (2,0,-10)								
LiNbO3	(1,-4,2)	5.093	70.13	70.314	76.2	1.957	149.04	24.46	151.03
	Equiv. Refl.: (3,1,2), (4,-1,2), (-1,-3,2), (-3,4,2), (-4,3,2)								
Quartz	(1,3,1)	5.377	83.21	68.901	72.3	0.645	46.64	8.06	47.33
Quartz	(1,-4,-1)	5.377	83.21	68.9	72.3	0.645	46.64	8.06	47.33
Quartz	(3,-4,1)	5.377	83.21	68.899	72.3	0.645	46.64	8.06	47.33
Quartz	(3,1,-1)	5.377	83.21	68.895	72.3	0.645	46.64	8.06	47.33
Quartz	(-4,1,1)	5.377	83.21	68.886	72.3	0.645	46.63	8.06	47.32
	Equiv. Refl.: (-4,3,-1)								
LiNbO3	(1,2,8)	5.131	71.38	63.784	68.7	1.825	125.34	22.81	127.4
	Equiv. Refl.: (2,-3,8), (3,-2,8), (-1,3,8), (-2,-1,8), (-3,1,8)								
LiNbO3	(1,-3,-8)	5.131	71.38	61.876	68.7	1.825	125.34	22.81	127.4
	Equiv. Refl.: (2,1,-8), (3,-1,-8), (-1,-2,-8), (-2,3,-8), (-3,2,-8)								
Quartz	(4,-1,0)	5.253	75.96	50.325	46.5	1.354	62.99	16.93	65.23
	Equiv. Refl.: (4,-3,0), (-1,4,0), (-1,-3,0), (-3,4,0), (-3,-1,0)								
Quartz	(1,3,0)	5.253	75.96	49.169	46.5	1.354	62.99	16.93	65.23
	Equiv. Refl.: (1,-4,0), (3,1,0), (3,-4,0), (-4,1,0), (-4,3,0)								
Quartz	(-1,2,4)	5.236	75.24	44.79	40.9	1.427	58.32	17.83	60.99
Quartz	(-1,-1,-4)	5.236	75.24	44.789	40.9	1.427	58.32	17.83	60.99
Quartz	(-1,2,-4)	5.236	75.24	44.779	40.9	1.427	58.31	17.83	60.98
Quartz	(-1,-1,4)	5.236	75.24	44.772	40.9	1.427	58.31	17.83	60.97
Quartz	(2,-1,-4)	5.236	75.24	44.763	40.9	1.427	58.3	17.83	60.96
Quartz	(2,-1,4)	5.236	75.24	44.762	40.9	1.427	58.3	17.83	60.96

Ei =	5.415	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[°]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Quartz	(1,1,4)	5.236	75.24	41.275	40.9	1.427	58.32	17.83	60.99
Equiv. Refl.: (1,-2,-4)									
Quartz	(1,-2,4)	5.236	75.24	41.268	40.9	1.427	58.31	17.83	60.98
Quartz	(1,1,-4)	5.236	75.24	41.262	40.9	1.427	58.31	17.83	60.97
Quartz	(-2,1,4)	5.236	75.24	41.254	40.9	1.427	58.3	17.83	60.96
Quartz	(-2,1,-4)	5.236	75.24	41.253	40.9	1.427	58.3	17.83	60.96
Quartz	(-3,2,3)	5.167	72.6	39.959	37.4	1.697	63.44	21.21	66.89
Quartz	(-3,1,-3)	5.167	72.6	39.958	37.4	1.697	63.44	21.21	66.89
Quartz	(2,-3,-3)	5.167	72.6	39.951	37.4	1.697	63.43	21.21	66.88
Quartz	(2,1,3)	5.167	72.6	39.948	37.4	1.697	63.42	21.21	66.88
Quartz	(1,-3,3)	5.167	72.6	39.946	37.4	1.697	63.42	21.21	66.87
Quartz	(1,2,-3)	5.167	72.6	39.944	37.4	1.697	63.42	21.21	66.87
Quartz	(3,-1,3)	5.167	72.6	39.375	37.4	1.697	63.44	21.21	66.89
Equiv. Refl.: (3,-2,-3)									
Quartz	(-2,3,3)	5.167	72.6	39.368	37.4	1.697	63.43	21.21	66.88
Quartz	(-2,-1,-3)	5.167	72.6	39.365	37.4	1.697	63.42	21.21	66.88
Quartz	(-1,3,-3)	5.167	72.6	39.362	37.4	1.697	63.42	21.21	66.87
Quartz	(-1,-2,3)	5.167	72.6	39.361	37.4	1.697	63.42	21.21	66.87
Sapph	(2,2,0)	5.211	74.24	30.936	32.4	1.528	49.44	19.1	53
Equiv. Refl.: (2,-4,0), (4,-2,0), (-2,4,0), (-2,-2,0), (-4,2,0)									
Quartz	(4,-2,-1)	5.176	72.91	19.091	20.4	1.665	33.97	20.81	39.84
Equiv. Refl.: (-2,4,-1), (-2,-2,1)									
Quartz	(4,-2,1)	5.176	72.91	19.09	20.4	1.665	33.97	20.81	39.84
Quartz	(-2,4,1)	5.176	72.91	19.086	20.4	1.665	33.96	20.81	39.83
Equiv. Refl.: (-2,-2,-1)									
Quartz	(2,2,-1)	5.176	72.91	18.116	20.4	1.665	33.97	20.81	39.84
Equiv. Refl.: (2,-4,1), (-4,2,1), (-4,2,-1)									
Quartz	(2,-4,-1)	5.176	72.91	18.112	20.4	1.665	33.96	20.81	39.83
Quartz	(2,2,1)	5.176	72.91	18.111	20.4	1.665	33.96	20.81	39.83
Quartz	(3,-4,-1)	5.377	83.21	17.096	21.8	0.645	14.06	8.06	16.2
Quartz	(3,1,1)	5.377	83.21	17.094	21.8	0.645	14.06	8.06	16.2
Quartz	(-4,1,-1)	5.377	83.21	17.091	21.8	0.645	14.05	8.06	16.2
Quartz	(-4,3,1)	5.377	83.21	17.088	21.8	0.645	14.05	8.06	16.2
Quartz	(1,3,-1)	5.377	83.21	17.086	21.8	0.645	14.05	8.06	16.2
Equiv. Refl.: (1,-4,1)									
Quartz	(3,-1,-3)	5.167	72.6	16.179	17.2	1.697	29.22	21.21	36.1
Quartz	(3,-2,3)	5.167	72.6	16.178	17.2	1.697	29.22	21.21	36.1
Quartz	(-1,-2,-3)	5.167	72.6	16.163	17.2	1.697	29.2	21.21	36.09
Quartz	(-1,3,3)	5.167	72.6	16.161	17.2	1.697	29.19	21.21	36.08
Equiv. Refl.: (-2,3,-3)									
Quartz	(-2,-1,3)	5.167	72.6	16.159	17.2	1.697	29.19	21.21	36.08
Quartz	(-3,1,3)	5.167	72.6	13.552	17.2	1.697	29.22	21.21	36.1
Equiv. Refl.: (-3,2,-3)									
Quartz	(1,2,3)	5.167	72.6	13.538	17.2	1.697	29.2	21.21	36.09
Quartz	(1,-3,-3)	5.167	72.6	13.536	17.2	1.697	29.19	21.21	36.08
Quartz	(2,-3,3)	5.167	72.6	13.535	17.2	1.697	29.19	21.21	36.08
Quartz	(2,1,-3)	5.167	72.6	13.533	17.2	1.697	29.19	21.21	36.08
Quartz	(-3,4,1)	5.377	83.21	12.077	21.8	0.645	14.06	8.06	16.2
Quartz	(-3,-1,-1)	5.377	83.21	12.076	21.8	0.645	14.06	8.06	16.2
Quartz	(4,-1,1)	5.377	83.21	12.071	21.8	0.645	14.05	8.06	16.2

Ei =	5.415	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(4,-3,-1)	5.377	83.21	12.07	21.8	0.645	14.05	8.06	16.2
Quartz	(-1,4,-1)	5.377	83.21	12.068	21.8	0.645	14.05	8.06	16.2
	Equiv. Refl.: (-1,-3,1)								
Sapph	(1,2,-7)	5.197	73.68	9.254	13.8	1.586	21.93	19.83	29.56
	Equiv. Refl.: (1,-3,7), (2,1,7), (2,-3,-7), (3,-1,7), (3,-2,-7), (-1,3,-7), (-1,-2,7), (-2,3,7), (-2,-1,-7), (-3,1,-7), (-3,2,7)								
Sapph	(0,3,6)	5.345	80.79	4.521	10.7	0.878	9.37	10.98	14.44
	Equiv. Refl.: (0,3,-6), (0,-3,6), (0,-3,-6), (3,0,6), (3,0,-6), (3,-3,6), (3,-3,-6), (-3,0,6), (-3,0,-6), (-3,3,6), (-3,3,-6)								

Ei =	5.406	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(2,2,4)	5.368	83.22	302.1536	287.85	0.6426	184.99	8.03	185.16
	Equiv. Refl.: (2,4,2), (4,2,2)								
Sapph	(2,2,3)	5.405	88.69	460.396	465.6	0.123	57.43	1.54	57.45
	Equiv. Refl.: (2,2,-3), (2,-4,3), (2,-4,-3), (4,-2,3), (4,-2,-3), (-2,4,3), (-2,4,-3), (-2,-2,3), (-2,-2,-3), (-4,2,3), (-4,2,-3)								
LiNbO3	(0,0,-12)	5.366	83.04	220.839	203.4	0.66	134.32	8.25	134.58
LiNbO3	(0,0,12)	5.366	83.04	166.073	203.4	0.66	134.32	8.25	134.58
LiNbO3	(1,3,4)	5.323	79.95	95.219	104	0.958	99.68	11.98	100.39
	Equiv. Refl.: (3,-4,4), (4,-3,4), (-1,4,4), (-3,-1,4), (-4,1,4)								
Quartz	(-1,4,1)	5.377	84.06	88.546	82.8	0.562	46.56	7.03	47.09
	Equiv. Refl.: (-1,-3,-1)								
Quartz	(-3,4,-1)	5.377	84.06	88.544	82.8	0.562	46.56	7.03	47.09
Quartz	(-3,-1,1)	5.377	84.06	88.54	82.8	0.562	46.56	7.03	47.09
Quartz	(4,-1,-1)	5.377	84.06	88.529	82.8	0.562	46.56	7.03	47.08
	Equiv. Refl.: (4,-3,1)								
LiNbO3	(1,-4,-4)	5.323	79.95	86.998	104	0.958	99.68	11.98	100.39
	Equiv. Refl.: (3,1,-4), (4,-1,-4), (-1,-3,-4), (-3,4,-4), (-4,3,-4)								
LiNbO3	(0,2,10)	5.266	76.93	84.664	89.6	1.255	112.4	15.69	113.49
	Equiv. Refl.: (2,-2,10), (-2,0,10)								
Quartz	(1,3,1)	5.377	84.06	78.838	82.8	0.562	46.56	7.03	47.09
	Equiv. Refl.: (1,-4,-1)								
Quartz	(3,-4,1)	5.377	84.06	78.837	82.8	0.562	46.56	7.03	47.09
Quartz	(3,1,-1)	5.377	84.06	78.832	82.8	0.562	46.56	7.03	47.09
Quartz	(-4,1,1)	5.377	84.06	78.822	82.8	0.562	46.56	7.03	47.08
	Equiv. Refl.: (-4,3,-1)								
LiNbO3	(-2,2,-10)	5.266	76.93	76.584	89.6	1.255	112.4	15.69	113.49
LiNbO3	(0,-2,-10)	5.266	76.93	76.583	89.6	1.255	112.4	15.69	113.49
	Equiv. Refl.: (2,0,-10)								
LiNbO3	(1,3,-2)	5.093	70.4	75.922	77.3	1.925	148.79	24.07	150.72
	Equiv. Refl.: (3,-4,-2), (4,-3,-2), (-1,4,-2), (-3,-1,-2), (-4,1,-2)								
LiNbO3	(1,-4,2)	5.093	70.4	71.292	77.3	1.925	148.79	24.07	150.72
	Equiv. Refl.: (3,1,2), (4,-1,2), (-1,-3,2), (-3,4,2), (-4,3,2)								
LiNbO3	(1,2,8)	5.131	71.66	64.803	69.8	1.792	125.13	22.4	127.12
	Equiv. Refl.: (2,-3,8), (3,-2,8), (-1,3,8), (-2,-1,8), (-3,1,8)								
LiNbO3	(1,-3,-8)	5.131	71.66	62.859	69.8	1.792	125.13	22.4	127.12
	Equiv. Refl.: (2,1,-8), (3,-1,-8), (-1,-2,-8), (-2,3,-8), (-3,2,-8)								
Quartz	(4,-1,0)	5.253	76.35	51.784	47.9	1.313	62.89	16.41	65
	Equiv. Refl.: (4,-3,0), (-1,4,0), (-1,-3,0), (-3,4,0), (-3,-1,0)								
Quartz	(1,3,0)	5.253	76.35	50.591	47.9	1.313	62.89	16.41	65
	Equiv. Refl.: (1,-4,0), (3,1,0), (3,-4,0), (-4,1,0), (-4,3,0)								
Quartz	(-1,2,4)	5.236	75.61	45.962	42	1.387	58.23	17.34	60.76
Quartz	(-1,-1,-4)	5.236	75.61	45.961	42	1.387	58.23	17.34	60.76
Quartz	(-1,2,-4)	5.236	75.61	45.951	42	1.387	58.22	17.34	60.75
Quartz	(-1,-1,4)	5.236	75.61	45.944	42	1.387	58.21	17.34	60.74
Quartz	(2,-1,4)	5.236	75.61	45.934	42	1.387	58.2	17.34	60.73
	Equiv. Refl.: (2,-1,-4)								
Quartz	(1,1,4)	5.236	75.61	42.345	42	1.387	58.23	17.34	60.76
	Equiv. Refl.: (1,-2,-4)								

Ei =	5.406	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(1,-2,4)	5.236	75.61	42.338	42	1.387	58.22	17.34	60.75
Quartz	(1,1,-4)	5.236	75.61	42.331	42	1.387	58.21	17.34	60.74
Quartz	(-2,1,4)	5.236	75.61	42.324	42	1.387	58.2	17.34	60.73
Quartz	(-2,1,-4)	5.236	75.61	42.323	42	1.387	58.2	17.34	60.73
Quartz	(-3,1,-3)	5.167	72.91	40.701	38.1	1.662	63.33	20.78	66.66
Equiv. Refl.: (-3,2,3)									
Quartz	(2,-3,-3)	5.167	72.91	40.693	38.1	1.662	63.33	20.78	66.65
Quartz	(2,1,3)	5.167	72.91	40.69	38.1	1.662	63.32	20.78	66.64
Quartz	(1,-3,3)	5.167	72.91	40.688	38.1	1.662	63.32	20.78	66.64
Quartz	(1,2,-3)	5.167	72.91	40.686	38.1	1.662	63.32	20.78	66.64
Quartz	(3,-1,3)	5.167	72.91	40.105	38.1	1.662	63.33	20.78	66.66
Equiv. Refl.: (3,-2,-3)									
Quartz	(-2,3,3)	5.167	72.91	40.098	38.1	1.662	63.33	20.78	66.65
Quartz	(-2,-1,-3)	5.167	72.91	40.095	38.1	1.662	63.32	20.78	66.64
Quartz	(-1,3,-3)	5.167	72.91	40.092	38.1	1.662	63.32	20.78	66.64
Quartz	(-1,-2,3)	5.167	72.91	40.09	38.1	1.662	63.32	20.78	66.64
Sapph	(2,2,0)	5.211	74.58	31.635	33.1	1.491	49.36	18.64	52.76
Equiv. Refl.: (2,-4,0), (4,-2,0), (-2,4,0), (-2,-2,0), (-4,2,0)									
Quartz	(3,-4,-1)	5.377	84.06	19.556	25	0.562	14.03	7.03	15.69
Quartz	(3,1,1)	5.377	84.06	19.554	25	0.562	14.03	7.03	15.69
Quartz	(-4,1,-1)	5.377	84.06	19.55	25	0.562	14.03	7.03	15.69
Quartz	(-4,3,1)	5.377	84.06	19.547	25	0.562	14.03	7.03	15.69
Quartz	(1,3,-1)	5.377	84.06	19.545	25	0.562	14.03	7.03	15.69
Quartz	(1,-4,1)	5.377	84.06	19.544	25	0.562	14.03	7.03	15.69
Quartz	(-2,4,-1)	5.176	73.22	19.453	20.8	1.63	33.92	20.38	39.57
Quartz	(4,-2,-1)	5.176	73.22	19.452	20.8	1.63	33.92	20.38	39.57
Equiv. Refl.: (-2,-2,1)									
Quartz	(4,-2,1)	5.176	73.22	19.451	20.8	1.63	33.92	20.38	39.56
Quartz	(-2,4,1)	5.176	73.22	19.447	20.8	1.63	33.91	20.38	39.56
Equiv. Refl.: (-2,-2,-1)									
Quartz	(2,2,-1)	5.176	73.22	18.456	20.8	1.63	33.92	20.38	39.57
Equiv. Refl.: (2,-4,1), (-4,2,1)									
Quartz	(-4,2,-1)	5.176	73.22	18.455	20.8	1.63	33.92	20.38	39.56
Quartz	(2,2,1)	5.176	73.22	18.451	20.8	1.63	33.91	20.38	39.56
Equiv. Refl.: (2,-4,-1)									
Quartz	(3,-1,-3)	5.167	72.91	16.474	17.5	1.662	29.17	20.78	35.81
Equiv. Refl.: (3,-2,3)									
Quartz	(-1,-2,-3)	5.167	72.91	16.459	17.5	1.662	29.15	20.78	35.8
Quartz	(-1,3,3)	5.167	72.91	16.456	17.5	1.662	29.15	20.78	35.79
Equiv. Refl.: (-2,3,-3)									
Quartz	(-2,-1,3)	5.167	72.91	16.454	17.5	1.662	29.14	20.78	35.79
Quartz	(-3,4,1)	5.377	84.06	13.801	25	0.562	14.03	7.03	15.69
Quartz	(-3,-1,-1)	5.377	84.06	13.8	25	0.562	14.03	7.03	15.69
Quartz	(4,-1,1)	5.377	84.06	13.795	25	0.562	14.03	7.03	15.69
Quartz	(4,-3,-1)	5.377	84.06	13.793	25	0.562	14.03	7.03	15.69
Equiv. Refl.: (-3,1,3)									
Quartz	(-3,2,-3)	5.167	72.91	13.792	17.5	1.662	29.17	20.78	35.81
Quartz	(-1,4,-1)	5.377	84.06	13.791	25	0.562	14.03	7.03	15.69
Equiv. Refl.: (-1,-3,1)									
Quartz	(1,2,3)	5.167	72.91	13.778	17.5	1.662	29.15	20.78	35.8

Ei =	5.406	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(1,-3,-3)	5.167	72.91	13.776	17.5	1.662	29.15	20.78	35.79
Quartz	(2,-3,3)	5.167	72.91	13.775	17.5	1.662	29.15	20.78	35.79
Quartz	(2,1,-3)	5.167	72.91	13.773	17.5	1.662	29.14	20.78	35.79
Sapph	(1,2,-7)	5.197	74	9.439	14.1	1.55	21.9	19.37	29.23
	Equiv. Refl.: (1,-3,7), (2,1,7), (2,-3,-7), (3,-1,7), (3,-2,-7), (-1,3,-7), (-1,-2,7), (-2,3,7), (-2,-1,-7), (-3,1,-7), (-3,2,7)								
Sapph	(0,3,6)	5.345	81.39	4.837	11.4	0.818	9.36	10.23	13.86
	Equiv. Refl.: (0,3,-6), (0,-3,6), (0,-3,-6), (3,0,6), (3,0,-6), (3,-3,6), (3,-3,-6), (-3,0,6), (-3,0,-6), (-3,3,6), (-3,3,-6)								

Ei =	5.947	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Si	(3,3,3)	5.931	85.81	117.9891	117.35	0.4355	51.1	5.44	51.39
	Equiv. Refl.: (1,5,1), (1,1,5), (5,1,1)								
Ge	(3,3,3)	5.694	73.22	65.6364	66.92	1.793	119.98	22.41	122.06
	Equiv. Refl.: (1,5,1), (1,1,5), (5,1,1)								
Si	(2,2,4)	5.592	70.1	43.3955	39.64	2.1527	85.33	26.91	89.47
	Equiv. Refl.: (2,4,2), (4,2,2)								
Sapph	(2,2,6)	5.946	89.23	1095.134	980.8	0.08	78.39	1	78.39
	Equiv. Refl.: (2,2,-6), (2,-4,6), (2,-4,-6), (4,-2,6), (4,-2,-6), (-2,4,6), (-2,4,-6), (-2,-2,6), (-2,-2,-6), (-4,2,6), (-4,2,-6)								
Quartz	(4,-4,-1)	5.94	87.17	203.635	185.1	0.294	54.43	3.68	54.55
Quartz	(-4,4,1)	5.94	87.17	203.634	185.1	0.294	54.43	3.68	54.55
Quartz	(4,0,1)	5.94	87.17	203.631	185.1	0.294	54.43	3.68	54.55
Quartz	(-4,0,-1)	5.94	87.17	203.63	185.1	0.294	54.43	3.68	54.55
Quartz	(0,4,-1)	5.94	87.17	203.623	185.1	0.294	54.43	3.68	54.55
	Equiv. Refl.: (0,-4,1)								
LiNbO3	(1,1,12)	5.882	81.51	110.867	108	0.888	95.91	11.1	96.55
	Equiv. Refl.: (1,-2,12), (2,-1,12), (-1,2,12), (-1,-1,12), (-2,1,12)								
Quartz	(1,-1,5)	5.917	84.27	109.272	98.3	0.597	58.65	7.46	59.12
Quartz	(-1,1,-5)	5.917	84.27	109.271	98.3	0.597	58.65	7.46	59.12
Quartz	(-1,0,5)	5.917	84.27	109.263	98.3	0.597	58.65	7.46	59.12
Quartz	(1,0,-5)	5.917	84.27	109.262	98.3	0.597	58.65	7.46	59.12
Quartz	(0,1,5)	5.917	84.27	109.193	98.2	0.597	58.61	7.46	59.09
Quartz	(0,-1,-5)	5.917	84.27	109.192	98.2	0.597	58.61	7.46	59.09
LiNbO3	(1,1,-12)	5.882	81.51	90.338	108	0.888	95.91	11.1	96.55
	Equiv. Refl.: (1,-2,-12), (2,-1,-12), (-1,2,-12), (-1,-1,-12), (-2,1,-12)								
LiNbO3	(1,2,-10)	5.791	76.83	71.948	74.8	1.392	104.11	17.39	105.56
	Equiv. Refl.: (2,-3,-10), (3,-2,-10), (-1,3,-10), (-2,-1,-10), (-3,1,-10)								
LiNbO3	(1,-3,10)	5.791	76.83	69.177	74.8	1.392	104.11	17.39	105.56
	Equiv. Refl.: (2,1,10), (3,-1,10), (-1,-2,10), (-2,3,10), (-3,2,10)								
LiNbO3	(0,-4,4)	5.842	79.24	67.646	74.4	1.13	84.04	14.12	85.22
	Equiv. Refl.: (4,0,4), (-4,4,4)								
LiNbO3	(0,4,-4)	5.842	79.24	65.57	74.4	1.13	84.04	14.12	85.22
	Equiv. Refl.: (4,-4,-4), (-4,0,-4)								
LiNbO3	(0,-4,-2)	5.633	71.31	63.254	62.3	2.012	125.26	25.15	127.75
	Equiv. Refl.: (4,0,-2), (-4,4,-2)								
LiNbO3	(0,4,2)	5.633	71.31	57.982	62.3	2.012	125.26	25.15	127.75
	Equiv. Refl.: (4,-4,2), (-4,0,2)								
Sapph	(0,0,12)	5.727	74.38	53.204	48.3	1.662	80.26	20.78	82.91
	Equiv. Refl.: (0,0,-12)								
Quartz	(4,-3,2)	5.732	74.56	37.491	33.4	1.643	54.93	20.54	58.64
Quartz	(4,-1,-2)	5.732	74.56	37.49	33.4	1.643	54.93	20.54	58.64
Quartz	(-3,4,-2)	5.732	74.56	37.487	33.4	1.643	54.93	20.54	58.64
	Equiv. Refl.: (-3,-1,2)								
Quartz	(-1,-3,-2)	5.732	74.56	37.483	33.4	1.643	54.92	20.54	58.63
Quartz	(-1,4,2)	5.732	74.56	37.481	33.4	1.643	54.92	20.54	58.63
Quartz	(-4,1,2)	5.732	74.56	35.585	33.4	1.643	54.93	20.54	58.64
	Equiv. Refl.: (-4,3,-2)								

Ei =	5.947	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(3,1,-2)	5.732	74.56	35.583	33.4	1.643	54.93	20.54	58.64
	Equiv. Refl.: (3,-4,2)								
Quartz	(1,3,2)	5.732	74.56	35.579	33.4	1.643	54.92	20.54	58.63
Quartz	(1,-4,-2)	5.732	74.56	35.577	33.4	1.643	54.92	20.54	58.63
Sapph	(0,2,10)	5.642	71.58	34.292	32.2	1.981	63.71	24.76	68.36
	Equiv. Refl.: (0,-2,-10), (2,0,-10), (2,-2,10), (-2,0,10), (-2,2,-10)								
Quartz	(-1,1,5)	5.917	84.27	30.866	34.9	0.597	20.86	7.46	22.15
Quartz	(0,1,-5)	5.917	84.27	30.863	34.9	0.597	20.86	7.46	22.15
	Equiv. Refl.: (1,-1,-5)								
Quartz	(0,-1,5)	5.917	84.27	30.862	34.9	0.597	20.86	7.46	22.15
Quartz	(-1,0,-5)	5.917	84.27	30.86	34.9	0.597	20.85	7.46	22.15
Quartz	(1,0,5)	5.917	84.27	30.855	34.9	0.597	20.85	7.46	22.15
Quartz	(0,4,1)	5.94	87.17	29.306	42.2	0.294	12.4	3.68	12.93
	Equiv. Refl.: (0,-4,-1)								
Quartz	(4,0,-1)	5.94	87.17	29.275	42.1	0.294	12.39	3.68	12.92
	Equiv. Refl.: (4,-4,1)								
Quartz	(-4,0,1)	5.94	87.17	29.274	42.1	0.294	12.39	3.68	12.92
Quartz	(-4,4,-1)	5.94	87.17	29.273	42.1	0.294	12.39	3.68	12.92
Sapph	(1,3,4)	5.75	75.23	29.18	29.2	1.568	45.78	19.6	49.8
	Equiv. Refl.: (1,-4,-4), (3,1,-4), (3,-4,4), (4,-1,-4), (4,-3,4), (-1,4,4), (-1,-3,-4), (-3,4,-4), (-3,-1,4), (-4,1,4), (-4,3,-4)								
Quartz	(3,-4,-2)	5.732	74.56	23.123	21.6	1.643	35.44	20.54	40.96
	Equiv. Refl.: (-4,1,-2)								
Quartz	(-4,3,2)	5.732	74.56	23.122	21.6	1.643	35.43	20.54	40.95
Quartz	(3,1,2)	5.732	74.56	23.121	21.6	1.643	35.43	20.54	40.95
Quartz	(1,3,-2)	5.732	74.56	23.113	21.6	1.643	35.42	20.54	40.94
Quartz	(1,-4,2)	5.732	74.56	23.112	21.6	1.643	35.42	20.54	40.94
Quartz	(0,4,0)	5.828	78.52	21.522	22.6	1.208	27.34	15.1	31.23
	Equiv. Refl.: (0,-4,0), (4,0,0), (4,-4,0), (-4,0,0), (-4,4,0)								
Quartz	(-3,4,2)	5.732	74.56	20.144	21.6	1.643	35.44	20.54	40.96
Quartz	(4,-1,2)	5.732	74.56	20.143	21.6	1.643	35.43	20.54	40.96
Quartz	(4,-3,-2)	5.732	74.56	20.142	21.6	1.643	35.43	20.54	40.95
	Equiv. Refl.: (-3,-1,-2)								
Quartz	(-1,-3,2)	5.732	74.56	20.134	21.6	1.643	35.42	20.54	40.94
Quartz	(-1,4,-2)	5.732	74.56	20.133	21.6	1.643	35.42	20.54	40.94
LiNbO3	(1,3,7)	5.91	83.64	15.737	38.6	0.662	25.57	8.28	26.88
	Equiv. Refl.: (1,-4,-7), (3,1,-7), (3,-4,7), (4,-1,-7), (4,-3,7), (-1,4,7), (-1,-3,-7), (-3,4,-7), (-3,-1,7), (-4,1,7), (-4,3,-7)								
Sapph	(1,3,-5)	5.926	85.19	12.227	22.4	0.501	11.19	6.26	12.83
	Equiv. Refl.: (1,-4,5), (3,1,5), (3,-4,-5), (4,-1,5), (4,-3,-5), (-1,4,-5), (-1,-3,5), (-3,4,5), (-3,-1,-5), (-4,1,-5), (-4,3,5)								

Ei =	6.539	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(1,3,5)	6.483	82.48	99.8	101.5	0.864	87.63	10.79	88.29
Ge	(0,4,4)	6.199	71.43	70.1	65	2.196	142.67	27.45	145.28
Si	(0,4,4)	6.457	80.92	65	59	1.046	61.72	13.07	63.08
LiNbO3	(0,-1,-14)	6.413	78.74	68.9	69.2	1.302	90.13	16.28	91.59
	Equiv. Refl.: (1,0,-14), (-1,1,-14)								
LiNbO3	(2,3,-4)	6.319	75.11	68.6	66.7	1.739	115.98	21.73	118
	Equiv. Refl.: (3,-5,-4), (5,-3,-4), (-2,5,-4), (-3,-2,-4), (-5,2,-4)								
LiNbO3	(2,-5,4)	6.319	75.11	67.5	66.7	1.739	115.98	21.73	118
	Equiv. Refl.: (3,2,4), (5,-2,4), (-2,-3,4), (-3,5,4), (-5,3,4)								
LiNbO3	(0,1,14)	6.413	78.74	65.6	69.2	1.302	90.13	16.28	91.59
	Equiv. Refl.: (1,-1,14), (-1,0,14)								
LiNbO3	(1,-5,0)	6.372	77.02	50.1	52.9	1.507	79.73	18.83	81.93
	Equiv. Refl.: (4,1,0), (5,-1,0), (-1,-4,0), (-4,5,0), (-5,4,0)								
LiNbO3	(1,4,0)	6.372	77.02	49.5	52.9	1.507	79.73	18.83	81.93
	Equiv. Refl.: (4,-5,0), (5,-4,0), (-1,5,0), (-4,-1,0), (-5,1,0)								
LiNbO3	(1,-4,8)	6.159	70.37	40.7	39.6	2.332	92.32	29.15	96.81
	Equiv. Refl.: (3,1,8), (4,-1,8), (-1,-3,8), (-3,4,8), (-4,3,8)								
Quartz	(5,-2,-1)	6.454	80.73	39.5	35.5	1.067	37.88	13.34	40.16
	Equiv. Refl.: (5,-3,1), (-2,5,1), (-2,-3,-1), (-3,5,-1), (-3,-2,1)								
Quartz	(2,3,1)	6.454	80.73	37.8	35.5	1.067	37.88	13.34	40.16
	Equiv. Refl.: (2,-5,-1), (3,2,-1), (3,-5,1), (-5,2,1), (-5,3,-1)								
LiNbO3	(1,3,-8)	6.159	70.37	35.2	39.6	2.332	92.32	29.15	96.81
	Equiv. Refl.: (3,-4,-8), (4,-3,-8), (-1,4,-8), (-3,-1,-8), (-4,1,-8)								
Sapph	(1,2,-10)	6.215	71.88	30.3	27.4	2.14	58.71	26.74	64.52
	Equiv. Refl.: (1,-3,10), (2,1,10), (2,-3,-10), (3,-1,10), (3,-2,-10), (-1,3,-10), (-1,-2,10), (-2,3,10), (-2,-1,-10), (-3,1,-10), (-3,2,10)								
Quartz	(2,3,0)	6.351	76.22	24.4	22.6	1.603	36.28	20.04	41.45
	Equiv. Refl.: (2,-5,0), (3,2,0), (3,-5,0), (-5,2,0), (-5,3,0)								
Quartz	(5,-2,0)	6.351	76.22	24.3	22.6	1.603	36.28	20.04	41.45
	Equiv. Refl.: (5,-3,0), (-2,5,0), (-2,-3,0), (-3,5,0), (-3,-2,0)								
Quartz	(2,-1,5)	6.266	73.38	19.3	17.3	1.952	33.78	24.4	41.67
	Equiv. Refl.: (2,-1,-5)								
Quartz	(-1,2,5)	6.266	73.38	19.2	17.3	1.952	33.77	24.4	41.66
	Equiv. Refl.: (-1,2,-5), (-1,-1,5), (-1,-1,-5)								
Quartz	(1,1,5)	6.266	73.38	17.6	17.3	1.952	33.77	24.4	41.67
	Equiv. Refl.: (1,1,-5), (1,-2,5), (1,-2,-5), (-2,1,5), (-2,1,-5)								
Sapph	(0,4,-4)	6.313	74.9	14.4	15.2	1.764	26.76	22.05	34.68
	Equiv. Refl.: (0,-4,4), (4,0,4), (4,-4,-4), (-4,0,-4), (-4,4,4)								
LiNbO3	(1,4,3)	6.512	84.76	12	30.9	0.599	18.55	7.49	20
	Equiv. Refl.: (1,4,-3), (1,-5,3), (1,-5,-3), (4,1,3), (4,1,-3), (4,-5,3), (4,-5,-3), (5,-1,3), (5,-1,-3), (5,-4,3), (5,-4,-3), (-1,5,3), (-1,5,-3), (-1,-4,3), (-1,-4,-3), (-4,5,3), (-4,5,-3), (-4,-1,3), (-4,-1,-3), (-5,1,3), (-5,1,-3), (-5,4,3), (-5,4,-3)								
Quartz	(0,4,2)	6.263	73.3	11.3	11.7	1.962	22.98	24.52	33.6
	Equiv. Refl.: (0,-4,-2), (4,0,-2), (4,-4,2), (-4,0,2), (-4,4,-2)								
LiNbO3	(2,2,9)	6.277	73.72	8.8	16.1	1.91	30.8	23.87	38.96
	Equiv. Refl.: (2,2,-9), (2,-4,9), (2,-4,-9), (4,-2,9), (4,-2,-9), (-2,4,9), (-2,4,-9), (-2,-2,9), (-2,-2,-9), (-4,2,9), (-4,2,-9)								
Sapph	(1,1,12)	6.292	74.21	8	9.9	1.849	18.33	23.11	29.5
	Equiv. Refl.: (1,1,-12), (1,-2,12), (1,-2,-12), (2,-1,12), (2,-1,-12), (-1,2,12), (-1,2,-12), (-1,-1,12), (-1,-1,-12), (-2,1,12), (-2,1,-12)								

Ei =	6.539	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(0,3,-4)	6.337	75.72	7.7	9.1	1.665	15.1	20.81	25.71
	Equiv. Refl.: (0,-3,4), (3,0,4), (3,-3,-4), (-3,0,-4), (-3,3,4)								
Quartz	(4,-1,-3)	6.28	73.82	6.1	7.3	1.898	13.76	23.72	27.42
	Equiv. Refl.: (4,-3,3), (-1,4,3), (-1,-3,-3), (-3,4,-3), (-3,-1,3)								
Quartz	(1,3,-3)	6.28	73.82	6	6.5	1.898	12.34	23.72	26.74
	Equiv. Refl.: (1,-4,3), (3,1,3), (3,-4,-3), (-4,1,-3), (-4,3,3)								
Quartz	(1,3,3)	6.28	73.82	5.9	7.3	1.898	13.76	23.72	27.42
	Equiv. Refl.: (1,-4,-3), (3,1,-3), (3,-4,3), (-4,1,3), (-4,3,-3)								
Quartz	(0,2,-5)	6.433	79.67	4.8	7.2	1.192	8.62	14.9	17.22
	Equiv. Refl.: (0,-2,5)								
Quartz	(0,2,5)	6.433	79.67	4.7	7.1	1.192	8.52	14.9	17.17
	Equiv. Refl.: (0,-2,-5), (2,0,5), (2,0,-5), (2,-2,5), (2,-2,-5), (-2,0,5), (-2,0,-5), (-2,2,5), (-2,2,-5)								
Quartz	(4,-1,3)	6.28	73.82	4.3	6.5	1.898	12.33	23.72	26.73
	Equiv. Refl.: (4,-3,-3), (-1,4,-3), (-1,-3,3), (-3,4,3), (-3,-1,-3)								
Sapph	(1,3,7)	6.371	76.97	3.5	6.5	1.513	9.77	18.91	21.29
	Equiv. Refl.: (1,-4,-7), (3,1,-7), (3,-4,7), (4,-1,-7), (4,-3,7), (-1,4,7), (-1,-3,-7), (-3,4,-7), (-3,-1,7), (-4,1,7), (-4,3,-7)								
Quartz	(0,3,4)	6.337	75.72	2.9	4.8	1.665	7.92	20.81	22.27
	Equiv. Refl.: (0,-3,-4), (3,0,-4), (3,-3,4), (-3,0,4), (-3,3,-4)								
LiNbO3	(2,3,5)	6.46	81.1	1.8	9.2	1.024	9.38	12.8	15.87
	Equiv. Refl.: (2,-5,-5), (3,2,-5), (3,-5,5), (5,-2,-5), (5,-3,5), (-2,5,5), (-2,-3,-5), (-3,5,-5), (-3,-2,5), (-5,2,5), (-5,3,-5)								
Quartz	(0,4,-2)	6.263	73.3	0.9	2.3	1.962	4.45	24.52	24.92
	Equiv. Refl.: (0,-4,2), (4,0,2), (4,-4,-2), (-4,0,-2), (-4,4,2)								

Ei =	5.899	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(3,3,3)	5.694	74.84	72.8796	74.54	1.5978	119.11	19.97	120.77
	Equiv. Refl.: (1,5,1), (1,1,5), (5,1,1)								
Si	(2,2,4)	5.592	71.43	46.6722	42.73	1.9816	84.67	24.77	88.22
	Equiv. Refl.: (2,4,2), (4,2,2)								
LiNbO3	(1,-2,12)	5.882	85.62	215.835	210.8	0.451	95.14	5.64	95.3
	Equiv. Refl.: (2,-1,12)								
LiNbO3	(1,1,12)	5.882	85.62	215.834	210.8	0.451	95.14	5.64	95.3
	Equiv. Refl.: (-1,2,12), (-1,-1,12), (-2,1,12)								
LiNbO3	(1,1,-12)	5.882	85.62	175.406	210.8	0.451	95.14	5.64	95.3
	Equiv. Refl.: (1,-2,-12), (2,-1,-12), (-1,2,-12), (-1,-1,-12), (-2,1,-12)								
LiNbO3	(0,-4,4)	5.842	82.06	91.865	101.4	0.822	83.36	10.28	83.99
	Equiv. Refl.: (4,0,4)								
LiNbO3	(-4,4,4)	5.842	82.06	91.864	101.4	0.822	83.36	10.28	83.99
LiNbO3	(0,4,-4)	5.842	82.06	89.01	101.4	0.822	83.36	10.28	83.99
	Equiv. Refl.: (-4,0,-4)								
LiNbO3	(4,-4,-4)	5.842	82.06	89.009	101.4	0.822	83.36	10.28	83.99
LiNbO3	(1,2,-10)	5.791	79	86.372	90.1	1.147	103.28	14.34	104.27
	Equiv. Refl.: (-1,3,-10), (-2,-1,-10), (-3,1,-10)								
LiNbO3	(2,-3,-10)	5.791	79	86.371	90.1	1.147	103.28	14.34	104.27
	Equiv. Refl.: (3,-2,-10)								
LiNbO3	(1,-3,10)	5.791	79	83.003	90.1	1.147	103.28	14.34	104.27
	Equiv. Refl.: (2,1,10), (3,-1,10), (-1,-2,10)								
LiNbO3	(-2,3,10)	5.791	79	83.002	90.1	1.147	103.28	14.34	104.27
	Equiv. Refl.: (-3,2,10)								
LiNbO3	(0,-4,-2)	5.633	72.74	68.707	67.8	1.833	124.26	22.91	126.35
	Equiv. Refl.: (4,0,-2), (-4,4,-2)								
LiNbO3	(0,4,2)	5.633	72.74	62.908	67.8	1.833	124.26	22.91	126.35
	Equiv. Refl.: (4,-4,2), (-4,0,2)								
Sapph	(0,0,12)	5.727	76.15	60.187	54.8	1.454	79.63	18.18	81.68
	Equiv. Refl.: (0,0,-12)								
Quartz	(4,-1,-2)	5.732	76.35	42.556	38	1.433	54.5	17.91	57.37
	Equiv. Refl.: (4,-3,2)								
Quartz	(-3,4,-2)	5.732	76.35	42.552	38	1.433	54.5	17.91	57.37
	Equiv. Refl.: (-3,-1,2)								
Quartz	(-1,-3,-2)	5.732	76.35	42.548	38	1.433	54.49	17.91	57.36
Quartz	(-1,4,2)	5.732	76.35	42.545	38	1.433	54.49	17.91	57.36
Quartz	(-4,1,2)	5.732	76.35	40.363	38	1.433	54.5	17.91	57.37
	Equiv. Refl.: (-4,3,-2)								
Quartz	(3,1,-2)	5.732	76.35	40.361	38	1.433	54.5	17.91	57.37
	Equiv. Refl.: (3,-4,2)								
Quartz	(1,3,2)	5.732	76.35	40.356	38	1.433	54.49	17.91	57.36
Quartz	(1,-4,-2)	5.732	76.35	40.354	38	1.433	54.49	17.91	57.36
Sapph	(0,2,10)	5.642	73.03	37.35	35.1	1.8	63.23	22.5	67.11
	Equiv. Refl.: (0,-2,-10), (2,0,-10), (2,-2,10), (-2,0,10), (-2,2,-10)								
Sapph	(1,3,4)	5.75	77.11	33.53	33.7	1.35	45.43	16.87	48.47
	Equiv. Refl.: (1,-4,-4), (3,1,-4), (3,-4,4), (4,-1,-4), (4,-3,4), (-1,4,4), (-1,-3,-4), (-3,4,-4), (-3,-1,4), (-4,1,4), (-4,3,-4)								

Ei =	5.899	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(0,4,0)	5.828	81.1	27.814	29.4	0.924	27.13	11.55	29.49
	Equiv. Refl.: (0,-4,0), (4,0,0), (4,-4,0), (-4,0,0), (-4,4,0)								
Quartz	(3,-4,-2)	5.732	76.35	26.227	24.5	1.433	35.16	17.91	39.46
	Equiv. Refl.: (-4,1,-2)								
Quartz	(-4,3,2)	5.732	76.35	26.226	24.5	1.433	35.16	17.91	39.46
Quartz	(3,1,2)	5.732	76.35	26.225	24.5	1.433	35.16	17.91	39.46
Quartz	(1,3,-2)	5.732	76.35	26.215	24.5	1.433	35.15	17.91	39.45
Quartz	(1,-4,2)	5.732	76.35	26.214	24.5	1.433	35.14	17.91	39.45
Quartz	(4,-1,2)	5.732	76.35	22.802	24.5	1.433	35.16	17.91	39.46
	Equiv. Refl.: (-3,4,2)								
Quartz	(4,-3,-2)	5.732	76.35	22.801	24.5	1.433	35.16	17.91	39.46
Quartz	(-3,-1,-2)	5.732	76.35	22.8	24.5	1.433	35.16	17.91	39.46
Quartz	(-1,-3,2)	5.732	76.35	22.791	24.5	1.433	35.15	17.91	39.45
Quartz	(-1,4,-2)	5.732	76.35	22.79	24.5	1.433	35.14	17.91	39.45
Quartz	(0,3,-3)	5.563	70.57	12.955	14	2.081	29.09	26.02	39.03
	Equiv. Refl.: (0,-3,3)								
Quartz	(3,0,3)	5.563	70.57	12.954	14	2.081	29.09	26.02	39.02
	Equiv. Refl.: (-3,0,-3)								
Quartz	(3,-3,-3)	5.563	70.57	12.953	14	2.081	29.09	26.02	39.02
	Equiv. Refl.: (-3,3,3)								
Quartz	(0,-3,-3)	5.563	70.57	7.71	9.5	2.081	19.69	26.02	32.62
Quartz	(0,3,3)	5.563	70.57	7.709	9.5	2.081	19.69	26.02	32.62
Quartz	(3,0,-3)	5.563	70.57	7.692	9.4	2.081	19.65	26.02	32.61
	Equiv. Refl.: (-3,0,3)								
Quartz	(3,-3,3)	5.563	70.57	7.691	9.4	2.081	19.65	26.02	32.6
	Equiv. Refl.: (-3,3,-3)								
Quartz	(-2,4,2)	5.544	70.02	6.298	7.8	2.144	16.82	26.81	31.64
	Equiv. Refl.: (-2,-2,-2)								
Quartz	(-2,4,-2)	5.544	70.02	6.297	7.8	2.144	16.81	26.81	31.64
Quartz	(-2,-2,2)	5.544	70.02	6.295	7.8	2.144	16.81	26.81	31.64
Quartz	(4,-2,2)	5.544	70.02	6.292	7.8	2.144	16.8	26.81	31.64
Quartz	(4,-2,-2)	5.544	70.02	6.291	7.8	2.144	16.8	26.81	31.64
Quartz	(2,2,2)	5.544	70.02	5.699	7.8	2.144	16.82	26.81	31.64
	Equiv. Refl.: (2,-4,2), (2,-4,-2)								
Quartz	(2,2,-2)	5.544	70.02	5.697	7.8	2.144	16.81	26.81	31.64
Quartz	(-4,2,-2)	5.544	70.02	5.693	7.8	2.144	16.8	26.81	31.64
Quartz	(-4,2,2)	5.544	70.02	5.692	7.8	2.144	16.8	26.81	31.64

Ei =	5.888	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(3,3,3)	5.694	75.25	74.8937	76.68	1.5507	118.9	19.38	120.47
	Equiv. Refl.: (1,5,1), (1,1,5), (5,1,1)								
Si	(2,2,4)	5.592	71.75	47.5324	43.54	1.9413	84.52	24.27	87.93
	Equiv. Refl.: (2,4,2), (4,2,2)								
LiNbO3	(1,-2,12)	5.882	87.37	359.592	351.2	0.27	94.96	3.38	95.02
	Equiv. Refl.: (2,-1,12)								
LiNbO3	(1,1,12)	5.882	87.37	359.591	351.2	0.27	94.96	3.38	95.02
	Equiv. Refl.: (-1,2,12), (-1,-1,12), (-2,1,12)								
LiNbO3	(-1,2,-12)	5.882	87.37	292.011	351.2	0.27	94.96	3.38	95.02
	Equiv. Refl.: (-2,1,-12)								
LiNbO3	(1,1,-12)	5.882	87.37	292.01	351.2	0.27	94.96	3.38	95.02
	Equiv. Refl.: (1,-2,-12), (2,-1,-12), (-1,-1,-12)								
LiNbO3	(0,-4,4)	5.842	82.87	102.363	113	0.736	83.21	9.2	83.71
	Equiv. Refl.: (4,0,4)								
LiNbO3	(-4,4,4)	5.842	82.87	102.362	113	0.736	83.21	9.2	83.71
LiNbO3	(0,4,-4)	5.842	82.87	99.144	113	0.736	83.21	9.2	83.71
	Equiv. Refl.: (4,-4,-4), (-4,0,-4)								
LiNbO3	(1,2,-10)	5.791	79.56	91.096	95.1	1.085	103.09	13.56	103.98
	Equiv. Refl.: (2,-3,-10), (3,-2,-10), (-1,3,-10), (-2,-1,-10), (-3,1,-10)								
LiNbO3	(1,-3,10)	5.791	79.56	87.532	95.1	1.085	103.09	13.56	103.98
	Equiv. Refl.: (2,1,10), (3,-1,10), (-1,-2,10), (-2,3,10), (-3,2,10)								
LiNbO3	(0,-4,-2)	5.633	73.09	70.169	69.3	1.79	124.03	22.38	126.03
	Equiv. Refl.: (4,0,-2), (-4,4,-2)								
LiNbO3	(0,4,2)	5.633	73.09	64.23	69.3	1.79	124.03	22.38	126.03
	Equiv. Refl.: (4,-4,2), (-4,0,2)								
Sapph	(0,0,12)	5.727	76.59	62.214	56.6	1.404	79.49	17.55	81.4
	Equiv. Refl.: (0,0,-12)								
Quartz	(4,-1,-2)	5.732	76.79	44.035	39.4	1.382	54.4	17.27	57.08
	Equiv. Refl.: (4,-3,2)								
Quartz	(-3,4,-2)	5.732	76.79	44.031	39.4	1.382	54.4	17.27	57.08
	Equiv. Refl.: (-3,-1,2)								
Quartz	(-1,-3,-2)	5.732	76.79	44.027	39.4	1.382	54.4	17.27	57.07
Quartz	(-1,4,2)	5.732	76.79	44.024	39.4	1.382	54.39	17.27	57.07
Quartz	(-4,1,2)	5.732	76.79	41.759	39.4	1.382	54.4	17.27	57.08
	Equiv. Refl.: (-4,3,-2)								
Quartz	(3,1,-2)	5.732	76.79	41.757	39.4	1.382	54.4	17.27	57.08
	Equiv. Refl.: (3,-4,2)								
Quartz	(1,3,2)	5.732	76.79	41.752	39.4	1.382	54.4	17.27	57.07
Quartz	(1,-4,-2)	5.732	76.79	41.749	39.4	1.382	54.39	17.27	57.07
Sapph	(0,2,10)	5.642	73.38	38.174	35.9	1.757	63.11	21.96	66.83
	Equiv. Refl.: (0,-2,-10), (2,0,-10), (2,-2,10), (-2,0,10), (-2,2,-10)								
Sapph	(1,3,4)	5.75	77.59	34.836	35	1.296	45.35	16.19	48.16
	Equiv. Refl.: (1,-4,-4), (3,1,-4), (3,-4,4), (4,-1,-4), (4,-3,4), (-1,4,4), (-1,-3,-4), (-3,4,-4), (-3,-1,4), (-4,1,4), (-4,3,-4)								
Quartz	(0,4,0)	5.828	81.81	30.242	32	0.847	27.08	10.59	29.08
	Equiv. Refl.: (0,-4,0), (4,0,0), (4,-4,0), (-4,0,0), (-4,4,0)								
Quartz	(3,-4,-2)	5.732	76.79	27.133	25.4	1.382	35.1	17.27	39.11
	Equiv. Refl.: (-4,1,-2)								

Ei = Cryst	5.888 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(3,1,2)	5.732	76.79	27.132	25.4	1.382	35.09	17.27	39.11
	Equiv. Refl.: (-4,3,2)								
Quartz	(1,3,-2)	5.732	76.79	27.122	25.4	1.382	35.08	17.27	39.1
Quartz	(1,-4,2)	5.732	76.79	27.12	25.4	1.382	35.08	17.27	39.1
Quartz	(4,-1,2)	5.732	76.79	23.579	25.4	1.382	35.09	17.27	39.11
	Equiv. Refl.: (-3,4,2)								
Quartz	(4,-3,-2)	5.732	76.79	23.578	25.4	1.382	35.09	17.27	39.11
	Equiv. Refl.: (-3,-1,-2)								
Quartz	(-1,-3,2)	5.732	76.79	23.568	25.4	1.382	35.08	17.27	39.1
Quartz	(-1,4,-2)	5.732	76.79	23.567	25.4	1.382	35.08	17.27	39.1
Quartz	(0,3,-3)	5.563	70.87	13.165	14.2	2.042	29.04	25.53	38.66
	Equiv. Refl.: (0,-3,3)								
Quartz	(3,0,3)	5.563	70.87	13.164	14.2	2.042	29.04	25.53	38.66
	Equiv. Refl.: (-3,0,-3)								
Quartz	(3,-3,-3)	5.563	70.87	13.163	14.2	2.042	29.03	25.53	38.66
	Equiv. Refl.: (-3,3,3)								
Quartz	(0,-3,-3)	5.563	70.87	7.831	9.6	2.042	19.65	25.53	32.21
Quartz	(0,3,3)	5.563	70.87	7.83	9.6	2.042	19.65	25.53	32.21
Quartz	(3,0,-3)	5.563	70.87	7.813	9.6	2.042	19.62	25.53	32.19
	Equiv. Refl.: (-3,0,3)								
Quartz	(3,-3,3)	5.563	70.87	7.812	9.6	2.042	19.62	25.53	32.19
	Equiv. Refl.: (-3,3,-3)								
Quartz	(-2,4,2)	5.544	70.32	6.391	8	2.106	16.78	26.33	31.22
	Equiv. Refl.: (-2,-2,-2)								
Quartz	(-2,4,-2)	5.544	70.32	6.39	8	2.106	16.78	26.33	31.22
Quartz	(-2,-2,2)	5.544	70.32	6.388	8	2.106	16.78	26.33	31.22
Quartz	(4,-2,2)	5.544	70.32	6.385	8	2.106	16.77	26.33	31.21
	Equiv. Refl.: (4,-2,-2)								
Quartz	(2,2,2)	5.544	70.32	5.78	8	2.106	16.78	26.33	31.22
	Equiv. Refl.: (2,-4,2), (2,-4,-2)								
Quartz	(2,2,-2)	5.544	70.32	5.779	8	2.106	16.78	26.33	31.22
Quartz	(-4,2,2)	5.544	70.32	5.774	8	2.106	16.77	26.33	31.21
	Equiv. Refl.: (-4,2,-2)								

Ei = Cryst	6.49 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Ge	(1,3,5) Equiv. Refl.: (1,5,3), (3,1,5), (3,5,1), (5,1,3), (5,3,1)	6.483	87.29	277.533	282.96	0.3076	87.05	3.85	87.14
Si	(0,4,4) Equiv. Refl.: (4,0,4), (4,4,0)	6.457	84.22	102.5381	93.25	0.6571	61.28	8.21	61.82
Ge	(0,4,4) Equiv. Refl.: (4,0,4), (4,4,0)	6.199	72.77	75.7699	70.4	2.013	141.71	25.16	143.93
LiNbO3	(0,-1,-14) Equiv. Refl.: (1,0,-14), (-1,1,-14)	6.413	81.17	88.164	88.7	1.009	89.48	12.61	90.36
LiNbO3	(0,1,14) Equiv. Refl.: (1,-1,14), (-1,0,14)	6.413	81.17	83.902	88.7	1.009	89.48	12.61	90.36
LiNbO3	(2,3,-4) Equiv. Refl.: (3,-5,-4), (5,-3,-4), (-2,5,-4), (-3,-2,-4), (-5,2,-4)	6.319	76.83	77.804	75.8	1.518	115.14	18.98	116.7
LiNbO3	(2,-5,4) Equiv. Refl.: (3,2,4), (5,-2,4), (-2,-3,4), (-3,5,4), (-5,3,4)	6.319	76.83	76.553	75.8	1.518	115.14	18.98	116.7
Quartz	(5,-2,-1) Equiv. Refl.: (5,-3,1), (-2,-3,-1)	6.454	83.93	60.523	54.5	0.69	37.61	8.63	38.58
Quartz	(-2,5,1) Equiv. Refl.: (-3,5,-1), (-3,-2,1)	6.454	83.93	60.522	54.5	0.69	37.6	8.63	38.58
LiNbO3	(1,-5,0) Equiv. Refl.: (4,1,0), (5,-1,0), (-1,-4,0), (-4,5,0), (-5,4,0)	6.372	79.06	59.501	63.1	1.255	79.15	15.68	80.69
LiNbO3	(1,4,0) Equiv. Refl.: (4,-5,0), (5,-4,0), (-1,5,0), (-4,-1,0), (-5,1,0)	6.372	79.06	58.787	63.1	1.255	79.15	15.68	80.69
Quartz	(3,2,-1) Equiv. Refl.: (3,-5,1), (-5,2,1), (-5,3,-1)	6.454	83.93	57.875	54.5	0.69	37.6	8.63	38.58
Quartz	(2,3,1)	6.454	83.93	57.874	54.5	0.69	37.61	8.63	38.58
Quartz	(2,-5,-1)	6.454	83.93	57.873	54.5	0.69	37.6	8.63	38.58
LiNbO3	(1,-4,8) Equiv. Refl.: (3,1,8), (4,-1,8), (-1,-3,8), (-3,4,8), (-4,3,8)	6.159	71.62	43.637	42.5	2.156	91.65	26.95	95.53
LiNbO3	(1,3,-8) Equiv. Refl.: (3,-4,-8), (4,-3,-8), (-1,4,-8), (-3,-1,-8), (-4,1,-8)	6.159	71.62	37.679	42.5	2.156	91.65	26.95	95.53
Sapph	(1,2,-10) Equiv. Refl.: (1,-3,10), (2,1,10), (2,-3,-10), (3,-1,10), (3,-2,-10), (-1,3,-10), (-1,-2,10), (-2,3,10), (-2,-1,-10), (-3,1,-10), (-3,2,10)	6.215	73.25	32.842	29.9	1.953	58.3	24.41	63.2
LiNbO3	(2,3,2) Equiv. Refl.: (3,-5,2), (5,-3,2), (-2,5,2), (-3,-2,2), (-5,2,2)	6.127	70.74	29.016	31.2	2.268	70.75	28.35	76.22
Quartz	(2,3,0) Equiv. Refl.: (2,-5,0), (3,2,0), (3,-5,0), (-5,2,0), (-5,3,0)	6.351	78.11	28.078	26.4	1.366	36.02	17.07	39.86
Quartz	(5,-2,0) Equiv. Refl.: (5,-3,0), (-2,5,0), (-2,-3,0), (-3,5,0), (-3,-2,0)	6.351	78.11	27.928	26.4	1.366	36.02	17.07	39.86
LiNbO3	(2,-5,-2) Equiv. Refl.: (3,2,-2), (5,-2,-2), (-2,-3,-2), (-3,5,-2), (-5,3,-2)	6.127	70.74	26.844	31.2	2.268	70.75	28.35	76.22
Quartz	(2,-1,-5)	6.266	74.89	21.253	19.1	1.752	33.54	21.9	40.06
Quartz	(2,-1,5)	6.266	74.89	21.252	19.1	1.752	33.54	21.9	40.05
Quartz	(-1,-1,-5)	6.266	74.89	21.245	19.1	1.752	33.53	21.9	40.05
Quartz	(-1,2,5)	6.266	74.89	21.24	19.1	1.752	33.52	21.9	40.04
Quartz	(-1,2,-5) Equiv. Refl.: (-1,-1,5)	6.266	74.89	21.231	19.1	1.752	33.51	21.9	40.03
Quartz	(-2,1,5)	6.266	74.89	19.431	19.1	1.752	33.54	21.9	40.06

Ei = Cryst	6.49 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(-2,1,-5)	6.266	74.89	19.43	19.1	1.752	33.54	21.9	40.05
Quartz	(1,1,5)	6.266	74.89	19.424	19.1	1.752	33.53	21.9	40.05
Quartz	(1,-2,-5)	6.266	74.89	19.419	19.1	1.752	33.52	21.9	40.04
Quartz	(1,1,-5)	6.266	74.89	19.413	19.1	1.752	33.51	21.9	40.03
Equiv. Refl.: (1,-2,5)									
Quartz	(2,2,3)	6.109	70.26	17.299	15.5	2.329	36.08	29.11	46.36
Equiv. Refl.: (2,-4,-3)									
Quartz	(-4,2,-3)	6.109	70.26	17.298	15.5	2.329	36.08	29.11	46.36
Quartz	(-4,2,3)	6.109	70.26	17.296	15.5	2.329	36.08	29.11	46.36
Quartz	(2,2,-3)	6.109	70.26	17.294	15.5	2.329	36.07	29.11	46.36
Equiv. Refl.: (2,-4,3)									
Quartz	(4,-2,3)	6.109	70.26	16.298	15.5	2.329	36.08	29.11	46.36
Quartz	(4,-2,-3)	6.109	70.26	16.297	15.5	2.329	36.08	29.11	46.36
Equiv. Refl.: (-2,4,3)									
Quartz	(-2,-2,-3)	6.109	70.26	16.296	15.5	2.329	36.08	29.11	46.36
Quartz	(-2,4,-3)	6.109	70.26	16.292	15.5	2.329	36.07	29.11	46.36
Equiv. Refl.: (-2,-2,3)									
Sapph	(0,4,-4)	6.313	76.6	16.23	17.2	1.546	26.58	19.33	32.86
Equiv. Refl.: (0,-4,4), (4,0,4), (4,-4,-4), (-4,0,-4), (-4,4,4)									
Quartz	(0,4,2)	6.263	74.81	12.416	12.9	1.762	22.81	22.03	31.71
Equiv. Refl.: (0,-4,-2), (4,0,-2)									
Quartz	(-4,0,2)	6.263	74.81	12.415	12.9	1.762	22.81	22.03	31.71
Quartz	(4,-4,2)	6.263	74.81	12.414	12.9	1.762	22.81	22.03	31.71
Equiv. Refl.: (-4,4,-2)									
LiNbO3	(2,2,9)	6.277	75.27	9.615	17.9	1.706	30.57	21.32	37.27
Equiv. Refl.: (2,2,-9), (2,-4,9), (2,-4,-9), (4,-2,9), (4,-2,-9), (-2,4,9), (-2,4,-9), (-2,-2,9), (-2,-2,-9), (-4,2,9), (-4,2,-9)									
Sapph	(1,1,12)	6.292	75.82	8.949	11.1	1.639	18.2	20.49	27.41
Equiv. Refl.: (1,1,-12), (1,-2,12), (1,-2,-12), (2,-1,12), (2,-1,-12), (-1,2,12), (-1,2,-12), (-1,-1,12), (-1,-1,-12), (-2,1,12), (-2,1,-12)									
Quartz	(0,3,-4)	6.337	77.53	8.82	10.4	1.435	14.99	17.94	23.38
Equiv. Refl.: (0,-3,4)									
Quartz	(-3,0,-4)	6.337	77.53	8.802	10.4	1.435	14.97	17.94	23.37
Quartz	(3,0,4)	6.337	77.53	8.801	10.4	1.435	14.97	17.94	23.37
Quartz	(-3,3,4)	6.337	77.53	8.799	10.4	1.435	14.97	17.94	23.37
Quartz	(3,-3,-4)	6.337	77.53	8.798	10.4	1.435	14.97	17.94	23.37
Quartz	(-3,4,-3)	6.28	75.38	6.72	8.1	1.693	13.67	21.16	25.19
Equiv. Refl.: (-3,-1,3)									
Quartz	(4,-1,-3)	6.28	75.38	6.719	8.1	1.693	13.66	21.16	25.19
Quartz	(4,-3,3)	6.28	75.38	6.717	8.1	1.693	13.66	21.16	25.19
Quartz	(-1,4,3)	6.28	75.38	6.716	8.1	1.693	13.66	21.16	25.19
Equiv. Refl.: (-1,-3,-3)									
Quartz	(1,3,-3)	6.28	75.38	6.651	7.2	1.693	12.25	21.16	24.45
Quartz	(1,-4,3)	6.28	75.38	6.649	7.2	1.693	12.25	21.16	24.45
Quartz	(-4,1,-3)	6.28	75.38	6.641	7.2	1.693	12.24	21.16	24.45
Quartz	(-4,3,3)	6.28	75.38	6.64	7.2	1.693	12.24	21.16	24.44
Quartz	(3,-4,-3)	6.28	75.38	6.632	7.2	1.693	12.23	21.16	24.44
Quartz	(3,1,3)	6.28	75.38	6.631	7.2	1.693	12.23	21.16	24.44
Quartz	(1,-4,-3)	6.28	75.38	6.495	8.1	1.693	13.66	21.16	25.19
Equiv. Refl.: (3,1,-3), (3,-4,3)									

Ei = Cryst	6.49 Refl (h,k,l)	keV EB [keV]	Θ B [$^\circ$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(1,3,3)	6.28	75.38	6.494	8.1	1.693	13.66	21.16	25.19
	Equiv. Refl.: (-4,1,3)								
Quartz	(-4,3,-3)	6.28	75.38	6.492	8.1	1.693	13.66	21.16	25.19
Quartz	(0,2,-5)	6.433	82.4	6.453	9.9	0.866	8.56	10.83	13.8
Quartz	(0,-2,5)	6.433	82.4	6.452	9.9	0.866	8.56	10.83	13.8
Quartz	(-2,0,-5)	6.433	82.4	6.42	9.8	0.866	8.53	10.83	13.79
Quartz	(2,0,5)	6.433	82.4	6.419	9.8	0.866	8.53	10.83	13.79
Quartz	(-2,2,5)	6.433	82.4	6.417	9.8	0.866	8.53	10.83	13.78
Quartz	(2,-2,-5)	6.433	82.4	6.416	9.8	0.866	8.53	10.83	13.78
Quartz	(-2,0,5)	6.433	82.4	6.41	9.8	0.866	8.48	10.83	13.75
Quartz	(2,0,-5)	6.433	82.4	6.407	9.8	0.866	8.48	10.83	13.75
Quartz	(-2,2,-5)	6.433	82.4	6.406	9.8	0.866	8.47	10.83	13.75
Quartz	(2,-2,5)	6.433	82.4	6.403	9.8	0.866	8.47	10.83	13.75
Quartz	(0,2,5)	6.433	82.4	6.393	9.8	0.866	8.46	10.83	13.74
	Equiv. Refl.: (0,-2,-5)								
Quartz	(-1,-3,3)	6.28	75.38	4.789	7.2	1.693	12.25	21.16	24.45
Quartz	(-1,4,-3)	6.28	75.38	4.787	7.2	1.693	12.25	21.16	24.45
Quartz	(4,-1,3)	6.28	75.38	4.782	7.2	1.693	12.24	21.16	24.45
Quartz	(4,-3,-3)	6.28	75.38	4.781	7.2	1.693	12.24	21.16	24.44
Quartz	(-3,4,3)	6.28	75.38	4.774	7.2	1.693	12.23	21.16	24.44
Quartz	(-3,-1,-3)	6.28	75.38	4.772	7.2	1.693	12.23	21.16	24.44
Sapph	(1,3,7)	6.371	78.99	4.34	7.7	1.262	9.69	15.78	18.52
	Equiv. Refl.: (1,-4,-7), (3,1,-7), (3,-4,7), (4,-1,-7), (4,-3,7), (-1,4,7), (-1,-3,-7), (-3,4,-7), (-3,-1,7), (-4,1,7), (-4,3,-7)								
Quartz	(0,-3,-4)	6.337	77.53	3.274	5.5	1.435	7.87	17.94	19.59
	Equiv. Refl.: (-3,0,4), (-3,3,-4)								
Quartz	(0,3,4)	6.337	77.53	3.273	5.5	1.435	7.87	17.94	19.59
Quartz	(3,0,-4)	6.337	77.53	3.271	5.5	1.435	7.87	17.94	19.59
Quartz	(3,-3,4)	6.337	77.53	3.269	5.5	1.435	7.87	17.94	19.59
LiNbO3	(2,3,5)	6.46	84.51	2.942	14.9	0.624	9.31	7.79	12.14
	Equiv. Refl.: (2,-5,-5), (3,2,-5), (3,-5,5), (5,-2,-5), (5,-3,5), (-2,5,5), (-2,-3,-5), (-3,5,-5), (-3,-2,5), (-5,2,5), (-5,3,-5)								
LiNbO3	(1,2,11)	6.142	71.17	2.834	8.3	2.214	18.39	27.67	33.22
	Equiv. Refl.: (1,-3,-11), (2,1,-11), (2,-3,11), (3,-1,-11), (3,-2,11), (-1,3,11), (-1,-2,-11), (-2,3,-11), (-2,-1,11), (-3,1,11), (-3,2,-11)								
Quartz	(0,4,-2)	6.263	74.81	0.978	2.5	1.762	4.42	22.03	22.47
	Equiv. Refl.: (0,-4,2), (-4,4,2)								
Quartz	(4,0,2)	6.263	74.81	0.977	2.5	1.762	4.42	22.03	22.47
	Equiv. Refl.: (4,-4,-2), (-4,0,-2)								

Ei =	7.112	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(0,2,6)	6.93	77.02	70.7	65.6	1.639	107.47	20.49	109.41
Si	(1,3,5)	6.753	71.71	18.8	17.6	2.35	41.26	29.38	50.65
LiNbO3	(2,-5,-8)	7.038	81.73	84.9	81.3	1.034	84.11	12.92	85.1
	Equiv. Refl.: (3,2,-8), (5,-2,-8), (-2,-3,-8), (-3,5,-8), (-5,3,-8)								
LiNbO3	(2,3,8)	7.038	81.73	79.4	81.3	1.034	84.11	12.92	85.1
	Equiv. Refl.: (3,-5,8), (5,-3,8), (-2,5,8), (-3,-2,8), (-5,2,8)								
LiNbO3	(1,-5,-6)	6.914	76.44	53.2	51.2	1.715	87.73	21.44	90.31
	Equiv. Refl.: (4,1,-6), (5,-1,-6), (-1,-4,-6), (-4,5,-6), (-5,4,-6)								
LiNbO3	(1,4,-6)	6.914	76.44	52.6	50.4	1.715	86.42	21.44	89.04
	Equiv. Refl.: (4,-5,-6), (5,-4,-6), (-1,5,-6), (-4,-1,-6), (-5,1,-6)								
LiNbO3	(1,4,6)	6.914	76.44	50.2	51.2	1.715	87.73	21.44	90.32
	Equiv. Refl.: (4,-5,6), (5,-4,6), (-1,5,6), (-4,-1,6), (-5,1,6)								
LiNbO3	(1,-5,6)	6.914	76.44	49	50.4	1.715	86.42	21.44	89.04
	Equiv. Refl.: (4,1,6), (5,-1,6), (-1,-4,6), (-4,5,6), (-5,4,6)								
LiNbO3	(0,-2,14)	6.85	74.41	46.1	44.2	1.984	87.79	24.8	91.23
	Equiv. Refl.: (2,0,14), (-2,2,14)								
LiNbO3	(0,-3,-12)	6.797	72.88	44.7	41	2.191	89.9	27.39	93.98
	Equiv. Refl.: (3,0,-12), (-3,3,-12)								
LiNbO3	(0,3,-12)	6.797	72.88	43.9	40.3	2.191	88.3	27.39	92.45
	Equiv. Refl.: (3,-3,-12), (-3,0,-12)								
LiNbO3	(0,2,-14)	6.85	74.41	42.9	44.2	1.984	87.79	24.8	91.23
	Equiv. Refl.: (2,-2,-14), (-2,0,-14)								
LiNbO3	(1,-4,-10)	6.718	70.84	41.2	39	2.471	96.33	30.89	101.16
	Equiv. Refl.: (3,1,-10), (4,-1,-10), (-1,-3,-10), (-3,4,-10), (-4,3,-10)								
LiNbO3	(0,3,12)	6.797	72.88	38.1	41	2.191	89.9	27.39	93.98
	Equiv. Refl.: (1,3,10), (3,-3,12), (3,-4,10), (4,-3,10), (-1,4,10), (-3,0,12), (-3,-1,10), (-4,1,10)								
LiNbO3	(0,-3,12)	6.797	72.88	37.1	40.3	2.191	88.3	27.39	92.45
	Equiv. Refl.: (3,0,12), (-3,3,12)								
LiNbO3	(0,-5,2)	7.01	80.27	33.3	36.3	1.219	44.23	15.24	46.78
	Equiv. Refl.: (5,0,2), (-5,5,2)								
Sapph	(2,3,-4)	6.83	73.81	31.7	27.8	2.065	57.43	25.81	62.97
	Equiv. Refl.: (2,-5,4), (3,2,4), (3,-5,-4), (5,-2,4), (5,-3,-4), (-2,5,-4), (-2,-3,4), (-3,5,4), (-3,-2,-4), (-5,2,-4), (-5,3,4)								
Sapph	(1,4,3)	7.041	81.91	30.6	29.8	1.011	30.1	12.63	32.64
	Equiv. Refl.: (1,4,-3), (1,-5,3), (1,-5,-3), (4,1,3), (4,1,-3), (4,-5,3), (4,-5,-3), (5,-1,3), (5,-1,-3), (5,-4,3), (5,-4,-3), (-1,5,3), (-1,5,-3), (-1,-4,3), (-1,-4,-3), (-4,5,3), (-4,5,-3), (-4,-1,3), (-4,-1,-3), (-5,1,3), (-5,1,-3), (-5,4,3), (-5,4,-3)								
LiNbO3	(0,5,-2)	7.01	80.27	29.2	36.3	1.219	44.23	15.24	46.78
	Equiv. Refl.: (5,-5,-2), (-5,0,-2)								
Sapph	(0,1,14)	6.849	74.38	23.1	21.2	1.988	42.09	24.85	48.88
	Equiv. Refl.: (0,-1,-14), (1,0,-14), (1,-1,14), (-1,0,14), (-1,1,-14), (0,1,-6), (0,-1,6), (1,0,6), (1,-1,-6), (-1,0,-6), (-1,1,6)								
Quartz	(0,4,-3)	6.768	72.11	19.7	17.5	2.296	40.23	28.7	49.42
	Equiv. Refl.: (0,-4,3), (4,0,3), (4,-4,-3), (-4,0,-3), (-4,4,3)								
Sapph	(1,4,0)	6.894	75.78	19.1	18.2	1.802	32.83	22.53	39.81
	Equiv. Refl.: (1,-5,0), (4,1,0), (4,-5,0), (5,-1,0), (5,-4,0), (-1,5,0), (-1,-4,0), (-4,5,0), (-4,-1,0), (-5,1,0), (-5,4,0)								
Quartz	(5,-1,2)	7.06	83.06	18.3	18.9	0.866	16.41	10.82	19.66
	Equiv. Refl.: (5,-4,-2), (-1,5,-2), (-1,-4,2), (-4,5,2), (-4,-1,-2)								
Quartz	(1,3,-4)	6.975	78.72	18.2	16.8	1.418	23.81	17.72	29.68
	Equiv. Refl.: (1,-4,4), (3,1,4), (3,-4,-4), (-4,1,-4), (-4,3,4)								

Ei =	7.112	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(1,4,-1)	6.775	72.28	18	15.9	2.273	36.13	28.41	45.96
	Equiv. Refl.: (1,-5,1), (3,-1,-5), (3,-2,5), (4,1,1), (4,-5,-1), (-1,3,5), (-1,-2,-5), (-2,3,-5), (-2,-1,5), (-5,1,-1), (-5,4,1)								
Quartz	(1,4,-2)	7.06	83.06	17.7	19	0.866	16.42	10.82	19.67
	Equiv. Refl.: (1,-5,2), (4,1,2), (4,-5,-2), (-5,1,-2), (-5,4,2)								
Quartz	(1,2,5)	6.91	76.32	17.4	16.5	1.731	28.55	21.64	35.83
	Equiv. Refl.: (1,-3,-5), (2,1,-5), (2,-3,5), (-3,1,5), (-3,2,-5)								
Quartz	(5,-1,1)	6.775	72.28	17.3	15.9	2.273	36.13	28.41	45.96
	Equiv. Refl.: (5,-4,-1), (-1,5,-1), (-1,-4,1), (-4,5,1), (-4,-1,-1)								
Quartz	(4,-1,4)	6.975	78.72	17.2	16.8	1.418	23.81	17.72	29.68
	Equiv. Refl.: (4,-3,-4), (-1,4,-4), (-1,-3,4), (-3,4,4), (-3,-1,-4)								
Sapph	(2,2,9)	6.754	71.73	16.8	15.9	2.347	37.26	29.34	47.43
	Equiv. Refl.: (2,2,-9), (2,-4,9), (2,-4,-9), (4,-2,9), (4,-2,-9), (-2,4,9), (-2,4,-9), (-2,-2,9), (-2,-2,-9), (-4,2,9), (-4,2,-9)								
Quartz	(5,-1,-2)	7.06	83.06	16.5	16.4	0.866	14.16	10.82	17.82
	Equiv. Refl.: (5,-4,2), (-1,5,2), (-1,-4,-2), (-4,5,-2), (-4,-1,2)								
Quartz	(2,2,4)	6.821	73.55	14.4	13.2	2.1	27.68	26.25	38.15
	Equiv. Refl.: (2,2,-4), (2,-4,4), (2,-4,-4), (-4,2,4), (-4,2,-4)								
Quartz	(0,0,6)	6.882	75.39	14.3	13.6	1.854	25.18	23.17	34.22
	Equiv. Refl.: (0,0,-6)								
Quartz	(1,4,2)	7.06	83.06	14	16.4	0.866	14.17	10.82	17.83
	Equiv. Refl.: (1,-5,-2), (4,1,-2), (4,-5,2), (-5,1,2), (-5,4,-2)								
Quartz	(4,-2,4)	6.821	73.55	13.8	13.2	2.1	27.68	26.25	38.15
	Equiv. Refl.: (4,-2,-4), (-2,4,4), (-2,4,-4), (-2,-2,4), (-2,-2,-4)								
Quartz	(0,4,3)	6.768	72.11	12.2	11.3	2.296	26.03	28.7	38.75
	Equiv. Refl.: (0,-4,-3), (4,0,-3), (4,-4,3), (-4,0,3), (-4,4,-3)								
Quartz	(1,3,4)	6.975	78.72	9.3	9.6	1.418	13.65	17.72	22.37
	Equiv. Refl.: (1,-4,-4), (3,1,-4), (3,-4,4), (-4,1,4), (-4,3,-4)								
Quartz	(4,-1,-4)	6.975	78.72	8.3	9.6	1.418	13.64	17.72	22.37
	Equiv. Refl.: (4,-3,4), (-1,4,4), (-1,-3,-4), (-3,4,-4), (-3,-1,4)								
Sapph	(2,3,5)	6.978	78.88	8	9.8	1.399	13.77	17.48	22.25
	Equiv. Refl.: (2,-5,-5), (3,2,-5), (3,-5,5), (5,-2,-5), (5,-3,5), (-2,5,5), (-2,-3,-5), (-3,5,-5), (-3,-2,5), (-5,2,5), (-5,3,-5)								
Quartz	(3,-1,5)	6.91	76.32	7.3	7.4	1.731	12.73	21.64	25.11
	Equiv. Refl.: (3,-2,-5), (-1,3,-5), (-2,3,5), (-2,-1,-5)								
Quartz	(-1,-2,5)	6.91	76.32	7.2	7.4	1.731	12.72	21.64	25.1
LiNbO3	(1,3,-11)	7.024	80.96	6.9	15.7	1.132	17.81	14.15	22.74
	Equiv. Refl.: (1,-4,11), (3,1,11), (3,-4,-11), (4,-1,11), (4,-3,-11), (-1,4,-11), (-1,-3,11), (-3,4,11), (-3,-1,-11), (-4,1,-11), (-4,3,11)								
Quartz	(1,2,-5)	6.91	76.32	5.7	7.4	1.731	12.72	21.64	25.1
	Equiv. Refl.: (1,-3,5), (2,1,5), (2,-3,-5), (-3,1,-5), (-3,2,5)								
Quartz	(5,-1,-1)	6.775	72.28	5.4	6	2.273	13.65	28.41	31.52
	Equiv. Refl.: (5,-4,1), (-1,5,1), (-1,-4,-1), (-4,5,-1), (-4,-1,1)								
Quartz	(1,4,1)	6.775	72.28	5.3	6	2.273	13.65	28.41	31.52
	Equiv. Refl.: (1,-5,-1), (4,1,-1), (4,-5,1), (-5,1,1), (-5,4,-1)								
Quartz	(2,3,-2)	6.752	71.7	5.2	5.6	2.351	13.06	29.39	32.17
	Equiv. Refl.: (2,-5,2), (3,2,2), (3,-5,-2), (-5,2,-2), (-5,3,2)								
Quartz	(5,-2,2)	6.752	71.7	4.9	5.6	2.351	13.07	29.39	32.17
	Equiv. Refl.: (5,-3,-2), (-2,5,-2), (-2,-3,2), (-3,5,2), (-3,-2,-2)								

Ei =	7.112	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	 IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,2,-13)	6.88	75.31	2.7	7.6	1.864	14.12	23.3	27.25
	Equiv. Refl.: (1,-3,13), (2,1,13), (2,-3,-13), (3,-1,13), (3,-2,-13), (-1,3,-13), (-1,-2,13), (-2,3,13), (-2,-1,-13), (-3,1,-13), (-3,2,13)								
Quartz	(0,1,6)	7.035	81.54	2.4	4.7	1.058	4.94	13.22	14.11
	Equiv. Refl.: (0,-1,-6), (1,0,-6), (1,-1,6), (-1,0,6), (-1,1,-6)								
Quartz	(2,3,2)	6.752	71.7	1.8	2.8	2.351	6.51	29.39	30.11
	Equiv. Refl.: (2,-5,-2), (3,2,-2), (3,-5,2), (-5,2,2), (-5,3,-2)								
Quartz	(5,-2,-2)	6.752	71.7	1.4	2.8	2.351	6.5	29.39	30.1
	Equiv. Refl.: (5,-3,2), (-2,5,2), (-2,-3,-2), (-3,5,-2), (-3,-2,2)								
LiNbO3	(2,3,-7)	6.822	73.57	0.9	4.1	2.097	8.58	26.22	27.58
	Equiv. Refl.: (2,-5,7), (3,2,7), (3,-5,-7), (5,-2,7), (5,-3,-7), (-2,5,-7), (-2,-3,7), (-3,5,7), (-3,-2,-7), (-5,2,-7), (-5,3,7)								

Ei =	6.404	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(0,4,4)	6.199	75.45	90.4	84.3	1.662	140.04	20.77	141.57
LiNbO3	(1,-5,0)	6.372	84.27	114.1	121.6	0.642	78.14	8.03	78.55
	Equiv. Refl.: (4,1,0), (5,-1,0), (-1,-4,0), (-4,5,0), (-5,4,0)								
LiNbO3	(1,4,0)	6.372	84.27	112.7	121.6	0.642	78.14	8.03	78.55
	Equiv. Refl.: (4,-5,0), (5,-4,0), (-1,5,0), (-4,-1,0), (-5,1,0)								
LiNbO3	(2,3,-4)	6.319	80.68	110.3	108.1	1.051	113.67	13.14	114.42
	Equiv. Refl.: (3,-5,-4), (5,-3,-4), (-2,5,-4), (-3,-2,-4), (-5,2,-4)								
LiNbO3	(2,-5,4)	6.319	80.68	108.5	108.1	1.051	113.67	13.14	114.42
	Equiv. Refl.: (3,2,4), (5,-2,4), (-2,-3,4), (-3,5,4), (-5,3,4)								
LiNbO3	(1,-4,8)	6.159	74.1	50.7	49.6	1.824	90.47	22.8	93.3
	Equiv. Refl.: (3,1,8), (4,-1,8), (-1,-3,8), (-3,4,8), (-4,3,8)								
Quartz	(2,3,0)	6.351	82.61	45.4	42.8	0.83	35.56	10.38	37.05
	Equiv. Refl.: (2,-5,0), (3,2,0), (3,-5,0), (-5,2,0), (-5,3,0)								
Quartz	(5,-2,0)	6.351	82.61	45.1	42.8	0.83	35.56	10.38	37.05
	Equiv. Refl.: (5,-3,0), (-2,5,0), (-2,-3,0), (-3,5,0), (-3,-2,0)								
LiNbO3	(1,3,-8)	6.159	74.1	43.7	49.6	1.824	90.47	22.8	93.3
	Equiv. Refl.: (3,-4,-8), (4,-3,-8), (-1,4,-8), (-3,-1,-8), (-4,1,-8)								
Sapph	(1,2,-10)	6.215	76.04	39.6	36.2	1.592	57.56	19.9	60.91
	Equiv. Refl.: (1,-3,10), (2,1,10), (2,-3,-10), (3,-1,10), (3,-2,-10), (-1,3,-10), (-1,-2,10), (-2,3,10), (-2,-1,-10), (-3,1,-10), (-3,2,10)								
LiNbO3	(2,3,2)	6.127	73.08	33.2	35.8	1.949	69.84	24.36	73.97
	Equiv. Refl.: (3,-5,2), (5,-3,2), (-2,5,2), (-3,-2,2), (-5,2,2)								
LiNbO3	(2,-5,-2)	6.127	73.08	30.6	35.8	1.949	69.84	24.36	73.97
	Equiv. Refl.: (3,2,-2), (5,-2,-2), (-2,-3,-2), (-3,5,-2), (-5,3,-2)								
Quartz	(2,-1,5)	6.266	78.07	26.6	24.5	1.353	33.11	16.91	37.18
	Equiv. Refl.: (2,-1,-5), (-1,2,5), (-1,2,-5), (-1,-1,5), (-1,-1,-5)								
Quartz	(1,1,5)	6.266	78.07	24.3	24.5	1.353	33.1	16.91	37.17
	Equiv. Refl.: (1,1,-5), (1,-2,5), (1,-2,-5), (-2,1,5), (-2,1,-5)								
Sapph	(0,4,2)	6.093	72.07	22.9	22	2.072	45.65	25.9	52.49
	Equiv. Refl.: (0,-4,-2), (4,0,-2), (4,-4,2), (-4,0,2), (-4,4,-2)								
Sapph	(0,4,-4)	6.313	80.34	22.2	24.1	1.09	26.25	13.62	29.57
	Equiv. Refl.: (0,-4,4), (4,0,4), (4,-4,-4), (-4,0,-4), (-4,4,4)								
Quartz	(2,2,3)	6.109	72.53	19.1	17.7	2.016	35.63	25.2	43.64
	Equiv. Refl.: (2,2,-3), (2,-4,3), (2,-4,-3), (-4,2,3), (-4,2,-3)								
Quartz	(4,-2,3)	6.109	72.53	18	17.7	2.016	35.63	25.2	43.64
	Equiv. Refl.: (4,-2,-3), (-2,4,3), (-2,4,-3), (-2,-2,3), (-2,-2,-3)								
Quartz	(0,4,2)	6.263	77.96	15.7	16.5	1.366	22.52	17.07	28.26
	Equiv. Refl.: (0,-4,-2), (4,0,-2), (4,-4,2), (-4,0,2), (-4,4,-2)								
Quartz	(0,3,-4)	6.337	81.7	13	15.8	0.935	14.8	11.68	18.86
	Equiv. Refl.: (0,-3,4), (3,0,4), (3,-3,-4), (-3,0,-4), (-3,3,4)								
LiNbO3	(2,2,9)	6.277	78.56	12.3	23.3	1.296	30.18	16.19	34.25
	Equiv. Refl.: (2,2,-9), (2,-4,9), (2,-4,-9), (4,-2,9), (4,-2,-9), (-2,4,9), (-2,4,-9), (-2,-2,9), (-2,-2,-9), (-4,2,9), (-4,2,-9)								
Sapph	(1,1,12)	6.292	79.29	11.6	14.8	1.212	17.96	15.14	23.5
	Equiv. Refl.: (1,1,-12), (1,-2,12), (1,-2,-12), (2,-1,12), (2,-1,-12), (-1,2,12), (-1,2,-12), (-1,-1,12), (-1,-1,-12), (-2,1,12), (-2,1,-12)								
Quartz	(4,-1,-3)	6.28	78.7	8.7	10.5	1.279	13.49	15.99	20.92
	Equiv. Refl.: (4,-3,3), (-1,4,3), (-1,-3,-3), (-3,4,-3), (-3,-1,3)								
Quartz	(1,3,-3)	6.28	78.7	8.6	9.5	1.279	12.1	15.99	20.05
	Equiv. Refl.: (1,-4,3), (3,1,3), (3,-4,-3), (-4,1,-3), (-4,3,3)								

Ei =	6.404	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(1,3,3)	6.28	78.7	8.4	10.5	1.279	13.49	15.99	20.92
	Equiv. Refl.: (1,-4,-3), (3,1,-3), (3,-4,3), (-4,1,3), (-4,3,-3)								
Sapph	(1,3,7)	6.371	84.15	8.3	14.6	0.656	9.57	8.2	12.6
	Equiv. Refl.: (1,-4,-7), (3,1,-7), (3,-4,7), (4,-1,-7), (4,-3,7), (-1,4,7), (-1,-3,-7), (-3,4,-7), (-3,-1,7), (-4,1,7), (-4,3,-7)								
Quartz	(4,-1,3)	6.28	78.7	6	9.4	1.279	12.09	15.99	20.04
	Equiv. Refl.: (4,-3,-3), (-1,4,-3), (-1,-3,3), (-3,4,3), (-3,-1,-3)								
Quartz	(0,3,4)	6.337	81.7	5.5	8.3	0.935	7.77	11.68	14.03
	Equiv. Refl.: (0,-3,-4), (3,0,-4), (3,-3,4), (-3,0,4), (-3,3,-4)								
LiNbO3	(1,2,11)	6.142	73.57	3.2	9.6	1.888	18.15	23.61	29.78
	Equiv. Refl.: (1,-3,-11), (2,1,-11), (2,-3,11), (3,-1,-11), (3,-2,11), (-1,3,11), (-1,-2,-11), (-2,3,-11), (-2,-1,11), (-3,1,11), (-3,2,-11)								
Quartz	(0,4,-2)	6.263	77.96	1.2	3.2	1.366	4.37	17.07	17.62
	Equiv. Refl.: (0,-4,2), (4,0,2), (4,-4,-2), (-4,0,-2), (-4,4,2)								
LiNbO3	(2,3,-1)	6.077	71.62	1.1	5.2	2.127	11.09	26.59	28.81
	Equiv. Refl.: (2,-5,1), (3,2,1), (3,-5,-1), (5,-2,1), (5,-3,-1), (-2,5,-1), (-2,-3,1), (-3,5,1), (-3,-2,-1), (-5,2,-1), (-5,3,1)								

Ei =	6.391	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(0,4,4)	6.199	75.91	93.4	87.1	1.604	139.79	20.05	141.22
LiNbO3	(1,-5,0)	6.372	85.58	148.1	158	0.494	77.98	6.17	78.23
	Equiv. Refl.: (4,1,0), (5,-1,0), (-1,-4,0), (-4,5,0), (-5,4,0)								
LiNbO3	(1,4,0)	6.372	85.58	146.3	158	0.494	77.98	6.17	78.23
	Equiv. Refl.: (4,-5,0), (5,-4,0), (-1,5,0), (-4,-1,0), (-5,1,0)								
LiNbO3	(2,3,-4)	6.319	81.42	119.9	117.6	0.965	113.44	12.06	114.08
	Equiv. Refl.: (3,-5,-4), (5,-3,-4), (-2,5,-4), (-3,-2,-4), (-5,2,-4)								
LiNbO3	(2,-5,4)	6.319	81.42	117.9	117.6	0.965	113.44	12.06	114.08
	Equiv. Refl.: (3,2,4), (5,-2,4), (-2,-3,4), (-3,5,4), (-5,3,4)								
Quartz	(2,3,0)	6.351	83.57	52.2	49.3	0.72	35.49	9	36.62
	Equiv. Refl.: (2,-5,0), (3,2,0), (3,-5,0), (-5,2,0), (-5,3,0)								
LiNbO3	(1,-4,8)	6.159	74.51	52.1	51	1.771	90.29	22.13	92.96
	Equiv. Refl.: (3,1,8), (4,-1,8), (-1,-3,8), (-3,4,8), (-4,3,8)								
Quartz	(5,-2,0)	6.351	83.57	51.9	49.3	0.72	35.49	9	36.62
	Equiv. Refl.: (5,-3,0), (-2,5,0), (-2,-3,0), (-3,5,0), (-3,-2,0)								
LiNbO3	(1,3,-8)	6.159	74.51	44.9	51	1.771	90.29	22.13	92.96
	Equiv. Refl.: (3,-4,-8), (4,-3,-8), (-1,4,-8), (-3,-1,-8), (-4,1,-8)								
Sapph	(1,2,-10)	6.215	76.51	41.1	37.5	1.533	57.45	19.16	60.56
	Equiv. Refl.: (1,-3,10), (2,1,10), (2,-3,-10), (3,-1,10), (3,-2,-10), (-1,3,-10), (-1,-2,10), (-2,3,10), (-2,-1,-10), (-3,1,-10), (-3,2,10)								
LiNbO3	(2,3,2)	6.127	73.46	34	36.7	1.898	69.71	23.72	73.63
	Equiv. Refl.: (3,-5,2), (5,-3,2), (-2,5,2), (-3,-2,2), (-5,2,2)								
LiNbO3	(2,-5,-2)	6.127	73.46	31.4	36.7	1.898	69.71	23.72	73.63
	Equiv. Refl.: (3,2,-2), (5,-2,-2), (-2,-3,-2), (-3,5,-2), (-5,3,-2)								
Quartz	(2,-1,5)	6.266	78.64	28	25.7	1.284	33.05	16.05	36.74
	Equiv. Refl.: (2,-1,-5), (-1,2,5), (-1,2,-5), (-1,-1,5), (-1,-1,-5)								
Quartz	(1,1,5)	6.266	78.64	25.5	25.7	1.284	33.04	16.05	36.73
	Equiv. Refl.: (1,1,-5), (1,-2,5), (1,-2,-5), (-2,1,5), (-2,1,-5)								
Sapph	(0,4,-4)	6.313	81.05	24	26	1.006	26.2	12.57	29.06
	Equiv. Refl.: (0,-4,4), (4,0,4), (4,-4,-4), (-4,0,-4), (-4,4,4)								
Sapph	(0,4,2)	6.093	72.43	23.4	22.5	2.023	45.56	25.29	52.11
	Equiv. Refl.: (0,-4,-2), (4,0,-2), (4,-4,2), (-4,0,2), (-4,4,-2)								
Quartz	(2,2,3)	6.109	72.9	19.6	18.1	1.966	35.56	24.57	43.22
	Equiv. Refl.: (2,2,-3), (2,-4,3), (2,-4,-3), (-4,2,3), (-4,2,-3)								
Quartz	(4,-2,3)	6.109	72.9	18.4	18.1	1.966	35.56	24.57	43.22
	Equiv. Refl.: (4,-2,-3), (-2,4,3), (-2,4,-3), (-2,-2,3), (-2,-2,-3)								
Quartz	(0,4,2)	6.263	78.52	16.5	17.3	1.298	22.48	16.22	27.72
	Equiv. Refl.: (0,-4,-2), (4,0,-2), (4,-4,2), (-4,0,2), (-4,4,-2)								
Quartz	(0,3,-4)	6.337	82.54	14.5	17.6	0.837	14.78	10.47	18.11
	Equiv. Refl.: (0,-3,4), (3,0,4), (3,-3,-4), (-3,0,-4), (-3,3,4)								
LiNbO3	(2,2,9)	6.277	79.15	13	24.6	1.224	30.12	15.31	33.79
	Equiv. Refl.: (2,2,-9), (2,-4,9), (2,-4,-9), (4,-2,9), (4,-2,-9), (-2,4,9), (-2,4,-9), (-2,-2,9), (-2,-2,-9), (-4,2,9), (-4,2,-9)								
Sapph	(1,1,12)	6.292	79.92	12.3	15.8	1.136	17.93	14.2	22.87
	Equiv. Refl.: (1,1,-12), (1,-2,12), (1,-2,-12), (2,-1,12), (2,-1,-12), (-1,2,12), (-1,2,-12), (-1,-1,12), (-1,-1,-12), (-2,1,12), (-2,1,-12)								
Sapph	(1,3,7)	6.371	85.43	10.6	18.7	0.511	9.55	6.39	11.49
	Equiv. Refl.: (1,-4,-7), (3,1,-7), (3,-4,7), (4,-1,-7), (4,-3,7), (-1,4,7), (-1,-3,-7), (-3,4,-7), (-3,-1,7), (-4,1,7), (-4,3,-7)								

Ei =	6.391	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(4,-1,-3)	6.28	79.3	9.2	11.2	1.207	13.47	15.09	20.23
	Equiv. Refl.: (4,-3,3), (-1,4,3), (-1,-3,-3), (-3,4,-3), (-3,-1,3)								
Quartz	(1,3,-3)	6.28	79.3	9.1	10	1.207	12.07	15.09	19.33
	Equiv. Refl.: (1,-4,3), (3,1,3), (3,-4,-3), (-4,1,-3), (-4,3,3)								
Quartz	(1,3,3)	6.28	79.3	8.9	11.2	1.207	13.47	15.09	20.23
	Equiv. Refl.: (1,-4,-3), (3,1,-3), (3,-4,3), (-4,1,3), (-4,3,-3)								
Quartz	(4,-1,3)	6.28	79.3	6.3	10	1.207	12.06	15.09	19.32
	Equiv. Refl.: (4,-3,-3), (-1,4,-3), (-1,-3,3), (-3,4,3), (-3,-1,-3)								
Quartz	(0,3,4)	6.337	82.54	6.2	9.3	0.837	7.76	10.47	13.03
	Equiv. Refl.: (0,-3,-4), (3,0,-4), (-3,0,4), (-3,3,-4)								
Quartz	(3,-3,4)	6.337	82.54	6.1	9.3	0.837	7.76	10.47	13.03
LiNbO3	(1,2,11)	6.142	73.97	3.3	9.9	1.836	18.12	22.95	29.24
	Equiv. Refl.: (1,-3,-11), (2,1,-11), (2,-3,11), (3,-1,-11), (3,-2,11), (-1,3,11), (-1,-2,-11), (-2,3,-11), (-2,-1,11), (-3,1,11), (-3,2,-11)								
Quartz	(0,4,-2)	6.263	78.52	1.3	3.4	1.298	4.36	16.22	16.8
	Equiv. Refl.: (0,-4,2), (4,0,2), (4,-4,-2), (-4,0,-2), (-4,4,2)								
LiNbO3	(2,3,-1)	6.077	71.98	1.1	5.3	2.079	11.07	25.99	28.25
	Equiv. Refl.: (2,-5,1), (3,2,1), (3,-5,-1), (5,-2,1), (5,-3,-1), (-2,5,-1), (-2,-3,1), (-3,5,1), (-3,-2,-1), (-5,2,-1), (-5,3,1)								

Ei =	7.058	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(0,2,6)	6.93	79.09	84.3788	78.44	1.361	106.77	17.01	108.11
	Equiv. Refl.: (0,6,2), (2,0,6), (2,6,0), (6,0,2), (6,2,0)								
Si	(1,3,5)	6.753	73.09	19.9679	19.09	2.1456	40.97	26.82	48.96
	Equiv. Refl.: (1,5,3), (3,1,5), (3,5,1), (5,1,3), (5,3,1)								
LiNbO3	(3,2,-8)	7.038	85.69	163.507	156.8	0.532	83.5	6.65	83.77
	Equiv. Refl.: (-2,-3,-8), (-3,5,-8), (-5,3,-8)								
LiNbO3	(2,-5,-8)	7.038	85.69	163.506	156.8	0.532	83.5	6.65	83.77
	Equiv. Refl.: (5,-2,-8)								
LiNbO3	(2,3,8)	7.038	85.69	152.54	156.8	0.532	83.5	6.65	83.77
	Equiv. Refl.: (3,-5,8), (5,-3,8), (-3,-2,8)								
LiNbO3	(-2,5,8)	7.038	85.69	152.539	156.8	0.532	83.5	6.65	83.77
	Equiv. Refl.: (-5,2,8)								
LiNbO3	(1,-5,-6)	6.914	78.4	62.498	60.1	1.449	87.1	18.11	88.96
	Equiv. Refl.: (4,1,-6), (5,-1,-6), (-1,-4,-6), (-4,5,-6), (-5,4,-6)								
Sapph	(1,4,3)	7.041	86.05	62.426	61.3	0.487	29.88	6.09	30.49
	Equiv. Refl.: (1,4,-3), (1,-5,3), (1,-5,-3), (4,1,3), (4,1,-3), (4,-5,3), (4,-5,-3), (5,-1,3), (5,-1,-3), (5,-4,3), (5,-4,-3), (-1,5,3), (-1,5,-3), (-1,-4,3), (-1,-4,-3), (-4,5,3), (-4,5,-3), (-4,-1,3), (-4,-1,-3), (-5,1,3), (-5,1,-3), (-5,4,3), (-5,4,-3)								
LiNbO3	(1,4,-6)	6.914	78.4	61.738	59.2	1.449	85.8	18.11	87.69
	Equiv. Refl.: (4,-5,-6), (5,-4,-6), (-1,5,-6), (-4,-1,-6), (-5,1,-6)								
LiNbO3	(1,4,6)	6.914	78.4	58.871	60.1	1.449	87.1	18.11	88.96
	Equiv. Refl.: (4,-5,6), (5,-4,6), (-1,5,6), (-4,-1,6), (-5,1,6)								
LiNbO3	(1,-5,6)	6.914	78.4	57.371	59.2	1.449	85.8	18.11	87.69
	Equiv. Refl.: (4,1,6), (5,-1,6), (-1,-4,6), (-4,5,6), (-5,4,6)								
LiNbO3	(0,-2,14)	6.85	76.07	51.796	49.8	1.751	87.16	21.89	89.86
	Equiv. Refl.: (2,0,14), (-2,2,14)								
LiNbO3	(0,-3,-12)	6.797	74.36	49.087	45.2	1.975	89.25	24.69	92.6
	Equiv. Refl.: (3,0,-12), (-3,3,-12)								
LiNbO3	(0,-5,2)	7.01	83.3	48.373	52.9	0.83	43.92	10.37	45.13
	Equiv. Refl.: (5,0,2), (-5,5,2)								
LiNbO3	(0,3,-12)	6.797	74.36	48.201	44.4	1.975	87.66	24.69	91.07
	Equiv. Refl.: (3,-3,-12), (-3,0,-12)								
LiNbO3	(0,2,-14)	6.85	76.07	48.159	49.8	1.751	87.16	21.89	89.86
	Equiv. Refl.: (2,-2,-14), (-2,0,-14)								
LiNbO3	(1,-4,-10)	6.718	72.14	44.388	42.1	2.274	95.63	28.42	99.76
	Equiv. Refl.: (3,1,-10), (4,-1,-10), (-1,-3,-10), (-3,4,-10), (-4,3,-10)								
LiNbO3	(0,5,-2)	7.01	83.3	42.365	52.9	0.83	43.92	10.37	45.13
	Equiv. Refl.: (5,-5,-2), (-5,0,-2)								
LiNbO3	(0,3,12)	6.797	74.36	41.778	45.2	1.975	89.25	24.69	92.6
	Equiv. Refl.: (3,-3,12), (-3,0,12)								
Quartz	(1,0,6)	7.035	85.34	41.619	40.5	0.576	23.28	7.19	24.37
Quartz	(1,-1,-6)	7.035	85.34	41.618	40.5	0.576	23.28	7.19	24.37
	Equiv. Refl.: (-1,0,-6)								
Quartz	(-1,1,6)	7.035	85.34	41.616	40.5	0.576	23.28	7.19	24.37
Quartz	(0,-1,6)	7.035	85.34	41.567	40.4	0.576	23.26	7.19	24.35
Quartz	(0,1,-6)	7.035	85.34	41.566	40.4	0.576	23.26	7.19	24.35
LiNbO3	(1,3,10)	6.718	72.14	40.991	42.1	2.274	95.63	28.42	99.76
	Equiv. Refl.: (3,-4,10), (4,-3,10), (-1,4,10), (-3,-1,10), (-4,1,10)								

Ei =	7.058	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	ΘB	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
LiNbO3	(0,-3,12)	6.797	74.36	40.714	44.4	1.975	87.66	24.69	91.07
	Equiv. Refl.: (3,0,12), (-3,3,12)								
Sapph	(2,3,-4)	6.83	75.39	35.283	31	1.839	57.02	22.99	61.48
	Equiv. Refl.: (2,-5,4), (3,2,4), (3,-5,-4), (5,-2,4), (5,-3,-4), (-2,5,-4), (-2,-3,4), (-3,5,4), (-3,-2,-4), (-5,2,-4), (-5,3,4)								
Sapph	(0,1,14)	6.849	76.03	25.892	23.8	1.755	41.79	21.94	47.2
	Equiv. Refl.: (0,-1,-14), (1,0,-14), (1,-1,14), (-1,0,14), (-1,1,-14)								
Quartz	(1,-4,4)	6.975	81.19	23.405	21.6	1.094	23.64	13.67	27.31
Quartz	(1,3,-4)	6.975	81.19	23.403	21.6	1.094	23.64	13.67	27.31
Quartz	(-4,1,-4)	6.975	81.19	23.402	21.6	1.094	23.64	13.67	27.31
Quartz	(3,-4,-4)	6.975	81.19	23.4	21.6	1.094	23.63	13.67	27.3
Quartz	(-4,3,4)	6.975	81.19	23.399	21.6	1.094	23.63	13.67	27.3
Quartz	(3,1,4)	6.975	81.19	23.397	21.6	1.094	23.63	13.67	27.3
Quartz	(4,-1,4)	6.975	81.19	22.008	21.6	1.094	23.64	13.67	27.31
Quartz	(-1,4,-4)	6.975	81.19	22.007	21.6	1.094	23.64	13.67	27.31
Quartz	(-1,-3,4)	6.975	81.19	22.006	21.6	1.094	23.64	13.67	27.31
Quartz	(4,-3,-4)	6.975	81.19	22.005	21.6	1.094	23.63	13.67	27.3
Quartz	(-3,4,4)	6.975	81.19	22.001	21.6	1.094	23.63	13.67	27.3
Quartz	(-3,-1,-4)	6.975	81.19	21.999	21.6	1.094	23.63	13.67	27.3
Sapph	(1,4,0)	6.894	77.63	21.972	21.1	1.548	32.6	19.35	37.91
	Equiv. Refl.: (1,-5,0), (4,1,0), (4,-5,0), (5,-1,0), (5,-4,0), (-1,5,0), (-1,-4,0), (-4,5,0), (-4,-1,0), (-5,1,0), (-5,4,0)								
Quartz	(0,4,-3)	6.768	73.52	21.502	19.1	2.088	39.94	26.1	47.71
	Equiv. Refl.: (0,-4,3)								
Quartz	(-4,0,-3)	6.768	73.52	21.495	19.1	2.088	39.93	26.1	47.7
Quartz	(4,0,3)	6.768	73.52	21.494	19.1	2.088	39.93	26.1	47.7
	Equiv. Refl.: (-4,4,3)								
Quartz	(4,-4,-3)	6.768	73.52	21.493	19.1	2.088	39.93	26.1	47.7
Quartz	(-1,3,5)	6.91	78.25	21.007	19.3	1.468	28.35	18.34	33.76
Quartz	(-1,-2,-5)	6.91	78.25	21.005	19.3	1.468	28.34	18.34	33.76
Quartz	(-2,3,-5)	6.91	78.25	20.995	19.3	1.468	28.34	18.34	33.76
Quartz	(3,-1,-5)	6.91	78.25	20.993	19.3	1.468	28.33	18.34	33.75
	Equiv. Refl.: (-2,-1,5)								
Quartz	(3,-2,5)	6.91	78.25	20.991	19.3	1.468	28.33	18.34	33.75
Quartz	(1,-3,-5)	6.91	78.25	20.367	19.3	1.468	28.35	18.34	33.76
Quartz	(1,2,5)	6.91	78.25	20.365	19.3	1.468	28.34	18.34	33.76
Quartz	(2,-3,5)	6.91	78.25	20.361	19.3	1.468	28.34	18.34	33.76
Quartz	(2,1,-5)	6.91	78.25	20.359	19.3	1.468	28.33	18.34	33.75
Quartz	(-3,1,5)	6.91	78.25	20.358	19.3	1.468	28.33	18.34	33.75
Quartz	(-3,2,-5)	6.91	78.25	20.356	19.3	1.468	28.33	18.34	33.75
Quartz	(4,1,1)	6.775	73.71	19.629	17.4	2.063	35.87	25.79	44.18
	Equiv. Refl.: (4,-5,-1)								
Quartz	(1,4,-1)	6.775	73.71	19.627	17.4	2.063	35.87	25.79	44.18
Quartz	(1,-5,1)	6.775	73.71	19.626	17.4	2.063	35.87	25.79	44.17
Quartz	(-5,1,-1)	6.775	73.71	19.625	17.4	2.063	35.87	25.79	44.17
	Equiv. Refl.: (-5,4,1)								
Quartz	(-4,5,1)	6.775	73.71	18.839	17.4	2.063	35.87	25.79	44.18
	Equiv. Refl.: (-4,-1,-1)								
Quartz	(-1,5,-1)	6.775	73.71	18.837	17.4	2.063	35.87	25.79	44.17
	Equiv. Refl.: (-1,-4,1)								

Ei =	7.058	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(5,-1,1)	6.775	73.71	18.835	17.4	2.063	35.87	25.79	44.17
	Equiv. Refl.: (5,-4,-1)								
Sapph	(2,2,9)	6.754	73.11	18.238	17.3	2.143	36.98	26.78	45.66
	Equiv. Refl.: (2,2,-9), (2,-4,9), (2,-4,-9), (4,-2,9), (4,-2,-9), (-2,4,9), (-2,4,-9), (-2,-2,9), (-2,-2,-9), (-4,2,9), (-4,2,-9)								
Quartz	(0,0,6)	6.882	77.18	16.336	15.6	1.606	25	20.07	32.06
	Equiv. Refl.: (0,0,-6)								
Quartz	(2,-4,-4)	6.821	75.11	15.898	14.6	1.877	27.48	23.47	36.14
Quartz	(-4,2,4)	6.821	75.11	15.897	14.6	1.877	27.48	23.47	36.14
Quartz	(2,2,4)	6.821	75.11	15.895	14.6	1.877	27.48	23.47	36.13
	Equiv. Refl.: (2,2,-4), (2,-4,4), (-4,2,-4)								
Quartz	(-2,4,4)	6.821	75.11	15.249	14.6	1.877	27.48	23.47	36.14
Quartz	(4,-2,-4)	6.821	75.11	15.248	14.6	1.877	27.48	23.47	36.14
Quartz	(4,-2,4)	6.821	75.11	15.247	14.6	1.877	27.48	23.47	36.14
Quartz	(-2,-2,-4)	6.821	75.11	15.246	14.6	1.877	27.48	23.47	36.13
Quartz	(-2,4,-4)	6.821	75.11	15.245	14.6	1.877	27.48	23.47	36.13
	Equiv. Refl.: (-2,-2,4)								
Sapph	(1,3,-8)	6.633	70.03	14.231	13.7	2.565	35.02	32.07	47.48
	Equiv. Refl.: (1,-4,8), (3,1,8), (3,-4,-8), (4,-1,8), (4,-3,-8), (-1,4,-8), (-1,-3,8), (-3,4,8), (-3,-1,-8), (-4,1,-8), (-4,3,8)								
Quartz	(4,-4,3)	6.768	73.52	13.248	12.4	2.088	25.86	26.1	36.74
Quartz	(4,0,-3)	6.768	73.52	13.247	12.4	2.088	25.85	26.1	36.74
Quartz	(-4,4,-3)	6.768	73.52	13.246	12.4	2.088	25.86	26.1	36.74
Quartz	(-4,0,3)	6.768	73.52	13.245	12.4	2.088	25.85	26.1	36.74
Quartz	(0,4,3)	6.768	73.52	13.241	12.4	2.088	25.85	26.1	36.73
	Equiv. Refl.: (0,-4,-3)								
Quartz	(3,-4,4)	6.975	81.19	11.677	12.4	1.094	13.56	13.67	19.26
Quartz	(3,1,-4)	6.975	81.19	11.676	12.4	1.094	13.56	13.67	19.26
Quartz	(1,-4,-4)	6.975	81.19	11.662	12.4	1.094	13.55	13.67	19.25
Quartz	(1,3,4)	6.975	81.19	11.66	12.4	1.094	13.55	13.67	19.25
Quartz	(-4,3,-4)	6.975	81.19	11.659	12.4	1.094	13.55	13.67	19.25
Quartz	(-4,1,4)	6.975	81.19	11.657	12.4	1.094	13.55	13.67	19.25
LiNbO3	(1,3,-11)	7.024	84.34	11.187	25.3	0.699	17.68	8.74	19.72
	Equiv. Refl.: (1,-4,11), (3,1,11), (3,-4,-11), (4,-1,11), (4,-3,-11), (-1,4,-11), (-1,-3,11), (-3,4,11), (-3,-1,-11), (-4,1,-11), (-4,3,11)								
Quartz	(-3,4,-4)	6.975	81.19	10.598	12.4	1.094	13.56	13.67	19.26
	Equiv. Refl.: (-3,-1,4)								
Quartz	(-1,4,4)	6.975	81.19	10.583	12.4	1.094	13.55	13.67	19.25
Quartz	(4,-3,4)	6.975	81.19	10.581	12.4	1.094	13.55	13.67	19.25
	Equiv. Refl.: (-1,-3,-4)								
Quartz	(4,-1,-4)	6.975	81.19	10.58	12.4	1.094	13.55	13.67	19.25
Sapph	(2,3,5)	6.978	81.38	10.3	12.8	1.069	13.67	13.37	19.12
	Equiv. Refl.: (2,-5,-5), (3,2,-5), (3,-5,5), (5,-2,-5), (5,-3,5), (-2,5,5), (-2,-3,-5), (-3,5,-5), (-3,-2,5), (-5,2,5), (-5,3,-5)								
Quartz	(-2,-1,-5)	6.91	78.25	8.464	8.6	1.468	12.64	18.34	22.28
Quartz	(-2,3,5)	6.91	78.25	8.463	8.6	1.468	12.64	18.34	22.28
Quartz	(3,-2,-5)	6.91	78.25	8.462	8.6	1.468	12.64	18.34	22.28
Quartz	(3,-1,5)	6.91	78.25	8.458	8.6	1.468	12.64	18.34	22.28
Quartz	(-1,3,-5)	6.91	78.25	8.455	8.6	1.468	12.63	18.34	22.27
Quartz	(-1,-2,5)	6.91	78.25	8.453	8.6	1.468	12.63	18.34	22.27

Ei =	7.058	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	ΘB	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(2,1,5)	6.91	78.25	6.663	8.6	1.468	12.64	18.34	22.28
	Equiv. Refl.: (2,-3,-5)								
Quartz	(-3,2,5)	6.91	78.25	6.662	8.6	1.468	12.64	18.34	22.28
Quartz	(-3,1,-5)	6.91	78.25	6.657	8.6	1.468	12.64	18.34	22.28
Quartz	(1,-3,5)	6.91	78.25	6.654	8.6	1.468	12.63	18.34	22.27
Quartz	(1,2,-5)	6.91	78.25	6.653	8.6	1.468	12.63	18.34	22.27
Quartz	(-1,5,1)	6.775	73.71	5.864	6.6	2.063	13.55	25.79	29.13
	Equiv. Refl.: (-1,-4,-1), (-4,5,-1), (-4,-1,1)								
Quartz	(5,-1,-1)	6.775	73.71	5.862	6.6	2.063	13.55	25.79	29.13
	Equiv. Refl.: (5,-4,1)								
Quartz	(1,4,1)	6.775	73.71	5.739	6.6	2.063	13.55	25.79	29.13
	Equiv. Refl.: (4,1,-1), (4,-5,1)								
Quartz	(1,-5,-1)	6.775	73.71	5.738	6.6	2.063	13.55	25.79	29.13
Quartz	(-5,1,1)	6.775	73.71	5.737	6.6	2.063	13.55	25.79	29.13
	Equiv. Refl.: (-5,4,-1)								
Quartz	(3,-5,-2)	6.752	73.08	5.593	6	2.147	12.98	26.84	29.81
Quartz	(3,2,2)	6.752	73.08	5.592	6	2.147	12.98	26.84	29.81
Quartz	(2,3,-2)	6.752	73.08	5.59	6	2.147	12.97	26.84	29.81
	Equiv. Refl.: (2,-5,2), (-5,2,-2), (-5,3,2)								
Quartz	(-3,5,2)	6.752	73.08	5.356	6	2.147	12.98	26.84	29.81
Quartz	(-3,-2,-2)	6.752	73.08	5.355	6	2.147	12.98	26.84	29.81
Quartz	(5,-2,2)	6.752	73.08	5.354	6	2.147	12.97	26.84	29.81
	Equiv. Refl.: (5,-3,-2), (-2,5,-2)								
Quartz	(-2,-3,2)	6.752	73.08	5.353	6	2.147	12.97	26.84	29.81
Quartz	(0,-1,-6)	7.035	85.34	4.35	8.5	0.576	4.9	7.19	8.71
Quartz	(0,1,6)	7.035	85.34	4.348	8.5	0.576	4.9	7.19	8.71
Quartz	(1,0,-6)	7.035	85.34	4.298	8.5	0.576	4.87	7.19	8.69
Quartz	(1,-1,6)	7.035	85.34	4.297	8.5	0.576	4.87	7.19	8.69
Quartz	(-1,0,6)	7.035	85.34	4.294	8.5	0.576	4.87	7.19	8.69
Quartz	(-1,1,-6)	7.035	85.34	4.293	8.5	0.576	4.87	7.19	8.69
LiNbO3	(1,2,-13)	6.88	77.09	3	8.7	1.618	14.02	20.22	24.61
	Equiv. Refl.: (1,-3,13), (2,1,13), (2,-3,-13), (3,-1,13), (3,-2,-13), (-1,3,-13), (-1,-2,13), (-2,3,13), (-2,-1,-13), (-3,1,-13), (-3,2,13)								
Quartz	(2,3,2)	6.752	73.08	1.921	3	2.147	6.46	26.84	27.61
	Equiv. Refl.: (2,-5,-2)								
Quartz	(-5,3,-2)	6.752	73.08	1.919	3	2.147	6.46	26.84	27.6
Quartz	(3,-5,2)	6.752	73.08	1.918	3	2.147	6.45	26.84	27.6
	Equiv. Refl.: (-5,2,2)								
Quartz	(3,2,-2)	6.752	73.08	1.917	3	2.147	6.45	26.84	27.6
Quartz	(-2,5,2)	6.752	73.08	1.518	3	2.147	6.46	26.84	27.61
	Equiv. Refl.: (-2,-3,-2)								
Quartz	(5,-3,2)	6.752	73.08	1.516	3	2.147	6.46	26.84	27.6
Quartz	(5,-2,-2)	6.752	73.08	1.515	3	2.147	6.45	26.84	27.6
	Equiv. Refl.: (-3,5,-2), (-3,-2,2)								
LiNbO3	(2,3,-7)	6.822	75.13	0.974	4.5	1.874	8.52	23.43	24.93
	Equiv. Refl.: (2,-5,7), (3,2,7), (3,-5,-7), (5,-2,7), (5,-3,-7), (-2,5,-7), (-2,-3,7), (-3,5,7), (-3,-2,-7), (-5,2,-7), (-5,3,7)								
Quartz	(1,4,0)	6.677	71.08	0.526	1	2.419	2.44	30.24	30.34
	Equiv. Refl.: (1,-5,0), (4,1,0), (4,-5,0), (-5,1,0), (-5,4,0)								
Quartz	(5,-1,0)	6.677	71.08	0.172	1	2.419	2.44	30.24	30.34
	Equiv. Refl.: (5,-4,0), (-1,5,0), (-1,-4,0), (-4,5,0), (-4,-1,0)								

Ei =	7.709	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Ge	(4,4,4)	7.592	80	67	62.2	1.36	84.55	17	86.24
Si	(3,3,5)	7.485	76.15	18.2	16.9	1.9	32.15	23.75	39.97
LiNbO3	(3,3,6)	7.707	88.79	328.6	331.2	0.163	53.98	2.04	54.02
	Equiv. Refl.: (3,-6,6), (6,-3,6), (-3,6,6), (-3,-3,6), (-6,3,6)								
LiNbO3	(3,3,-6)	7.707	88.79	311	331.2	0.163	53.98	2.04	54.02
	Equiv. Refl.: (3,-6,-6), (6,-3,-6), (-3,6,-6), (-3,-3,-6), (-6,3,-6)								
Sapph	(0,4,-10)	7.681	85.09	94.3	80.6	0.662	53.4	8.28	54.03
	Equiv. Refl.: (0,-4,10), (4,0,10), (4,-4,-10), (-4,0,-10), (-4,4,10)								
LiNbO3	(0,-2,-16)	7.676	84.72	88.9	85.5	0.712	60.91	8.91	61.56
	Equiv. Refl.: (2,0,-16), (-2,2,-16)								
LiNbO3	(0,2,16)	7.676	84.72	80.7	85.5	0.712	60.91	8.91	61.56
	Equiv. Refl.: (2,-2,16), (-2,0,16)								
Quartz	(0,5,-2)	7.638	82.2	55.5	46.6	1.057	49.22	13.21	50.97
	Equiv. Refl.: (0,-5,2), (5,0,2), (5,-5,-2), (-5,0,-2), (-5,5,2)								
LiNbO3	(2,4,4)	7.572	79.18	43.1	41.8	1.473	61.6	18.41	64.29
	Equiv. Refl.: (4,-6,4), (6,-4,4), (-2,6,4), (-4,-2,4), (-6,2,4)								
LiNbO3	(2,-6,-4)	7.572	79.18	39.5	41.8	1.473	61.6	18.41	64.29
	Equiv. Refl.: (4,2,-4), (6,-2,-4), (-2,-4,-4), (-4,6,-4), (-6,4,-4)								
LiNbO3	(2,-5,10)	7.532	77.7	38.3	37.1	1.681	62.38	21.01	65.82
	Equiv. Refl.: (3,2,10), (5,-2,10), (-2,-3,10), (-3,5,10), (-5,3,10)								
LiNbO3	(2,4,-2)	7.412	74.04	37.3	36.1	2.204	79.57	27.55	84.21
	Equiv. Refl.: (4,-6,-2), (6,-4,-2), (-2,6,-2), (-4,-2,-2), (-6,2,-2)								
LiNbO3	(2,-6,2)	7.412	74.04	37.1	36.1	2.204	79.57	27.55	84.21
	Equiv. Refl.: (4,2,2), (6,-2,2), (-2,-4,2), (-4,6,2), (-6,4,2)								
LiNbO3	(2,3,-10)	7.532	77.7	35	37.1	1.681	62.38	21.01	65.82
	Equiv. Refl.: (3,-5,-10), (5,-3,-10), (-2,5,-10), (-3,-2,-10), (-5,2,-10)								
LiNbO3	(1,-3,-14)	7.261	70.38	29.8	29	2.748	79.73	34.35	86.82
	Equiv. Refl.: (2,1,-14), (3,-1,-14), (-1,-2,-14), (-2,3,-14), (-3,2,-14)								
LiNbO3	(1,2,14)	7.261	70.38	29.6	29	2.748	79.73	34.35	86.82
	Equiv. Refl.: (2,-3,14), (3,-2,14), (-1,3,14), (-2,-1,14), (-3,1,14)								
Quartz	(3,3,1)	7.657	83.35	28.7	25.8	0.899	23.22	11.24	25.8
	Equiv. Refl.: (3,3,-1), (3,-6,1), (3,-6,-1), (-6,3,1), (-6,3,-1)								
Quartz	(0,2,6)	7.474	75.8	27.7	23.4	1.95	45.69	24.38	51.78
	Equiv. Refl.: (0,-2,-6), (2,0,-6), (2,-2,6), (-2,0,6), (-2,2,-6)								
Quartz	(2,2,5)	7.64	82.31	27.6	24.7	1.041	25.74	13.01	28.84
	Equiv. Refl.: (2,2,-5), (2,-4,5), (2,-4,-5)								
Quartz	(-4,2,5)	7.64	82.31	27.5	24.7	1.041	25.73	13.01	28.83
	Equiv. Refl.: (-4,2,-5)								
LiNbO3	(0,-1,16)	7.289	70.99	27.2	26.7	2.655	70.91	33.19	78.29
	Equiv. Refl.: (1,0,16), (-1,1,16), (6,-3,1), (6,-3,-1), (-3,6,1), (-3,6,-1), (-3,-3,1), (-3,-3,-1)								
Sapph	(1,4,6)	7.465	75.55	27.1	23.6	1.986	46.96	24.83	53.12
	Equiv. Refl.: (1,4,-6), (1,-5,6), (1,-5,-6), (4,1,6), (4,1,-6), (4,-5,6), (4,-5,-6), (5,-1,6), (5,-1,-6), (5,-4,6), (5,-4,-6), (-1,5,6), (-1,5,-6), (-1,-4,6), (-1,-4,-6), (-4,5,6), (-4,5,-6), (-4,-1,6), (-4,-1,-6), (-5,1,6), (-5,1,-6), (-5,4,6), (-5,4,-6)								
Sapph	(1,1,15)	7.619	81.23	26.9	24.9	1.19	29.64	14.87	33.16
	Equiv. Refl.: (1,1,-15), (1,-2,15), (1,-2,-15), (2,-1,15), (2,-1,-15), (-1,2,15), (-1,2,-15), (-1,-1,15), (-1,-1,-15), (-2,1,15), (-2,1,-15), (-2,4,5), (-2,4,-5), (-2,-2,5), (-2,-2,-5)								
Quartz	(4,-2,5)	7.64	82.31	26.8	24.7	1.041	25.73	13.01	28.83
	Equiv. Refl.: (4,-2,-5)								
LiNbO3	(0,1,-16)	7.289	70.99	26.3	26.7	2.655	70.91	33.19	78.29
	Equiv. Refl.: (1,-1,-16), (-1,0,-16)								

Ei =	7.709	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(1,4,3)	7.511	77	26.1	22.4	1.78	39.83	22.25	45.62
	Equiv. Refl.: (1,-5,-3), (4,1,-3), (4,-5,3), (-1,5,3), (-1,-4,-3), (-4,5,-3), (-4,-1,3), (-5,1,3), (-5,4,-3)								
Quartz	(5,-1,-3)	7.511	77	26	22.4	1.78	39.82	22.25	45.62
	Equiv. Refl.: (5,-4,3)								
Sapph	(0,2,-14)	7.328	71.92	21.8	19	2.517	47.91	31.46	57.32
	Equiv. Refl.: (0,-2,14), (2,0,14), (2,-2,-14), (-2,0,-14), (-2,2,14)								
LiNbO3	(2,4,-5)	7.69	85.98	20.9	36.5	0.542	19.81	6.78	20.94
	Equiv. Refl.: (2,-6,5), (4,2,5), (4,-6,-5), (6,-2,5), (6,-4,-5), (-2,6,-5), (-2,-4,5), (-4,6,5), (-4,-2,-5), (-6,2,-5), (-6,4,5)								
Sapph	(0,3,12)	7.292	71.07	19.1	16.7	2.644	44.2	33.05	55.19
	Equiv. Refl.: (0,3,-12), (0,-3,12), (0,-3,-12), (3,0,12), (3,0,-12), (3,-3,12), (3,-3,-12), (-3,0,12), (-3,0,-12), (-3,3,12), (-3,3,-12)								
Quartz	(6,-3,0)	7.571	79.13	18.8	17	1.48	25.23	18.5	31.29
	Equiv. Refl.: (-3,6,0), (-3,-3,0)								
Quartz	(3,3,0)	7.571	79.13	18.7	17	1.48	25.23	18.5	31.29
	Equiv. Refl.: (3,-6,0), (-6,3,0)								
LiNbO3	(1,3,13)	7.677	84.74	9.3	20.3	0.71	14.44	8.87	16.94
	Equiv. Refl.: (1,-4,-13), (3,1,-13), (3,-4,13), (4,-1,-13), (4,-3,13), (-1,4,13), (-1,-3,-13), (-3,4,-13), (-3,-1,13), (-4,1,13), (-4,3,-13)								
Quartz	(0,4,4)	7.417	74.19	6.9	6.8	2.183	14.95	27.29	31.12
	Equiv. Refl.: (0,-4,-4), (4,0,-4), (4,-4,4), (-4,0,4), (-4,4,-4)								
Quartz	(0,2,-6)	7.474	75.8	6.5	6.6	1.95	12.78	24.38	27.52
	Equiv. Refl.: (0,4,-4), (0,-2,6), (0,-4,4), (2,0,6), (2,-2,-6), (4,0,4), (4,-4,-4), (-2,0,-6), (-2,2,6), (-4,0,-4), (-4,4,4)								
LiNbO3	(2,4,1)	7.371	72.98	5.8	9.6	2.36	22.74	29.5	37.25
	Equiv. Refl.: (2,-6,-1), (4,2,-1), (4,-6,1), (6,-2,-1), (6,-4,1), (-2,6,1), (-2,-4,-1), (-4,6,-1), (-4,-2,1), (-6,2,1), (-6,4,-1)								
Quartz	(2,-1,6)	7.33	71.96	5.5	5.5	2.51	13.91	31.38	34.32
	Equiv. Refl.: (2,-1,-6), (-1,2,6), (-1,2,-6), (-1,-1,6), (-1,-1,-6)								
Quartz	(1,1,6)	7.33	71.96	5.3	5.5	2.51	13.9	31.38	34.32
	Equiv. Refl.: (1,1,-6), (1,-2,6), (1,-2,-6), (-2,1,6), (-2,1,-6)								
Sapph	(2,3,-7)	7.36	72.69	4.5	5.2	2.403	12.45	30.04	32.52
	Equiv. Refl.: (2,-5,7), (3,2,7), (3,-5,-7), (5,-2,7), (5,-3,-7), (-2,5,-7), (-2,-3,7), (-3,5,7), (-3,-2,-7), (-5,2,-7), (-5,3,7)								
LiNbO3	(1,4,9)	7.537	77.86	3.4	8.2	1.658	13.64	20.73	24.82
	Equiv. Refl.: (1,4,-9), (1,-5,9), (1,-5,-9), (4,1,9), (4,1,-9), (4,-5,9), (4,-5,-9), (5,-1,9), (5,-1,-9), (5,-4,9), (5,-4,-9), (-1,5,9), (-1,5,-9), (-1,-4,9), (-1,-4,-9), (-4,5,9), (-4,5,-9), (-4,-1,9), (-4,-1,-9), (-5,1,9), (-5,1,-9), (-5,4,9), (-5,4,-9)								
Sapph	(1,2,-13)	7.372	72.99	3.2	4.3	2.358	10.2	29.48	31.2
	Equiv. Refl.: (1,-3,13), (2,1,13), (2,-3,-13), (3,-1,13), (3,-2,-13), (-1,3,-13), (-1,-2,13), (-2,3,13), (-2,-1,-13), (-3,1,-13), (-3,2,13)								
Quartz	(0,5,2)	7.638	82.2	2.8	4.8	1.057	5.03	13.21	14.13
	Equiv. Refl.: (0,-5,-2), (5,0,-2), (5,-5,2), (-5,0,2), (-5,5,-2)								
Sapph	(2,3,8)	7.588	79.85	2.6	4.6	1.381	6.3	17.26	18.37
	Equiv. Refl.: (2,-5,-8), (3,2,-8), (3,-5,8), (5,-2,-8), (5,-3,8), (-2,5,8), (-2,-3,-8), (-3,5,-8), (-3,-2,8), (-5,2,8), (-5,3,-8)								
Sapph	(1,3,-11)	7.549	78.31	2.4	4.1	1.596	6.52	19.95	20.98
	Equiv. Refl.: (1,-4,11), (3,1,11), (3,-4,-11), (4,-1,11), (4,-3,-11), (-1,4,-11), (-1,-3,11), (-3,4,11), (-3,-1,-11), (-4,1,-11), (-4,3,11), (5,-1,3), (5,-4,-3), (-1,5,-3), (-1,-4,3), (-4,5,3), (-4,-1,-3)								
Quartz	(1,4,-3)	7.511	77	2	3.4	1.78	6.09	22.25	23.07
	Equiv. Refl.: (1,-5,3), (4,1,3), (4,-5,-3), (-5,1,-3), (-5,4,3)								

Ei =	7.709	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	 IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(0,5,-1)	7.375	73.06	0.7	1.5	2.347	3.64	29.34	29.57
	Equiv. Refl.: (0,-5,1), (5,0,1), (5,-5,-1), (-5,0,-1), (-5,5,1)								
LiNbO3	(3,3,3)	7.349	72.41	0.3	1.9	2.444	4.52	30.54	30.88
	Equiv. Refl.: (3,3,-3), (3,-6,3), (3,-6,-3), (6,-3,3), (6,-3,-3), (-3,6,3), (-3,6,-3), (-3,-3,3), (-3,-3,-3), (-6,3,3), (-6,3,-3)								
Quartz	(0,5,0)	7.285	70.91	0.2	0.7	2.668	1.91	33.35	33.41
	Equiv. Refl.: (0,-5,0), (5,0,0), (5,-5,0), (-5,0,0), (-5,5,0)								

Ei = Cryst	6.93 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Si	(1,3,5) Equiv. Refl.: (1,5,3), (3,1,5), (3,5,1), (5,1,3), (5,3,1)	6.753	77.02	26.1773	25.2	1.5976	40.26	19.97	44.94
LiNbO3	(4,1,-6) Equiv. Refl.: (-1,-4,-6), (-4,5,-6), (-5,4,-6)	6.914	86.09	186.663	180.6	0.474	85.6	5.92	85.8
LiNbO3	(1,-5,-6) Equiv. Refl.: (5,-1,-6)	6.914	86.09	186.662	180.6	0.474	85.6	5.92	85.8
LiNbO3	(1,4,-6) Equiv. Refl.: (-1,5,-6), (-4,-1,-6), (-5,1,-6)	6.914	86.09	184.411	177.9	0.474	84.32	5.92	84.52
LiNbO3	(4,-5,-6) Equiv. Refl.: (5,-4,-6)	6.914	86.09	184.41	177.9	0.474	84.32	5.92	84.52
LiNbO3	(1,4,6) Equiv. Refl.: (4,-5,6), (5,-4,6), (-4,-1,6)	6.914	86.09	175.522	180.6	0.474	85.6	5.92	85.8
LiNbO3	(-1,5,6) Equiv. Refl.: (-5,1,6)	6.914	86.09	175.521	180.6	0.474	85.6	5.92	85.8
LiNbO3	(1,-5,6) Equiv. Refl.: (4,1,6), (5,-1,6), (-1,-4,6), (-4,5,6), (-5,4,6)	6.914	86.09	171.188	177.9	0.474	84.32	5.92	84.52
LiNbO3	(0,-2,14) Equiv. Refl.: (2,0,14), (-2,2,14)	6.85	81.3	83.771	80.8	1.06	85.65	13.25	86.67
LiNbO3	(0,2,-14) Equiv. Refl.: (2,-2,-14), (-2,0,-14)	6.85	81.3	77.677	80.8	1.06	85.65	13.25	86.67
LiNbO3	(0,-3,-12) Equiv. Refl.: (3,0,-12), (-3,3,-12)	6.797	78.75	68.85	63.6	1.379	87.7	17.23	89.38
LiNbO3	(0,3,-12) Equiv. Refl.: (3,-3,-12), (-3,0,-12)	6.797	78.75	67.6	62.5	1.379	86.14	17.23	87.85
LiNbO3	(0,3,12) Equiv. Refl.: (3,-3,12), (-3,0,12)	6.797	78.75	58.322	63.6	1.379	87.7	17.23	89.38
Quartz	(-1,3,5)	6.91	85.67	57.389	53.1	0.525	27.86	6.56	28.62
Quartz	(-1,-2,-5)	6.91	85.67	57.385	53.1	0.525	27.86	6.56	28.62
Quartz	(-2,3,-5)	6.91	85.67	57.357	53.1	0.525	27.85	6.56	28.61
Quartz	(-2,-1,5)	6.91	85.67	57.353	53	0.525	27.85	6.56	28.61
Quartz	(3,-1,-5)	6.91	85.67	57.351	53	0.525	27.85	6.56	28.61
Quartz	(3,-2,5)	6.91	85.67	57.345	53	0.525	27.84	6.56	28.61
LiNbO3	(0,-3,12) Equiv. Refl.: (3,0,12)	6.797	78.75	56.82	62.5	1.379	86.14	17.23	87.85
LiNbO3	(-3,3,12)	6.797	78.75	56.819	62.5	1.379	86.14	17.23	87.85
LiNbO3	(1,-4,-10) Equiv. Refl.: (3,1,-10), (4,-1,-10), (-1,-3,-10), (-3,4,-10), (-4,3,-10)	6.718	75.79	56.244	53.6	1.755	93.97	21.93	96.5
Quartz	(1,-3,-5)	6.91	85.67	55.584	53.1	0.525	27.86	6.56	28.62
Quartz	(1,2,5)	6.91	85.67	55.58	53.1	0.525	27.86	6.56	28.62
Quartz	(2,-3,5)	6.91	85.67	55.568	53.1	0.525	27.85	6.56	28.61
Quartz	(2,1,-5)	6.91	85.67	55.563	53	0.525	27.85	6.56	28.61
Quartz	(-3,1,5)	6.91	85.67	55.56	53	0.525	27.85	6.56	28.61
Quartz	(-3,2,-5)	6.91	85.67	55.554	53	0.525	27.84	6.56	28.61
Sapph	(2,3,-4) Equiv. Refl.: (2,-5,4), (3,2,4), (3,-5,-4), (5,-2,4), (5,-3,-4), (-2,5,-4), (-2,-3,4), (-3,5,4), (-3,-2,-4), (-5,2,-4), (-5,3,4)	6.83	80.25	53.304	47.1	1.191	56.03	14.89	57.98
LiNbO3	(1,3,10) Equiv. Refl.: (3,-4,10), (4,-3,10), (-1,4,10), (-3,-1,10), (-4,1,10)	6.718	75.79	51.818	53.6	1.755	93.97	21.93	96.5

Ei = Cryst	6.93 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Sapph	(1,4,0)	6.894	84.17	46.911	45.3	0.708	32.04	8.85	33.24
	Equiv. Refl.: (1,-5,0), (4,1,0), (4,-5,0), (5,-1,0), (5,-4,0), (-1,5,0), (-1,-4,0), (-4,5,0), (-4,-1,0), (-5,1,0), (-5,4,0)								
Sapph	(0,1,14)	6.849	81.25	41.637	38.5	1.067	41.07	13.33	43.18
	Equiv. Refl.: (0,-1,-14), (1,0,-14), (1,-1,14), (-1,0,14), (-1,1,-14)								
LiNbO3	(0,4,8)	6.613	72.61	41.602	39.6	2.171	85.93	27.14	90.11
	Equiv. Refl.: (4,-4,8), (-4,0,8)								
LiNbO3	(0,-4,-8)	6.613	72.61	36.253	39.6	2.171	85.93	27.14	90.11
	Equiv. Refl.: (4,0,-8), (-4,4,-8)								
Quartz	(0,0,6)	6.882	83.26	31.28	30	0.819	24.57	10.24	26.62
	Equiv. Refl.: (0,0,-6)								
Quartz	(0,4,-3)	6.768	77.59	28.785	25.7	1.525	39.25	19.07	43.64
	Equiv. Refl.: (0,-4,3)								
Quartz	(-4,0,-3)	6.768	77.59	28.775	25.7	1.525	39.24	19.07	43.62
Quartz	(4,0,3)	6.768	77.59	28.774	25.7	1.525	39.24	19.07	43.62
	Equiv. Refl.: (-4,4,3)								
Quartz	(4,-4,-3)	6.768	77.59	28.773	25.7	1.525	39.24	19.07	43.62
Quartz	(4,1,1)	6.775	77.84	26.526	23.6	1.493	35.25	18.66	39.89
	Equiv. Refl.: (4,-5,-1)								
Quartz	(1,4,-1)	6.775	77.84	26.523	23.6	1.493	35.25	18.66	39.88
Quartz	(1,-5,1)	6.775	77.84	26.522	23.6	1.493	35.25	18.66	39.88
Quartz	(-5,1,-1)	6.775	77.84	26.521	23.6	1.493	35.24	18.66	39.88
	Equiv. Refl.: (-5,4,1)								
Quartz	(-4,5,1)	6.775	77.84	25.424	23.6	1.493	35.25	18.66	39.89
	Equiv. Refl.: (-4,-1,-1)								
Quartz	(-1,-4,1)	6.775	77.84	25.422	23.6	1.493	35.25	18.66	39.88
Quartz	(-1,5,-1)	6.775	77.84	25.421	23.6	1.493	35.25	18.66	39.88
Quartz	(5,-1,1)	6.775	77.84	25.419	23.6	1.493	35.24	18.66	39.88
	Equiv. Refl.: (5,-4,-1)								
Sapph	(2,2,9)	6.754	77.05	23.899	22.8	1.594	36.33	19.92	41.44
	Equiv. Refl.: (2,2,-9), (2,-4,9), (2,-4,-9), (4,-2,9), (4,-2,-9), (-2,4,9), (-2,4,-9), (-2,-2,9), (-2,-2,-9), (-4,2,9), (-4,2,-9)								
Quartz	(2,-4,-4)	6.821	79.82	23.401	21.7	1.245	27	15.56	31.17
Quartz	(-4,2,4)	6.821	79.82	23.4	21.7	1.245	27	15.56	31.16
Quartz	(-4,2,-4)	6.821	79.82	23.398	21.7	1.245	27	15.56	31.16
Quartz	(2,2,4)	6.821	79.82	23.397	21.7	1.245	27	15.56	31.16
	Equiv. Refl.: (2,2,-4), (2,-4,4)								
Quartz	(-2,-1,-5)	6.91	85.67	22.483	23.7	0.525	12.42	6.56	14.05
Quartz	(-2,3,5)	6.91	85.67	22.48	23.7	0.525	12.42	6.56	14.05
Quartz	(3,-2,-5)	6.91	85.67	22.478	23.7	0.525	12.42	6.56	14.05
Quartz	(3,-1,5)	6.91	85.67	22.466	23.6	0.525	12.41	6.56	14.04
Quartz	(-1,3,-5)	6.91	85.67	22.458	23.6	0.525	12.41	6.56	14.04
Quartz	(-1,-2,5)	6.91	85.67	22.452	23.6	0.525	12.41	6.56	14.04
Quartz	(-2,4,4)	6.821	79.82	22.415	21.7	1.245	27	15.56	31.17
Quartz	(4,-2,-4)	6.821	79.82	22.414	21.7	1.245	27	15.56	31.16
Quartz	(4,-2,4)	6.821	79.82	22.412	21.7	1.245	27	15.56	31.16
Quartz	(-2,-2,-4)	6.821	79.82	22.411	21.7	1.245	27	15.56	31.16
Quartz	(-2,4,-4)	6.821	79.82	22.409	21.7	1.245	27	15.56	31.16
	Equiv. Refl.: (-2,-2,4)								
Quartz	(4,-4,3)	6.768	77.59	17.697	16.7	1.525	25.41	19.07	31.77

Ei = Cryst	6.93 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(4,0,-3)	6.768	77.59	17.696	16.7	1.525	25.41	19.07	31.77
Quartz	(-4,4,-3)	6.768	77.59	17.695	16.7	1.525	25.41	19.07	31.77
Quartz	(-4,0,3)	6.768	77.59	17.694	16.7	1.525	25.41	19.07	31.77
Quartz	(0,4,3)	6.768	77.59	17.689	16.7	1.525	25.4	19.07	31.76
Equiv. Refl.: (0,-4,-3)									
Quartz	(2,1,5)	6.91	85.67	17.557	23.7	0.525	12.42	6.56	14.05
Quartz	(2,-3,-5)	6.91	85.67	17.555	23.7	0.525	12.42	6.56	14.05
Quartz	(-3,2,5)	6.91	85.67	17.553	23.7	0.525	12.42	6.56	14.05
Quartz	(-3,1,-5)	6.91	85.67	17.541	23.6	0.525	12.41	6.56	14.04
Quartz	(1,-3,5)	6.91	85.67	17.533	23.6	0.525	12.41	6.56	14.04
Quartz	(1,2,-5)	6.91	85.67	17.529	23.6	0.525	12.41	6.56	14.04
Sapph	(1,3,-8)	6.633	73.18	16.986	16.4	2.095	34.41	26.19	43.25
Equiv. Refl.: (1,-4,8), (3,1,8), (3,-4,-8), (4,-1,8), (4,-3,-8), (-1,4,-8), (-1,-3,8), (-3,4,8), (-3,-1,-8), (-4,1,-8), (-4,3,8)									
Quartz	(-1,5,1)	6.775	77.84	7.858	8.9	1.493	13.32	18.66	22.93
Equiv. Refl.: (-1,-4,-1), (-4,5,-1), (-4,-1,1)									
Quartz	(5,-1,-1)	6.775	77.84	7.855	8.9	1.493	13.32	18.66	22.93
Equiv. Refl.: (5,-4,1)									
Quartz	(1,4,1)	6.775	77.84	7.685	8.9	1.493	13.32	18.66	22.93
Equiv. Refl.: (1,-5,-1), (4,1,-1), (4,-5,1)									
Quartz	(-5,1,1)	6.775	77.84	7.682	8.9	1.493	13.32	18.66	22.93
Equiv. Refl.: (-5,4,-1)									
Quartz	(3,-5,-2)	6.752	77	7.301	8	1.599	12.76	19.99	23.72
Quartz	(3,2,2)	6.752	77	7.3	8	1.599	12.76	19.99	23.72
Quartz	(-5,2,-2)	6.752	77	7.298	8	1.599	12.76	19.99	23.72
Equiv. Refl.: (-5,3,2)									
Quartz	(2,3,-2)	6.752	77	7.297	8	1.599	12.76	19.99	23.72
Equiv. Refl.: (2,-5,2)									
Quartz	(-3,5,2)	6.752	77	6.982	8	1.599	12.76	19.99	23.72
Equiv. Refl.: (-3,-2,-2)									
Quartz	(5,-2,2)	6.752	77	6.98	8	1.599	12.76	19.99	23.72
Equiv. Refl.: (5,-3,-2), (-2,5,-2)									
Quartz	(-2,-3,2)	6.752	77	6.979	8	1.599	12.76	19.99	23.72
Sapph	(2,3,-1)	6.575	71.58	5.813	7.1	2.308	16.34	28.85	33.15
Equiv. Refl.: (2,-5,1), (3,2,1), (3,-5,-1), (5,-2,1), (5,-3,-1), (-2,5,-1), (-2,-3,1), (-3,5,1), (-3,-2,-1), (-5,2,-1), (-5,3,1)									
LiNbO3	(1,2,-13)	6.88	83.08	5.525	16.4	0.841	13.77	10.51	17.32
Equiv. Refl.: (1,-3,13), (2,1,13), (2,-3,-13), (3,-1,13), (3,-2,-13), (-1,3,-13), (-1,-2,13), (-2,3,13), (-2,-1,-13), (-3,1,-13), (-3,2,13)									
Sapph	(1,2,11)	6.588	71.94	4.513	5.9	2.26	13.38	28.25	31.26
Equiv. Refl.: (1,-3,-11), (2,1,-11), (2,-3,11), (3,-1,-11), (3,-2,11), (-1,3,11), (-1,-2,-11), (-2,3,-11), (-2,-1,-11), (-3,1,11), (-3,2,-11)									
Quartz	(2,3,2)	6.752	77	2.495	4	1.599	6.35	19.99	20.98
Equiv. Refl.: (2,-5,-2)									
Quartz	(-5,3,-2)	6.752	77	2.493	4	1.599	6.34	19.99	20.98
Quartz	(-5,2,2)	6.752	77	2.492	4	1.599	6.34	19.99	20.98
Quartz	(3,-5,2)	6.752	77	2.491	4	1.599	6.34	19.99	20.97
Quartz	(3,2,-2)	6.752	77	2.49	4	1.599	6.34	19.99	20.97
Quartz	(-2,-3,-2)	6.752	77	1.957	4	1.599	6.35	19.99	20.98
Quartz	(-2,5,2)	6.752	77	1.956	4	1.599	6.35	19.99	20.98

Ei =	6.93	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(5,-3,2)	6.752	77	1.954	4	1.599	6.34	19.99	20.98
Quartz	(5,-2,-2)	6.752	77	1.953	4	1.599	6.34	19.99	20.98
Quartz	(-3,5,-2)	6.752	77	1.952	4	1.599	6.34	19.99	20.97
	Equiv. Refl.: (-3,-2,2)								
LiNbO3	(2,3,-7)	6.822	79.85	1.4	6.7	1.24	8.37	15.51	17.62
	Equiv. Refl.: (2,-5,7), (3,2,7), (3,-5,-7), (5,-2,7), (5,-3,-7), (-2,5,-7), (-2,-3,7), (-3,5,7), (-3,-2,-7), (-5,2,-7), (-5,3,7)								
Quartz	(1,4,0)	6.677	74.46	0.641	1.2	1.927	2.4	24.08	24.2
	Equiv. Refl.: (1,-5,0), (4,1,0), (4,-5,0), (-5,1,0), (-5,4,0)								
Quartz	(5,-1,0)	6.677	74.46	0.204	1.2	1.927	2.4	24.08	24.2
	Equiv. Refl.: (5,-4,0), (-1,5,0), (-1,-4,0), (-4,5,0), (-4,-1,0)								
Sapph	(2,3,2)	6.627	72.99	0.055	0.5	2.12	1.09	26.51	26.53
	Equiv. Refl.: (2,-5,-2), (3,2,-2), (3,-5,2), (5,-2,-2), (5,-3,2), (-2,5,2), (-2,-3,-2), (-3,5,-2), (-3,-2,2), (-5,2,2), (-5,3,-2)								

Ei = Cryst	6.915 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Si	(1,3,5) Equiv. Refl.: (1,5,3), (3,1,5), (3,5,1), (5,1,3), (5,3,1)	6.753	77.57	27.3573	26.36	1.5243	40.18	19.05	44.47
LiNbO3	(-4,5,-6) Equiv. Refl.: (-5,4,-6)	6.914	88.96	700.879	678.6	0.126	85.42	1.57	85.43
LiNbO3	(4,1,-6) Equiv. Refl.: (-1,-4,-6)	6.914	88.96	700.878	678.6	0.126	85.42	1.57	85.43
LiNbO3	(1,-5,-6) Equiv. Refl.: (5,-1,-6)	6.914	88.96	700.877	678.6	0.126	85.42	1.57	85.43
LiNbO3	(1,4,-6) Equiv. Refl.: (-1,5,-6), (-4,-1,-6), (-5,1,-6)	6.914	88.96	692.442	668.4	0.126	84.14	1.57	84.16
LiNbO3	(4,-5,-6) Equiv. Refl.: (5,-4,-6)	6.914	88.96	692.439	668.4	0.126	84.14	1.57	84.16
LiNbO3	(4,-5,6) Equiv. Refl.: (5,-4,6)	6.914	88.96	658.908	678.6	0.126	85.42	1.57	85.43
LiNbO3	(1,4,6) Equiv. Refl.: (-1,5,6), (-4,-1,6), (-5,1,6)	6.914	88.96	658.907	678.6	0.126	85.42	1.57	85.43
LiNbO3	(1,-5,6) Equiv. Refl.: (4,1,6), (5,-1,6), (-1,-4,6)	6.914	88.96	642.628	668.4	0.126	84.14	1.57	84.16
LiNbO3	(-4,5,6) Equiv. Refl.: (-5,4,6)	6.914	88.96	642.625	668.4	0.126	84.14	1.57	84.16
Quartz	(-1,3,5)	6.91	87.87	116.583	107.9	0.258	27.8	3.22	27.99
Quartz	(-1,-2,-5)	6.91	87.87	116.574	107.9	0.258	27.8	3.22	27.99
Quartz	(-2,3,-5)	6.91	87.87	116.518	107.9	0.258	27.79	3.22	27.98
Quartz	(-2,-1,5)	6.91	87.87	116.509	107.9	0.258	27.79	3.22	27.98
Quartz	(3,-1,-5)	6.91	87.87	116.505	107.9	0.258	27.79	3.22	27.97
Quartz	(3,-2,5)	6.91	87.87	116.494	107.8	0.258	27.79	3.22	27.97
Quartz	(1,-3,-5)	6.91	87.87	112.903	107.9	0.258	27.8	3.22	27.99
Quartz	(1,2,5)	6.91	87.87	112.894	107.9	0.258	27.8	3.22	27.99
Quartz	(2,-3,5)	6.91	87.87	112.87	107.9	0.258	27.79	3.22	27.98
Quartz	(2,1,-5)	6.91	87.87	112.86	107.9	0.258	27.79	3.22	27.98
Quartz	(-3,1,5)	6.91	87.87	112.853	107.9	0.258	27.79	3.22	27.97
Quartz	(-3,2,-5)	6.91	87.87	112.842	107.8	0.258	27.79	3.22	27.97
LiNbO3	(0,-2,14) Equiv. Refl.: (2,0,14)	6.85	82.16	92.984	89.8	0.952	85.47	11.9	86.3
LiNbO3	(-2,2,14)	6.85	82.16	92.983	89.8	0.952	85.47	11.9	86.3
LiNbO3	(0,2,-14) Equiv. Refl.: (2,-2,-14), (-2,0,-14)	6.85	82.16	86.249	89.8	0.952	85.47	11.9	86.3
LiNbO3	(0,-3,-12) Equiv. Refl.: (3,0,-12), (-3,3,-12)	6.797	79.39	73.098	67.6	1.295	87.52	16.19	89.01
LiNbO3	(0,3,-12) Equiv. Refl.: (-3,0,-12)	6.797	79.39	71.772	66.4	1.295	85.96	16.19	87.48
LiNbO3	(3,-3,-12)	6.797	79.39	71.771	66.4	1.295	85.96	16.19	87.48
LiNbO3	(0,3,12) Equiv. Refl.: (3,-3,12), (-3,0,12)	6.797	79.39	61.885	67.6	1.295	87.52	16.19	89.01
Sapph	(1,4,0) Equiv. Refl.: (1,-5,0), (4,1,0), (4,-5,0), (5,-1,0), (5,-4,0), (-1,5,0), (-1,-4,0), (-4,5,0), (-4,-1,0), (-5,1,0), (-5,4,0)	6.894	85.55	61.487	59.4	0.539	31.98	6.73	32.68

Ei =	6.915	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
LiNbO3	(0,-3,12)	6.797	79.39	60.29	66.4	1.295	85.96	16.19	87.48
	Equiv. Refl.: (3,0,12)								
LiNbO3	(-3,3,12)	6.797	79.39	60.289	66.4	1.295	85.96	16.19	87.48
LiNbO3	(1,-4,-10)	6.718	76.29	58.349	55.6	1.687	93.78	21.09	96.12
	Equiv. Refl.: (3,1,-10), (4,-1,-10), (-1,-3,-10), (-3,4,-10), (-4,3,-10)								
Sapph	(2,3,-4)	6.83	81	57.676	51.1	1.095	55.92	13.69	57.57
	Equiv. Refl.: (2,-5,4), (3,2,4), (3,-5,-4), (5,-2,4), (5,-3,-4), (-2,-5,-4), (-2,-3,4), (-3,5,4), (-3,-2,-4), (-5,2,-4), (-5,3,4)								
LiNbO3	(1,3,10)	6.718	76.29	53.742	55.6	1.687	93.78	21.09	96.12
	Equiv. Refl.: (3,-4,10), (4,-3,10), (-1,4,10), (-3,-1,10), (-4,1,10)								
Sapph	(0,1,14)	6.849	82.1	46.148	42.7	0.96	40.99	12	42.71
	Equiv. Refl.: (0,-1,-14), (1,0,-14), (1,-1,14), (-1,0,14), (-1,1,-14)								
Quartz	(-2,-1,-5)	6.91	87.87	45.657	48.1	0.258	12.39	3.22	12.81
Quartz	(-2,3,5)	6.91	87.87	45.652	48.1	0.258	12.39	3.22	12.8
Quartz	(3,-2,-5)	6.91	87.87	45.647	48.1	0.258	12.39	3.22	12.8
Quartz	(3,-1,5)	6.91	87.87	45.623	48.1	0.258	12.39	3.22	12.8
Quartz	(-1,3,-5)	6.91	87.87	45.606	48.1	0.258	12.38	3.22	12.8
Quartz	(-1,-2,5)	6.91	87.87	45.594	48.1	0.258	12.38	3.22	12.79
LiNbO3	(0,4,8)	6.613	73.01	42.627	40.6	2.113	85.75	26.41	89.73
	Equiv. Refl.: (4,-4,8), (-4,0,8)								
Quartz	(0,0,-6)	6.882	84.41	37.741	36.2	0.677	24.52	8.46	25.94
Quartz	(0,0,6)	6.882	84.41	37.74	36.2	0.677	24.52	8.46	25.94
LiNbO3	(0,-4,-8)	6.613	73.01	37.129	40.6	2.113	85.75	26.41	89.73
	Equiv. Refl.: (4,0,-8), (-4,4,-8)								
Quartz	(2,1,5)	6.91	87.87	35.619	48.1	0.258	12.39	3.22	12.81
Quartz	(2,-3,-5)	6.91	87.87	35.616	48.1	0.258	12.39	3.22	12.8
Quartz	(-3,2,5)	6.91	87.87	35.611	48.1	0.258	12.39	3.22	12.8
Quartz	(-3,1,-5)	6.91	87.87	35.586	48.1	0.258	12.39	3.22	12.8
Quartz	(1,-3,5)	6.91	87.87	35.571	48.1	0.258	12.38	3.22	12.8
Quartz	(1,2,-5)	6.91	87.87	35.562	48.1	0.258	12.38	3.22	12.79
Quartz	(0,4,-3)	6.768	78.16	30.22	27	1.449	39.17	18.11	43.15
	Equiv. Refl.: (0,-4,3)								
Quartz	(-4,0,-3)	6.768	78.16	30.209	27	1.449	39.16	18.11	43.14
Quartz	(4,0,3)	6.768	78.16	30.208	27	1.449	39.16	18.11	43.14
	Equiv. Refl.: (-4,4,3)								
Quartz	(4,-4,-3)	6.768	78.16	30.207	27	1.449	39.15	18.11	43.14
Quartz	(4,1,1)	6.775	78.43	27.909	24.9	1.415	35.18	17.69	39.38
	Equiv. Refl.: (4,-5,-1)								
Quartz	(1,4,-1)	6.775	78.43	27.906	24.9	1.415	35.17	17.69	39.37
Quartz	(1,-5,1)	6.775	78.43	27.905	24.9	1.415	35.17	17.69	39.37
Quartz	(-5,1,-1)	6.775	78.43	27.904	24.9	1.415	35.17	17.69	39.37
	Equiv. Refl.: (-5,4,1)								
Quartz	(-4,5,1)	6.775	78.43	26.745	24.9	1.415	35.18	17.69	39.38
	Equiv. Refl.: (-4,-1,-1)								
Quartz	(-1,-4,1)	6.775	78.43	26.743	24.9	1.415	35.17	17.69	39.37
Quartz	(-1,5,-1)	6.775	78.43	26.742	24.9	1.415	35.17	17.69	39.37
Quartz	(5,-1,1)	6.775	78.43	26.74	24.9	1.415	35.17	17.69	39.37
	Equiv. Refl.: (5,-4,-1)								
Quartz	(2,-4,-4)	6.821	80.53	25.192	23.4	1.153	26.95	14.41	30.56
Quartz	(-4,2,4)	6.821	80.53	25.191	23.4	1.153	26.95	14.41	30.56
Quartz	(-4,2,-4)	6.821	80.53	25.189	23.4	1.153	26.94	14.41	30.56

Ei = Cryst	6.915 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(2,2,4)	6.821	80.53	25.188	23.4	1.153	26.94	14.41	30.56
Quartz	(2,2,-4) Equiv. Refl.: (2,-4,4)	6.821	80.53	25.187	23.4	1.153	26.94	14.41	30.55
Sapph	(2,2,9) Equiv. Refl.: (2,2,-9), (2,-4,9), (2,-4,-9), (4,-2,9), (4,-2,-9), (-2,4,9), (-2,4,-9), (-2,-2,9), (-2,-2,-9), (-4,2,9), (-4,2,-9)	6.754	77.6	24.978	23.8	1.521	36.26	19.01	40.94
Quartz	(-2,4,4)	6.821	80.53	24.127	23.4	1.153	26.95	14.41	30.56
Quartz	(4,-2,-4)	6.821	80.53	24.125	23.4	1.153	26.95	14.41	30.56
Quartz	(4,-2,4)	6.821	80.53	24.123	23.4	1.153	26.94	14.41	30.56
Quartz	(-2,-2,-4)	6.821	80.53	24.122	23.4	1.153	26.94	14.41	30.56
Quartz	(-2,4,-4) Equiv. Refl.: (-2,-2,4)	6.821	80.53	24.12	23.4	1.153	26.94	14.41	30.55
Quartz	(4,-4,3)	6.768	78.16	18.128	17.5	1.449	25.36	18.11	31.16
Quartz	(4,0,-3)	6.768	78.16	18.127	17.5	1.449	25.36	18.11	31.16
Quartz	(-4,4,-3)	6.768	78.16	18.126	17.5	1.449	25.36	18.11	31.16
Quartz	(-4,0,3)	6.768	78.16	18.125	17.5	1.449	25.36	18.11	31.16
Quartz	(0,4,3) Equiv. Refl.: (0,-4,-3)	6.768	78.16	18.12	17.5	1.449	25.35	18.11	31.16
Sapph	(1,3,-8) Equiv. Refl.: (1,-4,8), (3,1,8), (3,-4,-8), (4,-1,8), (4,-3,-8), (-1,4,-8), (-1,-3,8), (-3,4,8), (-3,-1,-8), (-4,1,-8), (-4,3,8)	6.633	73.59	17.427	16.9	2.036	34.34	25.45	42.74
Quartz	(-4,5,-1) Equiv. Refl.: (-4,-1,1)	6.775	78.43	8.26	9.4	1.415	13.29	17.69	22.13
Quartz	(-1,5,1) Equiv. Refl.: (-1,-4,-1)	6.775	78.43	8.259	9.4	1.415	13.29	17.69	22.13
Quartz	(5,-1,-1) Equiv. Refl.: (5,-4,1)	6.775	78.43	8.257	9.4	1.415	13.29	17.69	22.13
Quartz	(1,4,1) Equiv. Refl.: (4,1,-1), (4,-5,1)	6.775	78.43	8.077	9.4	1.415	13.29	17.69	22.13
Quartz	(1,-5,-1)	6.775	78.43	8.076	9.4	1.415	13.29	17.69	22.13
Quartz	(-5,1,1) Equiv. Refl.: (-5,4,-1)	6.775	78.43	8.074	9.4	1.415	13.29	17.69	22.13
Quartz	(3,-5,-2)	6.752	77.55	7.626	8.3	1.526	12.74	19.08	22.94
Quartz	(3,2,2)	6.752	77.55	7.625	8.3	1.526	12.74	19.08	22.94
Quartz	(-5,2,-2) Equiv. Refl.: (-5,3,2)	6.752	77.55	7.623	8.3	1.526	12.73	19.08	22.94
Quartz	(2,3,-2) Equiv. Refl.: (2,-5,2)	6.752	77.55	7.622	8.3	1.526	12.73	19.08	22.94
Quartz	(-3,5,2) Equiv. Refl.: (-3,-2,-2)	6.752	77.55	7.292	8.3	1.526	12.74	19.08	22.94
Quartz	(5,-2,2) Equiv. Refl.: (5,-3,-2)	6.752	77.55	7.29	8.3	1.526	12.73	19.08	22.94
Quartz	(-2,5,-2) Equiv. Refl.: (-2,-3,2)	6.752	77.55	7.289	8.3	1.526	12.73	19.08	22.94
LiNbO3	(1,2,-13) Equiv. Refl.: (1,-3,13), (2,1,13), (3,-1,13), (-1,3,-13), (-1,-2,13), (-2,-1,-13), (-3,1,-13)	6.88	84.2	6.576	19.6	0.703	13.74	8.78	16.31
LiNbO3	(2,-3,-13) Equiv. Refl.: (3,-2,-13), (-2,3,13), (-3,2,13)	6.88	84.2	6.575	19.6	0.703	13.74	8.78	16.31

Ei =	6.915	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(2,3,-1)	6.575	71.96	5.932	7.2	2.253	16.3	28.16	32.54
	Equiv. Refl.: (2,-5,1), (3,2,1), (3,-5,-1), (5,-2,1), (5,-3,-1), (-2,5,-1), (-2,-3,1), (-3,5,1), (-3,-2,-1), (-5,2,-1), (-5,3,1)								
Sapph	(1,2,11)	6.588	72.32	4.608	6.1	2.204	13.35	27.55	30.62
	Equiv. Refl.: (1,-3,-11), (2,1,-11), (2,-3,11), (3,-1,-11), (3,-2,11), (-1,3,11), (-1,-2,-11), (-2,3,-11), (-2,-1,11), (-3,1,11), (-3,2,-11)								
LiNbO3	(1,4,3)	6.512	70.34	3.237	7.9	2.471	19.58	30.89	36.57
	Equiv. Refl.: (1,4,-3), (1,-5,3), (1,-5,-3), (4,1,3), (4,1,-3), (4,-5,3), (4,-5,-3), (5,-1,3), (5,-1,-3), (5,-4,3), (5,-4,-3), (-1,5,3), (-1,5,-3), (-1,-4,3), (-1,-4,-3), (-4,5,3), (-4,5,-3), (-4,-1,3), (-4,-1,-3), (-5,1,3), (-5,1,-3), (-5,4,3), (-5,4,-3)								
Quartz	(2,3,2)	6.752	77.55	2.605	4.2	1.526	6.34	19.08	20.1
	Equiv. Refl.: (2,-5,-2)								
Quartz	(-5,3,-2)	6.752	77.55	2.602	4.1	1.526	6.33	19.08	20.1
Quartz	(-5,2,2)	6.752	77.55	2.601	4.1	1.526	6.33	19.08	20.1
Quartz	(3,2,-2)	6.752	77.55	2.6	4.1	1.526	6.33	19.08	20.1
	Equiv. Refl.: (3,-5,2)								
Quartz	(-2,5,2)	6.752	77.55	2.04	4.2	1.526	6.34	19.08	20.1
	Equiv. Refl.: (-2,-3,-2)								
Quartz	(5,-3,2)	6.752	77.55	2.038	4.1	1.526	6.33	19.08	20.1
Quartz	(5,-2,-2)	6.752	77.55	2.036	4.1	1.526	6.33	19.08	20.1
	Equiv. Refl.: (-3,5,-2), (-3,-2,2)								
LiNbO3	(2,3,-7)	6.822	80.57	1.504	7.3	1.148	8.35	14.35	16.61
	Equiv. Refl.: (2,-5,7), (3,2,7), (3,-5,-7), (5,-2,7), (5,-3,-7), (-2,5,-7), (-2,-3,7), (-3,5,7), (-3,-2,-7), (-5,2,-7), (-5,3,7)								
Quartz	(1,4,0)	6.677	74.92	0.66	1.3	1.864	2.39	23.3	23.42
	Equiv. Refl.: (1,-5,0), (4,1,0), (4,-5,0), (-5,1,0), (-5,4,0)								
Quartz	(5,-1,0)	6.677	74.92	0.209	1.3	1.864	2.39	23.3	23.42
	Equiv. Refl.: (5,-4,0), (-1,5,0), (-1,-4,0), (-4,5,0), (-4,-1,0)								
Sapph	(2,3,2)	6.627	73.4	0.056	0.5	2.062	1.09	25.77	25.79
	Equiv. Refl.: (2,-5,-2), (3,2,-2), (3,-5,2), (5,-2,-2), (5,-3,2), (-2,5,2), (-2,-3,-2), (-3,5,-2), (-3,-2,2), (-5,2,2), (-5,3,-2)								

Ei = Cryst	7.649 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Ge	(4,4,4)	7.592	82.99	96.0009	89.28	0.9408	84	11.76	84.82
Si	(0,2,6)	7.219	70.7	21.3457	18.94	2.6787	50.72	33.48	60.78
	Equiv. Refl.: (0,6,2), (2,0,6), (2,6,0), (6,0,2), (6,2,0)								
Si	(3,3,5)	7.485	78.11	20.8288	19.82	1.6102	31.91	20.13	37.73
	Equiv. Refl.: (3,5,3), (5,3,3)								
Quartz	(0,5,-2)	7.638	86.87	138.979	116.8	0.418	48.86	5.23	49.14
	Equiv. Refl.: (0,-5,2)								
Quartz	(5,0,2)	7.638	86.87	138.967	116.8	0.418	48.85	5.23	49.13
	Equiv. Refl.: (5,-5,-2), (-5,0,-2), (-5,5,2)								
Quartz	(2,2,5)	7.64	87.17	74.987	67.7	0.378	25.55	4.72	25.98
	Equiv. Refl.: (2,-4,-5)								
Quartz	(2,2,-5)	7.64	87.17	74.976	67.6	0.378	25.54	4.72	25.97
Quartz	(2,-4,5)	7.64	87.17	74.964	67.6	0.378	25.54	4.72	25.97
Quartz	(-4,2,5)	7.64	87.17	74.957	67.6	0.378	25.54	4.72	25.97
Quartz	(-4,2,-5)	7.64	87.17	74.95	67.6	0.378	25.53	4.72	25.97
Quartz	(-2,4,5)	7.64	87.17	73.059	67.7	0.378	25.55	4.72	25.98
	Equiv. Refl.: (-2,-2,-5)								
Quartz	(-2,-2,5)	7.64	87.17	73.048	67.6	0.378	25.54	4.72	25.97
Quartz	(-2,4,-5)	7.64	87.17	73.034	67.6	0.378	25.54	4.72	25.97
Quartz	(4,-2,-5)	7.64	87.17	73.026	67.6	0.378	25.54	4.72	25.97
Quartz	(4,-2,5)	7.64	87.17	73.02	67.6	0.378	25.53	4.72	25.97
LiNbO3	(2,4,4)	7.572	81.87	57.477	55.9	1.093	61.15	13.66	62.66
	Equiv. Refl.: (4,-6,4), (6,-4,4), (-2,6,4), (-4,-2,4), (-6,2,4)								
LiNbO3	(2,-6,-4)	7.572	81.87	52.622	55.9	1.093	61.15	13.66	62.66
	Equiv. Refl.: (4,2,-4), (6,-2,-4), (-2,-4,-4), (-4,6,-4), (-6,4,-4)								
LiNbO3	(2,-5,10)	7.532	79.97	47.124	45.8	1.353	61.92	16.91	64.19
	Equiv. Refl.: (3,2,10), (5,-2,10), (-2,-3,10), (-3,5,10), (-5,3,10)								
Sapph	(1,1,15)	7.619	84.91	46.14	43.2	0.681	29.42	8.52	30.63
	Equiv. Refl.: (1,1,-15), (1,-2,15), (1,-2,-15), (2,-1,15), (2,-1,-15), (-1,2,15), (-1,2,-15), (-1,-1,15), (-1,-1,-15), (-2,1,15), (-2,1,-15)								
LiNbO3	(2,3,-10)	7.532	79.97	42.992	45.8	1.353	61.92	16.91	64.19
	Equiv. Refl.: (3,-5,-10), (5,-3,-10), (-2,5,-10), (-3,-2,-10), (-5,2,-10)								
LiNbO3	(2,4,-2)	7.412	75.7	41.754	40.5	1.95	78.99	24.38	82.67
	Equiv. Refl.: (4,-6,-2), (6,-4,-2), (-2,6,-2), (-4,-2,-2), (-6,2,-2)								
LiNbO3	(2,-6,2)	7.412	75.7	41.556	40.5	1.95	78.99	24.38	82.67
	Equiv. Refl.: (4,2,2), (6,-2,2), (-2,-4,2), (-4,6,2), (-6,4,2)								
LiNbO3	(3,3,0)	7.225	70.84	36.813	35.1	2.658	93.21	33.23	98.95
	Equiv. Refl.: (3,-6,0), (6,-3,0), (-3,6,0), (-3,-3,0), (-6,3,0)								
Quartz	(2,-2,6)	7.474	77.71	32.153	27.2	1.667	45.36	20.84	49.92
Quartz	(2,0,-6)	7.474	77.71	32.151	27.2	1.667	45.36	20.84	49.92
	Equiv. Refl.: (-2,0,6), (-2,2,-6)								
Quartz	(0,2,6)	7.474	77.71	32.141	27.2	1.667	45.35	20.84	49.9
	Equiv. Refl.: (0,-2,-6)								
LiNbO3	(1,-3,-14)	7.261	71.68	31.975	31.3	2.532	79.15	31.65	85.24
	Equiv. Refl.: (2,1,-14), (3,-1,-14), (-1,-2,-14), (-2,3,-14), (-3,2,-14)								
LiNbO3	(1,2,14)	7.261	71.68	31.783	31.3	2.532	79.15	31.65	85.24
	Equiv. Refl.: (2,-3,14), (3,-2,14), (-1,3,14), (-2,-1,14), (-3,1,14)								
Quartz	(4,1,-3)	7.511	79.11	31.275	26.9	1.471	39.54	18.39	43.6

Ei =	7.649	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(4,-5,3)	7.511	79.11	31.274	26.9	1.471	39.53	18.39	43.6
Sapph	(1,4,6)	7.465	77.42	31.27	27.3	1.708	46.61	21.34	51.27
	Equiv. Refl.: (1,4,-6), (1,-5,6), (1,-5,-6), (4,1,6), (4,1,-6), (4,-5,6), (4,-5,-6), (5,-1,6), (5,-1,-6), (5,-4,6), (5,-4,-6), (-1,5,6), (-1,5,-6), (-1,-4,6), (-1,-4,-6), (-4,5,6), (-4,5,-6), (-4,-1,6), (-4,-1,-6), (-5,1,6), (-5,1,-6), (-5,4,6), (-5,4,-6)								
Quartz	(1,4,3)	7.511	79.11	31.269	26.9	1.471	39.53	18.39	43.6
Quartz	(1,-5,-3)	7.511	79.11	31.268	26.9	1.471	39.53	18.39	43.6
Quartz	(-5,1,3)	7.511	79.11	31.263	26.9	1.471	39.52	18.39	43.59
	Equiv. Refl.: (-5,4,-3)								
Quartz	(-4,-1,3)	7.511	79.11	31.238	26.9	1.471	39.54	18.39	43.6
Quartz	(-4,5,-3)	7.511	79.11	31.236	26.9	1.471	39.53	18.39	43.6
Quartz	(-1,-4,-3)	7.511	79.11	31.232	26.9	1.471	39.53	18.39	43.6
Quartz	(-1,5,3)	7.511	79.11	31.23	26.9	1.471	39.53	18.39	43.6
Quartz	(5,-1,-3)	7.511	79.11	31.226	26.9	1.471	39.52	18.39	43.59
	Equiv. Refl.: (5,-4,3)								
LiNbO3	(0,-1,16)	7.289	72.34	29.359	28.9	2.435	70.39	30.43	76.69
	Equiv. Refl.: (1,0,16), (-1,1,16)								
LiNbO3	(0,1,-16)	7.289	72.34	28.356	28.9	2.435	70.39	30.43	76.69
	Equiv. Refl.: (1,-1,-16), (-1,0,-16)								
LiNbO3	(2,2,12)	7.211	70.51	27.898	26.6	2.707	72.07	33.83	79.61
	Equiv. Refl.: (2,-4,12), (4,-2,12), (-2,-2,12)								
LiNbO3	(-2,4,12)	7.211	70.51	27.897	26.6	2.707	72.07	33.83	79.61
	Equiv. Refl.: (-4,2,12)								
LiNbO3	(2,2,-12)	7.211	70.51	25.261	26.6	2.707	72.07	33.83	79.61
	Equiv. Refl.: (2,-4,-12), (4,-2,-12), (-2,4,-12), (-2,-2,-12), (-4,2,-12)								
Quartz	(6,-3,0)	7.571	81.8	24.959	22.7	1.103	25.05	13.78	28.59
	Equiv. Refl.: (-3,6,0), (-3,-3,0)								
Quartz	(3,3,0)	7.571	81.8	24.796	22.7	1.103	25.05	13.78	28.59
	Equiv. Refl.: (3,-6,0), (-6,3,0)								
Sapph	(1,3,10)	7.225	70.84	24.485	21	2.658	55.94	33.23	65.06
	Equiv. Refl.: (1,-4,-10), (3,1,-10), (3,-4,10), (4,-1,-10), (4,-3,10), (-1,4,10), (-1,-3,-10), (-3,4,-10), (-3,-1,10), (-4,1,10), (-4,3,-10)								
Sapph	(0,2,-14)	7.328	73.35	23.78	20.8	2.288	47.56	28.6	55.49
	Equiv. Refl.: (0,-2,14), (2,0,14), (2,-2,-14), (-2,0,-14), (-2,2,14)								
Sapph	(0,3,12)	7.292	72.43	20.403	18.1	2.422	43.87	30.28	53.3
	Equiv. Refl.: (0,3,-12), (0,-3,12), (0,-3,-12), (3,0,12), (3,0,-12), (3,-3,12), (3,-3,-12), (-3,0,12), (-3,0,-12), (-3,3,12), (-3,3,-12)								
Quartz	(-4,0,4)	7.417	75.86	7.686	7.7	1.927	14.86	24.09	28.3
Quartz	(4,0,-4)	7.417	75.86	7.685	7.7	1.927	14.86	24.09	28.3
	Equiv. Refl.: (4,-4,4), (-4,4,-4)								
Quartz	(0,4,4)	7.417	75.86	7.669	7.7	1.927	14.84	24.09	28.29
	Equiv. Refl.: (0,-4,-4)								
Quartz	(2,0,6)	7.474	77.71	7.517	7.6	1.667	12.71	20.84	24.4
Quartz	(2,-2,-6)	7.474	77.71	7.516	7.6	1.667	12.7	20.84	24.4
Quartz	(-2,0,-6)	7.474	77.71	7.513	7.6	1.667	12.71	20.84	24.4
Quartz	(0,5,2)	7.638	86.87	7.512	11.9	0.418	4.99	5.23	7.23
	Equiv. Refl.: (0,-5,-2)								
Quartz	(-2,2,6)	7.474	77.71	7.511	7.6	1.667	12.7	20.84	24.4
Quartz	(0,2,-6)	7.474	77.71	7.504	7.6	1.667	12.69	20.84	24.4
	Equiv. Refl.: (0,-2,6)								

Ei =	7.649	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Quartz	(5,0,-2)	7.638	86.87	7.486	11.9	0.418	4.98	5.23	7.22
	Equiv. Refl.: (-5,0,2)								
Quartz	(5,-5,2)	7.638	86.87	7.484	11.9	0.418	4.98	5.23	7.22
Quartz	(-5,5,-2)	7.638	86.87	7.483	11.9	0.418	4.98	5.23	7.22
Quartz	(4,0,4)	7.417	75.86	7.305	7.4	1.927	14.3	24.09	28.01
	Equiv. Refl.: (-4,0,-4)								
Quartz	(4,-4,-4)	7.417	75.86	7.303	7.4	1.927	14.3	24.09	28.01
	Equiv. Refl.: (-4,4,4)								
Quartz	(0,4,-4)	7.417	75.86	7.299	7.4	1.927	14.29	24.09	28.01
	Equiv. Refl.: (0,-4,4)								
LiNbO3	(2,4,1)	7.371	74.52	6.331	10.7	2.119	22.57	26.49	34.8
	Equiv. Refl.: (2,-6,-1), (4,2,-1), (4,-6,1), (6,-2,-1), (6,-4,1), (-2,6,1), (-2,-4,-1), (-4,6,-1), (-4,-2,1), (-6,2,1), (-6,4,-1)								
Quartz	(2,-1,-6)	7.33	73.4	6	6.1	2.28	13.81	28.5	31.68
Quartz	(2,-1,6)	7.33	73.4	5.998	6.1	2.28	13.81	28.5	31.67
Quartz	(-1,2,6)	7.33	73.4	5.994	6.1	2.28	13.8	28.5	31.67
Quartz	(-1,2,-6)	7.33	73.4	5.993	6.1	2.28	13.8	28.5	31.67
	Equiv. Refl.: (-1,-1,6), (-1,-1,-6)								
Quartz	(-2,1,6)	7.33	73.4	5.733	6.1	2.28	13.81	28.5	31.68
Quartz	(-2,1,-6)	7.33	73.4	5.73	6.1	2.28	13.81	28.5	31.67
Quartz	(1,1,6)	7.33	73.4	5.725	6.1	2.28	13.8	28.5	31.67
	Equiv. Refl.: (1,-2,-6)								
Quartz	(1,1,-6)	7.33	73.4	5.724	6.1	2.28	13.8	28.5	31.67
	Equiv. Refl.: (1,-2,6)								
Sapph	(2,3,-7)	7.36	74.19	4.884	5.7	2.166	12.35	27.07	29.76
	Equiv. Refl.: (2,-5,7), (3,2,7), (3,-5,-7), (5,-2,7), (5,-3,-7), (-2,5,-7), (-2,-3,7), (-3,5,7), (-3,-2,-7), (-5,2,-7), (-5,3,7)								
LiNbO3	(1,4,9)	7.537	80.16	4.17	10.2	1.326	13.54	16.58	21.4
	Equiv. Refl.: (1,4,-9), (1,-5,9), (1,-5,-9), (4,1,9), (4,1,-9), (4,-5,9), (4,-5,-9), (5,-1,9), (5,-1,-9), (5,-4,9), (5,-4,-9), (-1,5,9), (-1,5,-9), (-1,-4,9), (-1,-4,-9), (-4,5,9), (-4,5,-9), (-4,-1,9), (-4,-1,-9), (-5,1,9), (-5,1,-9), (-5,4,9), (-5,4,-9)								
Sapph	(2,3,8)	7.588	82.78	3.951	6.5	0.97	6.25	12.12	13.64
	Equiv. Refl.: (2,-5,-8), (3,2,-8), (3,-5,8), (5,-2,-8), (5,-3,8), (-2,5,8), (-2,-3,-8), (-3,5,-8), (-3,-2,8), (-5,2,8), (-5,3,-8)								
Sapph	(1,2,-13)	7.372	74.53	3.527	4.8	2.118	10.13	26.47	28.34
	Equiv. Refl.: (1,-3,13), (2,1,13), (2,-3,-13), (3,-1,13), (3,-2,-13), (-1,3,-13), (-1,-2,13), (-2,3,13), (-2,-1,-13), (-3,1,-13), (-3,2,13)								
Quartz	(3,-3,-5)	7.211	70.51	3.086	3.6	2.707	9.75	33.83	35.21
Quartz	(3,0,5)	7.211	70.51	3.085	3.6	2.707	9.75	33.83	35.21
Quartz	(0,3,-5)	7.211	70.51	3.083	3.6	2.707	9.75	33.83	35.21
	Equiv. Refl.: (0,-3,5)								
Quartz	(-3,0,-5)	7.211	70.51	3.082	3.6	2.707	9.75	33.83	35.21
	Equiv. Refl.: (-3,3,5)								
Sapph	(1,3,-11)	7.549	80.72	2.966	5.2	1.249	6.47	15.61	16.9
	Equiv. Refl.: (1,-4,11), (3,1,11), (3,-4,-11), (4,-1,11), (4,-3,-11), (-1,4,-11), (-1,-3,11), (-3,4,11), (-3,-1,-11), (-4,1,-11), (-4,3,11)								
Quartz	(-4,5,3)	7.511	79.11	2.892	4.1	1.471	6.05	18.39	19.36
	Equiv. Refl.: (-4,-1,-3)								
Quartz	(-1,5,-3)	7.511	79.11	2.89	4.1	1.471	6.04	18.39	19.36

Ei =	7.649	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(5,-1,3)	7.511	79.11	2.889	4.1	1.471	6.04	18.39	19.36
	Equiv. Refl.: (5,-4,-3)								
Quartz	(-1,-4,3)	7.511	79.11	2.888	4.1	1.471	6.04	18.39	19.36
Quartz	(4,-5,-3)	7.511	79.11	2.394	4.1	1.471	6.05	18.39	19.36
Quartz	(1,-5,3)	7.511	79.11	2.393	4.1	1.471	6.04	18.39	19.36
	Equiv. Refl.: (4,1,3)								
Quartz	(1,4,-3)	7.511	79.11	2.391	4.1	1.471	6.04	18.39	19.36
	Equiv. Refl.: (-5,4,3)								
Quartz	(-5,1,-3)	7.511	79.11	2.39	4.1	1.471	6.04	18.39	19.36
Quartz	(3,-5,-3)	7.223	70.79	1.499	2.3	2.665	6.18	33.31	33.88
Quartz	(2,3,-3)	7.223	70.79	1.498	2.3	2.665	6.17	33.31	33.88
	Equiv. Refl.: (2,-5,3), (3,2,3)								
Quartz	(-5,2,-3)	7.223	70.79	1.497	2.3	2.665	6.17	33.31	33.88
	Equiv. Refl.: (-5,3,3)								
Quartz	(-2,5,-3)	7.223	70.79	1.37	2.3	2.665	6.18	33.31	33.88
	Equiv. Refl.: (-3,5,3)								
Quartz	(5,-2,3)	7.223	70.79	1.369	2.3	2.665	6.17	33.31	33.88
	Equiv. Refl.: (5,-3,-3), (-2,-3,3), (-3,-2,-3)								
Quartz	(5,-2,-3)	7.223	70.79	1.225	1.9	2.665	5.03	33.31	33.69
	Equiv. Refl.: (5,-3,3)								
Quartz	(-2,-3,-3)	7.223	70.79	1.224	1.9	2.665	5.03	33.31	33.69
Quartz	(-2,5,3)	7.223	70.79	1.223	1.9	2.665	5.03	33.31	33.69
Quartz	(-3,5,-3)	7.223	70.79	1.221	1.9	2.665	5.02	33.31	33.69
	Equiv. Refl.: (-3,-2,3)								
Quartz	(-5,2,3)	7.223	70.79	0.897	1.9	2.665	5.03	33.31	33.69
	Equiv. Refl.: (-5,3,-3)								
Quartz	(2,3,3)	7.223	70.79	0.896	1.9	2.665	5.03	33.31	33.69
Quartz	(2,-5,-3)	7.223	70.79	0.895	1.9	2.665	5.03	33.31	33.69
Quartz	(3,2,-3)	7.223	70.79	0.893	1.9	2.665	5.02	33.31	33.69
	Equiv. Refl.: (3,-5,3)								
Quartz	(3,-3,5)	7.211	70.51	0.82	1.6	2.707	4.33	33.83	34.11
Quartz	(3,0,-5)	7.211	70.51	0.819	1.6	2.707	4.33	33.83	34.11
	Equiv. Refl.: (-3,3,-5)								
Quartz	(-3,0,5)	7.211	70.51	0.818	1.6	2.707	4.33	33.83	34.11
Quartz	(0,3,5)	7.211	70.51	0.815	1.6	2.707	4.31	33.83	34.11
	Equiv. Refl.: (0,-3,-5)								
Quartz	(0,5,-1)	7.375	74.61	0.795	1.7	2.106	3.61	26.32	26.57
	Equiv. Refl.: (0,-5,1), (5,0,1), (5,-5,-1), (-5,0,-1), (-5,5,1)								
LiNbO3	(3,3,3)	7.349	73.89	0.272	2	2.209	4.49	27.61	27.98
	Equiv. Refl.: (3,3,-3), (3,-6,3), (3,-6,-3), (6,-3,3), (6,-3,-3), (-3,6,3), (-3,6,-3), (-3,-3,3), (-3,-3,-3), (-6,3,3), (-6,3,-3)								
Quartz	(0,5,0)	7.285	72.25	0.208	0.8	2.448	1.89	30.6	30.66
	Equiv. Refl.: (0,-5,0), (5,0,0), (5,-5,0), (-5,0,0), (-5,5,0)								

Ei =	8.333	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(2,4,6)	8.2	79.75	48.9	45.4	1.507	68.43	18.83	70.97
Si	(4,4,4)	7.908	71.63	16.7	14.7	2.768	40.75	34.6	53.46
Si	(1,1,7)	8.152	78.02	15.9	14.7	1.768	25.98	22.1	34.11
	Equiv. Refl.: (1,5,5)								
LiNbO3	(1,-5,12)	8.331	88.61	282	267.5	0.203	54.23	2.53	54.29
	Equiv. Refl.: (4,1,12), (5,-1,12), (-1,-4,12), (-4,5,12), (-5,4,12)								
LiNbO3	(1,4,12)	8.331	88.61	272.7	260	0.203	52.7	2.53	52.76
	Equiv. Refl.: (4,-5,12), (5,-4,12), (-1,5,12), (-4,-1,12), (-5,1,12)								
LiNbO3	(1,4,-12)	8.331	88.61	260	267.5	0.203	54.23	2.53	54.29
	Equiv. Refl.: (4,-5,-12), (5,-4,-12), (-1,5,-12), (-4,-1,-12), (-5,1,-12)								
LiNbO3	(1,-5,-12)	8.331	88.61	250.9	259.9	0.203	52.7	2.53	52.76
	Equiv. Refl.: (4,1,-12), (5,-1,-12), (-1,-4,-12), (-4,5,-12), (-5,4,-12)								
LiNbO3	(0,5,10)	8.266	82.75	53.1	49.2	1.06	52.11	13.25	53.77
	Equiv. Refl.: (5,-5,10), (-5,0,10)								
LiNbO3	(0,-5,-10)	8.266	82.75	45.3	49.2	1.06	52.11	13.25	53.77
	Equiv. Refl.: (5,0,-10), (-5,5,-10)								
LiNbO3	(0,0,18)	8.049	75	41.4	36.5	2.232	81.4	27.9	86.05
LiNbO3	(0,0,-18)	8.049	75	37.1	36.5	2.232	81.4	27.9	86.05
LiNbO3	(2,-6,8)	8.181	79.05	33.2	32.1	1.612	51.7	20.15	55.49
	Equiv. Refl.: (4,2,8), (6,-2,8), (-2,-4,8), (-4,6,8), (-6,4,8)								
Quartz	(3,3,3)	8.316	86.34	31.9	30	0.532	15.98	6.65	17.31
	Equiv. Refl.: (3,3,-3), (3,-6,3), (3,-6,-3), (-6,3,3), (-6,3,-3)								
Quartz	(6,-3,3)	8.316	86.34	31.7	30	0.532	15.98	6.65	17.31
	Equiv. Refl.: (6,-3,-3), (-3,6,3), (-3,6,-3), (-3,-3,3), (-3,-3,-3)								
LiNbO3	(2,4,-8)	8.181	79.05	30.6	32.1	1.612	51.7	20.15	55.49
	Equiv. Refl.: (4,-6,-8), (6,-4,-8), (-2,6,-8), (-4,-2,-8), (-6,2,-8)								
LiNbO3	(1,3,-14)	8.021	74.26	28.2	26.5	2.349	62.33	29.36	68.9
	Equiv. Refl.: (3,-4,-14), (4,-3,-14), (-1,4,-14), (-3,-1,-14), (-4,1,-14)								
LiNbO3	(1,2,-16)	8.045	74.9	27.3	26.7	2.249	60.05	28.11	66.31
	Equiv. Refl.: (2,-3,-16), (3,-2,-16), (-1,3,-16), (-2,-1,-16), (-3,1,-16)								
LiNbO3	(1,-3,16)	8.045	74.9	27.1	26.7	2.249	60.05	28.11	66.31
	Equiv. Refl.: (2,1,16), (3,-1,16), (-1,-2,16), (-2,3,16), (-3,2,16)								
LiNbO3	(1,-6,4)	7.946	72.47	27	25.5	2.633	67.24	32.91	74.86
	Equiv. Refl.: (5,1,4), (6,-1,4), (-1,-5,4), (-5,6,4), (-6,5,4)								
LiNbO3	(1,-4,14)	8.021	74.26	26.2	26.5	2.349	62.33	29.36	68.9
	Equiv. Refl.: (3,1,14), (4,-1,14), (-1,-3,14), (-3,4,14), (-4,3,14)								
LiNbO3	(1,5,-4)	7.946	72.47	25.9	25.5	2.633	67.24	32.91	74.86
	Equiv. Refl.: (5,-6,-4), (6,-5,-4), (-1,6,-4), (-5,-1,-4), (-6,1,-4)								
Sapph	(0,2,16)	8.208	80.06	20.5	18.6	1.46	27.21	18.25	32.76
	Equiv. Refl.: (0,-2,-16), (2,0,-16), (2,4,4), (2,-2,16), (2,-6,-4), (4,2,-4), (4,-6,4), (6,-2,-4), (6,-4,4), (-2,0,16), (-2,2,-16), (-2,6,4), (-2,-4,-4), (-4,6,-4), (-4,-2,4), (-6,2,4), (-6,4,-4)								
Quartz	(1,5,-1)	8.193	79.48	19.6	17.1	1.548	26.46	19.35	32.78
	Equiv. Refl.: (1,-6,1), (5,1,1), (5,-6,-1), (-6,1,-1), (-6,5,1)								
Quartz	(6,-1,1)	8.193	79.48	19.5	17.1	1.548	26.45	19.35	32.78
	Equiv. Refl.: (6,-5,-1), (-1,6,-1), (-1,-5,1), (-5,6,1), (-5,-1,-1)								
Sapph	(2,4,-5)	8.311	85.8	16.2	18.2	0.611	11.13	7.64	13.5
	Equiv. Refl.: (2,-6,5), (4,2,5), (4,-6,-5), (6,-2,5), (6,-4,-5), (-2,6,-5), (-2,-4,5), (-4,6,5), (-4,-2,-5), (-6,2,-5), (-6,4,5)								
Quartz	(2,3,4)	7.835	70.09	15.2	12.8	3.019	38.5	37.73	53.91
	Equiv. Refl.: (2,-5,-4), (3,2,-4), (3,-5,4), (-5,2,4), (-5,3,-4)								

Ei =	8.333	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50mm	2m, 50mm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/mrad]	[meV]	[meV]	[meV]
Quartz	(5,-2,-4)	7.835	70.09	15	12.8	3.019	38.49	37.73	53.9
	Equiv. Refl.: (5,-3,4), (-2,5,4), (-2,-3,-4), (-3,5,-4), (-3,-2,4)								
Sapph	(2,3,-10)	8.111	76.74	14.7	13.1	1.964	25.7	24.56	35.55
	Equiv. Refl.: (2,-5,10), (3,2,10), (3,-5,-10), (5,-2,10), (5,-3,-10), (-2,5,-10), (-2,-3,10), (-3,5,10), (-3,-2,-10), (-5,2,-10), (-5,3,10)								
Quartz	(2,4,2)	8.044	74.86	13.8	11.8	2.255	26.51	28.19	38.69
	Equiv. Refl.: (2,-6,-2), (4,2,-2), (4,-6,2), (-6,2,2), (-6,4,-2)								
Quartz	(6,-2,-2)	8.044	74.86	13.6	11.8	2.255	26.51	28.19	38.69
	Equiv. Refl.: (6,-4,2), (-2,6,2), (-2,-4,-2), (-4,6,-2), (-4,-2,2)								
Quartz	(0,1,7)	8.16	78.31	13.1	11.7	1.724	20.11	21.55	29.47
	Equiv. Refl.: (0,-1,-7), (1,0,-7), (1,-1,7), (5,-1,4), (5,-4,-4), (-1,0,7), (-1,1,-7), (-1,5,-4), (-1,-4,4), (-4,5,4), (-4,-1,-4)								
Quartz	(1,4,-4)	8.101	76.45	12.8	11.3	2.008	22.64	25.1	33.8
	Equiv. Refl.: (1,-5,4), (4,1,4), (4,-5,-4), (-5,1,-4), (-5,4,4)								
Sapph	(1,4,9)	8.123	77.11	11.9	11.3	1.908	21.49	23.84	32.1
	Equiv. Refl.: (1,4,-9), (1,-5,9), (1,-5,-9), (4,1,9), (4,1,-9), (4,-5,9), (4,-5,-9), (5,-1,9), (5,-1,-9), (5,-4,9), (5,-4,-9), (-1,5,9), (-1,5,-9), (-1,-4,9), (-1,-4,-9), (-4,5,9), (-4,5,-9), (-4,-1,9), (-4,-1,-9), (-5,1,9), (-5,1,-9), (-5,4,9), (-5,4,-9)								
Quartz	(1,2,6)	7.888	71.19	10.5	9.1	2.838	25.74	35.47	43.82
	Equiv. Refl.: (1,-3,-6), (2,1,-6), (2,-3,6), (-3,1,6), (-3,2,-6)								
Quartz	(0,3,6)	8.153	78.06	10.4	9.7	1.762	17.09	22.02	27.87
	Equiv. Refl.: (0,-3,-6), (3,0,-6), (3,-3,6), (-3,0,6), (-3,3,-6)								
Quartz	(3,-1,-6)	7.888	71.19	10.3	9.1	2.838	25.72	35.47	43.82
	Equiv. Refl.: (3,-2,6), (-1,3,6), (-1,-2,-6), (-2,3,-6), (-2,-1,6)								
LiNbO3	(2,2,15)	8.258	82.31	8.2	14.3	1.126	16.13	14.07	21.41
	Equiv. Refl.: (2,2,-15), (2,-4,15), (2,-4,-15), (4,-2,15), (4,-2,-15), (-2,4,15), (-2,4,-15), (-2,-2,15), (-2,-2,-15), (-4,2,15), (-4,2,-15)								
Quartz	(0,4,-5)	8.177	78.88	7.9	7.9	1.638	12.87	20.47	24.18
	Equiv. Refl.: (0,-4,5), (4,0,5), (4,-4,-5), (-4,0,-5), (-4,4,5)								
Quartz	(5,-2,4)	7.835	70.09	6.6	5.9	3.019	17.82	37.73	41.73
	Equiv. Refl.: (5,-3,-4), (-2,5,-4), (-2,-3,4), (-3,5,4), (-3,-2,-4)								
Quartz	(2,3,-4)	7.835	70.09	6.5	5.9	3.019	17.81	37.73	41.72
	Equiv. Refl.: (2,-5,4), (3,2,4), (3,-5,-4), (-5,2,-4), (-5,3,4)								
Quartz	(1,5,0)	8.112	76.78	6.2	5.7	1.958	11.17	24.47	26.9
	Equiv. Refl.: (1,-6,0), (5,1,0), (5,-6,0), (-6,1,0), (-6,5,0)								
Quartz	(6,-1,0)	8.112	76.78	5.2	5.7	1.958	11.17	24.47	26.9
	Equiv. Refl.: (6,-5,0), (-1,6,0), (-1,-5,0), (-5,6,0), (-5,-1,0)								
Quartz	(6,-2,2)	8.044	74.86	5.1	4.9	2.255	11.11	28.19	30.3
	Equiv. Refl.: (6,-4,-2), (-2,6,-2), (-2,-4,2), (-4,6,2), (-4,-2,-2)								
Sapph	(2,4,1)	7.975	73.14	4.8	5.1	2.525	12.86	31.56	34.08
	Equiv. Refl.: (2,-6,-1), (4,2,-1), (4,-6,1), (6,-2,-1), (6,-4,1), (-2,6,1), (-2,-4,-1), (-4,6,-1), (-4,-2,1), (-6,2,1), (-6,4,-1)								
Quartz	(2,4,-2)	8.044	74.86	4.6	4.9	2.255	11.11	28.19	30.3
	Equiv. Refl.: (2,-6,2), (4,2,2), (4,-6,-2), (-6,2,-2), (-6,4,2)								
LiNbO3	(2,4,7)	7.996	73.65	4.5	7.7	2.445	18.79	30.56	35.88
	Equiv. Refl.: (2,-6,-7), (4,2,-7), (4,-6,7), (6,-2,-7), (6,-4,7), (-2,6,7), (-2,-4,-7), (-4,6,-7), (-4,-2,7), (-6,2,7), (-6,4,-7)								
Quartz	(0,3,-6)	8.153	78.06	4.4	4.7	1.762	8.32	22.02	23.54
	Equiv. Refl.: (0,-3,6), (3,0,6), (3,-3,-6), (-3,0,-6), (-3,3,6)								
Sapph	(3,3,6)	8.325	87.53	4.1	8.7	0.36	3.12	4.5	5.48
	Equiv. Refl.: (3,3,-6), (3,-6,6), (3,-6,-6), (6,-3,6), (6,-3,-6), (-3,6,6), (-3,6,-6), (-3,-3,6), (-3,-3,-6), (-6,3,6), (-6,3,-6)								

Ei =	8.333	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50mm	2m, 50mm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/mrad]	[meV]	[meV]	[meV]
Quartz	(0,4,5)	8.177	78.88	4	4.5	1.638	7.34	20.47	21.75
	Equiv. Refl.: (0,-4,-5), (4,0,-5), (4,-4,5), (-4,0,5), (-4,4,-5)								
Quartz	(3,-1,6)	7.888	71.19	3.6	3.4	2.838	9.66	35.47	36.76
	Equiv. Refl.: (3,-2,-6), (-1,3,-6), (-1,-2,6), (-2,3,6), (-2,-1,-6)								
Quartz	(0,1,-7)	8.16	78.31	3.3	3.9	1.724	6.72	21.55	22.57
	Equiv. Refl.: (0,-1,7), (1,0,7), (1,-1,-7), (-1,0,-7), (-1,1,7)								
Sapph	(2,4,-2)	8.018	74.19	3.2	4	2.36	9.38	29.5	30.96
	Equiv. Refl.: (2,-6,2), (4,2,2), (4,-6,-2), (6,-2,2), (6,-4,-2), (-2,6,-2), (-2,-4,2), (-4,6,2), (-4,-2,-2), (-6,2,-2), (-6,4,2)								
Quartz	(1,2,-6)	7.888	71.19	2.7	3.4	2.838	9.67	35.47	36.77
	Equiv. Refl.: (1,-3,6), (2,1,6), (2,-3,-6), (-3,1,-6), (-3,2,6)								
Sapph	(1,3,13)	8.241	81.5	2.4	4.2	1.245	5.18	15.57	16.4
	Equiv. Refl.: (1,-4,-13), (3,1,-13), (3,-4,13), (4,-1,-13), (4,-3,13), (-1,4,13), (-1,-3,-13), (-3,4,-13), (-3,-1,13), (-4,1,13), (-4,3,-13)								
Quartz	(0,5,-3)	8.057	75.21	2.1	2.9	2.201	6.43	27.51	28.25
	Equiv. Refl.: (0,-5,3), (5,0,3), (5,-5,-3), (-5,0,-3), (-5,5,3)								
LiNbO3	(1,5,5)	8.058	75.25	1.9	4.8	2.194	10.43	27.43	29.35
	Equiv. Refl.: (1,-6,-5), (5,1,-5), (5,-6,5), (6,-1,-5), (6,-5,5), (-1,6,5), (-1,-5,-5), (-5,6,-5), (-5,-1,5), (-6,1,5), (-6,5,-5)								
Quartz	(1,4,4)	8.101	76.45	1.7	2.3	2.008	4.7	25.1	25.53
	Equiv. Refl.: (1,-5,-4), (4,1,-4), (4,-5,4), (-5,1,4), (-5,4,-4)								
Quartz	(5,-1,-4)	8.101	76.45	1.3	2.3	2.008	4.69	25.1	25.53
	Equiv. Refl.: (5,-4,4), (-1,5,4), (-1,-4,-4), (-4,5,-4), (-4,-1,4)								
Quartz	(6,-3,2)	7.911	71.68	1.1	1.6	2.759	4.41	34.49	34.77
	Equiv. Refl.: (6,-3,-2), (-3,6,2), (-3,6,-2), (-3,-3,2), (-3,-3,-2)								
Quartz	(3,3,2)	7.911	71.68	0.8	1.6	2.759	4.42	34.49	34.77
	Equiv. Refl.: (3,3,-2), (3,-6,2), (3,-6,-2), (-6,3,2), (-6,3,-2)								
Quartz	(6,-1,-1)	8.193	79.48	0.5	1	1.548	1.57	19.35	19.41
	Equiv. Refl.: (6,-5,1), (-1,6,1), (-1,-5,-1), (-5,6,-1), (-5,-1,1)								
LiNbO3	(3,3,9)	8.27	82.98	0.4	3.2	1.027	3.31	12.83	13.25
	Equiv. Refl.: (3,3,-9), (3,-6,9), (3,-6,-9), (6,-3,9), (6,-3,-9), (-3,6,9), (-3,6,-9), (-3,-3,9), (-3,-3,-9), (-6,3,9), (-6,3,-9)								
Quartz	(1,5,1)	8.193	79.48	0.2	1	1.548	1.57	19.35	19.41
	Equiv. Refl.: (1,-6,-1), (5,1,-1), (5,-6,1), (-6,1,1), (-6,5,-1)								
Sapph	(3,3,3)	7.947	72.5	0.1	0.5	2.628	1.36	32.85	32.87
	Equiv. Refl.: (3,3,-3), (3,-6,3), (3,-6,-3), (6,-3,3), (6,-3,-3), (-3,6,3), (-3,6,-3), (-3,-3,3), (-3,-3,-3), (-6,3,3), (-6,3,-3)								

Ei =	7.478	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(3,3,5)	7.186	73.92	32.7266	32.63	2.1553	70.33	26.94	75.31
	Equiv. Refl.: (3,5,3), (5,3,3)								
Si	(0,2,6)	7.219	74.88	27.5416	24.57	2.0205	49.65	25.26	55.7
	Equiv. Refl.: (0,6,2), (2,0,6), (2,6,0), (6,0,2), (6,2,0)								
Quartz	(2,-2,6)	7.474	88.03	202.701	172.9	0.257	44.39	3.21	44.51
Quartz	(2,0,-6)	7.474	88.03	202.693	172.9	0.257	44.39	3.21	44.51
	Equiv. Refl.: (-2,2,-6)								
Quartz	(-2,0,6)	7.474	88.03	202.688	172.9	0.257	44.39	3.21	44.51
Quartz	(0,2,6)	7.474	88.03	202.627	172.9	0.257	44.38	3.21	44.49
Quartz	(0,-2,-6)	7.474	88.03	202.626	172.9	0.257	44.38	3.21	44.49
Sapph	(1,4,6)	7.465	86.65	118.476	104.3	0.437	45.62	5.47	45.95
	Equiv. Refl.: (1,4,-6), (1,-5,6), (1,-5,-6), (4,1,6), (4,1,-6), (4,-5,6), (4,-5,-6), (5,-1,6), (5,-1,-6), (5,-4,6), (5,-4,-6), (-1,5,6), (-1,5,-6), (-1,-4,6), (-1,-4,-6), (-4,5,6), (-4,5,-6), (-4,-1,6), (-4,-1,-6), (-5,1,6), (-5,1,-6), (-5,4,6), (-5,4,-6)								
LiNbO3	(2,4,-2)	7.412	82.38	79.191	77.3	1.001	77.33	12.51	78.34
	Equiv. Refl.: (4,-6,-2), (6,-4,-2), (-2,6,-2), (-4,-2,-2), (-6,2,-2)								
LiNbO3	(2,-6,2)	7.412	82.38	78.803	77.3	1.001	77.33	12.51	78.34
	Equiv. Refl.: (4,2,2), (6,-2,2), (-2,-4,2), (-4,6,2), (-6,4,2)								
LiNbO3	(0,-5,-4)	7.179	73.74	51.535	47.6	2.181	103.85	27.27	107.36
	Equiv. Refl.: (5,0,-4), (-5,5,-4)								
LiNbO3	(0,5,4)	7.179	73.74	49.824	47.6	2.181	103.85	27.27	107.36
	Equiv. Refl.: (5,-5,4), (-5,0,4)								
LiNbO3	(3,3,0)	7.225	75.06	47.676	45.7	1.995	91.24	24.94	94.58
	Equiv. Refl.: (-3,-3,0)								
LiNbO3	(3,-6,0)	7.225	75.06	47.675	45.7	1.995	91.24	24.94	94.58
	Equiv. Refl.: (6,-3,0), (-3,6,0), (-6,3,0)								
Quartz	(2,0,6)	7.474	88.03	45.434	48.5	0.257	12.44	3.21	12.85
Quartz	(2,-2,-6)	7.474	88.03	45.43	48.5	0.257	12.44	3.21	12.85
Quartz	(-2,0,6)	7.474	88.03	45.409	48.5	0.257	12.44	3.21	12.85
Quartz	(-2,2,6)	7.474	88.03	45.4	48.5	0.257	12.44	3.21	12.85
Quartz	(0,2,-6)	7.474	88.03	45.361	48.4	0.257	12.43	3.21	12.84
Quartz	(0,-2,6)	7.474	88.03	45.358	48.4	0.257	12.43	3.21	12.84
LiNbO3	(1,-3,-14)	7.261	76.18	42.764	42.1	1.84	77.48	23	80.83
	Equiv. Refl.: (2,1,-14), (3,-1,-14), (-1,-2,-14), (-2,3,-14), (-3,2,-14)								
LiNbO3	(1,2,14)	7.261	76.18	42.497	42.1	1.84	77.48	23	80.83
	Equiv. Refl.: (2,-3,14), (3,-2,14), (-1,3,14), (-2,-1,14), (-3,1,14)								
LiNbO3	(0,4,-10)	7.137	72.62	40.737	38.2	2.34	89.51	29.25	94.17
	Equiv. Refl.: (4,-4,-10), (-4,0,-10)								
LiNbO3	(0,-1,16)	7.289	77.08	40.506	40.2	1.715	68.92	21.44	72.18
	Equiv. Refl.: (1,0,16)								
LiNbO3	(-1,1,16)	7.289	77.08	40.505	40.2	1.715	68.92	21.44	72.18
LiNbO3	(0,1,-16)	7.289	77.08	39.073	40.2	1.715	68.92	21.44	72.18
	Equiv. Refl.: (1,-1,-16), (-1,0,-16)								
LiNbO3	(0,-4,10)	7.137	72.62	38.381	38.2	2.34	89.51	29.25	94.17
	Equiv. Refl.: (4,0,10), (-4,4,10)								
LiNbO3	(2,-4,12)	7.211	74.64	35.766	34.3	2.054	70.56	25.68	75.08
	Equiv. Refl.: (4,-2,12)								

Ei =	7.478	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
LiNbO3	(2,2,12)	7.211	74.64	35.765	34.3	2.054	70.55	25.68	75.08
	Equiv. Refl.: (-2,4,12), (-2,-2,12), (-4,2,12)								
Sapph	(0,2,-14)	7.328	78.51	34.849	30.6	1.519	46.55	18.99	50.27
	Equiv. Refl.: (0,-2,14), (2,0,14), (2,-2,-14), (-2,0,-14), (-2,2,14)								
LiNbO3	(2,-5,-8)	7.038	70.25	34.768	32.8	2.685	88.2	33.57	94.37
	Equiv. Refl.: (3,2,-8), (5,-2,-8), (-2,-3,-8), (-3,5,-8), (-5,3,-8)								
LiNbO3	(2,3,8)	7.038	70.25	32.631	32.8	2.685	88.2	33.57	94.37
	Equiv. Refl.: (3,-5,8), (5,-3,8), (-2,5,8), (-3,-2,8), (-5,2,8)								
LiNbO3	(2,2,-12)	7.211	74.64	32.271	34.3	2.054	70.55	25.68	75.08
	Equiv. Refl.: (2,-4,-12), (4,-2,-12), (-2,4,-12), (-2,-2,-12), (-4,2,-12)								
Sapph	(1,3,10)	7.225	75.06	31.763	27.4	1.995	54.75	24.94	60.16
	Equiv. Refl.: (1,-4,-10), (3,1,-10), (3,-4,10), (4,-1,-10), (4,-3,10), (-1,4,10), (-1,-3,-10), (-3,4,-10), (-3,-1,10), (-4,1,10), (-4,3,-10)								
Sapph	(0,3,12)	7.292	77.2	28.265	25.3	1.7	42.92	21.24	47.89
	Equiv. Refl.: (0,3,-12), (0,-3,12), (0,-3,-12), (3,0,12), (3,0,-12), (3,-3,12), (3,-3,-12), (-3,0,12), (-3,0,-12), (-3,3,12), (-3,3,-12)								
Sapph	(0,4,8)	7.127	72.37	17.949	16.2	2.376	38.49	29.7	48.62
	Equiv. Refl.: (0,-4,-8), (4,0,-8), (4,-4,8), (-4,0,8), (-4,4,-8)								
Quartz	(-4,0,4)	7.417	82.69	14.518	15.2	0.959	14.54	11.99	18.85
Quartz	(-4,4,-4)	7.417	82.69	14.517	15.2	0.959	14.54	11.99	18.85
Quartz	(4,0,-4)	7.417	82.69	14.516	15.2	0.959	14.54	11.99	18.85
	Equiv. Refl.: (4,-4,4)								
Quartz	(0,4,4)	7.417	82.69	14.487	15.1	0.959	14.52	11.99	18.83
	Equiv. Refl.: (0,-4,-4)								
Quartz	(-4,0,-4)	7.417	82.69	13.777	14.6	0.959	13.98	11.99	18.42
Quartz	(4,0,4)	7.417	82.69	13.776	14.6	0.959	13.98	11.99	18.42
Quartz	(4,-4,-4)	7.417	82.69	13.774	14.6	0.959	13.98	11.99	18.42
Quartz	(-4,4,4)	7.417	82.69	13.773	14.6	0.959	13.98	11.99	18.42
Quartz	(0,4,-4)	7.417	82.69	13.767	14.6	0.959	13.98	11.99	18.41
Quartz	(0,-4,4)	7.417	82.69	13.766	14.6	0.959	13.98	11.99	18.41
Sapph	(1,4,3)	7.041	70.32	12.43	11.8	2.674	31.6	33.43	46
	Equiv. Refl.: (1,4,-3), (1,-5,3), (1,-5,-3), (4,1,3), (4,1,-3), (4,-5,3), (4,-5,-3), (5,-1,3), (5,-1,-3), (5,-4,3), (5,-4,-3), (-1,5,3), (-1,5,-3), (-1,-4,3), (-1,-4,-3), (-4,5,3), (-4,5,-3), (-4,-1,3), (-4,-1,-3), (-5,1,3), (-5,1,-3), (-5,4,3), (-5,4,-3)								
LiNbO3	(2,4,1)	7.371	80.31	9.942	17.3	1.277	22.08	15.96	27.25
	Equiv. Refl.: (2,-6,-1), (4,2,-1), (4,-6,1), (6,-2,-1), (6,-4,1), (-2,6,1), (-2,-4,-1), (-4,6,-1), (-4,-2,1), (-6,2,1), (-6,4,-1)								
Quartz	(1,0,6)	7.035	70.17	9.715	9.1	2.696	24.61	33.71	41.74
Quartz	(1,-1,-6)	7.035	70.17	9.714	9.1	2.696	24.61	33.71	41.73
	Equiv. Refl.: (-1,0,-6), (-1,1,6)								
Quartz	(0,1,-6)	7.035	70.17	9.702	9.1	2.696	24.59	33.71	41.72
	Equiv. Refl.: (0,-1,6)								
Quartz	(2,-1,-6)	7.33	78.59	8.757	9	1.509	13.52	18.87	23.21
Quartz	(2,-1,6)	7.33	78.59	8.753	9	1.509	13.52	18.87	23.21
Quartz	(-1,2,6)	7.33	78.59	8.748	9	1.509	13.51	18.87	23.2
Quartz	(-1,-1,6)	7.33	78.59	8.747	9	1.509	13.51	18.87	23.2
Quartz	(-1,2,-6)	7.33	78.59	8.746	8.9	1.509	13.51	18.87	23.2
	Equiv. Refl.: (-1,-1,-6)								
Quartz	(-2,1,6)	7.33	78.59	8.351	9	1.509	13.52	18.87	23.21
Quartz	(-2,1,-6)	7.33	78.59	8.347	9	1.509	13.52	18.87	23.21
Quartz	(1,-2,-6)	7.33	78.59	8.34	9	1.509	13.51	18.87	23.2

Ei =	7.478	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(1,1,6)	7.33	78.59	8.339	9	1.509	13.51	18.87	23.2
Quartz	(1,1,-6)	7.33	78.59	8.338	9	1.509	13.51	18.87	23.2
	Equiv. Refl.: (1,-2,6)								
LiNbO3	(1,1,15)	7.127	72.37	8.171	12.4	2.376	29.47	29.7	41.84
	Equiv. Refl.: (1,1,-15), (1,-2,15), (1,-2,-15), (2,-1,15), (2,-1,-15), (-1,2,15), (-1,2,-15), (-1,-1,15), (-1,-1,-15), (-2,1,15), (-2,1,-15)								
Sapph	(2,3,-7)	7.36	79.79	7.359	9	1.346	12.08	16.83	20.72
	Equiv. Refl.: (2,-5,7), (3,2,7), (3,-5,-7), (5,-2,7), (5,-3,-7), (-2,5,-7), (-2,-3,7), (-3,5,7), (-3,-2,-7), (-5,2,-7), (-5,3,7)								
Quartz	(-1,5,-2)	7.06	70.75	6.734	6.6	2.612	17.23	32.64	36.91
	Equiv. Refl.: (-1,-4,2)								
Quartz	(-4,5,2)	7.06	70.75	6.733	6.6	2.612	17.23	32.64	36.91
	Equiv. Refl.: (-4,-1,-2)								
Quartz	(5,-1,2)	7.06	70.75	6.727	6.6	2.612	17.21	32.64	36.9
	Equiv. Refl.: (5,-4,-2)								
Quartz	(1,-5,2)	7.06	70.75	6.53	6.6	2.612	17.23	32.64	36.91
Quartz	(1,4,-2)	7.06	70.75	6.529	6.6	2.612	17.23	32.64	36.91
Quartz	(4,1,2)	7.06	70.75	6.528	6.6	2.612	17.23	32.64	36.91
	Equiv. Refl.: (4,-5,-2)								
Quartz	(-5,1,-2)	7.06	70.75	6.522	6.6	2.612	17.21	32.64	36.9
	Equiv. Refl.: (-5,4,2)								
Quartz	(-1,5,2)	7.06	70.75	5.964	5.7	2.612	14.85	32.64	35.86
	Equiv. Refl.: (-1,-4,-2)								
Quartz	(-4,5,-2)	7.06	70.75	5.961	5.7	2.612	14.85	32.64	35.86
Quartz	(5,-1,-2)	7.06	70.75	5.96	5.7	2.612	14.84	32.64	35.86
	Equiv. Refl.: (5,-4,2), (-4,-1,2)								
Sapph	(1,2,-13)	7.372	80.33	5.916	7.8	1.274	9.91	15.93	18.76
	Equiv. Refl.: (1,-3,13), (2,1,13), (2,-3,-13), (3,-1,13), (3,-2,-13), (-1,3,-13), (-1,-2,13), (-2,3,13), (-2,-1,-13), (-3,1,-13), (-3,2,13)								
Quartz	(1,4,2)	7.06	70.75	5.127	5.7	2.612	14.85	32.64	35.86
	Equiv. Refl.: (1,-5,-2)								
Quartz	(4,-5,2)	7.06	70.75	5.125	5.7	2.612	14.85	32.64	35.86
Quartz	(4,1,-2)	7.06	70.75	5.124	5.7	2.612	14.84	32.64	35.86
Quartz	(-5,1,2)	7.06	70.75	5.123	5.7	2.612	14.84	32.64	35.86
	Equiv. Refl.: (-5,4,-2)								
Quartz	(3,-3,-5)	7.211	74.64	3.931	4.7	2.054	9.56	25.68	27.4
Quartz	(3,0,5)	7.211	74.64	3.93	4.7	2.054	9.55	25.68	27.4
Quartz	(0,3,-5)	7.211	74.64	3.928	4.7	2.054	9.55	25.68	27.4
Quartz	(0,-3,5)	7.211	74.64	3.927	4.7	2.054	9.55	25.68	27.4
	Equiv. Refl.: (-3,0,-5), (-3,3,5)								
Quartz	(3,-5,-3)	7.223	75	1.911	3	2.004	6.04	25.05	25.77
Quartz	(2,3,-3)	7.223	75	1.91	3	2.004	6.04	25.05	25.76
	Equiv. Refl.: (2,-5,3), (3,2,3)								
Quartz	(-5,2,-3)	7.223	75	1.909	3	2.004	6.03	25.05	25.76
	Equiv. Refl.: (-5,3,3)								
Quartz	(-2,5,-3)	7.223	75	1.74	3	2.004	6.04	25.05	25.77
Quartz	(-2,-3,3)	7.223	75	1.739	3	2.004	6.04	25.05	25.76
	Equiv. Refl.: (-3,5,3)								
Quartz	(5,-2,3)	7.223	75	1.738	3	2.004	6.03	25.05	25.76
	Equiv. Refl.: (5,-3,-3), (-3,-2,-3)								

Ei =	7.478	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(5,-2,-3)	7.223	75	1.564	2.5	2.004	4.92	25.05	25.53
	Equiv. Refl.: (5,-3,3)								
Quartz	(-2,-3,-3)	7.223	75	1.563	2.5	2.004	4.92	25.05	25.53
Quartz	(-2,5,3)	7.223	75	1.562	2.5	2.004	4.92	25.05	25.53
Quartz	(-3,5,-3)	7.223	75	1.559	2.5	2.004	4.91	25.05	25.52
	Equiv. Refl.: (-3,-2,3)								
Quartz	(5,0,1)	7.375	80.46	1.267	2.8	1.256	3.53	15.7	16.09
	Equiv. Refl.: (-5,0,-1)								
Quartz	(0,5,-1)	7.375	80.46	1.266	2.8	1.256	3.53	15.7	16.09
	Equiv. Refl.: (0,-5,1), (5,-5,-1), (-5,5,1)								
Quartz	(-5,2,3)	7.223	75	1.13	2.5	2.004	4.92	25.05	25.53
	Equiv. Refl.: (-5,3,-3)								
Quartz	(2,3,3)	7.223	75	1.128	2.5	2.004	4.92	25.05	25.53
Quartz	(2,-5,-3)	7.223	75	1.127	2.5	2.004	4.92	25.05	25.53
Quartz	(3,2,-3)	7.223	75	1.125	2.5	2.004	4.91	25.05	25.52
	Equiv. Refl.: (3,-5,3)								
Quartz	(0,1,6)	7.035	70.17	1.051	1.9	2.696	5.2	33.71	34.1
	Equiv. Refl.: (0,-1,-6)								
Quartz	(1,0,-6)	7.035	70.17	1.039	1.9	2.696	5.16	33.71	34.1
	Equiv. Refl.: (1,-1,6)								
Quartz	(-1,0,6)	7.035	70.17	1.038	1.9	2.696	5.16	33.71	34.1
	Equiv. Refl.: (-1,1,-6)								
Quartz	(3,-3,5)	7.211	74.64	1.031	2.1	2.054	4.24	25.68	26.03
Quartz	(3,0,-5)	7.211	74.64	1.03	2.1	2.054	4.24	25.68	26.03
	Equiv. Refl.: (-3,3,-5)								
Quartz	(-3,0,5)	7.211	74.64	1.029	2.1	2.054	4.24	25.68	26.03
Quartz	(0,3,5)	7.211	74.64	1.025	2.1	2.054	4.23	25.68	26.02
	Equiv. Refl.: (0,-3,-5)								
LiNbO3	(3,3,3)	7.349	79.33	0.398	3.1	1.409	4.39	17.61	18.15
	Equiv. Refl.: (3,3,-3), (3,-6,3), (3,-6,-3), (6,-3,3), (6,-3,-3), (-3,6,3), (-3,6,-3), (-3,-3,3), (-3,-3,-3), (-6,3,3), (-6,3,-3)								
Quartz	(0,5,0)	7.285	76.95	0.276	1.1	1.733	1.85	21.66	21.74
	Equiv. Refl.: (0,-5,0), (5,0,0), (5,-5,0), (-5,0,0), (-5,5,0)								

Ei =	7.461	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(3,3,5)	7.186	74.38	33.7246	33.65	2.0857	70.19	26.07	74.88
	Equiv. Refl.: (3,5,3), (5,3,3)								
Si	(0,2,6)	7.219	75.37	28.4965	25.44	1.9475	49.54	24.34	55.2
	Equiv. Refl.: (0,6,2), (2,0,6), (2,6,0), (6,0,2), (6,2,0)								
LiNbO3	(2,4,-2)	7.412	83.42	91.823	89.7	0.86	77.17	10.75	77.91
	Equiv. Refl.: (4,-6,-2), (6,-4,-2), (-2,6,-2), (-4,-2,-2), (-6,2,-2)								
LiNbO3	(2,-6,2)	7.412	83.42	91.371	89.7	0.86	77.17	10.75	77.91
	Equiv. Refl.: (4,2,2), (6,-2,2), (-2,-4,2), (-4,6,2), (-6,4,2)								
LiNbO3	(0,-5,-4)	7.179	74.19	53.072	49.1	2.112	103.62	26.4	106.93
	Equiv. Refl.: (5,0,-4), (-5,5,-4)								
LiNbO3	(0,5,4)	7.179	74.19	51.303	49.1	2.112	103.62	26.4	106.93
	Equiv. Refl.: (5,-5,4), (-5,0,4)								
LiNbO3	(3,3,0)	7.225	75.56	49.365	47.4	1.922	91.04	24.02	94.16
	Equiv. Refl.: (3,-6,0), (6,-3,0), (-3,6,0), (-3,-3,0), (-6,3,0)								
LiNbO3	(1,-3,-14)	7.261	76.72	44.547	43.9	1.761	77.32	22.02	80.39
	Equiv. Refl.: (2,1,-14), (3,-1,-14), (-1,-2,-14), (-2,3,-14), (-3,2,-14)								
LiNbO3	(1,2,14)	7.261	76.72	44.268	43.9	1.761	77.32	22.02	80.39
	Equiv. Refl.: (2,-3,14), (3,-2,14), (-2,-1,14)								
LiNbO3	(-1,3,14)	7.261	76.72	44.267	43.9	1.761	77.32	22.02	80.39
	Equiv. Refl.: (-3,1,14)								
LiNbO3	(0,-1,16)	7.289	77.66	42.457	42.1	1.632	68.77	20.4	71.73
	Equiv. Refl.: (1,0,16)								
LiNbO3	(-1,1,16)	7.289	77.66	42.456	42.1	1.632	68.77	20.4	71.73
LiNbO3	(0,4,-10)	7.137	73.04	41.796	39.3	2.275	89.32	28.43	93.74
	Equiv. Refl.: (-4,0,-10)								
LiNbO3	(4,-4,-10)	7.137	73.04	41.795	39.3	2.275	89.32	28.43	93.74
LiNbO3	(0,1,-16)	7.289	77.66	40.95	42.1	1.632	68.77	20.4	71.73
	Equiv. Refl.: (1,-1,-16), (-1,0,-16)								
LiNbO3	(0,-4,10)	7.137	73.04	39.37	39.3	2.275	89.32	28.43	93.74
	Equiv. Refl.: (4,0,10), (-4,4,10)								
Sapph	(0,2,-14)	7.328	79.18	37.018	32.6	1.427	46.45	17.83	49.75
	Equiv. Refl.: (0,-2,14), (2,0,14), (2,-2,-14), (-2,0,-14), (-2,2,14)								
LiNbO3	(2,2,12)	7.211	75.12	36.965	35.5	1.982	70.4	24.78	74.64
	Equiv. Refl.: (2,-4,12), (4,-2,12), (-2,-2,12)								
LiNbO3	(-2,4,12)	7.211	75.12	36.964	35.5	1.982	70.4	24.78	74.64
	Equiv. Refl.: (-4,2,12)								
LiNbO3	(2,-5,-8)	7.038	70.61	35.463	33.5	2.625	88.01	32.82	93.93
	Equiv. Refl.: (3,2,-8), (5,-2,-8), (-2,-3,-8), (-3,5,-8), (-5,3,-8)								
LiNbO3	(2,2,-12)	7.211	75.12	33.341	35.5	1.982	70.4	24.78	74.64
	Equiv. Refl.: (2,-4,-12), (4,-2,-12), (-2,4,-12), (-2,-2,-12), (-4,2,-12)								
LiNbO3	(2,3,8)	7.038	70.61	33.276	33.5	2.625	88.01	32.82	93.93
	Equiv. Refl.: (3,-5,8), (5,-3,8), (-2,5,8), (-3,-2,8), (-5,2,8)								
Sapph	(1,3,10)	7.225	75.56	32.894	28.4	1.922	54.63	24.02	59.68
	Equiv. Refl.: (1,-4,-10), (3,1,-10), (3,-4,10), (4,-1,-10), (4,-3,10), (-1,4,10), (-1,-3,-10), (-3,4,-10), (-3,-1,10), (-4,1,10), (-4,3,-10)								
Sapph	(0,3,12)	7.292	77.78	29.652	26.5	1.615	42.83	20.19	47.35
	Equiv. Refl.: (0,3,-12), (0,-3,12), (0,-3,-12), (3,0,12), (3,0,-12), (3,-3,12), (3,-3,-12), (-3,0,12), (-3,0,-12), (-3,3,12), (-3,3,-12)								

Ei = Cryst	7.461 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Sapph	(0,4,8)	7.127	72.79	18.398	16.6	2.311	38.41	28.89	48.06
Equiv. Refl.: (0,-4,-8), (4,0,-8), (4,-4,8), (-4,0,8), (-4,4,-8)									
Quartz	(-4,0,4)	7.417	83.79	17.097	17.9	0.812	14.51	10.15	17.71
Quartz	(-4,4,-4)	7.417	83.79	17.096	17.9	0.812	14.51	10.15	17.71
Quartz	(4,0,-4)	7.417	83.79	17.095	17.9	0.812	14.51	10.15	17.71
Quartz	(4,-4,4)	7.417	83.79	17.094	17.9	0.812	14.51	10.15	17.71
Quartz	(0,4,4)	7.417	83.79	17.061	17.8	0.812	14.49	10.15	17.69
Quartz	(0,-4,-4)	7.417	83.79	17.06	17.8	0.812	14.49	10.15	17.69
Quartz	(-4,0,-4)	7.417	83.79	16.222	17.2	0.812	13.95	10.15	17.25
Quartz	(4,0,4)	7.417	83.79	16.221	17.2	0.812	13.95	10.15	17.25
Quartz	(4,-4,-4)	7.417	83.79	16.218	17.2	0.812	13.95	10.15	17.25
Quartz	(-4,4,4)	7.417	83.79	16.217	17.2	0.812	13.95	10.15	17.25
Quartz	(0,4,-4)	7.417	83.79	16.21	17.2	0.812	13.95	10.15	17.25
Quartz	(0,-4,4)	7.417	83.79	16.209	17.2	0.812	13.95	10.15	17.25
Sapph	(1,4,3)	7.041	70.69	12.676	12.1	2.614	31.53	32.68	45.41
Equiv. Refl.: (1,4,-3), (1,-5,3), (1,-5,-3), (4,1,3), (4,1,-3), (4,-5,3), (4,-5,-3), (5,-1,3), (5,-1,-3), (5,-4,3), (5,-4,-3), (-1,5,3), (-1,5,-3), (-1,-4,3), (-1,-4,-3), (-4,5,3), (-4,5,-3), (-4,-1,3), (-4,-1,-3), (-5,1,3), (-5,1,-3), (-5,4,3), (-5,4,-3)									
LiNbO3	(2,4,1)	7.371	81.11	10.823	18.9	1.167	22.03	14.59	26.43
Equiv. Refl.: (2,-6,-1), (4,2,-1), (4,-6,1), (6,-2,-1), (6,-4,1), (-2,6,1), (-2,-4,-1), (-4,6,-1), (-4,-2,1), (-6,2,1), (-6,4,-1)									
Quartz	(1,0,6)	7.035	70.54	9.904	9.3	2.637	24.56	32.96	41.1
Equiv. Refl.: (1,-1,-6), (-1,0,-6)									
Quartz	(-1,1,6)	7.035	70.54	9.903	9.3	2.637	24.56	32.96	41.1
Quartz	(0,1,-6)	7.035	70.54	9.892	9.3	2.637	24.53	32.96	41.09
Equiv. Refl.: (0,-1,6)									
Quartz	(2,-1,-6)	7.33	79.26	9.303	9.5	1.416	13.49	17.7	22.25
Quartz	(2,-1,6)	7.33	79.26	9.298	9.5	1.416	13.49	17.7	22.25
Quartz	(-1,2,6)	7.33	79.26	9.293	9.5	1.416	13.48	17.7	22.25
Quartz	(-1,-1,6)	7.33	79.26	9.292	9.5	1.416	13.48	17.7	22.25
Equiv. Refl.: (-1,-1,-6)									
Quartz	(-1,2,-6)	7.33	79.26	9.291	9.5	1.416	13.48	17.7	22.24
Quartz	(-2,1,6)	7.33	79.26	8.87	9.5	1.416	13.49	17.7	22.25
Quartz	(-2,1,-6)	7.33	79.26	8.866	9.5	1.416	13.49	17.7	22.25
Quartz	(1,-2,-6)	7.33	79.26	8.858	9.5	1.416	13.48	17.7	22.25
Quartz	(1,1,6)	7.33	79.26	8.857	9.5	1.416	13.48	17.7	22.25
Quartz	(1,1,-6)	7.33	79.26	8.856	9.5	1.416	13.48	17.7	22.25
Quartz	(1,-2,6)	7.33	79.26	8.855	9.5	1.416	13.48	17.7	22.24
LiNbO3	(1,1,15)	7.127	72.79	8.363	12.7	2.311	29.41	28.89	41.22
Equiv. Refl.: (1,1,-15), (1,-2,15), (1,-2,-15), (2,-1,15), (2,-1,-15), (-1,2,15), (-1,2,-15), (-1,-1,15), (-1,-1,-15), (-2,1,15), (-2,1,-15)									
Sapph	(2,3,-7)	7.36	80.55	7.942	9.7	1.242	12.06	15.53	19.66
Equiv. Refl.: (2,-5,7), (3,2,7), (3,-5,-7), (5,-2,7), (5,-3,-7), (-2,5,-7), (-2,-3,7), (-3,5,7), (-3,-2,-7), (-5,2,-7), (-5,3,7)									
Quartz	(-1,5,-2)	7.06	71.13	6.872	6.7	2.551	17.19	31.88	36.22
Quartz	(-1,-4,2)	7.06	71.13	6.871	6.7	2.551	17.19	31.88	36.22
Quartz	(-4,5,2)	7.06	71.13	6.87	6.7	2.551	17.19	31.88	36.22
Equiv. Refl.: (-4,-1,-2)									
Quartz	(5,-1,2)	7.06	71.13	6.864	6.7	2.551	17.18	31.88	36.21
Equiv. Refl.: (5,-4,-2)									

Ei = Cryst	7.461 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(1,4,-2) Equiv. Refl.: (1,-5,2)	7.06	71.13	6.662	6.7	2.551	17.19	31.88	36.22
Quartz	(4,1,2) Equiv. Refl.: (4,-5,-2)	7.06	71.13	6.661	6.7	2.551	17.19	31.88	36.22
Quartz	(-5,1,-2) Equiv. Refl.: (-5,4,2)	7.06	71.13	6.654	6.7	2.551	17.18	31.88	36.21
Sapph	(1,2,-13) Equiv. Refl.: (1,-3,13), (2,1,13), (2,-3,-13), (3,-1,13), (3,-2,-13), (-1,3,-13), (-1,-2,13), (-2,3,13), (-2,-1,-13), (-3,1,-13), (-3,2,13)	7.372	81.13	6.332	8.5	1.165	9.89	14.56	17.6
Quartz	(-1,5,2) Equiv. Refl.: (-1,-4,-2)	7.06	71.13	6.087	5.8	2.551	14.82	31.88	35.16
Quartz	(-4,5,-2)	7.06	71.13	6.084	5.8	2.551	14.81	31.88	35.16
Quartz	(5,-1,-2) Equiv. Refl.: (5,-4,2), (-4,-1,2)	7.06	71.13	6.083	5.8	2.551	14.81	31.88	35.15
Quartz	(1,4,2) Equiv. Refl.: (1,-5,-2)	7.06	71.13	5.229	5.8	2.551	14.82	31.88	35.16
Quartz	(4,-5,2)	7.06	71.13	5.228	5.8	2.551	14.81	31.88	35.16
Quartz	(4,1,-2)	7.06	71.13	5.227	5.8	2.551	14.81	31.88	35.16
Quartz	(-5,1,2) Equiv. Refl.: (-5,4,-2)	7.06	71.13	5.226	5.8	2.551	14.81	31.88	35.15
Quartz	(3,-3,-5)	7.211	75.12	4.06	4.8	1.982	9.54	24.78	26.55
Quartz	(3,0,5)	7.211	75.12	4.059	4.8	1.982	9.53	24.78	26.55
Quartz	(0,3,-5)	7.211	75.12	4.057	4.8	1.982	9.53	24.78	26.55
Quartz	(0,-3,5) Equiv. Refl.: (-3,0,-5), (-3,3,5)	7.211	75.12	4.056	4.8	1.982	9.53	24.78	26.55
LiNbO3	(1,3,-11) Equiv. Refl.: (1,-4,11), (3,1,11), (3,-4,-11), (4,-1,11), (4,-3,-11), (-1,4,-11), (-1,-3,11), (-3,4,11), (-3,-1,-11), (-4,1,-11), (-4,3,11)	7.024	70.28	3.197	7	2.674	18.65	33.42	38.28
Quartz	(3,-5,-3)	7.223	75.49	1.975	3.1	1.93	6.02	24.13	24.87
Quartz	(2,3,-3) Equiv. Refl.: (2,-5,3), (3,2,3), (-5,2,-3), (-5,3,3)	7.223	75.49	1.974	3.1	1.93	6.02	24.13	24.87
Quartz	(-2,5,-3)	7.223	75.49	1.798	3.1	1.93	6.02	24.13	24.87
Quartz	(-2,-3,3) Equiv. Refl.: (-3,5,3)	7.223	75.49	1.797	3.1	1.93	6.02	24.13	24.87
Quartz	(5,-2,3) Equiv. Refl.: (5,-3,-3), (-3,-2,-3)	7.223	75.49	1.796	3.1	1.93	6.02	24.13	24.87
Quartz	(5,-2,-3) Equiv. Refl.: (5,-3,3)	7.223	75.49	1.617	2.5	1.93	4.91	24.13	24.62
Quartz	(-2,-3,-3)	7.223	75.49	1.616	2.5	1.93	4.91	24.13	24.62
Quartz	(-2,5,3)	7.223	75.49	1.615	2.5	1.93	4.91	24.13	24.62
Quartz	(-3,5,-3)	7.223	75.49	1.612	2.5	1.93	4.9	24.13	24.62
Quartz	(-3,-2,3)	7.223	75.49	1.611	2.5	1.93	4.9	24.13	24.62
Quartz	(5,0,1) Equiv. Refl.: (-5,0,-1)	7.375	81.28	1.383	3.1	1.145	3.53	14.31	14.74
Quartz	(0,5,-1) Equiv. Refl.: (0,-5,1), (5,-5,-1), (-5,5,1)	7.375	81.28	1.382	3.1	1.145	3.52	14.31	14.74
Quartz	(-5,3,-3)	7.223	75.49	1.167	2.5	1.93	4.91	24.13	24.62
Quartz	(-5,2,3)	7.223	75.49	1.166	2.5	1.93	4.91	24.13	24.62
Quartz	(2,3,3)	7.223	75.49	1.165	2.5	1.93	4.91	24.13	24.62
Quartz	(2,-5,-3)	7.223	75.49	1.164	2.5	1.93	4.91	24.13	24.62

Ei =	7.461	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	 IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(3,2,-3)	7.223	75.49	1.161	2.5	1.93	4.9	24.13	24.62
	Equiv. Refl.: (3,-5,3)								
Quartz	(0,-1,-6)	7.035	70.54	1.07	2	2.637	5.19	32.96	33.36
Quartz	(0,1,6)	7.035	70.54	1.069	2	2.637	5.19	32.96	33.36
Quartz	(3,-3,5)	7.211	75.12	1.064	2.1	1.982	4.23	24.78	25.14
Quartz	(-3,3,-5)	7.211	75.12	1.063	2.1	1.982	4.23	24.78	25.14
Quartz	(3,0,-5)	7.211	75.12	1.062	2.1	1.982	4.23	24.78	25.14
Quartz	(-3,0,5)	7.211	75.12	1.061	2.1	1.982	4.23	24.78	25.14
Quartz	(0,3,5)	7.211	75.12	1.058	2.1	1.982	4.22	24.78	25.13
	Equiv. Refl.: (0,-3,-5), (1,0,-6)								
Quartz	(1,-1,6)	7.035	70.54	1.057	2	2.637	5.15	32.96	33.36
	Equiv. Refl.: (-1,0,6)								
Quartz	(-1,1,-6)	7.035	70.54	1.056	2	2.637	5.15	32.96	33.36
LiNbO3	(3,3,3)	7.349	80.05	0.426	3.3	1.309	4.38	16.37	16.94
	Equiv. Refl.: (3,3,-3), (3,-6,3), (3,-6,-3), (6,-3,3), (6,-3,-3), (-3,6,3), (-3,6,-3), (-3,-3,3), (-3,-3,-3), (-6,3,3), (-6,3,-3)								
Quartz	(0,5,0)	7.285	77.53	0.288	1.1	1.65	1.85	20.63	20.71
	Equiv. Refl.: (0,-5,0), (5,0,0), (5,-5,0), (-5,0,0), (-5,5,0)								

Ei = Cryst	8.265 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Ge	(2,4,6)	8.2	82.81	70.1227	65.25	1.0422	68	13.03	69.24
	Equiv. Refl.: (2,6,4), (4,2,6), (4,6,2), (6,2,4), (6,4,2)								
Ge	(1,1,7)	7.825	71.23	20.8113	20.24	2.8089	56.85	35.11	66.82
	Equiv. Refl.: (1,5,5), (1,7,1), (5,1,5), (5,5,1), (7,1,1)								
Si	(1,1,7)	8.152	80.5	20.0828	18.63	1.3837	25.78	17.3	31.05
	Equiv. Refl.: (1,5,5), (1,7,1), (5,1,5), (5,5,1), (7,1,1)								
Si	(4,4,4)	7.908	73.1	18.2121	16.11	2.5107	40.44	31.38	51.19
LiNbO3	(0,0,18)	8.049	76.88	47.469	41.9	1.927	80.78	24.08	84.29
LiNbO3	(2,-6,8)	8.181	81.84	44.773	43.3	1.185	51.31	14.81	53.41
	Equiv. Refl.: (4,2,8), (6,-2,8), (-2,-4,8), (-4,6,8), (-6,4,8)								
LiNbO3	(0,0,-18)	8.049	76.88	42.527	41.9	1.927	80.78	24.08	84.29
LiNbO3	(2,4,-8)	8.181	81.84	41.14	43.3	1.185	51.31	14.81	53.41
	Equiv. Refl.: (4,-6,-8), (6,-4,-8), (-2,6,-8), (-4,-2,-8), (-6,2,-8)								
LiNbO3	(-1,4,-14)	8.021	76.03	31.881	30.1	2.056	61.86	25.7	66.99
	Equiv. Refl.: (-4,1,-14)								
LiNbO3	(1,3,-14)	8.021	76.03	31.88	30.1	2.056	61.86	25.7	66.99
	Equiv. Refl.: (3,-4,-14), (4,-3,-14), (-3,-1,-14)								
LiNbO3	(0,5,-8)	7.819	71.09	31.556	28.6	2.832	80.86	35.4	88.27
	Equiv. Refl.: (-5,0,-8)								
LiNbO3	(5,-5,-8)	7.819	71.09	31.555	28.6	2.832	80.86	35.4	88.27
LiNbO3	(1,2,-16)	8.045	76.76	31.25	30.6	1.945	59.6	24.31	64.37
	Equiv. Refl.: (2,-3,-16), (3,-2,-16), (-1,3,-16), (-2,-1,-16), (-3,1,-16)								
LiNbO3	(1,-3,16)	8.045	76.76	31.03	30.6	1.945	59.6	24.31	64.37
	Equiv. Refl.: (2,1,16), (3,-1,16), (-1,-2,16)								
LiNbO3	(-2,3,16)	8.045	76.76	31.029	30.6	1.945	59.6	24.31	64.37
	Equiv. Refl.: (-3,2,16)								
Sapph	(0,2,16)	8.208	83.27	30.397	27.7	0.975	27	12.19	29.63
	Equiv. Refl.: (0,-2,-16), (2,0,-16), (2,-2,16), (-2,0,16), (-2,2,-16)								
LiNbO3	(1,-6,4)	7.946	74.03	29.715	28.2	2.366	66.73	29.57	72.99
	Equiv. Refl.: (5,1,4), (6,-1,4), (-1,-5,4), (-5,6,4), (-6,5,4)								
LiNbO3	(1,-4,14)	8.021	76.03	29.598	30.1	2.056	61.86	25.7	66.99
	Equiv. Refl.: (3,1,14), (4,-1,14), (-1,-3,14), (-3,4,14), (-4,3,14)								
LiNbO3	(0,-5,8)	7.819	71.09	29.172	28.6	2.832	80.86	35.4	88.27
	Equiv. Refl.: (5,0,8), (-5,5,8)								
LiNbO3	(1,5,-4)	7.946	74.03	28.572	28.2	2.366	66.73	29.57	72.99
	Equiv. Refl.: (5,-6,-4), (6,-5,-4), (-1,6,-4), (-5,-1,-4), (-6,1,-4)								
Sapph	(2,4,4)	8.186	82.09	28.056	25.2	1.148	28.98	14.35	32.34
	Equiv. Refl.: (2,-6,-4), (4,2,-4), (4,-6,4), (6,-2,-4), (6,-4,4), (-2,6,4), (-2,-4,-4), (-4,6,-4), (-4,-2,4), (-6,2,4), (-6,4,-4)								
Sapph	(3,3,0)	7.817	71.05	27.77	23	2.837	65.17	35.47	74.2
	Equiv. Refl.: (3,-6,0), (6,-3,0), (-3,6,0), (-3,-3,0), (-6,3,0)								
Quartz	(1,-6,1)	8.193	82.42	27.277	23.9	1.099	26.25	13.74	29.63
Quartz	(1,5,-1)	8.193	82.42	27.276	23.9	1.099	26.25	13.74	29.63
Quartz	(-6,1,-1)	8.193	82.42	27.275	23.9	1.099	26.25	13.74	29.63
	Equiv. Refl.: (-6,5,1)								
Quartz	(5,1,1)	8.193	82.42	27.273	23.9	1.099	26.25	13.74	29.63
	Equiv. Refl.: (5,-6,-1)								
Quartz	(-1,6,-1)	8.193	82.42	27.143	23.9	1.099	26.25	13.74	29.63

Ei = Cryst	8.265 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(-1,-5,1)	8.193	82.42	27.142	23.9	1.099	26.25	13.74	29.63
Quartz	(6,-1,1)	8.193	82.42	27.141	23.9	1.099	26.25	13.74	29.63
Quartz	(6,-5,-1)	8.193	82.42	27.14	23.9	1.099	26.25	13.74	29.63
Quartz	(-5,6,1)	8.193	82.42	27.139	23.9	1.099	26.25	13.74	29.63
	Equiv. Refl.: (-5,-1,-1)								
LiNbO3	(2,2,15)	8.258	87.64	26.479	46.9	0.341	16.01	4.26	16.57
	Equiv. Refl.: (2,2,-15), (2,-4,15), (2,-4,-15), (4,-2,15), (4,-2,-15), (-2,4,15), (-2,4,-15), (-2,-2,15), (-2,-2,-15), (-4,2,15), (-4,2,-15)								
LiNbO3	(1,5,2)	7.793	70.55	22.874	22.2	2.918	64.72	36.48	74.29
	Equiv. Refl.: (5,-6,2), (6,-5,2), (-1,6,2), (-5,-1,2), (-6,1,2)								
LiNbO3	(1,-6,-2)	7.793	70.55	22.358	22.2	2.918	64.72	36.48	74.29
	Equiv. Refl.: (5,1,-2), (6,-1,-2), (-1,-5,-2), (-5,6,-2), (-6,5,-2)								
Sapph	(2,3,-10)	8.111	78.91	17.128	15.7	1.62	25.51	20.25	32.57
	Equiv. Refl.: (2,-5,10), (3,2,10), (3,-5,-10), (5,-2,10), (5,-3,-10), (-2,5,-10), (-2,-3,10), (-3,5,10), (-3,-2,-10), (-5,2,-10), (-5,3,10)								
Quartz	(-1,0,7)	8.16	80.87	16.876	15	1.329	19.96	16.61	25.96
Quartz	(1,0,-7)	8.16	80.87	16.874	15	1.329	19.96	16.61	25.96
	Equiv. Refl.: (-1,1,-7)								
Quartz	(0,1,7)	8.16	80.87	16.872	15	1.329	19.96	16.61	25.96
	Equiv. Refl.: (0,-1,-7), (1,-1,7)								
Quartz	(2,3,4)	7.835	71.43	16.389	13.8	2.776	38.2	34.7	51.61
	Equiv. Refl.: (2,-5,-4)								
Quartz	(3,2,-4)	7.835	71.43	16.387	13.8	2.776	38.2	34.7	51.61
	Equiv. Refl.: (3,-5,4)								
Quartz	(-5,2,4)	7.835	71.43	16.386	13.8	2.776	38.19	34.7	51.6
	Equiv. Refl.: (-5,3,-4)								
Quartz	(-2,5,4)	7.835	71.43	16.103	13.8	2.776	38.2	34.7	51.61
	Equiv. Refl.: (-2,-3,-4), (-3,-2,4)								
Quartz	(-3,5,-4)	7.835	71.43	16.102	13.8	2.776	38.19	34.7	51.61
Quartz	(5,-2,-4)	7.835	71.43	16.101	13.8	2.776	38.19	34.7	51.6
	Equiv. Refl.: (5,-3,4)								
Quartz	(4,2,-2)	8.044	76.71	15.8	13.5	1.952	26.31	24.4	35.88
	Equiv. Refl.: (4,-6,2)								
Quartz	(-6,2,2)	8.044	76.71	15.799	13.5	1.952	26.3	24.4	35.88
	Equiv. Refl.: (-6,4,-2)								
Quartz	(2,4,2)	8.044	76.71	15.798	13.5	1.952	26.3	24.4	35.88
	Equiv. Refl.: (2,-6,-2)								
Quartz	(5,-1,4)	8.101	78.57	15.544	13.4	1.67	22.46	20.88	30.67
	Equiv. Refl.: (5,-4,-4), (-1,-4,4)								
Quartz	(-1,5,-4)	8.101	78.57	15.543	13.4	1.67	22.46	20.88	30.67
	Equiv. Refl.: (-4,-1,-4)								
Quartz	(-4,5,4)	8.101	78.57	15.542	13.4	1.67	22.46	20.88	30.67
Quartz	(-4,-2,2)	8.044	76.71	15.497	13.5	1.952	26.31	24.4	35.88
Quartz	(-4,6,-2)	8.044	76.71	15.496	13.5	1.952	26.3	24.4	35.88
Quartz	(6,-2,-2)	8.044	76.71	15.495	13.5	1.952	26.3	24.4	35.88
	Equiv. Refl.: (6,-4,2), (-2,6,2), (-2,-4,-2)								
Quartz	(1,4,-4)	8.101	78.57	15.255	13.4	1.67	22.47	20.88	30.67
	Equiv. Refl.: (-5,4,4)								
Quartz	(1,-5,4)	8.101	78.57	15.254	13.4	1.67	22.46	20.88	30.67
	Equiv. Refl.: (-5,1,-4)								

Ei = Cryst	8.265 Refl (h,k,l)	keV EB [keV]	Θ B [$^\circ$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(4,1,4)	8.101	78.57	15.253	13.4	1.67	22.46	20.88	30.67
Quartz	(4,-5,-4)	8.101	78.57	15.252	13.4	1.67	22.46	20.88	30.67
Sapph	(1,2,14)	7.778	70.23	14.917	13.1	2.971	38.8	37.14	53.71
	Equiv. Refl.: (1,-3,-14), (2,1,-14), (2,-3,14), (3,-1,-14), (3,-2,14), (-1,3,14), (-1,-2,-14), (-2,3,-14), (-2,-1,14), (-3,1,14), (-3,2,-14)								
Sapph	(1,4,9)	8.123	79.36	14.412	13.7	1.553	21.32	19.41	28.83
	Equiv. Refl.: (1,4,-9), (1,-5,9), (1,-5,-9), (4,1,9), (4,1,-9), (4,-5,9), (4,-5,-9), (5,-1,9), (5,-1,-9), (5,-4,9), (5,-4,-9), (-1,5,9), (-1,5,-9), (-1,-4,9), (-1,-4,-9), (-4,5,9), (-4,5,-9), (-4,-1,9), (-4,-1,-9), (-5,1,9), (-5,1,-9), (-5,4,9), (-5,4,-9)								
Quartz	(0,3,6)	8.153	80.55	13.139	12.3	1.376	16.96	17.2	24.15
	Equiv. Refl.: (0,-3,-6)								
Quartz	(3,-3,6)	8.153	80.55	13.131	12.3	1.376	16.95	17.2	24.14
	Equiv. Refl.: (-3,3,-6)								
Quartz	(3,0,-6)	8.153	80.55	13.129	12.3	1.376	16.95	17.2	24.14
	Equiv. Refl.: (-3,0,6)								
Quartz	(2,1,-6)	7.888	72.63	11.388	9.9	2.585	25.54	32.31	41.19
Quartz	(1,2,6)	7.888	72.63	11.386	9.9	2.585	25.53	32.31	41.18
	Equiv. Refl.: (2,-3,6)								
Quartz	(1,-3,-6)	7.888	72.63	11.385	9.9	2.585	25.53	32.31	41.18
Quartz	(-3,1,6)	7.888	72.63	11.379	9.9	2.585	25.52	32.31	41.17
	Equiv. Refl.: (-3,2,-6)								
Quartz	(-2,-1,6)	7.888	72.63	11.154	9.9	2.585	25.54	32.31	41.19
Quartz	(-1,-2,-6)	7.888	72.63	11.153	9.9	2.585	25.53	32.31	41.18
Quartz	(-1,3,6)	7.888	72.63	11.152	9.9	2.585	25.53	32.31	41.18
	Equiv. Refl.: (-2,3,-6)								
Quartz	(3,-1,-6)	7.888	72.63	11.145	9.9	2.585	25.52	32.31	41.17
	Equiv. Refl.: (3,-2,6)								
Quartz	(0,4,-5)	8.177	81.61	10.477	10.5	1.219	12.77	15.24	19.88
	Equiv. Refl.: (0,-4,5)								
Quartz	(4,0,5)	8.177	81.61	10.46	10.5	1.219	12.75	15.24	19.87
	Equiv. Refl.: (4,-4,-5), (-4,4,5)								
Quartz	(-4,0,-5)	8.177	81.61	10.459	10.5	1.219	12.75	15.24	19.87
Sapph	(0,1,-16)	7.783	70.34	8.104	7.7	2.952	22.61	36.9	43.28
	Equiv. Refl.: (0,-1,16), (1,0,16), (1,-1,-16), (-1,0,-16), (-1,1,16)								
Quartz	(1,5,0)	8.112	78.96	7.433	6.9	1.612	11.08	20.15	22.99
	Equiv. Refl.: (1,-6,0), (5,1,0), (5,-6,0), (-6,1,0), (-6,5,0)								
Quartz	(5,-2,4)	7.835	71.43	6.785	6.4	2.776	17.68	34.7	38.95
	Equiv. Refl.: (5,-3,-4)								
Quartz	(-2,5,-4)	7.835	71.43	6.778	6.4	2.776	17.66	34.7	38.94
	Equiv. Refl.: (-2,-3,4)								
Quartz	(-3,-2,-4)	7.835	71.43	6.776	6.4	2.776	17.66	34.7	38.94
Quartz	(-3,5,4)	7.835	71.43	6.775	6.4	2.776	17.66	34.7	38.94
Quartz	(4,2,-1)	7.795	70.57	6.709	5.9	2.915	17.18	36.43	40.28
	Equiv. Refl.: (4,-6,1)								
Quartz	(2,-6,-1)	7.795	70.57	6.708	5.9	2.915	17.17	36.43	40.28
Quartz	(2,4,1)	7.795	70.57	6.707	5.9	2.915	17.17	36.43	40.28
	Equiv. Refl.: (-6,2,1), (-6,4,-1)								
Quartz	(-5,2,-4)	7.835	71.43	6.675	6.4	2.776	17.68	34.7	38.95
	Equiv. Refl.: (-5,3,4)								

Ei =	8.265	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(2,3,-4)	7.835	71.43	6.668	6.4	2.776	17.67	34.7	38.94
	Equiv. Refl.: (2,-5,4)								
Quartz	(3,2,4)	7.835	71.43	6.666	6.4	2.776	17.66	34.7	38.94
Quartz	(3,-5,-4)	7.835	71.43	6.665	6.4	2.776	17.66	34.7	38.94
Quartz	(-4,3,-5)	7.777	70.22	6.469	5.6	2.972	16.79	37.15	40.77
Quartz	(-4,1,5)	7.777	70.22	6.468	5.6	2.972	16.79	37.15	40.77
Quartz	(1,3,5)	7.777	70.22	6.465	5.6	2.972	16.78	37.15	40.77
	Equiv. Refl.: (1,-4,-5)								
Quartz	(3,1,-5)	7.777	70.22	6.464	5.6	2.972	16.78	37.15	40.77
Quartz	(3,-4,5)	7.777	70.22	6.463	5.6	2.972	16.78	37.15	40.77
Quartz	(6,-1,0)	8.112	78.96	6.252	6.9	1.612	11.08	20.15	22.99
	Equiv. Refl.: (6,-5,0), (-1,6,0), (-1,-5,0), (-5,6,0), (-5,-1,0)								
Quartz	(-4,6,-1)	7.795	70.57	6.137	5.9	2.915	17.18	36.43	40.28
	Equiv. Refl.: (-4,-2,1)								
Quartz	(6,-2,-1)	7.795	70.57	6.135	5.9	2.915	17.17	36.43	40.28
	Equiv. Refl.: (6,-4,1), (-2,6,1), (-2,-4,-1)								
Quartz	(6,-4,-2)	8.044	76.71	5.856	5.6	1.952	11.02	24.4	26.77
	Equiv. Refl.: (-2,6,-2)								
Quartz	(6,-2,2)	8.044	76.71	5.855	5.6	1.952	11.02	24.4	26.77
	Equiv. Refl.: (-2,-4,2)								
Quartz	(-4,6,2)	8.044	76.71	5.851	5.6	1.952	11.01	24.4	26.77
	Equiv. Refl.: (-4,-2,-2)								
Quartz	(4,-3,5)	7.777	70.22	5.809	5.6	2.972	16.79	37.15	40.77
Quartz	(4,-1,-5)	7.777	70.22	5.808	5.6	2.972	16.79	37.15	40.77
Quartz	(-1,4,5)	7.777	70.22	5.807	5.6	2.972	16.78	37.15	40.77
Quartz	(-1,-3,-5)	7.777	70.22	5.806	5.6	2.972	16.78	37.15	40.77
	Equiv. Refl.: (-3,-1,5)								
Quartz	(-3,4,-5)	7.777	70.22	5.805	5.6	2.972	16.78	37.15	40.77
Quartz	(-3,3,6)	8.153	80.55	5.356	6	1.376	8.27	17.2	19.08
Quartz	(3,-3,-6)	8.153	80.55	5.355	6	1.376	8.27	17.2	19.08
Quartz	(3,0,6)	8.153	80.55	5.354	6	1.376	8.27	17.2	19.08
	Equiv. Refl.: (-3,0,-6)								
Quartz	(0,3,-6)	8.153	80.55	5.336	6	1.376	8.25	17.2	19.07
	Equiv. Refl.: (0,-3,6)								
Sapph	(2,4,1)	7.975	74.78	5.268	5.7	2.249	12.76	28.12	30.87
	Equiv. Refl.: (2,-6,-1), (4,2,-1), (4,-6,1), (6,-2,-1), (6,-4,1), (-2,6,1), (-2,-4,-1), (-4,6,-1), (-4,-2,1), (-6,2,1), (-6,4,-1)								
LiNbO3	(2,4,7)	7.996	75.34	5.228	8.6	2.162	18.64	27.03	32.83
	Equiv. Refl.: (4,2,-7), (4,-6,7), (6,-4,7), (-2,-4,-7), (-4,6,-7), (-4,-2,7), (-6,4,-7)								
LiNbO3	(2,-6,-7)	7.996	75.34	5.227	8.6	2.162	18.64	27.03	32.83
	Equiv. Refl.: (6,-2,-7), (-2,6,7), (-6,2,7)								
Quartz	(2,4,-2)	8.044	76.71	5.198	5.6	1.952	11.02	24.4	26.77
	Equiv. Refl.: (2,-6,2), (-6,2,-2), (-6,4,2)								
Quartz	(4,2,2)	8.044	76.71	5.194	5.6	1.952	11.02	24.4	26.77
	Equiv. Refl.: (4,-6,-2)								
Sapph	(1,3,13)	8.241	85.68	5.147	8.2	0.625	5.14	7.81	9.35
	Equiv. Refl.: (1,-4,-13), (3,1,-13), (3,-4,13), (4,-1,-13), (4,-3,13), (-1,4,13), (-1,-3,-13), (-3,4,-13), (-3,-1,13), (-4,1,13), (-4,3,-13)								
Quartz	(0,4,5)	8.177	81.61	5.08	6	1.219	7.28	15.24	16.89
	Equiv. Refl.: (0,-4,-5)								
Quartz	(-4,4,-5)	8.177	81.61	5.076	6	1.219	7.28	15.24	16.88

Ei =	8.265	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(4,-4,5)	8.177	81.61	5.074	6	1.219	7.28	15.24	16.88
Quartz	(4,0,-5)	8.177	81.61	5.073	6	1.219	7.28	15.24	16.88
	Equiv. Refl.: (-4,0,5)								
Quartz	(0,1,-7)	8.16	80.87	4.25	5	1.329	6.66	16.61	17.89
Quartz	(0,-1,7)	8.16	80.87	4.249	5	1.329	6.66	16.61	17.89
Quartz	(1,-1,-7)	8.16	80.87	4.231	5	1.329	6.64	16.61	17.88
	Equiv. Refl.: (-1,1,7)								
Quartz	(-1,0,-7)	8.16	80.87	4.229	5	1.329	6.64	16.61	17.88
Quartz	(1,0,7)	8.16	80.87	4.228	5	1.329	6.64	16.61	17.88
Quartz	(-1,4,-5)	7.777	70.22	4.115	3.9	2.972	11.68	37.15	38.95
	Equiv. Refl.: (-1,-3,5)								
Quartz	(4,-1,5)	7.777	70.22	4.114	3.9	2.972	11.68	37.15	38.95
Quartz	(4,-3,-5)	7.777	70.22	4.113	3.9	2.972	11.68	37.15	38.95
Quartz	(-3,-1,-5)	7.777	70.22	4.111	3.9	2.972	11.67	37.15	38.94
Quartz	(-3,4,5)	7.777	70.22	4.109	3.9	2.972	11.67	37.15	38.94
Quartz	(1,3,-5)	7.777	70.22	3.934	3.9	2.972	11.68	37.15	38.95
Quartz	(1,-4,5)	7.777	70.22	3.933	3.9	2.972	11.68	37.15	38.95
Quartz	(-4,1,-5)	7.777	70.22	3.932	3.9	2.972	11.68	37.15	38.95
	Equiv. Refl.: (-4,3,5)								
Quartz	(3,1,5)	7.777	70.22	3.928	3.9	2.972	11.67	37.15	38.94
Quartz	(3,-4,-5)	7.777	70.22	3.927	3.9	2.972	11.67	37.15	38.94
Quartz	(-1,3,-6)	7.888	72.63	3.877	3.7	2.585	9.6	32.31	33.71
Quartz	(-1,-2,6)	7.888	72.63	3.876	3.7	2.585	9.59	32.31	33.71
Quartz	(-2,-1,-6)	7.888	72.63	3.874	3.7	2.585	9.59	32.31	33.71
Quartz	(-2,3,6)	7.888	72.63	3.871	3.7	2.585	9.58	32.31	33.7
Quartz	(3,-1,6)	7.888	72.63	3.869	3.7	2.585	9.58	32.31	33.7
	Equiv. Refl.: (3,-2,-6)								
Sapph	(2,4,-2)	8.018	75.95	3.817	4.5	2.069	9.31	25.86	27.48
	Equiv. Refl.: (2,-6,2), (4,2,2), (4,-6,-2), (6,-2,2), (6,-4,-2), (-2,6,-2), (-2,-4,2), (-4,6,2), (-4,-2,-2), (-6,2,-2), (-6,4,2)								
Quartz	(1,-3,6)	7.888	72.63	2.972	3.7	2.585	9.6	32.31	33.71
Quartz	(1,2,-6)	7.888	72.63	2.971	3.7	2.585	9.59	32.31	33.71
Quartz	(2,1,6)	7.888	72.63	2.969	3.7	2.585	9.59	32.31	33.71
Quartz	(2,-3,-6)	7.888	72.63	2.967	3.7	2.585	9.58	32.31	33.7
Quartz	(-3,1,-6)	7.888	72.63	2.965	3.7	2.585	9.58	32.31	33.7
	Equiv. Refl.: (-3,2,6)								
Quartz	(5,0,3)	8.057	77.11	2.395	3.4	1.891	6.39	23.64	24.49
	Equiv. Refl.: (-5,0,-3), (-5,5,3)								
Quartz	(5,-5,-3)	8.057	77.11	2.394	3.4	1.891	6.39	23.64	24.49
Quartz	(0,5,-3)	8.057	77.11	2.39	3.4	1.891	6.38	23.64	24.49
	Equiv. Refl.: (0,-5,3)								
LiNbO3	(1,5,5)	8.058	77.16	2.118	5.5	1.884	10.35	23.55	25.72
	Equiv. Refl.: (1,-6,-5), (5,1,-5), (5,-6,5), (6,-1,-5), (6,-5,5), (-1,6,5), (-1,-5,-5), (-5,6,-5), (-5,-1,5), (-6,1,5), (-6,5,-5)								
Quartz	(1,4,4)	8.101	78.57	2.02	2.8	1.67	4.67	20.88	21.4
	Equiv. Refl.: (1,-5,-4)								
Quartz	(-5,4,-4)	8.101	78.57	2.016	2.8	1.67	4.66	20.88	21.39
Quartz	(-5,1,4)	8.101	78.57	2.014	2.8	1.67	4.66	20.88	21.39
Quartz	(4,1,-4)	8.101	78.57	2.013	2.8	1.67	4.66	20.88	21.39
	Equiv. Refl.: (4,-5,4)								

Ei =	8.265	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-1,5,4)	8.101	78.57	1.508	2.8	1.67	4.67	20.88	21.4
	Equiv. Refl.: (-1,-4,-4)								
Quartz	(5,-4,4)	8.101	78.57	1.504	2.8	1.67	4.66	20.88	21.39
Quartz	(5,-1,-4)	8.101	78.57	1.502	2.8	1.67	4.66	20.88	21.39
	Equiv. Refl.: (-4,5,-4), (-4,-1,4)								
Quartz	(-3,6,2)	7.911	73.16	1.223	1.8	2.501	4.38	31.27	31.57
	Equiv. Refl.: (-3,-3,-2)								
Quartz	(-3,6,-2)	7.911	73.16	1.222	1.7	2.501	4.38	31.27	31.57
Quartz	(6,-3,-2)	7.911	73.16	1.221	1.7	2.501	4.37	31.27	31.57
	Equiv. Refl.: (-3,-3,2)								
Quartz	(6,-3,2)	7.911	73.16	1.22	1.7	2.501	4.37	31.27	31.57
Quartz	(3,3,2)	7.911	73.16	0.881	1.8	2.501	4.38	31.27	31.57
	Equiv. Refl.: (3,-6,-2)								
Quartz	(3,3,-2)	7.911	73.16	0.88	1.7	2.501	4.38	31.27	31.57
	Equiv. Refl.: (3,-6,2)								
Quartz	(-6,3,2)	7.911	73.16	0.879	1.7	2.501	4.37	31.27	31.57
	Equiv. Refl.: (-6,3,-2)								
Quartz	(-5,6,-1)	8.193	82.42	0.68	1.4	1.099	1.56	13.74	13.83
Quartz	(6,-1,-1)	8.193	82.42	0.679	1.4	1.099	1.56	13.74	13.83
	Equiv. Refl.: (6,-5,1), (-1,6,1), (-1,-5,-1), (-5,-1,1)								
Quartz	(6,-2,1)	7.795	70.57	0.58	1	2.915	3.06	36.43	36.56
	Equiv. Refl.: (6,-4,-1), (-2,6,-1), (-2,-4,1), (-4,6,1), (-4,-2,-1)								
LiNbO3	(2,3,11)	7.806	70.81	0.533	2.2	2.876	6.42	35.95	36.52
	Equiv. Refl.: (2,-5,-11), (3,2,-11), (3,-5,11), (5,-2,-11), (5,-3,11), (-2,5,11), (-2,-3,-11), (-3,5,-11), (-3,-2,11), (-5,2,11), (-5,3,-11)								
Quartz	(2,4,-1)	7.795	70.57	0.461	1	2.915	3.06	36.43	36.56
	Equiv. Refl.: (2,-6,1), (4,2,1), (4,-6,-1), (-6,2,-1), (-6,4,1)								
Quartz	(1,5,1)	8.193	82.42	0.264	1.4	1.099	1.56	13.74	13.83
	Equiv. Refl.: (1,-6,-1), (5,1,-1), (5,-6,1), (-6,1,1), (-6,5,-1)								
Sapph	(3,3,3)	7.947	74.06	0.106	0.6	2.36	1.35	29.51	29.54
	Equiv. Refl.: (3,3,-3), (3,-6,3), (3,-6,-3), (6,-3,3), (6,-3,-3), (-3,6,3), (-3,6,-3), (-3,-3,3), (-3,-3,-3), (-6,3,3), (-6,3,-3)								

Ei =	8.9805	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(3,3,7)	8.969	87.14	80.2	81.5	0.448	36.51	5.6	36.94
Ge	(0,0,8)	8.766	77.46	30.3	28.2	1.998	56.34	24.97	61.62
Si	(2,4,6)	8.542	72.02	13.1	11.5	2.915	33.48	36.44	49.48
Si	(1,3,7)	8.768	77.5	11.8	10.8	1.991	21.56	24.89	32.93
	Equiv. Refl.: (3,5,5)								
LiNbO3	(1,5,-10)	8.941	84.6	58.1	55.8	0.85	47.45	10.62	48.62
	Equiv. Refl.: (5,-6,-10), (6,-5,-10), (-1,6,-10), (-5,-1,-10), (-6,1,-10)								
LiNbO3	(1,-6,10)	8.941	84.6	56.4	55.8	0.85	47.45	10.62	48.62
	Equiv. Refl.: (5,1,10), (6,-1,10), (-1,-5,10), (-5,6,10), (-6,5,10)								
Quartz	(-4,6,4)	8.972	87.44	37.5	34.4	0.401	13.78	5.01	14.66
	Equiv. Refl.: (-4,-2,-4)								
Quartz	(6,-2,4)	8.972	87.44	37.4	34.4	0.401	13.77	5.01	14.65
	Equiv. Refl.: (6,-4,-4), (-2,6,-4), (-2,-4,4)								
Quartz	(4,-6,-4)	8.972	87.44	36.3	34.4	0.401	13.78	5.01	14.66
Quartz	(2,4,-4)	8.972	87.44	36.2	34.4	0.401	13.77	5.01	14.66
	Equiv. Refl.: (2,-6,4), (4,2,4), (-6,2,-4), (-6,4,4)								
Quartz	(6,-2,-4)	8.972	87.44	28.5	26.9	0.401	10.79	5.01	11.89
	Equiv. Refl.: (6,-4,4), (-2,6,4), (-2,-4,-4), (-4,6,-4), (-4,-2,4)								
LiNbO3	(2,3,14)	8.714	76	28.2	25.9	2.239	57.99	27.99	64.39
	Equiv. Refl.: (3,-5,14), (5,-3,14), (-2,5,14), (-3,-2,14), (-5,2,14)								
Quartz	(2,4,4)	8.972	87.44	26.8	26.9	0.401	10.8	5.01	11.9
	Equiv. Refl.: (2,-6,-4), (4,2,-4), (4,-6,4), (-6,2,4), (-6,4,-4)								
LiNbO3	(2,-5,-14)	8.714	76	26.3	25.9	2.239	57.99	27.99	64.39
	Equiv. Refl.: (3,2,-14), (5,-2,-14), (-2,-3,-14), (-3,5,-14), (-5,3,-14)								
LiNbO3	(1,3,16)	8.737	76.61	25.8	24.2	2.137	51.68	26.72	58.18
	Equiv. Refl.: (3,-4,16), (4,-3,16), (-1,4,16), (-3,-1,16), (-4,1,16)								
LiNbO3	(0,-6,6)	8.764	77.39	25.6	24.5	2.01	49.33	25.12	55.36
	Equiv. Refl.: (6,0,6), (-6,6,6)								
LiNbO3	(2,-7,0)	8.684	75.23	24.9	23.7	2.368	56.22	29.61	63.54
	Equiv. Refl.: (5,2,0), (7,-2,0), (-2,-5,0), (-5,7,0), (-7,5,0)								
LiNbO3	(0,6,-6)	8.764	77.39	24.7	24.5	2.01	49.33	25.12	55.36
	Equiv. Refl.: (2,5,0), (5,-7,0), (6,-6,-6), (7,-5,0), (-2,7,0), (-5,-2,0), (-6,0,-6), (-7,2,0)								
LiNbO3	(1,-4,-16)	8.737	76.61	24.2	24.2	2.137	51.68	26.72	58.18
	Equiv. Refl.: (3,1,-16), (4,-1,-16), (-1,-3,-16), (-3,4,-16), (-4,3,-16)								
LiNbO3	(2,-6,-10)	8.61	73.49	23.5	21.6	2.662	57.56	33.28	66.49
	Equiv. Refl.: (4,2,-10), (6,-2,-10), (-2,-4,-10), (-4,6,-10), (-6,4,-10)								
LiNbO3	(0,-6,-6)	8.764	77.39	22.6	22.3	2.01	44.88	25.12	51.43
	Equiv. Refl.: (6,0,-6), (-6,6,-6)								
LiNbO3	(0,6,6)	8.764	77.39	22.3	22.3	2.01	44.88	25.12	51.43
	Equiv. Refl.: (6,-6,6), (-6,0,6)								
LiNbO3	(2,4,10)	8.61	73.49	21.8	21.6	2.662	57.56	33.28	66.49
	Equiv. Refl.: (3,-7,-2), (4,3,-2), (4,-6,10), (6,-4,10), (7,-3,-2), (-2,6,10), (-3,-4,-2), (-4,7,-2), (-4,-2,10), (-6,2,10), (-7,4,-2)								
Quartz	(7,-3,-1)	8.936	84.32	21.3	19.1	0.893	17.08	11.16	20.4
	Equiv. Refl.: (7,-4,1), (-3,7,1), (-3,-4,-1), (-4,7,-1), (-4,-3,1)								
Quartz	(3,4,1)	8.936	84.32	21.1	19.1	0.893	17.08	11.16	20.4
	Equiv. Refl.: (3,-7,-1), (4,3,-1), (4,-7,1), (-7,3,1), (-7,4,-1)								
LiNbO3	(3,4,2)	8.505	71.27	20.7	20.1	3.044	61.33	38.05	72.17
	Equiv. Refl.: (4,-7,2), (7,-4,2), (-3,7,2), (-4,-3,2), (-7,3,2)								
Quartz	(7,-3,1)	8.936	84.32	20.4	18	0.893	16.1	11.16	19.59
	Equiv. Refl.: (7,-4,-1), (-3,7,-1), (-3,-4,1), (-4,7,1), (-4,-3,-1)								

Ei =	8.9805	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50mm	2m, 50mm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/mrad]	[meV]	[meV]	[meV]
Quartz	(3,4,-1)	8.936	84.32	19.4	18	0.893	16.1	11.16	19.59
	Equiv. Refl.: (3,-7,1), (4,3,1), (4,-7,-1), (-7,3,-1), (-7,4,1)								
Sapph	(0,0,18)	8.591	73.07	18.9	15.8	2.734	43.24	34.17	55.12
	Equiv. Refl.: (0,0,-18)								
LiNbO3	(3,-7,4)	8.645	74.29	18.7	18.5	2.526	46.66	31.57	56.34
	Equiv. Refl.: (4,3,4), (7,-3,4), (-3,-4,4), (-4,7,4), (-7,4,4)								
LiNbO3	(3,4,-4)	8.645	74.29	18.5	18.5	2.526	46.66	31.57	56.34
	Equiv. Refl.: (4,-7,-4), (7,-4,-4), (-3,7,-4), (-4,-3,-4), (-7,3,-4)								
LiNbO3	(1,5,8)	8.528	71.74	18.4	17.9	2.962	52.93	37.03	64.59
	Equiv. Refl.: (5,-6,8), (6,-5,8), (-1,6,8), (-5,-1,8), (-6,1,8), (0,5,10), (0,-5,-10), (5,0,-10), (5,-5,10), (-5,0,10), (-5,5,-10)								
LiNbO3	(1,-6,-8)	8.528	71.74	18.3	17.9	2.962	52.93	37.03	64.59
	Equiv. Refl.: (5,1,-8), (6,-1,-8), (-1,-5,-8), (-5,6,-8), (-6,5,-8)								
Quartz	(1,2,-7)	8.907	82.64	16.1	14.5	1.16	16.77	14.5	22.17
	Equiv. Refl.: (1,-3,7), (2,1,7), (2,-3,-7), (-3,1,-7), (-3,2,7)								
Quartz	(3,-1,7)	8.907	82.64	16	14.5	1.16	16.76	14.5	22.16
	Equiv. Refl.: (3,-2,-7), (-1,3,-7), (-1,-2,7), (-2,3,7), (-2,-1,-7)								
Quartz	(6,-1,3)	8.812	78.88	15.8	13.5	1.766	23.9	22.07	32.53
	Equiv. Refl.: (6,-5,-3), (-1,6,-3), (-1,-5,3), (-5,6,3), (-5,-1,-3)								
Quartz	(1,5,-3)	8.812	78.88	15.6	13.5	1.766	23.9	22.07	32.53
	Equiv. Refl.: (1,-6,3), (5,1,3), (5,-6,-3), (-6,1,-3), (-6,5,3)								
Quartz	(2,3,-5)	8.557	72.34	14.4	12	2.86	34.27	35.75	49.52
	Equiv. Refl.: (2,-5,5), (3,2,5), (3,-5,-5), (-5,2,-5), (-5,3,5)								
Quartz	(5,-2,5)	8.557	72.34	14.3	12	2.86	34.28	35.75	49.53
	Equiv. Refl.: (5,-3,-5), (-2,5,-5), (-2,-3,5), (-3,5,5), (-3,-2,-5)								
Quartz	(1,2,7)	8.907	82.64	14.1	12.6	1.16	14.59	14.5	20.57
	Equiv. Refl.: (1,-3,-7), (2,1,-7), (2,-3,7), (-3,1,7), (-3,2,-7)								
Sapph	(1,5,-4)	8.591	73.07	14	12.1	2.734	33.06	34.18	47.55
	Equiv. Refl.: (1,-6,4), (5,1,4), (5,-6,-4), (6,-1,4), (6,-5,-4), (-1,6,-4), (-1,-5,4), (-5,6,4), (-5,-1,-4), (-6,1,-4), (-6,5,4)								
Quartz	(1,4,5)	8.802	78.55	13.8	11.7	1.819	21.28	22.74	31.14
	Equiv. Refl.: (1,-5,-5), (4,1,-5), (4,-5,5), (5,-1,-5), (5,-4,5), (-1,5,5), (-1,-4,-5), (-4,5,-5), (-4,-1,5), (-5,1,5), (-5,4,-5)								
Quartz	(3,-2,7)	8.907	82.64	13.4	12.6	1.16	14.58	14.5	20.56
	Equiv. Refl.: (-1,3,7), (-1,-2,-7), (-2,3,-7), (-2,-1,7)								
Quartz	(3,-1,-7)	8.907	82.64	13.3	12.6	1.16	14.58	14.5	20.56
Quartz	(0,6,-1)	8.817	79.04	13.1	11.3	1.738	19.56	21.73	29.23
	Equiv. Refl.: (0,-6,1), (6,0,1), (6,-6,-1), (-6,0,-1), (-6,6,1)								
Sapph	(2,2,15)	8.855	80.42	13	12.1	1.516	18.35	18.94	26.38
	Equiv. Refl.: (2,2,-15), (2,-4,15), (2,-4,-15), (4,-2,15), (4,-2,-15), (-2,4,15), (-2,4,-15), (-2,-2,15), (-2,-2,-15), (-4,2,15), (-4,2,-15)								
Quartz	(0,5,4)	8.609	73.47	12.9	10.9	2.665	29.16	33.32	44.28
	Equiv. Refl.: (0,-5,-4), (5,0,-4), (5,-5,4), (-5,0,4), (-5,5,-4)								
Quartz	(6,-3,4)	8.852	80.31	10.7	9.5	1.533	14.59	19.16	24.08
	Equiv. Refl.: (6,-3,-4), (-3,6,4), (-3,6,-4), (-3,-3,4), (-3,-3,-4)								
Quartz	(3,3,4)	8.852	80.31	10.1	9.5	1.533	14.59	19.16	24.08
	Equiv. Refl.: (3,3,-4), (3,-6,4), (3,-6,-4), (-6,3,4), (-6,3,-4)								
Quartz	(6,-1,-3)	8.812	78.88	10	8.8	1.766	15.53	22.07	26.99
	Equiv. Refl.: (6,-5,3), (-1,6,3), (-1,-5,-3), (-5,6,-3), (-5,-1,3)								
Quartz	(1,5,3)	8.812	78.88	9.6	8.8	1.766	15.53	22.07	26.99
	Equiv. Refl.: (1,-6,-3), (5,1,-3), (5,-6,3), (-6,1,3), (-6,5,-3)								

Ei =	8.9805	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50mm	2m, 50mm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/mrad]	[meV]	[meV]	[meV]
Sapph	(1,2,-16)	8.612	73.52	9.3	8.4	2.656	22.24	33.2	39.96
	Equiv. Refl.: (1,-3,16), (2,1,16), (2,-3,-16), (3,-1,16), (3,-2,-16), (-1,3,-16), (-1,-2,16), (-2,3,16), (-2,-1,-16), (-3,1,-16), (-3,2,16)								
Sapph	(1,3,-14)	8.607	73.41	9.1	8.1	2.676	21.7	33.45	39.87
	Equiv. Refl.: (1,-4,14), (3,1,14), (3,-4,-14), (4,-1,14), (4,-3,-14), (-1,4,-14), (-1,-3,14), (-3,4,14), (-3,-1,-14), (-4,1,-14), (-4,3,14)								
Quartz	(2,2,6)	8.534	71.87	7.4	6.4	2.941	18.85	36.76	41.32
	Equiv. Refl.: (2,2,-6), (2,-4,6), (2,-4,-6), (-4,2,6), (-4,2,-6)								
Quartz	(4,-2,6)	8.534	71.87	7.3	6.4	2.941	18.84	36.76	41.31
	Equiv. Refl.: (4,-2,-6), (-2,4,6), (-2,4,-6), (-2,-2,6), (-2,-2,-6)								
Sapph	(1,1,18)	8.978	88.57	6.9	13.5	0.224	3.01	2.8	4.11
	Equiv. Refl.: (1,1,-18), (1,-2,18), (1,-2,-18), (2,-1,18), (2,-1,-18), (-1,2,18), (-1,2,-18), (-1,-1,18), (-1,-1,-18), (-2,1,18), (-2,1,-18)								
Sapph	(1,4,12)	8.963	86.41	6.4	9	0.563	5.07	7.04	8.68
	Equiv. Refl.: (1,4,-12), (1,-5,12), (1,-5,-12), (4,1,12), (4,1,-12), (4,-5,12), (4,-5,-12), (5,-1,12), (5,-1,-12), (5,-4,12), (5,-4,-12), (-1,5,12), (-1,5,-12), (-1,-4,12), (-1,-4,-12), (-4,5,12), (-4,5,-12), (-4,-1,12), (-4,-1,-12), (-5,1,12), (-5,1,-12), (-5,4,12), (-5,4,-12)								
Sapph	(2,4,-8)	8.829	79.46	6.3	6.5	1.671	10.89	20.88	23.55
	Equiv. Refl.: (2,-6,8), (4,2,8), (4,-6,-8), (6,-2,8), (6,-4,-8), (-2,6,-8), (-2,-4,8), (-4,6,8), (-4,-2,-8), (-6,2,-8), (-6,4,8)								
Sapph	(1,5,5)	8.71	75.89	6.2	6	2.257	13.57	28.22	31.31
	Equiv. Refl.: (1,-6,-5), (5,1,-5), (5,-6,5), (6,-1,-5), (6,-5,5), (-1,6,5), (-1,-5,-5), (-5,6,-5), (-5,-1,5), (-6,1,5), (-6,5,-5)								
LiNbO3	(2,4,-11)	8.851	80.24	5.7	9.3	1.544	14.42	19.3	24.09
	Equiv. Refl.: (2,-6,11), (4,2,11), (4,-6,-11), (6,-2,11), (6,-4,-11), (-2,6,-11), (-2,-4,11), (-4,6,11), (-4,-2,-11), (-6,2,-11), (-6,4,11)								
Quartz	(6,-2,3)	8.443	70.07	5.6	4.6	3.256	15	40.7	43.38
	Equiv. Refl.: (6,-4,-3), (-2,6,-3), (-2,-4,3), (-3,5,-5), (-3,-2,5), (-4,6,3), (-4,-2,-3)								
Quartz	(4,-1,6)	8.658	74.6	5.5	5	2.474	12.34	30.93	33.3
	Equiv. Refl.: (4,-3,-6), (5,-2,-5), (5,-3,5), (-1,4,-6), (-1,-3,6), (-2,5,5), (-2,-3,-5), (-3,4,6), (-3,-1,-6)								
Quartz	(2,3,5)	8.557	72.34	5.4	5	2.86	14.18	35.75	38.45
	Equiv. Refl.: (2,-5,-5), (3,2,-5), (3,-5,5), (-5,2,5), (-5,3,-5)								
Quartz	(1,3,-6)	8.658	74.6	5.3	5	2.474	12.35	30.93	33.3
	Equiv. Refl.: (1,-4,6), (2,4,3), (2,-6,-3), (3,1,6), (3,-4,-6), (4,2,-3), (4,-6,3), (-4,1,-6), (-4,3,6), (-6,2,3), (-6,4,-3)								
Quartz	(6,-2,-3)	8.443	70.07	5	4.6	3.256	14.89	40.7	43.34
	Equiv. Refl.: (6,-4,3), (-2,6,3), (-2,-4,-3), (-4,6,-3), (-4,-2,3)								
Quartz	(4,2,3)	8.443	70.07	4.8	4.6	3.256	15.01	40.7	43.38
	Equiv. Refl.: (4,-6,-3), (-6,4,3)								
Quartz	(0,2,-7)	8.542	72.01	4.7	4.3	2.916	12.67	36.45	38.59
	Equiv. Refl.: (0,-2,7), (2,0,7), (2,4,-3), (2,-2,-7), (2,-6,3), (-2,0,-7), (-2,2,7), (-6,2,-3)								
Quartz	(0,2,7)	8.542	72.01	4.1	3.9	2.916	11.37	36.45	38.18
	Equiv. Refl.: (0,-2,-7), (2,0,-7), (2,-2,7), (-2,0,7), (-2,2,-7)								
Sapph	(2,4,7)	8.633	74.02	4	4.1	2.572	10.45	32.15	33.81
	Equiv. Refl.: (2,-6,-7), (4,2,-7), (4,-6,7), (6,-2,-7), (6,-4,7), (-2,6,7), (-2,-4,-7), (-4,6,-7), (-4,-2,7), (-6,2,7), (-6,4,-7), (1,3,6), (1,-4,-6), (3,1,-6), (3,-4,6), (-4,1,6), (-4,3,-6)								
Quartz	(4,-1,-6)	8.658	74.6	3.8	3.8	2.474	9.45	30.93	32.34
	Equiv. Refl.: (4,-3,6), (-1,4,6), (-1,-3,-6), (-3,4,-6), (-3,-1,6)								

Ei =	8.9805	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50mm	2m, 50mm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/mrad]	[meV]	[meV]	[meV]
Quartz	(7,-3,0)	8.862	80.7	2.5	3.2	1.47	4.75	18.38	18.98
	Equiv. Refl.: (7,-4,0), (-3,7,0), (-3,-4,0), (-4,7,0), (-4,-3,0)								
LiNbO3	(3,4,5)	8.749	76.95	2.4	5.1	2.082	10.67	26.02	28.12
	Equiv. Refl.: (3,-7,-5), (4,3,-5), (4,-7,5), (7,-3,-5), (7,-4,5), (-3,7,5), (-3,-4,-5), (-4,7,-5), (-4,-3,5), (-7,3,5), (-7,4,-5)								
Quartz	(3,4,0)	8.862	80.7	2.1	3.2	1.47	4.75	18.38	18.98
	Equiv. Refl.: (3,-7,0), (4,3,0), (4,-7,0), (-7,3,0), (-7,4,0)								
Quartz	(0,6,1)	8.817	79.04	2	2.8	1.738	4.85	21.73	22.26
	Equiv. Refl.: (0,-6,-1), (6,0,-1), (6,-6,1), (-6,0,1), (-6,6,-1)								
LiNbO3	(3,4,-1)	8.47	70.58	1.8	3.8	3.165	11.89	39.57	41.31
	Equiv. Refl.: (3,-7,1), (4,3,1), (4,-7,-1), (7,-3,1), (7,-4,-1), (-3,7,-1), (-3,-4,1), (-4,7,1), (-4,-3,-1), (-7,3,-1), (-7,4,1)								
Quartz	(1,4,-5)	8.802	78.55	1.7	2.2	1.819	4.06	22.74	23.1
	Equiv. Refl.: (1,-5,5), (4,1,5), (4,-5,-5), (-5,1,-5), (-5,4,5)								
Quartz	(0,6,0)	8.742	76.76	1.6	2.3	2.112	4.91	26.4	26.86
	Equiv. Refl.: (0,-6,0), (6,0,0), (6,-6,0), (-6,0,0), (-6,6,0)								
Quartz	(5,-1,5)	8.802	78.55	1.3	2.2	1.819	4.07	22.74	23.1
	Equiv. Refl.: (5,-4,-5), (-1,5,-5), (-1,-4,5), (-4,5,5), (-4,-1,-5)								
Quartz	(0,5,-4)	8.609	73.47	1.2	1.7	2.665	4.64	33.32	33.64
	Equiv. Refl.: (0,-5,4), (5,0,4), (5,-5,-4), (-5,0,-4), (-5,5,4)								
LiNbO3	(1,2,17)	8.445	70.12	1.1	2.8	3.247	9.06	40.59	41.59
	Equiv. Refl.: (1,-3,-17), (2,1,-17), (2,-3,17), (3,-1,-17), (3,-2,17), (-1,3,17), (-1,-2,-17), (-2,3,-17), (-2,-1,17), (-3,1,17), (-3,2,-17)								
LiNbO3	(2,5,3)	8.787	78.07	1	3.2	1.897	6.16	23.71	24.5
	Equiv. Refl.: (2,5,-3), (2,-7,3), (2,-7,-3), (5,2,3), (5,2,-3), (5,-7,3), (5,-7,-3), (7,-2,3), (7,-2,-3), (7,-5,3), (7,-5,-3), (-2,7,3), (-2,7,-3), (-2,-5,3), (-2,-5,-3), (-5,7,3), (-5,7,-3), (-5,-2,3), (-5,-2,-3), (-7,2,3), (-7,2,-3), (-7,5,3), (-7,5,-3)								
Sapph	(3,3,9)	8.92	83.33	0.2	0.9	1.05	0.97	13.13	13.17
	Equiv. Refl.: (3,3,-9), (3,-6,9), (3,-6,-9), (6,-3,9), (6,-3,-9), (-3,6,9), (-3,6,-9), (-3,-3,9), (-3,-3,-9), (-6,3,9), (-6,3,-9)								

Ei = Cryst	8.048 Refl (h,k,l)	keV EB [keV]	Θ B [$^\circ$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Ge	(4,4,4)	7.592	70.62	33.6915	30.92	2.8317	87.56	35.4	94.44
Si	(4,4,4)	7.908	79.3	29.1381	25.94	1.5202	39.44	19	43.78
Ge	(1,1,7)	7.825	76.49	28.8222	28.8	1.9331	55.68	24.16	60.69
Equiv. Refl.: (1,5,5), (1,7,1), (5,1,5), (5,5,1), (7,1,1)									
LiNbO3	(1,2,-16)	8.045	88.5	278.608	275.3	0.211	58.15	2.64	58.21
Equiv. Refl.: (-1,3,-16), (-2,-1,-16), (-3,1,-16)									
LiNbO3	(2,-3,-16)	8.045	88.5	278.607	275.3	0.211	58.15	2.64	58.21
Equiv. Refl.: (3,-2,-16)									
LiNbO3	(1,-3,16)	8.045	88.5	276.559	275.3	0.211	58.15	2.64	58.21
Equiv. Refl.: (3,-1,16)									
LiNbO3	(2,1,16)	8.045	88.5	276.558	275.3	0.211	58.15	2.64	58.21
Equiv. Refl.: (-1,-2,16)									
LiNbO3	(-2,3,16)	8.045	88.5	276.557	275.3	0.211	58.15	2.64	58.21
Equiv. Refl.: (-3,2,16)									
Quartz	(4,2,-2)	8.044	88.13	110.601	97.5	0.263	25.65	3.29	25.86
Quartz	(4,-6,2)	8.044	88.13	110.595	97.5	0.263	25.64	3.29	25.85
Quartz	(-6,2,2)	8.044	88.13	110.591	97.5	0.263	25.64	3.29	25.85
Quartz	(-6,4,-2)	8.044	88.13	110.589	97.5	0.263	25.64	3.29	25.85
Quartz	(2,4,2)	8.044	88.13	110.587	97.5	0.263	25.64	3.29	25.85
Equiv. Refl.: (2,-6,-2)									
Quartz	(-4,-2,2)	8.044	88.13	108.375	97.5	0.263	25.65	3.29	25.86
Quartz	(-4,6,-2)	8.044	88.13	108.368	97.5	0.263	25.64	3.29	25.85
Quartz	(-2,6,2)	8.044	88.13	108.363	97.5	0.263	25.64	3.29	25.85
Equiv. Refl.: (-2,-4,-2)									
Quartz	(6,-2,-2)	8.044	88.13	108.362	97.5	0.263	25.64	3.29	25.85
Quartz	(6,-4,2)	8.044	88.13	108.36	97.5	0.263	25.64	3.29	25.85
LiNbO3	(1,3,-14)	8.021	85.26	95.329	90.5	0.667	60.35	8.34	60.92
Equiv. Refl.: (3,-4,-14), (4,-3,-14), (-1,4,-14), (-3,-1,-14), (-4,1,-14)									
LiNbO3	(1,-4,14)	8.021	85.26	88.177	90.5	0.667	60.35	8.34	60.92
Equiv. Refl.: (3,1,14), (4,-1,14), (-1,-3,14)									
LiNbO3	(-3,4,14)	8.021	85.26	88.176	90.5	0.667	60.35	8.34	60.92
Equiv. Refl.: (-4,3,14)									
LiNbO3	(1,-6,4)	7.946	80.86	52.578	50.3	1.295	65.1	16.18	67.08
Equiv. Refl.: (5,1,4), (6,-1,4), (-1,-5,4), (-5,6,4), (-6,5,4)									
LiNbO3	(1,5,-4)	7.946	80.86	50.474	50.3	1.295	65.1	16.18	67.08
Equiv. Refl.: (5,-6,-4), (6,-5,-4), (-1,6,-4), (-5,-1,-4), (-6,1,-4)									
LiNbO3	(0,5,-8)	7.819	76.29	44.14	40.2	1.963	78.87	24.53	82.6
Equiv. Refl.: (5,-5,-8), (-5,0,-8)									
Quartz	(6,-4,-2)	8.044	88.13	40.791	40.9	0.263	10.75	3.29	11.24
Quartz	(6,-2,2)	8.044	88.13	40.788	40.9	0.263	10.75	3.29	11.24
Equiv. Refl.: (-2,6,-2)									
Quartz	(-2,-4,2)	8.044	88.13	40.786	40.9	0.263	10.75	3.29	11.24
Quartz	(-4,-2,-2)	8.044	88.13	40.757	40.8	0.263	10.74	3.29	11.23
Quartz	(-4,6,2)	8.044	88.13	40.754	40.8	0.263	10.74	3.29	11.23
LiNbO3	(0,-5,8)	7.819	76.29	40.67	40.2	1.963	78.87	24.53	82.6
Equiv. Refl.: (5,0,8), (-5,5,8)									
Sapph	(3,3,0)	7.817	76.25	38.819	32.3	1.97	63.54	24.63	68.14
Equiv. Refl.: (3,-6,0), (6,-3,0), (-3,6,0), (-3,-3,0), (-6,3,0)									

Ei = Cryst	8.048 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(-6,4,2)	8.044	88.13	36.002	40.9	0.263	10.75	3.29	11.24
Quartz	(2,-6,2)	8.044	88.13	36	40.9	0.263	10.75	3.29	11.24
Quartz	(-6,2,-2)	8.044	88.13	35.999	40.9	0.263	10.75	3.29	11.24
Quartz	(2,4,-2)	8.044	88.13	35.997	40.9	0.263	10.75	3.29	11.24
Quartz	(4,2,2)	8.044	88.13	35.972	40.8	0.263	10.74	3.29	11.23
Quartz	(4,-6,-2)	8.044	88.13	35.97	40.8	0.263	10.74	3.29	11.23
LiNbO3	(1,5,2)	7.793	75.55	31.15	30.4	2.074	63.15	25.92	68.26
Equiv. Refl.: (5,-6,2), (6,-5,2), (-1,6,2), (-5,-1,2), (-6,1,2)									
LiNbO3	(1,-6,-2)	7.793	75.55	30.419	30.4	2.074	63.15	25.92	68.26
Equiv. Refl.: (5,1,-2), (6,-1,-2), (-1,-5,-2), (-5,6,-2), (-6,5,-2)									
LiNbO3	(0,-2,-16)	7.676	72.52	26.275	25	2.535	63.4	31.68	70.87
Equiv. Refl.: (2,0,-16), (-2,2,-16)									
Sapph	(0,4,-10)	7.681	72.62	26.161	22.1	2.519	55.62	31.48	63.92
Equiv. Refl.: (0,-4,10), (4,0,10), (4,-4,-10), (-4,0,-10), (-4,4,10)									
LiNbO3	(0,2,16)	7.676	72.52	24.021	25	2.535	63.4	31.68	70.87
Equiv. Refl.: (2,-2,16), (-2,0,16)									
LiNbO3	(3,3,6)	7.707	73.27	23.381	23.2	2.419	56.17	30.24	63.8
Equiv. Refl.: (3,-6,6), (6,-3,6), (-3,6,6), (-3,-3,6), (-6,3,6)									
Quartz	(2,3,4)	7.835	76.78	23.355	19.7	1.89	37.24	23.63	44.11
Equiv. Refl.: (2,-5,-4)									
Quartz	(3,2,-4)	7.835	76.78	23.352	19.7	1.89	37.24	23.63	44.1
Quartz	(3,-5,4)	7.835	76.78	23.351	19.7	1.89	37.24	23.63	44.1
Quartz	(-5,2,4)	7.835	76.78	23.35	19.7	1.89	37.24	23.63	44.1
Equiv. Refl.: (-5,3,-4)									
Quartz	(0,5,-2)	7.638	71.62	23.131	19.2	2.674	51.29	33.42	61.22
Equiv. Refl.: (0,-5,2)									
Quartz	(5,0,2)	7.638	71.62	23.129	19.2	2.674	51.29	33.42	61.21
Equiv. Refl.: (5,-5,-2), (-5,0,-2), (-5,5,2)									
LiNbO3	(2,4,4)	7.572	70.2	23.06	22.1	2.898	64.11	36.22	73.64
Equiv. Refl.: (4,-6,4), (6,-4,4), (-2,6,4), (-4,-2,4), (-6,2,4)									
Quartz	(-2,-3,-4)	7.835	76.78	22.928	19.7	1.89	37.24	23.63	44.11
Quartz	(-2,5,4)	7.835	76.78	22.927	19.7	1.89	37.24	23.63	44.11
Quartz	(-3,-2,4)	7.835	76.78	22.926	19.7	1.89	37.24	23.63	44.1
Quartz	(-3,5,-4)	7.835	76.78	22.925	19.7	1.89	37.24	23.63	44.1
Sapph	(0,5,4)	7.761	74.64	22.924	19.8	2.21	43.86	27.63	51.83
Equiv. Refl.: (0,-5,-4), (5,0,-4), (5,-5,4), (-5,0,4), (-5,5,-4), (5,-2,-4), (5,-3,4)									
LiNbO3	(3,3,-6)	7.707	73.27	22.205	23.2	2.419	56.17	30.24	63.8
Equiv. Refl.: (3,-6,-6), (6,-3,-6), (-3,6,-6), (-3,-3,-6), (-6,3,-6)									
LiNbO3	(4,2,-4)	7.572	70.2	21.257	22.1	2.898	64.11	36.22	73.64
Equiv. Refl.: (-2,-4,-4), (-4,6,-4), (-6,4,-4)									
LiNbO3	(2,-6,-4)	7.572	70.2	21.256	22.1	2.898	64.11	36.22	73.64
Equiv. Refl.: (6,-2,-4)									
Sapph	(1,2,14)	7.778	75.11	20.06	17.7	2.14	37.83	26.75	46.33
Equiv. Refl.: (1,-3,-14), (2,1,-14), (2,-3,14), (3,-1,-14), (3,-2,14), (-1,3,14), (-1,-2,-14), (-2,3,-14), (-2,-1,14), (-3,1,14), (-3,2,-14)									
Quartz	(2,1,-6)	7.888	78.56	17.485	15.3	1.628	24.89	20.35	32.15
Quartz	(1,2,6)	7.888	78.56	17.482	15.3	1.628	24.89	20.35	32.15
Quartz	(1,-3,-6)	7.888	78.56	17.481	15.3	1.628	24.89	20.35	32.15
Equiv. Refl.: (2,-3,6)									

Ei =	8.048	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-3,1,6)	7.888	78.56	17.471	15.3	1.628	24.88	20.35	32.14
	Equiv. Refl.: (-3,2,-6)								
Quartz	(-2,-1,6)	7.888	78.56	17.109	15.3	1.628	24.89	20.35	32.15
Quartz	(-1,-2,-6)	7.888	78.56	17.107	15.3	1.628	24.89	20.35	32.15
Quartz	(-1,3,6)	7.888	78.56	17.105	15.3	1.628	24.89	20.35	32.15
	Equiv. Refl.: (-2,3,-6)								
Quartz	(3,-1,-6)	7.888	78.56	17.095	15.3	1.628	24.88	20.35	32.14
	Equiv. Refl.: (3,-2,6)								
Quartz	(2,4,0)	7.71	73.33	15.141	12.7	2.41	30.66	30.13	42.98
	Equiv. Refl.: (2,-6,0), (4,2,0), (4,-6,0), (-6,2,0), (-6,4,0)								
Quartz	(6,-2,0)	7.71	73.33	14.71	12.7	2.41	30.66	30.13	42.98
	Equiv. Refl.: (6,-4,0), (-2,6,0), (-2,-4,0), (-4,6,0), (-4,-2,0)								
Sapph	(1,1,15)	7.619	71.2	12.386	11.3	2.739	30.91	34.24	46.12
	Equiv. Refl.: (1,1,-15), (1,-2,15), (1,-2,-15), (2,-1,15), (2,-1,-15), (-1,2,15), (-1,2,-15), (-1,-1,15), (-1,-1,-15), (-2,1,15), (-2,1,-15)								
Quartz	(2,2,5)	7.64	71.67	11.53	10.1	2.666	26.82	33.33	42.78
	Equiv. Refl.: (2,-4,-5)								
Quartz	(2,2,-5)	7.64	71.67	11.529	10.1	2.666	26.82	33.33	42.78
LiNbO3	(2,4,7)	7.996	83.48	11.527	19.8	0.92	18.17	11.5	21.5
	Equiv. Refl.: (2,-6,-7), (4,2,-7), (4,-6,7), (6,-2,-7), (6,-4,7), (-2,6,7), (-2,-4,-7), (-4,6,-7), (-4,-2,7), (-6,2,7), (-6,4,-7), (2,-4,5)								
Quartz	(-4,2,5)	7.64	71.67	11.526	10.1	2.666	26.81	33.33	42.77
Quartz	(-4,2,-5)	7.64	71.67	11.525	10.1	2.666	26.81	33.33	42.77
Quartz	(-2,4,5)	7.64	71.67	11.259	10.1	2.666	26.82	33.33	42.78
	Equiv. Refl.: (-2,-2,-5)								
Quartz	(-2,-2,5)	7.64	71.67	11.258	10.1	2.666	26.82	33.33	42.78
Quartz	(-2,4,-5)	7.64	71.67	11.256	10.1	2.666	26.82	33.33	42.78
Quartz	(4,-2,5)	7.64	71.67	11.254	10.1	2.666	26.81	33.33	42.77
	Equiv. Refl.: (4,-2,-5)								
Sapph	(0,1,-16)	7.783	75.27	10.905	10.4	2.116	22.05	26.45	34.44
	Equiv. Refl.: (0,-1,16), (1,0,16), (1,-1,-16), (-1,0,-16), (-1,1,16)								
Quartz	(3,3,1)	7.657	72.07	10.604	9.3	2.604	24.2	32.55	40.56
	Equiv. Refl.: (3,-6,-1), (-6,3,1), (-6,3,-1)								
Quartz	(3,3,-1)	7.657	72.07	10.602	9.3	2.604	24.2	32.55	40.56
	Equiv. Refl.: (3,-6,1)								
Sapph	(2,4,-2)	8.018	85.02	10.432	13	0.701	9.08	8.76	12.62
	Equiv. Refl.: (2,-6,2), (4,2,2), (4,-6,-2), (6,-2,2), (6,-4,-2), (-2,6,-2), (-2,-4,2), (-4,6,2), (-4,-2,-2), (-6,2,-2), (-6,4,2)								
Quartz	(6,-3,0)	7.571	70.17	10.391	9.1	2.902	26.29	36.28	44.8
	Equiv. Refl.: (-3,6,0), (-3,-3,0)								
Quartz	(3,3,0)	7.571	70.17	10.329	9.1	2.902	26.29	36.28	44.8
	Equiv. Refl.: (3,-6,0), (-6,3,0)								
Quartz	(6,-3,1)	7.657	72.07	10.107	9.3	2.604	24.2	32.55	40.56
	Equiv. Refl.: (6,-3,-1), (-3,6,1), (-3,-3,-1)								
Quartz	(-3,6,-1)	7.657	72.07	10.105	9.3	2.604	24.2	32.55	40.56
	Equiv. Refl.: (-3,-3,1)								
Sapph	(2,4,1)	7.975	82.27	10.099	11.4	1.092	12.43	13.65	18.46
	Equiv. Refl.: (2,-6,-1), (4,2,-1), (4,-6,1), (6,-2,-1), (6,-4,1), (-2,6,1), (-2,-4,-1), (-4,6,-1), (-4,-2,1), (-6,2,1), (-6,4,-1)								
Quartz	(5,-2,4)	7.835	76.78	9.609	9.1	1.89	17.23	23.63	29.25
	Equiv. Refl.: (5,-3,-4)								

Ei = Cryst	8.048 Refl (h,k,l)	keV EB [keV]	Θ B [$^{\circ}$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(-2,5,-4)	7.835	76.78	9.599	9.1	1.89	17.22	23.63	29.24
	Equiv. Refl.: (-2,-3,4)								
Quartz	(-3,-2,-4)	7.835	76.78	9.596	9.1	1.89	17.21	23.63	29.23
Quartz	(-3,5,4)	7.835	76.78	9.595	9.1	1.89	17.21	23.63	29.23
Quartz	(-5,3,4)	7.835	76.78	9.446	9.1	1.89	17.23	23.63	29.25
Quartz	(-5,2,-4)	7.835	76.78	9.445	9.1	1.89	17.23	23.63	29.25
Quartz	(2,3,-4)	7.835	76.78	9.436	9.1	1.89	17.22	23.63	29.24
	Equiv. Refl.: (2,-5,4)								
Quartz	(3,2,4)	7.835	76.78	9.433	9.1	1.89	17.21	23.63	29.23
Quartz	(3,-5,-4)	7.835	76.78	9.431	9.1	1.89	17.21	23.63	29.23
Quartz	(4,2,-1)	7.795	75.58	8.796	8.1	2.069	16.74	25.86	30.81
	Equiv. Refl.: (4,-6,1)								
Quartz	(2,-6,-1)	7.795	75.58	8.795	8.1	2.069	16.74	25.86	30.81
	Equiv. Refl.: (-6,2,1), (-6,4,-1)								
Quartz	(2,4,1)	7.795	75.58	8.794	8.1	2.069	16.74	25.86	30.81
Quartz	(-4,3,-5)	7.777	75.1	8.407	7.6	2.141	16.37	26.77	31.38
Quartz	(-4,1,5)	7.777	75.1	8.405	7.6	2.141	16.37	26.77	31.38
Quartz	(1,3,5)	7.777	75.1	8.402	7.6	2.141	16.36	26.77	31.37
	Equiv. Refl.: (1,-4,-5)								
Quartz	(3,1,-5)	7.777	75.1	8.401	7.6	2.141	16.36	26.77	31.37
Quartz	(3,-4,5)	7.777	75.1	8.399	7.6	2.141	16.36	26.77	31.37
Quartz	(-4,6,-1)	7.795	75.58	8.011	8.1	2.069	16.74	25.86	30.81
	Equiv. Refl.: (-4,-2,1)								
Quartz	(6,-2,-1)	7.795	75.58	8.009	8.1	2.069	16.74	25.86	30.81
	Equiv. Refl.: (6,-4,1), (-2,6,1), (-2,-4,-1)								
Quartz	(4,-3,5)	7.777	75.1	7.511	7.6	2.141	16.37	26.77	31.38
Quartz	(4,-1,-5)	7.777	75.1	7.509	7.6	2.141	16.37	26.77	31.38
Quartz	(-1,4,5)	7.777	75.1	7.507	7.6	2.141	16.36	26.77	31.37
	Equiv. Refl.: (-1,-3,-5)								
Quartz	(-3,-1,5)	7.777	75.1	7.506	7.6	2.141	16.36	26.77	31.37
Quartz	(-3,4,-5)	7.777	75.1	7.505	7.6	2.141	16.36	26.77	31.37
Quartz	(-1,3,-6)	7.888	78.56	5.722	5.7	1.628	9.35	20.35	22.4
Quartz	(-1,-2,6)	7.888	78.56	5.721	5.7	1.628	9.35	20.35	22.4
Quartz	(-2,-1,-6)	7.888	78.56	5.717	5.7	1.628	9.34	20.35	22.4
Quartz	(-2,3,6)	7.888	78.56	5.714	5.7	1.628	9.34	20.35	22.39
Quartz	(3,-2,-6)	7.888	78.56	5.711	5.7	1.628	9.34	20.35	22.39
Quartz	(3,-1,6)	7.888	78.56	5.71	5.7	1.628	9.34	20.35	22.39
Quartz	(-1,4,-5)	7.777	75.1	5.235	5.3	2.141	11.39	26.77	29.09
	Equiv. Refl.: (-1,-3,5)								
Quartz	(4,-1,5)	7.777	75.1	5.233	5.3	2.141	11.39	26.77	29.09
	Equiv. Refl.: (4,-3,-5)								
Quartz	(-3,-1,-5)	7.777	75.1	5.23	5.3	2.141	11.38	26.77	29.09
Quartz	(-3,4,5)	7.777	75.1	5.227	5.3	2.141	11.38	26.77	29.09
LiNbO3	(2,4,-5)	7.69	72.85	5.055	8.3	2.484	20.66	31.05	37.3
	Equiv. Refl.: (2,-6,5), (4,2,5), (4,-6,-5), (6,-2,5), (6,-4,-5), (-2,6,-5), (-2,-4,5), (-4,6,5), (-4,-2,-5), (-6,2,-5), (-6,4,5)								
Quartz	(1,3,-5)	7.777	75.1	4.994	5.3	2.141	11.39	26.77	29.09
Quartz	(1,-4,5)	7.777	75.1	4.993	5.3	2.141	11.39	26.77	29.09
Quartz	(-4,1,-5)	7.777	75.1	4.992	5.3	2.141	11.39	26.77	29.09
Quartz	(-4,3,5)	7.777	75.1	4.991	5.3	2.141	11.39	26.77	29.09

Ei = Cryst	8.048 Refl (h,k,l)	keV EB [keV]	Θ B [$^\circ$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(3,1,5)	7.777	75.1	4.987	5.3	2.141	11.38	26.77	29.09
Quartz	(3,-4,-5)	7.777	75.1	4.985	5.3	2.141	11.38	26.77	29.09
Quartz	(1,-3,6)	7.888	78.56	4.682	5.7	1.628	9.35	20.35	22.4
Quartz	(1,2,-6)	7.888	78.56	4.68	5.7	1.628	9.35	20.35	22.4
Quartz	(2,1,6)	7.888	78.56	4.677	5.7	1.628	9.34	20.35	22.4
Quartz	(2,-3,-6)	7.888	78.56	4.673	5.7	1.628	9.34	20.35	22.39
Quartz	(-3,1,-6)	7.888	78.56	4.67	5.7	1.628	9.34	20.35	22.39
	Equiv. Refl.: (-3,2,6)								
Sapph	(2,2,12)	7.744	74.19	3.421	4.4	2.279	9.97	28.48	30.18
	Equiv. Refl.: (2,2,-12), (2,-4,12), (2,-4,-12), (4,-2,12), (4,-2,-12), (-2,4,12), (-2,4,-12), (-2,-2,12), (-2,-2,-12), (-4,2,12), (-4,2,-12)								
LiNbO3	(1,3,13)	7.677	72.52	2.761	5.9	2.534	15.05	31.67	35.07
	Equiv. Refl.: (1,-4,-13), (3,1,-13), (3,-4,13), (4,-1,-13), (4,-3,13), (-1,4,13), (-1,-3,-13), (-3,4,-13), (-3,-1,13), (-4,1,13), (-4,3,-13)								
LiNbO3	(1,5,-1)	7.755	74.49	1.981	5.1	2.234	11.45	27.92	30.18
	Equiv. Refl.: (1,-6,1), (5,1,1), (5,-6,-1), (6,-1,1), (6,-5,-1), (-1,6,-1), (-1,-5,1), (-5,6,1), (-5,-1,-1), (-6,1,-1), (-6,5,1)								
Quartz	(-3,-3,-2)	7.911	79.4	1.94	2.8	1.506	4.26	18.83	19.3
Quartz	(-3,6,2)	7.911	79.4	1.939	2.8	1.506	4.26	18.83	19.3
Quartz	(-3,6,-2)	7.911	79.4	1.937	2.8	1.506	4.26	18.83	19.3
	Equiv. Refl.: (-3,-3,2)								
Quartz	(6,-3,-2)	7.911	79.4	1.936	2.8	1.506	4.26	18.83	19.3
Quartz	(6,-3,2)	7.911	79.4	1.935	2.8	1.506	4.25	18.83	19.3
Sapph	(2,3,8)	7.588	70.54	1.381	2.3	2.844	6.55	35.54	36.14
	Equiv. Refl.: (2,-5,-8), (3,2,-8), (3,-5,8), (5,-2,-8), (5,-3,8), (-2,5,8), (-2,-3,-8), (-3,5,-8), (-3,-2,8), (-5,2,8), (-5,3,-8)								
Quartz	(3,3,2)	7.911	79.4	1.374	2.8	1.506	4.26	18.83	19.3
	Equiv. Refl.: (3,-6,-2)								
Quartz	(3,-6,2)	7.911	79.4	1.373	2.8	1.506	4.26	18.83	19.3
Quartz	(3,3,-2)	7.911	79.4	1.372	2.8	1.506	4.26	18.83	19.3
Quartz	(-6,3,2)	7.911	79.4	1.371	2.8	1.506	4.26	18.83	19.3
Quartz	(-6,3,-2)	7.911	79.4	1.37	2.8	1.506	4.25	18.83	19.3
Quartz	(0,5,2)	7.638	71.62	1.209	2	2.674	5.25	33.42	33.83
	Equiv. Refl.: (0,-5,-2)								
Quartz	(5,0,-2)	7.638	71.62	1.206	2	2.674	5.24	33.42	33.83
	Equiv. Refl.: (-5,0,2)								
Quartz	(5,-5,2)	7.638	71.62	1.205	2	2.674	5.23	33.42	33.83
	Equiv. Refl.: (-5,5,-2)								
Quartz	(6,-2,1)	7.795	75.58	0.781	1.4	2.069	2.99	25.86	26.04
	Equiv. Refl.: (6,-4,-1), (-2,6,-1), (-2,-4,1), (-4,6,1), (-4,-2,-1)								
LiNbO3	(2,3,11)	7.806	75.91	0.706	3.1	2.02	6.26	25.25	26.01
	Equiv. Refl.: (2,-5,-11), (3,2,-11), (3,-5,11), (5,-2,-11), (5,-3,11), (-2,5,11), (-2,-3,-11), (-3,5,-11), (-3,-2,11), (-5,2,11), (-5,3,-11)								
Quartz	(2,4,-1)	7.795	75.58	0.616	1.4	2.069	2.99	25.86	26.04
	Equiv. Refl.: (2,-6,1), (4,2,1), (4,-6,-1), (-6,2,-1), (-6,4,1)								
Sapph	(3,3,3)	7.947	80.92	0.179	1	1.286	1.31	16.07	16.12
	Equiv. Refl.: (3,3,-3), (3,-6,3), (3,-6,-3), (6,-3,3), (6,-3,-3), (-3,6,3), (-3,6,-3), (-3,-3,3), (-3,-3,-3), (-6,3,3), (-6,3,-3)								

Ei = Cryst	8.028 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Ge	(4,4,4)	7.592	71.03	34.4718	31.66	2.7603	87.38	34.5	93.95
Si	(4,4,4)	7.908	80.09	31.4796	28.04	1.4029	39.34	17.54	43.07
Ge	(1,1,7)	7.825	77.1	30.2176	30.22	1.8384	55.57	22.98	60.13
Equiv. Refl.: (1,5,5), (1,7,1), (5,1,5), (5,5,1), (7,1,1)									
LiNbO3	(1,3,-14)	8.021	87.52	182.451	173.4	0.347	60.21	4.34	60.37
Equiv. Refl.: (-1,4,-14), (-3,-1,-14), (-4,1,-14)									
LiNbO3	(3,-4,-14)	8.021	87.52	182.45	173.4	0.347	60.21	4.34	60.37
Equiv. Refl.: (4,-3,-14)									
LiNbO3	(1,-4,14)	8.021	87.52	168.813	173.4	0.347	60.21	4.34	60.37
Equiv. Refl.: (4,-1,14)									
LiNbO3	(3,1,14)	8.021	87.52	168.812	173.4	0.347	60.21	4.34	60.37
Equiv. Refl.: (-1,-3,14), (-3,4,14), (-4,3,14)									
LiNbO3	(1,-6,4)	7.946	81.8	58.635	56.1	1.157	64.95	14.47	66.54
Equiv. Refl.: (5,1,4), (6,-1,4), (-1,-5,4)									
LiNbO3	(-5,6,4)	7.946	81.8	58.634	56.1	1.157	64.95	14.47	66.54
Equiv. Refl.: (-6,5,4)									
LiNbO3	(1,5,-4)	7.946	81.8	56.279	56.1	1.157	64.95	14.47	66.54
Equiv. Refl.: (-1,6,-4), (-5,-1,-4), (-6,1,-4)									
LiNbO3	(5,-6,-4)	7.946	81.8	56.278	56.1	1.157	64.95	14.47	66.54
Equiv. Refl.: (6,-5,-4)									
LiNbO3	(0,5,-8)	7.819	76.89	46.211	42.1	1.869	78.69	23.37	82.08
Equiv. Refl.: (5,-5,-8), (-5,0,-8)									
LiNbO3	(0,-5,8)	7.819	76.89	42.565	42.1	1.869	78.69	23.37	82.08
Equiv. Refl.: (5,0,8), (-5,5,8)									
Sapph	(3,3,0)	7.817	76.84	40.379	33.8	1.877	63.39	23.46	67.59
Equiv. Refl.: (3,-6,0), (6,-3,0), (-3,6,0), (-3,-3,0), (-6,3,0)									
LiNbO3	(1,5,2)	7.793	76.11	32.451	31.7	1.985	63	24.81	67.71
Equiv. Refl.: (5,-6,2), (6,-5,2), (-1,6,2), (-5,-1,2), (-6,1,2)									
LiNbO3	(1,-6,-2)	7.793	76.11	31.687	31.7	1.985	63	24.81	67.71
Equiv. Refl.: (5,1,-2), (6,-1,-2), (-1,-5,-2), (-5,6,-2), (-6,5,-2)									
LiNbO3	(0,-2,-16)	7.676	72.98	27.015	25.7	2.458	63.25	30.72	70.32
Equiv. Refl.: (2,0,-16), (-2,2,-16)									
Sapph	(0,4,-10)	7.681	73.09	26.911	22.7	2.441	55.49	30.52	63.33
Equiv. Refl.: (0,-4,10), (4,0,10), (4,-4,-10), (-4,0,-10), (-4,4,10)									
LiNbO3	(0,2,16)	7.676	72.98	24.689	25.7	2.458	63.25	30.72	70.32
Equiv. Refl.: (2,-2,16), (-2,0,16)									
Quartz	(2,3,4)	7.835	77.4	24.541	20.7	1.794	37.15	22.42	43.4
Quartz	(2,-5,-4)	7.835	77.4	24.54	20.7	1.794	37.15	22.42	43.4
Quartz	(3,2,-4)	7.835	77.4	24.537	20.7	1.794	37.15	22.42	43.39
Quartz	(3,-5,4)	7.835	77.4	24.536	20.7	1.794	37.15	22.42	43.39
Equiv. Refl.: (-5,2,4), (-5,3,-4)									
LiNbO3	(3,3,6)	7.707	73.75	24.1	24	2.34	56.04	29.25	63.22
Equiv. Refl.: (3,-6,6), (6,-3,6), (-3,6,6), (-3,-3,6), (-6,3,6)									
Quartz	(-2,5,4)	7.835	77.4	24.09	20.7	1.794	37.15	22.42	43.4
Equiv. Refl.: (-2,-3,-4)									
Quartz	(-3,-2,4)	7.835	77.4	24.088	20.7	1.794	37.15	22.42	43.39
Quartz	(-3,5,-4)	7.835	77.4	24.087	20.7	1.794	37.15	22.42	43.39

Ei =	8.028	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(5,-2,-4)	7.835	77.4	24.086	20.7	1.794	37.15	22.42	43.39
	Equiv. Refl.: (5,-3,4)								
Sapph	(0,5,4)	7.761	75.17	23.77	20.6	2.126	43.75	26.57	51.19
	Equiv. Refl.: (0,-5,-4), (5,0,-4), (5,-5,4), (-5,0,4), (-5,5,-4)								
Quartz	(0,5,-2)	7.638	72.06	23.724	19.7	2.599	51.17	32.49	60.61
	Equiv. Refl.: (0,-5,2)								
Quartz	(5,0,2)	7.638	72.06	23.722	19.7	2.599	51.16	32.49	60.61
	Equiv. Refl.: (5,-5,-2), (-5,0,-2), (-5,5,2)								
LiNbO3	(2,4,4)	7.572	70.6	23.563	22.6	2.828	63.96	35.34	73.08
	Equiv. Refl.: (4,-6,4), (6,-4,4), (-2,6,4), (-4,-2,4), (-6,2,4)								
LiNbO3	(3,3,-6)	7.707	73.75	22.883	24	2.34	56.04	29.25	63.22
	Equiv. Refl.: (3,-6,-6), (6,-3,-6), (-3,6,-6), (-3,-3,-6), (-6,3,-6)								
LiNbO3	(2,-6,-4)	7.572	70.6	21.713	22.6	2.828	63.96	35.34	73.08
	Equiv. Refl.: (4,2,-4), (6,-2,-4), (-2,-4,-4), (-4,6,-4), (-6,4,-4)								
Sapph	(1,2,14)	7.778	75.66	20.849	18.4	2.053	37.74	25.66	45.64
	Equiv. Refl.: (1,-3,-14), (2,1,-14), (2,-3,14), (3,-1,-14), (3,-2,14), (-1,3,14), (-1,-2,-14), (-2,3,-14), (-2,-1,14), (-3,1,14), (-3,2,-14)								
Quartz	(2,1,-6)	7.888	79.29	18.693	16.4	1.518	24.83	18.98	31.26
Quartz	(1,2,6)	7.888	79.29	18.69	16.4	1.518	24.83	18.98	31.25
Quartz	(2,-3,6)	7.888	79.29	18.689	16.4	1.518	24.83	18.98	31.25
Quartz	(1,-3,-6)	7.888	79.29	18.688	16.4	1.518	24.83	18.98	31.25
Quartz	(-3,1,6)	7.888	79.29	18.678	16.3	1.518	24.82	18.98	31.24
	Equiv. Refl.: (-3,2,-6)								
Quartz	(-2,-1,6)	7.888	79.29	18.289	16.4	1.518	24.83	18.98	31.26
Quartz	(-1,-2,-6)	7.888	79.29	18.287	16.4	1.518	24.83	18.98	31.25
Quartz	(-1,3,6)	7.888	79.29	18.285	16.4	1.518	24.83	18.98	31.25
	Equiv. Refl.: (-2,3,-6)								
Quartz	(3,-1,-6)	7.888	79.29	18.274	16.3	1.518	24.82	18.98	31.24
	Equiv. Refl.: (3,-2,6)								
Sapph	(2,4,-2)	8.018	87.09	17.605	22.2	0.408	9.06	5.09	10.39
	Equiv. Refl.: (2,-6,2), (4,2,2), (4,-6,-2), (6,-2,2), (6,-4,-2), (-2,6,-2), (-2,-4,2), (-4,6,2), (-4,-2,-2), (-6,2,-2), (-6,4,2)								
Quartz	(2,4,0)	7.71	73.81	15.186	13.1	2.331	30.59	29.13	42.24
	Equiv. Refl.: (2,-6,0), (4,2,0), (4,-6,0), (-6,2,0), (-6,4,0)								
Quartz	(6,-2,0)	7.71	73.81	15.165	13.1	2.331	30.59	29.13	42.24
	Equiv. Refl.: (6,-4,0), (-2,6,0), (-2,-4,0), (-4,6,0), (-4,-2,0)								
LiNbO3	(2,4,7)	7.996	84.88	14.658	25.2	0.72	18.12	8.99	20.23
	Equiv. Refl.: (2,-6,-7), (4,2,-7), (4,-6,7), (6,-2,-7), (6,-4,7), (-2,6,7), (-2,-4,-7), (-4,6,-7), (-4,-2,7), (-6,2,7), (-6,4,-7)								
Sapph	(1,1,15)	7.619	71.63	12.682	11.6	2.666	30.83	33.33	45.4
	Equiv. Refl.: (1,1,-15), (1,-2,15), (1,-2,-15), (2,-1,15), (2,-1,-15), (-1,2,15), (-1,2,-15), (-1,-1,15), (-1,-1,-15), (-2,1,15), (-2,1,-15)								
Sapph	(2,4,1)	7.975	83.41	11.838	13.4	0.928	12.4	11.6	16.98
	Equiv. Refl.: (2,-6,-1), (4,2,-1), (4,-6,1), (6,-2,-1), (6,-4,1), (-2,6,1), (-2,-4,-1), (-4,6,-1), (-4,-2,1), (-6,2,1), (-6,4,-1)								
Quartz	(2,2,5)	7.64	72.11	11.823	10.3	2.592	26.76	32.4	42.02
	Equiv. Refl.: (2,-4,-5)								
Quartz	(2,2,-5)	7.64	72.11	11.822	10.3	2.592	26.76	32.4	42.02
Quartz	(2,-4,5)	7.64	72.11	11.82	10.3	2.592	26.75	32.4	42.02
Quartz	(-4,2,5)	7.64	72.11	11.818	10.3	2.592	26.75	32.4	42.01
Quartz	(-4,2,-5)	7.64	72.11	11.817	10.3	2.592	26.75	32.4	42.01

Ei = Cryst	8.028 Refl (h,k,l)	keV EB [keV]	Θ B [$^\circ$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(-2,4,5)	7.64	72.11	11.544	10.3	2.592	26.76	32.4	42.02
	Equiv. Refl.: (-2,-2,-5)								
Quartz	(-2,-2,5)	7.64	72.11	11.543	10.3	2.592	26.76	32.4	42.02
Quartz	(-2,4,-5)	7.64	72.11	11.54	10.3	2.592	26.75	32.4	42.02
Quartz	(4,-2,-5)	7.64	72.11	11.539	10.3	2.592	26.75	32.4	42.01
Quartz	(4,-2,5)	7.64	72.11	11.538	10.3	2.592	26.75	32.4	42.01
Sapph	(0,1,-16)	7.783	75.82	11.339	10.8	2.028	22	25.35	33.57
	Equiv. Refl.: (0,-1,16), (1,0,16), (1,-1,-16), (-1,0,-16), (-1,1,16)								
Quartz	(3,3,1)	7.657	72.52	10.886	9.5	2.529	24.14	31.61	39.78
	Equiv. Refl.: (3,-6,-1), (-6,3,1), (-6,3,-1)								
Quartz	(3,3,-1)	7.657	72.52	10.884	9.5	2.529	24.14	31.61	39.77
	Equiv. Refl.: (3,-6,1)								
Quartz	(6,-3,0)	7.571	70.57	10.616	9.3	2.832	26.22	35.4	44.06
	Equiv. Refl.: (-3,6,0), (-3,-3,0)								
Quartz	(3,3,0)	7.571	70.57	10.553	9.3	2.832	26.22	35.4	44.06
	Equiv. Refl.: (3,-6,0), (-6,3,0)								
Quartz	(6,-3,1)	7.657	72.52	10.373	9.5	2.529	24.15	31.61	39.78
	Equiv. Refl.: (6,-3,-1), (-3,6,1), (-3,-3,-1)								
Quartz	(-3,6,-1)	7.657	72.52	10.372	9.5	2.529	24.14	31.61	39.77
	Equiv. Refl.: (-3,-3,1)								
Quartz	(5,-2,4)	7.835	77.4	10.09	9.6	1.794	17.19	22.42	28.26
	Equiv. Refl.: (5,-3,-4)								
Quartz	(-2,-3,4)	7.835	77.4	10.081	9.6	1.794	17.18	22.42	28.25
Quartz	(-2,5,-4)	7.835	77.4	10.08	9.6	1.794	17.18	22.42	28.25
Quartz	(-3,-2,-4)	7.835	77.4	10.077	9.6	1.794	17.17	22.42	28.24
Quartz	(-3,5,4)	7.835	77.4	10.076	9.6	1.794	17.17	22.42	28.24
Quartz	(-5,3,4)	7.835	77.4	9.919	9.6	1.794	17.19	22.42	28.26
Quartz	(-5,2,-4)	7.835	77.4	9.918	9.6	1.794	17.19	22.42	28.26
Quartz	(2,3,-4)	7.835	77.4	9.909	9.6	1.794	17.18	22.42	28.25
Quartz	(2,-5,4)	7.835	77.4	9.908	9.6	1.794	17.18	22.42	28.25
Quartz	(3,2,4)	7.835	77.4	9.905	9.6	1.794	17.17	22.42	28.24
Quartz	(3,-5,-4)	7.835	77.4	9.904	9.6	1.794	17.17	22.42	28.24
Quartz	(4,2,-1)	7.795	76.15	9.164	8.4	1.98	16.7	24.75	29.86
	Equiv. Refl.: (4,-6,1)								
Quartz	(2,-6,-1)	7.795	76.15	9.162	8.4	1.98	16.7	24.75	29.85
	Equiv. Refl.: (-6,2,1), (-6,4,-1)								
Quartz	(2,4,1)	7.795	76.15	9.161	8.4	1.98	16.7	24.75	29.85
Quartz	(-4,3,-5)	7.777	75.65	8.735	8	2.054	16.33	25.68	30.43
Quartz	(-4,1,5)	7.777	75.65	8.733	7.9	2.054	16.33	25.68	30.43
Quartz	(1,3,5)	7.777	75.65	8.73	7.9	2.054	16.32	25.68	30.43
	Equiv. Refl.: (1,-4,-5)								
Quartz	(3,1,-5)	7.777	75.65	8.729	7.9	2.054	16.32	25.68	30.43
Quartz	(3,-4,5)	7.777	75.65	8.727	7.9	2.054	16.32	25.68	30.43
Quartz	(-4,6,-1)	7.795	76.15	8.342	8.4	1.98	16.7	24.75	29.86
	Equiv. Refl.: (-4,-2,1)								
Quartz	(6,-2,-1)	7.795	76.15	8.34	8.4	1.98	16.7	24.75	29.85
	Equiv. Refl.: (6,-4,1), (-2,6,1), (-2,-4,-1)								
Quartz	(4,-3,5)	7.777	75.65	7.8	8	2.054	16.33	25.68	30.43
Quartz	(4,-1,-5)	7.777	75.65	7.798	7.9	2.054	16.33	25.68	30.43

Ei =	8.028	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(-1,4,5)	7.777	75.65	7.796	7.9	2.054	16.33	25.68	30.43
	Equiv. Refl.: (-1,-3,-5)								
Quartz	(-3,-1,5)	7.777	75.65	7.795	7.9	2.054	16.32	25.68	30.43
Quartz	(-3,4,-5)	7.777	75.65	7.794	7.9	2.054	16.32	25.68	30.43
Quartz	(-1,3,-6)	7.888	79.29	6.114	6.1	1.518	9.33	18.98	21.15
Quartz	(-1,-2,6)	7.888	79.29	6.112	6.1	1.518	9.33	18.98	21.15
Quartz	(-2,-1,-6)	7.888	79.29	6.108	6.1	1.518	9.32	18.98	21.14
Quartz	(-2,3,6)	7.888	79.29	6.105	6.1	1.518	9.32	18.98	21.14
Quartz	(3,-1,6)	7.888	79.29	6.101	6.1	1.518	9.31	18.98	21.14
	Equiv. Refl.: (3,-2,-6)								
Quartz	(-1,4,-5)	7.777	75.65	5.436	5.5	2.054	11.37	25.68	28.08
	Equiv. Refl.: (-1,-3,5)								
Quartz	(4,-1,5)	7.777	75.65	5.434	5.5	2.054	11.36	25.68	28.08
	Equiv. Refl.: (4,-3,-5)								
Quartz	(-3,-1,-5)	7.777	75.65	5.43	5.5	2.054	11.36	25.68	28.08
Quartz	(-3,4,5)	7.777	75.65	5.428	5.5	2.054	11.35	25.68	28.08
LiNbO3	(2,4,-5)	7.69	73.31	5.192	8.6	2.406	20.61	30.08	36.46
	Equiv. Refl.: (2,-6,5), (4,2,5), (4,-6,-5), (6,-2,5), (6,-4,-5), (-2,6,-5), (-2,-4,5), (-4,6,5), (-4,-2,-5), (-6,2,-5), (-6,4,5)								
Quartz	(1,3,-5)	7.777	75.65	5.184	5.5	2.054	11.37	25.68	28.08
	Equiv. Refl.: (1,-4,5)								
Quartz	(-4,1,-5)	7.777	75.65	5.182	5.5	2.054	11.36	25.68	28.08
	Equiv. Refl.: (-4,3,5)								
Quartz	(3,1,5)	7.777	75.65	5.177	5.5	2.054	11.36	25.68	28.08
Quartz	(3,-4,-5)	7.777	75.65	5.175	5.5	2.054	11.35	25.68	28.08
Quartz	(1,-3,6)	7.888	79.29	4.997	6.1	1.518	9.33	18.98	21.15
Quartz	(1,2,-6)	7.888	79.29	4.996	6.1	1.518	9.33	18.98	21.15
Quartz	(2,1,6)	7.888	79.29	4.992	6.1	1.518	9.32	18.98	21.14
Quartz	(2,-3,-6)	7.888	79.29	4.988	6.1	1.518	9.32	18.98	21.14
Quartz	(-3,1,-6)	7.888	79.29	4.985	6.1	1.518	9.31	18.98	21.14
	Equiv. Refl.: (-3,2,6)								
Sapph	(2,2,12)	7.744	74.7	3.758	4.5	2.196	9.95	27.45	29.19
	Equiv. Refl.: (2,2,-12), (2,-4,12), (2,-4,-12), (4,-2,12), (4,-2,-12), (-2,4,12), (-2,4,-12), (-2,-2,12), (-2,-2,-12), (-4,2,12), (-4,2,-12)								
LiNbO3	(1,3,13)	7.677	72.98	2.833	6.1	2.457	15.02	30.71	34.19
	Equiv. Refl.: (1,-4,-13), (3,1,-13), (3,-4,13), (4,-1,-13), (4,-3,13), (-1,4,13), (-1,-3,-13), (-3,4,-13), (-3,-1,13), (-4,1,13), (-4,3,-13)								
Quartz	(-3,-3,-2)	7.911	80.19	2.096	3.1	1.388	4.25	17.35	17.86
Quartz	(-3,6,2)	7.911	80.19	2.095	3.1	1.388	4.25	17.35	17.86
Quartz	(-3,6,-2)	7.911	80.19	2.093	3.1	1.388	4.25	17.35	17.86
	Equiv. Refl.: (-3,-3,2)								
Quartz	(6,-3,-2)	7.911	80.19	2.092	3.1	1.388	4.24	17.35	17.86
Quartz	(6,-3,2)	7.911	80.19	2.091	3.1	1.388	4.24	17.35	17.86
LiNbO3	(1,5,-1)	7.755	75.01	2.047	5.3	2.15	11.42	26.87	29.2
	Equiv. Refl.: (1,-6,1), (5,1,1), (5,-6,-1), (6,-1,1), (6,-5,-1), (-1,6,-1), (-1,-5,1), (-5,6,1), (-5,-1,-1), (-6,1,-1), (-6,5,1)								
Quartz	(3,3,2)	7.911	80.19	1.482	3.1	1.388	4.25	17.35	17.86
	Equiv. Refl.: (3,-6,-2)								
Quartz	(3,-6,2)	7.911	80.19	1.481	3.1	1.388	4.25	17.35	17.86
Quartz	(3,3,-2)	7.911	80.19	1.48	3.1	1.388	4.25	17.35	17.86
Quartz	(-6,3,2)	7.911	80.19	1.479	3.1	1.388	4.24	17.35	17.86

Ei =	8.028	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-6,3,-2)	7.911	80.19	1.478	3.1	1.388	4.24	17.35	17.86
Sapph	(2,3,8)	7.588	70.95	1.41	2.4	2.772	6.53	34.65	35.26
	Equiv. Refl.: (2,-5,-8), (3,2,-8), (3,-5,8), (5,-2,-8), (5,-3,8), (-2,5,8), (-2,-3,-8), (-3,5,-8), (-3,-2,8), (-5,2,8), (-5,3,-8)								
Sapph	(1,3,-11)	7.549	70.11	1.403	2.3	2.905	6.78	36.31	36.94
	Equiv. Refl.: (1,-4,11), (3,1,11), (3,-4,-11), (4,-1,11), (4,-3,-11), (-1,4,-11), (-1,-3,11), (-3,4,11), (-3,-1,-11), (-4,1,-11), (-4,3,11)								
Quartz	(0,5,2)	7.638	72.06	1.238	2	2.599	5.23	32.49	32.91
	Equiv. Refl.: (0,-5,-2)								
Quartz	(5,0,-2)	7.638	72.06	1.234	2	2.599	5.22	32.49	32.91
	Equiv. Refl.: (5,-5,2), (-5,0,2), (-5,5,-2)								
Quartz	(6,-2,1)	7.795	76.15	0.813	1.5	1.98	2.98	24.75	24.93
	Equiv. Refl.: (6,-4,-1), (-2,6,-1), (-2,-4,1), (-4,6,1), (-4,-2,-1)								
LiNbO3	(2,3,11)	7.806	76.49	0.735	3.2	1.929	6.24	24.11	24.9
	Equiv. Refl.: (2,-5,-11), (3,2,-11), (3,-5,11), (5,-2,-11), (5,-3,11), (-2,5,11), (-2,-3,-11), (-3,5,-11), (-3,-2,11), (-5,2,11), (-5,3,-11)								
Quartz	(2,4,-1)	7.795	76.15	0.641	1.5	1.98	2.98	24.75	24.93
	Equiv. Refl.: (2,-6,1), (4,2,1), (4,-6,-1), (-6,4,1)								
Quartz	(-6,2,-1)	7.795	76.15	0.64	1.5	1.98	2.98	24.75	24.93
Sapph	(3,3,3)	7.947	81.87	0.199	1.1	1.147	1.31	14.34	14.4
	Equiv. Refl.: (3,3,-3), (3,-6,3), (3,-6,-3), (6,-3,3), (6,-3,-3), (-3,6,3), (-3,6,-3), (-3,-3,3), (-3,-3,-3), (-6,3,3), (-6,3,-3)								

Ei =	8.905	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(0,0,8)	8.766	79.87	37.81	35.22	1.5907	56.03	19.88	59.45
	Equiv. Refl.: (0,8,0), (8,0,0)								
Ge	(1,3,7)	8.417	70.94	15.3739	14.99	3.0765	46.13	38.46	60.06
	Equiv. Refl.: (1,7,3), (3,1,7), (3,5,5), (3,7,1), (5,3,5), (5,5,3), (7,1,3), (7,3,1)								
Si	(1,3,7)	8.768	79.92	14.6281	13.52	1.5827	21.39	19.78	29.14
	Equiv. Refl.: (1,7,3), (3,1,7), (3,5,5), (3,7,1), (5,3,5), (5,5,3), (7,1,3), (7,3,1)								
Si	(2,4,6)	8.542	73.58	14.3539	12.66	2.6244	33.21	32.8	46.68
	Equiv. Refl.: (2,6,4), (4,2,6), (4,6,2), (6,2,4), (6,4,2)								
LiNbO3	(2,3,14)	8.714	78.1	33.358	30.7	1.876	57.54	23.45	62.14
	Equiv. Refl.: (3,-5,14), (5,-3,14), (-2,5,14), (-3,-2,14), (-5,2,14)								
LiNbO3	(0,-6,6)	8.764	79.78	31.768	30.5	1.605	48.95	20.07	52.9
	Equiv. Refl.: (6,0,6), (-6,6,6)								
LiNbO3	(2,-5,-14)	8.714	78.1	31.101	30.7	1.876	57.54	23.45	62.14
	Equiv. Refl.: (3,2,-14), (5,-2,-14), (-2,-3,-14), (-3,5,-14), (-5,3,-14)								
LiNbO3	(1,3,16)	8.737	78.84	31.03	29.2	1.757	51.28	21.97	55.79
	Equiv. Refl.: (3,-4,16), (4,-3,16), (-1,4,16), (-3,-1,16), (-4,1,16)								
LiNbO3	(0,6,-6)	8.764	79.78	30.562	30.5	1.605	48.95	20.07	52.9
	Equiv. Refl.: (6,-6,-6), (-6,0,-6)								
LiNbO3	(3,1,-16)	8.737	78.84	29.091	29.2	1.757	51.28	21.97	55.79
	Equiv. Refl.: (-1,-3,-16), (-3,4,-16), (-4,3,-16)								
LiNbO3	(1,-4,-16)	8.737	78.84	29.09	29.2	1.757	51.28	21.97	55.79
	Equiv. Refl.: (4,-1,-16)								
LiNbO3	(2,-7,0)	8.684	77.2	28.9	27.6	2.024	55.79	25.3	61.26
	Equiv. Refl.: (5,2,0), (7,-2,0), (-2,-5,0), (-5,7,0), (-7,5,0)								
LiNbO3	(2,5,0)	8.684	77.2	28.646	27.6	2.024	55.79	25.3	61.26
	Equiv. Refl.: (5,-7,0), (7,-5,0), (-2,7,0), (-5,-2,0), (-7,2,0)								
LiNbO3	(0,-6,-6)	8.764	79.78	27.967	27.7	1.605	44.54	20.07	48.85
	Equiv. Refl.: (6,0,-6), (-6,6,-6)								
LiNbO3	(0,6,6)	8.764	79.78	27.684	27.7	1.605	44.54	20.07	48.85
	Equiv. Refl.: (6,-6,6), (-6,0,6)								
LiNbO3	(2,-6,-10)	8.61	75.21	26.33	24.3	2.351	57.12	29.38	64.23
	Equiv. Refl.: (4,2,-10), (6,-2,-10), (-2,-4,-10), (-4,6,-10), (-6,4,-10)								
LiNbO3	(2,4,10)	8.61	75.21	24.448	24.3	2.351	57.12	29.38	64.23
	Equiv. Refl.: (4,-6,10), (6,-4,10), (-2,6,10), (-4,-2,10), (-6,2,10)								
LiNbO3	(3,-7,-2)	8.505	72.77	23.779	22	2.762	60.86	34.53	69.97
	Equiv. Refl.: (4,3,-2), (7,-3,-2), (-3,-4,-2), (-4,7,-2), (-7,4,-2)								
LiNbO3	(3,4,2)	8.505	72.77	22.593	22	2.762	60.86	34.53	69.97
	Equiv. Refl.: (4,-7,2), (7,-4,2), (-3,7,2), (-4,-3,2), (-7,3,2)								
Quartz	(-5,6,3)	8.812	81.7	21.281	18.3	1.299	23.71	16.23	28.74
	Equiv. Refl.: (-5,-1,-3)								
Quartz	(6,-5,-3)	8.812	81.7	21.28	18.3	1.299	23.71	16.23	28.74
Quartz	(6,-1,3)	8.812	81.7	21.279	18.3	1.299	23.71	16.23	28.73
	Equiv. Refl.: (-1,6,-3), (-1,-5,3)								
LiNbO3	(3,-7,4)	8.645	76.12	21.229	21	2.2	46.31	27.5	53.86
	Equiv. Refl.: (4,3,4), (7,-3,4), (-3,-4,4), (-4,7,4), (-7,4,4)								
LiNbO3	(3,4,-4)	8.645	76.12	21.071	21	2.2	46.31	27.5	53.86
	Equiv. Refl.: (4,-7,-4), (7,-4,-4), (-3,7,-4), (-4,-3,-4), (-7,3,-4)								

Ei = Cryst	8.905 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Sapph	(0,0,18) Equiv. Refl.: (0,0,-18)	8.591	74.75	21.046	17.7	2.429	42.89	30.36	52.55
Quartz	(5,1,3) Equiv. Refl.: (5,-6,-3)	8.812	81.7	20.994	18.3	1.299	23.71	16.23	28.74
Quartz	(1,5,-3) Equiv. Refl.: (-6,5,3)	8.812	81.7	20.992	18.3	1.299	23.71	16.23	28.73
Quartz	(1,-6,3) Equiv. Refl.: (-6,1,-3)	8.812	81.7	20.991	18.3	1.299	23.71	16.23	28.73
Sapph	(2,2,15) Equiv. Refl.: (2,2,-15), (2,-4,15), (2,-4,-15), (4,-2,15), (4,-2,-15), (-2,4,15), (-2,4,-15), (-2,-2,15), (-2,-2,-15), (-4,2,15), (-4,2,-15)	8.855	83.94	20.602	19.3	0.945	18.2	11.81	21.7
LiNbO3	(1,5,8) Equiv. Refl.: (5,-6,8), (6,-5,8), (-1,6,8), (-5,-1,8), (-6,1,8)	8.528	73.28	20.155	19.6	2.675	52.52	33.44	62.26
LiNbO3	(1,-6,-8) Equiv. Refl.: (5,1,-8), (6,-1,-8), (-1,-5,-8), (-5,6,-8), (-6,5,-8)	8.528	73.28	20.094	19.6	2.675	52.52	33.44	62.26
LiNbO3	(0,-4,-14) Equiv. Refl.: (4,0,-14), (-4,4,-14)	8.374	70.12	18.586	17.4	3.22	56.08	40.25	69.03
LiNbO3	(1,1,-18) Equiv. Refl.: (1,-2,-18), (2,-1,-18), (-1,2,-18), (-1,-1,-18), (-2,1,-18)	8.402	70.65	18.558	17.4	3.128	54.57	39.1	67.13
Quartz	(5,-1,-5) Equiv. Refl.: (5,-4,5)	8.802	81.27	17.609	15.4	1.368	21.11	17.1	27.17
Quartz	(-4,5,-5)	8.802	81.27	17.607	15.4	1.368	21.11	17.1	27.17
Quartz	(-4,-1,5)	8.802	81.27	17.606	15.4	1.368	21.11	17.1	27.17
Quartz	(-1,5,5)	8.802	81.27	17.605	15.4	1.368	21.11	17.1	27.17
Quartz	(-1,-4,-5)	8.802	81.27	17.604	15.4	1.368	21.11	17.1	27.17
Quartz	(-5,1,5) Equiv. Refl.: (-5,4,-5)	8.802	81.27	17.594	15.4	1.368	21.11	17.1	27.17
Quartz	(4,-5,5)	8.802	81.27	17.592	15.4	1.368	21.11	17.1	27.17
Quartz	(4,1,-5)	8.802	81.27	17.591	15.4	1.368	21.11	17.1	27.17
Quartz	(1,-5,-5)	8.802	81.27	17.59	15.4	1.368	21.11	17.1	27.17
Quartz	(1,4,5)	8.802	81.27	17.588	15.4	1.368	21.11	17.1	27.17
Quartz	(0,6,-1) Equiv. Refl.: (0,-6,1), (6,0,1), (6,-6,-1), (-6,0,-1), (-6,6,1)	8.817	81.93	17.326	15.4	1.262	19.4	15.78	25.01
LiNbO3	(0,4,14) Equiv. Refl.: (4,-4,14), (-4,0,14)	8.374	70.12	17.304	17.4	3.22	56.08	40.25	69.03
LiNbO3	(1,1,18) Equiv. Refl.: (1,-2,18), (2,-1,18), (-1,2,18), (-1,-1,18), (-2,1,18)	8.402	70.65	17.248	17.4	3.128	54.57	39.1	67.13
Quartz	(-3,6,-4)	8.852	83.77	16.696	14.9	0.972	14.48	12.14	18.9
Quartz	(-3,-3,4)	8.852	83.77	16.692	14.9	0.972	14.48	12.14	18.9
Quartz	(6,-3,4)	8.852	83.77	16.686	14.9	0.972	14.48	12.14	18.89
Quartz	(6,-3,-4)	8.852	83.77	16.685	14.9	0.972	14.47	12.14	18.89
Quartz	(-3,6,4) Equiv. Refl.: (-3,-3,-4)	8.852	83.77	16.683	14.9	0.972	14.47	12.14	18.89
Quartz	(-5,2,-5) Equiv. Refl.: (-5,3,5)	8.557	73.93	15.941	13.3	2.565	34	32.06	46.73
Quartz	(3,-5,-5)	8.557	73.93	15.94	13.3	2.565	34	32.06	46.73
Quartz	(2,3,-5) Equiv. Refl.: (2,-5,5), (3,2,5)	8.557	73.93	15.939	13.3	2.565	34	32.06	46.73
Quartz	(5,-2,5) Equiv. Refl.: (5,-3,-5)	8.557	73.93	15.776	13.3	2.565	34	32.06	46.73

Ei = Cryst	8.905 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(-2,5,-5)	8.557	73.93	15.774	13.3	2.565	34	32.06	46.73
	Equiv. Refl.: (-2,-3,5), (-3,5,5)								
Quartz	(-3,-2,-5)	8.557	73.93	15.773	13.3	2.565	34	32.06	46.73
Quartz	(3,-6,4)	8.852	83.77	15.717	14.9	0.972	14.48	12.14	18.9
Quartz	(3,3,-4)	8.852	83.77	15.713	14.9	0.972	14.48	12.14	18.9
Quartz	(-6,3,-4)	8.852	83.77	15.707	14.9	0.972	14.48	12.14	18.89
Quartz	(-6,3,4)	8.852	83.77	15.706	14.9	0.972	14.47	12.14	18.89
Quartz	(3,3,4)	8.852	83.77	15.703	14.9	0.972	14.47	12.14	18.89
	Equiv. Refl.: (3,-6,-4)								
Sapph	(1,5,-4)	8.591	74.74	15.618	13.5	2.429	32.79	30.37	44.69
	Equiv. Refl.: (1,-6,4), (5,1,4), (5,-6,-4), (6,-1,4), (6,-5,-4), (-1,6,-4), (-1,-5,4), (-5,6,4), (-5,-1,-4), (-6,1,-4), (-6,5,4)								
Quartz	(5,0,-4)	8.609	75.19	14.491	12.3	2.354	28.93	29.42	41.26
	Equiv. Refl.: (5,-5,4), (-5,0,4), (-5,5,-4)								
Quartz	(0,5,4)	8.609	75.19	14.49	12.3	2.354	28.93	29.42	41.26
	Equiv. Refl.: (0,-5,-4)								
Quartz	(-1,6,3)	8.812	81.7	13.475	11.9	1.299	15.41	16.23	22.38
	Equiv. Refl.: (-1,-5,-3)								
Quartz	(-5,6,-3)	8.812	81.7	13.471	11.9	1.299	15.41	16.23	22.38
	Equiv. Refl.: (-5,-1,3)								
Quartz	(6,-1,-3)	8.812	81.7	13.47	11.9	1.299	15.41	16.23	22.38
Quartz	(6,-5,3)	8.812	81.7	13.469	11.9	1.299	15.41	16.23	22.38
Quartz	(1,5,3)	8.812	81.7	12.95	11.9	1.299	15.41	16.23	22.38
	Equiv. Refl.: (1,-6,-3)								
Quartz	(5,-6,3)	8.812	81.7	12.947	11.9	1.299	15.41	16.23	22.38
	Equiv. Refl.: (-6,1,3)								
Quartz	(5,1,-3)	8.812	81.7	12.946	11.9	1.299	15.41	16.23	22.38
Quartz	(-6,5,-3)	8.812	81.7	12.945	11.9	1.299	15.41	16.23	22.38
Sapph	(1,2,-16)	8.612	75.25	10.475	9.4	2.344	22.06	29.3	36.68
	Equiv. Refl.: (1,-3,16), (2,1,16), (2,-3,-16), (3,-1,16), (3,-2,-16), (-1,3,-16), (-1,-2,16), (-2,3,16), (-2,-1,-16), (-3,1,-16), (-3,2,16)								
Sapph	(1,3,-14)	8.607	75.12	10.182	9.1	2.365	21.53	29.57	36.57
	Equiv. Refl.: (1,-4,14), (3,1,14), (3,-4,-14), (4,-1,14), (4,-3,-14), (-1,4,-14), (-1,-3,14), (-3,4,14), (-3,-1,-14), (-4,1,-14), (-4,3,14)								
Sapph	(2,4,-8)	8.829	82.51	8.908	9.2	1.171	10.8	14.64	18.19
	Equiv. Refl.: (2,-6,8), (4,2,8), (4,-6,-8), (6,-2,8), (6,-4,-8), (-2,6,-8), (-2,-4,8), (-4,6,8), (-4,-2,-8), (-6,2,-8), (-6,4,8)								
LiNbO3	(2,4,-11)	8.851	83.66	8.664	14.5	0.989	14.3	12.36	18.9
	Equiv. Refl.: (2,-6,11), (4,2,11), (4,-6,-11), (6,-2,11), (6,-4,-11), (-2,6,-11), (-2,-4,11), (-4,6,11), (-4,-2,-11), (-6,2,-11), (-6,4,11)								
Quartz	(2,2,6)	8.534	73.41	8.151	7.1	2.652	18.7	33.15	38.07
Quartz	(2,-4,6)	8.534	73.41	8.15	7.1	2.652	18.7	33.15	38.07
	Equiv. Refl.: (2,-4,-6)								
Quartz	(2,2,-6)	8.534	73.41	8.149	7.1	2.652	18.7	33.15	38.07
Quartz	(-4,2,-6)	8.534	73.41	8.148	7	2.652	18.7	33.15	38.06
Quartz	(-4,2,6)	8.534	73.41	8.146	7	2.652	18.69	33.15	38.06
Quartz	(-2,4,6)	8.534	73.41	8.032	7.1	2.652	18.7	33.15	38.07
	Equiv. Refl.: (-2,-2,-6)								
Quartz	(-2,4,-6)	8.534	73.41	8.031	7.1	2.652	18.7	33.15	38.07
	Equiv. Refl.: (-2,-2,6)								
Quartz	(4,-2,6)	8.534	73.41	8.027	7	2.652	18.7	33.15	38.06

Ei = Cryst	8.905 Refl (h,k,l)	keV EB [keV]	Θ B [$^\circ$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(4,-2,-6)	8.534	73.41	8.026	7	2.652	18.69	33.15	38.06
Sapph	(1,5,5)	8.71	77.97	7.276	7.1	1.897	13.46	23.71	27.27
	Equiv. Refl.: (1,-6,-5), (5,1,-5), (5,-6,5), (6,-1,-5), (6,-5,5), (-1,6,5), (-1,-5,-5), (-5,6,-5), (-5,-1,5), (-6,1,5), (-6,5,-5)								
Quartz	(-2,1,-7)	8.416	70.93	7.058	6.1	3.078	18.87	38.48	42.85
Quartz	(1,-2,-7)	8.416	70.93	7.057	6.1	3.078	18.86	38.48	42.85
	Equiv. Refl.: (-2,1,7)								
Quartz	(1,1,7)	8.416	70.93	7.055	6.1	3.078	18.86	38.48	42.85
Quartz	(1,-2,7)	8.416	70.93	7.054	6.1	3.078	18.86	38.48	42.85
Quartz	(1,1,-7)	8.416	70.93	7.053	6.1	3.078	18.85	38.48	42.85
Quartz	(2,-1,7)	8.416	70.93	6.787	6.1	3.078	18.87	38.48	42.85
	Equiv. Refl.: (2,-1,-7)								
Quartz	(-1,2,7)	8.416	70.93	6.785	6.1	3.078	18.86	38.48	42.85
Quartz	(-1,2,-7)	8.416	70.93	6.783	6.1	3.078	18.86	38.48	42.85
	Equiv. Refl.: (-1,-1,-7)								
Quartz	(-1,-1,7)	8.416	70.93	6.782	6.1	3.078	18.85	38.48	42.85
Quartz	(-1,-3,6)	8.658	76.47	6.279	5.7	2.142	12.25	26.78	29.45
Quartz	(-1,4,-6)	8.658	76.47	6.278	5.7	2.142	12.25	26.78	29.45
Quartz	(4,-3,-6)	8.658	76.47	6.276	5.7	2.142	12.25	26.78	29.45
Quartz	(4,-1,6)	8.658	76.47	6.274	5.7	2.142	12.24	26.78	29.45
	Equiv. Refl.: (-3,4,6), (-3,-1,-6)								
Quartz	(-3,5,-5)	8.557	73.93	6.116	5.5	2.565	14.07	32.06	35.01
Quartz	(-3,-2,5)	8.557	73.93	6.115	5.5	2.565	14.07	32.06	35.01
Quartz	(-2,5,5)	8.557	73.93	6.113	5.5	2.565	14.06	32.06	35.01
Quartz	(-2,-3,-5)	8.557	73.93	6.112	5.5	2.565	14.06	32.06	35.01
Quartz	(5,-2,-5)	8.557	73.93	6.108	5.5	2.565	14.05	32.06	35.01
	Equiv. Refl.: (5,-3,5)								
Quartz	(1,3,-6)	8.658	76.47	6.056	5.7	2.142	12.25	26.78	29.45
Quartz	(1,-4,6)	8.658	76.47	6.055	5.7	2.142	12.25	26.78	29.45
Quartz	(-4,3,6)	8.658	76.47	6.054	5.7	2.142	12.25	26.78	29.45
Quartz	(3,1,6)	8.658	76.47	6.053	5.7	2.142	12.24	26.78	29.45
	Equiv. Refl.: (3,-4,-6)								
Quartz	(-4,1,-6)	8.658	76.47	6.052	5.7	2.142	12.24	26.78	29.45
Quartz	(-4,-2,-3)	8.443	71.46	6.012	5	2.987	14.89	37.34	40.19
Quartz	(-4,6,3)	8.443	71.46	6.011	5	2.987	14.88	37.34	40.19
Quartz	(6,-4,-3)	8.443	71.46	6.009	5	2.987	14.88	37.34	40.19
Quartz	(6,-2,3)	8.443	71.46	6.008	5	2.987	14.88	37.34	40.19
Quartz	(-2,6,-3)	8.443	71.46	6.007	5	2.987	14.88	37.34	40.19
	Equiv. Refl.: (-2,-4,3)								
Quartz	(3,2,-5)	8.557	73.93	5.999	5.5	2.565	14.07	32.06	35.01
	Equiv. Refl.: (3,-5,5)								
Quartz	(2,-5,-5)	8.557	73.93	5.996	5.5	2.565	14.06	32.06	35.01
Quartz	(2,3,5)	8.557	73.93	5.995	5.5	2.565	14.06	32.06	35.01
Quartz	(-5,2,5)	8.557	73.93	5.992	5.5	2.565	14.05	32.06	35.01
Quartz	(-5,3,-5)	8.557	73.93	5.991	5.5	2.565	14.05	32.06	35.01
Quartz	(2,4,3)	8.443	71.46	5.719	4.9	2.987	14.78	37.34	40.15
	Equiv. Refl.: (2,-6,-3)								
Quartz	(-6,4,-3)	8.443	71.46	5.717	4.9	2.987	14.77	37.34	40.15
Quartz	(-6,2,3)	8.443	71.46	5.716	4.9	2.987	14.77	37.34	40.15

Ei = Cryst	8.905 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(4,2,-3) Equiv. Refl.: (4,-6,3)	8.443	71.46	5.715	4.9	2.987	14.77	37.34	40.15
Quartz	(-2,6,3) Equiv. Refl.: (-2,-4,-3)	8.443	71.46	5.339	4.9	2.987	14.78	37.34	40.15
Quartz	(6,-4,3)	8.443	71.46	5.338	4.9	2.987	14.77	37.34	40.15
Quartz	(6,-2,-3)	8.443	71.46	5.337	4.9	2.987	14.77	37.34	40.15
Quartz	(-4,6,-3) Equiv. Refl.: (-4,-2,3)	8.443	71.46	5.336	4.9	2.987	14.77	37.34	40.15
Quartz	(2,-2,-7) Equiv. Refl.: (-2,2,7)	8.542	73.57	5.147	4.8	2.625	12.59	32.82	35.15
Quartz	(2,0,7) Equiv. Refl.: (-2,0,-7)	8.542	73.57	5.145	4.8	2.625	12.59	32.82	35.15
Quartz	(0,2,-7) Equiv. Refl.: (0,-2,7)	8.542	73.57	5.136	4.8	2.625	12.57	32.82	35.14
Quartz	(4,2,3)	8.443	71.46	5.113	5	2.987	14.89	37.34	40.19
Quartz	(4,-6,-3)	8.443	71.46	5.112	5	2.987	14.88	37.34	40.19
Quartz	(-6,4,3)	8.443	71.46	5.111	5	2.987	14.88	37.34	40.19
Quartz	(-6,2,-3)	8.443	71.46	5.11	5	2.987	14.88	37.34	40.19
Quartz	(2,-6,3)	8.443	71.46	5.109	5	2.987	14.88	37.34	40.19
Quartz	(2,4,-3)	8.443	71.46	5.108	5	2.987	14.87	37.34	40.19
Sapph	(1,5,-1) Equiv. Refl.: (1,-6,1), (5,1,1), (5,-6,-1), (6,-1,1), (6,-5,-1), (-1,6,-1), (-1,-5,1), (-5,6,1), (-5,-1,-1), (-6,1,-1), (-6,5,1)	8.39	70.42	5.058	4.9	3.168	15.37	39.6	42.48
Quartz	(-5,6,-2) Equiv. Refl.: (-5,-1,2)	8.43	71.21	4.942	4.5	3.03	13.59	37.88	40.24
Quartz	(-1,-5,-2)	8.43	71.21	4.941	4.5	3.03	13.59	37.88	40.24
Quartz	(6,-1,-2) Equiv. Refl.: (6,-5,2), (-1,6,2)	8.43	71.21	4.94	4.5	3.03	13.58	37.88	40.24
Quartz	(5,1,-2) Equiv. Refl.: (5,-6,2)	8.43	71.21	4.851	4.5	3.03	13.59	37.88	40.24
Quartz	(1,5,2) Equiv. Refl.: (1,-6,-2), (-6,5,-2)	8.43	71.21	4.85	4.5	3.03	13.59	37.88	40.24
Quartz	(-6,1,2)	8.43	71.21	4.849	4.5	3.03	13.58	37.88	40.24
Quartz	(7,-3,0) Equiv. Refl.: (7,-4,0), (-3,7,0), (-3,-4,0), (-4,7,0), (-4,-3,0)	8.862	84.4	4.715	5.4	0.873	4.71	10.91	11.89
Quartz	(3,1,-6)	8.658	76.47	4.603	4.4	2.142	9.38	26.78	28.38
Quartz	(3,-4,6)	8.658	76.47	4.602	4.4	2.142	9.38	26.78	28.38
Quartz	(-4,1,6) Equiv. Refl.: (-4,3,-6)	8.658	76.47	4.598	4.4	2.142	9.38	26.78	28.37
Quartz	(1,-4,-6)	8.658	76.47	4.594	4.4	2.142	9.37	26.78	28.37
Quartz	(1,3,6)	8.658	76.47	4.592	4.4	2.142	9.37	26.78	28.37
Quartz	(2,0,-7) Equiv. Refl.: (-2,0,7)	8.542	73.57	4.492	4.3	2.625	11.31	32.82	34.71
Quartz	(2,-2,7) Equiv. Refl.: (-2,2,-7)	8.542	73.57	4.491	4.3	2.625	11.31	32.82	34.71
Quartz	(0,2,7)	8.542	73.57	4.477	4.3	2.625	11.28	32.82	34.7
Quartz	(0,-2,-7)	8.542	73.57	4.476	4.3	2.625	11.28	32.82	34.7
Sapph	(2,4,7) Equiv. Refl.: (2,-6,-7), (4,2,-7), (4,-6,7), (6,-2,-7), (6,-4,7), (-2,6,7), (-2,-4,-7), (-4,6,-7), (-4,-2,7), (-6,2,7), (-6,4,-7)	8.633	75.81	4.46	4.6	2.251	10.37	28.14	29.99
Quartz	(-3,-1,6)	8.658	76.47	4.165	4.4	2.142	9.38	26.78	28.38

Ei =	8.905	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-3,4,-6)	8.658	76.47	4.164	4.4	2.142	9.38	26.78	28.38
Quartz	(4,-1,-6)	8.658	76.47	4.162	4.4	2.142	9.38	26.78	28.37
	Equiv. Refl.: (4,-3,6)								
Quartz	(-1,4,6)	8.658	76.47	4.16	4.4	2.142	9.37	26.78	28.37
Quartz	(-1,-3,-6)	8.658	76.47	4.158	4.4	2.142	9.37	26.78	28.37
Quartz	(3,4,0)	8.862	84.4	3.95	5.4	0.873	4.71	10.91	11.89
	Equiv. Refl.: (3,-7,0), (4,3,0), (4,-7,0), (-7,3,0), (-7,4,0)								
Quartz	(6,0,-1)	8.817	81.93	2.952	3.8	1.262	4.81	15.78	16.5
	Equiv. Refl.: (6,-6,1), (-6,0,1), (-6,6,-1)								
Quartz	(0,6,1)	8.817	81.93	2.951	3.8	1.262	4.81	15.78	16.5
	Equiv. Refl.: (0,-6,-1)								
LiNbO3	(3,4,5)	8.749	79.24	2.882	6.3	1.692	10.58	21.15	23.65
	Equiv. Refl.: (3,-7,-5), (4,3,-5), (4,-7,5), (7,-3,-5), (7,-4,5), (-3,7,5), (-3,-4,-5), (-4,7,-5), (-4,-3,5), (-7,3,5), (-7,4,-5)								
Quartz	(4,1,5)	8.802	81.27	2.213	3	1.368	4.04	17.1	17.57
	Equiv. Refl.: (4,-5,-5)								
Quartz	(-5,1,-5)	8.802	81.27	2.212	3	1.368	4.04	17.1	17.57
Sapph	(2,3,11)	8.4	70.62	2.21	2.9	3.132	9.04	39.16	40.19
	Equiv. Refl.: (2,-5,-11), (3,2,-11), (3,-5,11), (5,-2,-11), (5,-3,11), (-2,5,11), (-2,-3,-11), (-3,5,-11), (-3,-2,11), (-5,2,11), (-5,3,-11), (-5,4,5)								
Quartz	(1,4,-5)	8.802	81.27	2.204	2.9	1.368	4.03	17.1	17.57
	Equiv. Refl.: (1,-5,5)								
Quartz	(0,6,0)	8.742	79.02	1.987	2.8	1.728	4.87	21.6	22.14
	Equiv. Refl.: (0,-6,0), (6,0,0), (6,-6,0), (-6,0,0), (-6,6,0)								
LiNbO3	(3,4,-1)	8.47	72.01	1.934	4.1	2.891	11.79	36.14	38.01
	Equiv. Refl.: (3,-7,1), (4,3,1), (4,-7,-1), (7,-3,1), (7,-4,-1), (-3,7,-1), (-3,-4,1), (-4,7,1), (-4,-3,-1), (-7,3,-1), (-7,4,1)								
Quartz	(5,-1,5)	8.802	81.27	1.674	3	1.368	4.04	17.1	17.57
	Equiv. Refl.: (-4,5,5), (-4,-1,-5)								
Quartz	(5,-4,-5)	8.802	81.27	1.671	3	1.368	4.04	17.1	17.57
Quartz	(-1,5,-5)	8.802	81.27	1.666	2.9	1.368	4.03	17.1	17.57
	Equiv. Refl.: (-1,-4,5)								
Quartz	(6,-1,2)	8.43	71.21	1.438	1.9	3.03	5.74	37.88	38.31
	Equiv. Refl.: (6,-5,-2), (-5,-1,-2)								
Quartz	(-1,6,-2)	8.43	71.21	1.437	1.9	3.03	5.74	37.88	38.31
	Equiv. Refl.: (-1,-5,2), (-5,6,2)								
Quartz	(5,0,4)	8.609	75.19	1.326	2	2.354	4.61	29.42	29.78
	Equiv. Refl.: (-5,0,-4)								
Quartz	(5,-5,-4)	8.609	75.19	1.325	2	2.354	4.61	29.42	29.78
	Equiv. Refl.: (-5,5,4)								
Quartz	(0,5,-4)	8.609	75.19	1.321	2	2.354	4.6	29.42	29.78
	Equiv. Refl.: (0,-5,4)								
Quartz	(5,1,2)	8.43	71.21	1.312	1.9	3.03	5.74	37.88	38.31
	Equiv. Refl.: (-6,1,-2), (-6,5,2)								
Quartz	(1,5,-2)	8.43	71.21	1.311	1.9	3.03	5.74	37.88	38.31
	Equiv. Refl.: (1,-6,2), (5,-6,-2)								
LiNbO3	(2,5,3)	8.787	80.65	1.251	4.2	1.467	6.11	18.33	19.33
	Equiv. Refl.: (2,5,-3), (2,-7,3), (2,-7,-3), (5,2,3), (5,2,-3), (5,-7,3), (5,-7,-3), (7,-2,3), (7,-2,-3), (7,-5,3), (7,-5,-3), (-2,7,3), (-2,7,-3), (-2,-5,3), (-2,-5,-3), (-5,7,3), (-5,7,-3), (-5,-2,3), (-5,-2,-3), (-7,2,3), (-7,2,-3), (-7,5,3), (-7,5,-3)								
LiNbO3	(1,2,17)	8.445	71.51	1.173	3	2.978	8.99	37.22	38.29
	Equiv. Refl.: (1,-3,-17), (2,1,-17), (2,-3,17), (3,-1,-17), (3,-2,17), (-1,3,17), (-1,-2,-17), (-2,3,-17), (-2,-1,17)								

	(-3,1,17), (-3,2,-17)								
Sapph	(0,5,-8)	8.436	71.32	0.812	1.4	3.011	4.31	37.64	37.89
	Equiv. Refl.: (0,-5,8), (5,0,8), (5,-5,-8), (-5,0,-8), (-5,5,8)								
LiNbO3	(2,3,-13)	8.398	70.58	0.426	1.7	3.14	5.42	39.25	39.62
	Equiv. Refl.: (2,-5,13), (3,2,13), (3,-5,-13), (5,-2,13), (5,-3,-13), (-2,-5,-13), (-2,-3,13), (-3,5,13), (-3,-2,-13), (-5,2,-13), (-5,3,13)								
Sapph	(1,5,2)	8.43	71.21	0.147	0.5	3.03	1.59	37.87	37.9
	Equiv. Refl.: (1,-6,-2), (5,1,-2), (5,-6,2), (6,-1,-2), (6,-5,2), (-1,6,2), (-1,-5,-2), (-5,6,-2), (-5,-1,2), (-6,1,2), (-6,5,-2)								

Ei =	9.659	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(0,6,6)	9.298	74.29	18.4	17.2	2.718	46.64	33.97	57.7
	Equiv. Refl.: (2,2,8)								
Ge	(5,5,5)	9.49	79.26	16.5	16.6	1.832	30.41	22.91	38.07
	Equiv. Refl.: (1,5,7)								
Si	(0,0,8)	9.132	70.98	10	8.5	3.33	28.14	41.63	50.24
Si	(3,3,7)	9.343	75.31	7.9	7.2	2.533	18.27	31.66	36.55
LiNbO3	(4,4,0)	9.634	85.84	57.8	56.2	0.702	39.46	8.78	40.43
	Equiv. Refl.: (4,-8,0), (8,-4,0), (-4,8,0), (-4,-4,0), (-8,4,0)								
LiNbO3	(3,4,-10)	9.567	82.1	41	37.5	1.34	50.27	16.75	52.99
	Equiv. Refl.: (4,-7,-10), (7,-4,-10), (-3,7,-10), (-4,-3,-10), (-7,3,-10)								
LiNbO3	(3,-7,10)	9.567	82.1	39.4	37.5	1.34	50.27	16.75	52.99
	Equiv. Refl.: (4,3,10), (7,-3,10), (-3,-4,10), (-4,7,10), (-7,4,10)								
Sapph	(1,5,-10)	9.641	86.47	30.8	28	0.596	16.68	7.45	18.27
	Equiv. Refl.: (1,-6,10), (5,1,10), (5,-6,-10), (6,-1,10), (6,-5,-10), (-1,6,-10), (-1,-5,10), (-5,6,10), (-5,-1,-10), (-6,1,-10), (-6,5,10)								
LiNbO3	(0,-5,14)	9.356	75.6	23.5	20.9	2.479	51.89	30.99	60.44
	Equiv. Refl.: (5,0,14), (-5,5,14)								
Quartz	(1,4,-6)	9.589	83.08	22.1	18.7	1.172	21.95	14.65	26.39
	Equiv. Refl.: (1,-5,6), (4,1,6), (4,-5,-6), (5,-1,6), (5,-4,-6), (-1,5,-6), (-1,-4,6), (-4,5,6), (-4,-1,-6), (-5,1,-6), (-5,4,6)								
LiNbO3	(0,5,-14)	9.356	75.6	21.2	20.9	2.479	51.89	30.99	60.44
	Equiv. Refl.: (5,-5,-14), (-5,0,-14)								
LiNbO3	(2,2,-18)	9.38	76.2	20	18.8	2.372	44.6	29.65	53.56
	Equiv. Refl.: (2,3,-16), (2,-4,-18), (3,-5,-16), (4,-2,-18), (5,-3,-16), (-2,4,-18), (-2,5,-16), (-2,-2,-18), (-3,-2,-16), (-4,2,-18), (-5,2,-16)								
LiNbO3	(2,2,18)	9.38	76.2	19.2	18.8	2.372	44.6	29.65	53.56
	Equiv. Refl.: (2,-4,18), (4,-2,18), (-2,4,18), (-2,-2,18), (-4,2,18)								
LiNbO3	(1,6,-2)	9.162	71.54	19.1	17.5	3.225	56.39	40.31	69.32
	Equiv. Refl.: (6,-7,-2), (7,-6,-2), (-1,7,-2), (-6,-1,-2), (-7,1,-2)								
LiNbO3	(1,-7,2)	9.162	71.54	18.6	17.5	3.225	56.39	40.31	69.32
	Equiv. Refl.: (6,1,2), (7,-1,2), (-1,-6,2), (-6,7,2), (-7,6,2)								
LiNbO3	(2,-5,16)	9.377	76.12	18.2	18.4	2.387	43.83	29.84	53.02
	Equiv. Refl.: (3,2,16), (5,-2,16), (-2,-3,16), (-3,5,16), (-5,3,16)								
LiNbO3	(0,2,-20)	9.366	75.85	17.5	16.6	2.435	40.43	30.44	50.61
	Equiv. Refl.: (2,-2,-20), (-2,0,-20), (4,-1,7), (4,-3,-7), (-1,4,-7), (-1,-3,7), (-3,4,7), (-3,-1,-7)								
LiNbO3	(3,4,8)	9.183	71.95	17.1	15.7	3.148	49.28	39.36	63.06
	Equiv. Refl.: (4,-7,8), (7,-4,8), (-3,7,8), (-4,-3,8), (-7,3,8)								
Quartz	(1,3,-7)	9.595	83.4	16.8	15	1.118	16.77	13.97	21.83
	Equiv. Refl.: (1,-4,7), (3,1,7), (3,-4,-7), (-4,1,-7), (-4,3,7)								
LiNbO3	(0,-2,20)	9.366	75.85	16.4	16.6	2.435	40.43	30.44	50.61
	Equiv. Refl.: (2,0,20), (-2,2,20)								
LiNbO3	(3,-7,-8)	9.183	71.95	15.8	15.7	3.148	49.28	39.36	63.06
	Equiv. Refl.: (4,3,-8), (7,-3,-8), (-3,-4,-8), (-4,7,-8), (-7,4,-8)								
LiNbO3	(1,6,4)	9.292	74.15	15.3	14.7	2.742	40.27	34.28	52.88
	Equiv. Refl.: (6,-7,4), (7,-6,4), (-1,7,4), (-6,-1,4), (-7,1,4)								
LiNbO3	(2,-7,-6)	9.089	70.21	15.2	14.4	3.475	49.92	43.44	66.17
	Equiv. Refl.: (5,2,-6), (7,-2,-6), (-2,-5,-6), (-5,7,-6), (-7,5,-6)								
LiNbO3	(2,5,6)	9.089	70.21	15.1	14.4	3.475	49.92	43.44	66.17
	Equiv. Refl.: (5,-7,6), (7,-5,6), (-2,7,6), (-5,-2,6), (-7,2,6)								

Ei =	9.659	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50mm	2m, 50mm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/mrad]	[meV]	[meV]	[meV]
LiNbO3	(1,6,7)	9.64	86.44	15	22.7	0.601	13.63	7.51	15.56
	Equiv. Refl.: (1,-7,-7), (6,1,-7), (6,-7,7), (7,-1,-7), (7,-6,7), (-1,7,7), (-1,-6,-7), (-6,7,-7), (-6,-1,7), (-7,1,7), (-7,6,-7), (7,-1,0), (7,-6,0), (-1,7,0), (-1,-6,0), (-6,7,0), (-6,-1,0)								
LiNbO3	(2,5,-6)	9.089	70.21	14.8	14	3.475	48.54	43.44	65.14
	Equiv. Refl.: (5,-7,-6), (7,-5,-6), (-2,7,-6), (-5,-2,-6), (-7,2,-6), (1,6,0), (1,-7,0), (6,1,0), (6,-7,0), (-7,1,0), (-7,6,0)								
LiNbO3	(1,-7,-4)	9.292	74.15	14.6	14.7	2.742	40.27	34.28	52.88
	Equiv. Refl.: (6,1,-4), (7,-1,-4), (-1,-6,-4), (-6,7,-4), (-7,6,-4)								
LiNbO3	(2,-7,6)	9.089	70.21	14.5	14	3.475	48.54	43.44	65.14
	Equiv. Refl.: (5,2,6), (7,-2,6), (-2,-5,6), (-5,7,6), (-7,5,6)								
Sapph	(2,3,14)	9.362	75.76	13.5	11.5	2.451	28.27	30.64	41.69
	Equiv. Refl.: (2,-5,-14), (3,2,-14), (3,-5,14), (5,-2,-14), (5,-3,14), (-2,5,14), (-2,-3,-14), (-3,5,-14), (-3,-2,14), (-5,2,14), (-5,3,-14)								
Quartz	(0,6,3)	9.395	76.57	11.2	9.3	2.307	21.39	28.84	35.91
	Equiv. Refl.: (0,-6,-3), (6,0,-3), (6,-6,3), (-6,0,3), (-6,6,-3)								
Quartz	(7,-1,-1)	9.623	85.03	10.8	10.3	0.84	8.61	10.5	13.58
	Equiv. Refl.: (7,-6,1), (-1,7,1), (-1,-6,-1), (-6,7,-1), (-6,-1,1)								
Sapph	(2,4,10)	9.282	73.94	10.4	8.8	2.781	24.35	34.77	42.45
	Equiv. Refl.: (2,-6,-10), (4,2,-10), (4,-6,10), (6,-2,-10), (6,-4,10), (-2,6,10), (-2,-4,-10), (-4,6,-10), (-4,-2,10), (-6,2,10), (-6,4,-10)								
Quartz	(1,6,1)	9.623	85.03	10.2	10.3	0.84	8.61	10.5	13.58
	Equiv. Refl.: (1,-7,-1), (6,1,-1), (6,-7,1), (-7,1,1), (-7,6,-1)								
Quartz	(2,5,1)	9.171	71.71	10.1	8	3.193	25.7	39.91	47.47
	Equiv. Refl.: (2,-7,-1), (5,2,-1), (5,-7,1), (-7,2,1), (-7,5,-1)								
Quartz	(7,-2,-1)	9.171	71.71	10	8	3.193	25.7	39.91	47.47
	Equiv. Refl.: (7,-5,1), (-2,7,1), (-2,-5,-1), (-5,7,-1), (-5,-2,1)								
Quartz	(7,-3,3)	9.507	79.82	9.8	8.5	1.734	14.8	21.67	26.24
	Equiv. Refl.: (7,-4,-3), (-3,7,-3), (-3,-4,3), (-4,7,3), (-4,-3,-3)								
Quartz	(1,3,7)	9.595	83.4	9.6	8.7	1.118	9.74	13.97	17.03
	Equiv. Refl.: (1,-4,-7), (3,4,-3), (3,-7,3), (4,3,3), (4,-7,-3), (7,-2,2), (7,-5,-2), (-2,7,-2), (-2,-5,2), (-5,7,2), (-5,-2,-2), (-7,3,-3), (-7,4,3)								
Quartz	(0,1,-8)	9.291	74.14	9.5	7.9	2.745	21.62	34.31	40.55
	Equiv. Refl.: (0,2,-8), (0,3,7), (0,-1,8), (0,-2,8), (0,-3,-7), (1,0,8), (1,-1,-8), (2,0,8), (2,-2,-8), (3,0,-7), (3,1,-7), (3,-3,7), (3,-4,7), (-1,0,-8), (-1,1,8), (-2,0,-8), (-2,2,8), (-3,0,7), (-3,3,-7), (-4,1,7), (-4,3,-7)								
Quartz	(6,-2,-5)	9.609	84.16	9.4	8.8	0.988	8.7	12.35	15.11
	Equiv. Refl.: (6,-4,5), (-2,6,5), (-2,-4,-5), (-4,6,-5), (-4,-2,5)								
Quartz	(2,5,-2)	9.384	76.29	9.3	7.9	2.357	18.55	29.47	34.82
	Equiv. Refl.: (2,-7,2), (5,2,2), (5,-7,-2), (6,-3,5), (6,-3,-5), (-3,6,5), (-3,6,-5), (-3,-3,5), (-3,-3,-5), (-7,2,-2), (-7,5,2)								
Quartz	(3,3,5)	9.498	79.52	9.1	8.1	1.787	14.52	22.34	26.65
	Equiv. Refl.: (3,3,-5), (3,-6,5), (3,-6,-5), (6,-2,5), (6,-4,-5), (-2,6,-5), (-2,-4,5), (-4,6,5), (-4,-2,-5), (-6,3,5), (-6,3,-5)								
Quartz	(2,4,-5)	9.609	84.16	8.9	8.8	0.988	8.68	12.35	15.1
	Equiv. Refl.: (2,-6,5), (4,2,5), (4,-6,-5), (-6,2,-5), (-6,4,5)								
Quartz	(4,-1,-7)	9.595	83.4	8.8	8.7	1.118	9.73	13.97	17.03
	Equiv. Refl.: (4,-3,7), (-1,4,7), (-1,-3,-7), (-3,4,-7), (-3,-1,7)								
Quartz	(2,4,5)	9.609	84.16	8.7	8.8	0.988	8.69	12.35	15.1
	Equiv. Refl.: (2,-6,-5), (4,2,-5), (4,-6,5), (-6,2,5), (-6,4,-5)								
Sapph	(2,5,0)	9.395	76.58	7.9	7.1	2.305	16.3	28.82	33.11
	Equiv. Refl.: (2,-7,0), (5,2,0), (5,-7,0), (7,-2,0), (7,-5,0), (-2,7,0), (-2,-5,0), (-5,7,0), (-5,-2,0), (-7,2,0), (-7,5,0)								

Ei =	9.659	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50mm	2m, 50mm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/mrad]	[meV]	[meV]	[meV]
Quartz	(3,4,2)	9.155	71.4	7.6	6.2	3.25	20.1	40.63	45.33
	Equiv. Refl.: (3,-7,-2), (4,3,-2), (4,-7,2), (-7,3,2), (-7,4,-2)								
Sapph	(3,4,2)	9.201	72.28	7.2	6.4	3.086	19.71	38.58	43.32
	Equiv. Refl.: (3,-7,-2), (4,3,-2), (4,-7,2), (7,-3,-2), (7,-4,2), (-3,7,2), (-3,-4,-2), (-4,7,-2), (-4,-3,2), (-7,3,2), (-7,4,-2), (0,5,-5), (0,-5,5), (5,0,5), (5,-5,-5), (7,-3,-2), (7,-4,2), (-3,7,2), (-3,-4,-2), (-4,7,-2), (-4,-3,2), (-5,0,-5), (-5,5,5)								
Quartz	(2,5,2)	9.384	76.29	6.9	6.1	2.357	14.49	29.47	32.84
	Equiv. Refl.: (2,-7,-2), (5,2,-2), (5,-7,2), (7,-2,-2), (7,-5,2), (-2,7,2), (-2,-5,-2), (-5,7,-2), (-5,-2,2), (-7,2,2), (-7,5,-2)								
Quartz	(1,5,4)	9.32	74.77	6.8	5.9	2.63	15.54	32.87	36.36
	Equiv. Refl.: (1,-6,-4), (5,1,-4), (5,-6,4), (-6,1,4), (-6,5,-4)								
Quartz	(6,-1,-4)	9.32	74.77	6.7	5.9	2.63	15.55	32.87	36.36
	Equiv. Refl.: (6,-5,4), (-1,6,4), (-1,-5,-4), (-5,6,-4), (-5,-1,4)								
Sapph	(2,5,3)	9.504	79.71	6.5	6.2	1.754	10.91	21.92	24.49
	Equiv. Refl.: (2,5,-3), (2,-7,3), (2,-7,-3), (5,2,3), (5,2,-3), (5,-7,3), (5,-7,-3), (7,-2,3), (7,-2,-3), (7,-5,3), (7,-5,-3), (-2,7,3), (-2,7,-3), (-2,-5,3), (-2,-5,-3), (-5,7,3), (-5,7,-3), (-5,-2,3), (-5,-2,-3), (-7,2,3), (-7,2,-3), (-7,5,3), (-7,5,-3)								
Quartz	(1,6,-1)	9.623	85.03	5.8	6.3	0.84	5.25	10.5	11.74
	Equiv. Refl.: (1,-7,1), (6,1,1), (6,-7,-1), (-7,1,-1), (-7,6,1)								
Quartz	(0,2,8)	9.628	85.39	5.7	6.5	0.779	5.04	9.74	10.97
	Equiv. Refl.: (0,-2,-8), (2,0,-8), (2,-2,8), (-2,0,8), (-2,2,-8)								
Quartz	(7,-1,1)	9.623	85.03	5.6	6.3	0.84	5.26	10.5	11.74
	Equiv. Refl.: (7,-6,-1), (-1,7,-1), (-1,-6,1), (-6,7,1), (-6,-1,-1)								
Quartz	(1,1,8)	9.517	80.16	5.1	4.5	1.676	7.61	20.95	22.29
	Equiv. Refl.: (1,1,-8), (1,-2,8), (1,-2,-8), (-2,1,8), (-2,1,-8)								
Sapph	(1,3,16)	9.367	75.88	4.9	4.6	2.43	11.29	30.38	32.41
	Equiv. Refl.: (1,-4,-16), (3,1,-16), (3,-4,16), (4,-1,-16), (4,-3,16), (-1,4,16), (-1,-3,-16), (-3,4,-16), (-3,-1,16), (-4,1,16), (-4,3,-16)								
Sapph	(2,4,-11)	9.536	80.85	4.7	5.1	1.556	7.86	19.45	20.98
	Equiv. Refl.: (2,-6,11), (4,2,11), (4,-6,-11), (6,-2,11), (6,-4,-11), (-2,6,-11), (-2,-4,11), (-4,6,11), (-4,-2,-11), (-6,2,-11), (-6,4,11)								
Quartz	(0,3,-7)	9.142	71.16	4.5	3.9	3.295	12.92	41.18	43.16
	Equiv. Refl.: (0,-3,7), (3,0,7), (3,-3,-7), (-3,0,-7), (-3,3,7)								
LiNbO3	(1,6,-5)	9.388	76.4	4.4	6.4	2.337	14.89	29.21	32.78
	Equiv. Refl.: (1,-7,5), (6,1,5), (6,-7,-5), (7,-1,5), (7,-6,-5), (-1,7,-5), (-1,-6,5), (-6,7,5), (-6,-1,-5), (-7,1,-5), (-7,6,5)								
Quartz	(2,-1,8)	9.517	80.16	4.2	4.5	1.676	7.62	20.95	22.29
Quartz	(2,-1,-8)	9.517	80.16	4.1	4.5	1.676	7.62	20.95	22.29
	Equiv. Refl.: (-1,2,8), (-1,2,-8), (-1,-1,8), (-1,-1,-8)								
Quartz	(0,6,-3)	9.395	76.57	3.8	3.5	2.307	8.06	28.84	29.94
	Equiv. Refl.: (0,-6,3), (3,4,3), (3,-7,-3), (4,3,-3), (4,-7,3), (6,0,3), (6,-6,-3), (-6,0,-3), (-6,6,3), (-7,3,3), (-7,4,-3)								
Quartz	(2,5,-1)	9.171	71.71	3.5	3.1	3.193	9.88	39.91	41.12
	Equiv. Refl.: (2,-7,1), (5,2,1), (5,-7,-1), (-7,2,-1), (-7,5,1)								
Quartz	(7,-2,1)	9.171	71.71	3.4	3.1	3.193	9.88	39.91	41.12
	Equiv. Refl.: (7,-5,-1), (-2,7,-1), (-2,-5,1), (-5,7,1), (-5,-2,-1)								
LiNbO3	(1,6,1)	9.129	70.93	3.3	4.9	3.339	16.34	41.73	44.82
	Equiv. Refl.: (1,-7,-1), (6,1,-1), (6,-7,1), (7,-1,-1), (7,-6,1), (-1,7,1), (-1,-6,-1), (-6,7,-1), (-6,-1,1), (-7,1,1), (-7,6,-1), (3,4,-4), (3,-7,4), (4,3,4), (4,-7,-4), (7,-3,4), (7,-4,-4), (-3,7,-4), (-3,-4,4), (-4,7,4), (-4,-3,-4), (-7,3,-4), (-7,4,4)								
Quartz	(7,-3,-3)	9.507	79.82	3.2	3.6	1.734	6.18	21.67	22.53
	Equiv. Refl.: (7,-4,3), (-3,7,3), (-3,-4,-3), (-4,7,-3), (-4,-3,3)								

Ei =	9.659	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50mm	2m, 50mm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/mrad]	[meV]	[meV]	[meV]
LiNbO3	(2,4,13)	9.377	76.13	3.1	5.3	2.386	12.76	29.82	32.44
	Equiv. Refl.: (2,-6,-13), (4,2,-13), (4,-6,13), (6,-2,-13), (6,-4,13), (-2,6,13), (-2,-4,-13), (-4,6,-13), (-4,-2,13), (-6,2,13), (-6,4,-13)								
Quartz	(4,-2,7)	9.484	79.07	2.9	3.1	1.866	5.79	23.32	24.03
	Equiv. Refl.: (4,-2,-7), (-2,4,7), (-2,4,-7), (-2,-2,7), (-2,-2,-7)								
Quartz	(0,1,8)	9.291	74.14	2.7	2.7	2.745	7.47	34.31	35.12
	Equiv. Refl.: (0,-1,-8), (1,0,-8), (1,-1,8), (-1,0,8), (-1,1,-8)								
Quartz	(2,2,7)	9.484	79.07	2.6	3.1	1.866	5.79	23.32	24.03
	Equiv. Refl.: (2,2,-7), (2,-4,7), (2,-4,-7), (-4,2,7), (-4,2,-7)								
LiNbO3	(1,3,-17)	9.106	70.52	1.5	3	3.416	10.19	42.7	43.9
	Equiv. Refl.: (1,-4,17), (3,1,17), (3,-4,-17), (4,-1,17), (4,-3,-17), (-1,4,-17), (-1,-3,17), (-3,4,17), (-3,-1,-17), (-4,1,-17), (-4,3,17), (7,-3,2), (7,-4,-2), (-3,7,-2), (-3,-4,2), (-4,7,2), (-4,-3,-2)								
Quartz	(0,5,5)	9.272	73.72	1.4	1.8	2.821	5.21	35.27	35.65
	Equiv. Refl.: (0,-5,-5), (3,4,-2), (3,-7,2), (4,3,2), (4,-7,-2), (5,0,-5), (5,-2,6), (5,-3,-6), (5,-5,5), (-2,5,-6), (-2,-3,6), (-3,5,6), (-3,-2,-6), (-5,0,5), (-5,5,-5), (-7,3,-2), (-7,4,2)								
LiNbO3	(1,4,15)	9.252	73.3	1.3	3	2.897	8.6	36.22	37.22
	Equiv. Refl.: (1,4,-15), (1,-5,15), (1,-5,-15), (4,1,15), (4,1,-15), (4,-5,15), (4,-5,-15), (5,-1,15), (5,-1,-15), (5,-4,15), (5,-4,-15), (-1,5,15), (-1,5,-15), (-1,-4,15), (-1,-4,-15), (-4,5,15), (-4,5,-15), (-4,-1,15), (-4,-1,-15), (-5,1,15), (-5,1,-15), (-5,4,15), (-5,4,-15), (0,6,6), (0,6,-6), (0,-6,6), (0,-6,-6), (6,0,6), (6,0,-6), (6,-6,6), (6,-6,-6), (-6,0,6), (-6,0,-6), (-6,6,6), (-6,6,-6), (2,3,-6), (2,-3,6), (3,2,6), (3,-2,6), (-5,2,-6), (-5,3,6)								
LiNbO3	(2,5,9)	9.571	82.26	1.2	3.8	1.314	4.97	16.42	17.16
	Equiv. Refl.: (2,5,-9), (2,-7,9), (2,-7,-9), (5,2,9), (5,2,-9), (5,-7,9), (5,-7,-9), (7,-2,9), (7,-2,-9), (7,-5,9), (7,-5,-9), (-2,7,9), (-2,7,-9), (-2,-5,9), (-2,-5,-9), (-5,7,9), (-5,7,-9), (-5,-2,9), (-5,-2,-9), (-7,2,9), (-7,2,-9), (-7,5,9), (-7,5,-9)								
Quartz	(5,-1,-6)	9.589	83.08	1.1	1.7	1.172	1.95	14.65	14.78
	Equiv. Refl.: (5,-4,6), (-1,5,6), (-1,-4,-6), (-4,5,-6), (-4,-1,6)								
LiNbO3	(1,2,-19)	9.259	73.45	1	2.5	2.871	7.16	35.89	36.6
	Equiv. Refl.: (1,5,11), (1,-3,19), (1,-6,-11), (2,1,19), (2,-3,-19), (3,-1,19), (3,-2,-19), (5,1,-11), (5,-6,11), (6,-1,-11), (6,-5,11), (-1,3,-19), (-1,6,11), (-1,-2,19), (-1,-5,-11), (-2,3,19), (-2,-1,-19), (-3,1,-19), (-3,2,19), (-5,6,-11), (-5,-1,11), (-6,1,11), (-6,5,-11), (1,5,8), (1,-6,-8), (5,1,-8), (5,-6,8), (6,-1,-8), (6,-5,8), (-1,6,8), (-1,-5,-8), (-5,6,-8), (-5,-1,8), (-6,1,8), (-6,5,-8)								
Quartz	(1,4,6)	9.589	83.08	0.7	1.7	1.172	1.96	14.65	14.78
	Equiv. Refl.: (1,-5,-6), (4,1,-6), (4,-5,6), (-5,1,6), (-5,4,-6)								
Quartz	(2,3,6)	9.365	75.82	0.6	0.9	2.441	2.21	30.51	30.59
	Equiv. Refl.: (2,-5,-6), (3,2,-6), (3,-5,6), (-5,2,6), (-5,3,-6)								
Sapph	(3,4,5)	9.457	78.26	0.4	1	2.007	1.95	25.08	25.16
	Equiv. Refl.: (3,-7,-5), (4,3,-5), (4,-7,5), (7,-3,-5), (7,-4,5), (-3,7,5), (-3,-4,-5), (-4,7,-5), (-4,-3,5), (-7,3,5), (-7,4,-5), (5,-2,-6), (5,-3,6), (-2,5,6), (-2,-3,-6), (-3,5,-6), (-3,-2,6)								
Sapph	(3,4,-1)	9.163	71.57	0.3	0.7	3.219	2.18	40.24	40.3
	Equiv. Refl.: (3,-7,1), (4,3,1), (4,-7,-1), (7,-3,1), (7,-4,-1), (-3,7,-1), (-3,-4,1), (-4,7,1), (-4,-3,-1), (-7,3,-1), (-7,4,1), (1,5,-4), (1,-6,4), (5,1,4), (5,-6,-4), (6,-1,4), (6,-5,-4), (7,-2,0), (7,-5,0), (-1,6,-4), (-1,-5,4), (-2,7,0), (-2,-5,0), (-5,6,4), (-5,7,0), (-5,-1,-4), (-5,-2,0), (-6,1,-4), (-6,5,4)								
Quartz	(2,5,0)	9.099	70.39	0.2	0.6	3.441	1.95	43.01	43.06
	Equiv. Refl.: (2,-7,0), (5,2,0), (5,-7,0), (-7,2,0), (-7,5,0)								

Ei =	8.639	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Si	(2,4,6)	8.542	81.4	27.7966	24.69	1.3071	32.28	16.34	36.18
	Equiv. Refl.: (2,6,4), (4,2,6), (4,6,2), (6,2,4), (6,4,2)								
Ge	(2,4,6)	8.2	71.66	26.6719	24.54	2.8642	70.29	35.8	78.88
	Equiv. Refl.: (2,6,4), (4,2,6), (4,6,2), (6,2,4), (6,4,2)								
Ge	(1,3,7)	8.417	76.98	22.9302	22.61	1.9979	45.17	24.97	51.61
	Equiv. Refl.: (1,7,3), (3,1,7), (3,5,5), (3,7,1), (5,3,5), (5,5,3), (7,1,3), (7,3,1)								
Si	(1,1,7)	8.152	70.66	9.7109	8.87	3.032	26.88	37.9	46.46
	Equiv. Refl.: (1,5,5), (1,7,1), (5,1,5), (5,5,1), (7,1,1)								
LiNbO3	(2,-6,-10)	8.61	85.31	84.358	78.4	0.709	55.55	8.86	56.25
	Equiv. Refl.: (4,2,-10), (6,-2,-10), (-2,-4,-10), (-4,6,-10), (-6,4,-10)								
LiNbO3	(4,-6,10)	8.61	85.31	78.053	78.4	0.709	55.55	8.86	56.25
	Equiv. Refl.: (6,-4,10)								
LiNbO3	(2,4,10)	8.61	85.31	78.052	78.4	0.709	55.55	8.86	56.25
	Equiv. Refl.: (-2,6,10), (-4,-2,10), (-6,2,10)								
Sapph	(0,0,18)	8.591	83.97	53.728	45.7	0.912	41.67	11.4	43.2
	Equiv. Refl.: (0,0,-18)								
Quartz	(-5,0,4)	8.609	85.25	45.893	39.2	0.718	28.11	8.97	29.51
Quartz	(5,0,-4)	8.609	85.25	45.892	39.2	0.718	28.11	8.97	29.51
	Equiv. Refl.: (5,-5,4), (-5,5,-4)								
Quartz	(0,5,4)	8.609	85.25	45.888	39.2	0.718	28.11	8.97	29.51
	Equiv. Refl.: (0,-5,-4)								
LiNbO3	(3,-7,-2)	8.505	79.9	41.196	38.5	1.539	59.18	19.23	62.23
	Equiv. Refl.: (4,3,-2), (7,-3,-2), (-3,-4,-2), (-4,7,-2), (-7,4,-2)								
Sapph	(1,5,-4)	8.591	83.96	40.054	34.9	0.914	31.87	11.42	33.85
	Equiv. Refl.: (1,-6,4), (5,1,4), (5,-6,-4), (6,-1,4), (6,-5,-4), (-1,6,-4), (-1,-5,4), (-5,6,4), (-5,-1,-4), (-6,1,-4), (-6,5,4)								
LiNbO3	(3,4,2)	8.505	79.9	39.046	38.5	1.539	59.18	19.23	62.23
	Equiv. Refl.: (4,-7,2), (7,-4,2), (-3,7,2), (-4,-3,2), (-7,3,2)								
LiNbO3	(1,5,8)	8.528	80.83	37.225	36.6	1.395	51.09	17.44	53.98
	Equiv. Refl.: (5,-6,8), (6,-5,8), (-1,6,8), (-5,-1,8), (-6,1,8)								
LiNbO3	(1,-6,-8)	8.528	80.83	37.107	36.6	1.395	51.09	17.44	53.98
	Equiv. Refl.: (5,1,-8), (6,-1,-8), (-1,-5,-8), (-5,6,-8), (-6,5,-8)								
Sapph	(1,2,-16)	8.612	85.44	33.676	31.2	0.688	21.44	8.6	23.1
	Equiv. Refl.: (1,-3,16), (2,1,16), (2,-3,-16), (3,-1,16), (3,-2,-16), (-1,3,-16), (-1,-2,16), (-2,3,16), (-2,-1,-16), (-3,1,-16), (-3,2,16)								
Quartz	(-5,2,-5)	8.557	82.11	32.99	27.6	1.198	33.04	14.97	36.27
	Equiv. Refl.: (-5,3,5)								
Quartz	(3,-5,-5)	8.557	82.11	32.986	27.6	1.198	33.03	14.97	36.27
Quartz	(2,3,-5)	8.557	82.11	32.985	27.6	1.198	33.03	14.97	36.27
	Equiv. Refl.: (2,-5,5), (3,2,5)								
Quartz	(5,-2,5)	8.557	82.11	32.629	27.6	1.198	33.04	14.97	36.27
	Equiv. Refl.: (5,-3,-5)								
Quartz	(-2,5,-5)	8.557	82.11	32.625	27.6	1.198	33.03	14.97	36.27
	Equiv. Refl.: (-2,-3,5), (-3,5,5)								
Quartz	(-3,-2,-5)	8.557	82.11	32.623	27.6	1.198	33.03	14.97	36.27
LiNbO3	(0,6,0)	8.343	74.96	30.577	28.6	2.322	66.43	29.02	72.5
	Equiv. Refl.: (6,-6,0), (-6,0,0)								

Ei =	8.639	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(1,3,-14)	8.607	85.03	30.087	27.9	0.751	20.93	9.38	22.93
	Equiv. Refl.: (1,-4,14), (3,1,14), (3,-4,-14), (4,-1,14), (4,-3,-14), (-1,4,-14), (-1,-3,14), (-3,4,14), (-3,-1,-14), (-4,1,-14), (-4,3,14)								
LiNbO3	(0,-6,0)	8.343	74.96	29.919	28.6	2.322	66.43	29.02	72.5
	Equiv. Refl.: (6,0,0)								
LiNbO3	(-6,6,0)	8.343	74.96	29.918	28.6	2.322	66.43	29.02	72.5
Sapph	(2,4,7)	8.633	87.92	28.688	32.2	0.313	10.07	3.91	10.8
	Equiv. Refl.: (2,-6,-7), (4,2,-7), (4,-6,7), (6,-2,-7), (6,-4,7), (-2,6,7), (-2,-4,-7), (-4,6,-7), (-4,-2,7), (-6,2,7), (-6,4,-7)								
LiNbO3	(1,1,-18)	8.402	76.54	27.088	25.7	2.067	53.07	25.84	59.03
	Equiv. Refl.: (1,-2,-18), (2,-1,-18), (-1,2,-18), (-1,-1,-18), (-2,1,-18)								
LiNbO3	(0,-4,-14)	8.374	75.78	26.375	24.9	2.189	54.55	27.37	61.02
	Equiv. Refl.: (4,0,-14), (-4,4,-14)								
LiNbO3	(1,-5,12)	8.331	74.64	25.127	23.6	2.373	56.05	29.66	63.42
	Equiv. Refl.: (4,1,12), (5,-1,12), (-1,-4,12), (-4,5,12), (-5,4,12)								
LiNbO3	(1,1,18)	8.402	76.54	25.09	25.7	2.067	53.07	25.84	59.03
	Equiv. Refl.: (1,-2,18), (2,-1,18), (-1,2,18), (-1,-1,18), (-2,1,18)								
LiNbO3	(0,4,14)	8.374	75.78	24.474	24.9	2.189	54.55	27.37	61.02
	Equiv. Refl.: (4,-4,14), (-4,0,14)								
LiNbO3	(1,4,12)	8.331	74.64	24.307	23	2.373	54.47	29.66	62.02
	Equiv. Refl.: (4,-5,12), (5,-4,12), (-1,5,12), (-4,-1,12), (-5,1,12)								
LiNbO3	(1,4,-12)	8.331	74.64	23.267	23.6	2.373	56.05	29.66	63.42
	Equiv. Refl.: (4,-5,-12), (5,-4,-12), (-1,5,-12), (-4,-1,-12), (-5,1,-12)								
LiNbO3	(-4,5,-12)	8.331	74.64	22.46	23	2.373	54.47	29.66	62.02
	Equiv. Refl.: (-5,4,-12)								
LiNbO3	(1,-5,-12)	8.331	74.64	22.459	23	2.373	54.47	29.66	62.02
	Equiv. Refl.: (4,1,-12), (5,-1,-12), (-1,-4,-12)								
LiNbO3	(0,5,10)	8.266	73.11	22.354	20.5	2.623	53.87	32.79	63.06
	Equiv. Refl.: (5,-5,10), (-5,0,10)								
LiNbO3	(0,-5,-10)	8.266	73.11	19.228	20.5	2.623	53.87	32.79	63.06
	Equiv. Refl.: (5,0,-10), (-5,5,-10)								
LiNbO3	(2,-6,8)	8.181	71.27	19.093	18.2	2.93	53.44	36.62	64.78
	Equiv. Refl.: (4,2,8), (6,-2,8), (-2,-4,8), (-4,6,8), (-6,4,8)								
LiNbO3	(2,4,-8)	8.181	71.27	17.64	18.2	2.93	53.44	36.62	64.78
	Equiv. Refl.: (4,-6,-8), (6,-4,-8), (-2,6,-8), (-4,-2,-8), (-6,2,-8)								
Quartz	(2,2,6)	8.534	81.08	15.354	13.4	1.356	18.18	16.95	24.86
	Equiv. Refl.: (2,-4,-6)								
Quartz	(2,2,-6)	8.534	81.08	15.352	13.4	1.356	18.17	16.95	24.85
	Equiv. Refl.: (2,-4,6)								
Quartz	(-4,2,-6)	8.534	81.08	15.348	13.4	1.356	18.17	16.95	24.85
Quartz	(-4,2,6)	8.534	81.08	15.346	13.4	1.356	18.17	16.95	24.85
Quartz	(-2,-2,-6)	8.534	81.08	15.119	13.4	1.356	18.18	16.95	24.86
Quartz	(-2,4,6)	8.534	81.08	15.118	13.4	1.356	18.18	16.95	24.86
Quartz	(-2,4,-6)	8.534	81.08	15.117	13.4	1.356	18.18	16.95	24.85
	Equiv. Refl.: (-2,-2,6)								
Quartz	(4,-2,6)	8.534	81.08	15.109	13.4	1.356	18.17	16.95	24.85
Quartz	(4,-2,-6)	8.534	81.08	15.107	13.4	1.356	18.17	16.95	24.85
Quartz	(-3,5,-5)	8.557	82.11	12.075	11.4	1.198	13.66	14.97	20.27
Quartz	(-3,-2,5)	8.557	82.11	12.073	11.4	1.198	13.66	14.97	20.27
Quartz	(-2,5,5)	8.557	82.11	12.068	11.4	1.198	13.66	14.97	20.27
Quartz	(-2,-3,-5)	8.557	82.11	12.067	11.4	1.198	13.66	14.97	20.27

Ei =	8.639	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Quartz	(5,-2,-5)	8.557	82.11	12.06	11.4	1.198	13.65	14.97	20.26
	Equiv. Refl.: (5,-3,5)								
Sapph	(2,4,4)	8.186	71.37	12.004	10.4	2.912	30.22	36.4	47.31
	Equiv. Refl.: (2,-6,-4), (4,2,-4), (4,-6,4), (6,-2,-4), (6,-4,4), (-2,6,4), (-2,-4,-4), (-4,6,-4), (-4,-2,4), (-6,2,4), (-6,4,-4)								
Quartz	(3,-5,5)	8.557	82.11	11.831	11.4	1.198	13.66	14.97	20.27
Quartz	(3,2,-5)	8.557	82.11	11.83	11.4	1.198	13.66	14.97	20.27
Quartz	(2,-5,-5)	8.557	82.11	11.825	11.4	1.198	13.66	14.97	20.27
Quartz	(2,3,5)	8.557	82.11	11.823	11.4	1.198	13.66	14.97	20.27
Quartz	(-5,2,5)	8.557	82.11	11.816	11.4	1.198	13.65	14.97	20.26
	Equiv. Refl.: (-5,3,-5)								
Sapph	(0,2,16)	8.208	71.83	11.285	9.9	2.836	28.16	35.45	45.27
	Equiv. Refl.: (0,-2,-16), (2,0,-16), (2,-2,16), (-2,0,16), (-2,2,-16)								
Quartz	(1,-6,1)	8.193	71.51	11.227	9.5	2.89	27.38	36.12	45.33
Quartz	(1,5,-1)	8.193	71.51	11.226	9.5	2.89	27.38	36.12	45.33
	Equiv. Refl.: (-6,1,-1), (-6,5,1)								
Quartz	(5,1,1)	8.193	71.51	11.225	9.5	2.89	27.38	36.12	45.32
	Equiv. Refl.: (5,-6,-1)								
Quartz	(-1,6,-1)	8.193	71.51	11.176	9.5	2.89	27.38	36.12	45.33
Quartz	(6,-1,1)	8.193	71.51	11.175	9.5	2.89	27.38	36.12	45.33
	Equiv. Refl.: (6,-5,-1), (-1,-5,1)								
Quartz	(-5,6,1)	8.193	71.51	11.174	9.5	2.89	27.38	36.12	45.32
	Equiv. Refl.: (-5,-1,-1)								
Quartz	(-2,1,-7)	8.416	76.96	10.46	9.2	2	18.33	25	31
Quartz	(-2,1,7)	8.416	76.96	10.459	9.2	2	18.33	25	31
Quartz	(1,-2,-7)	8.416	76.96	10.458	9.2	2	18.33	25	31
Quartz	(1,1,7)	8.416	76.96	10.456	9.2	2	18.32	25	31
Quartz	(1,-2,7)	8.416	76.96	10.454	9.2	2	18.32	25	31
Quartz	(1,1,-7)	8.416	76.96	10.453	9.2	2	18.32	25	30.99
Quartz	(2,-1,7)	8.416	76.96	10.037	9.2	2	18.33	25	31
Quartz	(2,-1,-7)	8.416	76.96	10.036	9.2	2	18.33	25	31
Quartz	(-1,2,7)	8.416	76.96	10.033	9.2	2	18.33	25	31
Quartz	(-1,-1,-7)	8.416	76.96	10.031	9.2	2	18.32	25	31
Quartz	(-1,2,-7)	8.416	76.96	10.03	9.2	2	18.32	25	31
Quartz	(-1,-1,7)	8.416	76.96	10.029	9.2	2	18.32	25	30.99
Quartz	(-2,2,7)	8.542	81.39	9.537	9.3	1.309	12.23	16.36	20.42
Quartz	(2,-2,-7)	8.542	81.39	9.536	9.3	1.309	12.23	16.36	20.42
Quartz	(-2,0,-7)	8.542	81.39	9.534	9.3	1.309	12.23	16.36	20.42
Quartz	(2,0,7)	8.542	81.39	9.533	9.3	1.309	12.23	16.36	20.42
Quartz	(0,2,-7)	8.542	81.39	9.518	9.3	1.309	12.21	16.36	20.41
	Equiv. Refl.: (0,-2,7)								
Quartz	(-4,-2,-3)	8.443	77.76	8.887	7.7	1.874	14.46	23.42	27.52
Quartz	(-4,6,3)	8.443	77.76	8.885	7.7	1.874	14.46	23.42	27.52
Quartz	(6,-4,-3)	8.443	77.76	8.882	7.7	1.874	14.45	23.42	27.52
Quartz	(6,-2,3)	8.443	77.76	8.881	7.7	1.874	14.45	23.42	27.52
Quartz	(-2,6,-3)	8.443	77.76	8.88	7.7	1.874	14.45	23.42	27.52
Quartz	(-2,-4,3)	8.443	77.76	8.879	7.7	1.874	14.45	23.42	27.52
Quartz	(2,4,3)	8.443	77.76	8.486	7.7	1.874	14.36	23.42	27.47
	Equiv. Refl.: (2,-6,-3)								
Quartz	(-6,4,-3)	8.443	77.76	8.484	7.7	1.874	14.36	23.42	27.47

Ei =	8.639	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-6,2,3)	8.443	77.76	8.482	7.7	1.874	14.35	23.42	27.47
Quartz	(4,2,-3)	8.443	77.76	8.481	7.7	1.874	14.35	23.42	27.47
	Equiv. Refl.: (4,-6,3)								
Quartz	(2,0,-7)	8.542	81.39	8.328	8.4	1.309	10.99	16.36	19.7
	Equiv. Refl.: (-2,0,7)								
Quartz	(2,-2,7)	8.542	81.39	8.326	8.4	1.309	10.98	16.36	19.7
	Equiv. Refl.: (-2,2,-7)								
Quartz	(0,2,7)	8.542	81.39	8.3	8.4	1.309	10.96	16.36	19.69
	Equiv. Refl.: (0,-2,-7)								
Quartz	(1,0,-7)	8.16	70.84	7.897	6.9	3.002	20.81	37.53	42.91
	Equiv. Refl.: (-1,0,7)								
Quartz	(-1,1,-7)	8.16	70.84	7.896	6.9	3.002	20.81	37.53	42.91
Quartz	(0,1,7)	8.16	70.84	7.895	6.9	3.002	20.81	37.53	42.91
	Equiv. Refl.: (0,-1,-7), (1,-1,7)								
Quartz	(-2,6,3)	8.443	77.76	7.894	7.7	1.874	14.36	23.42	27.47
Quartz	(-2,-4,-3)	8.443	77.76	7.893	7.7	1.874	14.36	23.42	27.47
Quartz	(6,-4,3)	8.443	77.76	7.891	7.7	1.874	14.36	23.42	27.47
Quartz	(6,-2,-3)	8.443	77.76	7.889	7.7	1.874	14.35	23.42	27.47
Quartz	(-4,6,-3)	8.443	77.76	7.888	7.7	1.874	14.35	23.42	27.47
	Equiv. Refl.: (-4,-2,3)								
Sapph	(1,4,9)	8.123	70.09	7.607	7.1	3.128	22.26	39.1	44.99
	Equiv. Refl.: (1,4,-9), (1,-5,9), (1,-5,-9), (4,1,9), (4,1,-9), (4,-5,9), (4,-5,-9), (5,-1,9), (5,-1,-9), (5,-4,9), (5,-4,-9), (-1,5,9), (-1,5,-9), (-1,-4,9), (-1,-4,-9), (-4,5,9), (-4,5,-9), (-4,-1,9), (-4,-1,-9), (-5,1,9), (-5,1,-9), (-5,4,9), (-5,4,-9)								
Quartz	(3,-6,-3)	8.316	74.28	7.507	6.8	2.431	16.53	30.39	34.59
	Equiv. Refl.: (-6,3,3)								
Quartz	(3,3,3)	8.316	74.28	7.506	6.8	2.431	16.53	30.39	34.59
	Equiv. Refl.: (-6,3,-3)								
Quartz	(3,3,-3)	8.316	74.28	7.505	6.8	2.431	16.53	30.39	34.59
	Equiv. Refl.: (3,-6,3)								
Quartz	(4,2,3)	8.443	77.76	7.49	7.7	1.874	14.46	23.42	27.52
Quartz	(4,-6,-3)	8.443	77.76	7.488	7.7	1.874	14.46	23.42	27.52
Quartz	(-6,4,3)	8.443	77.76	7.486	7.7	1.874	14.45	23.42	27.52
Quartz	(-6,2,-3)	8.443	77.76	7.485	7.7	1.874	14.45	23.42	27.52
Quartz	(2,-6,3)	8.443	77.76	7.483	7.7	1.874	14.45	23.42	27.52
Quartz	(2,4,-3)	8.443	77.76	7.482	7.7	1.874	14.45	23.42	27.52
Quartz	(-3,6,3)	8.316	74.28	7.464	6.8	2.431	16.53	30.39	34.59
Quartz	(6,-3,3)	8.316	74.28	7.463	6.8	2.431	16.53	30.39	34.59
	Equiv. Refl.: (6,-3,-3), (-3,6,-3), (-3,-3,3), (-3,-3,-3)								
Quartz	(-5,6,-2)	8.43	77.38	7.42	6.8	1.934	13.2	24.18	27.55
	Equiv. Refl.: (-5,-1,2)								
Quartz	(-1,6,2)	8.43	77.38	7.418	6.8	1.934	13.2	24.18	27.55
	Equiv. Refl.: (-1,-5,-2)								
Quartz	(6,-1,-2)	8.43	77.38	7.417	6.8	1.934	13.2	24.18	27.55
	Equiv. Refl.: (6,-5,2)								
Quartz	(5,1,-2)	8.43	77.38	7.276	6.8	1.934	13.2	24.18	27.55
	Equiv. Refl.: (5,-6,2)								
Quartz	(1,5,2)	8.43	77.38	7.275	6.8	1.934	13.2	24.18	27.55
Quartz	(1,-6,-2)	8.43	77.38	7.274	6.8	1.934	13.2	24.18	27.55
	Equiv. Refl.: (-6,1,2), (-6,5,-2)								

Ei =	8.639	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(1,5,-1)	8.39	76.21	7.212	7	2.121	14.93	26.51	30.43
	Equiv. Refl.: (1,-6,1), (5,1,1), (5,-6,-1), (6,-1,1), (6,-5,-1), (-1,6,-1), (-1,-5,1), (-5,6,1), (-5,-1,-1), (-6,1,-1), (-6,5,1)								
Quartz	(0,3,6)	8.153	70.69	6.338	5.8	3.028	17.69	37.84	41.78
	Equiv. Refl.: (0,-3,-6)								
Quartz	(3,-3,6)	8.153	70.69	6.335	5.8	3.028	17.68	37.84	41.77
	Equiv. Refl.: (-3,3,-6)								
Quartz	(3,0,-6)	8.153	70.69	6.334	5.8	3.028	17.68	37.84	41.77
	Equiv. Refl.: (-3,0,6)								
Quartz	(0,4,-5)	8.177	71.17	4.776	4.5	2.946	13.32	36.83	39.16
	Equiv. Refl.: (0,-4,5)								
Quartz	(4,0,5)	8.177	71.17	4.768	4.5	2.946	13.3	36.83	39.16
	Equiv. Refl.: (4,-4,-5), (-4,4,5)								
Quartz	(-4,0,-5)	8.177	71.17	4.767	4.5	2.946	13.3	36.83	39.16
Quartz	(5,0,4)	8.609	85.25	4.59	6.2	0.718	4.48	8.97	10.03
Quartz	(-5,0,-4)	8.609	85.25	4.589	6.2	0.718	4.48	8.97	10.03
Quartz	(5,-5,-4)	8.609	85.25	4.587	6.2	0.718	4.48	8.97	10.03
	Equiv. Refl.: (-5,5,4)								
Quartz	(0,5,-4)	8.609	85.25	4.572	6.2	0.718	4.47	8.97	10.02
	Equiv. Refl.: (0,-5,4)								
Sapph	(2,4,-5)	8.311	74.15	4.402	4.7	2.452	11.52	30.65	32.75
	Equiv. Refl.: (2,-6,5), (4,2,5), (4,-6,-5), (6,-2,5), (6,-4,-5), (-2,6,-5), (-2,-4,5), (-4,6,5), (-4,-2,-5), (-6,2,-5), (-6,4,5)								
Sapph	(2,3,11)	8.4	76.5	3.695	4.2	2.074	8.78	25.92	27.37
	Equiv. Refl.: (2,-5,-11), (3,2,-11), (3,-5,11), (5,-2,-11), (5,-3,11), (-2,5,11), (-2,-3,-11), (-3,5,-11), (-3,-2,11), (-5,2,11), (-5,3,-11)								
LiNbO3	(2,2,15)	8.258	72.92	3.528	6.3	2.654	16.71	33.18	37.15
	Equiv. Refl.: (2,-2,-15), (2,-4,15), (2,-4,-15), (4,-2,15), (4,-2,-15), (-2,4,15), (-2,4,-15), (-2,-2,15), (-2,-2,-15), (-4,2,15), (-4,2,-15)								
LiNbO3	(3,4,-1)	8.47	78.64	3.019	6.6	1.735	11.45	21.69	24.53
	Equiv. Refl.: (3,-7,1), (4,3,1), (4,-7,-1), (7,-3,1), (7,-4,-1), (-3,7,-1), (-3,-4,1), (-4,7,1), (-4,-3,-1), (-7,3,-1), (-7,4,1)								
Quartz	(3,-3,-6)	8.153	70.69	2.519	2.9	3.028	8.64	37.84	38.82
	Equiv. Refl.: (-3,3,6)								
Quartz	(3,0,6)	8.153	70.69	2.518	2.9	3.028	8.64	37.84	38.82
	Equiv. Refl.: (-3,0,-6)								
Quartz	(0,3,-6)	8.153	70.69	2.51	2.8	3.028	8.62	37.84	38.81
	Equiv. Refl.: (0,-3,6)								
Quartz	(6,-1,2)	8.43	77.38	2.15	2.9	1.934	5.58	24.18	24.81
	Equiv. Refl.: (6,-5,-2), (-5,-1,-2)								
Quartz	(-5,6,2)	8.43	77.38	2.149	2.9	1.934	5.58	24.18	24.81
Quartz	(-1,6,-2)	8.43	77.38	2.148	2.9	1.934	5.58	24.18	24.81
	Equiv. Refl.: (-1,-5,2)								
Quartz	(0,4,5)	8.177	71.17	1.995	2.6	2.946	7.62	36.83	37.61
	Equiv. Refl.: (0,-4,-5)								
Quartz	(-4,4,-5)	8.177	71.17	1.994	2.6	2.946	7.61	36.83	37.61
Quartz	(4,0,-5)	8.177	71.17	1.993	2.6	2.946	7.61	36.83	37.61
	Equiv. Refl.: (4,-4,5), (-4,0,5)								
Quartz	(5,1,2)	8.43	77.38	1.952	2.9	1.934	5.58	24.18	24.81

Ei =	8.639	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(5,-6,-2)	8.43	77.38	1.951	2.9	1.934	5.58	24.18	24.81
	Equiv. Refl.: (-6,1,-2), (-6,5,2)								
Quartz	(1,5,-2)	8.43	77.38	1.95	2.9	1.934	5.58	24.18	24.81
	Equiv. Refl.: (1,-6,2)								
LiNbO3	(1,2,17)	8.445	77.85	1.749	4.7	1.86	8.73	23.25	24.84
	Equiv. Refl.: (1,-3,-17), (2,1,-17), (2,-3,17), (3,-1,-17), (3,-2,17), (-1,3,17), (-1,-2,-17), (-2,3,-17), (-2,-1,17), (-3,1,17), (-3,2,-17)								
Quartz	(0,1,-7)	8.16	70.84	1.742	2.3	3.002	6.97	37.53	38.17
Quartz	(0,-1,7)	8.16	70.84	1.741	2.3	3.002	6.97	37.53	38.17
Quartz	(1,-1,-7)	8.16	70.84	1.735	2.3	3.002	6.95	37.53	38.17
	Equiv. Refl.: (-1,1,7)								
Quartz	(-1,0,-7)	8.16	70.84	1.734	2.3	3.002	6.94	37.53	38.17
Quartz	(1,0,7)	8.16	70.84	1.733	2.3	3.002	6.94	37.53	38.17
LiNbO3	(1,5,-7)	8.351	75.16	1.655	4.2	2.289	9.6	28.62	30.18
	Equiv. Refl.: (1,-6,7), (5,1,7), (5,-6,-7), (6,-1,7), (6,-5,-7), (-1,6,-7), (-1,-5,7), (-5,6,7), (-5,-1,-7), (-6,1,-7), (-6,5,7)								
Sapph	(0,5,-8)	8.436	77.55	1.211	2.2	1.908	4.2	23.85	24.21
	Equiv. Refl.: (0,-5,8), (5,0,8), (5,-5,-8), (-5,0,-8), (-5,5,8)								
Sapph	(1,3,13)	8.241	72.55	1.196	2	2.715	5.36	33.94	34.36
	Equiv. Refl.: (1,-4,-13), (3,1,-13), (3,-4,13), (4,-1,-13), (4,-3,13), (-1,4,13), (-1,-3,-13), (-3,4,-13), (-3,-1,13), (-4,1,13), (-4,3,-13)								
Sapph	(3,3,6)	8.325	74.51	0.653	1.3	2.394	3.21	29.93	30.1
	Equiv. Refl.: (3,3,-6), (3,-6,6), (3,-6,-6), (6,-3,6), (6,-3,-6), (-3,6,6), (-3,6,-6), (-3,-3,6), (-3,-3,-6), (-6,3,6), (-6,3,-6)								
LiNbO3	(2,3,-13)	8.398	76.44	0.592	2.5	2.083	5.26	26.04	26.57
	Equiv. Refl.: (2,-5,13), (3,2,13), (3,-5,-13), (5,-2,13), (5,-3,-13), (-2,5,-13), (-2,-3,13), (-3,5,13), (-3,-2,-13), (-5,2,-13), (-5,3,13)								
Quartz	(6,-1,-1)	8.193	71.51	0.282	0.6	2.89	1.63	36.12	36.16
	Equiv. Refl.: (6,-5,1), (-1,6,1), (-1,-5,-1), (-5,6,-1), (-5,-1,1)								
Sapph	(1,5,2)	8.43	77.39	0.214	0.8	1.933	1.55	24.17	24.22
	Equiv. Refl.: (1,-6,-2), (5,1,-2), (5,-6,2), (6,-1,-2), (6,-5,2), (-1,6,2), (-1,-5,-2), (-5,6,-2), (-5,-1,2), (-6,1,2), (-6,5,-2)								
LiNbO3	(3,3,9)	8.27	73.2	0.188	1.3	2.608	3.43	32.59	32.77
	Equiv. Refl.: (3,3,-9), (3,-6,9), (3,-6,-9), (6,-3,9), (6,-3,-9), (-3,6,9), (-3,6,-9), (-3,-3,9), (-3,-3,-9), (-6,3,9), (-6,3,-9)								
Quartz	(1,5,1)	8.193	71.51	0.118	0.6	2.89	1.63	36.12	36.16
	Equiv. Refl.: (1,-6,-1), (5,1,-1), (5,-6,1), (-6,1,1), (-6,5,-1)								

Ei =	8.616	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Si	(2,4,6)	8.542	82.47	31.8187	28.29	1.1382	32.2	14.23	35.2
	Equiv. Refl.: (2,6,4), (4,2,6), (4,6,2), (6,2,4), (6,4,2)								
Ge	(2,4,6)	8.2	72.12	27.4205	25.24	2.7788	70.15	34.74	78.28
	Equiv. Refl.: (2,6,4), (4,2,6), (4,6,2), (6,2,4), (6,4,2)								
Ge	(1,3,7)	8.417	77.66	23.8416	23.91	1.8854	45.08	23.57	50.87
	Equiv. Refl.: (1,7,3), (3,1,7), (3,5,5), (3,7,1), (5,3,5), (5,5,3), (7,1,3), (7,3,1)								
Si	(1,1,7)	8.152	71.1	9.9475	9.09	2.9497	26.81	36.87	45.59
	Equiv. Refl.: (1,5,5), (1,7,1), (5,1,5), (5,5,1), (7,1,1)								
LiNbO3	(4,2,-10)	8.61	87.88	186.531	173.4	0.32	55.41	3.99	55.55
	Equiv. Refl.: (-2,-4,-10), (-4,6,-10), (-6,4,-10)								
LiNbO3	(2,-6,-10)	8.61	87.88	186.53	173.4	0.32	55.41	3.99	55.55
	Equiv. Refl.: (6,-2,-10)								
LiNbO3	(4,-6,10)	8.61	87.88	172.534	173.4	0.32	55.41	3.99	55.55
	Equiv. Refl.: (6,-4,10)								
LiNbO3	(2,4,10)	8.61	87.88	172.533	173.4	0.32	55.41	3.99	55.55
	Equiv. Refl.: (-2,6,10), (-4,-2,10), (-6,2,10)								
Quartz	(5,0,-4)	8.609	87.75	96.52	82.7	0.339	28.04	4.24	28.36
	Equiv. Refl.: (-5,0,4)								
Quartz	(5,-5,4)	8.609	87.75	96.519	82.7	0.339	28.04	4.24	28.36
	Equiv. Refl.: (-5,5,-4)								
Quartz	(0,5,4)	8.609	87.75	96.51	82.7	0.339	28.04	4.24	28.36
	Equiv. Refl.: (0,-5,-4)								
Sapph	(1,2,-16)	8.612	88.19	84.814	78.7	0.272	21.39	3.4	21.66
	Equiv. Refl.: (1,-3,16), (2,1,16), (2,-3,-16), (3,-1,16), (3,-2,-16), (-1,3,-16), (-1,-2,16), (-2,3,16), (-2,-1,-16), (-3,1,-16), (-3,2,16)								
Sapph	(0,0,18)	8.591	85.66	74.649	63.5	0.655	41.56	8.18	42.36
	Equiv. Refl.: (0,0,-18)								
Sapph	(1,3,-14)	8.607	87.32	55.769	51.7	0.404	20.87	5.05	21.48
	Equiv. Refl.: (1,-4,14), (3,1,14), (3,-4,-14), (4,-1,14), (4,-3,-14), (-1,4,-14), (-1,-3,14), (-3,4,14), (-3,-1,-14), (-4,1,-14), (-4,3,14)								
Sapph	(1,5,-4)	8.591	85.64	55.365	48.4	0.657	31.79	8.21	32.83
	Equiv. Refl.: (1,-6,4), (5,1,4), (5,-6,-4), (6,-1,4), (6,-5,-4), (-1,6,-4), (-1,-5,4), (-5,6,4), (-5,-1,-4), (-6,1,-4), (-6,5,4)								
LiNbO3	(4,3,-2)	8.505	80.8	45.278	42.3	1.396	59.04	17.44	61.56
	Equiv. Refl.: (-3,-4,-2), (-4,7,-2), (-7,4,-2)								
LiNbO3	(3,-7,-2)	8.505	80.8	45.277	42.3	1.396	59.04	17.44	61.56
	Equiv. Refl.: (7,-3,-2)								
LiNbO3	(3,4,2)	8.505	80.8	42.905	42.3	1.396	59.04	17.44	61.56
	Equiv. Refl.: (4,-7,2), (7,-4,2), (-3,7,2), (-4,-3,2), (-7,3,2)								
LiNbO3	(1,5,8)	8.528	81.83	41.833	41.2	1.237	50.96	15.47	53.26
	Equiv. Refl.: (5,-6,8), (6,-5,8), (-1,6,8), (-5,-1,8), (-6,1,8)								
LiNbO3	(1,-6,-8)	8.528	81.83	41.7	41.2	1.237	50.96	15.47	53.26
	Equiv. Refl.: (5,1,-8), (6,-1,-8), (-1,-5,-8), (-5,6,-8), (-6,5,-8)								
Quartz	(-5,2,-5)	8.557	83.3	38.918	32.6	1.012	32.95	12.65	35.3
	Equiv. Refl.: (-5,3,5)								
Quartz	(3,-5,-5)	8.557	83.3	38.914	32.5	1.012	32.95	12.65	35.29
Quartz	(2,-5,5)	8.557	83.3	38.913	32.5	1.012	32.95	12.65	35.29

Ei = Cryst	8.616 Refl (h,k,l)	keV EB [keV]	Θ B [$^{\circ}$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(2,3,-5) Equiv. Refl.: (3,2,5)	8.557	83.3	38.912	32.5	1.012	32.95	12.65	35.29
Quartz	(5,-2,5)	8.557	83.3	38.491	32.6	1.012	32.95	12.65	35.3
Quartz	(5,-3,-5)	8.557	83.3	38.49	32.6	1.012	32.95	12.65	35.3
Quartz	(-2,5,-5) Equiv. Refl.: (-2,-3,5)	8.557	83.3	38.486	32.5	1.012	32.95	12.65	35.29
Quartz	(-3,5,5)	8.557	83.3	38.485	32.5	1.012	32.95	12.65	35.29
Quartz	(-3,-2,-5)	8.557	83.3	38.483	32.5	1.012	32.95	12.65	35.29
LiNbO3	(0,6,0) Equiv. Refl.: (6,-6,0), (-6,0,0)	8.343	75.54	31.843	29.8	2.222	66.27	27.78	71.86
LiNbO3	(0,-6,0) Equiv. Refl.: (6,0,0), (-6,6,0)	8.343	75.54	31.155	29.8	2.222	66.27	27.78	71.86
LiNbO3	(1,1,-18) Equiv. Refl.: (1,-2,-18), (2,-1,-18), (-1,2,-18), (-1,-1,-18), (-2,1,-18)	8.402	77.2	28.51	27	1.958	52.94	24.48	58.33
LiNbO3	(0,-4,-14) Equiv. Refl.: (4,0,-14), (-4,4,-14)	8.374	76.4	27.607	26.1	2.085	54.41	26.06	60.33
LiNbO3	(1,1,18) Equiv. Refl.: (1,-2,18), (2,-1,18), (-1,2,18), (-1,-1,18), (-2,1,18)	8.402	77.2	26.399	27	1.958	52.94	24.48	58.33
LiNbO3	(1,-5,12) Equiv. Refl.: (4,1,12), (5,-1,12), (-1,-4,12), (-4,5,12), (-5,4,12)	8.331	75.21	26.125	24.6	2.275	55.92	28.44	62.73
LiNbO3	(0,4,14) Equiv. Refl.: (4,-4,14), (-4,0,14)	8.374	76.4	25.609	26.1	2.085	54.41	26.06	60.33
LiNbO3	(1,4,12) Equiv. Refl.: (4,-5,12), (5,-4,12), (-1,5,12), (-4,-1,12), (-5,1,12)	8.331	75.21	25.272	23.9	2.275	54.34	28.44	61.33
LiNbO3	(1,4,-12) Equiv. Refl.: (4,-5,-12), (5,-4,-12), (-1,5,-12), (-4,-1,-12), (-5,1,-12)	8.331	75.21	24.184	24.6	2.275	55.92	28.44	62.73
LiNbO3	(1,-5,-12) Equiv. Refl.: (4,1,-12), (5,-1,-12), (-1,-4,-12), (-4,5,-12), (-5,4,-12)	8.331	75.21	23.344	23.9	2.275	54.34	28.44	61.33
LiNbO3	(5,-5,10)	8.266	73.62	23.085	21.2	2.532	53.74	31.65	62.37
LiNbO3	(0,5,10) Equiv. Refl.: (-5,0,10)	8.266	73.62	23.084	21.2	2.532	53.74	31.65	62.37
LiNbO3	(0,-5,-10) Equiv. Refl.: (5,0,-10), (-5,5,-10)	8.266	73.62	19.844	21.2	2.532	53.74	31.65	62.37
LiNbO3	(2,-6,8) Equiv. Refl.: (4,2,8), (6,-2,8), (-2,-4,8)	8.181	71.72	19.596	18.7	2.846	53.31	35.57	64.08
LiNbO3	(-4,6,8) Equiv. Refl.: (-6,4,8)	8.181	71.72	19.595	18.7	2.846	53.31	35.57	64.08
LiNbO3	(2,4,-8) Equiv. Refl.: (4,-6,-8), (6,-4,-8), (-2,6,-8), (-4,-2,-8), (-6,2,-8)	8.181	71.72	18.098	18.7	2.846	53.31	35.57	64.08
Quartz	(2,2,6)	8.534	82.11	16.86	15.2	1.194	18.13	14.92	23.48
Quartz	(2,-4,-6)	8.534	82.11	16.859	15.2	1.194	18.13	14.92	23.48
Quartz	(2,-4,6)	8.534	82.11	16.858	15.2	1.194	18.13	14.92	23.48
Quartz	(2,2,-6)	8.534	82.11	16.857	15.2	1.194	18.13	14.92	23.48
Quartz	(-4,2,-6)	8.534	82.11	16.854	15.2	1.194	18.12	14.92	23.48
Quartz	(-4,2,6)	8.534	82.11	16.851	15.2	1.194	18.12	14.92	23.47
Quartz	(-2,-2,-6)	8.534	82.11	16.6	15.2	1.194	18.13	14.92	23.48
Quartz	(-2,4,6)	8.534	82.11	16.599	15.2	1.194	18.13	14.92	23.48
Quartz	(-2,4,-6) Equiv. Refl.: (-2,-2,6)	8.534	82.11	16.598	15.2	1.194	18.13	14.92	23.48
Quartz	(4,-2,6)	8.534	82.11	16.59	15.2	1.194	18.12	14.92	23.48
Quartz	(4,-2,-6)	8.534	82.11	16.587	15.2	1.194	18.12	14.92	23.47

Ei = Cryst	8.616 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(-3,5,-5)	8.557	83.3	14.235	13.5	1.012	13.63	12.65	18.6
Quartz	(-3,-2,5)	8.557	83.3	14.233	13.5	1.012	13.63	12.65	18.6
Quartz	(-2,5,5)	8.557	83.3	14.228	13.5	1.012	13.62	12.65	18.59
Quartz	(-2,-3,-5)	8.557	83.3	14.227	13.5	1.012	13.62	12.65	18.59
Quartz	(5,-2,-5)	8.557	83.3	14.218	13.5	1.012	13.62	12.65	18.59
Quartz	(5,-3,5)	8.557	83.3	14.217	13.4	1.012	13.62	12.65	18.59
Quartz	(3,-5,5)	8.557	83.3	13.947	13.5	1.012	13.63	12.65	18.6
Quartz	(3,2,-5)	8.557	83.3	13.945	13.5	1.012	13.63	12.65	18.6
Quartz	(2,-5,-5)	8.557	83.3	13.939	13.5	1.012	13.62	12.65	18.59
Quartz	(2,3,5)	8.557	83.3	13.938	13.5	1.012	13.62	12.65	18.59
Quartz	(-5,2,5)	8.557	83.3	13.929	13.5	1.012	13.62	12.65	18.59
Equiv. Refl.: (-5,3,-5)									
Sapph	(2,4,4)	8.186	71.83	12.322	10.7	2.828	30.14	35.35	46.45
Equiv. Refl.: (2,-6,-4), (4,2,-4), (4,-6,4), (6,-2,-4), (6,-4,4), (-2,6,4), (-2,-4,-4), (-4,6,-4), (-4,-2,4), (-6,2,4), (-6,4,-4)									
Sapph	(0,2,16)	8.208	72.3	11.599	10.2	2.75	28.08	34.38	44.39
Equiv. Refl.: (0,-2,-16), (2,0,-16), (2,-2,16), (-2,0,16), (-2,-2,-16)									
Quartz	(1,5,-1)	8.193	71.97	11.529	9.7	2.805	27.31	35.06	44.44
Equiv. Refl.: (1,-6,1)									
Quartz	(-6,1,-1)	8.193	71.97	11.528	9.7	2.805	27.31	35.06	44.44
Equiv. Refl.: (-6,5,1)									
Quartz	(5,1,1)	8.193	71.97	11.527	9.7	2.805	27.31	35.06	44.44
Equiv. Refl.: (5,-6,-1)									
Quartz	(6,-1,1)	8.193	71.97	11.476	9.7	2.805	27.31	35.06	44.44
Equiv. Refl.: (-1,6,-1), (-1,-5,1)									
Quartz	(6,-5,-1)	8.193	71.97	11.475	9.7	2.805	27.31	35.06	44.44
Equiv. Refl.: (-5,6,1), (-5,-1,-1)									
Quartz	(-2,1,-7)	8.416	77.64	11.047	9.7	1.888	18.28	23.6	29.85
Quartz	(-2,1,7)	8.416	77.64	11.046	9.7	1.888	18.28	23.6	29.85
Quartz	(1,-2,-7)	8.416	77.64	11.045	9.7	1.888	18.28	23.6	29.85
Quartz	(1,1,7)	8.416	77.64	11.042	9.7	1.888	18.28	23.6	29.85
Quartz	(1,-2,7)	8.416	77.64	11.04	9.7	1.888	18.27	23.6	29.84
Quartz	(1,1,-7)	8.416	77.64	11.039	9.7	1.888	18.27	23.6	29.84
Quartz	(2,-2,-7)	8.542	82.46	10.906	10.7	1.14	12.2	14.25	18.76
Equiv. Refl.: (-2,2,7)									
Quartz	(-2,0,-7)	8.542	82.46	10.903	10.7	1.14	12.19	14.25	18.76
Quartz	(2,0,7)	8.542	82.46	10.902	10.7	1.14	12.19	14.25	18.76
Quartz	(0,2,-7)	8.542	82.46	10.884	10.7	1.14	12.18	14.25	18.75
Equiv. Refl.: (0,-2,7)									
Quartz	(2,-1,7)	8.416	77.64	10.598	9.7	1.888	18.28	23.6	29.85
Quartz	(2,-1,-7)	8.416	77.64	10.596	9.7	1.888	18.28	23.6	29.85
Quartz	(-1,2,7)	8.416	77.64	10.594	9.7	1.888	18.28	23.6	29.85
Quartz	(-1,-1,-7)	8.416	77.64	10.591	9.7	1.888	18.28	23.6	29.85
Quartz	(-1,2,-7)	8.416	77.64	10.59	9.7	1.888	18.27	23.6	29.84
Quartz	(-1,-1,7)	8.416	77.64	10.589	9.7	1.888	18.27	23.6	29.84
Sapph	(2,3,-10)	8.111	70.28	9.755	8.6	3.088	26.52	38.61	46.84
Equiv. Refl.: (2,-5,10), (3,2,10), (3,-5,-10), (5,-2,10), (5,-3,-10), (-2,-5,-10), (-2,-3,10), (-3,5,10), (-3,-2,-10), (-5,2,-10), (-5,3,10)									
Quartz	(2,0,-7)	8.542	82.46	9.523	9.6	1.14	10.96	14.25	17.98
Equiv. Refl.: (-2,0,7)									

Ei = Cryst	8.616 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(2,-2,7)	8.542	82.46	9.521	9.6	1.14	10.96	14.25	17.98
	Equiv. Refl.: (-2,2,-7)								
Quartz	(5,0,4)	8.609	87.75	9.5	13.2	0.339	4.47	4.24	6.16
Quartz	(-5,0,-4)	8.609	87.75	9.499	13.2	0.339	4.47	4.24	6.16
Quartz	(5,-5,-4)	8.609	87.75	9.495	13.2	0.339	4.47	4.24	6.16
	Equiv. Refl.: (-5,5,4)								
Quartz	(0,2,7)	8.542	82.46	9.491	9.6	1.14	10.93	14.25	17.96
	Equiv. Refl.: (0,-2,-7)								
Quartz	(0,5,-4)	8.609	87.75	9.463	13.1	0.339	4.46	4.24	6.15
	Equiv. Refl.: (0,-5,4)								
Quartz	(-4,-2,-3)	8.443	78.49	9.459	8.2	1.755	14.42	21.93	26.25
Quartz	(-4,6,3)	8.443	78.49	9.457	8.2	1.755	14.42	21.93	26.25
Quartz	(6,-4,-3)	8.443	78.49	9.454	8.2	1.755	14.42	21.93	26.25
Quartz	(6,-2,3)	8.443	78.49	9.453	8.2	1.755	14.41	21.93	26.24
Quartz	(-2,6,-3)	8.443	78.49	9.452	8.2	1.755	14.41	21.93	26.24
Quartz	(-2,-4,3)	8.443	78.49	9.451	8.2	1.755	14.41	21.93	26.24
Quartz	(2,-6,-3)	8.443	78.49	9.032	8.2	1.755	14.32	21.93	26.2
Quartz	(2,4,3)	8.443	78.49	9.031	8.2	1.755	14.32	21.93	26.2
Quartz	(-6,4,-3)	8.443	78.49	9.029	8.2	1.755	14.32	21.93	26.19
Quartz	(-6,2,3)	8.443	78.49	9.027	8.2	1.755	14.32	21.93	26.19
Quartz	(4,2,-3)	8.443	78.49	9.026	8.2	1.755	14.32	21.93	26.19
	Equiv. Refl.: (4,-6,3)								
Quartz	(5,-1,4)	8.101	70.09	8.758	7.5	3.12	23.37	39	45.47
	Equiv. Refl.: (5,-4,-4), (-1,-4,4)								
Quartz	(-1,5,-4)	8.101	70.09	8.757	7.5	3.12	23.37	39	45.46
	Equiv. Refl.: (-4,5,4), (-4,-1,-4)								
Quartz	(1,4,-4)	8.101	70.09	8.607	7.5	3.12	23.37	39	45.47
Quartz	(1,-5,4)	8.101	70.09	8.606	7.5	3.12	23.37	39	45.46
	Equiv. Refl.: (4,1,4), (-5,1,-4), (-5,4,4)								
Quartz	(4,-5,-4)	8.101	70.09	8.605	7.5	3.12	23.36	39	45.46
Quartz	(-2,6,3)	8.443	78.49	8.398	8.2	1.755	14.32	21.93	26.2
	Equiv. Refl.: (-2,-4,-3)								
Quartz	(6,-4,3)	8.443	78.49	8.395	8.2	1.755	14.32	21.93	26.19
Quartz	(6,-2,-3)	8.443	78.49	8.393	8.2	1.755	14.32	21.93	26.19
Quartz	(-4,6,-3)	8.443	78.49	8.392	8.2	1.755	14.32	21.93	26.19
	Equiv. Refl.: (-4,-2,3)								
Quartz	(-1,0,7)	8.16	71.28	8.094	7.1	2.92	20.76	36.49	41.99
Quartz	(1,0,-7)	8.16	71.28	8.093	7.1	2.92	20.76	36.49	41.99
	Equiv. Refl.: (-1,1,-7)								
Quartz	(0,1,7)	8.16	71.28	8.092	7.1	2.92	20.76	36.49	41.98
	Equiv. Refl.: (0,-1,-7), (1,-1,7)								
Quartz	(4,2,3)	8.443	78.49	7.965	8.2	1.755	14.42	21.93	26.25
Quartz	(4,-6,-3)	8.443	78.49	7.964	8.2	1.755	14.42	21.93	26.25
Quartz	(-6,4,3)	8.443	78.49	7.961	8.2	1.755	14.42	21.93	26.25
Quartz	(-6,2,-3)	8.443	78.49	7.96	8.2	1.755	14.41	21.93	26.24
Quartz	(2,-6,3)	8.443	78.49	7.959	8.2	1.755	14.41	21.93	26.24
Quartz	(2,4,-3)	8.443	78.49	7.958	8.2	1.755	14.41	21.93	26.24
Quartz	(-6,3,3)	8.316	74.84	7.789	7.1	2.335	16.49	29.19	33.52
Quartz	(3,3,3)	8.316	74.84	7.788	7.1	2.335	16.49	29.19	33.52
	Equiv. Refl.: (3,-6,-3), (-6,3,-3)								

Ei =	8.616	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(3,3,-3)	8.316	74.84	7.787	7.1	2.335	16.49	29.19	33.52
	Equiv. Refl.: (3,-6,3)								
Sapph	(1,4,9)	8.123	70.52	7.78	7.3	3.047	22.2	38.09	44.09
	Equiv. Refl.: (1,4,-9), (1,-5,9), (1,-5,-9), (4,1,9), (4,1,-9), (4,-5,9), (4,-5,-9), (5,-1,9), (5,-1,-9), (5,-4,9), (5,-4,-9), (-1,5,9), (-1,5,-9), (-1,-4,9), (-1,-4,-9), (-4,5,9), (-4,5,-9), (-4,-1,9), (-4,-1,-9), (-5,1,9), (-5,1,-9), (-5,4,9), (-5,4,-9)								
Quartz	(-3,6,3)	8.316	74.84	7.744	7.1	2.335	16.49	29.19	33.52
Quartz	(6,-3,3)	8.316	74.84	7.743	7.1	2.335	16.49	29.19	33.52
	Equiv. Refl.: (6,-3,-3), (-3,6,-3), (-3,-3,3), (-3,-3,-3)								
Quartz	(-5,6,-2)	8.43	78.08	7.63	7.2	1.818	13.17	22.73	26.27
	Equiv. Refl.: (-5,-1,2)								
Quartz	(6,-5,2)	8.43	78.08	7.628	7.2	1.818	13.17	22.73	26.27
	Equiv. Refl.: (-1,6,2), (-1,-5,-2)								
Quartz	(6,-1,-2)	8.43	78.08	7.627	7.2	1.818	13.17	22.73	26.27
Quartz	(5,1,-2)	8.43	78.08	7.481	7.2	1.818	13.17	22.73	26.27
	Equiv. Refl.: (5,-6,2)								
Quartz	(1,5,2)	8.43	78.08	7.48	7.2	1.818	13.17	22.73	26.27
	Equiv. Refl.: (-6,5,-2)								
Quartz	(1,-6,-2)	8.43	78.08	7.479	7.2	1.818	13.17	22.73	26.27
	Equiv. Refl.: (-6,1,2)								
Sapph	(1,5,-1)	8.39	76.84	7.292	7.4	2.014	14.89	25.17	29.25
	Equiv. Refl.: (1,-6,1), (5,1,1), (5,-6,-1), (6,-1,1), (6,-5,-1), (-1,6,-1), (-1,-5,1), (-5,6,1), (-5,-1,-1), (-6,1,-1), (-6,5,1)								
Quartz	(0,3,6)	8.153	71.13	6.493	6	2.945	17.65	36.82	40.83
Quartz	(0,-3,-6)	8.153	71.13	6.492	6	2.945	17.65	36.82	40.83
Quartz	(-3,3,-6)	8.153	71.13	6.489	6	2.945	17.64	36.82	40.82
Quartz	(3,0,-6)	8.153	71.13	6.488	6	2.945	17.64	36.82	40.82
	Equiv. Refl.: (3,-3,6), (-3,0,6)								
Quartz	(0,-4,5)	8.177	71.62	4.897	4.6	2.862	13.28	35.78	38.17
Quartz	(0,4,-5)	8.177	71.62	4.896	4.6	2.862	13.28	35.78	38.17
Quartz	(4,0,5)	8.177	71.62	4.888	4.6	2.862	13.27	35.78	38.16
	Equiv. Refl.: (4,-4,-5), (-4,0,-5), (-4,4,5)								
Sapph	(2,4,-5)	8.311	74.7	4.56	4.9	2.357	11.49	29.46	31.62
	Equiv. Refl.: (2,-6,5), (4,2,5), (4,-6,-5), (6,-2,5), (6,-4,-5), (-2,6,-5), (-2,-4,5), (-4,6,5), (-4,-2,-5), (-6,2,-5), (-6,4,5)								
Quartz	(1,5,0)	8.112	70.31	4.111	3.7	3.083	11.52	38.54	40.23
	Equiv. Refl.: (1,-6,0), (5,1,0), (5,-6,0), (-6,1,0), (-6,5,0)								
Sapph	(2,3,11)	8.4	77.16	3.881	4.5	1.964	8.76	24.56	26.07
	Equiv. Refl.: (2,-5,-11), (3,2,-11), (3,-5,11), (5,-2,-11), (5,-3,11), (-2,5,11), (-2,-3,-11), (-3,5,-11), (-3,-2,11), (-5,2,11), (-5,3,-11)								
LiNbO3	(2,2,15)	8.258	73.42	3.774	6.5	2.564	16.67	32.06	36.13
	Equiv. Refl.: (2,2,-15), (2,-4,15), (2,-4,-15), (4,-2,15), (4,-2,-15), (-2,4,15), (-2,4,-15), (-2,-2,15), (-2,-2,-15), (-4,2,15), (-4,2,-15)								
Quartz	(6,-1,0)	8.112	70.31	3.683	3.7	3.083	11.52	38.54	40.23
	Equiv. Refl.: (6,-5,0), (-1,6,0), (-1,-5,0), (-5,6,0), (-5,-1,0)								
LiNbO3	(3,4,-1)	8.47	79.43	3.24	7.1	1.608	11.42	20.1	23.11
	Equiv. Refl.: (3,-7,1), (4,3,1), (4,-7,-1), (7,-3,1), (7,-4,-1), (-3,7,-1), (-3,-4,1), (-4,7,1), (-4,-3,-1), (-7,3,-1), (-7,4,1)								
Quartz	(3,-3,-6)	8.153	71.13	2.578	2.9	2.945	8.62	36.82	37.81
	Equiv. Refl.: (-3,3,6)								

Ei =	8.616	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(3,0,6)	8.153	71.13	2.577	2.9	2.945	8.62	36.82	37.81
	Equiv. Refl.: (-3,0,-6)								
Quartz	(0,3,-6)	8.153	71.13	2.569	2.9	2.945	8.6	36.82	37.81
	Equiv. Refl.: (0,-3,6)								
Quartz	(6,-1,2)	8.43	78.08	2.277	3.1	1.818	5.56	22.73	23.4
	Equiv. Refl.: (6,-5,-2), (-5,6,2), (-5,-1,-2)								
Quartz	(-1,6,-2)	8.43	78.08	2.276	3.1	1.818	5.56	22.73	23.4
	Equiv. Refl.: (-1,-5,2)								
Quartz	(5,1,2)	8.43	78.08	2.066	3.1	1.818	5.57	22.73	23.4
	Equiv. Refl.: (5,-6,-2), (-6,1,-2), (-6,5,2)								
Quartz	(1,5,-2)	8.43	78.08	2.065	3.1	1.818	5.56	22.73	23.4
	Equiv. Refl.: (1,-6,2)								
Quartz	(0,4,5)	8.177	71.62	2.045	2.7	2.862	7.6	35.78	36.58
	Equiv. Refl.: (0,-4,-5)								
Quartz	(4,-4,5)	8.177	71.62	2.043	2.7	2.862	7.59	35.78	36.58
	Equiv. Refl.: (-4,4,-5)								
Quartz	(4,0,-5)	8.177	71.62	2.042	2.7	2.862	7.59	35.78	36.58
	Equiv. Refl.: (-4,0,5)								
LiNbO3	(1,2,17)	8.445	78.58	1.858	5	1.741	8.71	21.76	23.44
	Equiv. Refl.: (1,-3,-17), (2,1,-17), (2,-3,17), (3,-1,-17), (3,-2,17), (-1,3,17), (-1,-2,-17), (-2,3,-17), (-2,-1,17), (-3,1,17), (-3,2,-17)								
Quartz	(0,1,-7)	8.16	71.28	1.783	2.4	2.92	6.95	36.49	37.15
	Equiv. Refl.: (0,-1,7)								
Quartz	(1,-1,-7)	8.16	71.28	1.776	2.4	2.92	6.93	36.49	37.15
	Equiv. Refl.: (-1,1,7)								
Quartz	(1,0,7)	8.16	71.28	1.775	2.4	2.92	6.92	36.49	37.15
	Equiv. Refl.: (-1,0,-7)								
LiNbO3	(1,5,-7)	8.351	75.75	1.72	4.4	2.189	9.58	27.36	28.99
	Equiv. Refl.: (1,-6,7), (5,1,7), (5,-6,-7), (6,-1,7), (6,-5,-7), (-1,6,-7), (-1,-5,7), (-5,6,7), (-5,-1,-7), (-6,1,-7), (-6,5,7)								
Sapph	(0,5,-8)	8.436	78.26	1.284	2.3	1.791	4.19	22.38	22.77
	Equiv. Refl.: (0,-5,8), (5,0,8), (5,-5,-8), (-5,0,-8), (-5,5,8)								
Sapph	(1,3,13)	8.241	73.04	1.23	2	2.627	5.35	32.84	33.27
	Equiv. Refl.: (1,-4,-13), (3,1,-13), (3,-4,13), (4,-1,-13), (4,-3,13), (-1,4,13), (-1,-3,-13), (-3,4,-13), (-3,-1,13), (-4,1,13), (-4,3,-13)								
Quartz	(1,4,4)	8.101	70.09	1.155	1.6	3.12	4.86	39	39.3
	Equiv. Refl.: (1,-5,-4)								
Quartz	(-5,4,-4)	8.101	70.09	1.153	1.6	3.12	4.85	39	39.3
Quartz	(4,1,-4)	8.101	70.09	1.152	1.6	3.12	4.85	39	39.3
	Equiv. Refl.: (4,-5,4), (-5,1,4)								
Quartz	(-1,5,4)	8.101	70.09	0.881	1.6	3.12	4.86	39	39.3
	Equiv. Refl.: (-1,-4,-4)								
Quartz	(5,-4,4)	8.101	70.09	0.879	1.6	3.12	4.85	39	39.3
Quartz	(-4,5,-4)	8.101	70.09	0.878	1.6	3.12	4.85	39	39.3
	Equiv. Refl.: (-4,-1,4)								
Quartz	(5,-1,-4)	8.101	70.09	0.877	1.6	3.12	4.85	39	39.3
Sapph	(3,3,6)	8.325	75.07	0.677	1.4	2.297	3.2	28.71	28.89
	Equiv. Refl.: (3,3,-6), (3,-6,6), (3,-6,-6), (6,-3,6), (6,-3,-6), (-3,6,6), (-3,6,-6), (-3,-3,6), (-3,-3,-6), (-6,3,6), (-6,3,-6)								
LiNbO3	(2,3,-13)	8.398	77.09	0.62	2.7	1.975	5.25	24.69	25.24
	Equiv. Refl.: (2,-5,13), (3,2,13), (3,-5,-13), (5,-2,13), (5,-3,-13), (-2,5,-13), (-2,-3,13), (-3,5,13), (-3,-2,-13), (-5,2,-13), (-5,3,13)								

Quartz	(6,-1,-1)	8.193	71.97	0.289	0.6	2.805	1.63	35.06	35.1
	Equiv. Refl.: (6,-5,1), (-1,6,1), (-1,-5,-1), (-5,6,-1), (-5,-1,1)								
Sapph	(1,5,2)	8.43	78.09	0.226	0.9	1.817	1.55	22.72	22.77
	Equiv. Refl.: (1,-6,-2), (5,1,-2), (5,-6,2), (6,-1,-2), (6,-5,2), (-1,6,2), (-1,-5,-2), (-5,6,-2), (-5,-1,2), (-6,1,2), (-6,5,-2)								
LiNbO3	(3,3,9)	8.27	73.72	0.193	1.4	2.516	3.42	31.46	31.64
	Equiv. Refl.: (3,3,-9), (3,-6,9), (3,-6,-9), (6,-3,9), (6,-3,-9), (-3,6,9), (-3,6,-9), (-3,-3,9), (-3,-3,-9), (-6,3,9), (-6,3,-9)								
Quartz	(1,5,1)	8.193	71.97	0.121	0.6	2.805	1.63	35.06	35.1
	Equiv. Refl.: (1,-6,-1), (5,1,-1), (5,-6,1), (-6,1,1), (-6,5,-1)								

Ei =	9.572	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(5,5,5)	9.49	82.48	23.7964	24	1.2631	30.31	15.79	34.18
	Equiv. Refl.: (1,7,5), (5,1,7), (1,5,7), (5,7,1), (7,1,5), (7,5,1)								
Ge	(0,6,6)	9.298	76.26	21.2518	19.85	2.3409	46.47	29.26	54.92
	Equiv. Refl.: (2,2,8), (2,8,2), (6,0,6), (6,6,0), (8,2,2)								
Si	(0,0,8)	9.132	72.55	10.9607	9.27	3.0086	27.9	37.61	46.83
	Equiv. Refl.: (0,8,0), (8,0,0)								
Si	(3,3,7)	9.343	77.45	9.2372	8.5	2.1316	18.11	26.65	32.22
	Equiv. Refl.: (3,7,3), (7,3,3)								
LiNbO3	(3,4,-10)	9.567	88.22	182.578	167.4	0.298	49.86	3.72	50
	Equiv. Refl.: (-3,7,-10), (-4,-3,-10), (-7,3,-10)								
LiNbO3	(4,-7,-10)	9.567	88.22	182.577	167.4	0.298	49.86	3.72	50
	Equiv. Refl.: (7,-4,-10)								
LiNbO3	(3,-7,10)	9.567	88.22	175.698	167.4	0.298	49.86	3.72	50
	Equiv. Refl.: (7,-3,10)								
LiNbO3	(4,3,10)	9.567	88.22	175.697	167.4	0.298	49.86	3.72	50
	Equiv. Refl.: (-3,-4,10)								
LiNbO3	(-4,7,10)	9.567	88.22	175.696	167.4	0.298	49.86	3.72	50
	Equiv. Refl.: (-7,4,10)								
Quartz	(7,-1,0)	9.554	86.5	35.369	30.6	0.586	17.94	7.33	19.38
	Equiv. Refl.: (7,-6,0), (-1,7,0), (-1,-6,0), (-6,7,0), (-6,-1,0)								
Quartz	(1,6,0)	9.554	86.5	35.013	30.6	0.586	17.94	7.33	19.38
	Equiv. Refl.: (1,-7,0), (6,1,0), (6,-7,0), (-7,1,0), (-7,6,0)								
LiNbO3	(0,-5,14)	9.356	77.8	27.909	24.9	2.07	51.46	25.87	57.6
	Equiv. Refl.: (5,0,14), (-5,5,14)								
LiNbO3	(0,5,-14)	9.356	77.8	25.108	24.9	2.07	51.46	25.87	57.6
	Equiv. Refl.: (-5,0,-14)								
LiNbO3	(5,-5,-14)	9.356	77.8	25.107	24.9	2.07	51.46	25.87	57.6
LiNbO3	(2,2,-18)	9.38	78.52	24.109	22.7	1.945	44.24	24.31	50.48
	Equiv. Refl.: (2,-4,-18), (4,-2,-18), (-2,4,-18), (-2,-2,-18), (-4,2,-18)								
LiNbO3	(2,3,-16)	9.377	78.41	24.016	22.2	1.962	43.48	24.53	49.92
	Equiv. Refl.: (-2,5,-16), (-3,-2,-16), (-5,2,-16)								
LiNbO3	(3,-5,-16)	9.377	78.41	24.015	22.2	1.962	43.48	24.53	49.92
	Equiv. Refl.: (5,-3,-16)								
LiNbO3	(2,2,18)	9.38	78.52	23.169	22.7	1.945	44.24	24.31	50.48
	Equiv. Refl.: (2,-4,18), (4,-2,18), (-2,4,18), (-2,-2,18), (-4,2,18)								
LiNbO3	(2,-5,16)	9.377	78.41	21.887	22.2	1.962	43.48	24.53	49.92
	Equiv. Refl.: (3,2,16), (5,-2,16), (-2,-3,16), (-3,5,16), (-5,3,16)								
LiNbO3	(0,-3,18)	9.066	71.28	21.836	19.3	3.243	62.56	40.53	74.54
	Equiv. Refl.: (3,0,18), (-3,3,18)								
LiNbO3	(0,3,18)	9.066	71.28	21.61	19.1	3.243	61.89	40.53	73.98
	Equiv. Refl.: (3,-3,18), (-3,0,18)								
LiNbO3	(1,6,-2)	9.162	73.17	21.016	19.3	2.896	55.92	36.2	66.62
	Equiv. Refl.: (6,-7,-2), (7,-6,-2), (-1,7,-2), (-6,-1,-2), (-7,1,-2)								
LiNbO3	(0,2,-20)	9.366	78.09	20.926	19.9	2.019	40.11	25.24	47.39
	Equiv. Refl.: (2,-2,-20), (-2,0,-20)								
LiNbO3	(1,-7,2)	9.162	73.17	20.465	19.3	2.896	55.92	36.2	66.62
	Equiv. Refl.: (6,1,2), (7,-1,2), (-1,-6,2), (-6,7,2), (-7,6,2)								

Ei =	9.572	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(0,3,-18)	9.066	71.28	20.195	19.3	3.243	62.56	40.53	74.54
	Equiv. Refl.: (3,-3,-18), (-3,0,-18)								
LiNbO3	(0,-3,-18)	9.066	71.28	19.903	19.1	3.243	61.89	40.53	73.98
	Equiv. Refl.: (3,0,-18), (-3,3,-18)								
LiNbO3	(0,-2,20)	9.366	78.09	19.582	19.9	2.019	40.11	25.24	47.39
	Equiv. Refl.: (2,0,20), (-2,2,20)								
LiNbO3	(3,4,8)	9.183	73.62	18.97	17.4	2.814	48.88	35.17	60.21
	Equiv. Refl.: (4,-7,8), (7,-4,8), (-3,7,8), (-4,-3,8), (-7,3,8)								
LiNbO3	(1,6,4)	9.292	76.1	17.564	16.9	2.368	39.95	29.6	49.72
	Equiv. Refl.: (6,-7,4), (7,-6,4), (-1,7,4), (-6,-1,4), (-7,1,4)								
LiNbO3	(3,-7,-8)	9.183	73.62	17.511	17.4	2.814	48.87	35.17	60.21
	Equiv. Refl.: (4,3,-8), (7,-3,-8), (-3,-4,-8), (-4,7,-8), (-7,4,-8)								
LiNbO3	(0,-1,-20)	9.051	71.01	16.76	15.8	3.294	52.19	41.18	66.48
	Equiv. Refl.: (1,0,-20), (-1,1,-20)								
LiNbO3	(0,1,20)	9.051	71.01	16.738	15.8	3.294	52.19	41.18	66.48
	Equiv. Refl.: (1,-1,20), (-1,0,20)								
LiNbO3	(1,-7,-4)	9.292	76.1	16.688	16.9	2.368	39.95	29.6	49.72
	Equiv. Refl.: (6,1,-4), (7,-1,-4), (-1,-6,-4), (-6,7,-4), (-7,6,-4)								
LiNbO3	(2,-7,-6)	9.089	71.71	16.468	15.7	3.163	49.51	39.54	63.36
	Equiv. Refl.: (5,2,-6), (7,-2,-6), (-2,-5,-6), (-5,7,-6), (-7,5,-6)								
LiNbO3	(2,5,6)	9.089	71.71	16.37	15.7	3.163	49.51	39.54	63.36
	Equiv. Refl.: (5,-7,6), (7,-5,6), (-2,7,6), (-5,-2,6), (-7,2,6)								
LiNbO3	(3,3,-12)	9	70.09	16.166	14.9	3.467	51.73	43.33	67.48
	Equiv. Refl.: (-3,6,-12), (-3,-3,-12), (-6,3,-12)								
LiNbO3	(3,-6,-12)	9	70.09	16.165	14.9	3.467	51.73	43.33	67.48
	Equiv. Refl.: (6,-3,-12)								
Sapph	(2,3,14)	9.362	77.98	16.085	13.8	2.037	28.03	25.47	37.87
	Equiv. Refl.: (2,-5,-14), (3,2,-14), (3,-5,14), (5,-2,-14), (5,-3,14), (-2,5,14), (-2,-3,-14), (-3,5,-14), (-3,-2,14), (-5,2,14), (-5,3,-14)								
LiNbO3	(2,5,-6)	9.089	71.71	16.049	15.2	3.163	48.14	39.54	62.3
	Equiv. Refl.: (-2,7,-6), (-5,-2,-6), (-7,2,-6)								
LiNbO3	(5,-7,-6)	9.089	71.71	16.048	15.2	3.163	48.14	39.54	62.3
	Equiv. Refl.: (7,-5,-6)								
Sapph	(0,6,0)	9.027	70.56	15.747	13	3.378	43.86	42.22	60.88
	Equiv. Refl.: (0,-6,0), (6,0,0), (6,-6,0), (-6,0,0), (-6,6,0)								
LiNbO3	(2,-7,6)	9.089	71.71	15.718	15.2	3.163	48.14	39.54	62.3
	Equiv. Refl.: (5,2,6), (7,-2,6), (-2,-5,6), (-5,7,6), (-7,5,6)								
LiNbO3	(0,-4,16)	9.062	71.22	15.656	14.6	3.255	47.38	40.69	62.45
	Equiv. Refl.: (4,0,16), (-4,4,16)								
LiNbO3	(3,3,12)	9	70.09	15.271	14.9	3.467	51.73	43.33	67.48
	Equiv. Refl.: (3,-6,12), (6,-3,12), (-3,-3,12)								
LiNbO3	(-3,6,12)	9	70.09	15.27	14.9	3.467	51.73	43.33	67.48
	Equiv. Refl.: (-6,3,12)								
Quartz	(7,-3,3)	9.507	83.32	14.943	13.1	1.12	14.67	14.01	20.28
	Equiv. Refl.: (7,-4,-3), (-3,7,-3)								
Quartz	(-3,-4,3)	9.507	83.32	14.941	13.1	1.12	14.67	14.01	20.28
Quartz	(-4,7,3)	9.507	83.32	14.934	13.1	1.12	14.66	14.01	20.28
Quartz	(-4,-3,-3)	9.507	83.32	14.933	13.1	1.12	14.66	14.01	20.28
Quartz	(-7,3,-3)	9.507	83.32	14.75	13.1	1.12	14.67	14.01	20.28
	Equiv. Refl.: (-7,4,3)								
Quartz	(3,-7,3)	9.507	83.32	14.749	13.1	1.12	14.67	14.01	20.28

Ei = Cryst	9.572 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(3,4,-3)	9.507	83.32	14.748	13.1	1.12	14.67	14.01	20.28
Quartz	(4,-7,-3)	9.507	83.32	14.74	13.1	1.12	14.66	14.01	20.28
Quartz	(4,3,3)	9.507	83.32	14.739	13.1	1.12	14.66	14.01	20.28
LiNbO3	(0,4,-16)	9.062	71.22	14.603	14.6	3.255	47.38	40.69	62.45
Equiv. Refl.: (4,-4,-16), (-4,0,-16)									
Quartz	(-3,6,-5)	9.498	82.86	13.776	12	1.199	14.4	14.99	20.79
Equiv. Refl.: (-3,-3,5)									
Quartz	(6,-3,5)	9.498	82.86	13.768	12	1.199	14.4	14.99	20.79
Quartz	(6,-3,-5)	9.498	82.86	13.767	12	1.199	14.4	14.99	20.78
Quartz	(-3,-3,-5)	9.498	82.86	13.765	12	1.199	14.39	14.99	20.78
Quartz	(-3,6,5)	9.498	82.86	13.762	12	1.199	14.39	14.99	20.78
Quartz	(6,-6,3)	9.395	78.96	13.666	11.4	1.868	21.22	23.35	31.55
Equiv. Refl.: (-6,6,-3)									
Quartz	(6,0,-3)	9.395	78.96	13.665	11.4	1.868	21.22	23.35	31.55
Equiv. Refl.: (-6,0,3)									
Quartz	(0,6,3)	9.395	78.96	13.658	11.4	1.868	21.21	23.35	31.54
Equiv. Refl.: (0,-6,-3)									
Quartz	(3,3,-5)	9.498	82.86	13.382	12	1.199	14.4	14.99	20.79
Equiv. Refl.: (3,-6,5)									
Quartz	(-6,3,-5)	9.498	82.86	13.374	12	1.199	14.4	14.99	20.79
Quartz	(-6,3,5)	9.498	82.86	13.373	12	1.199	14.4	14.99	20.78
Quartz	(3,3,5)	9.498	82.86	13.372	12	1.199	14.39	14.99	20.78
Quartz	(3,-6,-5)	9.498	82.86	13.369	12	1.199	14.39	14.99	20.78
Sapph	(2,4,10)	9.282	75.86	11.88	10	2.412	24.14	30.15	38.63
Equiv. Refl.: (2,-6,-10), (4,2,-10), (4,-6,10), (6,-2,-10), (6,-4,10), (-2,6,10), (-2,-4,-10), (-4,6,-10), (-4,-2,10), (-6,2,10), (-6,4,-10)									
Quartz	(7,-2,2)	9.384	78.61	11.609	9.5	1.928	18.39	24.1	30.31
Equiv. Refl.: (7,-5,-2)									
Quartz	(-2,7,-2)	9.384	78.61	11.607	9.5	1.928	18.39	24.1	30.31
Equiv. Refl.: (-2,-5,2)									
Quartz	(-5,7,2)	9.384	78.61	11.606	9.5	1.928	18.39	24.1	30.31
Equiv. Refl.: (-5,-2,-2)									
Quartz	(-7,2,-2)	9.384	78.61	11.275	9.5	1.928	18.39	24.1	30.31
Equiv. Refl.: (-7,5,2)									
Quartz	(2,-7,2)	9.384	78.61	11.274	9.5	1.928	18.39	24.1	30.31
Quartz	(2,5,-2)	9.384	78.61	11.273	9.5	1.928	18.39	24.1	30.31
Quartz	(5,2,2)	9.384	78.61	11.272	9.5	1.928	18.39	24.1	30.31
Equiv. Refl.: (5,-7,-2)									
Quartz	(-1,1,8)	9.291	76.09	10.931	9	2.371	21.44	29.64	36.59
Quartz	(1,-1,-8)	9.291	76.09	10.93	9	2.371	21.44	29.64	36.59
Equiv. Refl.: (-1,0,-8)									
Quartz	(1,0,8)	9.291	76.09	10.929	9	2.371	21.44	29.64	36.59
Quartz	(0,1,-8)	9.291	76.09	10.924	9	2.371	21.43	29.64	36.58
Equiv. Refl.: (0,-1,8)									
Quartz	(2,5,1)	9.171	73.35	10.613	8.9	2.862	25.48	35.77	43.92
Equiv. Refl.: (2,-7,-1), (5,2,-1), (5,-7,1), (-7,2,1), (-7,5,-1)									
Quartz	(7,-2,-1)	9.171	73.35	10.525	8.9	2.862	25.48	35.77	43.92
Equiv. Refl.: (7,-5,1), (-5,7,-1), (-5,-2,1)									
Quartz	(-2,7,1)	9.171	73.35	10.524	8.9	2.862	25.48	35.77	43.92
Equiv. Refl.: (-2,-5,-1)									

Ei = Cryst	9.572 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(3,0,-7)	9.142	72.76	10.409	8.4	2.971	24.96	37.14	44.75
Quartz	(0,3,7)	9.142	72.76	10.408	8.4	2.971	24.96	37.14	44.75
	Equiv. Refl.: (0,-3,-7), (3,-3,7), (-3,0,7)								
Quartz	(-3,3,-7)	9.142	72.76	10.407	8.4	2.971	24.96	37.14	44.75
LiNbO3	(2,5,9)	9.571	89.13	10.302	33.9	0.145	4.93	1.82	5.25
	Equiv. Refl.: (2,5,-9), (2,-7,9), (2,-7,-9), (5,2,9), (5,2,-9), (5,-7,9), (5,-7,-9), (7,-2,9), (7,-2,-9), (7,-5,9), (7,-5,-9), (-2,7,9), (-2,7,-9), (-2,-5,9), (-2,-5,-9), (-5,7,9), (-5,7,-9), (-5,-2,9), (-5,-2,-9), (-7,2,9), (-7,2,-9), (-7,5,9), (-7,5,-9)								
Sapph	(2,5,0)	9.395	78.97	9.659	8.7	1.866	16.16	23.33	28.38
	Equiv. Refl.: (2,-7,0), (5,2,0), (5,-7,0), (7,-2,0), (7,-5,0), (-2,7,0), (-2,-5,0), (-5,7,0), (-5,-2,0), (-7,2,0), (-7,5,0)								
Sapph	(2,5,3)	9.504	83.15	9.349	9.4	1.151	10.81	14.38	17.99
	Equiv. Refl.: (2,5,-3), (2,-7,3), (2,-7,-3), (5,2,3), (5,2,-3), (5,-7,3), (5,-7,-3), (7,-2,3), (7,-2,-3), (7,-5,3), (7,-5,-3), (-2,7,3), (-2,7,-3), (-2,-5,3), (-2,-5,-3), (-5,7,3), (-5,7,-3), (-5,-2,3), (-5,-2,-3), (-7,2,3), (-7,2,-3), (-7,5,3), (-7,5,-3)								
Sapph	(2,4,-11)	9.536	85.03	8.731	9.4	0.832	7.79	10.4	12.99
	Equiv. Refl.: (2,-6,11), (4,2,11), (4,-6,-11), (6,-2,11), (6,-4,-11), (-2,6,-11), (-2,-4,11), (-4,6,11), (-4,-2,-11), (-6,2,-11), (-6,4,11)								
Quartz	(7,-2,-2)	9.384	78.61	8.361	7.5	1.928	14.37	24.1	28.06
	Equiv. Refl.: (7,-5,2)								
Quartz	(-2,7,2)	9.384	78.61	8.36	7.5	1.928	14.37	24.1	28.06
	Equiv. Refl.: (-2,-5,-2)								
Quartz	(-5,7,-2)	9.384	78.61	8.359	7.5	1.928	14.37	24.1	28.05
	Equiv. Refl.: (-5,-2,2)								
Quartz	(-7,2,2)	9.384	78.61	8.343	7.5	1.928	14.37	24.1	28.06
Quartz	(2,-7,-2)	9.384	78.61	8.342	7.5	1.928	14.37	24.1	28.06
	Equiv. Refl.: (-7,5,-2)								
Quartz	(2,5,2)	9.384	78.61	8.341	7.5	1.928	14.37	24.1	28.05
	Equiv. Refl.: (5,2,-2), (5,-7,2)								
Quartz	(3,4,2)	9.155	73.02	8.332	6.8	2.923	19.93	36.54	41.62
	Equiv. Refl.: (3,-7,-2), (-7,3,2), (-7,4,-2)								
Quartz	(4,3,-2)	9.155	73.02	8.33	6.8	2.923	19.92	36.54	41.62
	Equiv. Refl.: (4,-7,2)								
Quartz	(-2,1,-8)	9.517	83.85	8.211	7.3	1.032	7.56	12.9	14.95
Quartz	(-2,1,8)	9.517	83.85	8.207	7.3	1.032	7.55	12.9	14.95
Quartz	(1,-2,-8)	9.517	83.85	8.196	7.3	1.032	7.54	12.9	14.95
Quartz	(1,1,8)	9.517	83.85	8.193	7.3	1.032	7.54	12.9	14.94
Quartz	(1,1,-8)	9.517	83.85	8.182	7.3	1.032	7.53	12.9	14.94
Quartz	(1,-2,8)	9.517	83.85	8.177	7.3	1.032	7.53	12.9	14.94
Quartz	(5,0,5)	9.272	75.61	8.164	6.9	2.457	16.93	30.71	35.06
	Equiv. Refl.: (5,-5,-5), (-5,0,-5), (-5,5,5)								
Quartz	(0,5,-5)	9.272	75.61	8.163	6.9	2.457	16.93	30.71	35.06
	Equiv. Refl.: (0,-5,5)								
Sapph	(3,4,2)	9.201	73.99	7.961	7.1	2.747	19.54	34.33	39.5
	Equiv. Refl.: (3,-7,-2), (4,3,-2), (4,-7,2), (7,-3,-2), (7,-4,2), (-3,7,2), (-3,-4,-2), (-4,7,-2), (-4,-3,2), (-7,3,2), (-7,4,-2)								
Quartz	(7,-3,-2)	9.155	73.02	7.938	6.8	2.923	19.93	36.54	41.62
	Equiv. Refl.: (7,-4,2), (-3,7,2), (-3,-4,-2)								
Quartz	(-4,7,-2)	9.155	73.02	7.936	6.8	2.923	19.92	36.54	41.62
	Equiv. Refl.: (-4,-3,2)								

Ei = Cryst	9.572 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(-6,1,4) Equiv. Refl.: (-6,5,-4)	9.32	76.82	7.849	6.9	2.242	15.41	28.03	31.99
Quartz	(1,5,4) Equiv. Refl.: (1,-6,-4)	9.32	76.82	7.846	6.9	2.242	15.41	28.03	31.98
Quartz	(5,1,-4) Equiv. Refl.: (5,-6,4)	9.32	76.82	7.84	6.9	2.242	15.4	28.03	31.98
Quartz	(6,-5,4)	9.32	76.82	7.742	6.9	2.242	15.42	28.03	31.99
Quartz	(6,-1,-4)	9.32	76.82	7.741	6.9	2.242	15.41	28.03	31.99
Quartz	(-1,6,4) Equiv. Refl.: (-1,-5,-4)	9.32	76.82	7.739	6.9	2.242	15.41	28.03	31.98
Quartz	(-5,6,-4) Equiv. Refl.: (-5,-1,4)	9.32	76.82	7.733	6.9	2.242	15.4	28.03	31.98
Quartz	(4,0,-6) Equiv. Refl.: (4,-4,6), (-4,0,6), (-4,4,-6)	9.018	70.42	7.629	6.3	3.406	21.61	42.57	47.74
Quartz	(0,4,6) Equiv. Refl.: (0,-4,-6)	9.018	70.42	7.626	6.3	3.406	21.6	42.57	47.74
Quartz	(2,-1,8)	9.517	83.85	6.634	7.3	1.032	7.56	12.9	14.95
Quartz	(2,-1,-8)	9.517	83.85	6.631	7.3	1.032	7.55	12.9	14.95
Quartz	(-1,2,8)	9.517	83.85	6.621	7.3	1.032	7.54	12.9	14.95
Quartz	(-1,-1,-8)	9.517	83.85	6.618	7.3	1.032	7.54	12.9	14.94
Quartz	(-1,-1,8)	9.517	83.85	6.608	7.3	1.032	7.53	12.9	14.94
Quartz	(-1,2,-8)	9.517	83.85	6.603	7.3	1.032	7.53	12.9	14.94
Quartz	(6,0,2) Equiv. Refl.: (-6,0,-2)	9.038	70.77	6.217	5.4	3.339	18.02	41.74	45.46
Quartz	(6,-6,-2) Equiv. Refl.: (-6,6,2)	9.038	70.77	6.216	5.4	3.339	18.02	41.74	45.46
Quartz	(0,6,-2) Equiv. Refl.: (0,-6,2)	9.038	70.77	6.214	5.4	3.339	18.02	41.74	45.46
Sapph	(1,3,16) Equiv. Refl.: (1,-4,-16), (3,1,-16), (3,-4,16), (4,-1,-16), (4,-3,16), (-1,4,16), (-1,-3,-16), (-3,4,-16), (-3,-1,16), (-4,1,16), (-4,3,-16)	9.367	78.12	5.779	5.6	2.013	11.2	25.17	27.55
Quartz	(-7,3,3) Equiv. Refl.: (-7,4,-3)	9.507	83.32	5.581	5.5	1.12	6.12	14.01	15.29
Quartz	(4,3,-3)	9.507	83.32	5.576	5.5	1.12	6.12	14.01	15.28
Quartz	(4,-7,3)	9.507	83.32	5.575	5.5	1.12	6.12	14.01	15.28
Quartz	(3,-7,-3)	9.507	83.32	5.574	5.5	1.12	6.12	14.01	15.28
Quartz	(3,4,3)	9.507	83.32	5.573	5.5	1.12	6.12	14.01	15.28
LiNbO3	(1,6,-5) Equiv. Refl.: (1,-7,5), (6,1,5), (6,-7,-5), (7,-1,5), (7,-6,-5), (-1,7,-5), (-1,-6,5), (-6,7,5), (-6,-1,-5), (-7,1,-5), (-7,6,5)	9.388	78.75	5.318	7.8	1.903	14.76	23.79	28
Quartz	(0,3,-7) Equiv. Refl.: (0,-3,7)	9.142	72.76	4.882	4.3	2.971	12.81	37.14	39.28
Quartz	(3,0,7) Equiv. Refl.: (-3,0,-7)	9.142	72.76	4.881	4.3	2.971	12.8	37.14	39.28
Quartz	(3,-3,-7) Equiv. Refl.: (-3,3,7)	9.142	72.76	4.879	4.3	2.971	12.8	37.14	39.28
Quartz	(7,-4,3)	9.507	83.32	4.732	5.5	1.12	6.12	14.01	15.29
Quartz	(7,-3,-3)	9.507	83.32	4.731	5.5	1.12	6.12	14.01	15.29
Quartz	(-4,-3,3)	9.507	83.32	4.727	5.5	1.12	6.12	14.01	15.28
Quartz	(-4,7,-3)	9.507	83.32	4.726	5.5	1.12	6.12	14.01	15.28

Ei = Cryst	9.572 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(-3,7,3)	9.507	83.32	4.725	5.5	1.12	6.12	14.01	15.28
Quartz	(-3,-4,-3)	9.507	83.32	4.724	5.5	1.12	6.12	14.01	15.28
Quartz	(4,-2,7)	9.484	82.21	4.432	4.4	1.309	5.74	16.37	17.34
	Equiv. Refl.: (4,-2,-7)								
Quartz	(-2,-2,-7)	9.484	82.21	4.43	4.4	1.309	5.74	16.37	17.34
Quartz	(-2,4,7)	9.484	82.21	4.426	4.4	1.309	5.73	16.37	17.34
Quartz	(-2,4,-7)	9.484	82.21	4.424	4.4	1.309	5.73	16.37	17.34
	Equiv. Refl.: (-2,-2,7)								
Quartz	(6,0,3)	9.395	78.96	4.389	4.3	1.868	8	23.35	24.68
	Equiv. Refl.: (-6,0,-3)								
Quartz	(6,-6,-3)	9.395	78.96	4.388	4.3	1.868	8	23.35	24.68
	Equiv. Refl.: (-6,6,3)								
Quartz	(0,6,-3)	9.395	78.96	4.385	4.3	1.868	8	23.35	24.68
	Equiv. Refl.: (0,-6,3)								
Quartz	(0,4,-6)	9.018	70.42	4.137	3.7	3.406	12.45	42.57	44.35
	Equiv. Refl.: (0,-4,6), (4,0,6), (-4,0,-6), (-4,4,6)								
Quartz	(4,-4,-6)	9.018	70.42	4.136	3.7	3.406	12.44	42.57	44.35
Sapph	(1,5,-7)	9.018	70.41	3.935	3.7	3.406	12.75	42.58	44.45
	Equiv. Refl.: (1,-6,7), (5,1,7), (5,-6,-7), (6,-1,7), (6,-5,-7), (-1,6,-7), (-1,-5,7), (-5,6,7), (-5,-1,-7), (-6,1,-7), (-6,5,7)								
Quartz	(-4,2,-7)	9.484	82.21	3.905	4.4	1.309	5.74	16.37	17.34
Quartz	(-4,2,7)	9.484	82.21	3.904	4.4	1.309	5.74	16.37	17.34
Quartz	(2,2,7)	9.484	82.21	3.902	4.4	1.309	5.74	16.37	17.34
Quartz	(2,-4,-7)	9.484	82.21	3.898	4.4	1.309	5.73	16.37	17.34
Sapph	(3,4,-4)	9.348	77.58	3.896	4.2	2.108	8.88	26.35	27.8
	Equiv. Refl.: (3,-7,4), (4,3,4), (4,-7,-4), (7,-3,4), (7,-4,-4), (-3,7,-4), (-3,-4,4), (-4,7,4), (-4,-3,-4), (-7,3,-4), (-7,4,4), (2,2,-7), (2,-4,7)								
LiNbO3	(2,4,13)	9.377	78.42	3.881	6.4	1.961	12.65	24.52	27.59
	Equiv. Refl.: (2,-6,-13), (4,2,-13), (4,-6,13), (6,-2,-13), (6,-4,13), (-2,6,13), (-2,-4,-13), (-4,6,-13), (-4,-2,13), (-6,2,13), (-6,4,-13)								
Quartz	(-5,7,1)	9.171	73.35	3.754	3.4	2.862	9.79	35.77	37.09
	Equiv. Refl.: (-5,-2,-1)								
Quartz	(7,-2,1)	9.171	73.35	3.753	3.4	2.862	9.79	35.77	37.09
	Equiv. Refl.: (7,-5,-1), (-2,7,-1), (-2,-5,1)								
Quartz	(5,2,1)	9.171	73.35	3.688	3.4	2.862	9.79	35.77	37.09
	Equiv. Refl.: (5,-7,-1)								
Quartz	(2,5,-1)	9.171	73.35	3.687	3.4	2.862	9.79	35.77	37.09
	Equiv. Refl.: (2,-7,1), (-7,2,-1), (-7,5,1)								
LiNbO3	(1,6,1)	9.129	72.5	3.598	5.4	3.018	16.2	37.72	41.06
	Equiv. Refl.: (1,-7,-1), (6,1,-1), (6,-7,1), (7,-1,-1), (7,-6,1), (-1,7,1), (-1,-6,-1), (-6,7,-1), (-6,-1,1), (-7,1,1), (-7,6,-1)								
Quartz	(0,1,8)	9.291	76.09	3.256	3.1	2.371	7.41	29.64	30.55
	Equiv. Refl.: (0,-1,-8)								
Quartz	(-1,1,-8)	9.291	76.09	3.253	3.1	2.371	7.4	29.64	30.55
Quartz	(1,-1,8)	9.291	76.09	3.252	3.1	2.371	7.4	29.64	30.55
Quartz	(-1,0,8)	9.291	76.09	3.251	3.1	2.371	7.4	29.64	30.55
Quartz	(1,0,-8)	9.291	76.09	3.25	3.1	2.371	7.4	29.64	30.55
Sapph	(0,6,6)	9.47	81.62	1.743	2.8	1.409	3.88	17.62	18.04
	Equiv. Refl.: (0,6,-6), (0,-6,6), (0,-6,-6), (6,0,6), (6,0,-6), (6,-6,6), (6,-6,-6), (-6,0,6), (-6,0,-6), (-6,6,6), (-6,6,-6)								

Ei =	9.572	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(2,3,-13)	9.028	70.59	1.718	2.2	3.373	7.51	42.16	42.83
	Equiv. Refl.: (2,-5,13), (3,2,13), (3,-5,-13), (5,-2,13), (5,-3,-13), (-2,5,-13), (-2,-3,13), (-3,5,13), (-3,-2,-13), (-5,2,-13), (-5,3,13)								
Quartz	(7,-3,2)	9.155	73.02	1.683	2	2.923	5.97	36.54	37.03
	Equiv. Refl.: (7,-4,-2), (-3,7,-2), (-3,-4,2), (-4,7,2), (-4,-3,-2)								
Quartz	(5,-2,6)	9.365	78.05	1.679	2.2	2.025	4.43	25.32	25.7
	Equiv. Refl.: (5,-3,-6), (-3,-2,-6)								
Quartz	(-3,5,6)	9.365	78.05	1.678	2.2	2.025	4.42	25.32	25.7
Quartz	(-2,5,-6)	9.365	78.05	1.675	2.2	2.025	4.42	25.32	25.7
	Equiv. Refl.: (-2,-3,6)								
Quartz	(0,5,5)	9.272	75.61	1.604	2.1	2.457	5.17	30.71	31.14
	Equiv. Refl.: (0,-5,-5)								
Quartz	(5,0,-5)	9.272	75.61	1.597	2.1	2.457	5.15	30.71	31.14
	Equiv. Refl.: (5,-5,5), (-5,0,5), (-5,5,-5)								
LiNbO3	(1,3,-17)	9.106	72.05	1.594	3.3	3.1	10.1	38.75	40.05
	Equiv. Refl.: (1,-4,17), (3,1,17), (3,-4,-17), (4,-1,17), (4,-3,-17), (-1,4,-17), (-1,-3,17), (-3,4,17), (-3,-1,-17), (-4,1,-17), (-4,3,17)								
Quartz	(4,-7,-2)	9.155	73.02	1.549	2	2.923	5.97	36.54	37.03
	Equiv. Refl.: (-7,3,-2), (-7,4,2)								
Quartz	(3,4,-2)	9.155	73.02	1.548	2	2.923	5.97	36.54	37.03
	Equiv. Refl.: (3,-7,2), (4,3,2)								
Quartz	(-5,2,-6)	9.365	78.05	1.517	2.2	2.025	4.43	25.32	25.7
Quartz	(3,2,6)	9.365	78.05	1.516	2.2	2.025	4.43	25.32	25.7
	Equiv. Refl.: (-5,3,6)								
Quartz	(3,-5,-6)	9.365	78.05	1.514	2.2	2.025	4.42	25.32	25.7
Quartz	(2,3,-6)	9.365	78.05	1.512	2.2	2.025	4.42	25.32	25.7
	Equiv. Refl.: (2,-5,6)								
LiNbO3	(1,4,15)	9.252	75.14	1.496	3.4	2.54	8.53	31.75	32.88
	Equiv. Refl.: (1,4,-15), (1,-5,15), (1,-5,-15), (4,1,15), (4,1,-15), (4,-5,15), (4,-5,-15), (5,-1,15), (5,-1,-15), (5,-4,15), (5,-4,-15), (-1,5,15), (-1,5,-15), (-1,-4,15), (-1,-4,-15), (-4,5,15), (-4,5,-15), (-4,-1,15), (-4,-1,-15), (-5,1,15), (-5,1,-15), (-5,4,15), (-5,4,-15)								
LiNbO3	(3,4,-7)	9.019	70.42	1.469	3	3.404	10.26	42.55	43.77
	Equiv. Refl.: (3,-7,7), (4,3,7), (4,-7,-7), (7,-3,7), (7,-4,-7), (-3,7,-7), (-3,-4,7), (-4,7,7), (-4,-3,-7), (-7,3,-7), (-7,4,7)								
Sapph	(1,2,17)	9.038	70.77	1.338	1.8	3.34	6.16	41.75	42.2
	Equiv. Refl.: (1,-3,-17), (2,1,-17), (2,-3,17), (3,-1,-17), (3,-2,17), (-1,3,17), (-1,-2,-17), (-2,3,-17), (-2,-1,17), (-3,1,17), (-3,2,-17)								
Quartz	(0,6,2)	9.038	70.77	1.165	1.5	3.339	5.15	41.74	42.05
	Equiv. Refl.: (0,-6,-2), (6,0,-2), (-6,0,2), (-6,6,-2)								
Quartz	(6,-6,2)	9.038	70.77	1.164	1.5	3.339	5.15	41.74	42.05
Sapph	(1,5,8)	9.206	74.09	1.118	1.7	2.728	4.62	34.1	34.41
	Equiv. Refl.: (1,-6,-8), (5,1,-8), (5,-6,8), (6,-1,-8), (6,-5,8), (-1,6,8), (-1,-5,-8), (-5,6,-8), (-5,-1,8), (-6,1,8), (-6,5,-8)								
LiNbO3	(1,5,11)	9.172	73.39	1.116	2.7	2.856	7.76	35.7	36.53
	Equiv. Refl.: (1,-6,-11), (5,1,-11), (5,-6,11), (6,-1,-11), (6,-5,11), (-1,6,11), (-1,-5,-11), (-5,6,-11), (-5,-1,11), (-6,1,11), (-6,5,-11)								
LiNbO3	(1,2,-19)	9.259	75.3	1.101	2.8	2.511	7.1	31.39	32.18
	Equiv. Refl.: (1,-3,19), (2,1,19), (2,-3,-19), (3,-1,19), (3,-2,-19), (-1,3,-19), (-1,-2,19), (-2,3,19), (-2,-1,-19), (-3,1,-19), (-3,2,19)								
Quartz	(2,-5,-6)	9.365	78.05	0.672	1.1	2.025	2.2	25.32	25.41

Ei =	9.572	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(2,3,6)	9.365	78.05	0.67	1.1	2.025	2.19	25.32	25.41
Quartz	(-5,2,6)	9.365	78.05	0.669	1.1	2.025	2.19	25.32	25.41
	Equiv. Refl.: (-5,3,-6)								
Quartz	(3,2,-6)	9.365	78.05	0.665	1.1	2.025	2.18	25.32	25.41
Quartz	(3,-5,6)	9.365	78.05	0.664	1.1	2.025	2.18	25.32	25.41
Sapph	(3,4,5)	9.457	81.11	0.523	1.3	1.497	1.93	18.71	18.81
	Equiv. Refl.: (3,-7,-5), (4,3,-5), (4,-7,5), (7,-3,-5), (7,-4,5), (-3,7,5), (-3,-4,-5), (-4,7,-5), (-4,-3,5), (-7,3,5), (-7,4,-5)								
Quartz	(-2,5,6)	9.365	78.05	0.485	1.1	2.025	2.2	25.32	25.41
Quartz	(-2,-3,-6)	9.365	78.05	0.483	1.1	2.025	2.19	25.32	25.41
Quartz	(5,-2,-6)	9.365	78.05	0.482	1.1	2.025	2.19	25.32	25.41
	Equiv. Refl.: (5,-3,6)								
Quartz	(-3,5,-6)	9.365	78.05	0.478	1.1	2.025	2.18	25.32	25.41
	Equiv. Refl.: (-3,-2,6)								
Quartz	(-1,-5,4)	9.32	76.82	0.339	0.7	2.242	1.63	28.03	28.07
Quartz	(6,-5,-4)	9.32	76.82	0.338	0.7	2.242	1.63	28.03	28.07
	Equiv. Refl.: (-1,6,-4)								
Quartz	(6,-1,4)	9.32	76.82	0.337	0.7	2.242	1.63	28.03	28.07
Quartz	(-5,6,4)	9.32	76.82	0.335	0.7	2.242	1.62	28.03	28.07
	Equiv. Refl.: (-5,-1,-4)								
Quartz	(1,5,-4)	9.32	76.82	0.324	0.7	2.242	1.63	28.03	28.07
	Equiv. Refl.: (1,-6,4)								
Quartz	(-6,5,4)	9.32	76.82	0.323	0.7	2.242	1.63	28.03	28.07
Quartz	(7,-2,0)	9.099	71.91	0.322	0.6	3.127	1.94	39.08	39.13
	Equiv. Refl.: (7,-5,0), (-2,7,0), (-2,-5,0), (-5,7,0), (-5,-2,0), (-6,1,-4)								
Quartz	(5,1,4)	9.32	76.82	0.32	0.7	2.242	1.62	28.03	28.07
	Equiv. Refl.: (5,-6,-4)								
Sapph	(3,4,-1)	9.163	73.2	0.315	0.7	2.89	2.16	36.12	36.19
	Equiv. Refl.: (3,-7,1), (4,3,1), (4,-7,-1), (7,-3,1), (7,-4,-1), (-3,7,-1), (-3,-4,1), (-4,7,1), (-4,-3,-1), (-7,3,-1), (-7,4,1)								
Quartz	(2,5,0)	9.099	71.91	0.262	0.6	3.127	1.94	39.08	39.13
	Equiv. Refl.: (2,-7,0), (5,2,0), (5,-7,0), (-7,2,0), (-7,5,0)								

Ei =	10.367	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(4,6,6)	10.279	82.54	23.7	22.8	1.357	30.9	16.96	35.25
Si	(0,4,8)	10.209	80	12.5	10.7	1.829	19.61	22.86	30.12
Ge	(0,4,8)	9.801	70.98	11.5	10.6	3.574	37.74	44.67	58.48
Ge	(1,1,9)	9.983	74.36	8.5	8.5	2.903	24.72	36.29	43.9
	Equiv. Refl.: (3,5,7)								
Si	(5,5,5)	9.885	72.46	5.5	4.8	3.276	15.74	40.95	43.87
	Equiv. Refl.: (1,5,7)								
Quartz	(0,0,9)	10.323	84.73	33.9	27.7	0.956	26.47	11.95	29.05
	Equiv. Refl.: (0,0,-9)								
Sapph	(3,4,-10)	10.321	84.6	32.9	27.5	0.98	26.94	12.25	29.6
	Equiv. Refl.: (3,-7,10), (4,3,10), (4,-7,-10), (7,-3,10), (7,-4,-10), (-3,7,-10), (-3,-4,10), (-4,7,10), (-4,-3,-10), (-7,3,-10), (-7,4,10)								
Sapph	(1,1,21)	10.356	87.4	30.7	28.1	0.472	13.27	5.89	14.52
	Equiv. Refl.: (1,1,-21), (1,-2,21), (1,-2,-21), (2,-1,21), (2,-1,-21), (-1,2,21), (-1,2,-21), (-1,-1,21), (-1,-1,-21), (-2,1,21), (-2,1,-21)								
LiNbO3	(2,4,16)	10.263	81.88	29.2	26.9	1.48	39.8	18.5	43.89
	Equiv. Refl.: (4,-6,16), (6,-4,16), (-2,6,16), (-4,-2,16), (-6,2,16)								
LiNbO3	(1,-4,20)	10.253	81.49	29.1	26.9	1.551	41.8	19.39	46.08
	Equiv. Refl.: (3,1,20), (4,-1,20), (-1,-3,20), (-3,4,20), (-4,3,20)								
LiNbO3	(1,3,-20)	10.253	81.49	28.7	26.9	1.551	41.8	19.39	46.08
	Equiv. Refl.: (3,-4,-20), (4,-3,-20), (-1,4,-20), (-3,-1,-20), (-4,1,-20)								
LiNbO3	(2,-6,-16)	10.263	81.88	28.1	26.9	1.48	39.8	18.5	43.89
	Equiv. Refl.: (4,2,-16), (6,-2,-16), (-2,-4,-16), (-4,6,-16), (-6,4,-16)								
LiNbO3	(1,-5,-18)	10.266	82	27.3	25.5	1.457	37.19	18.22	41.41
	Equiv. Refl.: (4,1,-18), (5,-1,-18), (-1,-4,-18), (-4,5,-18), (-5,4,-18)								
LiNbO3	(0,2,22)	10.223	80.45	27.1	24.6	1.744	42.96	21.8	48.18
	Equiv. Refl.: (2,-2,22), (-2,0,22)								
LiNbO3	(1,4,-18)	10.266	82	26.6	24.9	1.457	36.34	18.22	40.65
	Equiv. Refl.: (4,-5,-18), (5,-4,-18), (-1,5,-18), (-4,-1,-18), (-5,1,-18)								
LiNbO3	(1,4,18)	10.266	82	26.4	25.5	1.457	37.19	18.22	41.41
	Equiv. Refl.: (4,-5,18), (5,-4,18), (-1,5,18), (-4,-1,18), (-5,1,18)								
LiNbO3	(0,-2,-22)	10.223	80.45	26	24.6	1.744	42.96	21.8	48.18
	Equiv. Refl.: (2,0,-22), (-2,2,-22)								
Sapph	(1,2,20)	10.342	86.05	25.8	22.8	0.715	16.29	8.94	18.58
	Equiv. Refl.: (1,-3,-20), (2,1,-20), (2,-3,20), (3,-1,-20), (3,-2,20), (-1,3,20), (-1,-2,-20), (-2,3,-20), (-2,-1,20), (-3,1,20), (-3,2,-20)								
LiNbO3	(1,-5,18)	10.266	82	25.7	24.9	1.457	36.34	18.22	40.65
	Equiv. Refl.: (4,1,18), (5,-1,18), (-1,-4,18), (-4,5,18), (-5,4,18)								
Quartz	(4,4,2)	10.352	86.89	25	22	0.564	12.4	7.05	14.27
	Equiv. Refl.: (4,4,-2), (4,-8,2), (4,-8,-2), (-8,4,2), (-8,4,-2)								
Quartz	(8,-4,2)	10.352	86.89	24.7	22	0.564	12.4	7.05	14.27
	Equiv. Refl.: (8,-4,-2), (-4,8,2), (-4,8,-2), (-4,-4,2), (-4,-4,-2)								
LiNbO3	(2,6,-4)	10.185	79.26	24.4	22.5	1.967	44.31	24.59	50.67
	Equiv. Refl.: (6,-8,-4), (8,-6,-4), (-2,8,-4), (-6,-2,-4), (-8,2,-4)								
LiNbO3	(2,-8,4)	10.185	79.26	24.3	22.5	1.967	44.31	24.59	50.67
	Equiv. Refl.: (6,2,4), (8,-2,4), (-2,-6,4), (-6,8,4), (-8,6,4)								
LiNbO3	(1,-7,-10)	10.156	78.41	23	20.7	2.126	44.01	26.58	51.42
	Equiv. Refl.: (6,1,-10), (7,-1,-10), (-1,-6,-10), (-6,7,-10), (-7,6,-10)								
LiNbO3	(2,-7,12)	10.208	79.95	22.1	20.9	1.838	38.35	22.97	44.71
	Equiv. Refl.: (5,2,12), (7,-2,12), (-2,-5,12), (-5,7,12), (-7,5,12)								

Ei =	10.367	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(2,5,-12)	10.208	79.95	22	20.9	1.838	38.35	22.97	44.71
	Equiv. Refl.: (5,-7,-12), (7,-5,-12), (-2,7,-12), (-5,-2,-12), (-7,2,-12)								
LiNbO3	(1,6,10)	10.156	78.41	21.7	20.7	2.126	44.01	26.58	51.42
	Equiv. Refl.: (6,-7,10), (7,-6,10), (-1,7,10), (-6,-1,10), (-7,1,10)								
LiNbO3	(2,5,12)	10.208	79.95	21	20	1.838	36.76	22.97	43.35
	Equiv. Refl.: (5,-7,12), (7,-5,12), (-2,7,12), (-5,-2,12), (-7,2,12)								
LiNbO3	(2,-7,-12)	10.208	79.95	20.9	20	1.838	36.76	22.97	43.35
	Equiv. Refl.: (5,2,-12), (7,-2,-12), (-2,-5,-12), (-5,7,-12), (-7,5,-12)								
LiNbO3	(1,6,-11)	10.36	87.93	20.7	30.7	0.375	11.5	4.68	12.42
	Equiv. Refl.: (1,-7,11), (6,1,11), (6,-7,-11), (7,-1,11), (7,-6,-11), (-1,7,-11), (-1,-6,11), (-6,7,11), (-6,-1,-11), (-7,1,-11), (-7,6,11)								
LiNbO3	(3,-8,-4)	9.896	72.67	19.1	17	3.235	54.99	40.44	68.26
	Equiv. Refl.: (5,3,-4), (8,-3,-4), (-3,-5,-4), (-5,8,-4), (-8,5,-4)								
LiNbO3	(3,5,4)	9.896	72.67	18.6	17	3.235	54.99	40.44	68.26
	Equiv. Refl.: (5,-8,4), (8,-5,4), (-3,8,4), (-5,-3,4), (-8,3,4)								
Quartz	(4,2,6)	10.335	85.46	17.5	15	0.823	12.34	10.28	16.06
	Equiv. Refl.: (4,-6,-6), (-6,2,-6), (-6,4,6)								
Quartz	(2,4,-6)	10.335	85.46	17.4	15	0.823	12.33	10.28	16.06
	Equiv. Refl.: (2,-6,6)								
LiNbO3	(4,4,-6)	10	74.71	17	15.6	2.833	44.12	35.42	56.58
	Equiv. Refl.: (4,-8,-6), (8,-4,-6), (-4,8,-6), (-4,-4,-6), (-8,4,-6)								
Quartz	(6,-2,6)	10.335	85.46	16.8	15	0.823	12.34	10.28	16.06
	Equiv. Refl.: (6,-4,-6), (-2,6,-6), (-2,-4,6), (-4,6,6), (-4,-2,-6)								
LiNbO3	(4,4,6)	10	74.71	16.4	15.6	2.833	44.12	35.42	56.58
	Equiv. Refl.: (4,-8,6), (8,-4,6), (-4,8,6), (-4,-4,6), (-8,4,6)								
LiNbO3	(1,-6,-14)	9.956	73.82	16.3	15.1	3.008	45.34	37.6	58.9
	Equiv. Refl.: (5,1,-14), (6,-1,-14), (-1,-5,-14), (-5,6,-14), (-6,5,-14)								
LiNbO3	(1,5,14)	9.956	73.82	16.2	15.1	3.008	45.34	37.6	58.9
	Equiv. Refl.: (5,-6,14), (6,-5,14), (-1,6,14), (-5,-1,14), (-6,1,14)								
LiNbO3	(0,-6,-12)	9.92	73.11	15.1	14	3.148	43.99	39.35	59.02
	Equiv. Refl.: (6,0,-12), (-6,6,-12)								
LiNbO3	(0,6,12)	9.92	73.11	14.8	14	3.148	43.99	39.35	59.02
	Equiv. Refl.: (6,-6,12), (-6,0,12)								
LiNbO3	(0,-5,-16)	9.976	74.22	14.7	13.1	2.929	38.49	36.62	53.13
	Equiv. Refl.: (5,0,-16), (-5,5,-16)								
LiNbO3	(0,1,-22)	9.936	73.41	13.8	13	3.088	40.22	38.6	55.74
	Equiv. Refl.: (1,-1,-22), (2,6,2), (6,-8,2), (8,-6,2), (-1,0,-22), (-2,8,2), (-6,-2,2), (-8,2,2)								
LiNbO3	(0,-1,22)	9.936	73.41	13.7	13	3.088	40.22	38.6	55.74
	Equiv. Refl.: (1,0,22), (-1,1,22), (6,-2,-6), (6,-4,6), (-2,6,6), (-2,-4,-6), (-4,6,-6), (-4,-2,6)								
LiNbO3	(2,-8,-2)	10.067	76.18	13.6	13.3	2.551	34.04	31.88	46.64
	Equiv. Refl.: (6,2,-2), (8,-2,-2), (-2,-6,-2), (-6,8,-2), (-8,6,-2)								
LiNbO3	(0,6,-12)	9.92	73.11	13.3	12.4	3.148	39.12	39.35	55.49
	Equiv. Refl.: (6,-6,-12), (-6,0,-12)								
LiNbO3	(0,-7,-2)	9.774	70.53	13	11.9	3.664	43.67	45.8	63.28
	Equiv. Refl.: (7,0,-2), (-7,7,-2)								
LiNbO3	(0,7,-4)	9.896	72.67	12.9	12.1	3.235	39.27	40.44	56.37
	Equiv. Refl.: (7,-7,-4), (-7,0,-4)								
LiNbO3	(0,5,16)	9.976	74.22	12.8	13.1	2.929	38.49	36.62	53.13
	Equiv. Refl.: (0,-6,12), (5,-5,16), (6,0,12), (-5,0,16), (-6,6,12)								
Quartz	(0,3,-8)	10.164	78.64	12.7	10.6	2.082	22.03	26.03	34.1
	Equiv. Refl.: (0,-3,8), (3,0,8), (3,-3,-8), (-3,0,-8), (-3,3,8)								

Ei =	10.367	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(0,-7,4)	9.896	72.67	12.6	12.1	3.235	39.27	40.44	56.37
	Equiv. Refl.: (7,0,4), (-7,7,4)								
LiNbO3	(0,7,2)	9.774	70.53	12.4	11.9	3.664	43.67	45.8	63.28
	Equiv. Refl.: (7,-7,2), (-7,0,2), (0,7,1), (0,-7,-1), (7,0,-1), (7,-7,1), (-7,0,1), (-7,7,-1)								
LiNbO3	(1,-7,8)	9.795	70.87	12.3	11.2	3.595	40.37	44.94	60.41
	Equiv. Refl.: (6,1,8), (7,-1,8), (-1,-6,8), (-6,7,8), (-7,6,8)								
Quartz	(2,4,6)	10.335	85.46	12	11.7	0.823	9.63	10.28	14.09
	Equiv. Refl.: (2,-6,-6), (4,2,-6), (4,-6,6), (-6,2,6), (-6,4,-6)								
LiNbO3	(1,6,-8)	9.795	70.87	11.5	11.2	3.595	40.37	44.94	60.41
	Equiv. Refl.: (6,-7,-8), (7,-6,-8), (-1,7,-8), (-6,-1,-8), (-7,1,-8)								
Sapph	(0,5,-14)	10.061	76.05	11.3	9.3	2.574	23.88	32.18	40.07
	Equiv. Refl.: (0,-5,14), (5,0,14), (5,-5,-14), (-5,0,-14), (-5,5,14)								
Sapph	(2,5,9)	10.331	85.19	9.9	9.9	0.872	8.65	10.9	13.91
	Equiv. Refl.: (2,5,-9), (2,-7,9), (2,-7,-9), (5,2,9), (5,2,-9), (5,-7,9), (5,-7,-9), (7,-2,9), (7,-2,-9), (7,-5,9), (7,-5,-9), (-2,7,9), (-2,7,-9), (-2,-5,9), (-2,-5,-9), (-5,7,9), (-5,7,-9), (-5,-2,9), (-5,-2,-9), (-7,2,9), (-7,2,-9), (-7,5,9), (-7,5,-9)								
Quartz	(0,7,0)	10.199	79.67	8.7	7.5	1.89	14.21	23.62	27.57
	Equiv. Refl.: (0,-7,0), (7,0,0), (7,-7,0), (-7,0,0), (-7,7,0)								
Sapph	(2,3,-16)	10.066	76.16	8.4	7.2	2.555	18.34	31.94	36.83
	Equiv. Refl.: (2,-5,16), (3,2,16), (3,-5,-16), (5,-2,16), (5,-3,-16), (-2,5,-16), (-2,-3,16), (-3,5,16), (-3,-2,-16), (-5,2,-16), (-5,3,16)								
Sapph	(2,5,6)	9.822	71.34	8.2	6.8	3.502	23.79	43.77	49.82
	Equiv. Refl.: (2,5,-6), (2,-7,6), (2,-7,-6), (5,2,6), (5,2,-6), (5,-7,6), (5,-7,-6), (7,-2,6), (7,-2,-6), (7,-5,6), (7,-5,-6), (-2,7,6), (-2,7,-6), (-2,-5,6), (-2,-5,-6), (-5,7,6), (-5,7,-6), (-5,-2,6), (-5,-2,-6), (-7,2,6), (-7,2,-6), (-7,5,6), (-7,5,-6)								
LiNbO3	(3,-8,2)	9.774	70.53	8	7.9	3.664	28.93	45.8	54.17
	Equiv. Refl.: (5,3,2), (8,-3,2), (-3,-5,2), (-5,8,2), (-8,5,2)								
LiNbO3	(3,5,-2)	9.774	70.53	7.7	7.9	3.664	28.93	45.8	54.17
	Equiv. Refl.: (5,-8,-2), (8,-5,-2), (-3,8,-2), (-5,-3,-2), (-8,3,-2)								
Quartz	(3,3,6)	10.231	80.72	7.2	6.3	1.694	10.76	21.18	23.75
	Equiv. Refl.: (3,3,-6), (3,-6,6), (3,-6,-6), (6,-3,6), (6,-3,-6), (-3,6,6), (-3,6,-6), (-3,-3,6), (-3,-3,-6), (-6,3,6), (-6,3,-6)								
Quartz	(7,-1,-2)	9.826	71.4	7	5.6	3.488	19.68	43.61	47.84
	Equiv. Refl.: (7,-6,2), (-1,7,2), (-1,-6,-2), (-6,7,-2), (-6,-1,2)								
Sapph	(0,2,-20)	10.009	74.89	6.9	6	2.798	16.66	34.98	38.74
	Equiv. Refl.: (0,-2,20), (2,0,20), (2,-2,-20), (3,4,8), (3,-7,-8), (4,3,-8), (4,-7,8), (7,-3,-8), (7,-4,8), (-2,0,-20), (-2,2,20), (-3,7,8), (-3,-4,-8), (-4,7,-8), (-4,-3,8), (-7,3,8), (-7,4,-8)								
Quartz	(1,6,2)	9.826	71.4	6.7	5.6	3.488	19.68	43.61	47.84
	Equiv. Refl.: (1,-7,-2), (6,1,-2), (6,-7,2), (-7,1,2), (-7,6,-2)								
Quartz	(8,-3,0)	10.199	79.67	6.2	5.2	1.89	9.89	23.62	25.61
	Equiv. Refl.: (8,-4,0), (8,-5,0), (-3,8,0), (-3,-5,0), (-4,8,0), (-4,-4,0), (-5,8,0), (-5,-3,0)								
Quartz	(3,5,0)	10.199	79.67	5.9	5.2	1.89	9.89	23.62	25.61
	Equiv. Refl.: (3,-8,0), (5,3,0), (5,-8,0), (-8,3,0), (-8,5,0)								
Quartz	(0,4,-7)	9.921	73.14	5.6	4.7	3.142	14.92	39.28	42.02
	Equiv. Refl.: (0,-4,7), (1,2,-8), (1,-3,8), (2,1,8), (2,-3,-8), (3,-1,8), (3,-2,-8), (4,0,7), (4,4,0), (4,-4,-7), (4,-8,0), (-1,3,-8), (-1,-2,8), (-2,3,8), (-2,-1,-8), (-3,1,-8), (-3,2,8), (-4,0,-7), (-4,4,7), (-8,4,0)								
Sapph	(1,6,4)	10.048	75.75	5.3	4.7	2.632	12.35	32.9	35.14
	Equiv. Refl.: (1,-7,-4), (6,1,-4), (6,-7,4), (7,-1,-4), (7,-6,4), (-1,7,4), (-1,-6,-4), (-6,7,-4), (-6,-1,4), (-7,1,4), (-7,6,-4)								

Ei =	10.367	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(7,-3,4)	9.98	74.29	5.1	4.2	2.916	12.33	36.45	38.48
	Equiv. Refl.: (7,-4,-4), (-3,7,-4), (-3,-4,4), (-4,7,4), (-4,-3,-4)								
Quartz	(0,6,-4)	9.873	72.24	5	4.1	3.321	13.77	41.51	43.74
	Equiv. Refl.: (0,-6,4), (3,4,-4), (3,-7,4), (4,3,4), (4,-7,-4), (6,0,4), (6,-6,-4), (-6,0,-4), (-6,6,4), (-7,3,-4), (-7,4,4)								
Quartz	(1,5,-5)	9.935	73.4	4.9	4.1	3.091	12.67	38.64	40.67
	Equiv. Refl.: (1,-6,5), (5,1,5), (5,-6,-5), (-6,1,-5), (-6,5,5)								
Quartz	(6,-1,5)	9.935	73.4	4.8	4.1	3.091	12.67	38.64	40.67
	Equiv. Refl.: (6,-5,-5), (-1,6,-5), (-1,-5,5), (-5,6,5), (-5,-1,-5)								
Sapph	(1,4,15)	9.939	73.48	4.7	4.2	3.075	12.93	38.43	40.55
	Equiv. Refl.: (1,4,-15), (1,-5,15), (1,-5,-15), (4,1,15), (4,1,-15), (4,-5,15), (4,-5,-15), (5,-1,15), (5,-1,-15), (5,-4,15), (5,-4,-15), (-1,5,15), (-1,5,-15), (-1,-4,15), (-1,-4,-15), (-4,5,15), (-4,5,-15), (-4,-1,15), (-4,-1,-15), (-5,1,15), (-5,1,-15), (-5,4,15), (-5,4,-15)								
Quartz	(1,2,8)	9.953	73.75	4.6	3.8	3.021	11.51	37.77	39.48
	Equiv. Refl.: (1,-3,-8), (2,1,-8), (2,-3,8), (-3,1,8), (-3,2,-8)								
Quartz	(3,-1,-8)	9.953	73.75	4.4	3.8	3.021	11.51	37.77	39.48
	Equiv. Refl.: (3,-2,8), (-1,3,8), (-1,-2,-8), (-2,3,-8), (-2,-1,8)								
Quartz	(1,6,-3)	10.155	78.39	3.9	3.4	2.13	7.21	26.62	27.58
	Equiv. Refl.: (1,-7,3), (6,1,3), (6,-7,-3), (7,-2,4), (7,-5,-4), (-2,7,-4), (-2,-5,4), (-5,7,4), (-5,-2,-4), (-7,1,-3), (-7,6,3)								
Quartz	(2,5,-4)	10.19	79.4	3.8	3.7	1.94	7.09	24.24	25.26
	Equiv. Refl.: (2,-7,4), (5,2,4), (5,-7,-4), (-7,2,-4), (-7,5,4)								
Sapph	(1,6,-2)	9.911	72.95	3.7	3.4	3.18	10.91	39.75	41.22
	Equiv. Refl.: (1,-7,2), (6,1,2), (6,-7,-2), (7,-1,2), (7,-6,-2), (-1,7,-2), (-1,-6,2), (-6,7,2), (-6,-1,-2), (-7,1,-2), (-7,6,2), (7,-1,-3), (7,-6,3), (-1,7,3), (-1,-6,-3), (-6,7,-3), (-6,-1,3)								
Quartz	(7,-1,3)	10.155	78.39	3.5	3.4	2.13	7.21	26.62	27.58
	Equiv. Refl.: (7,-6,-3), (-1,7,-3), (-1,-6,3), (-6,7,3), (-6,-1,-3)								
Sapph	(1,5,11)	9.886	72.47	3.3	3	3.274	9.91	40.93	42.11
	Equiv. Refl.: (1,-6,-11), (5,1,-11), (5,-6,11), (6,-1,-11), (6,-5,11), (-1,6,11), (-1,-5,-11), (-5,6,-11), (-5,-1,11), (-6,1,11), (-6,5,-11), (-7,1,3), (-7,6,-3)								
Quartz	(1,6,3)	10.155	78.39	3.2	3.2	2.13	6.73	26.62	27.46
	Equiv. Refl.: (1,-7,-3), (6,1,-3), (6,-7,3)								
Quartz	(2,5,4)	10.19	79.4	3.1	3.1	1.94	5.95	24.24	24.96
	Equiv. Refl.: (2,-7,-4), (5,2,-4), (5,-7,4), (-7,2,4), (-7,5,-4)								
Quartz	(7,-2,-4)	10.19	79.4	2.9	3.1	1.94	5.95	24.24	24.96
	Equiv. Refl.: (7,-5,4), (-2,7,4), (-2,-5,-4), (-5,7,-4), (-5,-2,4)								
Quartz	(0,7,-1)	10.263	81.89	2.7	3	1.478	4.45	18.48	19.01
	Equiv. Refl.: (0,-7,1), (7,0,1), (7,-7,-1), (-7,0,-1), (-7,7,1)								
Sapph	(2,4,13)	10.093	76.8	2.6	2.8	2.431	6.86	30.39	31.16
	Equiv. Refl.: (2,-6,-13), (4,2,-13), (4,-6,13), (6,-2,-13), (6,-4,13), (-2,6,13), (-2,-4,-13), (-4,6,-13), (-4,-2,13), (-6,2,13), (-6,4,-13)								
LiNbO3	(3,4,-13)	10.263	81.88	2.3	4.9	1.479	7.21	18.48	19.84
	Equiv. Refl.: (3,-7,13), (4,3,13), (4,-7,-13), (7,-3,13), (7,-4,-13), (-3,7,-13), (-3,-4,13), (-4,7,13), (-4,-3,-13), (-7,3,-13), (-7,4,13), (5,-2,-7), (5,-3,7), (-2,5,7), (-2,-3,-7), (-3,5,-7), (-3,-2,7)								
Quartz	(2,3,7)	10.237	80.92	2.1	2.7	1.656	4.51	20.7	21.19
	Equiv. Refl.: (2,-5,-7), (3,2,-7), (3,-5,7), (-5,2,7), (-5,3,-7)								
Quartz	(3,4,4)	9.98	74.29	2	2.3	2.916	6.56	36.45	37.04
	Equiv. Refl.: (3,-7,-4), (4,3,-4), (4,-7,4), (-7,3,4), (-7,4,-4)								
Quartz	(7,-3,-4)	9.98	74.29	1.8	2.2	2.916	6.56	36.45	37.04
	Equiv. Refl.: (7,-4,4), (8,-4,1), (8,-4,-1), (-3,7,4), (-3,-4,-4), (-4,7,-4), (-4,8,1), (-4,8,-1), (-4,-3,4), (-4,-4,1), (-4,-4,-1)								

Ei =	10.367	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(1,6,-2)	9.826	71.4	1.7	1.9	3.488	6.78	43.61	44.13
	Equiv. Refl.: (1,-7,2), (6,1,2), (6,-7,-2), (-7,1,-2), (-7,6,2)								
Quartz	(7,-1,2)	9.826	71.4	1.6	1.9	3.488	6.78	43.61	44.13
	Equiv. Refl.: (7,-6,-2), (-1,7,-2), (-1,-6,2), (-6,7,2), (-6,-1,-2)								
Quartz	(4,4,1)	10.159	78.51	1.5	2.1	2.107	4.36	26.34	26.7
	Equiv. Refl.: (4,4,-1), (4,-8,1), (4,-8,-1), (-8,4,1), (-8,4,-1)								
Sapph	(1,6,-5)	10.15	78.25	1.3	1.8	2.157	3.96	26.96	27.25
	Equiv. Refl.: (1,-7,5), (6,1,5), (6,-7,-5), (7,-1,5), (7,-6,-5), (-1,7,-5), (-1,-6,5), (-6,7,5), (-6,-1,-5), (-7,1,-5), (-7,6,5), (2,3,-7), (2,-5,7), (3,2,7), (3,-5,-7), (-5,2,-7), (-5,3,7)								
LiNbO3	(1,3,19)	9.865	72.1	1.2	2.5	3.348	8.36	41.85	42.68
	Equiv. Refl.: (1,-4,-19), (3,1,-19), (3,4,11), (3,-4,19), (3,-7,-11), (4,3,-11), (4,-1,-19), (4,-3,19), (4,-7,11), (7,-3,-11), (7,-4,11), (-1,4,19), (-1,-3,-19), (-3,4,-19), (-3,7,11), (-3,-1,19), (-3,-4,-11), (-4,1,19), (-4,3,-19), (-4,7,-11), (-4,-3,11), (-7,3,11), (-7,4,-11)								
Sapph	(1,2,-19)	9.904	72.8	1.1	1.5	3.208	4.79	40.1	40.39
	Equiv. Refl.: (1,-3,19), (2,1,19), (2,-3,-19), (3,-1,19), (3,-2,-19), (-1,3,-19), (-1,-2,19), (-2,3,19), (-2,-1,-19), (-3,1,-19), (-3,2,19), (5,-2,7), (5,-3,-7), (-2,5,-7), (-2,-3,7), (-3,5,7), (-3,-2,-7)								
Quartz	(0,5,6)	10.022	75.17	1	1.4	2.745	3.72	34.31	34.51
	Equiv. Refl.: (0,-5,-6), (3,5,1), (3,-8,-1), (5,0,-6), (5,3,-1), (5,-5,6), (5,-8,1), (-5,0,6), (-5,5,-6), (-8,3,1), (-8,5,-1)								
LiNbO3	(2,6,5)	10.273	82.29	0.9	2.9	1.404	4.09	17.55	18.02
	Equiv. Refl.: (2,-8,-5), (6,2,-5), (6,-8,5), (8,-2,-5), (8,-6,5), (-2,8,5), (-2,-6,-5), (-6,8,-5), (-6,-2,5), (-8,2,5), (-8,6,-5), (1,6,1), (1,-7,-1), (6,1,-1), (6,-7,1), (7,-1,-1), (7,-6,1), (-1,7,1), (-1,-6,-1), (-6,7,-1), (-6,-1,1), (-7,1,1), (-7,6,-1), (8,-3,-1), (8,-5,1), (-3,8,1), (-3,-5,-1), (-5,8,-1), (-5,-3,1)								
Sapph	(1,3,-17)	9.76	70.3	0.6	0.9	3.712	3.5	46.41	46.54
	Equiv. Refl.: (1,-4,17), (2,2,18), (2,2,-18), (2,-4,18), (2,-4,-18), (3,1,17), (3,-4,-17), (4,-1,17), (4,-2,18), (4,-2,-18), (4,-3,-17), (-1,4,-17), (-1,-3,17), (-2,4,18), (-2,4,-18), (-2,-2,18), (-2,-2,-18), (-3,4,17), (-3,-1,-17), (-4,1,-17), (-4,2,18), (-4,2,-18), (-4,3,17)								
LiNbO3	(2,6,-1)	10.037	75.5	0.5	1.6	2.681	4.42	33.51	33.8
	Equiv. Refl.: (2,-8,1), (6,2,1), (6,-8,-1), (8,-2,1), (8,-6,-1), (-2,8,-1), (-2,-6,1), (-6,8,1), (-6,-2,-1), (-8,2,-1), (-8,6,1), (8,-3,1), (8,-5,-1), (-3,8,-1), (-3,-5,1), (-5,8,1), (-5,-3,-1)								
LiNbO3	(3,5,7)	10.224	80.48	0.4	1.7	1.738	3.01	21.72	21.93
	Equiv. Refl.: (3,-8,-7), (5,3,-7), (5,-8,7), (8,-3,-7), (8,-5,7), (-3,8,7), (-3,-5,-7), (-5,8,-7), (-5,-3,7), (-8,3,7), (-8,5,-7), (0,6,4), (0,-6,-4), (3,5,-1), (3,-8,1), (5,3,1), (5,-8,-1), (6,0,-4), (6,-6,4), (-6,0,4), (-6,6,-4), (-8,3,-1), (-8,5,1)								
LiNbO3	(3,5,-5)	9.987	74.44	0.3	1.1	2.887	3.26	36.09	36.24
	Equiv. Refl.: (3,-8,5), (5,3,5), (5,-8,-5), (8,-3,5), (8,-5,-5), (-3,8,-5), (-3,-5,5), (-5,8,5), (-5,-3,-5), (-8,3,-5), (-8,5,5)								
LiNbO3	(3,5,1)	9.744	70.03	0.2	0.9	3.767	3.53	47.09	47.22
	Equiv. Refl.: (3,-8,-1), (5,3,-1), (5,-8,1), (8,-3,-1), (8,-5,1), (-3,8,1), (-3,-5,-1), (-5,8,-1), (-5,-3,1), (-8,3,1), (-8,5,-1), (3,4,-7), (3,-7,7), (4,3,7), (4,-7,-7), (7,-3,7), (7,-4,-7), (-3,7,-7), (-3,-4,7), (-4,7,7), (-4,-3,-7), (-7,3,-7), (-7,4,7), (0,5,-6), (0,-5,6), (5,0,6), (5,-5,-6), (-5,0,-6), (-5,5,6)								
LiNbO3	(3,3,15)	9.859	71.99	0.1	0.7	3.371	2.28	42.14	42.2
	Equiv. Refl.: (3,3,-15), (3,-6,15), (3,-6,-15), (6,-3,15), (6,-3,-15), (-3,6,15), (-3,6,-15), (-3,-3,15), (-3,-3,-15), (-6,3,15), (-6,3,-15)								

Ei =	11.103	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	E cotΘ	ΔE	2m	2m
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[keV]	[meV]	[meV]	[meV]
Si	(4,6,6)	10.708	74.67	6.639	5.7	3.045	17.27	38.06	41.79
Si	(1,3,9)	10.889	78.72	5.759	5.2	2.214	11.4	27.67	29.93
Ge	(4,4,8)	10.736	75.24	1.845	2.8	2.926	8.31	36.58	37.51
Ge	(1,7,7)	10.903	79.11	1.583	2.8	2.137	6.04	26.71	27.39
	Equiv. Refl.: (3,3,9), (5,5,7)								
Ge	(1,3,9)	10.453	70.3	0.711	1.4	3.976	5.49	49.7	50
LiNbO3	(3,-7,16)	11.078	86.18	43.9	40.6	0.741	30.07	9.27	31.46
	Equiv. Refl.: (4,3,16), (7,-3,16), (-3,-4,16), (-4,7,16), (-7,4,16)								
LiNbO3	(3,4,-16)	11.078	86.18	41.4	40.6	0.741	30.07	9.27	31.46
	Equiv. Refl.: (4,-7,-16), (7,-4,-16), (-3,7,-16), (-4,-3,-16), (-7,3,-16)								
LiNbO3	(1,6,-14)	11.06	84.98	36.8	33.4	0.976	32.62	12.19	34.83
	Equiv. Refl.: (6,-7,-14), (7,-6,-14), (-1,7,-14), (-6,-1,-14), (-7,1,-14)								
LiNbO3	(1,-7,14)	11.06	84.98	34.4	33.4	0.976	32.62	12.19	34.83
	Equiv. Refl.: (6,1,14), (7,-1,14), (-1,-6,14), (-6,7,14), (-7,6,14)								
LiNbO3	(3,6,0)	11.037	83.73	28.7	26.6	1.219	32.49	15.24	35.89
	Equiv. Refl.: (6,-9,0), (9,-6,0), (-3,9,0), (-6,-3,0), (-9,3,0)								
LiNbO3	(3,-9,0)	11.037	83.73	28	26.6	1.219	32.49	15.24	35.89
	Equiv. Refl.: (6,3,0), (9,-3,0), (-3,-6,0), (-6,9,0), (-9,6,0)								
LiNbO3	(1,1,24)	10.999	82.16	27.8	25.4	1.529	38.79	19.12	43.25
	Equiv. Refl.: (1,-2,24), (2,-1,24), (-1,2,24), (-1,-1,24), (-2,1,24)								
LiNbO3	(1,1,-24)	10.999	82.16	27.6	25.4	1.529	38.79	19.12	43.25
	Equiv. Refl.: (1,-2,-24), (2,-1,-24), (-1,2,-24), (-1,-1,-24), (-2,1,-24)								
LiNbO3	(1,-4,-22)	11.042	83.98	26.7	25.2	1.172	29.5	14.65	32.94
	Equiv. Refl.: (3,1,-22), (4,-1,-22), (-1,-3,-22), (-3,4,-22), (-4,3,-22)								
LiNbO3	(4,4,12)	11.027	83.31	26.1	24.1	1.303	31.4	16.29	35.37
	Equiv. Refl.: (4,-8,12), (8,-4,12), (-4,8,12), (-4,-4,12), (-8,4,12)								
LiNbO3	(1,3,22)	11.042	83.98	26	25.2	1.172	29.5	14.65	32.94
	Equiv. Refl.: (3,-4,22), (4,-3,22), (-1,4,22), (-3,-1,22), (-4,1,22)								
LiNbO3	(4,4,-12)	11.027	83.31	24.8	24.1	1.303	31.4	16.29	35.37
	Equiv. Refl.: (4,-8,-12), (8,-4,-12), (-4,8,-12), (-4,-4,-12), (-8,4,-12)								
LiNbO3	(4,-9,4)	11.006	82.44	23.5	21.5	1.474	31.68	18.43	36.65
	Equiv. Refl.: (5,4,4), (9,-4,4), (-4,-5,4), (-5,9,4), (-9,5,4)								
LiNbO3	(4,5,-4)	11.006	82.44	21.9	21.5	1.474	31.68	18.43	36.65
	Equiv. Refl.: (5,-9,-4), (9,-5,-4), (-4,9,-4), (-5,-4,-4), (-9,4,-4)								
LiNbO3	(2,-8,10)	10.979	81.43	20.3	18.9	1.674	31.59	20.93	37.89
	Equiv. Refl.: (6,2,10), (8,-2,10), (-2,-6,10), (-6,8,10), (-8,6,10)								
LiNbO3	(2,6,-10)	10.979	81.43	19.6	18.9	1.674	31.59	20.93	37.89
	Equiv. Refl.: (6,-8,-10), (8,-6,-10), (-2,8,-10), (-6,-2,-10), (-8,2,-10)								
LiNbO3	(4,5,2)	10.897	78.94	19.1	17.4	2.17	37.86	27.13	46.57
	Equiv. Refl.: (5,-9,2), (9,-5,2), (-4,9,2), (-5,-4,2), (-9,4,2)								
LiNbO3	(4,-9,-2)	10.897	78.94	18.8	17.4	2.17	37.86	27.13	46.57
	Equiv. Refl.: (5,4,-2), (9,-4,-2), (-4,-5,-2), (-5,9,-2), (-9,5,-2)								
Quartz	(4,4,4)	11.088	87.03	18	15.9	0.576	9.19	7.21	11.68
	Equiv. Refl.: (4,4,-4), (4,-8,4), (4,-8,-4), (8,-4,4), (8,-4,-4), (-4,8,-4), (-4,-4,4), (-8,4,4), (-8,4,-4)								
Quartz	(-4,8,4)	11.088	87.03	17.9	16	0.576	9.19	7.21	11.68
	Equiv. Refl.: (-4,-4,-4)								
LiNbO3	(3,3,18)	10.816	76.95	16.7	15	2.573	38.68	32.17	50.31
	Equiv. Refl.: (3,-6,18), (6,-3,18), (-3,6,18), (-3,-3,18), (-6,3,18)								

Ei =	11.103	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	E cotΘ	ΔE	2m	2m
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[keV]	[meV]	[meV]	[meV]
LiNbO3	(3,3,-18)	10.816	76.95	16	15	2.573	38.68	32.17	50.31
	Equiv. Refl.: (3,-6,-18), (6,-3,-18), (-3,6,-18), (-3,-3,-18), (-6,3,-18)								
LiNbO3	(1,-8,-6)	10.835	77.4	15.6	14.5	2.483	35.92	31.04	47.47
	Equiv. Refl.: (7,1,-6), (8,-1,-6), (-1,-7,-6), (-7,8,-6), (-8,7,-6)								
LiNbO3	(1,7,6)	10.835	77.4	15.5	14.5	2.483	35.92	31.04	47.47
	Equiv. Refl.: (7,-8,6), (8,-7,6), (-1,8,6), (-7,-1,6), (-8,1,6)								
Sapph	(2,6,-4)	11.015	82.79	15.3	13	1.404	18.29	17.55	25.35
	Equiv. Refl.: (2,-8,4), (6,2,4), (6,-8,-4), (8,-2,4), (8,-6,-4), (-2,8,-4), (-2,-6,4), (-6,8,4), (-6,-2,-4), (-8,2,-4), (-8,6,4)								
LiNbO3	(1,7,-6)	10.835	77.4	14.8	13.6	2.483	33.89	31.04	45.95
	Equiv. Refl.: (7,-8,-6), (8,-7,-6), (-1,8,-6), (-7,-1,-6), (-8,1,-6)								
LiNbO3	(0,7,-10)	10.711	74.74	14.6	13.3	3.029	40.22	37.87	55.24
	Equiv. Refl.: (7,-7,-10), (-7,0,-10)								
LiNbO3	(0,-7,10)	10.711	74.74	14.4	13.3	3.029	40.22	37.87	55.24
	Equiv. Refl.: (7,0,10), (-7,7,10)								
LiNbO3	(1,-8,6)	10.835	77.4	14.3	13.6	2.483	33.89	31.04	45.95
	Equiv. Refl.: (7,1,6), (8,-1,6), (-1,-7,6), (-7,8,6), (-8,7,6)								
LiNbO3	(2,-8,-8)	10.646	73.5	12.8	11.7	3.288	38.43	41.1	56.27
	Equiv. Refl.: (6,2,-8), (8,-2,-8), (-2,-6,-8), (-6,8,-8), (-8,6,-8)								
Sapph	(1,3,-20)	10.979	81.44	12.7	10.8	1.671	18.1	20.89	27.64
	Equiv. Refl.: (1,-4,20), (3,1,20), (3,-4,-20), (4,-1,20), (4,-3,-20), (-1,4,-20), (-1,-3,20), (-3,4,20), (-3,-1,-20), (-4,1,-20), (-4,3,20)								
LiNbO3	(0,4,20)	10.532	71.54	12.5	11.4	3.705	42.19	46.32	62.66
	Equiv. Refl.: (2,6,8), (4,-4,20), (6,-8,8), (8,-6,8), (-2,8,8), (-4,0,20), (-6,-2,8), (-8,2,8), (1,6,10), (1,-7,-10), (6,1,-10), (6,-7,10), (7,-1,-10), (7,-6,10), (-1,7,10), (-1,-6,-10), (-6,7,-10), (-6,-1,10), (-7,1,10), (-7,6,-10)								
LiNbO3	(0,-4,-20)	10.532	71.54	12.4	11.4	3.705	42.19	46.32	62.66
	Equiv. Refl.: (4,0,-20), (-4,4,-20)								
LiNbO3	(2,-5,-20)	10.804	76.67	12.2	11.1	2.631	29.24	32.89	44
	Equiv. Refl.: (3,2,-20), (3,5,10), (5,-2,-20), (5,-8,10), (8,-5,10), (-2,-3,-20), (-3,5,-20), (-3,8,10), (-5,3,-20), (-5,-3,10), (-8,3,10)								
Quartz	(2,6,-3)	11.056	84.71	11.4	9.9	1.029	10.18	12.86	16.4
	Equiv. Refl.: (2,-8,3), (6,2,3), (6,-8,-3), (8,-2,3), (8,-6,-3), (-2,8,-3), (-2,-6,3), (-8,2,-3), (-8,6,3)								
LiNbO3	(2,3,20)	10.804	76.67	11.3	11.1	2.631	29.24	32.89	44
	Equiv. Refl.: (3,-5,20), (3,-8,-10), (5,3,-10), (5,-3,20), (8,-3,-10), (-2,5,20), (-3,-2,20), (-3,-5,-10), (-5,2,20), (-5,8,-10), (-8,5,-10), (-6,8,3), (-6,-2,-3)								
LiNbO3	(1,5,-16)	10.542	71.7	11.2	10.4	3.671	38.13	45.89	59.66
	Equiv. Refl.: (5,-6,-16), (6,-5,-16), (-1,6,-16), (-5,-1,-16), (-6,1,-16)								
LiNbO3	(1,-6,16)	10.542	71.7	11.1	10.4	3.671	38.13	45.89	59.66
	Equiv. Refl.: (5,1,16), (6,-1,16), (-1,-5,16), (-5,6,16), (-6,5,16)								
LiNbO3	(1,-3,22)	10.503	71.08	10.9	9.9	3.805	37.49	47.57	60.56
	Equiv. Refl.: (1,-8,0), (2,1,22), (3,-1,22), (7,1,0), (8,-1,0), (-1,-2,22), (-1,-7,0), (-2,3,22), (-3,2,22), (-7,8,0), (-8,7,0)								
LiNbO3	(1,2,-22)	10.503	71.08	10.7	9.9	3.805	37.49	47.57	60.56
	Equiv. Refl.: (1,7,0), (2,-3,-22), (3,-2,-22), (7,-8,0), (8,-7,0), (-1,3,-22), (-1,8,0), (-2,-1,-22), (-3,1,-22), (-7,-1,0), (-8,1,0)								
LiNbO3	(3,-7,-14)	10.523	71.4	10.6	9.5	3.737	35.54	46.71	58.7
	Equiv. Refl.: (4,3,-14), (7,-3,-14), (-3,-4,-14), (-4,7,-14), (-7,4,-14)								
LiNbO3	(3,4,14)	10.523	71.4	10.1	9.5	3.737	35.54	46.71	58.7
	Equiv. Refl.: (4,-7,14), (7,-4,14), (-3,7,14), (-4,-3,14), (-7,3,14)								

Ei =	11.103	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	E cotΘ	ΔE	2m	2m
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[keV]	[meV]	[meV]	[meV]
Quartz	(0,5,7)	10.841	77.54	9.6	7.6	2.454	18.56	30.67	35.85
	Equiv. Refl.: (0,-5,-7), (5,0,-7), (5,-5,7), (8,-1,-1), (8,-7,1), (-1,8,1), (-1,-7,-1), (-5,0,7), (-5,5,-7) (-7,8,-1), (-7,-1,1)								
Quartz	(1,7,1)	11.06	84.93	9.4	8.5	0.984	8.41	12.3	14.9
	Equiv. Refl.: (1,-8,-1), (7,1,-1), (7,-8,1), (-8,1,1), (-8,7,-1)								
Quartz	(0,4,8)	10.87	78.25	9.2	7.5	2.309	17.25	28.86	33.62
	Equiv. Refl.: (0,-4,-8), (4,0,-8), (4,-4,8), (8,-1,0), (8,-7,0), (-1,8,0), (-1,-7,0), (-4,0,8), (-4,4,-8) (-7,8,0), (-7,-1,0)								
Sapph	(2,4,16)	11.031	83.49	9.1	8.3	1.268	10.48	15.84	19
	Equiv. Refl.: (2,-6,-16), (4,2,-16), (4,-6,16), (6,-2,-16), (6,-4,16), (-2,6,16), (-2,-4,-16), (-4,6,-16), (-4,-2,16) (-6,2,16), (-6,4,-16)								
Quartz	(1,7,0)	11	82.19	9	7.6	1.523	11.65	19.04	22.32
	Equiv. Refl.: (1,-8,0), (7,1,0), (7,-8,0), (-8,1,0), (-8,7,0)								
Quartz	(3,5,-3)	10.764	75.8	8.7	6.8	2.809	19.2	35.12	40.03
	Equiv. Refl.: (3,-8,3), (5,3,3), (5,-8,-3), (8,-3,3), (8,-5,-3), (-3,8,-3), (-3,-5,3), (-5,8,3), (-5,-3,-3) (-8,3,-3), (-8,5,3)								
LiNbO3	(0,0,-24)	10.732	75.15	8.3	7.8	2.944	23.01	36.79	43.4
Quartz	(8,-2,-3)	11.056	84.71	8.1	7.2	1.029	7.36	12.86	14.82
	Equiv. Refl.: (8,-6,3), (-2,8,3), (-2,-6,-3), (-6,8,-3), (-6,-2,3)								
Sapph	(1,5,14)	10.715	74.81	7.9	6.5	3.015	19.46	37.68	42.41
	Equiv. Refl.: (1,-6,-14), (5,1,-14), (5,-6,14), (6,-1,-14), (6,-5,14), (-1,6,14), (-1,-5,-14), (-5,6,-14), (-5,-1,14) (-6,1,14), (-6,5,-14)								
Sapph	(3,5,4)	10.703	74.57	7.8	6.4	3.065	19.68	38.32	43.08
	Equiv. Refl.: (3,-8,-4), (5,3,-4), (5,-8,4), (8,-3,-4), (8,-5,4), (-3,8,4), (-3,-5,-4), (-5,8,-4), (-5,-3,4) (-8,3,4), (-8,5,-4)								
Quartz	(8,-1,1)	11.06	84.93	7.6	6.9	0.984	6.76	12.3	14.04
	Equiv. Refl.: (8,-7,-1), (-1,8,-1), (-1,-7,1), (-7,8,1), (-7,-1,-1)								
Quartz	(2,6,3)	11.056	84.71	7.4	7.2	1.029	7.37	12.86	14.82
	Equiv. Refl.: (2,-8,-3), (6,2,-3), (6,-8,3), (-8,2,3), (-8,6,-3)								
LiNbO3	(0,0,24)	10.732	75.15	7.2	7.8	2.944	23.01	36.79	43.4
Sapph	(4,4,6)	10.809	76.79	7	6	2.606	15.59	32.58	36.12
	Equiv. Refl.: (4,4,-6), (4,-8,6), (4,-8,-6), (8,-4,6), (8,-4,-6), (-4,8,6), (-4,8,-6), (-4,-4,6), (-4,-4,-6) (-8,4,6), (-8,4,-6), (1,7,-1), (1,-8,1), (7,1,1), (7,-8,-1), (-8,1,-1), (-8,7,1)								
Sapph	(0,5,16)	10.719	74.89	6.3	5.3	2.998	16.02	37.47	40.75
	Equiv. Refl.: (0,-5,-16), (5,0,-16), (5,-5,16), (-5,0,16), (-5,5,-16)								
Sapph	(0,7,2)	10.574	72.24	5.5	4.7	3.555	16.72	44.44	47.48
	Equiv. Refl.: (0,-7,-2), (7,0,-2), (7,-7,2), (-7,0,2), (-7,7,-2)								
Quartz	(1,5,6)	10.638	73.36	5.3	4.4	3.318	14.48	41.47	43.93
	Equiv. Refl.: (1,-6,-6), (5,1,-6), (5,-6,6), (6,-1,-6), (6,-5,6), (-1,6,6), (-1,-5,-6), (-5,6,-6), (-5,-1,6) (-6,1,6), (-6,5,-6)								
Quartz	(0,2,-9)	10.727	75.04	5.1	4.1	2.967	12.19	37.09	39.04
	Equiv. Refl.: (0,-2,9), (2,0,9), (2,-2,-9), (8,-2,-2), (8,-6,2), (-2,0,-9), (-2,2,9), (-2,8,2), (-2,-6,-2) (-6,8,-2), (-6,-2,2)								
Quartz	(2,6,2)	10.754	75.6	5	4.1	2.852	11.63	35.64	37.49
	Equiv. Refl.: (2,-8,-2), (6,2,-2), (6,-8,2), (-8,2,2), (-8,6,-2)								
Quartz	(2,6,1)	10.569	72.16	4.9	3.9	3.574	13.97	44.68	46.81
	Equiv. Refl.: (2,-8,-1), (6,2,-1), (6,-8,1), (8,-2,-1), (8,-6,1), (-2,8,1), (-2,-6,-1), (-6,8,-1), (-6,-2,1) (-8,2,1), (-8,6,-1)								

Ei =	11.103	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	E cotΘ	ΔE	2m	2m
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[keV]	[meV]	[meV]	[meV]
Sapph	(0,6,12)	10.69	74.33	4.8	4.1	3.115	12.79	38.94	40.98
	Equiv. Refl.: (0,6,-12), (0,-6,12), (0,-6,-12), (6,0,12), (6,0,-12), (6,-6,12), (6,-6,-12), (-6,0,12), (-6,0,-12), (-6,6,12), (-6,6,-12)								
Quartz	(0,6,5)	10.455	70.33	4.6	3.7	3.968	14.54	49.6	51.69
	Equiv. Refl.: (0,-6,-5), (6,0,-5), (6,-6,5), (-6,0,5), (-6,6,-5)								
LiNbO3	(4,5,5)	11.088	87	4.3	9.4	0.581	5.47	7.26	9.09
	Equiv. Refl.: (4,-9,-5), (5,4,-5), (5,-9,5), (9,-4,-5), (9,-5,5), (-4,9,5), (-4,-5,-5), (-5,9,-5), (-5,-4,5), (-9,4,5), (-9,5,-5)								
Quartz	(1,6,-4)	10.599	72.66	4	3.2	3.466	11.04	43.32	44.71
	Equiv. Refl.: (1,-7,4), (4,4,3), (4,4,-3), (4,-8,3), (4,-8,-3), (6,1,4), (6,-7,-4), (-7,1,-4), (-7,6,4), (-8,4,3), (-8,4,-3)								
Sapph	(2,6,-1)	10.859	77.97	3.9	3.6	2.367	8.57	29.58	30.8
	Equiv. Refl.: (2,-8,1), (6,2,1), (6,-8,-1), (8,-2,1), (8,-6,-1), (-2,8,-1), (-2,-6,1), (-6,8,1), (-6,-2,-1), (-8,2,-1), (-8,6,1)								
Quartz	(8,-4,3)	10.665	73.85	3.8	3.3	3.216	10.53	40.2	41.55
	Equiv. Refl.: (8,-4,-3), (-4,8,3), (-4,8,-3), (-4,-4,3), (-4,-4,-3)								
Sapph	(1,6,-8)	10.578	72.32	3.7	3.3	3.54	11.51	44.25	45.72
	Equiv. Refl.: (1,-7,8), (3,5,7), (3,-8,-7), (5,3,-7), (5,-8,7), (6,1,8), (6,-7,-8), (7,-1,8), (7,-6,-8), (8,-3,-7), (8,-5,7), (-1,7,-8), (-1,-6,8), (-3,8,7), (-3,-5,-7), (-5,8,-7), (-5,-3,7), (-6,7,8), (-6,-1,-8), (-7,1,-8), (-7,6,8), (-8,3,7), (-8,5,-7), (7,-1,4), (7,-6,-4), (-1,7,-4), (-1,-6,4), (-6,7,4), (-6,-1,-4)								
Quartz	(1,3,-8)	10.573	72.23	3.4	2.8	3.558	9.93	44.47	45.57
	Equiv. Refl.: (1,-4,8), (3,1,8), (3,5,-2), (3,-4,-8), (3,-8,2), (4,-1,8), (4,-3,-8), (5,3,2), (5,-8,-2), (8,-3,2), (8,-5,-2), (-1,4,-8), (-1,-3,8), (-3,4,8), (-3,8,-2), (-3,-1,-8), (-3,-5,2), (-4,1,-8), (-4,3,8), (-5,8,2), (-5,-3,-2), (-8,3,-2), (-8,5,2)								
Quartz	(7,-3,-5)	10.556	71.95	3.3	3	3.619	10.8	45.24	46.51
	Equiv. Refl.: (7,-4,5), (-3,7,5), (-3,-4,-5), (-4,7,-5), (-4,-3,5)								
Quartz	(3,4,5)	10.556	71.95	3.2	3	3.619	10.8	45.24	46.51
	Equiv. Refl.: (3,5,3), (3,-7,-5), (3,-8,-3), (4,3,-5), (4,-7,5), (5,3,-3), (5,-8,3), (-7,3,5), (-7,4,-5), (-8,3,3), (-8,5,-3)								
Quartz	(8,-3,-3)	10.764	75.8	3	2.9	2.809	8.13	35.12	36.05
	Equiv. Refl.: (8,-5,3), (-3,8,3), (-3,-5,-3), (-5,8,-3), (-5,-3,3)								
Quartz	(1,2,-9)	11.019	82.96	2.9	2.9	1.37	3.99	17.13	17.59
	Equiv. Refl.: (1,-3,9), (2,1,9), (2,-3,-9), (-3,1,-9), (-3,2,9)								
LiNbO3	(1,6,13)	10.814	76.89	2.7	4.1	2.586	10.69	32.33	34.05
	Equiv. Refl.: (1,-7,-13), (6,1,-13), (6,-7,13), (7,-1,-13), (7,-6,13), (-1,7,13), (-1,-6,-13), (-6,7,-13), (-6,-1,13), (-7,1,13), (-7,6,-13), (8,-2,1), (8,-6,-1), (-2,8,-1), (-2,-6,1), (-6,8,1), (-6,-2,-1)								
Quartz	(2,6,-1)	10.569	72.16	2.6	2.5	3.574	8.99	44.68	45.57
	Equiv. Refl.: (2,-8,1), (6,2,1), (6,-8,-1), (-8,2,-1), (-8,6,1)								
Sapph	(4,4,3)	10.521	71.36	2.4	2.4	3.744	8.85	46.81	47.63
	Equiv. Refl.: (4,4,-3), (4,-8,3), (4,-8,-3), (8,-4,3), (8,-4,-3), (-4,8,3), (-4,8,-3), (-4,-4,3), (-4,-4,-3), (-8,4,3), (-8,4,-3), (1,1,9), (1,1,-9), (1,5,-6), (1,-2,9), (1,-2,-9), (1,-6,6), (2,5,-5), (2,-7,5), (5,1,6), (5,2,5), (5,-6,-6), (5,-7,-5), (6,-1,6), (6,-5,-6), (-1,6,-6), (-1,-5,6), (-2,1,9), (-2,1,-9), (-5,6,6), (-5,-1,-6), (-6,1,-6), (-6,5,6), (-7,2,-5), (-7,5,5)								
Quartz	(3,-1,9)	11.019	82.96	2.2	2.9	1.37	3.98	17.13	17.58
	Equiv. Refl.: (3,-2,-9), (-1,3,-9), (-1,-2,9), (-2,3,9), (-2,-1,-9)								
Quartz	(1,4,7)	10.443	70.14	1.9	2.1	4.011	8.39	50.14	50.83
	Equiv. Refl.: (1,-5,-7), (2,-1,9), (2,-1,-9), (4,1,-7), (4,-5,7), (5,-1,-7), (5,-4,7), (7,-2,5), (7,-5,-5), (-1,2,9), (-1,2,-9), (-1,5,7), (-1,-1,9), (-1,-1,-9), (-1,-4,-7), (-2,7,-5), (-2,-5,5), (-4,5,-7), (-4,-1,7), (-5,1,7), (-5,4,-7), (-5,7,5), (-5,-2,-5)								

Ei =	11.103	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	E cotΘ	ΔE	2m	2m
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[keV]	[meV]	[meV]	[meV]
Quartz	(0,2,9)	10.727	75.04	1.8	2	2.967	6.05	37.09	37.58
	Equiv. Refl.: (0,-2,-9), (2,0,-9), (2,-2,9), (3,5,2), (3,-8,-2), (5,3,-2), (5,-8,2), (8,-3,-2), (8,-5,2) (-2,0,9), (-2,2,-9), (-3,8,2), (-3,-5,-2), (-5,8,-2), (-5,-3,2), (-8,3,2), (-8,5,-2)								
LiNbO3	(2,4,-17)	10.58	72.34	1.7	2.8	3.536	9.8	44.19	45.27
	Equiv. Refl.: (2,-6,17), (4,2,17), (4,-6,-17), (6,-2,17), (6,-4,-17), (-2,6,-17), (-2,-4,17), (-4,6,17), (-4,-2,-17) (-6,2,-17), (-6,4,17), (2,6,-2), (2,-8,2), (6,2,2), (6,-8,-2), (-8,2,-2), (-8,6,2)								
Quartz	(0,7,-2)	10.454	70.31	1.6	1.8	3.974	6.96	49.67	50.16
	Equiv. Refl.: (0,-7,2), (7,0,2), (7,-7,-2), (-7,0,-2), (-7,7,2)								
LiNbO3	(2,2,21)	10.554	71.91	1.5	2.6	3.628	9.44	45.34	46.32
	Equiv. Refl.: (2,2,-21), (2,-4,21), (2,-4,-21), (4,-2,21), (4,-2,-21), (-2,4,21), (-2,4,-21), (-2,-2,21), (-2,-2,-21) (-4,2,21), (-4,2,-21), (2,6,0), (2,-8,0), (5,-1,7), (5,-4,-7), (6,2,0), (6,-8,0), (8,-2,2) (8,-6,-2), (-1,5,-7), (-1,-4,7), (-2,8,-2), (-2,-6,2), (-4,5,7), (-4,-1,-7), (-6,8,2), (-6,-2,-2) (-8,2,0), (-8,6,0)								
Sapph	(1,4,18)	11.015	82.8	1.4	2.1	1.403	2.95	17.54	17.79
	Equiv. Refl.: (1,4,-18), (1,-5,18), (1,-5,-18), (3,5,-5), (3,-8,5), (4,1,18), (4,1,-18), (4,-5,18), (4,-5,-18) (5,3,5), (5,-1,18), (5,-1,-18), (5,-4,18), (5,-4,-18), (5,-8,-5), (8,-3,5), (8,-5,-5), (-1,5,18) (-1,5,-18), (-1,-4,18), (-1,-4,-18), (-3,8,-5), (-3,-5,5), (-4,5,18), (-4,5,-18), (-4,-1,18), (-4,-1,-18) (-5,1,18), (-5,1,-18), (-5,4,18), (-5,4,-18), (-5,8,5), (-5,-3,-5), (-8,3,-5), (-8,5,5), (1,2,9) (1,3,8), (1,4,-7), (1,-3,-9), (1,-4,-8), (1,-5,7), (2,1,-9), (2,-3,9), (3,1,-8), (3,-4,8) (4,1,7), (4,-1,-8), (4,-3,8), (4,-5,-7), (-1,4,8), (-1,-3,-8), (-3,1,9), (-3,2,-9), (-3,4,-8) (-3,-1,8), (-4,1,8), (-4,3,-8), (-5,1,-7), (-5,4,7)								
Quartz	(0,7,3)	10.764	75.8	1.3	1.6	2.809	4.4	35.12	35.39
	Equiv. Refl.: (0,-7,-3), (3,-1,-9), (3,-2,9), (7,0,-3), (7,-7,3), (8,-2,0), (8,-6,0), (-1,3,9), (-1,-2,-9) (-2,3,-9), (-2,8,0), (-2,-1,9), (-2,-6,0), (-6,8,0), (-6,-2,0), (-7,0,3), (-7,7,-3)								
LiNbO3	(4,5,-1)	10.869	78.22	1.2	2.5	2.315	5.83	28.94	29.52
	Equiv. Refl.: (4,-9,1), (5,4,1), (5,-9,-1), (9,-4,1), (9,-5,-1), (-4,9,-1), (-4,-5,1), (-5,9,1), (-5,-4,-1) (-9,4,-1), (-9,5,1), (2,5,12), (2,5,-12), (2,-7,12), (2,-7,-12), (5,2,12), (5,2,-12), (5,-7,12) (5,-7,-12), (7,-2,12), (7,-2,-12), (7,-5,12), (7,-5,-12), (-2,7,12), (-2,7,-12), (-2,-5,12), (-2,-5,-12) (-5,7,12), (-5,7,-12), (-5,-2,12), (-5,-2,-12), (-7,2,12), (-7,2,-12), (-7,5,12), (-7,5,-12), (0,7,-3) (0,-7,3), (3,4,-5), (3,-7,5), (4,3,5), (4,-2,8), (4,-2,-8), (4,-7,-5), (7,0,3), (7,-7,-3) (-2,4,8), (-2,4,-8), (-2,-2,8), (-2,-2,-8), (-7,0,-3), (-7,3,-5), (-7,4,5), (-7,7,3)								
Sapph	(3,5,1)	10.542	71.7	1.1	1.4	3.671	5.23	45.89	46.18
	Equiv. Refl.: (3,-8,-1), (5,3,-1), (5,-8,1), (8,-3,-1), (8,-5,1), (-3,8,1), (-3,-5,-1), (-5,8,-1), (-5,-3,1) (-8,3,1), (-8,5,-1), (2,2,8), (2,2,-8), (2,-4,8), (2,-4,-8), (-4,2,8), (-4,2,-8)								
Quartz	(1,6,4)	10.599	72.66	1	1.2	3.466	4.22	43.32	43.53
	Equiv. Refl.: (1,-7,-4), (6,1,-4), (6,-7,4), (7,-1,-4), (7,-3,5), (7,-4,-5), (7,-6,4), (-1,7,4), (-1,-6,-4) (-3,7,-5), (-3,-4,5), (-4,7,5), (-4,-3,-5), (-6,7,-4), (-6,-1,4), (-7,1,4), (-7,6,-4)								
LiNbO3	(1,2,23)	10.923	79.68	0.9	2.3	2.023	4.75	25.28	25.73
	Equiv. Refl.: (1,5,17), (1,-3,-23), (1,-6,-17), (2,1,-23), (2,-3,23), (3,-1,-23), (3,-2,23), (5,1,-17), (5,-6,17) (6,-1,-17), (6,-5,17), (-1,3,23), (-1,6,17), (-1,-2,-23), (-1,-5,-17), (-2,3,-23), (-2,-1,23), (-3,1,23) (-3,2,-23), (-5,6,-17), (-5,-1,17), (-6,1,17), (-6,5,-17), (0,6,-5), (0,-6,5), (6,0,5), (6,-6,-5) (-6,0,-5), (-6,6,5)								
Quartz	(3,3,-7)	11.036	83.68	0.8	1.1	1.23	1.39	15.37	15.43
LiNbO3	(2,5,15)	10.973	81.21	0.7	2.1	1.717	3.63	21.46	21.77
	Equiv. Refl.: (2,5,-15), (2,-7,15), (2,-7,-15), (5,2,15), (5,2,-15), (5,-7,15), (5,-7,-15), (7,-2,15), (7,-2,-15) (7,-5,15), (7,-5,-15), (-2,7,15), (-2,7,-15), (-2,-5,15), (-2,-5,-15), (-5,7,15), (-5,7,-15), (-5,-2,15) (-5,-2,-15), (-7,2,15), (-7,2,-15), (-7,5,15), (-7,5,-15), (0,2,22), (0,7,-4), (0,-2,-22), (0,-7,4) (2,0,-22), (2,-2,22), (7,0,4), (7,-7,-4), (-2,0,22), (-2,2,-22), (-7,0,-4), (-7,7,4), (0,4,-8) (0,5,-7), (0,-4,8), (0,-5,7), (3,3,7), (3,-6,7), (3,-6,-7), (4,0,8), (4,-4,-8), (5,0,7) (5,-5,-7), (7,-2,-5), (7,-5,5), (-2,7,5), (-2,-5,-5), (-4,0,-8), (-4,4,8), (-5,0,-7), (-5,5,7) (-5,7,-5), (-5,-2,5), (-6,3,7), (-6,3,-7)								

Ei =	11.103	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	E cotΘ	ΔE	2m	2m
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[keV]	[meV]	[meV]	[meV]
Quartz	(2,5,5)	10.756	75.63	0.6	0.9	2.845	2.55	35.56	35.65
	Equiv. Refl.: (2,-7,-5), (5,2,-5), (5,-7,5), (-7,2,5), (-7,5,-5)								
Sapph	(1,3,19)	10.567	72.12	0.5	0.8	3.581	2.81	44.76	44.85
	Equiv. Refl.: (1,-4,-19), (3,1,-19), (3,4,-13), (3,-4,19), (3,-7,13), (4,3,13), (4,-1,-19), (4,-3,19), (4,-7,-13), (7,-3,13), (7,-4,-13), (-1,4,19), (-1,-3,-19), (-3,4,-19), (-3,7,-13), (-3,-1,19), (-3,-4,13), (-4,1,19), (-4,3,-19), (-4,7,13), (-4,-3,-13), (-7,3,-13), (-7,4,13), (6,-3,7), (6,-3,-7), (-3,6,7), (-3,6,-7), (-3,-3,7), (-3,-3,-7)								
LiNbO3	(2,6,-7)	10.504	71.1	0.4	1.1	3.802	4.06	47.53	47.7
	Equiv. Refl.: (2,-8,7), (6,2,7), (6,-8,-7), (8,-2,7), (8,-6,-7), (-2,8,-7), (-2,-6,7), (-6,8,7), (-6,-2,-7), (-8,2,-7), (-8,6,7), (0,7,2), (0,-7,-2), (7,0,-2), (7,-7,2), (-7,0,2), (-7,7,-2)								
LiNbO3	(3,5,-11)	10.906	79.18	0.3	1.2	2.121	2.61	26.52	26.64
	Equiv. Refl.: (3,-8,11), (5,3,11), (5,-8,-11), (8,-3,11), (8,-5,-11), (-3,8,-11), (-3,-5,11), (-5,8,11), (-5,-3,-11), (-8,3,-11), (-8,5,11), (0,1,-22), (0,-1,22), (1,0,22), (1,-1,-22), (-1,0,-22), (-1,1,22)								
LiNbO3	(1,7,3)	10.583	72.4	0.2	0.9	3.522	3.19	44.02	44.14
	Equiv. Refl.: (1,7,-3), (1,-8,3), (1,-8,-3), (2,3,-19), (2,-5,19), (3,2,19), (3,-5,-19), (5,-2,19), (5,-3,-19), (7,1,3), (7,1,-3), (7,-8,3), (7,-8,-3), (8,-1,3), (8,-1,-3), (8,-7,3), (8,-7,-3), (-1,8,3), (-1,8,-3), (-1,-7,3), (-1,-7,-3), (-2,5,-19), (-2,-3,19), (-3,5,19), (-3,-2,-19), (-5,2,-19), (-5,3,19), (-7,8,3), (-7,8,-3), (-7,-1,3), (-7,-1,-3), (-8,1,3), (-8,1,-3), (-8,7,3), (-8,7,-3), (2,6,2), (2,-8,-2), (3,4,11), (3,-7,-11), (4,3,-11), (4,-7,11), (6,2,-2), (6,-8,2), (7,-3,-11), (7,-4,11), (8,-2,-2), (8,-6,2), (-2,8,2), (-2,-6,-2), (-3,7,11), (-3,-4,-11), (-4,7,-11), (-4,-3,11), (-6,8,-2), (-6,-2,2), (-7,3,11), (-7,4,-11), (-8,2,2), (-8,6,-2)								
LiNbO3	(4,4,9)	10.44	70.11	0	0.2	4.018	0.94	50.22	50.23
	Equiv. Refl.: (4,4,-9), (4,-8,9), (4,-8,-9), (8,-4,9), (8,-4,-9), (-4,8,9), (-4,8,-9), (-4,-4,9), (-4,-4,-9), (-8,4,9), (-8,4,-9), (3,3,15), (3,3,-15), (3,-6,15), (3,-6,-15), (6,-3,15), (6,-3,-15), (-3,6,15), (-3,6,-15), (-3,-3,15), (-3,-3,-15), (-6,3,15), (-6,3,-15)								

Ei =	11.867	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	E cotΘ	ΔE	2m	2m
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[keV]	[meV]	[meV]	[meV]
Si	(1,5,9)	11.807	84.25	7.712	7.2	1.196	8.64	14.95	17.27
	Equiv. Refl.: (3,7,7)								
Si	(0,2,10)	11.64	78.79	6.388	5.5	2.352	12.98	29.4	32.14
	Equiv. Refl.: (2,6,8)								
Si	(4,4,8)	11.184	70.46	4.464	3.6	4.211	15.36	52.63	54.83
Si	(1,7,7)	11.357	73.15	3.368	2.8	3.595	10.19	44.94	46.08
	Equiv. Refl.: (3,3,9), (5,5,7)								
Ge	(3,5,9)	11.751	81.98	3.178	9	1.672	15.08	20.9	25.78
Ge	(0,2,10)	11.175	70.33	3.089	6.3	4.241	26.52	53.01	59.28
	Equiv. Refl.: (2,6,8)								
Ge	(1,5,9)	11.335	72.78	1.781	4.8	3.679	17.64	45.99	49.25
	Equiv. Refl.: (3,7,7)								
LiNbO3	(2,5,18)	11.84	86.16	39.5	36.5	0.797	29.06	9.96	30.72
	Equiv. Refl.: (5,-7,18), (7,-5,18), (-5,-2,18)								
LiNbO3	(-2,7,18)	11.84	86.16	39.4	36.5	0.797	29.06	9.96	30.72
	Equiv. Refl.: (-7,2,18)								
LiNbO3	(2,-7,-18)	11.84	86.16	39.2	36.5	0.797	29.06	9.96	30.72
	Equiv. Refl.: (5,2,-18), (7,-2,-18), (-2,-5,-18), (-5,7,-18), (-7,5,-18)								
LiNbO3	(2,-7,18)	11.84	86.16	38.1	35.3	0.797	28.1	9.96	29.81
	Equiv. Refl.: (5,2,18), (7,-2,18), (-2,-5,18), (-5,7,18), (-7,5,18)								
LiNbO3	(2,5,-18)	11.84	86.16	37.6	35.3	0.797	28.1	9.96	29.81
	Equiv. Refl.: (5,-7,-18), (7,-5,-18), (-2,7,-18), (-5,-2,-18), (-7,2,-18)								
LiNbO3	(2,6,14)	11.821	84.95	30.9	28.1	1.049	29.45	13.12	32.24
	Equiv. Refl.: (6,-8,14), (8,-6,14), (-2,8,14), (-6,-2,14), (-8,2,14)								
LiNbO3	(2,-8,-14)	11.821	84.95	29.7	28.1	1.049	29.45	13.12	32.24
	Equiv. Refl.: (6,2,-14), (8,-2,-14), (-2,-6,-14), (-6,8,-14), (-8,6,-14)								
LiNbO3	(1,5,20)	11.829	85.41	29.2	27.5	0.953	26.17	11.91	28.75
	Equiv. Refl.: (5,-6,20), (6,-5,20), (-1,6,20), (-5,-1,20), (-6,1,20)								
LiNbO3	(1,-6,-20)	11.829	85.41	29	27.5	0.953	26.17	11.91	28.75
	Equiv. Refl.: (5,1,-20), (6,-1,-20), (-1,-5,-20), (-5,6,-20), (-6,5,-20)								
LiNbO3	(1,-8,12)	11.79	83.47	22.9	21.1	1.359	28.63	16.99	33.29
	Equiv. Refl.: (7,1,12), (8,-1,12), (-1,-7,12), (-7,8,12), (-8,7,12)								
LiNbO3	(1,7,-12)	11.79	83.47	22.4	21.1	1.359	28.63	16.99	33.29
	Equiv. Refl.: (7,-8,-12), (8,-7,-12), (-1,8,-12), (-7,-1,-12), (-8,1,-12)								
LiNbO3	(2,2,24)	11.764	82.43	22.1	20.2	1.577	31.83	19.71	37.44
	Equiv. Refl.: (2,-4,24), (4,-2,24), (-2,4,24), (-2,-2,24), (-4,2,24)								
LiNbO3	(2,2,-24)	11.764	82.43	22	20.2	1.577	31.83	19.71	37.44
	Equiv. Refl.: (2,-4,-24), (4,-2,-24), (-2,4,-24), (-2,-2,-24), (-4,2,-24)								
LiNbO3	(1,7,12)	11.79	83.47	20.3	19.1	1.359	25.91	16.99	30.99
	Equiv. Refl.: (7,-8,12), (8,-7,12), (-1,8,12), (-7,-1,12), (-8,1,12)								
LiNbO3	(1,-8,-12)	11.79	83.47	19.9	19.1	1.359	25.91	16.99	30.99
	Equiv. Refl.: (7,1,-12), (8,-1,-12), (-1,-7,-12), (-7,8,-12), (-8,7,-12)								
LiNbO3	(0,8,-8)	11.685	79.95	19.5	17	2.103	35.84	26.28	44.45
	Equiv. Refl.: (8,-8,-8), (-8,0,-8)								
LiNbO3	(0,-8,8)	11.685	79.95	18.3	17	2.103	35.84	26.28	44.45
	Equiv. Refl.: (8,0,8), (-8,8,8)								
LiNbO3	(4,5,-10)	11.745	81.77	18.1	16.3	1.717	28.07	21.46	35.34
	Equiv. Refl.: (5,-9,-10), (9,-5,-10), (-4,9,-10), (-5,-4,-10), (-9,4,-10)								

Ei =	11.867	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	E cotΘ	ΔE	2m	2m
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[keV]	[meV]	[meV]	[meV]
LiNbO3	(4,-9,10)	11.745	81.77	16.9	16.3	1.717	28.07	21.46	35.34
	Equiv. Refl.: (5,4,10), (9,-4,10), (-4,-5,10), (-5,9,10), (-9,5,10)								
Quartz	(4,0,9)	11.855	87.39	15.5	13.5	0.542	7.32	6.77	9.98
	Equiv. Refl.: (4,-4,-9), (-4,0,-9), (-4,4,9)								
Quartz	(0,4,-9)	11.855	87.39	15.4	13.5	0.542	7.31	6.77	9.97
	Equiv. Refl.: (0,-4,9)								
Sapph	(2,6,-10)	11.852	87.12	14.8	13.4	0.596	7.97	7.45	10.91
	Equiv. Refl.: (2,-8,10), (6,2,10), (6,-8,-10), (8,-2,10), (8,-6,-10), (-2,8,-10), (-2,-6,10), (-6,8,10), (-6,-2,-10), (-8,2,-10), (-8,6,10)								
LiNbO3	(0,1,26)	11.709	80.65	14.4	13.6	1.953	26.48	24.42	36.02
	Equiv. Refl.: (1,-1,26), (-1,0,26)								
LiNbO3	(0,-1,-26)	11.709	80.65	14.2	13.6	1.953	26.48	24.42	36.02
	Equiv. Refl.: (0,-6,18), (1,0,-26), (6,0,18), (-1,1,-26), (-6,6,18)								
LiNbO3	(0,6,-18)	11.593	77.66	14	12.9	2.596	33.44	32.45	46.59
	Equiv. Refl.: (2,-5,22), (3,2,22), (5,-2,22), (6,-6,-18), (-2,-3,22), (-3,5,22), (-5,3,22), (-6,0,-18)								
LiNbO3	(3,-8,14)	11.573	77.22	13.6	12	2.692	32.25	33.65	46.61
	Equiv. Refl.: (5,3,14), (8,-3,14), (-3,-5,14), (-5,8,14), (-8,5,14)								
LiNbO3	(2,3,-22)	11.555	76.83	13.5	12.5	2.776	34.69	34.7	49.07
	Equiv. Refl.: (3,-5,-22), (5,-3,-22), (-2,5,-22), (-3,-2,-22), (-5,2,-22)								
LiNbO3	(0,6,18)	11.593	77.66	13	11.8	2.596	30.66	32.45	44.64
	Equiv. Refl.: (6,-6,18), (-6,0,18)								
LiNbO3	(2,-6,20)	11.581	77.4	12.9	11.8	2.653	31.22	33.16	45.54
	Equiv. Refl.: (4,2,20), (6,-2,20), (-2,-4,20), (-4,6,20), (-6,4,20)								
LiNbO3	(0,-8,-4)	11.267	71.7	12.7	11.1	3.925	43.7	49.06	65.7
	Equiv. Refl.: (1,6,16), (6,-7,16), (7,-6,16), (8,0,-4), (-1,7,16), (-6,-1,16), (-7,1,16), (-8,8,-4)								
LiNbO3	(2,4,-20)	11.581	77.4	12.6	11.8	2.653	31.22	33.16	45.54
	Equiv. Refl.: (4,-6,-20), (6,-4,-20), (-2,6,-20), (-4,-2,-20), (-6,2,-20), (1,1,24), (1,1,-24), (1,-2,24), (1,-2,-24), (2,-1,24), (2,-1,-24), (-1,2,24), (-1,2,-24), (-1,-1,24), (-1,-1,-24), (-2,1,24), (-2,1,-24)								
LiNbO3	(0,-6,-18)	11.593	77.66	12.5	11.8	2.596	30.66	32.45	44.64
	Equiv. Refl.: (3,5,-14), (5,-8,-14), (6,0,-18), (8,-5,-14), (-3,8,-14), (-5,-3,-14), (-6,6,-18), (-8,3,-14)								
LiNbO3	(0,8,4)	11.267	71.7	12.4	11.1	3.925	43.7	49.06	65.7
	Equiv. Refl.: (8,-8,4), (-8,0,4)								
LiNbO3	(1,-7,-16)	11.59	77.6	12	11.5	2.61	30	32.62	44.32
	Equiv. Refl.: (6,1,-16), (7,-1,-16), (-1,-6,-16), (-6,7,-16), (-7,6,-16)								
LiNbO3	(2,7,-2)	11.417	74.17	11.7	10.6	3.366	35.84	42.07	55.27
	Equiv. Refl.: (2,-9,2), (7,2,2), (7,-9,-2), (9,-2,2), (9,-7,-2), (-2,9,-2), (-2,-7,2), (-7,9,2), (-7,-2,-2), (-9,2,-2), (-9,7,2)								
LiNbO3	(0,-7,-14)	11.573	77.22	11.2	10.2	2.692	27.47	33.65	43.44
	Equiv. Refl.: (7,0,-14), (-7,7,-14)								
LiNbO3	(0,7,14)	11.573	77.22	10.9	10.2	2.692	27.47	33.65	43.44
	Equiv. Refl.: (7,-7,14), (-7,0,14)								
Quartz	(0,4,9)	11.855	87.39	10.6	9.8	0.542	5.33	6.77	8.62
	Equiv. Refl.: (0,-4,-9), (4,0,-9), (4,-4,9), (-4,0,9), (-4,4,-9)								
Sapph	(0,7,-10)	11.562	76.98	10.5	8.2	2.743	22.57	34.29	41.05
	Equiv. Refl.: (0,-7,10), (7,0,10), (7,-7,-10), (-7,0,-10), (-7,7,10)								
LiNbO3	(2,7,4)	11.521	76.14	10.3	9.3	2.929	27.1	36.61	45.55
	Equiv. Refl.: (3,6,-6), (3,-9,6), (6,3,6), (6,-9,-6), (7,-9,4), (9,-3,6), (9,-6,-6), (9,-7,4), (-2,9,4), (-3,9,-6), (-3,-6,6), (-6,9,6), (-6,-3,-6), (-7,-2,4), (-9,2,4), (-9,3,-6), (-9,6,6)								
LiNbO3	(2,-9,-4)	11.521	76.14	9.7	9.3	2.929	27.1	36.61	45.55
	Equiv. Refl.: (7,2,-4), (9,-2,-4), (-2,-7,-4), (-7,9,-4), (-9,7,-4)								

Ei =	11.867	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	E cotΘ	ΔE	2m	2m
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[keV]	[meV]	[meV]	[meV]
LiNbO3	(3,-9,-6)	11.358	73.16	9.6	8.6	3.592	30.9	44.9	54.51
	Equiv. Refl.: (6,3,-6), (9,-3,-6), (-3,-6,-6), (-6,9,-6), (-9,6,-6)								
LiNbO3	(3,6,6)	11.358	73.16	9.3	8.6	3.592	30.9	44.9	54.51
	Equiv. Refl.: (6,-9,6), (9,-6,6), (-3,9,6), (-6,-3,6), (-9,3,6)								
Quartz	(0,7,-5)	11.701	80.4	9.2	7.2	2.007	14.54	25.09	29
	Equiv. Refl.: (0,-7,5), (7,0,5), (7,-7,-5), (-7,0,-5), (-7,7,5)								
LiNbO3	(0,4,-22)	11.301	72.24	8.8	7.9	3.801	29.98	47.52	56.18
	Equiv. Refl.: (4,-4,-22), (-4,0,-22)								
LiNbO3	(4,5,8)	11.434	74.48	8.5	7.9	3.296	25.94	41.2	48.69
	Equiv. Refl.: (5,-9,8), (9,-5,8), (-4,9,8), (-5,-4,8), (-9,4,8)								
LiNbO3	(0,-4,22)	11.301	72.24	8.4	7.9	3.801	29.98	47.52	56.18
	Equiv. Refl.: (4,0,22), (-4,4,22)								
LiNbO3	(4,-9,-8)	11.434	74.48	8.2	7.9	3.296	25.94	41.2	48.69
	Equiv. Refl.: (5,4,-8), (9,-4,-8), (-4,-5,-8), (-5,9,-8), (-9,5,-8)								
LiNbO3	(0,-3,-24)	11.514	76	8.1	7.5	2.959	22.13	36.99	43.1
	Equiv. Refl.: (3,0,-24), (-3,3,-24)								
LiNbO3	(0,3,-24)	11.514	76	7.9	7.4	2.959	21.87	36.99	42.97
	Equiv. Refl.: (3,-3,-24), (-3,0,-24), (3,3,18), (3,3,-18), (3,-6,18), (3,-6,-18), (6,-3,18), (6,-3,-18), (-3,6,18), (-3,6,-18), (-3,-3,18), (-3,-3,-18), (-6,3,18), (-6,3,-18), (3,6,-2), (3,-9,2), (6,3,2), (6,-9,-2), (9,-3,2), (9,-6,-2), (-3,9,-2), (-3,-6,2), (-6,9,2), (-6,-3,-2), (-9,3,-2), (-9,6,2)								
LiNbO3	(0,5,-20)	11.328	72.66	7.7	6.8	3.704	25.15	46.3	52.69
	Equiv. Refl.: (5,-5,-20), (-5,0,-20)								
Sapph	(1,7,6)	11.714	80.78	7.6	6.5	1.927	12.49	24.09	27.13
	Equiv. Refl.: (1,7,-6), (1,-8,6), (1,-8,-6), (7,1,6), (7,1,-6), (7,-8,6), (7,-8,-6), (8,-1,6), (8,-1,-6), (8,-7,6), (8,-7,-6), (-1,8,6), (-1,8,-6), (-1,-7,6), (-1,-7,-6), (-7,8,6), (-7,8,-6), (-7,-1,6), (-7,-1,-6), (-8,1,6), (-8,1,-6), (-8,7,6), (-8,7,-6)								
LiNbO3	(0,3,24)	11.514	76	7.4	7.5	2.959	22.13	36.99	43.1
	Equiv. Refl.: (3,-3,24), (-3,0,24)								
LiNbO3	(0,-3,24)	11.514	76	7.3	7.4	2.959	21.87	36.99	42.97
	Equiv. Refl.: (3,0,24), (-3,3,24)								
Quartz	(3,6,2)	11.79	83.46	7.2	6.2	1.36	8.37	17	18.95
	Equiv. Refl.: (3,-9,-2), (6,3,-2), (6,-9,2), (-9,3,2), (-9,6,-2)								
Quartz	(9,-3,-2)	11.79	83.46	7.1	6.2	1.36	8.37	17	18.95
	Equiv. Refl.: (9,-6,2), (-3,9,2), (-3,-6,-2), (-6,9,-2), (-6,-3,2)								
LiNbO3	(0,-5,20)	11.328	72.66	6.7	6.8	3.704	25.15	46.3	52.69
	Equiv. Refl.: (5,0,20), (-5,5,20)								
Sapph	(0,4,20)	11.284	71.97	6.5	5.2	3.863	20.18	48.28	52.33
	Equiv. Refl.: (0,-4,-20), (4,0,-20), (4,-4,20), (-4,0,20), (-4,4,-20)								
Quartz	(0,8,-1)	11.712	80.74	6.2	5.2	1.936	10.02	24.2	26.19
	Equiv. Refl.: (0,-8,1), (8,0,1), (8,-8,-1), (-8,0,-1), (-8,8,1)								
Quartz	(0,2,-10)	11.835	85.76	5.7	5.3	0.88	4.69	10.99	11.95
	Equiv. Refl.: (0,-2,10), (2,0,10), (2,-2,-10), (-2,0,-10), (-2,2,10)								
Sapph	(2,5,15)	11.812	84.48	5.6	5.3	1.146	6.09	14.32	15.57
	Equiv. Refl.: (2,5,-15), (2,-7,15), (2,-7,-15), (5,2,15), (5,2,-15), (5,-7,15), (5,-7,-15), (7,-2,15), (7,-2,-15), (7,-5,15), (7,-5,-15), (-2,7,15), (-2,7,-15), (-2,-5,15), (-2,-5,-15), (-5,7,15), (-5,7,-15), (-5,-2,15), (-5,-2,-15), (-7,2,15), (-7,2,-15), (-7,5,15), (-7,5,-15), (7,-1,6), (7,-6,-6), (-1,7,-6), (-1,-6,6), (-6,7,6), (-6,-1,-6)								
LiNbO3	(0,-8,2)	11.16	70.12	5.3	4.8	4.291	20.56	53.64	57.45
	Equiv. Refl.: (8,0,2), (-8,8,2), (1,3,9), (1,-4,-9), (3,1,-9), (3,-4,9), (4,-1,-9), (4,-3,9), (-1,4,9), (-1,-3,-9), (-3,4,-9), (-3,-1,9), (-4,1,9), (-4,3,-9)								

Ei =	11.867	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	E cotΘ	ΔE	2m	2m
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[keV]	[meV]	[meV]	[meV]
Quartz	(0,1,10)	11.562	76.99	5.2	4.1	2.742	11.2	34.28	36.06
	Equiv. Refl.: (0,-1,-10), (1,0,-10), (1,6,6), (1,6,-6), (1,-1,10), (1,-7,6), (1,-7,-6), (6,1,6), (6,1,-6), (6,-7,6), (6,-7,-6), (-1,0,10), (-1,1,-10), (-7,1,6), (-7,1,-6), (-7,6,6), (-7,6,-6)								
Quartz	(0,1,-10)	11.562	76.99	5.1	4.2	2.742	11.54	34.28	36.17
	Equiv. Refl.: (0,-1,10), (1,0,10), (1,-1,-10), (4,-1,9), (4,-3,-9), (-1,0,-10), (-1,1,10), (-1,4,-9), (-1,-3,9), (-3,4,9), (-3,-1,-9)								
LiNbO3	(0,8,-2)	11.16	70.12	5	4.8	4.291	20.56	53.64	57.45
	Equiv. Refl.: (8,-8,-2), (-8,0,-2), (0,7,8), (0,-7,-8), (7,0,-8), (7,-7,8), (-7,0,8), (-7,7,-8), (1,3,-9), (1,-4,9), (3,1,9), (3,-4,-9), (-4,1,-9), (-4,3,9)								
Quartz	(0,7,4)	11.183	70.46	4.7	3.6	4.212	15.09	52.65	54.77
	Equiv. Refl.: (0,-7,-4), (7,0,-4), (7,-1,-6), (7,-6,6), (7,-7,4), (-1,7,6), (-1,-6,-6), (-7,0,4), (-7,7,-4)								
Sapph	(4,5,-1)	11.76	82.29	4.6	4.2	1.608	6.8	20.09	21.21
	Equiv. Refl.: (4,-9,1), (5,4,1), (5,-9,-1), (9,-4,1), (9,-5,-1), (-4,9,-1), (-4,-5,1), (-5,9,1), (-5,-4,-1), (-9,4,-1), (-9,5,1), (4,5,-2), (4,-9,2), (5,4,2), (5,-9,-2), (-6,7,-6), (-6,-1,6), (-9,4,-2), (-9,5,2)								
LiNbO3	(2,7,7)	11.804	84.1	4.5	6.5	1.225	8	15.32	17.28
	Equiv. Refl.: (2,-9,-7), (7,2,-7), (7,-9,7), (9,-2,-7), (9,-7,7), (-2,9,7), (-2,-7,-7), (-7,9,-7), (-7,-2,7), (-9,2,7), (-9,7,-7), (9,-4,2), (9,-5,-2), (-4,9,-2), (-4,-5,2), (-5,9,2), (-5,-4,-2)								
Sapph	(1,5,-16)	11.335	72.78	4.4	3.6	3.679	13.21	45.98	47.84
	Equiv. Refl.: (1,-6,16), (5,1,16), (5,-6,-16), (6,-1,16), (6,-5,-16), (-1,6,-16), (-1,-5,16), (-5,6,16), (-5,-1,-16), (-6,1,-16), (-6,5,16), (4,-2,9), (4,-2,-9), (-2,4,9), (-2,4,-9), (-2,-2,9), (-2,-2,-9)								
Sapph	(2,3,20)	11.581	77.4	4.3	3.6	2.652	9.6	33.16	34.52
	Equiv. Refl.: (2,-5,-20), (3,2,-20), (3,-5,20), (5,-2,-20), (5,-3,20), (-2,5,20), (-2,-3,-20), (-3,5,-20), (-3,-2,20), (-5,2,20), (-5,3,-20), (9,-4,-1), (9,-5,1), (-4,9,1), (-4,-5,-1), (-5,9,-1), (-5,-4,1)								
Quartz	(2,2,9)	11.491	75.54	4.2	3.4	3.061	10.46	38.26	39.66
	Equiv. Refl.: (2,-2,-9), (2,-4,9), (2,-4,-9), (4,5,1), (4,-9,-1), (5,4,-1), (5,-9,1), (-4,2,9), (-4,2,-9), (-9,4,1), (-9,5,-1)								
Sapph	(1,7,0)	11.358	73.16	3.9	3.3	3.592	11.7	44.9	46.4
	Equiv. Refl.: (1,-8,0), (7,1,0), (7,-8,0), (8,-1,0), (8,-7,0), (-1,8,0), (-1,-7,0), (-7,8,0), (-7,-1,0), (-8,1,0), (-8,7,0)								
Sapph	(3,5,10)	11.562	76.98	3.6	3.4	2.743	9.28	34.29	35.53
	Equiv. Refl.: (3,-8,-10), (5,3,-10), (5,-8,10), (8,-3,-10), (8,-5,10), (-3,8,10), (-3,-5,-10), (-5,8,-10), (-5,-3,10), (-8,3,10), (-8,5,-10), (1,5,-7), (1,-6,7), (5,1,7), (5,-6,-7), (6,-1,7), (6,-5,-7), (-1,6,-7), (-1,-5,7), (-5,6,7), (-5,-1,-7), (-6,1,-7), (-6,5,7)								
Quartz	(0,8,0)	11.656	79.18	3.5	3	2.269	6.86	28.36	29.18
	Equiv. Refl.: (0,-8,0), (8,0,0), (8,-8,0), (-8,0,0), (-8,8,0)								
Quartz	(3,6,0)	11.564	77.03	3.4	2.8	2.732	7.61	34.15	34.99
	Equiv. Refl.: (3,-9,0), (6,3,0), (6,-9,0), (-9,3,0), (-9,6,0)								
Quartz	(2,6,-4)	11.465	75.04	3.3	3	3.172	9.43	39.65	40.75
	Equiv. Refl.: (2,-8,4), (6,2,4), (6,-8,-4), (7,-3,-6), (7,-4,6), (8,-1,-3), (8,-7,3), (9,-3,0), (9,-6,0), (-1,8,3), (-1,-7,-3), (-3,7,6), (-3,9,0), (-3,-4,-6), (-3,-6,0), (-4,7,-6), (-4,-3,6), (-6,9,0), (-6,-3,0), (-7,8,-3), (-7,-1,3), (-8,2,-4), (-8,6,4)								
Sapph	(2,2,21)	11.297	72.17	3.2	2.6	3.817	10.02	47.71	48.75
	Equiv. Refl.: (2,2,-21), (2,-4,21), (2,-4,-21), (4,-2,21), (4,-2,-21), (-2,4,21), (-2,4,-21), (-2,-2,21), (-2,-2,-21), (-4,2,21), (-4,2,-21), (1,7,3), (1,-8,-3), (3,4,6), (3,-7,-6), (4,3,-6), (4,4,5), (4,4,-5), (4,-7,6), (4,-8,5), (4,-8,-5), (7,1,-3), (7,-8,3), (8,-2,4), (8,-6,-4), (-2,8,-4), (-2,-6,4), (-6,8,4), (-6,-2,-4), (-7,3,6), (-7,4,-6), (-8,1,3), (-8,1,-3), (-8,4,5), (-8,4,-5), (-8,7,-3)								

Ei =	11.867	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	E cotΘ	ΔE	2m	2m
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[keV]	[meV]	[meV]	[meV]
Sapph	(1,5,17)	11.662	79.33	3.1	2.8	2.236	6.24	27.95	28.64
	Equiv. Refl.: (1,-6,-17), (5,1,-17), (5,-6,17), (6,-1,-17), (6,-5,17), (-1,6,17), (-1,-5,-17), (-5,6,-17), (-5,-1,17), (-6,1,17), (-6,5,-17), (1,7,-3), (1,-8,3), (7,1,3), (7,-8,-3), (8,-4,5), (8,-4,-5), (-4,8,5), (-4,8,-5), (-4,-4,5), (-4,-4,-5), (-8,7,3)								
Quartz	(1,4,8)	11.348	72.99	3	2.7	3.629	9.65	45.37	46.38
	Equiv. Refl.: (1,-5,-8), (4,1,-8), (4,-5,8), (-5,1,8), (-5,4,-8)								
Quartz	(3,6,-1)	11.621	78.32	2.9	2.3	2.454	5.67	30.67	31.19
	Equiv. Refl.: (3,-9,1), (5,-1,-8), (5,-4,8), (6,3,1), (6,-9,-1), (8,-1,3), (8,-7,-3), (-1,5,8), (-1,8,-3), (-1,-4,-8), (-1,-7,3), (-4,5,-8), (-4,-1,8), (-7,8,3), (-7,-1,-3), (-9,3,-1), (-9,6,1)								
Quartz	(4,5,-1)	11.437	74.53	2.8	2.2	3.284	7.36	41.05	41.71
	Equiv. Refl.: (4,-9,1), (5,4,1), (5,-9,-1), (-9,4,-1), (-9,5,1)								
Quartz	(3,5,5)	11.701	80.4	2.6	2.5	2.007	4.96	25.09	25.58
	Equiv. Refl.: (3,-8,-5), (5,3,-5), (5,-8,5), (-8,3,5), (-8,5,-5)								
Quartz	(8,-3,-5)	11.701	80.4	2.5	2.5	2.007	4.96	25.09	25.58
	Equiv. Refl.: (8,-5,5), (9,-4,1), (9,-5,-1), (-3,8,5), (-3,-5,-5), (-4,9,-1), (-4,-5,1), (-5,8,-5), (-5,9,1), (-5,-3,5), (-5,-4,-1)								
Quartz	(2,3,-8)	11.16	70.12	2.4	2.1	4.292	8.99	53.65	54.4
	Equiv. Refl.: (2,-5,8), (3,2,8), (3,-5,-8), (5,-2,8), (5,-3,-8), (-2,5,-8), (-2,-3,8), (-3,5,8), (-3,-2,-8), (-5,2,-8), (-5,3,8)								
LiNbO3	(2,7,-5)	11.599	77.8	2.1	3.3	2.565	8.45	32.06	33.16
	Equiv. Refl.: (2,-9,5), (7,2,5), (7,-9,-5), (9,-2,5), (9,-7,-5), (-2,9,-5), (-2,-7,5), (-7,9,5), (-7,-2,-5), (-9,2,-5), (-9,7,5)								
Sapph	(2,6,-7)	11.351	73.05	1.9	2.2	3.617	7.8	45.22	45.88
	Equiv. Refl.: (2,-8,7), (3,5,-11), (3,-8,11), (5,3,11), (5,-8,-11), (6,2,7), (6,-8,-7), (8,-2,7), (8,-3,11), (8,-5,-11), (8,-6,-7), (-2,8,-7), (-2,-6,7), (-3,8,-11), (-3,-5,11), (-5,8,11), (-5,-3,-11), (-6,8,7), (-6,-2,-7), (-8,2,-7), (-8,3,-11), (-8,5,11), (-8,6,7), (9,-3,1), (9,-6,-1), (-3,9,-1), (-3,-6,1), (-6,9,1), (-6,-3,-1)								
LiNbO3	(2,7,1)	11.39	73.71	1.7	2.6	3.469	8.96	43.36	44.27
	Equiv. Refl.: (2,-9,-1), (7,2,-1), (7,-9,1), (9,-2,-1), (9,-7,1), (-2,9,1), (-2,-7,-1), (-7,9,-1), (-7,-2,1), (-9,2,1), (-9,7,-1), (1,3,22), (1,-4,-22), (3,1,-22), (3,-4,22), (4,4,9), (4,4,-9), (4,-1,-22), (4,-3,22), (4,-8,9), (4,-8,-9), (8,-4,9), (8,-4,-9), (-1,4,22), (-1,-3,-22), (-3,4,-22), (-3,-1,22), (-4,1,22), (-4,3,-22), (-4,8,9), (-4,8,-9), (-4,-4,9), (-4,-4,-9), (-8,4,9), (-8,4,-9), (0,3,-9), (0,7,5), (0,-3,9), (0,-7,-5), (3,0,9), (3,5,-4), (3,-3,-9), (3,-8,4), (5,3,4), (5,-8,-4), (7,0,-5), (7,-7,5), (8,-3,4), (8,-3,5), (8,-5,-4), (8,-5,-5), (-3,0,-9), (-3,3,9), (-3,8,-4), (-3,8,-5), (-3,-5,4), (-3,-5,5), (-5,8,4), (-5,8,5), (-5,-3,-4), (-5,-3,-5), (-7,0,5), (-7,7,-5), (-8,3,-4), (-8,5,4)								
Sapph	(1,7,3)	11.448	74.73	1.6	1.8	3.24	5.92	40.5	40.93
	Equiv. Refl.: (1,7,-3), (1,-8,3), (1,-8,-3), (7,1,3), (7,1,-3), (7,-8,3), (7,-8,-3), (8,-1,3), (8,-1,-3), (8,-7,3), (8,-7,-3), (-1,8,3), (-1,8,-3), (-1,-7,3), (-1,-7,-3), (-7,8,3), (-7,8,-3), (-7,-1,3), (-7,-1,-3), (-8,1,3), (-8,1,-3), (-8,7,3), (-8,7,-3), (3,5,-5), (3,-8,5), (5,3,5), (5,-8,-5), (-8,3,-5), (-8,5,5)								
Sapph	(3,4,14)	11.331	72.71	1.5	1.7	3.693	6.24	46.16	46.58
	Equiv. Refl.: (3,-7,-14), (4,3,-14), (4,-7,14), (7,-3,-14), (7,-4,14), (-3,7,14), (-3,-4,-14), (-4,7,-14), (-4,-3,14), (-7,3,14), (-7,4,-14)								
Quartz	(1,4,-8)	11.348	72.99	1.4	1.6	3.629	5.71	45.37	45.72
	Equiv. Refl.: (1,-5,8), (2,5,6), (2,-7,-6), (4,1,8), (4,5,2), (4,-5,-8), (4,-9,-2), (5,2,-6), (5,4,-2), (5,-1,8), (5,-4,-8), (5,-7,6), (5,-9,2), (7,-2,-6), (7,-5,6), (9,-4,-2), (9,-5,2), (-1,5,-8), (-1,-4,8), (-2,7,6), (-2,-5,-6), (-4,5,8), (-4,9,2), (-4,-1,-8), (-4,-5,-2), (-5,1,-8), (-5,4,8), (-5,7,-6), (-5,9,-2), (-5,-2,6), (-5,-4,2), (-7,2,6), (-7,5,-6), (-9,4,2), (-9,5,-2)								
LiNbO3	(2,4,19)	11.239	71.28	1.3	2.1	4.021	8.59	50.26	50.99
	Equiv. Refl.: (2,-6,-19), (4,2,-19), (4,-6,19), (6,-2,-19), (6,-4,19), (-2,6,19), (-2,-4,-19), (-4,6,-19), (-4,-2,19), (-6,2,19), (-6,4,-19)								

Ei =	11.867	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	E cotΘ	ΔE	2m	2m
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[keV]	[meV]	[meV]	[meV]
Sapph	(2,4,-17)	11.367	73.31	1.2	1.4	3.558	5.1	44.48	44.77
	Equiv. Refl.: (2,-6,17), (4,2,17), (4,-6,-17), (6,-2,17), (6,-4,-17), (-2,6,-17), (-2,-4,17), (-4,6,17), (-4,-2,-17), (-6,2,-17), (-6,4,17), (0,8,1), (0,-8,-1), (8,0,-1), (8,-8,1), (-8,0,1), (-8,8,-1)								
LiNbO3	(1,2,-25)	11.769	82.64	1.1	2.6	1.533	3.99	19.17	19.58
	Equiv. Refl.: (1,-3,25), (2,1,25), (2,-3,-25), (3,-1,25), (3,-2,-25), (-1,3,-25), (-1,-2,25), (-2,3,25), (-2,-1,-25), (-3,1,-25), (-3,2,25), (0,2,10), (0,5,-8), (0,-2,-10), (0,-5,8), (1,1,10), (1,1,-10), (1,-2,10), (1,-2,-10), (2,0,-10), (2,-2,10), (5,0,8), (5,-5,-8), (-2,0,10), (-2,1,10), (-2,1,-10), (-2,2,-10), (-5,0,-8), (-5,5,8)								
Sapph	(1,2,23)	11.677	79.73	1	1.4	2.149	3.02	26.87	27.04
	Equiv. Refl.: (1,-3,-23), (2,1,-23), (2,-3,23), (3,-1,-23), (3,-2,23), (-1,3,23), (-1,-2,-23), (-2,3,-23), (-2,-1,23), (-3,1,23), (-3,2,-23)								
LiNbO3	(1,3,-23)	11.442	74.62	0.9	1.8	3.265	5.88	40.81	41.23
	Equiv. Refl.: (1,-4,23), (3,1,23), (3,4,17), (3,-4,-23), (3,-7,-17), (4,3,-17), (4,-1,23), (4,-3,-23), (4,-7,17), (7,-3,-17), (7,-4,17), (-1,4,-23), (-1,-3,23), (-3,4,23), (-3,7,17), (-3,-1,-23), (-3,-4,-17), (-4,1,-23), (-4,3,23), (-4,7,-17), (-4,-3,17), (-7,3,17), (-7,4,-17), (2,-1,10), (2,-1,-10), (3,4,-6), (3,-7,6), (4,3,6), (4,-7,-6), (-1,2,10), (-1,2,-10), (-1,-1,10), (-1,-1,-10), (-7,3,-6), (-7,4,6)								
Sapph	(1,6,13)	11.654	79.13	0.8	1.2	2.278	2.74	28.48	28.61
	Equiv. Refl.: (1,-7,-13), (2,3,-19), (2,-5,19), (3,2,19), (3,-5,-19), (5,-2,19), (5,-3,-19), (6,1,-13), (6,-7,13), (7,-1,-13), (7,-6,13), (-1,7,13), (-1,-6,-13), (-2,5,-19), (-2,-3,19), (-3,5,19), (-3,-2,-19), (-5,2,-19), (-5,3,19), (-6,7,-13), (-6,-1,13), (-7,1,13), (-7,6,-13), (8,-1,2), (8,-7,-2), (-1,8,-2), (-1,-7,2), (-7,8,2), (-7,-1,-2)								
LiNbO3	(1,4,21)	11.348	73	0.7	1.5	3.628	5.37	45.35	45.67
	Equiv. Refl.: (1,4,-21), (1,5,-19), (1,-5,21), (1,-5,-21), (1,-6,19), (3,6,9), (3,6,-9), (3,-9,9), (3,-9,-9), (4,1,21), (4,1,-21), (4,5,-7), (4,-5,21), (4,-5,-21), (4,-9,7), (5,1,19), (5,4,7), (5,-1,21), (5,-1,-21), (5,-4,21), (5,-4,-21), (5,-6,-19), (5,-9,-7), (6,3,9), (6,3,-9), (6,-1,19), (6,-5,-19), (6,-9,9), (6,-9,-9), (9,-3,9), (9,-3,-9), (9,-4,7), (9,-5,-7), (9,-6,9), (9,-6,-9), (-1,5,21), (-1,5,-21), (-1,6,-19), (-1,-4,21), (-1,-4,-21), (-1,-5,19), (-3,9,9), (-3,9,-9), (-3,-6,9), (-3,-6,-9), (-4,5,21), (-4,5,-21), (-4,9,-7), (-4,-1,21), (-4,-1,-21), (-4,-5,7), (-5,1,21), (-5,1,-21), (-5,4,21), (-5,4,-21), (-5,6,19), (-5,9,7), (-5,-1,-19), (-5,-4,-7), (-6,1,-19), (-6,5,19), (-6,9,9), (-6,9,-9), (-6,-3,9), (-6,-3,-9), (-9,3,9), (-9,3,-9), (-9,4,-7), (-9,5,7), (-9,6,9), (-9,6,-9), (1,7,-2), (1,-8,2), (7,1,2), (7,-3,6), (7,-4,-6), (7,-8,-2), (-3,7,-6), (-3,-4,6), (-4,7,6), (-4,-3,-6), (-8,1,-2), (-8,7,2)								
Quartz	(0,7,-4)	11.183	70.46	0.6	0.8	4.212	3.25	52.65	52.75
	Equiv. Refl.: (0,-7,4), (7,0,4), (7,-7,-4), (8,-3,-4), (8,-5,4), (-3,8,4), (-3,-5,-4), (-5,8,-4), (-5,-3,4), (-7,0,-4), (-7,7,4)								
Sapph	(1,6,-11)	11.175	70.34	0.5	0.8	4.24	3.19	53	53.09
	Equiv. Refl.: (1,-7,11), (6,1,11), (6,-7,-11), (7,-1,11), (7,-6,-11), (-1,7,-11), (-1,-6,11), (-6,7,11), (-6,-1,-11), (-7,1,-11), (-7,6,11), (3,5,4), (3,-8,-4), (5,3,-4), (5,-8,4), (8,-2,-4), (8,-6,4), (-2,8,4), (-2,-6,-4), (-6,8,-4), (-6,-2,4), (-8,3,4), (-8,5,-4)								
LiNbO3	(2,6,-13)	11.59	77.6	0.4	1.2	2.609	3.15	32.61	32.76
	Equiv. Refl.: (2,-8,13), (6,2,13), (6,-8,-13), (8,-2,13), (8,-6,-13), (-2,8,-13), (-2,-6,13), (-6,8,13), (-6,-2,-13), (-8,2,-13), (-8,6,13), (2,5,-6), (2,6,4), (2,-7,6), (2,-8,-4), (5,2,6), (5,-7,-6), (6,2,-4), (6,-1,-7), (6,-5,7), (6,-8,4), (7,-2,6), (7,-5,-6), (-1,6,7), (-1,-5,-7), (-2,7,-6), (-2,-5,6), (-5,6,-7), (-5,7,6), (-5,-1,7), (-5,-2,-6), (-7,2,-6), (-7,5,6), (-8,2,4), (-8,6,-4)								
LiNbO3	(2,6,11)	11.169	70.24	0.3	0.8	4.262	3.55	53.28	53.39
	Equiv. Refl.: (2,-8,-11), (3,3,21), (3,3,-21), (3,-6,21), (3,-6,-21), (6,2,-11), (6,-3,21), (6,-3,-21), (6,-8,11), (8,-2,-11), (8,-6,11), (-2,8,11), (-2,-6,-11), (-3,6,21), (-3,6,-21), (-3,-3,21), (-3,-3,-21), (-6,3,21), (-6,3,-21), (-6,8,-11), (-6,-2,11), (-8,2,11), (-8,6,-11), (0,3,9), (0,-3,-9), (1,5,7), (1,7,2), (1,-6,-7), (1,-8,-2), (2,3,8), (2,-5,-8), (3,0,-9), (3,2,-8), (3,-3,9), (3,-5,8), (4,5,0), (4,-9,0), (5,1,-7), (5,4,0), (5,-2,-8), (5,-3,8), (5,-6,7), (5,-9,0), (7,1,-2), (7,-8,2), (8,-1,-2), (8,-7,2), (9,-4,0), (9,-5,0), (-1,8,2), (-1,-7,-2), (-2,5,8), (-2,-3,-8), (-3,0,9), (-3,3,-9), (-3,5,-8), (-3,-2,8), (-4,9,0), (-4,-5,0), (-5,2,8), (-5,3,-8), (-5,9,0), (-5,-4,0)								

	(−6,1,7), (−6,5,−7), (−7,8,−2), (−7,−1,2), (−8,1,2), (−8,7,−2), (−9,4,0), (−9,5,0)								
LiNbO3	(1,7,9)	11.243	71.34	0.2	0.7	4.008	2.8	50.1	50.18
	Equiv. Refl.: (1,7,−9), (1,−8,9), (1,−8,−9), (3,5,13), (3,−8,−13), (5,3,−13), (5,−8,13), (7,1,9), (7,1,−9)								
	(7,−8,9), (7,−8,−9), (8,−1,9), (8,−1,−9), (8,−3,−13), (8,−5,13), (8,−7,9), (8,−7,−9), (−1,8,9)								
	(−1,8,−9), (−1,−7,9), (−1,−7,−9), (−3,8,13), (−3,−5,−13), (−5,8,−13), (−5,−3,13), (−7,8,9), (−7,8,−9)								
	(−7,−1,9), (−7,−1,−9), (−8,1,9), (−8,1,−9), (−8,3,13), (−8,5,−13), (−8,7,9), (−8,7,−9), (0,0,24)								
	(0,0,−24), (3,5,−8), (3,−8,8), (5,3,8), (5,−8,−8), (8,−3,8), (8,−5,−8), (−3,8,−8), (−3,−5,8)								
	(−5,8,8), (−5,−3,−8), (−8,3,−8), (−8,5,8)								
Sapph	(1,2,−22)	11.229	71.13	0.1	0.2	4.055	0.89	50.69	50.7
	Equiv. Refl.: (1,−3,22), (2,1,22), (2,6,8), (2,−3,−22), (2,−8,−8), (3,−1,22), (3,−2,−22), (4,5,2), (4,−9,−2)								
	(5,4,−2), (5,−9,2), (6,2,−8), (6,−8,8), (8,−2,−8), (8,−6,8), (9,−4,−2), (9,−5,2), (−1,3,−22)								
	(−1,−2,22), (−2,3,22), (−2,8,8), (−2,−1,−22), (−2,−6,−8), (−3,1,−22), (−3,2,22), (−4,9,2), (−4,−5,−2)								
	(−5,9,−2), (−5,−4,2), (−6,8,−8), (−6,−2,8), (−8,2,8), (−8,6,−8), (−9,4,2), (−9,5,−2)								
LiNbO3	(4,4,15)	11.739	81.57	0	0.4	1.759	0.68	21.99	22
	Equiv. Refl.: (4,4,−15), (4,−8,15), (4,−8,−15), (8,−4,15), (8,−4,−15), (−4,8,15), (−4,8,−15), (−4,−4,15), (−4,−4,−15)								
	(−8,4,15), (−8,4,−15)								

Ei =	12.658	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Si	(2,4,10)	12.504	81.05	5.823	5.1	1.993	10.13	24.92	26.9
Ge	(0,8,8)	12.397	78.35	3.668	7.8	2.609	20.34	32.62	38.44
Ge	(1,3,11)	12.542	82.23	2.783	7.9	1.727	13.69	21.59	25.56
	Equiv. Refl.: (1,7,9), (5,5,9)								
Si	(3,5,9)	12.241	75.25	2.769	2.4	3.334	7.86	41.67	42.4
Ge	(2,4,10)	12.004	71.5	2.685	5.5	4.236	23.34	52.95	57.87
Ge	(1,1,11)	12.153	73.76	1.567	4.2	3.688	15.66	46.1	48.68
	Equiv. Refl.: (5,7,7)								
LiNbO3	(4,-10,8)	12.639	86.85	37.7	34.2	0.697	23.81	8.71	25.36
	Equiv. Refl.: (6,4,8), (10,-4,8), (-4,-6,8), (-6,10,8), (-10,6,8)								
LiNbO3	(4,6,-8)	12.639	86.85	35.7	34.2	0.697	23.81	8.71	25.36
	Equiv. Refl.: (6,-10,-8), (10,-6,-8), (-4,10,-8), (-6,-4,-8), (-10,4,-8)								
LiNbO3	(0,1,-28)	12.598	84.42	22.9	21	1.238	26.05	15.47	30.29
	Equiv. Refl.: (0,-1,28), (1,0,28), (1,-1,-28), (-1,0,-28), (-1,1,28)								
Quartz	(5,5,0)	12.618	85.44	19.4	15.7	1.01	15.86	12.63	20.28
	Equiv. Refl.: (5,-10,0), (-10,5,0)								
Quartz	(10,-5,0)	12.618	85.44	19.3	15.7	1.01	15.86	12.63	20.28
	Equiv. Refl.: (-5,10,0), (-5,-5,0)								
LiNbO3	(4,-9,-14)	12.535	82.02	17.4	15.6	1.775	27.62	22.19	35.43
	Equiv. Refl.: (5,4,-14), (9,-4,-14), (-4,-5,-14), (-5,9,-14), (-9,5,-14)								
LiNbO3	(4,5,14)	12.535	82.02	16.7	15.6	1.775	27.62	22.19	35.43
	Equiv. Refl.: (5,-9,14), (9,-5,14), (-4,9,14), (-5,-4,14), (-9,4,14)								
LiNbO3	(4,4,-18)	12.554	82.64	15.7	14.4	1.635	23.59	20.44	31.21
	Equiv. Refl.: (4,-8,-18), (8,-4,-18), (-4,8,-18), (-4,-4,-18), (-8,4,-18)								
LiNbO3	(4,4,18)	12.554	82.64	15.2	14.4	1.635	23.59	20.44	31.21
	Equiv. Refl.: (4,-8,18), (8,-4,18), (-4,8,18), (-4,-4,18), (-8,4,18)								
LiNbO3	(1,4,-24)	12.481	80.42	14.3	13	2.137	27.86	26.72	38.6
	Equiv. Refl.: (1,-5,24), (4,1,24), (4,-5,-24), (5,-1,24), (5,-4,-24), (-1,5,-24), (-1,-4,24), (-4,5,24), (-4,-1,-24), (-5,1,-24), (-5,4,24)								
LiNbO3	(1,4,24)	12.481	80.42	14.2	12.9	2.137	27.66	26.72	38.46
	Equiv. Refl.: (4,-5,24), (5,-4,24), (-1,5,24), (-4,-1,24), (-5,1,24)								
LiNbO3	(1,-5,-24)	12.481	80.42	14.1	12.9	2.137	27.66	26.72	38.46
	Equiv. Refl.: (4,1,-24), (5,-1,-24), (-1,-4,-24), (-4,5,-24), (-5,4,-24)								
LiNbO3	(1,-6,22)	12.519	81.5	13.7	12.6	1.893	23.9	23.66	33.63
	Equiv. Refl.: (5,1,22), (6,-1,22), (-1,-5,22), (-5,6,22), (-6,5,22)								
LiNbO3	(0,9,0)	12.514	81.36	13.3	12.1	1.923	23.31	24.04	33.48
	Equiv. Refl.: (1,5,-22), (5,-6,-22), (6,-5,-22), (9,-9,0), (-1,6,-22), (-5,-1,-22), (-6,1,-22), (-9,0,0)								
LiNbO3	(3,7,-4)	12.488	80.59	12.7	11.7	2.098	24.56	26.22	35.93
	Equiv. Refl.: (7,-10,-4), (10,-7,-4), (-3,10,-4), (-7,-3,-4), (-10,3,-4)								
LiNbO3	(0,-9,0)	12.514	81.36	12.6	12.1	1.923	23.31	24.04	33.48
	Equiv. Refl.: (9,0,0), (-9,9,0), (2,2,24), (2,2,-24), (2,-4,24), (2,-4,-24), (4,-2,24), (4,-2,-24), (-2,4,24), (-2,4,-24), (-2,-2,24), (-2,-2,-24), (-4,2,24), (-4,2,-24)								
LiNbO3	(3,-10,4)	12.488	80.59	12.5	11.7	2.098	24.56	26.22	35.93
	Equiv. Refl.: (7,3,4), (10,-3,4), (-3,-7,4), (-7,10,4), (-10,7,4)								
LiNbO3	(3,4,20)	12.31	76.52	10.6	9.7	3.033	29.27	37.91	47.9
	Equiv. Refl.: (3,-7,-20), (4,3,-20), (4,-7,20), (7,-3,-20), (7,-4,20), (-3,7,20), (-3,-4,-20), (-4,7,-20), (-4,-3,20), (-7,3,20), (-7,4,-20)								

Ei =	12.658	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(3,-10,-2)	12.391	78.22	10.1	9.1	2.641	23.92	33.01	40.76
	Equiv. Refl.: (7,3,-2), (10,-3,-2), (-3,-7,-2), (-7,10,-2), (-10,7,-2)								
LiNbO3	(0,5,22)	12.047	72.12	10	8.7	4.084	35.63	51.05	62.25
	Equiv. Refl.: (5,-5,22), (-5,0,22)								
LiNbO3	(1,8,8)	12.407	78.58	9.7	8.9	2.558	22.84	31.97	39.29
	Equiv. Refl.: (3,7,2), (7,-10,2), (8,-9,8), (9,-8,8), (10,-7,2), (-1,9,8), (-3,10,2), (-7,-3,2), (-8,-1,8), (-9,1,8), (-10,3,2)								
LiNbO3	(0,-5,-22)	12.047	72.12	9.6	8.7	4.084	35.63	51.05	62.25
	Equiv. Refl.: (1,-9,-8), (5,0,-22), (8,1,-8), (9,-1,-8), (-1,-8,-8), (-5,5,-22), (-8,9,-8), (-9,8,-8)								
LiNbO3	(2,-9,-10)	12.229	75.03	9.5	8.2	3.384	27.9	42.3	50.67
	Equiv. Refl.: (3,6,12), (6,-9,12), (7,2,-10), (9,-2,-10), (9,-6,12), (-2,-7,-10), (-3,9,12), (-6,-3,12), (-7,9,-10), (-9,3,12), (-9,7,-10)								
LiNbO3	(2,6,-16)	12.318	76.69	9.3	8.2	2.995	24.66	37.44	44.83
	Equiv. Refl.: (3,-9,-12), (6,3,-12), (6,-8,-16), (8,-6,-16), (9,-3,-12), (-2,8,-16), (-3,-6,-12), (-6,9,-12), (-6,-2,-16), (-8,2,-16), (-9,6,-12), (4,4,15), (4,4,-15), (4,-8,15), (4,-8,-15), (8,-4,15), (8,-4,-15), (-4,8,15), (-4,8,-15), (-4,-4,15), (-4,-4,-15), (-8,4,15), (-8,4,-15)								
LiNbO3	(5,5,0)	12.042	72.05	9.2	8.2	4.1	33.75	51.25	61.37
	Equiv. Refl.: (5,-10,0), (10,-5,0), (-5,10,0), (-5,-5,0), (-10,5,0)								
LiNbO3	(2,7,10)	12.229	75.03	8.9	8.2	3.384	27.9	42.3	50.67
	Equiv. Refl.: (4,6,-2), (6,-10,-2), (7,-9,10), (9,-7,10), (10,-6,-2), (-2,9,10), (-4,10,-2), (-6,-4,-2), (-7,-2,10), (-9,2,10), (-10,4,-2)								
LiNbO3	(2,-8,16)	12.318	76.69	8.8	8.2	2.995	24.66	37.44	44.83
	Equiv. Refl.: (6,2,16), (8,-2,16), (-2,-6,16), (-6,8,16), (-8,6,16)								
LiNbO3	(4,-10,2)	12.155	73.79	8.6	7.8	3.679	28.63	45.99	54.17
	Equiv. Refl.: (6,4,2), (10,-4,2), (-4,-6,2), (-6,10,2), (-10,6,2), (4,-1,-10), (4,-3,10), (-1,4,10), (-1,-3,-10), (-3,4,-10), (-3,-1,10)								
LiNbO3	(5,5,6)	12.337	77.07	8.3	7.5	2.905	21.89	36.31	42.4
	Equiv. Refl.: (5,-10,6), (10,-5,6), (-5,10,6), (-5,-5,6), (-10,5,6)								
LiNbO3	(0,2,-26)	11.955	70.81	8.2	7.2	4.406	31.79	55.07	63.59
	Equiv. Refl.: (0,-2,26), (1,2,26), (1,-3,-26), (2,0,26), (2,1,-26), (2,-2,-26), (2,-3,26), (3,-1,-26), (3,-2,26), (3,-9,12), (6,3,12), (9,-3,12), (-1,3,26), (-1,-2,-26), (-2,0,-26), (-2,2,26), (-2,3,-26), (-2,-1,26), (-3,1,26), (-3,2,-26), (-3,-6,12), (-6,9,12), (-9,6,12)								
Quartz	(1,3,10)	12.616	85.33	8.1	7.2	1.035	7.4	12.93	14.9
	Equiv. Refl.: (1,-4,-10), (3,-4,10)								
LiNbO3	(3,6,-12)	12.272	75.81	8	7.4	3.199	23.82	39.99	46.55
	Equiv. Refl.: (6,-9,-12), (9,-6,-12), (-3,9,-12), (-6,-3,-12), (-9,3,-12), (3,1,-10), (-4,1,10), (-4,3,-10)								
LiNbO3	(5,5,-6)	12.337	77.07	7.9	7.5	2.905	21.89	36.31	42.4
	Equiv. Refl.: (5,-10,-6), (10,-5,-6), (-5,10,-6), (-5,-5,-6), (-10,5,-6)								
LiNbO3	(2,4,22)	12.285	76.06	7.8	7.2	3.143	22.67	39.29	45.36
	Equiv. Refl.: (2,-6,-22), (4,2,-22), (4,6,4), (4,-6,22), (4,-10,-4), (6,4,-4), (6,-2,-22), (6,-4,22), (6,-10,4), (10,-4,-4), (10,-6,4), (-2,6,22), (-2,-4,-22), (-4,6,-22), (-4,10,4), (-4,-2,22), (-4,-6,-4), (-6,2,22), (-6,4,-22), (-6,10,-4), (-6,-4,4), (-10,4,4), (-10,6,-4)								
LiNbO3	(1,-9,4)	12.014	71.65	7.7	6.7	4.199	28.25	52.49	59.61
	Equiv. Refl.: (8,1,4), (9,-1,4), (-1,-8,4), (-8,9,4), (-9,8,4), (0,8,-4), (0,-8,4), (8,0,4), (8,-8,-4), (-8,0,-4), (-8,8,4)								
LiNbO3	(2,4,-23)	12.646	87.5	7.6	11.4	0.553	6.3	6.92	9.36
	Equiv. Refl.: (2,-6,23), (4,2,23), (4,-6,-23), (6,-2,23), (6,-4,-23), (-2,6,-23), (-2,-4,23), (-4,6,23), (-4,-2,-23), (-6,2,-23), (-6,4,23)								
LiNbO3	(1,8,2)	11.914	70.26	7.5	6.6	4.543	29.92	56.79	64.19
	Equiv. Refl.: (8,-9,2), (9,-8,2), (-1,9,2), (-8,-1,2), (-9,1,2), (3,5,-14), (3,-8,14), (5,3,14), (5,-8,-14), (8,-3,14), (8,-5,-14), (-3,8,-14), (-3,-5,14), (-5,8,14), (-5,-3,-14), (-8,3,-14), (-8,5,14)								

Ei =	12.658	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,8,-4)	12.014	71.65	7.4	6.7	4.199	28.25	52.49	59.61
	Equiv. Refl.: (1,-9,-2), (3,-8,-16), (5,3,-16), (8,1,-2), (8,-3,-16), (8,-9,-4), (9,-1,-2), (9,-8,-4), (-1,9,-4), (-1,-8,-2), (-3,-5,-16), (-5,8,-16), (-8,5,-16), (-8,9,-2), (-8,-1,-4), (-9,1,-4), (-9,8,-2)								
LiNbO3	(0,8,10)	11.989	71.29	7.1	6.1	4.287	26.08	53.59	59.6
	Equiv. Refl.: (8,-8,10), (-8,0,10)								
LiNbO3	(0,-7,16)	12.08	72.62	6.8	6.2	3.962	24.37	49.52	55.19
	Equiv. Refl.: (7,0,16), (-7,7,16)								
Sapph	(0,6,18)	12.461	79.89	6.7	5.6	2.257	12.58	28.21	30.89
	Equiv. Refl.: (0,6,-18), (0,-6,18), (0,-6,-18), (6,0,18), (6,0,-18), (6,-6,18), (6,-6,-18), (-6,0,18), (-6,0,-18), (-6,6,18), (-6,6,-18)								
LiNbO3	(0,7,-16)	12.08	72.62	6.6	6.2	3.962	24.37	49.52	55.19
	Equiv. Refl.: (3,5,16), (5,-8,16), (7,-7,-16), (8,-5,16), (-3,8,16), (-5,-3,16), (-7,0,-16), (-8,3,16)								
LiNbO3	(0,-8,-10)	11.989	71.29	6.3	6.1	4.287	26.08	53.59	59.6
	Equiv. Refl.: (8,0,-10), (-8,8,-10)								
LiNbO3	(2,-9,8)	11.931	70.48	6.1	5.5	4.487	24.59	56.09	61.24
	Equiv. Refl.: (7,2,8), (9,-2,8), (-2,-7,8), (-7,9,8), (-9,7,8), (7,-1,7), (7,-6,-7), (-1,7,-7), (-1,-6,7), (-6,7,7), (-6,-1,-7)								
Quartz	(1,6,-7)	12.48	80.38	5.9	4.9	2.146	10.5	26.83	28.81
	Equiv. Refl.: (1,-7,7), (3,5,6), (3,-8,-6), (5,3,-6), (5,-8,6), (6,1,7), (6,-7,-7), (8,-3,-6), (8,-5,6), (-3,8,6), (-3,-5,-6), (-5,8,-6), (-5,-3,6), (-7,1,-7), (-7,6,7), (-8,3,6), (-8,5,-6)								
LiNbO3	(2,7,-8)	11.931	70.48	5.7	5.5	4.487	24.59	56.09	61.24
	Equiv. Refl.: (7,-9,-8), (9,-7,-8), (-2,9,-8), (-7,-2,-8), (-9,2,-8), (0,8,4), (0,-8,-4), (2,6,6), (2,-8,-6), (6,2,-6), (6,-8,6), (8,0,-4), (8,-8,4), (-8,0,4), (-8,2,6), (-8,6,-6), (-8,8,-4)								
Quartz	(8,-2,-6)	12.56	82.86	5.5	4.8	1.586	7.61	19.82	21.23
	Equiv. Refl.: (8,-6,6), (-2,8,6), (-2,-6,-6), (-6,8,-6), (-6,-2,6)								
Sapph	(2,4,-20)	12.43	79.1	5.3	4.3	2.438	10.39	30.47	32.2
	Equiv. Refl.: (2,-6,20), (4,2,20), (4,-6,-20), (6,-2,20), (6,-4,-20), (-2,6,-20), (-2,-4,20), (-4,6,20), (-4,-2,-20), (-6,2,-20), (-6,4,20), (9,-1,1), (9,-8,-1), (-1,9,-1), (-1,-8,1), (-8,9,1), (-8,-1,-1)								
Sapph	(3,6,0)	11.941	70.62	5.2	4.1	4.452	18.38	55.65	58.61
	Equiv. Refl.: (3,-9,0), (6,3,0), (6,-9,0), (9,-3,0), (9,-6,0), (-3,9,0), (-3,-6,0), (-6,9,0), (-6,-3,0), (-9,3,0), (-9,6,0), (1,8,-1), (1,-9,1), (8,1,1), (8,-9,-1), (-9,1,-1), (-9,8,1)								
Sapph	(2,7,4)	12.461	79.89	5.1	4.2	2.258	9.56	28.22	29.8
	Equiv. Refl.: (2,-9,-4), (7,2,-4), (7,-9,4), (9,-2,-4), (9,-7,4), (-2,9,4), (-2,-7,-4), (-7,9,-4), (-7,-2,4), (-9,2,4), (-9,7,-4), (3,6,-4), (3,-9,4), (6,3,4), (6,-9,-4), (9,-3,4), (9,-6,-4), (-3,9,-4), (-3,-6,4), (-6,9,4), (-6,-3,-4), (-9,3,-4), (-9,6,4)								
Sapph	(0,8,4)	12.186	74.3	4.7	3.7	3.558	13.24	44.47	46.4
	Equiv. Refl.: (0,-8,-4), (8,0,-4), (8,-8,4), (-8,0,4), (-8,8,-4)								
Quartz	(1,5,8)	12.248	75.37	4.6	3.6	3.303	11.79	41.29	42.94
	Equiv. Refl.: (1,-6,-8), (5,1,-8), (5,-6,8), (6,-1,-8), (6,-5,8), (9,-1,0), (9,-8,0), (-1,6,8), (-1,9,0), (-1,-5,-8), (-1,-8,0), (-5,6,-8), (-5,-1,8), (-6,1,8), (-6,5,-8), (-8,9,0), (-8,-1,0)								
Quartz	(1,8,0)	12.448	79.56	4.5	3.7	2.332	8.54	29.15	30.37
	Equiv. Refl.: (1,-9,0), (2,2,10), (2,2,-10), (2,-4,10), (2,-4,-10), (4,-2,10), (4,-2,-10), (8,1,0), (8,-9,0), (-2,4,10), (-2,4,-10), (-2,-2,10), (-2,-2,-10), (-4,2,10), (-4,2,-10), (-9,1,0), (-9,8,0)								
Quartz	(2,7,3)	12.412	78.7	4.4	3.5	2.53	8.91	31.63	32.86
	Equiv. Refl.: (2,-9,-3), (7,2,-3), (7,-2,-7), (7,-5,7), (7,-9,3), (9,-2,-3), (9,-7,3), (-2,7,7), (-2,9,3), (-2,-5,-7), (-2,-7,-3), (-5,7,-7), (-5,-2,7), (-7,9,-3), (-7,-2,3), (-9,2,3), (-9,7,-3)								
Quartz	(2,5,7)	12.135	73.47	4.3	3.3	3.756	12.3	46.96	48.54
	Equiv. Refl.: (2,-7,-7), (5,2,-7), (5,-7,7), (-7,2,7), (-7,5,-7)								
Quartz	(0,3,10)	12.275	75.87	4.1	3.2	3.188	10.19	39.84	41.13
	Equiv. Refl.: (0,-3,-10), (3,0,-10), (3,-3,10), (-3,0,10), (-3,3,-10)								

Ei =	12.658	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(4,5,-4)	11.904	70.12	3.9	3.1	4.576	13.98	57.2	58.89
Equiv. Refl.: (4,-9,4), (5,4,4), (5,-9,-4), (9,-4,4), (9,-5,-4), (-4,9,-4), (-4,-5,4), (-5,9,4), (-5,-4,-4), (-9,4,-4), (-9,5,4), (1,7,5), (1,-8,-5), (4,5,-4), (4,-9,4), (5,4,4), (5,-9,-4), (7,1,-5), (7,-8,5), (9,-4,4), (9,-5,-4), (-4,9,-4), (-4,-5,4), (-5,9,4), (-5,-4,-4), (-8,1,5), (-8,7,-5), (-9,4,-4), (-9,5,4)									
Quartz	(1,7,-5)	12.405	78.53	3.8	3	2.568	7.81	32.1	33.04
Equiv. Refl.: (1,-8,5), (3,6,4), (3,-9,-4), (6,3,-4), (6,-9,4), (7,1,5), (7,-8,-5), (8,-1,-5), (8,-7,5), (9,-3,-4), (9,-6,4), (-1,8,5), (-1,-7,-5), (-3,9,4), (-3,-6,-4), (-6,9,-4), (-6,-3,4), (-7,8,-5), (-7,-1,5), (-8,1,-5), (-8,7,5), (-9,3,4), (-9,6,-4)									
Quartz	(8,-1,5)	12.405	78.53	3.7	3	2.568	7.81	32.1	33.04
Equiv. Refl.: (8,-7,-5), (-1,8,-5), (-1,-7,5), (-7,8,5), (-7,-1,-5)									
Sapph	(2,6,-13)	12.498	80.87	3.3	2.9	2.035	5.88	25.43	26.1
Equiv. Refl.: (2,-8,13), (6,2,13), (6,-8,-13), (8,-2,13), (8,-6,-13), (-2,8,-13), (-2,-6,13), (-6,8,13), (-6,-2,-13), (-8,2,-13), (-8,6,13), (1,3,-10), (1,-4,10), (3,1,10), (3,-4,-10), (8,-2,6), (8,-6,-6), (-2,8,-6), (-2,-6,6), (-4,1,-10), (-4,3,10), (-6,8,6), (-6,-2,-6)									
Quartz	(2,3,9)	12.12	73.24	2.8	2.2	3.812	8.3	47.65	48.37
Equiv. Refl.: (2,-5,-9), (3,2,-9), (3,4,-7), (3,-5,9), (3,-7,7), (4,3,7), (4,-7,-7), (5,-2,-9), (5,-3,9), (-2,5,9), (-2,-3,-9), (-3,5,-9), (-3,-2,9), (-5,2,9), (-5,3,-9), (-7,3,-7), (-7,4,7)									
Quartz	(2,7,1)	11.981	71.18	2.7	2.3	4.315	9.87	53.94	54.83
Equiv. Refl.: (2,-9,-1), (7,2,-1), (7,-3,7), (7,-4,-7), (7,-9,1), (-3,7,-7), (-3,-4,7), (-4,7,7), (-4,-3,-7), (-9,2,1), (-9,7,-1)									
Quartz	(2,6,-6)	12.56	82.86	2.6	2.7	1.586	4.25	19.82	20.27
Equiv. Refl.: (2,-8,6), (6,2,6), (6,-8,-6), (9,-2,2), (9,-7,-2), (-2,9,-2), (-2,-7,2), (-7,9,2), (-7,-2,-2), (-8,2,-6), (-8,6,6)									
Sapph	(0,1,26)	12.5	80.95	2.5	2.5	2.016	4.97	25.2	25.69
Equiv. Refl.: (0,-1,-26), (1,0,-26), (1,-1,26), (-1,0,26), (-1,1,-26), (2,7,-2), (2,-9,2), (7,2,2), (7,-9,-2), (9,-2,-1), (9,-7,1), (-2,9,1), (-2,-7,-1), (-7,9,-1), (-7,-2,1), (-9,2,-2), (-9,7,2)									
Sapph	(0,5,-20)	12.153	73.77	2.4	2.2	3.685	8.15	46.07	46.78
Equiv. Refl.: (0,-5,20), (5,0,20), (5,-5,-20), (-5,0,-20), (-5,5,20)									
LiNbO3	(1,6,19)	12.463	79.93	2.3	3.4	2.248	7.73	28.1	29.14
Equiv. Refl.: (1,-7,-19), (6,1,-19), (6,-7,19), (7,-1,-19), (7,-6,19), (-1,7,19), (-1,-6,-19), (-6,7,-19), (-6,-1,19), (-7,1,19), (-7,6,-19), (1,7,-4), (1,-8,4), (2,3,-9), (2,-5,9), (3,2,9), (3,-5,-9), (5,-2,9), (5,-3,-9), (7,1,4), (7,-8,-4), (-2,5,-9), (-2,-3,9), (-3,5,9), (-3,-2,-9), (-5,2,-9), (-5,3,9), (-8,1,-4), (-8,7,4)									
Quartz	(4,-1,10)	12.616	85.33	2.1	2.9	1.035	2.96	12.93	13.27
Equiv. Refl.: (4,-3,-10), (-1,4,-10), (-1,-3,10), (-3,4,10), (-3,-1,-10)									
LiNbO3	(4,6,7)	12.52	81.52	2	3.3	1.887	6.24	23.59	24.4
Equiv. Refl.: (4,-10,-7), (6,4,-7), (6,-10,7), (10,-4,-7), (10,-6,7), (-4,10,7), (-4,-6,-7), (-6,10,-7), (-6,-4,7), (-10,4,7), (-10,6,-7)									
Sapph	(1,4,21)	12.165	73.96	1.9	2.1	3.639	7.59	45.49	46.12
Equiv. Refl.: (1,4,-21), (1,-5,21), (1,-5,-21), (4,1,21), (4,1,-21), (4,-5,21), (4,-5,-21), (5,-1,21), (5,-1,-21), (5,-4,21), (5,-4,-21), (-1,5,21), (-1,5,-21), (-1,-4,21), (-1,-4,-21), (-4,5,21), (-4,5,-21), (-4,-1,21), (-4,-1,-21), (-5,1,21), (-5,1,-21), (-5,4,21), (-5,4,-21), (8,-1,4), (8,-7,-4), (-1,8,-4), (-1,-7,4), (-7,8,4), (-7,-1,-4)									

Ei =	12.658	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,1,27)	12.312	76.57	1.8	2.7	3.024	8.2	37.8	38.67
Equiv. Refl.: (1,1,-27), (1,-2,27), (1,-2,-27), (2,7,-11), (2,-1,27), (2,-1,-27), (2,-9,11), (7,2,11), (7,-9,-11) (9,-2,11), (9,-7,-11), (-1,2,27), (-1,2,-27), (-1,-1,27), (-1,-1,-27), (-2,1,27), (-2,1,-27), (-2,9,-11) (-2,-7,11), (-7,9,11), (-7,-2,-11), (-9,2,-11), (-9,7,11), (1,6,16), (1,6,-14), (1,-7,14), (1,-7,-16) (6,1,14), (6,1,-16), (6,-7,16), (6,-7,-14), (7,-1,14), (7,-1,-16), (7,-6,16), (7,-6,-14), (-1,7,16) (-1,7,-14), (-1,-6,14), (-1,-6,-16), (-6,7,14), (-6,7,-16), (-6,-1,16), (-6,-1,-14), (-7,1,16), (-7,1,-14) (-7,6,14), (-7,6,-16), (2,6,5), (2,-8,-5), (3,-1,-10), (3,-2,10), (6,2,-5), (6,-8,5), (-1,3,10) (-1,-2,-10), (-2,3,-10), (-2,-1,10), (-8,2,5), (-8,6,-5)									
Sapph	(1,5,-19)	12.345	77.23	1.7	1.9	2.868	5.42	35.85	36.26
Equiv. Refl.: (1,-6,19), (2,7,-5), (2,-9,5), (4,5,-7), (4,-9,7), (5,1,19), (5,4,7), (5,-6,-19), (5,-9,-7) (6,-1,19), (6,-5,-19), (7,2,5), (7,-9,-5), (9,-2,5), (9,-4,7), (9,-5,-7), (9,-7,-5), (-1,6,-19) (-1,-5,19), (-2,9,-5), (-2,-7,5), (-4,9,-7), (-4,-5,7), (-5,6,19), (-5,9,7), (-5,-1,-19), (-5,-4,-7) (-6,1,-19), (-6,5,19), (-7,9,5), (-7,-2,-5), (-9,2,-5), (-9,4,-7), (-9,5,7), (-9,7,5), (1,2,10) (1,2,-10), (1,-3,10), (1,-3,-10), (2,1,10), (2,1,-10), (2,-3,10), (2,-3,-10), (3,-1,10), (3,-2,-10) (8,-2,-5), (8,-6,5), (-1,3,-10), (-1,-2,10), (-2,3,10), (-2,8,5), (-2,-1,-10), (-2,-6,-5), (-3,1,10) (-3,1,-10), (-3,2,10), (-3,2,-10), (-6,8,-5), (-6,-2,5)									
Quartz	(1,6,7)	12.48	80.38	1.6	1.7	2.146	3.72	26.83	27.08
Equiv. Refl.: (1,-7,-7), (2,7,-1), (2,-9,1), (4,5,4), (4,-9,-4), (5,4,-4), (5,-9,4), (6,1,-7), (6,-7,7) (7,2,1), (7,-9,-1), (9,-2,1), (9,-3,3), (9,-4,-4), (9,-5,4), (9,-6,-3), (9,-7,-1), (-2,9,-1) (-2,-7,1), (-3,9,-3), (-3,-6,3), (-4,9,4), (-4,-5,-4), (-5,9,-4), (-5,-4,4), (-6,9,3), (-6,-3,-3) (-7,1,7), (-7,6,-7), (-7,9,1), (-7,-2,-1), (-9,2,-1), (-9,4,4), (-9,5,-4), (-9,7,1)									
Sapph	(2,6,11)	12.052	72.2	1.5	1.6	4.064	6.7	50.79	51.23
Equiv. Refl.: (2,-8,-11), (6,2,-11), (6,-8,11), (8,-2,-11), (8,-6,11), (-2,8,11), (-2,-6,-11), (-6,8,-11), (-6,-2,11) (-8,2,11), (-8,6,-11), (2,5,-7), (2,-7,7), (3,3,8), (3,3,-8), (3,6,-3), (3,-6,8), (3,-6,-8) (3,-9,3), (4,4,6), (4,4,-6), (4,-8,6), (4,-8,-6), (5,2,7), (5,-7,-7), (6,3,3), (6,-9,-3) (7,-1,-7), (7,-6,7), (8,-4,6), (8,-4,-6), (-1,7,7), (-1,-6,-7), (-4,8,6), (-4,8,-6), (-4,-4,6) (-4,-4,-6), (-6,3,8), (-6,3,-8), (-6,7,-7), (-6,-1,7), (-7,2,-7), (-7,5,7), (-8,4,6), (-8,4,-6) (-9,3,-3), (-9,6,3)									
LiNbO3	(4,6,-5)	12.326	76.86	1.4	2.2	2.955	6.55	36.94	37.52
Equiv. Refl.: (4,-10,5), (6,4,5), (6,-10,-5), (10,-4,5), (10,-6,-5), (-4,10,-5), (-4,-6,5), (-6,10,5), (-6,-4,-5) (-10,4,-5), (-10,6,5), (4,5,5), (4,-9,-5), (5,4,-5), (5,-9,5), (9,-4,-5), (9,-5,5), (-4,9,5) (-4,-5,-5), (-5,9,-5), (-5,-4,5), (-9,4,5), (-9,5,-5), (1,7,4), (1,-8,-4), (6,-3,8), (6,-3,-8) (7,1,-4), (7,-2,7), (7,-3,-7), (7,-4,7), (7,-5,-7), (7,-8,4), (8,-1,-4), (8,-7,4), (9,-3,-3) (9,-6,3), (-1,8,4), (-1,-7,-4), (-2,7,-7), (-2,-5,7), (-3,6,8), (-3,6,-8), (-3,7,7), (-3,9,3) (-3,-3,8), (-3,-3,-8), (-3,-4,-7), (-3,-6,-3), (-4,7,-7), (-4,-3,7), (-5,7,7), (-5,-2,-7), (-6,9,-3) (-6,-3,3), (-7,8,-4), (-7,-1,4), (-8,1,4), (-8,7,-4)									
Sapph	(1,2,-25)	12.579	83.58	1.3	1.7	1.424	2.47	17.8	17.97
Equiv. Refl.: (1,-3,25), (2,1,25), (2,-3,-25), (3,-1,25), (3,-2,-25), (-1,3,-25), (-1,-2,25), (-2,3,25), (-2,-1,-25) (-3,1,-25), (-3,2,25), (2,4,-8), (2,-6,8), (3,4,7), (3,6,3), (3,-7,-7), (3,-9,-3), (4,3,-7) (4,-7,7), (6,3,-3), (6,-9,3), (-6,2,-8), (-6,4,8), (-7,3,7), (-7,4,-7), (-9,3,3), (-9,6,-3)									
Sapph	(1,7,9)	12.143	73.6	1.2	1.4	3.724	5.1	46.55	46.83
Equiv. Refl.: (1,7,-9), (1,-8,9), (1,-8,-9), (7,1,9), (7,1,-9), (7,-8,9), (7,-8,-9), (8,-1,9), (8,-1,-9) (8,-7,9), (8,-7,-9), (-1,8,9), (-1,8,-9), (-1,-7,9), (-1,-7,-9), (-7,8,9), (-7,8,-9), (-7,-1,9) (-7,-1,-9), (-8,1,9), (-8,1,-9), (-8,7,9), (-8,7,-9), (1,4,9), (1,-5,-9), (3,5,-6), (3,-8,6) (4,1,-9), (4,2,8), (4,-5,9), (4,-6,-8), (5,3,6), (5,-8,-6), (6,-2,8), (6,-4,-8), (-2,6,-8) (-2,-4,8), (-4,6,8), (-4,-2,-8), (-5,1,9), (-5,4,-9), (-8,3,-6), (-8,5,6)									
LiNbO3	(4,6,1)	12.13	73.4	1.1	1.8	3.774	6.89	47.18	47.68
Equiv. Refl.: (4,-10,-1), (6,4,-1), (6,-10,1), (10,-4,-1), (10,-6,1), (-4,10,1), (-4,-6,-1), (-6,10,-1), (-6,-4,1) (-10,4,1), (-10,6,-1), (0,4,-22), (0,-4,22), (2,7,1), (2,-9,-1), (4,0,22), (4,-4,-22), (7,2,-1) (7,-9,1), (9,-2,-1), (9,-7,1), (-2,9,1), (-2,-7,-1), (-4,0,-22), (-4,4,22), (-7,9,-1), (-7,-2,1) (-9,2,1), (-9,7,-1), (5,-1,-9), (5,-4,9), (8,-3,6), (8,-5,-6), (-1,5,9), (-1,-4,-9), (-4,5,-9) (-4,-1,9), (-5,8,6), (-5,-3,-6)									

Ei =	12.658	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	ΘB	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Sapph	(0,8,-8)	12.627	85.96	1	1.7	0.894	1.48	11.18	11.27
Equiv. Refl.: (0,-8,8), (3,6,6), (3,6,-6), (3,-9,6), (3,-9,-6), (6,3,6), (6,3,-6), (6,-9,6), (6,-9,-6) (8,0,8), (8,-8,-8), (9,-3,6), (9,-3,-6), (9,-6,6), (9,-6,-6), (-3,9,6), (-3,9,-6), (-3,-6,6) (-3,-6,-6), (-6,9,6), (-6,9,-6), (-6,-3,6), (-6,-3,-6), (-8,0,-8), (-8,8,8), (-9,3,6), (-9,3,-6) (-9,6,6), (-9,6,-6), (-3,8,-6), (-3,-5,6)									
LiNbO3	(3,7,5)	12.56	82.85	0.9	2.2	1.588	3.52	19.85	20.16
Equiv. Refl.: (3,-10,-5), (7,3,-5), (7,-10,5), (10,-3,-5), (10,-7,5), (-3,10,5), (-3,-7,-5), (-7,10,-5), (-7,-3,5) (-10,3,5), (-10,7,-5), (0,7,14), (0,-7,-14), (2,4,19), (2,-6,-19), (4,2,-19), (4,-6,19), (6,-2,-19) (6,-4,19), (7,0,-14), (7,-7,14), (-2,6,19), (-2,-4,-19), (-4,6,-19), (-4,-2,19), (-6,2,19), (-6,4,-19) (-7,0,14), (-7,7,-14), (2,7,2), (2,-9,-2), (7,2,-2), (7,-9,2), (9,-2,-2), (9,-7,2), (-2,9,2) (-2,-7,-2), (-7,9,-2), (-7,-2,2), (-9,2,2), (-9,7,-2)									
LiNbO3	(1,3,25)	12.252	75.45	0.8	1.5	3.285	5.04	41.06	41.37
Equiv. Refl.: (1,-4,-25), (3,1,-25), (3,-4,25), (4,-1,-25), (4,-3,25), (-1,4,25), (-1,-3,-25), (-3,4,-25), (-3,-1,25) (-4,1,25), (-4,3,-25), (2,3,-22), (2,7,-2), (2,-5,22), (2,-9,2), (3,2,22), (3,5,13), (3,-5,-22) (3,-8,-13), (5,3,-13), (5,-2,22), (5,-3,-22), (5,-8,13), (7,2,2), (7,-9,-2), (8,-3,-13), (8,-5,13) (9,-2,2), (9,-7,-2), (-2,5,-22), (-2,9,-2), (-2,-3,22), (-2,-7,2), (-3,5,22), (-3,8,13), (-3,-2,-22) (-3,-5,-13), (-5,2,-22), (-5,3,22), (-5,8,-13), (-5,-3,13), (-7,9,2), (-7,-2,-2), (-8,3,13), (-8,5,-13) (-9,2,-2), (-9,7,2), (0,5,9), (0,8,-3), (0,-5,-9), (0,-8,3), (5,0,-9), (5,-5,9), (8,0,3) (8,-8,-3), (-5,0,9), (-5,5,-9), (-8,0,-3), (-8,8,3)									
LiNbO3	(3,4,-19)	11.989	71.28	0.7	1.2	4.289	5.3	53.61	53.87
Equiv. Refl.: (3,-7,19), (4,3,19), (4,5,-13), (4,-7,-19), (4,-9,13), (5,4,13), (5,-9,-13), (7,-3,19), (7,-4,-19) (9,-4,13), (9,-5,-13), (-3,7,-19), (-3,-4,19), (-4,7,19), (-4,9,-13), (-4,-3,-19), (-4,-5,13), (-5,9,13) (-5,-4,-13), (-7,3,-19), (-7,4,19), (-9,4,-13), (-9,5,13), (1,8,1), (1,-9,-1), (8,1,-1), (8,-9,1) (-9,1,1), (-9,8,-1)									
LiNbO3	(2,6,17)	12.583	83.76	0.6	1.9	1.385	2.59	17.31	17.5
Equiv. Refl.: (2,-8,-17), (3,7,-1), (3,-10,1), (6,2,-17), (6,-8,17), (7,3,1), (7,-10,-1), (8,-2,-17), (8,-6,17) (10,-3,1), (10,-7,-1), (-2,8,17), (-2,-6,-17), (-3,10,-1), (-3,-7,1), (-6,8,-17), (-6,-2,17), (-7,10,1) (-7,-3,-1), (-8,2,17), (-8,6,-17), (-10,3,-1), (-10,7,1), (0,3,-10), (0,-3,10), (3,0,10), (3,-3,-10) (8,-2,5), (8,-6,-5), (-2,8,-5), (-2,-6,5), (-3,0,-10), (-3,3,10), (-6,8,5), (-6,-2,-5)									
LiNbO3	(4,5,11)	11.922	70.37	0.5	1.1	4.516	4.93	56.44	56.66
Equiv. Refl.: (4,-9,-11), (5,4,-11), (5,-9,11), (9,-4,-11), (9,-5,11), (-4,9,11), (-4,-5,-11), (-5,9,-11), (-5,-4,11) (-9,4,11), (-9,5,-11), (4,5,8), (4,-9,-8), (5,4,-8), (5,-9,8), (9,-4,-8), (9,-5,8), (-4,9,8) (-4,-5,-8), (-5,9,-8), (-5,-4,8), (-9,4,8), (-9,5,-8), (1,4,-9), (1,-5,9), (2,4,8), (2,6,-5) (2,-6,-8), (2,-8,5), (4,1,9), (4,2,-8), (4,-5,-9), (4,-6,8), (5,-1,9), (5,-4,-9), (6,2,5) (6,-8,-5), (9,-1,-1), (9,-8,1), (-1,5,-9), (-1,9,1), (-1,-4,9), (-1,-8,-1), (-4,5,9), (-4,-1,-9) (-5,1,-9), (-5,4,9), (-5,6,8), (-5,-1,-8), (-6,2,8), (-6,4,-8), (-8,2,-5), (-8,6,5), (-8,9,-1) (-8,-1,1)									
Sapph	(1,3,-23)	12.245	75.32	0.4	0.6	3.316	1.88	41.46	41.5
Equiv. Refl.: (1,-4,23), (3,1,23), (3,-4,-23), (4,-1,23), (4,-3,-23), (-1,4,-23), (-1,-3,23), (-3,4,23), (-3,-1,-23) (-4,1,-23), (-4,3,23), (1,5,-8), (1,-6,8), (5,1,8), (5,-6,-8), (6,-1,8), (6,-2,-8), (6,-4,8) (6,-5,-8), (9,-2,3), (9,-7,-3), (-1,6,-8), (-1,-5,8), (-2,6,8), (-2,9,-3), (-2,-4,-8), (-2,-7,3) (-4,6,-8), (-4,-2,8), (-6,1,-8), (-6,5,8), (-7,9,3), (-7,-2,-3)									
LiNbO3	(1,7,15)	12.458	79.8	0.3	0.9	2.278	2.15	28.47	28.55
Equiv. Refl.: (1,7,-15), (1,-8,15), (1,-8,-15), (7,1,15), (7,1,-15), (7,-8,15), (7,-8,-15), (8,-1,15), (8,-1,-15) (8,-7,15), (8,-7,-15), (-1,8,15), (-1,8,-15), (-1,-7,15), (-1,-7,-15), (-7,8,15), (-7,8,-15), (-7,-1,15) (-7,-1,-15), (-8,1,15), (-8,1,-15), (-8,7,15), (-8,7,-15), (0,3,24), (0,3,-24), (0,-3,24), (0,-3,-24) (3,0,24), (3,0,-24), (3,4,-16), (3,-3,24), (3,-3,-24), (3,-7,16), (4,3,16), (4,-7,-16), (7,-3,16) (7,-4,-16), (-3,0,24), (-3,0,-24), (-3,3,24), (-3,3,-24), (-3,7,-16), (-3,-4,16), (-4,7,16), (-4,-3,-16) (-7,3,-16), (-7,4,16), (2,7,-3), (2,-9,3), (7,2,3), (7,-9,-3), (9,-2,0), (9,-7,0), (-2,9,0) (-2,-7,0), (-7,9,0), (-7,-2,0), (-9,2,-3), (-9,7,3)									
LiNbO3	(2,3,23)	11.938	70.58	0.2	0.5	4.462	2.4	55.77	55.82
Equiv. Refl.: (2,-5,-23), (3,2,-23), (3,5,-17), (3,-5,23), (3,-8,17), (5,3,17), (5,-2,-23), (5,-3,23), (5,-8,-17)									

		(8,-3,17), (8,-5,-17), (-2,5,23), (-2,-3,-23), (-3,5,-23), (-3,8,-17), (-3,-2,23), (-3,-5,17), (-5,2,23)							
		(-5,3,-23), (-5,8,17), (-5,-3,-17), (-8,3,-17), (-8,5,17), (3,6,3), (3,6,-3), (3,-9,3), (3,-9,-3)							
		(6,3,3), (6,3,-3), (6,-9,3), (6,-9,-3), (9,-3,3), (9,-3,-3), (9,-6,3), (9,-6,-3), (-3,9,3)							
		(-3,9,-3), (-3,-6,3), (-3,-6,-3), (-6,9,3), (-6,9,-3), (-6,-3,3), (-6,-3,-3), (-9,3,3), (-9,3,-3)							
		(-9,6,3), (-9,6,-3), (2,7,0), (2,-9,0), (7,2,0), (7,-9,0), (-9,2,0), (-9,7,0)							
LiNbO3	(1,8,5)	12.089	72.75	0.1	0.5	3.929	1.89	49.12	49.15
		Equiv. Refl.: (1,8,-7), (1,-9,7), (1,-9,-5), (8,1,7), (8,1,-5), (8,-9,5), (8,-9,-7), (9,-1,7), (9,-1,-5)							
		(9,-8,5), (9,-8,-7), (-1,9,5), (-1,9,-7), (-1,-8,7), (-1,-8,-5), (-8,9,7), (-8,9,-5), (-8,-1,5)							
		(-8,-1,-7), (-9,1,5), (-9,1,-7), (-9,8,7), (-9,8,-5), (3,4,17), (3,-7,-17), (4,3,-17), (4,-7,17)							
		(7,-3,-17), (7,-4,17), (-3,7,17), (-3,-4,-17), (-4,7,-17), (-4,-3,17), (-7,3,17), (-7,4,-17)							
LiNbO3	(5,5,3)	12.116	73.18	0	0.1	3.826	0.55	47.83	47.83
		Equiv. Refl.: (5,5,-3), (5,-10,3), (5,-10,-3), (10,-5,3), (10,-5,-3), (-5,10,3), (-5,10,-3), (-5,-5,3), (-5,-5,-3)							
		(-10,5,3), (-10,5,-3)							

Ei =	13.474	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Si	(3,3,11)	13.457	87.16	8.5763	8.18	0.6688	5.47	8.36	9.99
	Equiv. Refl.: (3,7,9), (3,9,7), (3,11,3), (7,3,9), (7,9,3), (9,3,7), (9,7,3), (11,3,3)								
Si	(0,6,10)	13.311	81.09	4.5518	3.85	2.1123	8.13	26.4	27.63
	Equiv. Refl.: (0,10,6), (6,0,10), (6,6,8), (6,8,6), (6,10,0), (8,6,6), (10,0,6), (10,6,0)								
Si	(0,8,8)	12.914	73.42	2.9342	2.32	4.0109	9.31	50.14	50.99
	Equiv. Refl.: (8,0,8), (8,8,0)								
Ge	(0,0,12)	13.149	77.4	2.7615	5.95	3.0125	17.93	37.66	41.71
	Equiv. Refl.: (0,12,0), (4,8,8), (8,4,8), (8,8,4), (12,0,0)								
Ge	(0,6,10)	12.779	71.52	2.1614	4.5	4.5043	20.26	56.3	59.84
	Equiv. Refl.: (0,10,6), (6,0,10), (6,6,8), (6,8,6), (6,10,0), (8,6,6), (10,0,6), (10,6,0)								
Ge	(1,5,11)	13.286	80.41	1.8516	5.33	2.277	12.13	28.46	30.94
	Equiv. Refl.: (1,11,5), (5,1,11), (5,11,1), (7,7,7), (11,1,5), (11,5,1)								
Si	(1,3,11)	13.064	75.84	1.6618	1.84	3.4002	6.25	42.5	42.96
	Equiv. Refl.: (1,7,9), (1,9,7), (1,11,3), (3,1,11), (3,11,1), (5,5,9), (5,9,5), (7,1,9), (7,9,1) (9,1,7), (9,5,5), (9,7,1), (11,1,3), (11,3,1)								
Ge	(3,3,11)	12.919	73.5	1.2477	3.43	3.9915	13.67	49.89	51.73
	Equiv. Refl.: (3,7,9), (3,9,7), (3,11,3), (7,3,9), (7,9,3), (9,3,7), (9,7,3), (11,3,3)								
LiNbO3	(7,-9,16)	13.444	86.16	27.497	24.6	0.905	22.26	11.31	24.97
	Equiv. Refl.: (9,-7,16)								
LiNbO3	(2,7,16)	13.444	86.16	27.496	24.6	0.905	22.26	11.31	24.97
	Equiv. Refl.: (-2,9,16), (-7,-2,16), (-9,2,16)								
LiNbO3	(2,-9,-16)	13.444	86.16	26.275	24.6	0.905	22.26	11.31	24.97
	Equiv. Refl.: (7,2,-16), (9,-2,-16), (-2,-7,-16), (-7,9,-16), (-9,7,-16)								
LiNbO3	(0,0,-30)	13.415	84.65	25.384	22.2	1.262	28	15.77	32.14
LiNbO3	(0,0,30)	13.415	84.65	24.694	22.2	1.262	28	15.77	32.14
LiNbO3	(1,-9,-14)	13.429	85.31	22.575	20.4	1.105	22.56	13.81	26.46
	Equiv. Refl.: (8,1,-14), (9,-1,-14), (-1,-8,-14), (-8,9,-14), (-9,8,-14)								
LiNbO3	(1,8,14)	13.429	85.31	22.135	20.4	1.105	22.56	13.81	26.46
	Equiv. Refl.: (8,-9,14), (9,-8,14), (-1,9,14), (-8,-1,14), (-9,1,14)								
LiNbO3	(-6,8,-20)	13.436	85.7	19.493	18	1.014	18.25	12.67	22.22
	Equiv. Refl.: (-8,6,-20)								
LiNbO3	(2,-8,-20)	13.436	85.7	19.492	18	1.014	18.25	12.67	22.22
	Equiv. Refl.: (6,2,-20), (8,-2,-20), (-2,-6,-20)								
LiNbO3	(2,6,20)	13.436	85.7	18.604	18	1.014	18.25	12.67	22.22
	Equiv. Refl.: (6,-8,20), (8,-6,20), (-2,8,20), (-6,-2,20), (-8,2,20)								
LiNbO3	(5,6,-4)	13.384	83.39	16.859	15.1	1.561	23.58	19.51	30.61
	Equiv. Refl.: (6,-11,-4), (11,-6,-4), (-5,11,-4), (-6,-5,-4), (-11,5,-4)								
LiNbO3	(5,-11,4)	13.384	83.39	16.399	15.1	1.561	23.58	19.51	30.61
	Equiv. Refl.: (6,5,4), (11,-5,4), (-5,-6,4), (-6,11,4), (-11,6,4)								
LiNbO3	(4,-11,0)	13.409	84.39	15.476	14.4	1.324	19.07	16.56	25.25
	Equiv. Refl.: (7,4,0), (11,-4,0), (-4,-7,0), (-7,11,0), (-11,7,0)								
LiNbO3	(4,7,0)	13.409	84.39	15.196	14.4	1.324	19.07	16.56	25.25
	Equiv. Refl.: (-7,-4,0)								
LiNbO3	(7,-11,0)	13.409	84.39	15.195	14.4	1.324	19.07	16.56	25.25
	Equiv. Refl.: (11,-7,0), (-4,11,0), (-11,4,0)								
LiNbO3	(1,-7,-22)	13.414	84.57	15	13.9	1.281	17.87	16.01	23.99
	Equiv. Refl.: (6,1,-22), (7,-1,-22), (-1,-6,-22), (-6,7,-22), (-7,6,-22)								

Ei =	13.474	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,6,22)	13.414	84.57	14.387	13.9	1.281	17.87	16.01	23.99
	Equiv. Refl.: (6,-7,22), (7,-6,22), (-6,-1,22)								
LiNbO3	(-1,7,22)	13.414	84.57	14.386	13.9	1.281	17.87	16.01	23.99
	Equiv. Refl.: (-7,1,22)								
LiNbO3	(1,9,4)	13.384	83.39	12.35	11.5	1.561	18	19.51	26.55
	Equiv. Refl.: (9,-10,4), (10,-9,4), (-1,10,4), (-9,-1,4), (-10,1,4)								
LiNbO3	(1,-10,-4)	13.384	83.39	12.209	11.5	1.561	18	19.51	26.55
	Equiv. Refl.: (9,1,-4), (10,-1,-4), (-1,-9,-4), (-9,10,-4), (-10,9,-4)								
LiNbO3	(1,9,-2)	13.295	80.64	11.934	10.7	2.221	23.85	27.77	36.6
	Equiv. Refl.: (9,-10,-2), (10,-9,-2), (-1,10,-2), (-9,-1,-2), (-10,1,-2)								
LiNbO3	(1,-10,2)	13.295	80.64	11.699	10.7	2.221	23.85	27.77	36.6
	Equiv. Refl.: (9,1,2), (10,-1,2), (-1,-9,2), (-9,10,2), (-10,9,2)								
LiNbO3	(0,-7,-20)	13.218	78.82	10.159	8.9	2.663	23.73	33.28	40.88
	Equiv. Refl.: (7,0,-20), (-7,7,-20)								
LiNbO3	(0,7,20)	13.218	78.82	9.976	8.9	2.663	23.73	33.28	40.88
	Equiv. Refl.: (7,-7,20), (-7,0,20)								
Quartz	(7,3,-3)	13.399	83.97	9.801	7.7	1.424	10.9	17.8	20.87
	Equiv. Refl.: (7,-10,3), (-10,3,3), (-10,7,-3)								
Quartz	(3,7,3)	13.399	83.97	9.799	7.7	1.424	10.9	17.8	20.87
	Equiv. Refl.: (3,-10,-3)								
LiNbO3	(1,-8,-18)	13.229	79.05	9.767	8.7	2.607	22.6	32.59	39.66
	Equiv. Refl.: (7,1,-18), (8,-1,-18), (-1,-7,-18), (-7,8,-18), (-8,7,-18)								
Quartz	(10,-3,-3)	13.399	83.97	9.757	7.7	1.424	10.9	17.8	20.87
	Equiv. Refl.: (10,-7,3), (-7,10,-3), (-7,-3,3)								
Quartz	(-3,10,3)	13.399	83.97	9.755	7.7	1.424	10.9	17.8	20.87
	Equiv. Refl.: (-3,-7,-3)								
LiNbO3	(1,7,18)	13.229	79.05	9.649	8.7	2.607	22.6	32.59	39.66
	Equiv. Refl.: (7,-8,18), (8,-7,18), (-1,8,18), (-7,-1,18), (-8,1,18)								
LiNbO3	(2,3,26)	13.112	76.68	9.404	8.2	3.19	26.13	39.87	47.67
	Equiv. Refl.: (3,-5,26), (5,-3,26), (-2,5,26), (-3,-2,26), (-5,2,26)								
LiNbO3	(2,-5,-26)	13.112	76.68	9.363	8.2	3.19	26.13	39.87	47.67
	Equiv. Refl.: (3,2,-26), (5,-2,-26), (-2,-3,-26), (-3,5,-26), (-5,3,-26)								
LiNbO3	(5,5,-12)	13.183	78.08	8.995	7.8	2.844	22.31	35.55	41.97
	Equiv. Refl.: (-5,10,-12), (-5,-5,-12), (-10,5,-12)								
LiNbO3	(5,-10,-12)	13.183	78.08	8.994	7.8	2.844	22.31	35.55	41.97
	Equiv. Refl.: (10,-5,-12)								
LiNbO3	(-8,8,-16)	13.226	78.99	8.987	7.7	2.62	20.06	32.75	38.41
LiNbO3	(0,-8,-16)	13.226	78.99	8.986	7.7	2.62	20.06	32.75	38.41
	Equiv. Refl.: (8,0,-16)								
LiNbO3	(3,-10,10)	13.143	77.27	8.928	7.9	3.043	23.99	38.03	44.97
	Equiv. Refl.: (7,3,10), (10,-3,10), (-3,-7,10), (-7,10,10), (-10,7,10)								
LiNbO3	(3,7,-10)	13.143	77.27	8.876	7.9	3.043	23.99	38.03	44.97
	Equiv. Refl.: (7,-10,-10), (10,-7,-10), (-3,10,-10), (-7,-3,-10), (-10,3,-10)								
LiNbO3	(1,-8,18)	13.229	79.05	8.779	8	2.607	20.73	32.59	38.62
	Equiv. Refl.: (7,1,18), (8,-1,18), (-1,-7,18), (-7,8,18), (-8,7,18)								
Sapph	(0,1,-28)	13.449	86.48	8.764	7.8	0.829	6.46	10.36	12.21
	Equiv. Refl.: (0,-1,28), (1,0,28), (1,-1,-28), (-1,0,-28), (-1,1,28)								
LiNbO3	(1,7,-18)	13.229	79.05	8.74	8	2.607	20.73	32.59	38.62
	Equiv. Refl.: (7,-8,-18), (8,-7,-18), (-1,8,-18), (-7,-1,-18), (-8,1,-18)								

Ei =	13.474	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(1,4,24)	13.37	82.86	8.581	6.9	1.687	11.72	21.09	24.13
	Equiv. Refl.: (1,4,-24), (1,-5,24), (1,-5,-24), (4,1,24), (4,1,-24), (4,-5,24), (4,-5,-24), (5,-1,24), (5,-1,-24), (5,-4,24), (5,-4,-24), (-1,5,24), (-1,5,-24), (-1,-4,24), (-1,-4,-24), (-4,5,24), (-4,5,-24), (-4,-1,24), (-4,-1,-24), (-5,1,24), (-5,1,-24), (-5,4,24), (-5,4,-24)								
LiNbO3	(5,5,12)	13.183	78.08	8.51	7.8	2.844	22.31	35.55	41.97
	Equiv. Refl.: (5,-10,12), (10,-5,12), (-5,10,12), (-5,-5,12), (-10,5,12)								
Quartz	(10,-2,1)	13.403	84.1	8.343	6.6	1.392	9.21	17.4	19.69
	Equiv. Refl.: (10,-8,-1), (-2,10,-1), (-2,-8,1)								
Quartz	(-8,10,1)	13.403	84.1	8.342	6.6	1.392	9.21	17.4	19.69
	Equiv. Refl.: (-8,-2,-1)								
LiNbO3	(5,-11,-2)	13.295	80.64	8.257	7.7	2.221	17.12	27.77	32.62
	Equiv. Refl.: (6,5,-2), (11,-5,-2), (-5,-6,-2), (-6,11,-2), (-11,6,-2)								
Quartz	(2,8,-1)	13.403	84.1	8.224	6.6	1.392	9.21	17.4	19.69
	Equiv. Refl.: (2,-10,1)								
Quartz	(8,2,1)	13.403	84.1	8.223	6.6	1.392	9.21	17.4	19.69
	Equiv. Refl.: (8,-10,-1), (-10,2,-1), (-10,8,1)								
LiNbO3	(5,6,2)	13.295	80.64	8.114	7.7	2.221	17.12	27.77	32.62
	Equiv. Refl.: (6,-11,2), (11,-6,2), (-5,11,2), (-6,-5,2), (-11,5,2)								
LiNbO3	(4,-9,16)	13.005	74.84	8.015	7	3.651	25.43	45.63	52.24
	Equiv. Refl.: (5,4,16), (9,-4,16), (-4,-5,16), (-5,9,16), (-9,5,16)								
LiNbO3	(4,5,-16)	13.005	74.84	7.821	7	3.651	25.43	45.63	52.24
	Equiv. Refl.: (5,-9,-16), (9,-5,-16), (-4,9,-16), (-5,-4,-16), (-9,4,-16)								
LiNbO3	(0,8,16)	13.226	78.99	7.791	7.7	2.62	20.06	32.75	38.41
	Equiv. Refl.: (8,-8,16), (-8,0,16)								
LiNbO3	(2,7,-14)	12.99	74.59	7.769	6.7	3.713	24.81	46.41	52.63
	Equiv. Refl.: (7,-9,-14), (9,-7,-14), (-2,9,-14), (-7,-2,-14), (-9,2,-14), (3,7,2), (3,-10,-2), (7,3,-2), (7,-10,2), (10,-3,-2), (10,-7,2), (-3,10,2), (-3,-7,-2), (-7,10,-2), (-7,-3,2), (-10,3,2), (-10,7,-2)								
Quartz	(3,6,6)	13.457	87.15	7.586	6.8	0.67	4.58	8.38	9.55
Quartz	(3,-9,-6)	13.457	87.15	7.584	6.8	0.67	4.58	8.38	9.55
Quartz	(-9,6,-6)	13.457	87.15	7.581	6.8	0.67	4.58	8.38	9.55
Quartz	(-9,3,6)	13.457	87.15	7.58	6.8	0.67	4.58	8.38	9.55
Quartz	(6,3,-6)	13.457	87.15	7.579	6.8	0.67	4.58	8.38	9.55
Quartz	(6,-9,6)	13.457	87.15	7.578	6.8	0.67	4.57	8.38	9.55
Quartz	(-3,-6,-6)	13.457	87.15	7.575	6.8	0.67	4.58	8.38	9.55
Quartz	(-3,9,6)	13.457	87.15	7.574	6.8	0.67	4.58	8.38	9.55
Quartz	(9,-6,6)	13.457	87.15	7.571	6.8	0.67	4.58	8.38	9.55
Quartz	(9,-3,-6)	13.457	87.15	7.57	6.8	0.67	4.58	8.38	9.55
Quartz	(-6,-3,6)	13.457	87.15	7.568	6.8	0.67	4.58	8.38	9.55
Quartz	(-6,9,-6)	13.457	87.15	7.567	6.8	0.67	4.57	8.38	9.55
LiNbO3	(4,-10,-10)	12.921	73.52	7.564	6.6	3.986	26.12	49.82	56.26
	Equiv. Refl.: (6,4,-10), (10,-4,-10), (-4,-6,-10), (-6,10,-10), (-10,6,-10)								
LiNbO3	(1,2,-28)	13.05	75.59	7.48	6.7	3.462	23.03	43.27	49.02
	Equiv. Refl.: (3,5,-20), (5,-8,-20), (8,-5,-20), (-1,3,-28), (-2,-1,-28), (-3,1,-28), (-3,8,-20), (-5,-3,-20), (-8,3,-20)								
LiNbO3	(2,-3,-28)	13.05	75.59	7.479	6.7	3.462	23.03	43.27	49.02
	Equiv. Refl.: (3,-2,-28)								
LiNbO3	(1,-3,28)	13.05	75.59	7.396	6.7	3.462	23.03	43.27	49.02
	Equiv. Refl.: (2,1,28), (3,-1,28), (-1,-2,28), (-2,3,28), (-3,2,28)								
LiNbO3	(4,6,10)	12.921	73.52	7.37	6.6	3.986	26.12	49.82	56.26
	Equiv. Refl.: (6,-10,10), (10,-6,10), (-4,10,10), (-6,-4,10), (-10,4,10)								
LiNbO3	(2,-9,14)	12.99	74.59	7.356	6.7	3.713	24.81	46.41	52.63
	Equiv. Refl.: (7,2,14), (9,-2,14), (-2,-7,14), (-7,9,14), (-9,7,14)								

Ei =	13.474	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(0,-9,6)	12.799	71.78	7.191	6.2	4.434	27.71	55.43	61.97
	Equiv. Refl.: (9,0,6), (-9,9,6)								
LiNbO3	(0,9,-6)	12.799	71.78	7.151	6.2	4.434	27.71	55.43	61.97
	Equiv. Refl.: (9,-9,-6), (-9,0,-6)								
LiNbO3	(2,-10,0)	12.744	71.05	7.137	6.2	4.625	28.48	57.82	64.45
	Equiv. Refl.: (8,2,0), (10,-2,0), (-2,-8,0), (-8,10,0), (-10,8,0)								
LiNbO3	(0,-8,14)	12.765	71.32	7.065	5.9	4.554	26.9	56.93	62.96
	Equiv. Refl.: (8,0,14), (-8,8,14)								
LiNbO3	(2,8,0)	12.744	71.05	7.041	6.2	4.625	28.48	57.82	64.45
	Equiv. Refl.: (8,-10,0), (10,-8,0), (-2,10,0), (-8,-2,0), (-10,2,0)								
LiNbO3	(1,-7,20)	12.772	71.42	6.986	6	4.528	27.35	56.6	62.86
	Equiv. Refl.: (6,1,20), (7,-1,20), (-1,-6,20), (-6,7,20), (-7,6,20)								
LiNbO3	(3,7,8)	12.866	72.73	6.954	6.1	4.19	25.46	52.37	58.23
	Equiv. Refl.: (7,-10,8), (10,-7,8), (-3,10,8), (-7,-3,8), (-10,3,8)								
LiNbO3	(-1,7,-20)	12.772	71.42	6.833	6	4.528	27.35	56.6	62.86
	Equiv. Refl.: (-7,1,-20)								
LiNbO3	(1,6,-20)	12.772	71.42	6.832	6	4.528	27.35	56.6	62.86
	Equiv. Refl.: (6,-7,-20), (7,-6,-20), (-6,-1,-20)								
LiNbO3	(3,-10,-8)	12.866	72.73	6.812	6.1	4.19	25.46	52.37	58.23
	Equiv. Refl.: (7,3,-8), (10,-3,-8), (-3,-7,-8), (-7,10,-8), (-10,7,-8)								
LiNbO3	(2,8,6)	13.023	75.14	6.584	5.9	3.575	21	44.69	49.38
	Equiv. Refl.: (8,-10,6), (10,-8,6), (-2,10,6), (-8,-2,6), (-10,2,6)								
LiNbO3	(3,-8,20)	13.218	78.82	6.563	6.6	2.663	17.55	33.28	37.62
	Equiv. Refl.: (5,3,20), (8,-3,20), (-3,-5,20), (-5,8,20), (-8,5,20)								
LiNbO3	(3,4,-22)	12.974	74.34	6.493	5.8	3.777	21.77	47.21	51.99
	Equiv. Refl.: (4,-7,-22), (7,-4,-22), (-3,7,-22), (-4,-3,-22), (-7,3,-22)								
Sapph	(3,4,20)	13.224	78.94	6.473	5.2	2.634	13.61	32.93	35.63
	Equiv. Refl.: (3,-7,-20), (4,3,-20), (4,-7,20), (7,-3,-20), (7,-4,20), (-3,7,20), (-3,-4,-20), (-4,7,-20), (-4,-3,20), (-7,3,20), (-7,4,-20)								
LiNbO3	(0,8,-14)	12.765	71.32	6.417	5.9	4.554	26.9	56.93	62.96
	Equiv. Refl.: (8,-8,-14), (-8,0,-14)								
LiNbO3	(2,-10,-6)	13.023	75.14	6.317	5.9	3.575	21	44.69	49.38
	Equiv. Refl.: (8,2,-6), (10,-2,-6), (-2,-8,-6), (-8,10,-6), (-10,8,-6)								
LiNbO3	(3,-7,22)	12.974	74.34	6.232	5.8	3.777	21.77	47.21	51.99
	Equiv. Refl.: (4,3,22), (7,-3,22), (-3,-4,22), (-4,7,22), (-7,4,22)								
LiNbO3	(0,-9,-6)	12.799	71.78	6.153	5.3	4.434	23.65	55.43	60.26
	Equiv. Refl.: (9,0,-6), (-9,9,-6)								
Sapph	(5,5,6)	13.34	81.9	6.04	5	1.917	9.67	23.96	25.84
	Equiv. Refl.: (5,5,-6), (5,-10,6), (5,-10,-6), (10,-5,6), (10,-5,-6), (-5,10,6), (-5,10,-6), (-5,-5,6), (-5,-5,-6), (-10,5,6), (-10,5,-6)								
LiNbO3	(2,-10,6)	13.023	75.14	5.818	5.4	3.575	19.2	44.69	48.64
	Equiv. Refl.: (8,2,6), (10,-2,6), (-2,-8,6), (-8,10,6), (-10,8,6)								
LiNbO3	(2,8,-6)	13.023	75.14	5.766	5.4	3.575	19.2	44.69	48.64
	Equiv. Refl.: (8,-10,-6), (10,-8,-6), (-2,10,-6), (-8,-2,-6), (-10,2,-6)								
LiNbO3	(0,9,6)	12.799	71.78	5.752	5.3	4.434	23.65	55.43	60.26
	Equiv. Refl.: (9,-9,6), (-9,0,6)								
LiNbO3	(0,4,26)	12.888	73.05	5.677	4.8	4.107	19.77	51.34	55.02
	Equiv. Refl.: (4,-4,26), (-4,0,26)								
LiNbO3	(1,8,-10)	12.694	70.41	5.67	5	4.795	23.95	59.94	64.55
	Equiv. Refl.: (8,-9,-10), (9,-8,-10), (-1,9,-10), (-8,-1,-10), (-9,1,-10)								

Ei =	13.474	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(3,3,-24)	12.938	73.78	5.571	5.1	3.92	19.8	48.99	52.85
	Equiv. Refl.: (3,-6,-24), (6,-3,-24), (-3,6,-24), (-3,-3,-24), (-6,3,-24)								
LiNbO3	(1,-9,10)	12.694	70.41	5.464	5	4.795	23.95	59.94	64.55
	Equiv. Refl.: (8,1,10), (9,-1,10), (-1,-8,10), (-8,9,10), (-9,8,10)								
LiNbO3	(0,-4,-26)	12.888	73.05	5.454	4.8	4.107	19.77	51.34	55.02
	Equiv. Refl.: (4,0,-26), (-4,4,-26)								
LiNbO3	(3,3,24)	12.938	73.78	5.365	5.1	3.92	19.8	48.99	52.85
	Equiv. Refl.: (3,-6,24), (6,-3,24), (-3,6,24), (-3,-3,24), (-6,3,24)								
LiNbO3	(0,-2,-28)	12.826	72.16	5.321	4.9	4.337	21.07	54.21	58.16
	Equiv. Refl.: (2,0,-28), (-2,2,-28)								
LiNbO3	(0,2,28)	12.826	72.16	5.29	4.9	4.337	21.07	54.21	58.16
	Equiv. Refl.: (2,-2,28), (-2,0,28)								
LiNbO3	(1,9,-5)	13.452	86.69	5.236	7.4	0.779	5.78	9.74	11.33
	Equiv. Refl.: (1,-10,5), (9,1,5), (9,-10,-5), (10,-1,5), (10,-9,-5), (-1,10,-5), (-1,-9,5), (-9,10,5), (-9,-1,-5), (-10,1,-5), (-10,9,5)								
LiNbO3	(1,-4,26)	12.661	70	5.018	4.3	4.904	20.97	61.3	64.79
	Equiv. Refl.: (3,1,26), (4,-1,26), (-1,-3,26), (-3,4,26), (-4,3,26)								
Quartz	(-3,9,-6)	13.457	87.15	5.012	4.5	0.67	3.04	8.38	8.91
Quartz	(9,-3,6)	13.457	87.15	5.009	4.5	0.67	3.04	8.38	8.91
	Equiv. Refl.: (9,-6,-6), (-3,-6,6)								
Quartz	(-6,9,6)	13.457	87.15	5.007	4.5	0.67	3.03	8.38	8.91
	Equiv. Refl.: (-6,-3,-6)								
LiNbO3	(1,3,-26)	12.661	70	4.925	4.3	4.904	20.97	61.3	64.79
	Equiv. Refl.: (3,-4,-26), (4,-3,-26), (-1,4,-26), (-3,-1,-26), (-4,1,-26)								
Sapph	(2,6,-16)	13.267	79.94	4.898	3.9	2.39	9.39	29.88	31.32
	Equiv. Refl.: (2,-8,16), (6,2,16), (6,-8,-16), (8,-2,16), (8,-6,-16), (-2,8,-16), (-2,-6,16), (-6,8,16), (-6,-2,-16), (-8,2,-16), (-8,6,16)								
Quartz	(10,-3,3)	13.399	83.97	4.794	3.8	1.424	5.39	17.8	18.6
	Equiv. Refl.: (10,-7,-3), (-7,10,3), (-7,-3,-3)								
Quartz	(-3,10,-3)	13.399	83.97	4.792	3.8	1.424	5.38	17.8	18.6
	Equiv. Refl.: (-3,-7,3)								
Quartz	(4,1,10)	13.272	80.06	4.689	3.6	2.36	8.5	29.5	30.7
	Equiv. Refl.: (4,-5,-10)								
Quartz	(1,4,-10)	13.272	80.06	4.686	3.6	2.36	8.5	29.5	30.7
Quartz	(1,-5,10)	13.272	80.06	4.685	3.6	2.36	8.5	29.5	30.7
Quartz	(-5,1,-10)	13.272	80.06	4.681	3.6	2.36	8.49	29.5	30.7
	Equiv. Refl.: (-5,4,10)								
Quartz	(-4,5,10)	13.272	80.06	4.585	3.6	2.36	8.5	29.5	30.7
	Equiv. Refl.: (-4,-1,-10)								
Quartz	(-1,-4,10)	13.272	80.06	4.582	3.6	2.36	8.5	29.5	30.7
Quartz	(-1,5,-10)	13.272	80.06	4.581	3.6	2.36	8.5	29.5	30.7
Quartz	(5,-1,10)	13.272	80.06	4.577	3.6	2.36	8.49	29.5	30.7
	Equiv. Refl.: (5,-4,-10)								
Quartz	(3,-9,6)	13.457	87.15	4.475	4.5	0.67	3.04	8.38	8.91
Quartz	(3,6,-6)	13.457	87.15	4.472	4.5	0.67	3.04	8.38	8.91
Quartz	(-9,3,-6)	13.457	87.15	4.471	4.5	0.67	3.04	8.38	8.91
	Equiv. Refl.: (-9,6,6)								
Quartz	(6,3,6)	13.457	87.15	4.469	4.5	0.67	3.03	8.38	8.91
	Equiv. Refl.: (6,-9,-6)								
Quartz	(3,-3,11)	13.353	82.31	4.321	3.5	1.819	6.42	22.74	23.63
	Equiv. Refl.: (-3,3,-11)								

Ei =	13.474	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(3,0,-11)	13.353	82.31	4.32	3.5	1.819	6.42	22.74	23.63
	Equiv. Refl.: (-3,0,11)								
Quartz	(0,3,11)	13.353	82.31	4.309	3.5	1.819	6.4	22.74	23.62
	Equiv. Refl.: (0,-3,-11)								
Quartz	(7,3,3)	13.399	83.97	4.299	3.8	1.424	5.39	17.8	18.6
	Equiv. Refl.: (-10,7,3)								
Quartz	(7,-10,-3)	13.399	83.97	4.298	3.8	1.424	5.39	17.8	18.6
	Equiv. Refl.: (-10,3,-3)								
Quartz	(3,7,-3)	13.399	83.97	4.297	3.8	1.424	5.38	17.8	18.6
	Equiv. Refl.: (3,-10,3)								
Quartz	(8,0,-5)	12.99	74.6	4.29	3.2	3.711	11.87	46.38	47.88
	Equiv. Refl.: (8,-8,5), (-8,0,5), (-8,8,-5)								
Quartz	(0,8,5)	12.99	74.6	4.288	3.2	3.711	11.87	46.38	47.88
	Equiv. Refl.: (0,-8,-5)								
Sapph	(1,8,-4)	12.995	74.67	4.235	3.3	3.693	12.13	46.16	47.73
	Equiv. Refl.: (1,-9,4), (8,1,4), (8,-9,-4), (9,-1,4), (9,-8,-4), (-1,9,-4), (-1,-8,4), (-8,9,4), (-8,-1,-4), (-9,1,-4), (-9,8,4)								
Quartz	(2,5,-8)	12.923	73.55	4.202	3.1	3.978	12.37	49.73	51.24
	Equiv. Refl.: (2,-7,8)								
Quartz	(-7,2,-8)	12.923	73.55	4.201	3.1	3.978	12.37	49.73	51.24
	Equiv. Refl.: (-7,5,8)								
Quartz	(5,2,8)	12.923	73.55	4.2	3.1	3.978	12.36	49.73	51.24
	Equiv. Refl.: (5,-7,-8)								
Quartz	(-2,7,-8)	12.923	73.55	4.198	3.1	3.978	12.37	49.73	51.24
	Equiv. Refl.: (-2,-5,8)								
Quartz	(7,-2,8)	12.923	73.55	4.197	3.1	3.978	12.37	49.73	51.24
	Equiv. Refl.: (7,-5,-8)								
Quartz	(-5,7,8)	12.923	73.55	4.196	3.1	3.978	12.36	49.73	51.24
	Equiv. Refl.: (-5,-2,-8)								
Quartz	(5,-2,-10)	13.111	76.67	4.126	3.1	3.192	9.94	39.91	41.12
	Equiv. Refl.: (-3,5,-10), (-3,-2,10)								
Quartz	(5,-3,10)	13.111	76.67	4.125	3.1	3.192	9.94	39.91	41.12
	Equiv. Refl.: (-2,5,10), (-2,-3,-10)								
Sapph	(2,7,10)	13.207	78.57	4.102	3.3	2.724	8.98	34.05	35.21
	Equiv. Refl.: (2,-9,-10), (7,2,-10), (7,-9,10), (9,-2,-10), (9,-7,10), (-2,9,10), (-2,-7,-10), (-7,9,-10), (-7,-2,10), (-9,2,10), (-9,7,-10)								
Quartz	(3,2,-10)	13.111	76.67	4.082	3.1	3.192	9.94	39.91	41.12
	Equiv. Refl.: (3,-5,10)								
Quartz	(2,3,10)	13.111	76.67	4.081	3.1	3.192	9.93	39.91	41.12
	Equiv. Refl.: (-5,2,10), (-5,3,-10)								
Quartz	(2,-5,-10)	13.111	76.67	4.08	3.1	3.192	9.93	39.91	41.12
Sapph	(2,6,14)	12.741	71.02	3.806	2.9	4.635	13.54	57.93	59.49
	Equiv. Refl.: (2,-8,-14), (6,2,-14), (6,-8,14), (8,-2,-14), (8,-6,14), (-2,8,14), (-2,-6,-14), (-6,8,-14), (-6,-2,14), (-8,2,14), (-8,6,-14)								
LiNbO3	(4,6,13)	13.444	86.17	3.803	5.9	0.903	5.33	11.29	12.48
	Equiv. Refl.: (4,-10,-13), (6,4,-13), (6,-10,13), (10,-4,-13), (10,-6,13), (-4,10,13), (-4,-6,-13), (-6,10,-13), (-6,-4,13), (-10,4,13), (-10,6,-13)								

Ei =	13.474	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(1,7,15)	13.426	85.17	3.572	3.3	1.138	3.79	14.22	14.72
	Equiv. Refl.: (1,7,-15), (1,-8,15), (1,-8,-15), (7,1,15), (7,1,-15), (7,-8,15), (7,-8,-15), (8,-1,15), (8,-1,-15), (8,-7,15), (8,-7,-15), (-1,8,15), (-1,8,-15), (-1,-7,15), (-1,-7,-15), (-7,8,15), (-7,8,-15), (-7,-1,15), (-7,-1,-15), (-8,1,15), (-8,1,-15), (-8,7,15), (-8,7,-15)								
Quartz	(-3,3,11)	13.353	82.31	3.365	3	1.819	5.54	22.74	23.4
Quartz	(0,3,-11)	13.353	82.31	3.364	3	1.819	5.54	22.74	23.4
	Equiv. Refl.: (0,-3,11), (3,-3,-11), (-3,0,-11)								
Quartz	(3,0,11)	13.353	82.31	3.363	3	1.819	5.54	22.74	23.4
Sapph	(3,5,16)	13.008	74.89	3.326	2.7	3.637	9.71	45.46	46.49
	Equiv. Refl.: (3,-8,-16), (5,3,-16), (5,-8,16), (8,-3,-16), (8,-5,16), (-3,8,16), (-3,-5,-16), (-5,8,-16), (-5,-3,16), (-8,3,16), (-8,5,-16)								
Sapph	(1,8,-7)	13.281	80.29	3.293	2.7	2.306	6.24	28.83	29.49
	Equiv. Refl.: (1,-9,7), (8,1,7), (8,-9,-7), (9,-1,7), (9,-8,-7), (-1,9,-7), (-1,-8,7), (-8,9,7), (-8,-1,-7), (-9,1,-7), (-9,8,7)								
Quartz	(9,-4,-5)	12.743	71.04	3.291	2.5	4.629	11.58	57.86	59.01
	Equiv. Refl.: (9,-5,5)								
Quartz	(-4,9,5)	12.743	71.04	3.29	2.5	4.629	11.58	57.86	59.01
	Equiv. Refl.: (-4,-5,-5), (-5,9,-5), (-5,-4,5)								
Quartz	(-6,4,-9)	12.884	72.99	3.289	2.5	4.123	10.25	51.53	52.54
Quartz	(2,4,9)	12.884	72.99	3.288	2.5	4.123	10.25	51.53	52.54
	Equiv. Refl.: (2,-6,-9), (-6,2,9)								
Quartz	(4,2,-9)	12.884	72.99	3.287	2.5	4.123	10.24	51.53	52.54
	Equiv. Refl.: (4,-6,9)								
Quartz	(-9,4,5)	12.743	71.04	3.28	2.5	4.629	11.58	57.86	59.01
	Equiv. Refl.: (-9,5,-5)								
Quartz	(4,5,5)	12.743	71.04	3.279	2.5	4.629	11.58	57.86	59.01
	Equiv. Refl.: (4,-9,-5), (5,4,-5), (5,-9,5)								
Quartz	(9,-2,5)	13.233	79.15	3.238	2.8	2.582	7.33	32.27	33.09
	Equiv. Refl.: (9,-7,-5)								
Quartz	(-2,9,-5)	13.233	79.15	3.236	2.8	2.582	7.33	32.27	33.09
	Equiv. Refl.: (-7,9,5), (-7,-2,-5)								
Quartz	(-2,-7,5)	13.233	79.15	3.235	2.8	2.582	7.33	32.27	33.09
Quartz	(-9,2,-5)	13.233	79.15	3.199	2.8	2.582	7.33	32.27	33.09
	Equiv. Refl.: (-9,7,5)								
Quartz	(2,-9,5)	13.233	79.15	3.197	2.8	2.582	7.33	32.27	33.09
	Equiv. Refl.: (7,2,5), (7,-9,-5)								
Quartz	(2,7,-5)	13.233	79.15	3.196	2.8	2.582	7.33	32.27	33.09
Quartz	(6,-4,9)	12.884	72.99	3.189	2.5	4.123	10.25	51.53	52.54
Quartz	(6,-2,-9)	12.884	72.99	3.188	2.5	4.123	10.25	51.53	52.54
Quartz	(-2,6,9)	12.884	72.99	3.187	2.5	4.123	10.25	51.53	52.54
	Equiv. Refl.: (-2,-4,-9), (-4,6,-9), (-4,-2,9)								
Quartz	(4,6,-1)	12.753	71.18	3.15	2.4	4.593	10.86	57.41	58.43
	Equiv. Refl.: (4,-10,1), (6,4,1), (6,-10,-1), (-10,4,-1), (-10,6,1)								
Quartz	(10,-4,1)	12.753	71.18	3.054	2.4	4.593	10.87	57.41	58.43
	Equiv. Refl.: (10,-6,-1), (-4,10,-1), (-4,-6,1), (-6,10,1), (-6,-4,-1)								
Sapph	(4,6,-2)	13.15	77.41	3.039	2.4	3.01	7.3	37.62	38.32
	Equiv. Refl.: (4,-10,2), (6,4,2), (6,-10,-2), (10,-4,2), (10,-6,-2), (-4,10,-2), (-4,-6,2), (-6,10,2), (-6,-4,-2), (-10,4,-2), (-10,6,2)								
Sapph	(1,1,27)	13.148	77.36	3.013	2.4	3.021	7.28	37.76	38.45
	Equiv. Refl.: (1,1,-27), (1,-2,27), (1,-2,-27), (2,-1,27), (2,-1,-27), (-1,2,27), (-1,2,-27), (-1,-1,27), (-1,-1,-27), (-2,1,27), (-2,1,-27)								
Quartz	(-1,2,-11)	12.867	72.74	2.986	2.2	4.187	9.22	52.34	53.14

Equiv. Refl.: $(-1,-1,11)$, $(-1,-1,-11)$

Ei =	13.474	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(9,0,2)	13.312	81.11	2.985	2.7	2.108	5.72	26.35	26.97
	Equiv. Refl.: (9,-9,-2), (-1,2,11), (-9,0,-2), (-9,9,2)								
Quartz	(2,-1,11)	12.867	72.74	2.984	2.2	4.187	9.22	52.34	53.14
	Equiv. Refl.: (2,-1,-11)								
Quartz	(0,9,-2)	13.312	81.11	2.983	2.7	2.108	5.72	26.35	26.97
	Equiv. Refl.: (0,-9,2)								
Quartz	(1,1,11)	12.867	72.74	2.959	2.2	4.187	9.22	52.34	53.14
	Equiv. Refl.: (1,1,-11)								
Quartz	(1,-2,11)	12.867	72.74	2.958	2.2	4.187	9.22	52.34	53.14
	Equiv. Refl.: (1,-2,-11)								
Quartz	(-2,1,11)	12.867	72.74	2.956	2.2	4.187	9.22	52.34	53.14
	Equiv. Refl.: (-2,1,-11)								
Quartz	(3,-1,-11)	13.193	78.28	2.949	2.6	2.796	7.27	34.95	35.7
	Equiv. Refl.: (3,-2,11), (-1,3,11), (-2,3,-11)								
Quartz	(-1,-2,-11)	13.193	78.28	2.948	2.6	2.796	7.26	34.95	35.7
	Equiv. Refl.: (-2,-1,11)								
Quartz	(-3,1,11)	13.193	78.28	2.899	2.6	2.796	7.27	34.95	35.7
Quartz	(1,2,11)	13.193	78.28	2.898	2.6	2.796	7.26	34.95	35.7
	Equiv. Refl.: (1,-3,-11), (2,-3,11), (-3,2,-11)								
Quartz	(2,1,-11)	13.193	78.28	2.897	2.6	2.796	7.26	34.95	35.7
Quartz	(-6,8,7)	13.223	78.93	2.886	2.6	2.637	6.74	32.96	33.64
Quartz	(-2,8,-7)	13.223	78.93	2.885	2.6	2.637	6.74	32.96	33.64
	Equiv. Refl.: (-2,-6,7), (-6,-2,-7)								
Quartz	(8,-2,7)	13.223	78.93	2.883	2.6	2.637	6.73	32.96	33.64
	Equiv. Refl.: (8,-6,-7)								
Quartz	(2,6,-7)	13.223	78.93	2.797	2.6	2.637	6.74	32.96	33.64
	Equiv. Refl.: (2,-8,7), (6,2,7), (6,-8,-7)								
Quartz	(-8,2,-7)	13.223	78.93	2.795	2.6	2.637	6.73	32.96	33.64
	Equiv. Refl.: (-8,6,7)								
Quartz	(-3,9,5)	12.908	73.34	2.657	2	4.032	7.91	50.4	51.02
	Equiv. Refl.: (-3,-6,-5), (-6,9,-5), (-6,-3,5)								
Quartz	(9,-3,-5)	12.908	73.34	2.655	2	4.032	7.9	50.4	51.01
	Equiv. Refl.: (9,-6,5)								
Quartz	(8,1,4)	13.267	79.95	2.439	2.1	2.389	5.06	29.86	30.29
	Equiv. Refl.: (8,-9,-4)								
Quartz	(1,8,-4)	13.267	79.95	2.438	2.1	2.389	5.06	29.86	30.29
	Equiv. Refl.: (-9,1,-4)								
Quartz	(1,-9,4)	13.267	79.95	2.437	2.1	2.389	5.06	29.86	30.29
	Equiv. Refl.: (-9,8,4)								
Quartz	(0,2,11)	12.949	73.96	2.381	2	3.874	7.91	48.43	49.07
	Equiv. Refl.: (0,-2,-11)								
Quartz	(2,0,-11)	12.949	73.96	2.376	2	3.874	7.9	48.43	49.07
	Equiv. Refl.: (2,-2,11), (-2,0,11), (-2,2,-11)								
Quartz	(-1,9,4)	13.267	79.95	2.356	2.1	2.389	4.96	29.86	30.27
	Equiv. Refl.: (-1,-8,-4)								
Quartz	(9,-1,-4)	13.267	79.95	2.355	2.1	2.389	4.96	29.86	30.27
	Equiv. Refl.: (9,-8,4), (-8,9,-4), (-8,-1,4)								
Quartz	(8,0,5)	12.99	74.6	2.336	2	3.711	7.47	46.38	46.98
	Equiv. Refl.: (8,-8,-5), (-8,0,-5), (-8,8,5)								

Ei =	13.474	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(0,8,-5)	12.99	74.6	2.335	2	3.711	7.47	46.38	46.98
	Equiv. Refl.: (0,-8,5)								
Quartz	(2,4,-9)	12.884	72.99	2.318	2	4.123	8.04	51.53	52.16
	Equiv. Refl.: (2,-6,9)								
Quartz	(4,2,9)	12.884	72.99	2.315	1.9	4.123	8.04	51.53	52.16
	Equiv. Refl.: (4,-6,-9), (-6,2,-9), (-6,4,9)								
Quartz	(-4,7,8)	12.757	71.23	2.312	1.9	4.58	8.92	57.25	57.94
Quartz	(7,-3,8)	12.757	71.23	2.311	1.9	4.58	8.92	57.25	57.94
	Equiv. Refl.: (7,-4,-8), (-2,6,-9), (-2,-4,9), (-3,7,-8), (-3,-4,8), (-4,-3,-8)								
Quartz	(6,-2,9)	12.884	72.99	2.309	1.9	4.123	8.04	51.53	52.16
	Equiv. Refl.: (-4,-2,-9)								
Quartz	(6,-4,-9)	12.884	72.99	2.308	1.9	4.123	8.04	51.53	52.16
	Equiv. Refl.: (-4,6,9)								
Quartz	(-10,3,-2)	13.152	77.44	2.295	2	3.002	6.03	37.52	38
	Equiv. Refl.: (-10,7,2)								
Quartz	(3,7,-2)	13.152	77.44	2.294	2	3.002	6.03	37.52	38
	Equiv. Refl.: (3,-10,2), (7,3,2), (7,-10,-2)								
Quartz	(-8,1,-6)	12.975	74.37	2.289	2	3.771	7.47	47.13	47.72
	Equiv. Refl.: (-8,7,6)								
Quartz	(7,1,6)	12.975	74.37	2.288	2	3.771	7.47	47.13	47.72
	Equiv. Refl.: (7,-8,-6)								
Quartz	(1,7,-6)	12.975	74.37	2.287	2	3.771	7.46	47.13	47.72
	Equiv. Refl.: (1,-8,6)								
Quartz	(4,-7,-8)	12.757	71.23	2.286	1.9	4.58	8.92	57.25	57.94
Quartz	(3,4,-8)	12.757	71.23	2.285	1.9	4.58	8.92	57.25	57.94
	Equiv. Refl.: (3,-7,8), (4,3,8), (-7,3,-8), (-7,4,8)								
Quartz	(-8,3,7)	12.98	74.44	2.284	2	3.752	7.38	46.9	47.48
	Equiv. Refl.: (-8,5,-7)								
Quartz	(3,5,7)	12.98	74.44	2.283	2	3.752	7.38	46.9	47.48
	Equiv. Refl.: (3,-8,-7)								
Quartz	(5,3,-7)	12.98	74.44	2.281	2	3.752	7.37	46.9	47.47
	Equiv. Refl.: (5,-8,7)								
Quartz	(8,-1,6)	12.975	74.37	2.269	2	3.771	7.47	47.13	47.72
	Equiv. Refl.: (8,-3,-7), (8,-5,7), (8,-7,-6), (-7,-1,-6)								
Quartz	(-3,-5,-7)	12.98	74.44	2.268	2	3.752	7.38	46.9	47.48
	Equiv. Refl.: (-7,8,6)								
Quartz	(-1,8,-6)	12.975	74.37	2.267	2	3.771	7.46	47.13	47.72
	Equiv. Refl.: (-1,-7,6), (-3,8,7)								
Quartz	(-5,8,-7)	12.98	74.44	2.265	2	3.752	7.37	46.9	47.47
	Equiv. Refl.: (-5,-3,7)								
LiNbO3	(2,4,25)	13.383	83.35	2.253	3.6	1.57	5.63	19.63	20.42
	Equiv. Refl.: (2,-6,-25), (4,2,-25), (4,-6,25), (6,-2,-25), (6,-4,25), (-2,6,25), (-2,-4,-25), (-4,6,-25), (-4,-2,25), (-6,2,25), (-6,4,-25)								
Quartz	(2,8,0)	13.353	82.33	1.985	2.2	1.814	3.94	22.68	23.02
	Equiv. Refl.: (2,-10,0), (8,2,0), (8,-10,0), (-10,2,0), (-10,8,0)								
Sapph	(4,5,-13)	13.288	80.46	1.981	2.2	2.265	4.97	28.31	28.75
	Equiv. Refl.: (4,-9,13), (5,4,13), (5,-9,-13), (9,-4,13), (9,-5,-13), (-4,9,-13), (-4,-5,13), (-5,9,13), (-5,-4,-13), (-9,4,-13), (-9,5,13)								
Quartz	(10,-2,0)	13.353	82.33	1.965	2.2	1.814	3.94	22.68	23.02
	Equiv. Refl.: (10,-8,0), (-2,10,0), (-2,-8,0), (-8,10,0), (-8,-2,0)								

Ei =	13.474	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(3,6,12)	13.244	79.39	1.954	2.1	2.525	5.4	31.56	32.02
	Equiv. Refl.: (3,6,-12), (3,-9,12), (3,-9,-12), (6,3,12), (6,3,-12), (6,-9,12), (6,-9,-12), (9,-3,12), (9,-3,-12), (9,-6,12), (9,-6,-12), (-3,9,12), (-3,9,-12), (-3,-6,12), (-3,-6,-12), (-6,9,12), (-6,9,-12), (-6,-3,12), (-6,-3,-12), (-9,3,12), (-9,3,-12), (-9,6,12), (-9,6,-12)								
Quartz	(-8,9,4)	13.267	79.95	1.931	2.1	2.389	5.06	29.86	30.29
	Equiv. Refl.: (-8,-1,-4)								
Quartz	(9,-1,4)	13.267	79.95	1.929	2.1	2.389	5.06	29.86	30.29
	Equiv. Refl.: (9,-8,-4), (-1,9,-4), (-1,-8,4)								
Quartz	(1,8,4)	13.267	79.95	1.921	2.1	2.389	4.96	29.86	30.27
	Equiv. Refl.: (1,-9,-4), (8,1,-4), (8,-9,4), (-9,1,4), (-9,8,-4)								
Quartz	(10,-3,2)	13.152	77.44	1.901	2	3.002	6.03	37.52	38
	Equiv. Refl.: (10,-7,-2), (-3,10,-2), (-3,-7,2), (-7,10,2)								
Quartz	(-7,-3,-2)	13.152	77.44	1.9	2	3.002	6.03	37.52	38
Quartz	(9,0,-1)	13.163	77.66	1.891	2	2.946	5.85	36.83	37.29
	Equiv. Refl.: (9,-9,1), (-9,9,-1)								
Quartz	(0,9,1)	13.163	77.66	1.89	2	2.946	5.84	36.83	37.29
	Equiv. Refl.: (0,-9,-1), (-9,0,1)								
Quartz	(3,6,5)	12.908	73.34	1.869	2	4.032	7.91	50.4	51.02
	Equiv. Refl.: (3,-9,-5), (6,3,-5), (6,-9,5)								
Quartz	(-9,3,5)	12.908	73.34	1.868	2	4.032	7.9	50.4	51.01
	Equiv. Refl.: (-9,6,-5)								
Quartz	(-2,9,4)	12.778	71.5	1.863	1.9	4.507	8.43	56.34	56.97
	Equiv. Refl.: (-2,-7,-4), (-7,9,-4), (-7,-2,4)								
Quartz	(9,-2,-4)	12.778	71.5	1.862	1.9	4.507	8.43	56.34	56.97
	Equiv. Refl.: (9,-7,4)								
Sapph	(1,8,5)	13.073	75.99	1.836	2	3.361	6.6	42.01	42.53
	Equiv. Refl.: (1,-9,-5), (8,1,-5), (8,-9,5), (9,-1,-5), (9,-8,5), (-1,9,5), (-1,-8,-5), (-8,9,-5), (-8,-1,5), (-9,1,5), (-9,8,-5)								
Quartz	(2,7,4)	12.778	71.5	1.802	1.9	4.507	8.43	56.34	56.97
	Equiv. Refl.: (2,-9,-4), (7,2,-4), (7,-9,4)								
Quartz	(-9,2,4)	12.778	71.5	1.801	1.9	4.507	8.43	56.34	56.97
	Equiv. Refl.: (-9,7,-4)								
Sapph	(5,5,0)	13.029	75.23	1.782	1.9	3.553	6.75	44.41	44.92
	Equiv. Refl.: (5,-10,0), (10,-5,0), (-5,10,0), (-5,-5,0), (-10,5,0)								
Sapph	(0,8,10)	12.947	73.93	1.758	1.9	3.882	7.23	48.53	49.07
	Equiv. Refl.: (0,-8,-10), (8,0,-10), (8,-8,10), (-8,0,10), (-8,8,-10)								
Quartz	(1,7,6)	12.975	74.37	1.718	1.7	3.771	6.5	47.13	47.58
	Equiv. Refl.: (1,-8,-6), (-8,1,6), (-8,7,-6)								
Quartz	(7,1,-6)	12.975	74.37	1.717	1.7	3.771	6.5	47.13	47.58
	Equiv. Refl.: (7,-8,6)								
Quartz	(4,-4,-10)	12.866	72.72	1.676	1.7	4.192	7.25	52.39	52.89
Quartz	(0,4,-10)	12.866	72.72	1.675	1.7	4.192	7.25	52.39	52.89
	Equiv. Refl.: (0,-4,10), (4,0,10), (-4,0,-10), (-4,4,10)								
Quartz	(3,7,0)	12.95	73.97	1.673	1.7	3.872	6.55	48.4	48.84
	Equiv. Refl.: (3,-10,0), (6,-3,9), (6,-3,-9), (7,3,0), (7,-10,0), (-3,6,9), (-3,6,-9), (-3,-3,9), (-3,-3,-9), (-10,3,0), (-10,7,0)								
Quartz	(3,3,9)	12.802	71.82	1.666	1.7	4.424	7.6	55.3	55.82
	Equiv. Refl.: (3,3,-9), (3,-6,9), (3,-6,-9), (-6,3,9), (-6,3,-9)								
LiNbO3	(1,9,1)	13.272	80.06	1.642	2.6	2.36	6.02	29.5	30.11
	Equiv. Refl.: (1,-10,-1), (9,1,-1), (9,-10,1), (10,-1,-1), (10,-9,1), (-1,10,1), (-1,-9,-1), (-9,10,-1), (-9,-1,1), (-10,1,1), (-10,9,-1)								

Ei =	13.474	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(2,7,-11)	13.387	83.48	1.641	2	1.541	3.07	19.26	19.51
	Equiv. Refl.: (2,-9,11), (7,2,11), (7,-9,-11), (9,-2,11), (9,-7,-11), (-2,9,-11), (-2,-7,11), (-7,9,11), (-7,-2,-11), (-9,2,-11), (-9,7,11)								
Sapph	(4,5,-10)	12.682	70.26	1.619	1.7	4.835	8.22	60.43	60.99
	Equiv. Refl.: (4,-9,10), (5,4,10), (5,-9,-10), (9,-4,10), (9,-5,-10), (-4,9,-10), (-4,-5,10), (-5,9,10), (-5,-4,-10), (-9,4,-10), (-9,5,10), (5,5,4), (5,-10,-4)								
Quartz	(5,5,-4)	13.426	85.17	1.614	2	1.139	2.24	14.23	14.41
	Equiv. Refl.: (5,-10,4), (-10,5,4)								
Quartz	(-10,5,-4)	13.426	85.17	1.613	2	1.139	2.24	14.23	14.41
Quartz	(-5,10,4)	13.426	85.17	1.605	2	1.139	2.25	14.23	14.41
Quartz	(-5,-5,-4)	13.426	85.17	1.604	2	1.139	2.25	14.23	14.41
Quartz	(-5,-5,4)	13.426	85.17	1.6	2	1.139	2.24	14.23	14.41
Quartz	(10,-5,4)	13.426	85.17	1.599	2	1.139	2.24	14.23	14.41
	Equiv. Refl.: (10,-5,-4), (-5,10,-4)								
Sapph	(1,2,26)	13.032	75.29	1.598	1.7	3.538	6.11	44.22	44.64
	Equiv. Refl.: (1,-3,-26), (2,1,-26), (2,-3,26), (3,-1,-26), (3,-2,26), (-1,3,26), (-1,-2,-26), (-2,3,-26), (-2,-1,26), (-3,1,26), (-3,2,-26)								
Quartz	(8,-1,-6)	12.975	74.37	1.597	1.7	3.771	6.5	47.13	47.58
	Equiv. Refl.: (8,-7,6), (-1,8,6), (-1,-7,-6)								
Quartz	(-7,8,-6)	12.975	74.37	1.596	1.7	3.771	6.5	47.13	47.58
	Equiv. Refl.: (-7,-1,6)								
Quartz	(10,-3,0)	12.95	73.97	1.578	1.7	3.872	6.55	48.4	48.84
	Equiv. Refl.: (10,-7,0), (-3,10,0), (-3,-7,0), (-7,10,0), (-7,-3,0)								
Quartz	(-3,7,8)	12.757	71.23	1.574	1.6	4.58	7.4	57.25	57.73
Quartz	(-3,-4,-8)	12.757	71.23	1.573	1.6	4.58	7.4	57.25	57.73
	Equiv. Refl.: (-4,7,-8)								
Quartz	(7,-3,-8)	12.757	71.23	1.572	1.6	4.58	7.39	57.25	57.72
	Equiv. Refl.: (7,-4,8), (-4,-3,8)								
Quartz	(6,-8,7)	13.223	78.93	1.57	1.6	2.637	4.34	32.96	33.24
Quartz	(6,2,-7)	13.223	78.93	1.569	1.6	2.637	4.34	32.96	33.24
	Equiv. Refl.: (-8,2,7), (-8,6,-7)								
Quartz	(2,-8,-7)	13.223	78.93	1.568	1.6	2.637	4.34	32.96	33.24
Quartz	(2,6,7)	13.223	78.93	1.567	1.6	2.637	4.34	32.96	33.24
Sapph	(0,2,-26)	12.769	71.39	1.562	1.7	4.538	7.51	56.73	57.22
	Equiv. Refl.: (0,-2,26), (2,0,26), (2,-2,-26), (-2,0,-26), (-2,2,26)								
Sapph	(1,8,-1)	12.863	72.67	1.561	1.7	4.203	7	52.54	53.01
	Equiv. Refl.: (1,-9,1), (8,1,1), (8,-9,-1), (9,-1,1), (9,-8,-1), (-1,9,-1), (-1,-8,1), (-8,9,1), (-8,-1,-1), (-9,1,-1), (-9,8,1)								
Quartz	(3,4,8)	12.757	71.23	1.557	1.6	4.58	7.4	57.25	57.73
	Equiv. Refl.: (3,-7,-8)								
Quartz	(4,3,-8)	12.757	71.23	1.556	1.6	4.58	7.4	57.25	57.72
	Equiv. Refl.: (4,-7,8), (-7,3,8), (-7,4,-8)								
Sapph	(1,5,20)	12.7	70.48	1.548	1.6	4.776	7.8	59.7	60.21
	Equiv. Refl.: (1,-6,-20), (5,1,-20), (5,-6,20), (6,-1,-20), (6,-5,20), (-1,6,20), (-1,-5,-20), (-5,6,-20), (-5,-1,20), (-6,1,20), (-6,5,-20)								
Quartz	(4,-8,-7)	12.898	73.19	1.511	1.6	4.071	6.41	50.89	51.29
	Equiv. Refl.: (-8,4,7), (-8,4,-7)								
Quartz	(4,4,7)	12.898	73.19	1.51	1.6	4.071	6.41	50.89	51.29
	Equiv. Refl.: (4,4,-7), (4,-8,7)								

Ei =	13.474	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(5,6,5)	13.452	86.69	1.506	3.6	0.779	2.81	9.74	10.14
	Equiv. Refl.: (5,-11,-5), (6,5,-5), (6,-11,5), (11,-5,-5), (11,-6,5), (-5,11,5), (-5,-6,-5), (-6,11,-5), (-6,-5,5), (-11,5,5), (-11,6,-5), (8,-4,7), (8,-4,-7), (-4,8,7)								
Quartz	(-4,8,-7)	12.898	73.19	1.505	1.6	4.071	6.41	50.89	51.29
	Equiv. Refl.: (-4,-4,7), (-4,-4,-7)								
Quartz	(10,-4,-2)	12.907	73.32	1.483	1.5	4.037	6.02	50.46	50.82
	Equiv. Refl.: (10,-6,2), (-4,10,2), (-4,-6,-2), (-6,10,-2), (-6,-4,2)								
Quartz	(8,-2,-7)	13.223	78.93	1.463	1.6	2.637	4.34	32.96	33.24
	Equiv. Refl.: (8,-6,7), (-6,8,-7), (-6,-2,7)								
Quartz	(-2,8,7)	13.223	78.93	1.461	1.6	2.637	4.34	32.96	33.24
Quartz	(-2,-6,-7)	13.223	78.93	1.46	1.6	2.637	4.34	32.96	33.24
Quartz	(-1,7,8)	13.247	79.47	1.445	1.5	2.505	3.83	31.31	31.55
	Equiv. Refl.: (-1,-6,-8)								
Quartz	(-6,7,-8)	13.247	79.47	1.444	1.5	2.505	3.82	31.31	31.55
Quartz	(-6,-1,8)	13.247	79.47	1.443	1.5	2.505	3.82	31.31	31.55
Quartz	(7,-1,-8)	13.247	79.47	1.442	1.5	2.505	3.82	31.31	31.55
	Equiv. Refl.: (7,-6,8)								
Sapph	(1,5,-22)	13.432	85.48	1.42	1.9	1.066	2.06	13.32	13.48
	Equiv. Refl.: (1,-6,22), (5,1,22), (5,-6,-22), (6,-1,22), (6,-5,-22), (-1,6,-22), (-1,-5,22), (-5,6,22), (-5,-1,-22), (-6,1,-22), (-6,5,22)								
Quartz	(7,-1,8)	13.247	79.47	1.411	1.5	2.505	3.84	31.31	31.55
	Equiv. Refl.: (7,-6,-8), (-1,7,-8), (-1,-6,8), (-6,7,8), (-6,-1,-8)								
Quartz	(4,5,-6)	13.299	80.75	1.409	1.6	2.195	3.41	27.44	27.65
	Equiv. Refl.: (4,-9,6), (-9,4,-6), (-9,5,6)								
Quartz	(5,4,6)	13.299	80.75	1.407	1.6	2.195	3.41	27.44	27.65
	Equiv. Refl.: (5,-9,-6)								
Quartz	(-6,1,-9)	13.129	77.01	1.391	1.4	3.108	4.49	38.85	39.11
	Equiv. Refl.: (-6,5,9)								
Quartz	(5,-6,-9)	13.129	77.01	1.39	1.4	3.108	4.49	38.85	39.11
Quartz	(1,5,-9)	13.129	77.01	1.389	1.4	3.108	4.49	38.85	39.11
	Equiv. Refl.: (5,1,9)								
Quartz	(1,-6,9)	13.129	77.01	1.388	1.4	3.108	4.49	38.85	39.11
Quartz	(6,1,8)	13.247	79.47	1.366	1.5	2.505	3.85	31.31	31.55
	Equiv. Refl.: (6,-7,-8), (-7,1,-8), (-7,6,8)								
Quartz	(0,6,8)	12.674	70.15	1.365	1.4	4.863	6.91	60.79	61.18
	Equiv. Refl.: (0,-6,-8), (1,6,-8), (1,-7,8), (6,0,-8), (6,-6,8), (-6,0,8), (-6,6,-8)								
Quartz	(4,6,2)	12.907	73.32	1.358	1.5	4.037	6.02	50.46	50.82
	Equiv. Refl.: (4,-10,-2), (6,4,-2), (6,-10,2), (-10,4,2), (-10,6,-2)								
Quartz	(-4,9,-6)	13.299	80.75	1.351	1.6	2.195	3.41	27.44	27.65
	Equiv. Refl.: (-4,-5,6)								
Quartz	(9,-4,6)	13.299	80.75	1.35	1.6	2.195	3.41	27.44	27.65
	Equiv. Refl.: (9,-5,-6)								
Quartz	(-5,9,6)	13.299	80.75	1.348	1.6	2.195	3.41	27.44	27.65
	Equiv. Refl.: (-5,-4,-6)								
Quartz	(1,6,8)	13.247	79.47	1.319	1.5	2.505	3.83	31.31	31.55
	Equiv. Refl.: (1,-7,-8), (6,-7,8)								
Quartz	(6,1,-8)	13.247	79.47	1.318	1.5	2.505	3.82	31.31	31.55
Quartz	(-7,1,8)	13.247	79.47	1.317	1.5	2.505	3.82	31.31	31.55
	Equiv. Refl.: (-7,6,-8)								
Quartz	(10,-4,3)	13.16	77.6	1.296	1.4	2.963	4.12	37.04	37.27
	Equiv. Refl.: (10,-6,-3), (-4,10,-3), (-4,-6,3)								

Ei =	13.474	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-6,10,3)	13.16	77.6	1.295	1.4	2.963	4.12	37.04	37.27
	Equiv. Refl.: (-6,-4,-3)								
Quartz	(10,-4,-1)	12.753	71.18	1.288	1.3	4.593	6.16	57.41	57.74
	Equiv. Refl.: (10,-6,1), (-4,10,1), (-4,-6,-1), (-6,10,-1), (-6,-4,1)								
Quartz	(6,-1,9)	13.129	77.01	1.28	1.4	3.108	4.49	38.85	39.11
	Equiv. Refl.: (6,-5,-9)								
Quartz	(-1,-5,9)	13.129	77.01	1.279	1.4	3.108	4.49	38.85	39.11
	Equiv. Refl.: (-5,6,9), (-5,-1,-9)								
Quartz	(-1,6,-9)	13.129	77.01	1.278	1.4	3.108	4.49	38.85	39.11
Quartz	(4,6,1)	12.753	71.18	1.263	1.3	4.593	6.16	57.41	57.74
	Equiv. Refl.: (4,-10,-1), (6,4,-1), (6,-10,1), (-10,4,1), (-10,6,-1)								
Quartz	(4,6,-3)	13.16	77.6	1.239	1.4	2.963	4.12	37.04	37.27
	Equiv. Refl.: (4,-10,3), (-10,4,-3), (-10,6,3)								
Quartz	(6,4,3)	13.16	77.6	1.238	1.4	2.963	4.12	37.04	37.27
	Equiv. Refl.: (6,-10,-3)								
Quartz	(9,0,1)	13.163	77.66	1.221	1.3	2.946	3.97	36.83	37.04
	Equiv. Refl.: (9,-9,-1), (-9,0,-1), (-9,9,1)								
Quartz	(0,9,-1)	13.163	77.66	1.22	1.3	2.946	3.97	36.83	37.04
	Equiv. Refl.: (0,-9,1)								
Sapph	(4,5,11)	12.87	72.77	1.213	1.3	4.178	5.57	52.22	52.52
	Equiv. Refl.: (4,-9,-11), (5,4,-11), (5,-9,11), (9,-4,-11), (9,-5,11), (-4,9,11), (-4,-5,-11), (-5,9,-11), (-5,-4,11), (-9,4,11), (-9,5,-11)								
Quartz	(6,3,5)	12.908	73.34	1.181	1.3	4.032	5.08	50.4	50.65
	Equiv. Refl.: (6,-9,-5), (-9,6,5)								
Quartz	(3,6,-5)	12.908	73.34	1.18	1.3	4.032	5.08	50.4	50.65
	Equiv. Refl.: (3,-9,5), (-9,3,-5)								
Quartz	(9,-6,-5)	12.908	73.34	1.172	1.3	4.032	5.08	50.4	50.65
	Equiv. Refl.: (-6,9,5), (-6,-3,-5)								
Quartz	(9,-3,5)	12.908	73.34	1.171	1.3	4.032	5.08	50.4	50.65
	Equiv. Refl.: (-3,9,-5), (-3,-6,5)								
Quartz	(9,-4,5)	12.743	71.04	1.107	1.2	4.629	5.43	57.86	58.12
	Equiv. Refl.: (9,-5,-5), (-5,9,5), (-5,-4,-5)								
Sapph	(4,6,4)	13.253	79.62	1.106	1.3	2.468	3.27	30.85	31.03
	Equiv. Refl.: (4,-10,-4), (6,4,-4), (6,-10,4), (10,-4,-4), (10,-6,4), (-4,10,4), (-4,-6,-4), (-6,10,-4), (-6,-4,4), (-10,4,4), (-10,6,-4), (-4,9,-5), (-4,-5,5)								
Quartz	(4,-9,5)	12.743	71.04	1.093	1.2	4.629	5.42	57.86	58.12
	Equiv. Refl.: (5,4,5), (5,-9,-5), (-9,4,-5), (-9,5,5)								
Quartz	(4,5,-5)	12.743	71.04	1.092	1.2	4.629	5.42	57.86	58.12
Quartz	(1,8,3)	12.915	73.44	1.091	1.1	4.006	4.51	50.07	50.27
	Equiv. Refl.: (1,-9,-3), (-9,1,3), (-9,8,-3)								
Quartz	(8,1,-3)	12.915	73.44	1.09	1.1	4.006	4.51	50.07	50.27
	Equiv. Refl.: (8,-9,3)								
LiNbO3	(4,6,-11)	13.082	76.15	1.086	1.7	3.323	5.79	41.54	41.94
	Equiv. Refl.: (4,-10,11), (6,4,11), (6,-10,-11), (10,-4,11), (10,-6,-11), (-4,10,-11), (-4,-6,11), (-6,10,11), (-6,-4,-11), (-10,4,-11), (-10,6,11)								
LiNbO3	(2,7,13)	12.78	71.53	1.046	1.6	4.499	7.06	56.24	56.68
	Equiv. Refl.: (2,-9,-13), (7,2,-13), (7,-9,13), (9,-2,-13), (9,-7,13), (-2,9,13), (-2,-7,-13), (-7,9,-13), (-7,-2,13), (-9,2,13), (-9,7,-13)								

Ei =	13.474	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(3,4,23)	13.316	81.22	1.029	2	2.081	4.07	26.01	26.32
	Equiv. Refl.: (3,-7,-23), (4,3,-23), (4,-7,23), (7,-3,-23), (7,-4,23), (-3,7,23), (-3,-4,-23), (-4,7,-23), (-4,-3,23), (-7,3,23), (-7,4,-23)								
LiNbO3	(2,2,27)	12.999	74.74	0.998	1.6	3.675	5.88	45.94	46.31
	Equiv. Refl.: (2,2,-27), (2,-4,27), (2,-4,-27), (4,-2,27), (4,-2,-27), (-2,4,27), (-2,4,-27), (-2,-2,27), (-2,-2,-27), (-4,2,27), (-4,2,-27)								
Quartz	(-4,9,6)	13.299	80.75	0.991	1.1	2.195	2.5	27.44	27.55
	Equiv. Refl.: (-4,-5,-6)								
Quartz	(9,-4,-6)	13.299	80.75	0.988	1.1	2.195	2.49	27.44	27.55
Sapph	(3,5,-17)	13.294	80.63	0.987	1.2	2.223	2.75	27.79	27.93
	Equiv. Refl.: (3,-8,17), (5,3,17), (5,-8,-17), (8,-3,17), (8,-5,-17), (-3,8,-17), (-3,-5,17), (-5,8,17), (-5,-3,-17), (-8,3,-17), (-8,5,17), (9,-5,6), (-5,9,-6)								
Quartz	(-5,-4,6)	13.299	80.75	0.986	1.1	2.195	2.49	27.44	27.55
Quartz	(9,-8,3)	12.915	73.44	0.983	1.1	4.006	4.51	50.07	50.27
	Equiv. Refl.: (-1,9,3), (-1,-8,-3)								
Quartz	(9,-1,-3)	12.915	73.44	0.982	1.1	4.006	4.51	50.07	50.27
	Equiv. Refl.: (-8,9,-3), (-8,-1,3)								
Quartz	(-8,9,3)	12.915	73.44	0.962	1	4.006	4.2	50.07	50.25
	Equiv. Refl.: (-8,-1,-3)								
Quartz	(9,-1,3)	12.915	73.44	0.961	1	4.006	4.2	50.07	50.25
	Equiv. Refl.: (9,-8,-3), (-1,9,-3), (-1,-8,3)								
Quartz	(8,1,3)	12.915	73.44	0.947	1	4.006	4.2	50.07	50.25
	Equiv. Refl.: (8,-9,-3)								
Sapph	(1,6,19)	13.4	83.99	0.946	1.3	1.418	1.88	17.73	17.83
	Equiv. Refl.: (1,-7,-19), (6,1,-19), (6,-7,19), (7,-1,-19), (7,-6,19), (-1,7,19), (-1,-6,-19), (-6,7,-19), (-6,-1,19), (-7,1,19), (-7,6,-19), (1,8,-3), (1,-9,3), (-9,1,-3), (-9,8,3)								
Quartz	(4,-9,-6)	13.299	80.75	0.913	1.1	2.195	2.5	27.44	27.55
Quartz	(4,5,6)	13.299	80.75	0.912	1.1	2.195	2.5	27.44	27.55
Quartz	(-9,4,6)	13.299	80.75	0.909	1.1	2.195	2.49	27.44	27.55
	Equiv. Refl.: (-9,5,-6)								
Quartz	(5,-9,6)	13.299	80.75	0.908	1.1	2.195	2.49	27.44	27.55
Quartz	(5,4,-6)	13.299	80.75	0.907	1.1	2.195	2.49	27.44	27.55
Quartz	(0,6,-8)	12.674	70.15	0.899	1	4.863	4.75	60.79	60.98
	Equiv. Refl.: (0,-6,8), (6,0,8), (6,-6,-8), (-6,0,-8), (-6,6,8)								
Quartz	(2,1,11)	13.193	78.28	0.898	1	2.796	2.74	34.95	35.06
	Equiv. Refl.: (2,-3,-11)								
Quartz	(-3,1,-11)	13.193	78.28	0.896	1	2.796	2.74	34.95	35.06
Quartz	(1,2,-11)	13.193	78.28	0.895	1	2.796	2.73	34.95	35.06
	Equiv. Refl.: (1,-3,11)								
Quartz	(-3,2,11)	13.193	78.28	0.894	1	2.796	2.73	34.95	35.06
Quartz	(10,-5,3)	13.079	76.09	0.873	1	3.338	3.29	41.72	41.85
	Equiv. Refl.: (10,-5,-3), (-5,10,3), (-5,10,-3), (-5,-5,3), (-5,-5,-3)								
Quartz	(5,5,3)	13.079	76.09	0.864	1	3.338	3.29	41.72	41.85
	Equiv. Refl.: (5,-10,-3)								
Quartz	(5,5,-3)	13.079	76.09	0.863	1	3.338	3.29	41.72	41.85
	Equiv. Refl.: (5,-10,3), (-10,5,3), (-10,5,-3)								
Quartz	(1,5,9)	13.129	77.01	0.856	0.9	3.108	2.83	38.85	38.96
	Equiv. Refl.: (1,-6,-9)								
Quartz	(5,1,-9)	13.129	77.01	0.855	0.9	3.108	2.82	38.85	38.96
Quartz	(5,-6,9)	13.129	77.01	0.854	0.9	3.108	2.82	38.85	38.96
Quartz	(-6,1,9)	13.129	77.01	0.852	0.9	3.108	2.82	38.85	38.96
	Equiv. Refl.: (-6,5,-9)								

Ei =	13.474	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(10,-3,-2)	13.152	77.44	0.839	1	3.002	2.9	37.52	37.63
	Equiv. Refl.: (10,-7,2)								
Quartz	(-3,10,2)	13.152	77.44	0.838	1	3.002	2.89	37.52	37.63
	Equiv. Refl.: (-3,-7,-2), (-7,10,-2), (-7,-3,2)								
Quartz	(-10,3,2)	13.152	77.44	0.818	1	3.002	2.9	37.52	37.63
	Equiv. Refl.: (-10,7,-2)								
Sapph	(2,7,-8)	12.893	73.11	0.817	1	4.092	3.91	51.15	51.3
	Equiv. Refl.: (2,-9,8), (7,2,8), (7,-9,-8), (9,-2,8), (9,-7,-8), (-2,9,-8), (-2,-7,8), (-7,9,8), (-7,-2,-8), (-9,2,-8), (-9,7,8), (0,7,7), (0,-7,-7), (7,3,-2)								
Quartz	(3,7,2)	13.152	77.44	0.816	1	3.002	2.9	37.52	37.63
	Equiv. Refl.: (3,-10,-2), (7,-10,2)								
Quartz	(7,0,-7)	12.98	74.44	0.815	0.9	3.752	3.46	46.9	47.03
	Equiv. Refl.: (7,-7,7), (-7,0,7), (-7,7,-7)								
Quartz	(0,1,-11)	12.701	70.5	0.804	0.9	4.772	4.23	59.65	59.8
	Equiv. Refl.: (0,-1,11)								
Quartz	(1,0,11)	12.701	70.5	0.803	0.9	4.772	4.22	59.65	59.8
	Equiv. Refl.: (1,-1,-11)								
Quartz	(-1,0,-11)	12.701	70.5	0.802	0.9	4.772	4.22	59.65	59.8
	Equiv. Refl.: (-1,1,11)								
Quartz	(9,-2,-5)	13.233	79.15	0.781	0.9	2.582	2.31	32.27	32.35
	Equiv. Refl.: (9,-7,5), (-7,9,-5), (-7,-2,5)								
Quartz	(-2,9,5)	13.233	79.15	0.78	0.9	2.582	2.3	32.27	32.35
	Equiv. Refl.: (-2,-7,-5)								
Quartz	(2,5,8)	12.923	73.55	0.774	0.9	3.978	3.43	49.73	49.85
Quartz	(2,-7,-8)	12.923	73.55	0.773	0.9	3.978	3.43	49.73	49.85
	Equiv. Refl.: (-7,2,8), (-7,5,-8)								
Quartz	(5,2,-8)	12.923	73.55	0.772	0.9	3.978	3.42	49.73	49.85
	Equiv. Refl.: (5,-7,8)								
Quartz	(-2,3,11)	13.193	78.28	0.771	1	2.796	2.74	34.95	35.06
	Equiv. Refl.: (-2,-1,-11)								
Quartz	(3,-1,11)	13.193	78.28	0.769	1	2.796	2.74	34.95	35.06
	Equiv. Refl.: (8,-3,7)								
Quartz	(3,-2,-11)	13.193	78.28	0.768	1	2.796	2.73	34.95	35.06
	Equiv. Refl.: (8,-5,-7), (-1,3,-11), (-1,-2,11), (-3,8,-7), (-3,-5,7)								
LiNbO3	(4,5,17)	13.256	79.69	0.766	1.5	2.452	3.77	30.64	30.87
	Equiv. Refl.: (4,-9,-17), (5,4,-17), (5,-9,17), (9,-4,-17), (9,-5,17), (-4,9,17), (-4,-5,-17), (-5,9,-17), (-5,-4,17), (-9,4,17), (-9,5,-17), (-5,8,7), (-5,-3,-7)								
Quartz	(3,5,-7)	12.98	74.44	0.75	0.9	3.752	3.26	46.9	47.01
	Equiv. Refl.: (3,-8,7), (-8,3,-7), (-8,5,7)								
Quartz	(5,3,7)	12.98	74.44	0.747	0.9	3.752	3.25	46.9	47.01
	Equiv. Refl.: (5,-8,-7)								
Quartz	(7,-5,8)	12.923	73.55	0.744	0.9	3.978	3.43	49.73	49.85
	Equiv. Refl.: (-2,7,8), (-2,-5,-8)								
Quartz	(7,-2,-8)	12.923	73.55	0.743	0.9	3.978	3.43	49.73	49.85
Quartz	(-5,7,-8)	12.923	73.55	0.742	0.9	3.978	3.42	49.73	49.85
	Equiv. Refl.: (-5,-2,8)								
Quartz	(10,-4,0)	12.702	70.51	0.733	0.8	4.77	3.9	59.62	59.75
	Equiv. Refl.: (10,-6,0), (-4,10,0), (-4,-6,0), (-6,10,0), (-6,-4,0)								
Quartz	(4,6,0)	12.702	70.51	0.73	0.8	4.77	3.9	59.62	59.75
	Equiv. Refl.: (4,-10,0), (6,4,0), (6,-10,0), (-10,4,0), (-10,6,0)								

Ei =	13.474	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(10,-3,-1)	13.001	74.77	0.713	0.8	3.669	3	45.86	45.96
	Equiv. Refl.: (10,-7,1), (-3,10,1), (-3,-7,-1), (-7,10,-1), (-7,-3,1)								
Quartz	(-1,6,9)	13.129	77.01	0.706	0.9	3.108	2.83	38.85	38.96
Quartz	(-1,-5,-9)	13.129	77.01	0.705	0.9	3.108	2.83	38.85	38.96
Quartz	(-5,6,-9)	13.129	77.01	0.704	0.9	3.108	2.82	38.85	38.96
	Equiv. Refl.: (-5,-1,9)								
Quartz	(6,-1,-9)	13.129	77.01	0.702	0.9	3.108	2.82	38.85	38.96
	Equiv. Refl.: (6,-5,9)								
Quartz	(3,7,1)	13.001	74.77	0.692	0.8	3.669	3	45.86	45.96
	Equiv. Refl.: (3,-10,-1), (7,3,-1), (7,-10,1), (-10,3,1), (-10,7,-1)								
Quartz	(0,4,10)	12.866	72.72	0.69	0.8	4.192	3.31	52.39	52.5
	Equiv. Refl.: (0,-4,-10)								
Quartz	(4,0,-10)	12.866	72.72	0.687	0.8	4.192	3.3	52.39	52.5
	Equiv. Refl.: (4,-4,10), (-4,0,10), (-4,4,-10)								
Quartz	(7,2,-5)	13.233	79.15	0.683	0.9	2.582	2.31	32.27	32.35
	Equiv. Refl.: (7,-9,5), (-9,7,-5)								
Quartz	(2,7,5)	13.233	79.15	0.682	0.9	2.582	2.31	32.27	32.35
	Equiv. Refl.: (-9,2,5)								
Quartz	(2,-9,-5)	13.233	79.15	0.681	0.9	2.582	2.3	32.27	32.35
Quartz	(-10,6,-3)	13.16	77.6	0.671	0.8	2.963	2.26	37.04	37.11
Quartz	(4,6,3)	13.16	77.6	0.67	0.8	2.963	2.26	37.04	37.11
	Equiv. Refl.: (4,-10,-3), (6,4,-3), (6,-10,3), (-10,4,3)								
Sapph	(2,7,7)	12.759	71.26	0.668	0.8	4.572	3.64	57.15	57.27
	Equiv. Refl.: (2,-9,-7), (7,2,-7), (7,-9,7), (9,-2,-7), (9,-7,7), (-2,9,7), (-2,-7,-7), (-7,9,-7), (-7,-2,7), (-9,2,7), (-9,7,-7)								
Quartz	(1,4,10)	13.272	80.06	0.657	0.8	2.36	1.95	29.5	29.57
Quartz	(1,-5,-10)	13.272	80.06	0.656	0.8	2.36	1.95	29.5	29.57
	Equiv. Refl.: (4,1,-10), (4,-5,10)								
Quartz	(-5,4,-10)	13.272	80.06	0.651	0.8	2.36	1.94	29.5	29.57
Quartz	(-5,1,10)	13.272	80.06	0.65	0.8	2.36	1.94	29.5	29.57
LiNbO3	(3,7,11)	13.302	80.83	0.639	1.4	2.175	3.13	27.18	27.37
	Equiv. Refl.: (3,-10,-11), (7,3,-11), (7,-10,11), (10,-3,-11), (10,-7,11), (-3,10,11), (-3,-7,-11), (-7,10,-11), (-7,-3,11), (-10,3,11), (-10,7,-11)								
Quartz	(-1,5,10)	13.272	80.06	0.637	0.8	2.36	1.95	29.5	29.57
	Equiv. Refl.: (-1,-4,-10)								
Quartz	(-4,5,-10)	13.272	80.06	0.636	0.8	2.36	1.95	29.5	29.57
	Equiv. Refl.: (-4,-1,10)								
Quartz	(5,-1,-10)	13.272	80.06	0.631	0.8	2.36	1.94	29.5	29.57
	Equiv. Refl.: (5,-4,10)								
Quartz	(10,-5,1)	12.67	70.11	0.628	0.7	4.876	3.49	60.95	61.05
	Equiv. Refl.: (10,-5,-1), (-5,10,1), (-5,10,-1), (-5,-5,1), (-5,-5,-1)								
Quartz	(5,5,1)	12.67	70.11	0.626	0.7	4.876	3.49	60.95	61.05
	Equiv. Refl.: (5,-10,1), (5,-10,-1), (-10,5,-1)								
Quartz	(5,5,-1)	12.67	70.11	0.625	0.7	4.876	3.49	60.95	61.05
	Equiv. Refl.: (-10,5,1)								
Quartz	(-2,9,-4)	12.778	71.5	0.596	0.7	4.507	3	56.34	56.42
	Equiv. Refl.: (-2,-7,4)								
Quartz	(9,-2,4)	12.778	71.5	0.595	0.7	4.507	3	56.34	56.42
	Equiv. Refl.: (9,-7,-4), (-7,9,4), (-7,-2,-4)								

Ei =	13.474	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(10,-2,-1)	13.403	84.1	0.581	0.8	1.392	1.13	17.4	17.44
	Equiv. Refl.: (10,-8,1), (-8,10,-1), (-8,-2,1)								
Quartz	(-2,10,1)	13.403	84.1	0.58	0.8	1.392	1.13	17.4	17.44
	Equiv. Refl.: (-2,-8,-1)								
Quartz	(10,-4,-3)	13.16	77.6	0.569	0.8	2.963	2.26	37.04	37.11
	Equiv. Refl.: (10,-6,3), (-4,10,3), (-4,-6,-3)								
Quartz	(-6,10,-3)	13.16	77.6	0.568	0.8	2.963	2.26	37.04	37.11
	Equiv. Refl.: (-6,-4,3)								
Sapph	(0,5,22)	12.917	73.46	0.565	0.7	4.001	2.85	50.01	50.09
	Equiv. Refl.: (0,-5,-22), (5,0,-22), (5,-5,22), (-5,0,22), (-5,5,-22)								
LiNbO3	(2,8,9)	13.364	82.69	0.543	1.4	1.729	2.49	21.61	21.76
	Equiv. Refl.: (2,8,-9), (2,-10,9), (2,-10,-9), (8,2,9), (8,2,-9), (8,-10,9), (8,-10,-9), (10,-2,9), (10,-2,-9), (10,-8,9), (10,-8,-9), (-2,10,9), (-2,10,-9), (-2,-8,9), (-2,-8,-9), (-8,10,9), (-8,10,-9), (-8,-2,9), (-8,-2,-9), (-10,2,9), (-10,2,-9), (-10,8,9), (-10,8,-9)								
Quartz	(2,7,-4)	12.778	71.5	0.541	0.7	4.507	3	56.34	56.42
	Equiv. Refl.: (2,-9,4), (7,2,4), (7,-9,-4)								
Quartz	(-9,2,-4)	12.778	71.5	0.54	0.7	4.507	3	56.34	56.42
	Equiv. Refl.: (-9,7,4)								
Sapph	(2,3,23)	12.787	71.63	0.536	0.7	4.475	3	55.94	56.02
	Equiv. Refl.: (2,-5,-23), (3,2,-23), (3,-5,23), (5,-2,-23), (5,-3,23), (-2,5,23), (-2,-3,-23), (-3,5,-23), (-3,-2,23), (-5,2,23), (-5,3,-23)								
Sapph	(5,5,3)	13.107	76.6	0.526	0.7	3.21	2.26	40.13	40.19
	Equiv. Refl.: (5,5,-3), (5,-10,3), (5,-10,-3), (10,-5,3), (10,-5,-3), (-5,10,3), (-5,10,-3), (-5,-5,3), (-5,-5,-3), (-10,5,3), (-10,5,-3)								
LiNbO3	(5,6,-1)	13.272	80.06	0.524	1.2	2.36	2.93	29.5	29.65
	Equiv. Refl.: (5,-11,1), (6,5,1), (6,-11,-1), (11,-5,1), (11,-6,-1), (-5,11,-1), (-5,-6,1), (-6,11,1), (-6,-5,-1), (-11,5,-1), (-11,6,1)								
Quartz	(10,-3,1)	13.001	74.77	0.508	0.6	3.669	2.24	45.86	45.91
	Equiv. Refl.: (10,-7,-1), (-3,10,-1), (-3,-7,1), (-7,10,1), (-7,-3,-1)								
Quartz	(3,7,-1)	13.001	74.77	0.471	0.6	3.669	2.23	45.86	45.91
	Equiv. Refl.: (3,-10,1), (7,3,1), (7,-10,-1), (8,2,-1), (8,-10,1), (-10,2,1), (-10,3,-1), (-10,7,1), (-10,8,-1)								
Quartz	(2,8,1)	13.403	84.1	0.47	0.8	1.392	1.13	17.4	17.44
	Equiv. Refl.: (2,-10,-1)								
LiNbO3	(1,5,23)	12.873	72.83	0.405	0.9	4.164	3.61	52.05	52.18
	Equiv. Refl.: (1,-6,-23), (5,1,-23), (5,-6,23), (6,-1,-23), (6,-5,23), (-1,6,23), (-1,-5,-23), (-5,6,-23), (-5,-1,23), (-6,1,23), (-6,5,-23)								
Quartz	(0,2,-11)	12.949	73.96	0.379	0.5	3.874	1.92	48.43	48.47
	Equiv. Refl.: (0,-2,11)								
Quartz	(2,0,11)	12.949	73.96	0.375	0.5	3.874	1.9	48.43	48.47
	Equiv. Refl.: (2,-2,-11), (-2,0,-11), (-2,2,11)								
Sapph	(1,6,-17)	12.773	71.44	0.362	0.5	4.524	2.24	56.55	56.59
	Equiv. Refl.: (1,-7,17), (6,1,17), (6,-7,-17), (7,-1,17), (7,-6,-17), (-1,7,-17), (-1,-6,17), (-6,7,17), (-6,-1,-17), (-7,1,-17), (-7,6,17)								
LiNbO3	(3,7,-7)	12.749	71.12	0.355	0.8	4.608	3.57	57.59	57.71
	Equiv. Refl.: (3,-10,7), (7,3,7), (7,-10,-7), (10,-3,7), (10,-7,-7), (-3,10,-7), (-3,-7,7), (-7,10,7), (-7,-3,-7), (-10,3,-7), (-10,7,7)								
Sapph	(2,5,18)	12.731	70.88	0.322	0.4	4.67	2.1	58.38	58.41
	Equiv. Refl.: (2,5,-18), (2,-7,18), (2,-7,-18), (5,2,18), (5,2,-18), (5,-7,18), (5,-7,-18), (7,-2,18), (7,-2,-18), (7,-5,18), (7,-5,-18), (-2,7,18), (-2,7,-18), (-2,-5,18), (-2,-5,-18), (-5,7,18), (-5,7,-18), (-5,-2,18), (-5,-2,-18), (-7,2,18), (-7,2,-18), (-7,5,18), (-7,5,-18)								
Sapph	(1,3,25)	13.107	76.6	0.317	0.5	3.209	1.57	40.12	40.15
	Equiv. Refl.: (1,-4,-25), (3,1,-25), (3,-4,25), (4,-1,-25), (4,-3,25), (-1,4,25), (-1,-3,-25), (-3,4,-25), (-3,-1,25)								

		(-4,1,25), (-4,3,-25)							
Quartz	(-2,5,-10)	13.111	76.67	0.315	0.4	3.192	1.39	39.91	39.93
		Equiv. Refl.: (-2,-3,10), (-3,5,10), (-3,-2,-10)							
Quartz	(5,-3,-10)	13.111	76.67	0.312	0.4	3.192	1.38	39.91	39.93
Quartz	(5,-2,10)	13.111	76.67	0.311	0.4	3.192	1.38	39.91	39.93
Quartz	(0,7,-7)	12.98	74.44	0.291	0.4	3.752	1.53	46.9	46.92
		Equiv. Refl.: (0,-7,7), (2,3,-10), (2,-5,10), (3,2,10), (3,-5,-10), (7,0,7), (7,-7,-7), (-7,0,-7), (-7,7,7)							
Quartz	(-5,3,10)	13.111	76.67	0.288	0.4	3.192	1.38	39.91	39.93
LiNbO3	(3,6,15)	12.915	73.44	0.287	0.7	4.007	2.88	50.08	50.16
		Equiv. Refl.: (3,6,-15), (3,-9,15), (3,-9,-15), (6,3,15), (6,3,-15), (6,-9,15), (6,-9,-15), (9,-3,15), (9,-3,-15), (9,-6,15), (9,-6,-15), (-3,9,15), (-3,9,-15), (-3,-6,15), (-3,-6,-15), (-6,9,15), (-6,9,-15), (-6,-3,15), (-6,-3,-15), (-9,3,15), (-9,3,-15), (-9,6,15), (-9,6,-15), (-5,2,-10)							
LiNbO3	(2,6,-19)	13.143	77.27	0.282	0.8	3.045	2.41	38.06	38.14
		Equiv. Refl.: (2,-8,19), (6,2,19), (6,-8,-19), (8,-2,19), (8,-6,-19), (-2,8,-19), (-2,-6,19), (-6,8,19), (-6,-2,-19), (-8,2,-19), (-8,6,19)							
LiNbO3	(2,8,3)	12.814	72	0.253	0.6	4.378	2.84	54.73	54.8
		Equiv. Refl.: (2,8,-3), (2,-10,3), (2,-10,-3), (8,2,3), (8,2,-3), (8,-10,3), (8,-10,-3), (10,-2,3), (10,-2,-3), (10,-8,3), (10,-8,-3), (-2,10,3), (-2,10,-3), (-2,-8,3), (-2,-8,-3), (-8,10,3), (-8,10,-3), (-8,-2,3), (-8,-2,-3), (-10,2,3), (-10,2,-3), (-10,8,3), (-10,8,-3)							
LiNbO3	(2,5,21)	12.79	71.67	0.226	0.6	4.464	2.7	55.8	55.87
		Equiv. Refl.: (2,5,-21), (2,-7,21), (2,-7,-21), (5,2,21), (5,2,-21), (5,-7,21), (5,-7,-21), (7,-2,21), (7,-2,-21), (7,-5,21), (7,-5,-21), (-2,7,21), (-2,7,-21), (-2,-5,21), (-2,-5,-21), (-5,7,21), (-5,7,-21), (-5,-2,21), (-5,-2,-21), (-7,2,21), (-7,2,-21), (-7,5,21), (-7,5,-21)							
Sapph	(4,6,-5)	13.331	81.63	0.139	0.3	1.982	0.68	24.77	24.78
		Equiv. Refl.: (4,-10,5), (6,4,5), (6,-10,-5), (10,-4,5), (10,-6,-5), (-4,10,-5), (-4,-6,5), (-6,10,5), (-6,-4,-5), (-10,4,-5), (-10,6,5)							
LiNbO3	(1,8,-13)	13.226	79	0.137	0.6	2.62	1.52	32.74	32.78
		Equiv. Refl.: (1,-9,13), (8,1,13), (8,-9,-13), (9,-1,13), (9,-8,-13), (-1,9,-13), (-1,-8,13), (-8,9,13), (-8,-1,-13), (-9,1,-13), (-9,8,13)							
LiNbO3	(2,3,-25)	12.717	70.7	0.132	0.4	4.719	2.09	58.98	59.02
		Equiv. Refl.: (2,-5,25), (3,2,25), (3,-5,-25), (5,-2,25), (5,-3,-25), (-2,5,-25), (-2,-3,25), (-3,5,25), (-3,-2,-25), (-5,2,-25), (-5,3,25)							
LiNbO3	(3,5,19)	12.92	73.51	0.126	0.5	3.988	1.84	49.85	49.88
		Equiv. Refl.: (3,-8,-19), (5,3,-19), (5,-8,19), (8,-3,-19), (8,-5,19), (-3,8,19), (-3,-5,-19), (-5,8,-19), (-5,-3,19), (-8,3,19), (-8,5,-19)							
Sapph	(3,6,9)	12.69	70.36	0.122	0.2	4.809	1.12	60.11	60.12
		Equiv. Refl.: (3,6,-9), (3,-9,9), (3,-9,-9), (6,3,9), (6,3,-9), (6,-9,9), (6,-9,-9), (9,-3,9), (9,-3,-9), (9,-6,9), (9,-6,-9), (-3,9,9), (-3,9,-9), (-3,-6,9), (-3,-6,-9), (-6,9,9), (-6,9,-9), (-6,-3,9), (-6,-3,-9), (-9,3,9), (-9,3,-9), (-9,6,9), (-9,6,-9)							
Sapph	(1,8,2)	12.889	73.06	0.121	0.2	4.105	0.99	51.31	51.32
		Equiv. Refl.: (1,-9,-2), (8,1,-2), (8,-9,2), (9,-1,-2), (9,-8,2), (-1,9,2), (-1,-8,-2), (-8,9,-2), (-8,-1,2), (-9,1,2), (-9,8,-2)							
Sapph	(3,4,-19)	12.883	72.97	0.1	0.2	4.127	0.89	51.58	51.59
		Equiv. Refl.: (3,-7,19), (4,3,19), (4,-7,-19), (7,-3,19), (7,-4,-19), (-3,7,-19), (-3,-4,19), (-4,7,19), (-4,-3,-19), (-7,3,-19), (-7,4,19)							
LiNbO3	(1,8,11)	12.858	72.61	0.096	0.4	4.219	1.66	52.74	52.76
		Equiv. Refl.: (1,-9,-11), (8,1,-11), (8,-9,11), (9,-1,-11), (9,-8,11), (-1,9,11), (-1,-8,-11), (-8,9,-11), (-8,-1,11), (-9,1,11), (-9,8,-11)							
Sapph	(4,6,1)	13.124	76.91	0.094	0.2	3.133	0.72	39.16	39.17
		Equiv. Refl.: (4,-10,-1), (6,4,-1), (6,-10,1), (10,-4,-1), (10,-6,1), (-4,10,1), (-4,-6,-1), (-6,10,-1), (-6,-4,1), (-10,4,1), (-10,6,-1)							
LiNbO3	(4,4,21)	13.453	86.82	0.046	0.7	0.748	0.51	9.35	9.36
		Equiv. Refl.: (4,4,-21), (4,-8,21), (4,-8,-21), (8,-4,21), (8,-4,-21), (-4,8,21), (-4,8,-21), (-4,-4,21), (-4,-4,-21), (-8,4,21), (-8,4,-21)							
Sapph	(1,7,12)	12.721	70.75	0.045	0.1	4.706	0.61	58.82	58.83
		Equiv. Refl.: (1,7,-12), (1,-8,12), (1,-8,-12), (7,1,12), (7,1,-12), (7,-8,12), (7,-8,-12), (8,-1,12), (8,-1,-12)							

	(8,-7,12), (8,-7,-12), (-1,8,12), (-1,8,-12), (-1,-7,12), (-1,-7,-12), (-7,8,12), (-7,8,-12), (-7,-1,12)								
	(-7,-1,-12), (-8,1,12), (-8,1,-12), (-8,7,12), (-8,7,-12)								
LiNbO3	(5,5,9)	12.697	70.44	0.006	0.1	4.786	0.5	59.83	59.83
	Equiv. Refl.: (5,5,-9), (5,-10,9), (5,-10,-9), (10,-5,9), (10,-5,-9), (-5,10,9), (-5,10,-9), (-5,-5,9), (-5,-5,-9)								
	(-10,5,9), (-10,5,-9)								

Ei =	22.117	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Si	(1,3,19)	21.986	83.76	0.2513	0.31	2.42	0.75	30.25	30.26
	Equiv. Refl.: (1,9,17), (5,11,15), (9,11,13)								
Ge	(0,0,20)	21.916	82.26	0.2247	0.87	3.0053	2.6	37.57	37.66
	Equiv. Refl.: (0,12,16)								
Si	(0,6,18)	21.657	78.3	0.2232	0.25	4.5806	1.16	57.26	57.27
	Equiv. Refl.: (2,10,16), (8,10,14)								
Si	(8,12,12)	21.415	75.53	0.1921	0.22	5.7076	1.24	71.34	71.36
Si	(2,4,18)	21.171	73.18	0.176	0.2	6.6865	1.32	83.58	83.59
	Equiv. Refl.: (2,12,14), (10,10,12)								
Ge	(0,14,14)	21.695	78.79	0.1713	0.63	4.3817	2.77	54.77	54.84
	Equiv. Refl.: (2,8,18), (6,10,16)								
Si	(4,8,16)	20.923	71.09	0.1668	0.19	7.5777	1.41	94.72	94.73
Si	(1,1,19)	21.747	79.51	0.1596	0.2	4.0946	0.8	51.18	51.19
	Equiv. Refl.: (5,7,17), (5,13,13), (11,11,11)								
Ge	(8,8,16)	21.473	76.14	0.1529	0.54	5.458	2.96	68.23	68.29
Ge	(4,6,18)	21.248	73.89	0.1451	0.49	6.39	3.16	79.87	79.94
	Equiv. Refl.: (6,12,14)								
Ge	(0,6,18)	20.791	70.06	0.1426	0.45	8.0242	3.6	100.3	100.37
	Equiv. Refl.: (2,10,16), (8,10,14)								
Ge	(3,13,15)	21.998	84.04	0.1385	0.78	2.3073	1.79	28.84	28.9
Si	(3,11,15)	21.506	76.51	0.1324	0.16	5.3073	0.85	66.34	66.35
	Equiv. Refl.: (7,9,15)								
Si	(1,11,15)	21.263	74.02	0.1194	0.14	6.332	0.91	79.15	79.16
	Equiv. Refl.: (3,7,17), (3,13,13)								
Si	(1,7,17)	21.016	71.85	0.1123	0.13	7.2515	0.97	90.64	90.65
	Equiv. Refl.: (1,13,13), (5,5,17), (7,11,13)								
Ge	(1,13,15)	21.778	79.96	0.0912	0.49	3.9164	1.91	48.96	48.99
	Equiv. Refl.: (3,5,19), (5,9,17), (7,11,15)								
Ge	(1,5,19)	21.557	77.07	0.0787	0.4	5.0762	2.04	63.45	63.48
	Equiv. Refl.: (7,7,17), (7,13,13), (9,9,15)								
Ge	(3,3,19)	21.333	74.69	0.0737	0.36	6.0528	2.18	75.66	75.69
	Equiv. Refl.: (3,9,17)								
Ge	(1,1,19)	20.877	70.73	0.0721	0.32	7.7338	2.49	96.67	96.7
	Equiv. Refl.: (5,7,17), (5,13,13), (11,11,11)								
Ge	(1,3,19)	21.106	72.61	0.072	0.34	6.9264	2.33	86.58	86.61
	Equiv. Refl.: (1,9,17), (5,11,15), (9,11,13)								

Ei =	19.279	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Si	(6,10,12)	19.1	82.19	0.6857	0.76	2.6454	2.01	33.07	33.13
	Equiv. Refl.: (6,12,10), (10,6,12), (10,12,6), (12,6,10), (12,10,6)								
Si	(3,7,15)	19.202	84.88	0.6751	0.8	1.7275	1.38	21.59	21.64
	Equiv. Refl.: (3,15,7), (7,3,15), (7,15,3), (9,9,11), (9,11,9), (11,9,9), (15,3,7), (15,7,3)								
Ge	(4,12,12)	19.106	82.31	0.6619	1.94	2.6035	5.04	32.54	32.93
	Equiv. Refl.: (12,4,12), (12,12,4)								
Ge	(1,9,15)	19.2	84.8	0.4816	1.98	1.755	3.47	21.94	22.21
	Equiv. Refl.: (1,15,9), (3,3,17), (3,17,3), (9,1,15), (9,15,1), (15,1,9), (15,9,1), (17,3,3)								
Ge	(0,10,14)	18.853	77.93	0.4659	1.31	4.1239	5.42	51.55	51.83
	Equiv. Refl.: (0,14,10), (2,6,16), (2,16,6), (6,2,16), (6,8,14), (6,14,8), (6,16,2), (8,6,14), (8,14,6) (10,0,14), (10,14,0), (14,0,10), (14,6,8), (14,8,6), (14,10,0), (16,2,6), (16,6,2)								
Si	(0,4,16)	18.825	77.54	0.462	0.51	4.2586	2.17	53.23	53.28
	Equiv. Refl.: (0,16,4), (4,0,16), (4,16,0), (8,8,12), (8,12,8), (12,8,8), (16,0,4), (16,4,0)								
Ge	(0,12,12)	18.596	74.7	0.4064	1.1	5.2729	5.82	65.91	66.17
	Equiv. Refl.: (4,4,16), (4,16,4), (12,0,12), (12,12,0), (16,4,4)								
Si	(2,2,16)	18.546	74.15	0.3906	0.43	5.4725	2.34	68.41	68.45
	Equiv. Refl.: (2,8,14), (2,14,8), (2,16,2), (8,2,14), (8,10,10), (8,14,2), (10,8,10), (10,10,8), (14,2,8) (14,8,2), (16,2,2)								
Ge	(6,10,12)	18.336	72	0.3817	1	6.2624	6.27	78.28	78.53
	Equiv. Refl.: (6,12,10), (10,6,12), (10,12,6), (12,6,10), (12,10,6)								
Si	(0,0,16)	18.263	71.32	0.3568	0.39	6.5192	2.53	81.49	81.53
	Equiv. Refl.: (0,16,0), (16,0,0)								
Si	(1,7,15)	18.929	79.06	0.3402	0.4	3.726	1.49	46.58	46.6
	Equiv. Refl.: (1,15,7), (5,5,15), (5,9,13), (5,13,9), (5,15,5), (7,1,15), (7,15,1), (9,5,13), (9,13,5) (13,5,9), (13,9,5), (15,1,7), (15,5,5), (15,7,1)								
Si	(5,11,11)	18.651	75.34	0.2736	0.32	5.0434	1.61	63.04	63.06
	Equiv. Refl.: (7,7,13), (7,13,7), (11,5,11), (11,11,5), (13,7,7)								
Ge	(1,3,17)	18.948	79.36	0.262	1.03	3.6204	3.73	45.25	45.41
	Equiv. Refl.: (1,17,3), (3,1,17), (3,11,13), (3,13,11), (3,17,1), (5,7,15), (5,15,7), (7,5,15), (7,9,13) (7,13,9), (7,15,5), (9,7,13), (9,13,7), (11,3,13), (11,13,3), (13,3,11), (13,7,9), (13,9,7) (13,11,3), (15,5,7), (15,7,5), (17,1,3), (17,3,1)								
Si	(3,5,15)	18.37	72.33	0.245	0.28	6.1402	1.73	76.75	76.77
	Equiv. Refl.: (3,9,13), (3,13,9), (3,15,5), (5,3,15), (5,15,3), (9,3,13), (9,13,3), (13,3,9), (13,9,3) (15,3,5), (15,5,3)								
Ge	(1,1,17)	18.693	75.83	0.2188	0.82	4.8668	4.01	60.83	60.97
	Equiv. Refl.: (1,11,13), (1,13,11), (1,17,1), (7,11,11), (11,1,13), (11,7,11), (11,11,7), (11,13,1), (13,1,11) (13,11,1), (17,1,1)								
Ge	(3,7,15)	18.434	72.97	0.2025	0.73	5.9044	4.31	73.8	73.93
	Equiv. Refl.: (3,15,7), (7,3,15), (7,15,3), (9,9,11), (9,11,9), (11,9,9), (15,3,7), (15,7,3)								
Ge	(1,7,15)	18.171	70.48	0.1965	0.68	6.8329	4.65	85.41	85.54
	Equiv. Refl.: (1,15,7), (5,5,15), (5,9,13), (5,13,9), (5,15,5), (7,1,15), (7,15,1), (9,5,13), (9,13,5) (13,5,9), (13,9,5), (15,1,7), (15,5,5), (15,7,1)								

Ei =	19.15	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Si	(6,10,12)	19.1	85.86	1.2977	1.44	1.3863	2	17.33	17.44
	Equiv. Refl.: (6,12,10), (10,6,12), (10,12,6), (12,6,10), (12,10,6)								
Ge	(4,12,12)	19.106	86.1	1.2974	3.83	1.3067	5	16.33	17.08
	Equiv. Refl.: (12,4,12), (12,12,4)								
Ge	(0,10,14)	18.853	79.89	0.5536	1.57	3.4154	5.38	42.69	43.03
	Equiv. Refl.: (0,14,10), (2,6,16), (2,16,6), (6,2,16), (6,8,14), (6,14,8), (6,16,2), (8,6,14), (8,14,6), (10,0,14), (10,14,0), (14,0,10), (14,6,8), (14,8,6), (14,10,0), (16,2,6), (16,6,2)								
Si	(0,4,16)	18.825	79.43	0.5463	0.6	3.5727	2.15	44.66	44.71
	Equiv. Refl.: (0,16,4), (4,0,16), (4,16,0), (8,8,12), (8,12,8), (12,8,8), (16,0,4), (16,4,0)								
Ge	(0,12,12)	18.596	76.18	0.4478	1.23	4.7091	5.78	58.86	59.15
	Equiv. Refl.: (4,4,16), (4,16,4), (12,0,12), (12,12,0), (16,4,4)								
Si	(2,2,16)	18.546	75.57	0.4305	0.47	4.9258	2.32	61.57	61.62
	Equiv. Refl.: (2,8,14), (2,14,8), (2,16,2), (8,2,14), (8,10,10), (8,14,2), (10,8,10), (10,10,8), (14,2,8), (14,8,2), (16,2,2)								
Si	(1,7,15)	18.929	81.28	0.4278	0.5	2.9367	1.48	36.71	36.74
	Equiv. Refl.: (1,15,7), (5,5,15), (5,9,13), (5,13,9), (5,15,5), (7,1,15), (7,15,1), (9,5,13), (9,13,5), (13,5,9), (13,9,5), (15,1,7), (15,5,5), (15,7,1)								
Ge	(6,10,12)	18.336	73.23	0.4078	1.08	5.7695	6.22	72.12	72.39
	Equiv. Refl.: (6,12,10), (10,6,12), (10,12,6), (12,6,10), (12,10,6)								
Ge	(0,4,16)	18.072	70.68	0.3912	1	6.7121	6.71	83.9	84.17
	Equiv. Refl.: (0,16,4), (4,0,16), (4,16,0), (8,8,12), (8,12,8), (12,8,8), (16,0,4), (16,4,0)								
Si	(0,0,16)	18.263	72.49	0.382	0.42	6.04	2.51	75.5	75.54
	Equiv. Refl.: (0,16,0), (16,0,0)								
Ge	(1,3,17)	18.948	81.67	0.3321	1.32	2.8051	3.7	35.06	35.26
	Equiv. Refl.: (1,17,3), (3,1,17), (3,11,13), (3,13,11), (3,17,1), (5,7,15), (5,15,7), (7,5,15), (7,9,13), (7,13,9), (7,15,5), (9,7,13), (9,13,7), (11,3,13), (11,13,3), (13,3,11), (13,7,9), (13,9,7), (13,11,3), (15,5,7), (15,7,5), (17,1,3), (17,3,1)								
Si	(5,11,11)	18.651	76.9	0.3069	0.36	4.4577	1.6	55.72	55.74
	Equiv. Refl.: (7,7,13), (7,13,7), (11,5,11), (11,11,5), (13,7,7)								
Si	(3,5,15)	18.37	73.59	0.2644	0.31	5.6402	1.72	70.5	70.52
	Equiv. Refl.: (3,9,13), (3,13,9), (3,15,5), (5,3,15), (5,15,3), (9,3,13), (9,13,3), (13,3,9), (13,9,3), (15,3,5), (15,5,3)								
Ge	(1,1,17)	18.693	77.45	0.2454	0.93	4.2622	3.98	53.28	53.43
	Equiv. Refl.: (1,11,13), (1,13,11), (1,17,1), (7,11,11), (11,1,13), (11,7,11), (11,11,7), (11,13,1), (13,1,11), (13,11,1), (17,1,1)								
Si	(1,5,15)	18.084	70.79	0.2441	0.28	6.6719	1.86	83.4	83.42
	Equiv. Refl.: (1,9,13), (1,13,9), (1,15,5), (3,11,11), (5,1,15), (5,15,1), (7,9,11), (7,11,9), (9,1,13), (9,7,11), (9,11,7), (9,13,1), (11,3,11), (11,7,9), (11,9,7), (11,11,3), (13,1,9), (13,9,1), (15,1,5), (15,5,1)								
Ge	(3,7,15)	18.434	74.28	0.218	0.79	5.3895	4.28	67.37	67.5
	Equiv. Refl.: (3,15,7), (7,3,15), (7,15,3), (9,9,11), (9,11,9), (11,9,9), (15,3,7), (15,7,3)								
Ge	(1,7,15)	18.171	71.6	0.2072	0.72	6.3687	4.61	79.61	79.74
	Equiv. Refl.: (1,15,7), (5,5,15), (5,9,13), (5,13,9), (5,15,5), (7,1,15), (7,15,1), (9,5,13), (9,13,5), (13,5,9), (13,9,5), (15,1,7), (15,5,5), (15,7,1)								

Ei =	21.657	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Si	(8,12,12)	21.415	81.43	0.3272	0.37	3.2623	1.21	40.78	40.8
	Equiv. Refl.: (12,8,12), (12,12,8)								
Ge	(8,8,16)	21.473	82.52	0.278	1.02	2.8427	2.89	35.53	35.65
	Equiv. Refl.: (8,16,8), (16,8,8)								
Si	(3,11,15)	21.506	83.24	0.2657	0.33	2.5669	0.84	32.09	32.1
	Equiv. Refl.: (3,15,11), (7,9,15), (7,15,9), (9,7,15), (9,15,7), (11,3,15), (11,15,3), (15,3,11), (15,7,9), (15,9,7), (15,11,3)								
Si	(2,4,18)	21.171	77.83	0.2454	0.28	4.6688	1.29	58.36	58.37
	Equiv. Refl.: (2,12,14), (2,14,12), (2,18,4), (4,2,18), (4,18,2), (10,10,12), (10,12,10), (12,2,14), (12,10,10), (12,14,2), (14,2,12), (14,12,2), (18,2,4), (18,4,2)								
Si	(4,8,16)	20.923	75.04	0.2128	0.24	5.7865	1.38	72.33	72.34
	Equiv. Refl.: (4,16,8), (8,4,16), (8,16,4), (16,4,8), (16,8,4)								
Ge	(4,6,18)	21.248	78.85	0.2058	0.72	4.2699	3.09	53.37	53.46
	Equiv. Refl.: (4,18,6), (6,4,18), (6,12,14), (6,14,12), (6,18,4), (12,6,14), (12,14,6), (14,6,12), (14,12,6), (18,4,6), (18,6,4)								
Si	(0,2,18)	20.672	72.66	0.1957	0.22	6.7631	1.47	84.54	84.55
	Equiv. Refl.: (0,18,2), (2,0,18), (2,18,0), (6,6,16), (6,16,6), (16,6,6), (18,0,2), (18,2,0)								
Si	(0,8,16)	20.419	70.53	0.1861	0.21	7.6557	1.58	95.7	95.71
	Equiv. Refl.: (0,16,8), (8,0,16), (8,16,0), (16,0,8), (16,8,0)								
Ge	(1,5,19)	21.557	84.48	0.1797	0.95	2.0934	2	26.17	26.24
	Equiv. Refl.: (1,19,5), (5,1,19), (5,19,1), (7,7,17), (7,13,13), (7,17,7), (9,9,15), (9,15,9), (13,7,13), (13,13,7), (15,9,9), (17,7,7), (19,1,5), (19,5,1)								
Si	(1,11,15)	21.263	79.05	0.1752	0.21	4.1898	0.89	52.37	52.38
	Equiv. Refl.: (1,15,11), (3,7,17), (3,13,13), (3,17,7), (7,3,17), (7,17,3), (11,1,15), (11,15,1), (13,3,13), (13,13,3), (15,1,11), (15,11,1), (17,3,7), (17,7,3)								
Ge	(0,6,18)	20.791	73.74	0.172	0.56	6.3157	3.53	78.95	79.02
	Equiv. Refl.: (0,18,6), (2,10,16), (2,16,10), (6,0,18), (6,18,0), (8,10,14), (8,14,10), (10,2,16), (10,8,14), (10,14,8), (10,16,2), (14,8,10), (14,10,8), (16,2,10), (16,10,2), (18,0,6), (18,6,0)								
Ge	(8,12,12)	20.559	71.67	0.1683	0.53	7.1732	3.77	89.66	89.74
	Equiv. Refl.: (12,8,12), (12,12,8)								
Si	(1,7,17)	21.016	76.03	0.1467	0.18	5.3886	0.95	67.36	67.36
	Equiv. Refl.: (1,13,13), (1,17,7), (5,5,17), (5,17,5), (7,1,17), (7,11,13), (7,13,11), (7,17,1), (11,7,13), (11,13,7), (13,1,13), (13,7,11), (13,11,7), (13,13,1), (17,1,7), (17,5,5), (17,7,1)								
Si	(5,9,15)	20.767	73.51	0.1329	0.16	6.4089	1.02	80.11	80.12
	Equiv. Refl.: (5,15,9), (9,5,15), (9,9,13), (9,13,9), (9,15,5), (13,9,9), (15,5,9), (15,9,5)								
Si	(3,5,17)	20.514	71.3	0.1254	0.15	7.3286	1.09	91.61	91.61
	Equiv. Refl.: (3,17,5), (5,3,17), (5,17,3), (7,7,15), (7,15,7), (9,11,11), (11,9,11), (11,11,9), (15,7,7), (17,3,5), (17,5,3)								
Ge	(3,3,19)	21.333	80.07	0.111	0.56	3.7915	2.13	47.39	47.44
	Equiv. Refl.: (3,9,17), (3,17,9), (3,19,3), (9,3,17), (9,17,3), (17,3,9), (17,9,3), (19,3,3)								
Ge	(1,3,19)	21.106	77.05	0.0945	0.46	4.9799	2.28	62.25	62.29
	Equiv. Refl.: (1,9,17), (1,17,9), (1,19,3), (3,1,19), (3,19,1), (5,11,15), (5,15,11), (9,1,17), (9,11,13), (9,13,11), (9,17,1), (11,5,15), (11,9,13), (11,13,9), (11,15,5), (13,9,11), (13,11,9), (15,5,11), (15,11,5), (17,1,9), (17,9,1), (19,1,3), (19,3,1)								
Ge	(1,1,19)	20.877	74.58	0.0881	0.41	5.9735	2.43	74.67	74.71
	Equiv. Refl.: (1,19,1), (5,7,17), (5,13,13), (5,17,7), (7,5,17), (7,17,5), (11,11,11), (13,5,13), (13,13,5), (17,5,7), (17,7,5), (19,1,1)								

Ei =	21.657	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(3,11,15)	20.646	72.42	0.0858	0.38	6.8597	2.6	85.75	85.79
	Equiv. Refl.: (3,15,11), (7,9,15), (7,15,9), (9,7,15), (9,15,7), (11,3,15), (11,15,3), (15,3,11), (15,7,9), (15,9,7), (15,11,3)								
Ge	(1,11,15)	20.412	70.48	0.0857	0.36	7.6781	2.78	95.98	96.02
	Equiv. Refl.: (1,15,11), (3,7,17), (3,13,13), (3,17,7), (7,3,17), (7,17,3), (11,1,15), (11,15,1), (13,3,13), (13,13,3), (15,1,11), (15,11,1), (17,3,7), (17,7,3)								

Ei =	11.271	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Si	(4,4,8)	11.184	82.87	12.0217	10.38	1.41	14.64	17.62	22.91
	Equiv. Refl.: (4,8,4), (8,4,4)								
Ge	(0,2,10)	11.175	82.51	5.6818	12.62	1.4821	18.71	18.53	26.33
	Equiv. Refl.: (0,10,2), (2,0,10), (2,6,8), (2,8,6), (2,10,0), (6,2,8), (6,8,2), (8,2,6), (8,6,2), (10,0,2), (10,2,0)								
Si	(4,6,6)	10.708	71.81	5.5575	4.73	3.7037	17.51	46.3	49.5
	Equiv. Refl.: (6,4,6), (6,6,4)								
Si	(1,3,9)	10.889	75.03	4.319	3.84	3.0129	11.56	37.66	39.4
	Equiv. Refl.: (1,9,3), (3,1,9), (3,9,1), (9,1,3), (9,3,1)								
Ge	(4,4,8)	10.736	72.28	3.1476	6.27	3.6008	22.59	45.01	50.36
	Equiv. Refl.: (4,8,4), (8,4,4)								
Ge	(1,7,7)	10.903	75.32	1.7274	5.03	2.9535	14.86	36.92	39.8
	Equiv. Refl.: (3,3,9), (3,9,3), (5,5,7), (5,7,5), (7,1,7), (7,5,5), (7,7,1), (9,3,3)								
LiNbO3	(0,-8,-4)	11.267	88.43	153.332	135.5	0.308	41.74	3.85	41.92
	Equiv. Refl.: (8,0,-4), (-8,8,-4)								
LiNbO3	(0,8,4)	11.267	88.43	149.007	135.5	0.308	41.74	3.85	41.92
	Equiv. Refl.: (8,-8,4), (-8,0,4)								
LiNbO3	(1,1,24)	10.999	77.39	17.171	15.6	2.521	39.31	31.52	50.39
	Equiv. Refl.: (1,-2,24), (2,-1,24), (-1,2,24), (-1,-1,24), (-2,1,24)								
LiNbO3	(1,1,-24)	10.999	77.39	17.058	15.6	2.521	39.31	31.52	50.39
	Equiv. Refl.: (1,-2,-24), (2,-1,-24), (-1,2,-24), (-1,-1,-24), (-2,1,-24)								
LiNbO3	(1,6,-14)	11.06	78.91	16.522	15	2.21	33.05	27.63	43.08
	Equiv. Refl.: (6,-7,-14), (7,-6,-14), (-1,7,-14), (-6,-1,-14), (-7,1,-14)								
LiNbO3	(3,-7,16)	11.078	79.39	15.671	14.4	2.111	30.46	26.39	40.3
	Equiv. Refl.: (4,3,16), (7,-3,16), (-3,-4,16), (-4,7,16), (-7,4,16)								
LiNbO3	(1,-7,14)	11.06	78.91	15.47	15	2.21	33.05	27.63	43.08
	Equiv. Refl.: (6,1,14), (7,-1,14), (-1,-6,14), (-6,7,14), (-7,6,14)								
LiNbO3	(3,6,0)	11.037	78.3	15.223	14.1	2.335	32.92	29.19	43.99
	Equiv. Refl.: (6,-9,0), (9,-6,0), (-3,9,0), (-6,-3,0), (-9,3,0)								
LiNbO3	(3,-9,0)	11.037	78.3	14.892	14.1	2.335	32.92	29.19	43.99
	Equiv. Refl.: (6,3,0), (9,-3,0), (-3,-6,0), (-6,9,0), (-9,6,0)								
LiNbO3	(3,4,-16)	11.078	79.39	14.786	14.4	2.111	30.46	26.39	40.3
	Equiv. Refl.: (4,-7,-16), (7,-4,-16), (-3,7,-16), (-4,-3,-16), (-7,3,-16)								
Sapph	(0,7,8)	11.202	83.65	14.76	12.5	1.255	15.66	15.68	22.16
	Equiv. Refl.: (0,-7,-8), (7,0,-8), (7,-7,8), (-7,0,8), (-7,7,-8)								
LiNbO3	(4,4,12)	11.027	78.06	14.535	13.4	2.383	31.81	29.78	43.58
	Equiv. Refl.: (4,-8,12), (8,-4,12), (-4,8,12), (-4,-4,12), (-8,4,12)								
LiNbO3	(4,-9,4)	11.006	77.56	14.186	12.9	2.486	32.1	31.08	44.68
	Equiv. Refl.: (5,4,4), (9,-4,4), (-4,-5,4)								
LiNbO3	(-5,9,4)	11.006	77.56	14.185	12.9	2.486	32.1	31.08	44.68
	Equiv. Refl.: (-9,5,4)								
LiNbO3	(4,5,2)	10.897	75.2	14.156	12.9	2.979	38.36	37.24	53.46
	Equiv. Refl.: (5,-9,2), (9,-5,2), (-4,9,2), (-5,-4,2), (-9,4,2)								
LiNbO3	(4,-9,-2)	10.897	75.2	13.931	12.9	2.979	38.36	37.24	53.46
	Equiv. Refl.: (5,4,-2), (9,-4,-2), (-4,-5,-2), (-5,9,-2), (-9,5,-2)								
LiNbO3	(4,4,-12)	11.027	78.06	13.816	13.4	2.383	31.81	29.78	43.58
	Equiv. Refl.: (4,-8,-12), (8,-4,-12), (-4,8,-12), (-4,-4,-12), (-8,4,-12)								

Ei = Cryst	11.271 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
LiNbO3	(1,-4,-22)	11.042	78.42	13.785	12.9	2.309	29.88	28.86	41.55
	Equiv. Refl.: (3,1,-22), (4,-1,-22), (-1,-3,-22), (-3,4,-22), (-4,3,-22)								
LiNbO3	(1,3,22)	11.042	78.42	13.41	12.9	2.309	29.88	28.86	41.55
	Equiv. Refl.: (3,-4,22), (4,-3,22), (-1,4,22), (-3,-1,22), (-4,1,22)								
LiNbO3	(3,3,18)	10.816	73.67	13.248	11.9	3.302	39.2	41.28	56.92
	Equiv. Refl.: (3,-6,18), (6,-3,18), (-3,6,18), (-3,-3,18), (-6,3,18)								
LiNbO3	(4,5,-4)	11.006	77.56	13.244	12.9	2.486	32.1	31.08	44.68
	Equiv. Refl.: (5,-9,-4), (9,-5,-4), (-4,9,-4), (-5,-4,-4), (-9,4,-4)								
LiNbO3	(2,-8,10)	10.979	76.93	13.175	12.2	2.617	32	32.71	45.76
	Equiv. Refl.: (6,2,10), (8,-2,10), (-2,-6,10), (-6,8,10), (-8,6,10)								
LiNbO3	(2,6,-10)	10.979	76.93	12.776	12.2	2.617	32	32.71	45.76
	Equiv. Refl.: (6,-8,-10), (8,-6,-10), (-2,8,-10), (-6,-2,-10), (-8,2,-10)								
LiNbO3	(3,3,-18)	10.816	73.67	12.66	11.9	3.302	39.2	41.28	56.92
	Equiv. Refl.: (3,-6,-18), (6,-3,-18), (-3,6,-18), (-3,-3,-18), (-6,3,-18)								
LiNbO3	(0,-8,2)	11.16	81.94	12.53	12.4	1.595	19.74	19.94	28.05
	Equiv. Refl.: (8,0,2), (-8,8,2)								
LiNbO3	(1,-8,-6)	10.835	74.02	12.211	11.3	3.228	36.4	40.35	54.34
	Equiv. Refl.: (7,1,-6), (8,-1,-6), (-1,-7,-6), (-7,8,-6), (-8,7,-6)								
LiNbO3	(0,7,-10)	10.711	71.87	12.152	11	3.69	40.75	46.13	61.55
	Equiv. Refl.: (-7,0,-10)								
LiNbO3	(7,-7,-10)	10.711	71.87	12.151	11	3.69	40.75	46.13	61.55
LiNbO3	(1,7,6)	10.835	74.02	12.135	11.3	3.228	36.4	40.35	54.34
	Equiv. Refl.: (7,-8,6), (8,-7,6), (-1,8,6), (-7,-1,6), (-8,1,6)								
Quartz	(7,-7,4)	11.183	82.85	12.066	10.2	1.414	14.39	17.67	22.79
Quartz	(7,0,-4)	11.183	82.85	12.065	10.2	1.414	14.39	17.67	22.79
	Equiv. Refl.: (-7,0,4), (-7,7,-4)								
Quartz	(0,7,4)	11.183	82.85	12.059	10.2	1.414	14.38	17.67	22.78
	Equiv. Refl.: (0,-7,-4)								
LiNbO3	(0,-7,10)	10.711	71.87	12.028	11	3.69	40.75	46.13	61.55
	Equiv. Refl.: (7,0,10), (-7,7,10)								
LiNbO3	(0,8,-2)	11.16	81.94	11.746	12.4	1.595	19.74	19.94	28.05
	Equiv. Refl.: (8,-8,-2), (-8,0,-2)								
LiNbO3	(1,7,-6)	10.835	74.02	11.569	10.6	3.228	34.34	40.35	52.98
	Equiv. Refl.: (7,-8,-6), (8,-7,-6), (-1,8,-6), (-7,-1,-6), (-8,1,-6)								
LiNbO3	(1,-8,6)	10.835	74.02	11.442	10.6	3.228	34.34	40.35	52.98
	Equiv. Refl.: (7,1,6), (8,-1,6), (-1,-7,6), (-7,8,6), (-8,7,6)								
Quartz	(-4,-3,6)	11.221	84.59	11.282	9.6	1.067	10.29	13.34	16.84
Quartz	(-4,7,-6)	11.221	84.59	11.281	9.6	1.067	10.28	13.34	16.84
Quartz	(-3,-4,-6)	11.221	84.59	11.275	9.6	1.067	10.28	13.34	16.84
Quartz	(7,-3,-6)	11.221	84.59	11.272	9.6	1.067	10.28	13.34	16.84
	Equiv. Refl.: (7,-4,6), (-3,7,6)								
Quartz	(4,3,-6)	11.221	84.59	11.062	9.6	1.067	10.29	13.34	16.84
Quartz	(4,-7,6)	11.221	84.59	11.06	9.6	1.067	10.28	13.34	16.84
Quartz	(3,4,6)	11.221	84.59	11.054	9.6	1.067	10.28	13.34	16.84
Quartz	(3,-7,-6)	11.221	84.59	11.051	9.6	1.067	10.28	13.34	16.84
Quartz	(-7,3,6)	11.221	84.59	11.05	9.6	1.067	10.28	13.34	16.84
	Equiv. Refl.: (-7,4,-6)								
LiNbO3	(2,-8,-8)	10.646	70.83	10.906	9.9	3.918	38.95	48.98	62.58
	Equiv. Refl.: (6,2,-8), (8,-2,-8), (-2,-6,-8), (-6,8,-8), (-8,6,-8)								
LiNbO3	(2,6,8)	10.646	70.83	10.662	9.9	3.918	38.95	48.98	62.58
	Equiv. Refl.: (6,-8,8), (8,-6,8), (-2,8,8), (-6,-2,8), (-8,2,8)								

Ei =	11.271	keV						ΔEg	ΔEt
Cryst	Ref	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(3,5,10)	10.711	71.87	10.438	9.1	3.69	33.76	46.13	57.16
	Equiv. Refl.: (5,-8,10), (8,-5,10), (-3,8,10), (-5,-3,10), (-8,3,10)								
LiNbO3	(2,-5,-20)	10.804	73.45	9.725	8.8	3.35	29.61	41.88	51.29
	Equiv. Refl.: (3,2,-20), (5,-2,-20), (-2,-3,-20), (-3,5,-20), (-5,3,-20)								
LiNbO3	(3,-8,-10)	10.711	71.87	9.43	9.1	3.69	33.76	46.13	57.16
	Equiv. Refl.: (5,3,-10), (8,-3,-10), (-3,-5,-10), (-5,8,-10), (-8,5,-10)								
Sapph	(2,6,-4)	11.015	77.77	9.239	7.6	2.443	18.55	30.54	35.73
	Equiv. Refl.: (2,-8,4), (6,2,4), (6,-8,-4), (8,-2,4), (8,-6,-4), (-2,8,-4), (-2,-6,4), (-6,8,4), (-6,-2,-4), (-8,2,-4), (-8,6,4)								
LiNbO3	(2,3,20)	10.804	73.45	9.026	8.8	3.35	29.61	41.88	51.29
	Equiv. Refl.: (3,-5,20), (5,-3,20), (-2,5,20), (-3,-2,20), (-5,2,20)								
Quartz	(0,6,-6)	11.126	80.79	8.988	7.4	1.827	13.56	22.83	26.56
	Equiv. Refl.: (0,-6,6)								
Quartz	(6,0,6)	11.126	80.79	8.978	7.4	1.827	13.55	22.83	26.55
	Equiv. Refl.: (-6,0,-6)								
Quartz	(6,-6,-6)	11.126	80.79	8.977	7.4	1.827	13.55	22.83	26.55
	Equiv. Refl.: (-6,6,6)								
Sapph	(1,6,10)	10.959	76.49	8.837	7.2	2.708	19.46	33.85	39.05
	Equiv. Refl.: (1,-7,-10), (6,1,-10), (6,-7,10), (7,-1,-10), (7,-6,10), (-1,7,10), (-1,-6,-10), (-6,7,-10), (-6,-1,10), (-7,1,10), (-7,6,-10)								
Sapph	(1,3,-20)	10.979	76.94	8.562	7	2.615	18.36	32.69	37.49
	Equiv. Refl.: (1,-4,20), (3,1,20), (3,-4,-20), (4,-1,20), (4,-3,-20), (-1,4,-20), (-1,-3,20), (-3,4,20), (-3,-1,-20), (-4,1,-20), (-4,3,20)								
Quartz	(5,0,-7)	10.841	74.13	7.512	5.9	3.204	18.83	40.05	44.26
	Equiv. Refl.: (5,-5,7), (-5,0,7), (-5,5,-7)								
Quartz	(0,5,7)	10.841	74.13	7.51	5.9	3.204	18.83	40.05	44.26
	Equiv. Refl.: (0,-5,-7)								
Quartz	(2,4,-7)	11.131	80.97	7.086	6	1.791	10.72	22.39	24.83
	Equiv. Refl.: (2,-6,7)								
Quartz	(4,-6,-7)	11.131	80.97	7.083	6	1.791	10.72	22.39	24.82
	Equiv. Refl.: (-6,2,-7), (-6,4,7)								
Quartz	(4,2,7)	11.131	80.97	7.081	6	1.791	10.71	22.39	24.82
	Equiv. Refl.: (-3,8,-3), (-3,-5,3)								
Quartz	(8,-3,3)	10.764	72.75	7.08	5.6	3.501	19.48	43.76	47.9
	Equiv. Refl.: (8,-5,-3), (-5,8,3), (-5,-3,-3)								
Quartz	(3,5,-3)	10.764	72.75	7.064	5.6	3.501	19.48	43.76	47.9
Quartz	(3,-8,3)	10.764	72.75	7.063	5.6	3.501	19.48	43.76	47.9
	Equiv. Refl.: (5,3,3), (5,-8,-3), (-8,3,-3), (-8,5,3)								
Quartz	(0,4,8)	10.87	74.68	7.01	5.7	3.088	17.5	38.6	42.38
	Equiv. Refl.: (0,-4,-8)								
Quartz	(4,0,-8)	10.87	74.68	7.007	5.7	3.088	17.49	38.6	42.38
	Equiv. Refl.: (-4,0,8)								
Quartz	(4,-4,8)	10.87	74.68	7.006	5.7	3.088	17.49	38.6	42.38
	Equiv. Refl.: (-4,4,-8)								
Quartz	(-2,6,-7)	11.131	80.97	6.912	6	1.791	10.72	22.39	24.83
	Equiv. Refl.: (-2,-4,7)								
Quartz	(6,-4,-7)	11.131	80.97	6.911	6	1.791	10.72	22.39	24.83
Quartz	(6,-2,7)	11.131	80.97	6.91	6	1.791	10.72	22.39	24.82
	Equiv. Refl.: (-4,6,7)								
Quartz	(-4,-2,-7)	11.131	80.97	6.908	6	1.791	10.71	22.39	24.82

Ei =	11.271	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(0,0,-24)	10.732	72.21	6.891	6.4	3.616	23.3	45.2	50.85
Sapph	(1,5,14)	10.715	71.93	6.552	5.4	3.678	19.74	45.97	50.03
	Equiv. Refl.: (1,-6,-14), (5,1,-14), (5,-6,14), (6,-1,-14), (6,-5,14), (-1,6,14), (-1,-5,-14), (-5,6,-14), (-5,-1,14), (-6,1,14), (-6,5,-14)								
Sapph	(3,5,4)	10.703	71.73	6.538	5.4	3.722	19.96	46.52	50.62
	Equiv. Refl.: (3,-8,-4), (5,3,-4), (5,-8,4), (8,-3,-4), (8,-5,4), (-3,8,4), (-3,-5,-4), (-5,8,-4), (-5,-3,4), (-8,3,4), (-8,5,-4)								
Quartz	(3,0,9)	11.21	84.06	6.506	6	1.174	7.07	14.67	16.28
	Equiv. Refl.: (-3,0,-9)								
Quartz	(3,-3,-9)	11.21	84.06	6.505	6	1.174	7.07	14.67	16.28
	Equiv. Refl.: (-3,3,9)								
Quartz	(0,3,-9)	11.21	84.06	6.486	6	1.174	7.05	14.67	16.28
	Equiv. Refl.: (0,-3,9)								
LiNbO3	(0,0,24)	10.732	72.21	6.372	6.4	3.616	23.3	45.2	50.85
Quartz	(-3,-2,-8)	11.16	81.94	6.341	5.4	1.597	8.57	19.96	21.73
Quartz	(-3,5,8)	11.16	81.94	6.34	5.4	1.597	8.57	19.96	21.73
Quartz	(5,-3,-8)	11.16	81.94	6.337	5.4	1.597	8.57	19.96	21.72
	Equiv. Refl.: (-2,5,-8)								
Quartz	(5,-2,8)	11.16	81.94	6.336	5.4	1.597	8.57	19.96	21.72
	Equiv. Refl.: (-2,-3,8)								
LiNbO3	(2,4,19)	11.239	85.71	6.233	9.7	0.845	8.17	10.57	13.36
	Equiv. Refl.: (2,-6,-19), (4,2,-19), (4,-6,19), (6,-2,-19), (6,-4,19), (-2,6,19), (-2,-4,-19), (-4,6,-19), (-4,-2,19), (-6,2,19), (-6,4,-19)								
Quartz	(1,-7,-5)	11.143	81.37	6.116	5.1	1.712	8.79	21.39	23.13
Quartz	(1,6,5)	11.143	81.37	6.115	5.1	1.712	8.79	21.39	23.13
Quartz	(-7,6,-5)	11.143	81.37	6.113	5.1	1.712	8.79	21.39	23.13
Quartz	(6,1,-5)	11.143	81.37	6.112	5.1	1.712	8.79	21.39	23.13
	Equiv. Refl.: (-7,1,5)								
Quartz	(6,-7,5)	11.143	81.37	6.111	5.1	1.712	8.79	21.39	23.13
Quartz	(2,-5,8)	11.16	81.94	5.983	5.4	1.597	8.57	19.96	21.72
	Equiv. Refl.: (3,2,8), (3,-5,-8)								
Quartz	(-5,3,8)	11.16	81.94	5.982	5.4	1.597	8.57	19.96	21.72
Quartz	(2,3,-8)	11.16	81.94	5.981	5.4	1.597	8.57	19.96	21.72
	Equiv. Refl.: (-5,2,-8)								
Quartz	(3,-8,4)	11.183	82.85	5.868	5.1	1.414	7.27	17.67	19.11
	Equiv. Refl.: (-8,3,-4)								
Quartz	(3,5,-4)	11.183	82.85	5.867	5.1	1.414	7.27	17.67	19.11
	Equiv. Refl.: (5,3,4), (5,-8,-4)								
Quartz	(-8,5,4)	11.183	82.85	5.866	5.1	1.414	7.27	17.67	19.11
Quartz	(-3,8,-4)	11.183	82.85	5.789	5.1	1.414	7.27	17.67	19.11
Quartz	(8,-3,4)	11.183	82.85	5.788	5.1	1.414	7.27	17.67	19.11
	Equiv. Refl.: (-3,-5,4), (-5,8,4), (-5,-3,-4)								
Quartz	(8,-5,-4)	11.183	82.85	5.787	5.1	1.414	7.27	17.67	19.11
Quartz	(-1,7,5)	11.143	81.37	5.735	5.1	1.712	8.79	21.39	23.13
Quartz	(-1,-6,-5)	11.143	81.37	5.733	5.1	1.712	8.79	21.39	23.13
Quartz	(7,-6,5)	11.143	81.37	5.732	5.1	1.712	8.79	21.39	23.13
Quartz	(7,-1,-5)	11.143	81.37	5.731	5.1	1.712	8.79	21.39	23.13
	Equiv. Refl.: (-6,-1,5)								
Quartz	(-6,7,-5)	11.143	81.37	5.73	5.1	1.712	8.79	21.39	23.13

Ei =	11.271	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Quartz	(8,-1,0)	11	77.41	5.656	4.7	2.517	11.81	31.47	33.61
	Equiv. Refl.: (8,-7,0), (-1,8,0), (-1,-7,0), (-7,8,0), (-7,-1,0)								
Sapph	(4,4,6)	10.809	73.54	5.61	4.7	3.33	15.81	41.62	44.52
	Equiv. Refl.: (4,4,-6), (4,-8,6), (4,-8,-6), (8,-4,6), (8,-4,-6), (-4,8,6), (-4,8,-6), (-4,-4,6), (-4,-4,-6), (-8,4,6), (-8,4,-6)								
Quartz	(2,6,-3)	11.056	78.78	5.606	4.6	2.236	10.33	27.94	29.79
	Equiv. Refl.: (2,-8,3)								
Quartz	(-8,2,-3)	11.056	78.78	5.604	4.6	2.236	10.32	27.94	29.79
	Equiv. Refl.: (-8,6,3)								
Quartz	(6,2,3)	11.056	78.78	5.602	4.6	2.236	10.32	27.94	29.79
	Equiv. Refl.: (6,-8,-3)								
Quartz	(-2,8,-3)	11.056	78.78	5.573	4.6	2.236	10.33	27.94	29.79
	Equiv. Refl.: (-2,-6,3)								
Quartz	(8,-2,3)	11.056	78.78	5.571	4.6	2.236	10.32	27.94	29.79
	Equiv. Refl.: (8,-6,-3)								
Quartz	(-6,8,3)	11.056	78.78	5.569	4.6	2.236	10.32	27.94	29.79
	Equiv. Refl.: (-6,-2,-3)								
Quartz	(1,7,0)	11	77.41	5.55	4.7	2.517	11.81	31.47	33.61
	Equiv. Refl.: (1,-8,0), (7,1,0), (7,-8,0), (-8,1,0), (-8,7,0)								
Sapph	(0,5,16)	10.719	72	5.482	4.4	3.663	16.25	45.79	48.58
	Equiv. Refl.: (0,-5,-16), (5,0,-16), (5,-5,16), (-5,0,16), (-5,5,-16)								
Quartz	(4,4,-4)	11.088	79.66	5.47	4.5	2.056	9.33	25.7	27.34
	Equiv. Refl.: (4,-8,4)								
Quartz	(-8,4,4)	11.088	79.66	5.469	4.5	2.056	9.33	25.7	27.34
Quartz	(-8,4,-4)	11.088	79.66	5.468	4.5	2.056	9.33	25.7	27.34
Quartz	(4,4,4)	11.088	79.66	5.466	4.5	2.056	9.32	25.7	27.34
	Equiv. Refl.: (4,-8,-4)								
Quartz	(8,-4,4)	11.088	79.66	5.351	4.5	2.056	9.33	25.7	27.34
	Equiv. Refl.: (8,-4,-4), (-4,8,-4), (-4,-4,4)								
Quartz	(-4,8,4)	11.088	79.66	5.348	4.5	2.056	9.33	25.7	27.34
Quartz	(-4,-4,-4)	11.088	79.66	5.347	4.5	2.056	9.32	25.7	27.34
Sapph	(2,4,16)	11.031	78.16	5.196	4.5	2.362	10.63	29.53	31.38
	Equiv. Refl.: (2,-6,-16), (4,2,-16), (4,-6,16), (6,-2,-16), (6,-4,16), (-2,6,16), (-2,-4,-16), (-4,6,-16), (-4,-2,16), (-6,2,16), (-6,4,-16)								
Quartz	(6,-1,-6)	10.638	70.71	4.744	3.7	3.945	14.69	49.31	51.45
Quartz	(6,-5,6)	10.638	70.71	4.743	3.7	3.945	14.68	49.31	51.45
	Equiv. Refl.: (-1,6,6), (-1,-5,-6), (-5,6,-6), (-5,-1,6)								
Quartz	(-6,1,6)	10.638	70.71	4.727	3.7	3.945	14.69	49.31	51.45
Quartz	(1,-6,-6)	10.638	70.71	4.726	3.7	3.945	14.68	49.31	51.45
	Equiv. Refl.: (-6,5,-6)								
Quartz	(1,5,6)	10.638	70.71	4.725	3.7	3.945	14.68	49.31	51.45
	Equiv. Refl.: (5,1,-6), (5,-6,6)								
Quartz	(8,-1,-1)	11.06	78.89	4.532	3.9	2.214	8.53	27.68	28.96
	Equiv. Refl.: (8,-7,1)								
Quartz	(-1,8,1)	11.06	78.89	4.531	3.9	2.214	8.53	27.68	28.96
	Equiv. Refl.: (-1,-7,-1), (-7,8,-1), (-7,-1,1)								
Sapph	(2,6,5)	11.108	80.24	4.482	4.1	1.938	8.02	24.23	25.52
	Equiv. Refl.: (2,-8,-5), (6,2,-5), (6,-8,5), (8,-2,-5), (8,-6,5), (-2,8,5), (-2,-6,-5), (-6,8,-5), (-6,-2,5), (-8,2,5), (-8,6,-5)								
Quartz	(1,7,1)	11.06	78.89	4.454	3.9	2.214	8.53	27.68	28.96
	Equiv. Refl.: (-8,1,1), (-8,7,-1)								

Ei = Cryst	11.271 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(1,-8,-1)	11.06	78.89	4.453	3.9	2.214	8.53	27.68	28.96
	Equiv. Refl.: (7,1,-1), (7,-8,1)								
Quartz	(0,2,-9)	10.727	72.12	4.264	3.4	3.636	12.37	45.45	47.11
	Equiv. Refl.: (0,-2,9)								
Quartz	(-2,0,-9)	10.727	72.12	4.263	3.4	3.636	12.36	45.45	47.11
Quartz	(2,0,9)	10.727	72.12	4.262	3.4	3.636	12.36	45.45	47.11
	Equiv. Refl.: (2,-2,-9), (-2,2,9)								
Quartz	(8,-2,-2)	10.754	72.58	4.156	3.3	3.537	11.8	44.21	45.76
	Equiv. Refl.: (8,-6,2)								
Quartz	(-2,8,2)	10.754	72.58	4.155	3.3	3.537	11.8	44.21	45.76
	Equiv. Refl.: (-2,-6,-2), (-6,8,-2), (-6,-2,2)								
Quartz	(2,6,2)	10.754	72.58	4.087	3.3	3.537	11.8	44.21	45.76
	Equiv. Refl.: (2,-8,-2), (6,2,-2), (-8,2,2), (-8,6,-2)								
Quartz	(6,-8,2)	10.754	72.58	4.086	3.3	3.537	11.8	44.21	45.76
Sapph	(0,6,12)	10.69	71.53	4.079	3.4	3.765	12.98	47.06	48.82
	Equiv. Refl.: (0,6,-12), (0,-6,12), (0,-6,-12), (6,0,12), (6,0,-12), (6,-6,12), (6,-6,-12), (-6,0,12), (-6,0,-12), (-6,6,12), (-6,6,-12)								
Quartz	(-2,8,3)	11.056	78.78	3.972	3.3	2.236	7.47	27.94	28.93
	Equiv. Refl.: (-2,-6,-3)								
Quartz	(-6,8,-3)	11.056	78.78	3.971	3.3	2.236	7.47	27.94	28.93
	Equiv. Refl.: (-6,-2,3)								
Quartz	(8,-2,-3)	11.056	78.78	3.97	3.3	2.236	7.47	27.94	28.93
	Equiv. Refl.: (8,-6,3)								
Quartz	(8,-1,2)	11.237	85.53	3.957	4	0.882	3.53	11.02	11.57
	Equiv. Refl.: (8,-7,-2), (-1,8,-2), (-1,-7,2)								
Quartz	(-7,-1,-2)	11.237	85.53	3.956	4	0.882	3.53	11.02	11.57
Quartz	(-7,8,2)	11.237	85.53	3.955	4	0.882	3.53	11.02	11.57
Quartz	(3,4,-6)	11.221	84.59	3.727	3.5	1.067	3.72	13.34	13.85
Quartz	(4,-7,-6)	11.221	84.59	3.725	3.5	1.067	3.72	13.34	13.84
Quartz	(3,-7,6)	11.221	84.59	3.724	3.5	1.067	3.72	13.34	13.84
	Equiv. Refl.: (4,3,6)								
Quartz	(-7,3,-6)	11.221	84.59	3.717	3.5	1.067	3.71	13.34	13.84
	Equiv. Refl.: (-7,4,6)								
Quartz	(1,7,-2)	11.237	85.53	3.709	4	0.882	3.53	11.02	11.57
	Equiv. Refl.: (1,-8,2)								
Quartz	(7,1,2)	11.237	85.53	3.708	4	0.882	3.53	11.02	11.57
	Equiv. Refl.: (-8,1,-2), (-8,7,2)								
Quartz	(7,-8,-2)	11.237	85.53	3.707	4	0.882	3.53	11.02	11.57
Quartz	(2,6,3)	11.056	78.78	3.614	3.3	2.236	7.47	27.94	28.93
Quartz	(2,-8,-3)	11.056	78.78	3.613	3.3	2.236	7.47	27.94	28.93
	Equiv. Refl.: (6,-8,3)								
Quartz	(6,2,-3)	11.056	78.78	3.612	3.3	2.236	7.47	27.94	28.93
	Equiv. Refl.: (-8,2,3)								
Quartz	(-8,6,-3)	11.056	78.78	3.611	3.3	2.236	7.47	27.94	28.93
Quartz	(-1,8,-1)	11.06	78.89	3.581	3.1	2.214	6.86	27.68	28.51
	Equiv. Refl.: (-1,-7,1), (-7,8,1), (-7,-1,-1)								
Quartz	(8,-1,1)	11.06	78.89	3.58	3.1	2.214	6.86	27.68	28.51
	Equiv. Refl.: (8,-7,-1)								
Quartz	(1,7,-1)	11.06	78.89	3.495	3.1	2.214	6.86	27.68	28.51
	Equiv. Refl.: (1,-8,1)								

Ei = Cryst	11.271 Refl (h,k,l)	keV EB [keV]	ØB [°]	∫ IR dØ [µrad]	Width [µrad]	Ei cotØ [meV/µrad]	ΔE [meV]	ΔEg 2m, 50µm [meV]	ΔEt 2m, 50µm [meV]
Quartz	(7,1,1)	11.06	78.89	3.494	3.1	2.214	6.86	27.68	28.51
Equiv. Refl.: (7,-8,-1), (-8,7,1)									
Quartz	(-8,1,-1)	11.06	78.89	3.493	3.1	2.214	6.86	27.68	28.51
Quartz	(6,1,4)	10.599	70.11	3.44	2.7	4.078	11.2	50.97	52.19
Equiv. Refl.: (6,-7,-4)									
Quartz	(1,6,-4)	10.599	70.11	3.439	2.7	4.078	11.2	50.97	52.19
Quartz	(1,-7,4)	10.599	70.11	3.438	2.7	4.078	11.2	50.97	52.19
Equiv. Refl.: (-7,1,-4), (-7,6,4)									
Quartz	(4,4,3)	10.665	71.12	3.427	2.8	3.854	10.68	48.18	49.35
Equiv. Refl.: (4,-8,-3)									
Quartz	(4,4,-3)	10.665	71.12	3.426	2.8	3.854	10.68	48.18	49.35
Equiv. Refl.: (4,-8,3), (-8,4,3), (-8,4,-3)									
Quartz	(-4,8,3)	10.665	71.12	3.232	2.8	3.854	10.68	48.18	49.35
Equiv. Refl.: (-4,-4,-3)									
Quartz	(8,-4,3)	10.665	71.12	3.231	2.8	3.854	10.68	48.18	49.35
Equiv. Refl.: (8,-4,-3), (-4,8,-3), (-4,-4,3)									
Quartz	(-1,-6,4)	10.599	70.11	3.217	2.7	4.078	11.2	50.97	52.19
Equiv. Refl.: (-6,7,4), (-6,-1,-4)									
Quartz	(7,-1,4)	10.599	70.11	3.216	2.7	4.078	11.2	50.97	52.19
Equiv. Refl.: (7,-6,-4), (-1,7,-4)									
Sapph	(2,6,-1)	10.859	74.46	3.176	2.8	3.134	8.7	39.17	40.13
Equiv. Refl.: (2,-8,1), (6,2,1), (6,-8,-1), (8,-2,1), (8,-6,-1), (-2,8,-1), (-2,-6,1), (-6,8,1), (-6,-2,-1), (-8,2,-1), (-8,6,1)									
Quartz	(-3,-4,6)	11.221	84.59	2.84	3.5	1.067	3.72	13.34	13.85
Quartz	(-4,7,6)	11.221	84.59	2.839	3.5	1.067	3.72	13.34	13.84
Quartz	(-3,7,-6)	11.221	84.59	2.838	3.5	1.067	3.72	13.34	13.84
Equiv. Refl.: (-4,-3,-6)									
Quartz	(7,-3,6)	11.221	84.59	2.832	3.5	1.067	3.71	13.34	13.84
Quartz	(7,-4,-6)	11.221	84.59	2.831	3.5	1.067	3.71	13.34	13.84
Quartz	(3,5,3)	10.764	72.75	2.602	2.4	3.501	8.25	43.76	44.53
Equiv. Refl.: (3,-8,-3)									
Quartz	(5,3,-3)	10.764	72.75	2.601	2.4	3.501	8.25	43.76	44.53
Equiv. Refl.: (5,-8,3), (-8,3,3), (-8,5,-3)									
Quartz	(-3,8,3)	10.764	72.75	2.419	2.4	3.501	8.25	43.76	44.53
Quartz	(8,-3,-3)	10.764	72.75	2.418	2.4	3.501	8.25	43.76	44.53
Equiv. Refl.: (8,-5,3), (-3,-5,-3), (-5,8,-3), (-5,-3,3)									
Sapph	(2,3,-19)	11.191	83.17	2.311	3	1.349	4.06	16.87	17.35
Equiv. Refl.: (2,-5,19), (3,2,19), (3,-5,-19), (5,-2,19), (5,-3,-19), (-2,5,-19), (-2,-3,19), (-3,5,19), (-3,-2,-19), (-5,2,-19), (-5,3,19)									
LiNbO3	(1,6,13)	10.814	73.62	2.143	3.3	3.313	10.85	41.41	42.81
Equiv. Refl.: (1,-7,-13), (6,1,-13), (6,-7,13), (7,-1,-13), (7,-6,13), (-1,7,13), (-1,-6,-13), (-6,7,-13), (-6,-1,13), (-7,1,13), (-7,6,-13)									
Quartz	(-6,7,5)	11.143	81.37	2.02	2.4	1.712	4.1	21.39	21.78
Quartz	(-6,-1,-5)	11.143	81.37	2.019	2.4	1.712	4.1	21.39	21.78
Quartz	(7,-6,-5)	11.143	81.37	2.018	2.4	1.712	4.09	21.39	21.78
Equiv. Refl.: (-1,7,-5), (-1,-6,5)									
Quartz	(7,-1,5)	11.143	81.37	2.017	2.4	1.712	4.09	21.39	21.78
Quartz	(6,-7,-5)	11.143	81.37	1.941	2.4	1.712	4.1	21.39	21.78
Quartz	(1,6,-5)	11.143	81.37	1.94	2.4	1.712	4.09	21.39	21.78
Equiv. Refl.: (6,1,5)									

Ei = Cryst	11.271 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(1,-7,5)	11.143	81.37	1.939	2.4	1.712	4.09	21.39	21.78
Quartz	(-7,6,5)	11.143	81.37	1.938	2.4	1.712	4.09	21.39	21.78
Quartz	(-7,1,-5)	11.143	81.37	1.937	2.4	1.712	4.09	21.39	21.78
Quartz	(-4,6,-7)	11.131	80.97	1.853	2.2	1.791	3.91	22.39	22.73
Quartz	(-4,-2,7)	11.131	80.97	1.852	2.2	1.791	3.91	22.39	22.73
Quartz	(6,-2,-7)	11.131	80.97	1.851	2.2	1.791	3.91	22.39	22.73
Quartz	(6,-4,7)	11.131	80.97	1.85	2.2	1.791	3.91	22.39	22.73
Quartz	(-2,6,7)	11.131	80.97	1.848	2.2	1.791	3.91	22.39	22.73
Equiv. Refl.: (-2,-4,-7)									
Quartz	(1,1,-9)	10.627	70.54	1.8	1.9	3.982	7.53	49.78	50.35
Quartz	(1,-2,9)	10.627	70.54	1.799	1.9	3.982	7.53	49.78	50.35
Quartz	(-2,1,9)	10.627	70.54	1.795	1.9	3.982	7.52	49.78	50.34
Equiv. Refl.: (-2,1,-9)									
Quartz	(1,1,9)	10.627	70.54	1.794	1.9	3.982	7.51	49.78	50.34
Equiv. Refl.: (1,-2,-9)									
Quartz	(6,-5,-6)	10.638	70.71	1.792	1.9	3.945	7.63	49.31	49.9
Quartz	(6,-1,6)	10.638	70.71	1.791	1.9	3.945	7.63	49.31	49.9
Equiv. Refl.: (-1,6,-6), (-1,-5,6), (-5,6,6), (-5,-1,-6)									
Quartz	(5,1,6)	10.638	70.71	1.743	1.9	3.945	7.63	49.31	49.9
Equiv. Refl.: (5,-6,-6), (-6,1,-6), (-6,5,6)									
Quartz	(1,5,-6)	10.638	70.71	1.742	1.9	3.945	7.62	49.31	49.9
Equiv. Refl.: (1,-6,6)									
Quartz	(4,2,-7)	11.131	80.97	1.724	2.2	1.791	3.91	22.39	22.73
Equiv. Refl.: (4,-6,7)									
Quartz	(-6,2,7)	11.131	80.97	1.723	2.2	1.791	3.91	22.39	22.73
Quartz	(5,2,5)	10.756	72.6	1.722	1.8	3.531	6.5	44.14	44.62
Equiv. Refl.: (5,-7,-5), (-6,4,-7)									
Quartz	(-7,2,-5)	10.756	72.6	1.721	1.8	3.531	6.5	44.14	44.62
Equiv. Refl.: (-7,5,5)									
Quartz	(2,4,7)	11.131	80.97	1.72	2.2	1.791	3.91	22.39	22.73
Equiv. Refl.: (2,5,-5), (2,-6,-7), (2,-7,5)									
Quartz	(0,7,-4)	11.183	82.85	1.681	2.2	1.414	3.09	17.67	17.94
Equiv. Refl.: (0,-7,4)									
Quartz	(7,0,4)	11.183	82.85	1.675	2.2	1.414	3.09	17.67	17.94
Equiv. Refl.: (7,-7,-4), (-7,0,-4), (-7,7,4)									
Quartz	(-1,2,-9)	10.627	70.54	1.651	1.9	3.982	7.53	49.78	50.35
Equiv. Refl.: (-1,-1,9)									
Quartz	(2,-1,9)	10.627	70.54	1.647	1.9	3.982	7.52	49.78	50.34
Quartz	(2,-1,-9)	10.627	70.54	1.646	1.9	3.982	7.52	49.78	50.34
Equiv. Refl.: (-1,2,9)									
Quartz	(-1,-1,-9)	10.627	70.54	1.645	1.9	3.982	7.51	49.78	50.34
Quartz	(-3,8,4)	11.183	82.85	1.62	2	1.414	2.86	17.67	17.9
Quartz	(8,-3,-4)	11.183	82.85	1.619	2	1.414	2.86	17.67	17.9
Equiv. Refl.: (8,-5,4), (-3,-5,-4), (-5,8,-4)									
Quartz	(-5,-3,4)	11.183	82.85	1.618	2	1.414	2.86	17.67	17.9
Quartz	(-5,7,5)	10.756	72.6	1.581	1.8	3.531	6.51	44.14	44.62
Equiv. Refl.: (-5,-2,-5)									
Quartz	(7,-2,5)	10.756	72.6	1.579	1.8	3.531	6.5	44.14	44.62
Equiv. Refl.: (7,-5,-5)									

Ei =	11.271	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-2,7,-5)	10.756	72.6	1.578	1.8	3.531	6.5	44.14	44.62
	Equiv. Refl.: (-2,-5,5)								
Sapph	(3,5,7)	11.048	78.59	1.544	2	2.275	4.48	28.43	28.79
	Equiv. Refl.: (3,-8,-7), (5,3,-7), (5,-8,7), (8,-3,-7), (8,-5,7), (-3,8,7), (-3,-5,-7), (-5,8,-7), (-5,-3,7), (-8,3,7), (-8,5,-7)								
Quartz	(0,2,9)	10.727	72.12	1.496	1.7	3.636	6.14	45.45	45.87
	Equiv. Refl.: (0,-2,-9)								
Quartz	(2,0,-9)	10.727	72.12	1.495	1.7	3.636	6.13	45.45	45.87
	Equiv. Refl.: (2,-2,9), (-2,0,9), (-2,2,-9)								
Quartz	(1,2,-9)	11.019	77.87	1.481	1.7	2.422	4.05	30.28	30.55
	Equiv. Refl.: (2,-3,-9)								
Quartz	(1,-3,9)	11.019	77.87	1.48	1.7	2.422	4.05	30.28	30.55
Quartz	(2,1,9)	11.019	77.87	1.479	1.7	2.422	4.04	30.28	30.55
Quartz	(-3,1,-9)	11.019	77.87	1.476	1.7	2.422	4.04	30.28	30.55
	Equiv. Refl.: (-3,2,9)								
Quartz	(3,5,4)	11.183	82.85	1.424	2	1.414	2.86	17.67	17.9
	Equiv. Refl.: (3,-8,-4), (-8,3,4)								
Quartz	(5,-8,4)	11.183	82.85	1.423	2	1.414	2.86	17.67	17.9
	Equiv. Refl.: (-8,5,-4)								
Sapph	(1,6,-11)	11.175	82.53	1.422	2.1	1.479	3.03	18.48	18.73
	Equiv. Refl.: (1,-7,11), (6,1,11), (6,-7,-11), (7,-1,11), (7,-6,-11), (-1,7,-11), (-1,-6,11), (-6,7,11), (-6,-1,-11), (-7,1,-11), (-7,6,11), (5,3,-4)								
Quartz	(2,6,-2)	10.754	72.58	1.379	1.5	3.537	5.29	44.21	44.52
	Equiv. Refl.: (2,-8,2), (6,2,2), (6,-8,-2), (-8,2,-2), (-8,6,2)								
Quartz	(-1,-2,9)	11.019	77.87	1.267	1.7	2.422	4.05	30.28	30.55
Quartz	(-1,3,-9)	11.019	77.87	1.266	1.7	2.422	4.05	30.28	30.55
	Equiv. Refl.: (-2,3,9)								
Quartz	(-2,-1,-9)	11.019	77.87	1.265	1.7	2.422	4.04	30.28	30.55
Quartz	(3,-1,9)	11.019	77.87	1.263	1.7	2.422	4.04	30.28	30.55
	Equiv. Refl.: (3,-2,-9)								
LiNbO3	(4,5,5)	11.088	79.66	1.253	2.7	2.057	5.55	25.71	26.31
	Equiv. Refl.: (4,-9,-5), (5,4,-5), (5,-9,5), (9,-4,-5), (9,-5,5), (-4,9,5), (-4,-5,-5), (-5,9,-5), (-5,-4,5), (-9,4,5), (-9,5,-5)								
Quartz	(8,-2,2)	10.754	72.58	1.201	1.5	3.537	5.29	44.21	44.52
	Equiv. Refl.: (8,-6,-2), (-2,8,-2), (-2,-6,2)								
Quartz	(-6,8,2)	10.754	72.58	1.2	1.5	3.537	5.29	44.21	44.52
	Equiv. Refl.: (-6,-2,-2)								
Quartz	(1,7,2)	11.237	85.53	1.185	1.9	0.882	1.68	11.02	11.15
Quartz	(1,-8,-2)	11.237	85.53	1.184	1.9	0.882	1.67	11.02	11.15
Quartz	(-8,1,2)	11.237	85.53	1.181	1.9	0.882	1.67	11.02	11.15
	Equiv. Refl.: (-8,7,-2)								
Quartz	(7,1,-2)	11.237	85.53	1.18	1.9	0.882	1.67	11.02	11.15
	Equiv. Refl.: (7,-8,2)								
Sapph	(3,5,-5)	10.798	73.34	1.142	1.4	3.373	4.86	42.16	42.44
	Equiv. Refl.: (3,-8,5), (5,3,5), (5,-8,-5), (8,-3,5), (8,-5,-5), (-3,8,-5), (-3,-5,5), (-5,8,5), (-5,-3,-5), (-8,3,-5), (-8,5,5)								
Quartz	(-1,8,2)	11.237	85.53	1.137	1.9	0.882	1.67	11.02	11.15
	Equiv. Refl.: (-1,-7,-2)								
Quartz	(8,-1,-2)	11.237	85.53	1.133	1.9	0.882	1.67	11.02	11.15
	Equiv. Refl.: (8,-7,2), (-7,8,-2), (-7,-1,2)								

Ei =	11.271	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(0,7,3)	10.764	72.75	1.057	1.3	3.501	4.46	43.76	43.99
	Equiv. Refl.: (0,-7,-3), (7,0,-3), (7,-7,3), (-7,0,3), (-7,7,-3)								
Quartz	(0,3,9)	11.21	84.06	1.055	1.6	1.174	1.92	14.67	14.79
	Equiv. Refl.: (0,-3,-9)								
Quartz	(3,-3,9)	11.21	84.06	1.05	1.6	1.174	1.91	14.67	14.79
Quartz	(3,0,-9)	11.21	84.06	1.049	1.6	1.174	1.91	14.67	14.79
	Equiv. Refl.: (-3,3,-9)								
Quartz	(-3,0,9)	11.21	84.06	1.048	1.6	1.174	1.91	14.67	14.79
Quartz	(0,6,6)	11.126	80.79	1.011	1.4	1.827	2.55	22.83	22.97
	Equiv. Refl.: (0,-6,-6)								
Quartz	(6,0,-6)	11.126	80.79	1.005	1.4	1.827	2.54	22.83	22.97
	Equiv. Refl.: (6,-6,6), (-6,0,6), (-6,6,-6)								
Quartz	(0,7,-3)	10.764	72.75	0.969	1.2	3.501	4.16	43.76	43.96
	Equiv. Refl.: (0,-7,3), (7,0,3), (7,-7,-3), (-7,0,-3), (-7,7,3)								
LiNbO3	(4,5,-1)	10.869	74.66	0.904	1.9	3.093	5.92	38.66	39.11
	Equiv. Refl.: (4,-9,1), (5,4,1), (5,-9,-1), (9,-4,1), (9,-5,-1), (-4,9,-1), (-4,-5,1), (-5,9,1), (-5,-4,-1), (-9,4,-1), (-9,5,1)								
LiNbO3	(1,7,9)	11.243	85.96	0.869	3.3	0.796	2.66	9.96	10.3
	Equiv. Refl.: (1,7,-9), (1,-8,9), (1,-8,-9), (7,1,9), (7,1,-9), (7,-8,9), (7,-8,-9), (8,-1,9), (8,-1,-9), (8,-7,9), (8,-7,-9), (-1,8,9), (-1,8,-9), (-1,-7,9), (-1,-7,-9), (-7,8,9), (-7,8,-9), (-7,-1,9), (-7,-1,-9), (-8,1,9), (-8,1,-9), (-8,7,9), (-8,7,-9)								
Quartz	(-7,1,4)	10.599	70.11	0.864	1	4.078	4.28	50.97	51.15
Quartz	(6,1,-4)	10.599	70.11	0.863	1	4.078	4.28	50.97	51.15
	Equiv. Refl.: (6,-7,4), (-7,6,-4)								
Quartz	(1,6,4)	10.599	70.11	0.862	1	4.078	4.27	50.97	51.15
	Equiv. Refl.: (1,-7,-4)								
Quartz	(7,-1,-4)	10.599	70.11	0.849	1	4.078	4.28	50.97	51.15
	Equiv. Refl.: (7,-6,4), (-6,7,-4), (-6,-1,4)								
Quartz	(-1,7,4)	10.599	70.11	0.848	1	4.078	4.27	50.97	51.15
	Equiv. Refl.: (-1,-6,-4)								
Sapph	(1,4,18)	11.015	77.77	0.839	1.2	2.442	2.99	30.53	30.67
	Equiv. Refl.: (1,4,-18), (1,-5,18), (1,-5,-18), (4,1,18), (4,1,-18), (4,-5,18), (4,-5,-18), (5,-1,18), (5,-1,-18), (5,-4,18), (5,-4,-18), (-1,5,18), (-1,5,-18), (-1,-4,18), (-1,-4,-18), (-4,5,18), (-4,5,-18), (-4,-1,18), (-4,-1,-18), (-5,1,18), (-5,1,-18), (-5,4,18), (-5,4,-18)								
Quartz	(3,2,-8)	11.16	81.94	0.806	1.2	1.597	1.89	19.96	20.05
Quartz	(3,-5,8)	11.16	81.94	0.805	1.2	1.597	1.89	19.96	20.05
Quartz	(2,3,8)	11.16	81.94	0.804	1.2	1.597	1.89	19.96	20.05
Quartz	(2,-5,-8)	11.16	81.94	0.803	1.2	1.597	1.89	19.96	20.05
Quartz	(-5,3,-8)	11.16	81.94	0.796	1.2	1.597	1.88	19.96	20.05
Quartz	(-5,2,8)	11.16	81.94	0.795	1.2	1.597	1.87	19.96	20.05
Quartz	(1,-3,-9)	11.019	77.87	0.792	1.1	2.422	2.62	30.28	30.39
Quartz	(1,2,9)	11.019	77.87	0.791	1.1	2.422	2.62	30.28	30.39
Quartz	(-3,1,9)	11.019	77.87	0.79	1.1	2.422	2.61	30.28	30.39
	Equiv. Refl.: (-3,2,-9)								
Quartz	(2,1,-9)	11.019	77.87	0.788	1.1	2.422	2.61	30.28	30.39
	Equiv. Refl.: (2,-3,9)								
Quartz	(-1,3,9)	11.019	77.87	0.766	1.1	2.422	2.62	30.28	30.39
Quartz	(-1,-2,-9)	11.019	77.87	0.765	1.1	2.422	2.62	30.28	30.39
Quartz	(3,-1,-9)	11.019	77.87	0.764	1.1	2.422	2.61	30.28	30.39
	Equiv. Refl.: (3,-2,9)								
Quartz	(-2,3,-9)	11.019	77.87	0.763	1.1	2.422	2.61	30.28	30.39

Ei = Cryst	11.271 Refl (h,k,l)	keV EB [keV]	ΘB [°]	IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(-2,-1,9)	11.019	77.87	0.762	1.1	2.422	2.61	30.28	30.39
Sapph	(2,5,12)	11.003	77.49	0.752	1.1	2.501	2.83	31.27	31.4
	Equiv. Refl.: (2,5,-12), (2,-7,12), (2,-7,-12), (5,2,12), (5,2,-12), (5,-7,12), (5,-7,-12), (7,-2,12), (7,-2,-12), (7,-5,12), (7,-5,-12), (-2,7,12), (-2,7,-12), (-2,-5,12), (-2,-5,-12), (-5,7,12), (-5,7,-12), (-5,-2,12), (-5,-2,-12), (-7,2,12), (-7,2,-12), (-7,5,12), (-7,5,-12)								
LiNbO3	(3,6,3)	11.118	80.55	0.74	2.1	1.877	3.89	23.46	23.78
	Equiv. Refl.: (3,6,-3), (3,-9,3), (3,-9,-3), (6,3,3), (6,3,-3), (6,-9,3), (6,-9,-3), (9,-3,3), (9,-3,-3), (9,-6,3), (9,-6,-3), (-3,9,3), (-3,9,-3), (-3,-6,3), (-3,-6,-3), (-6,9,3), (-6,9,-3), (-6,-3,3), (-6,-3,-3), (-9,3,3), (-9,3,-3), (-9,6,3), (-9,6,-3)								
LiNbO3	(1,5,17)	10.85	74.3	0.711	1.6	3.169	5.22	39.61	39.96
	Equiv. Refl.: (1,-6,-17), (5,1,-17), (5,-6,17), (6,-1,-17), (6,-5,17), (-1,6,17), (-1,-5,-17), (-5,6,-17), (-5,-1,17), (-6,1,17), (-6,5,-17)								
Quartz	(-3,5,-8)	11.16	81.94	0.707	1.2	1.597	1.89	19.96	20.05
	Equiv. Refl.: (-3,-2,8)								
LiNbO3	(2,6,11)	11.169	82.27	0.706	2.2	1.53	3.38	19.13	19.43
	Equiv. Refl.: (2,-8,-11), (6,2,-11), (6,-8,11), (8,-2,-11), (8,-6,11), (-2,8,11), (-2,-6,-11), (-6,8,-11), (-6,-2,11), (-8,2,11), (-8,6,-11), (-2,-3,-8)								
Quartz	(-2,5,8)	11.16	81.94	0.705	1.2	1.597	1.89	19.96	20.05
Quartz	(5,-2,-8)	11.16	81.94	0.697	1.2	1.597	1.87	19.96	20.05
	Equiv. Refl.: (5,-3,8)								
LiNbO3	(1,2,23)	10.923	75.73	0.691	1.7	2.867	4.82	35.83	36.16
	Equiv. Refl.: (1,-3,-23), (2,1,-23), (2,-3,23), (3,-1,-23), (3,-2,23), (-1,3,23), (-1,-2,-23), (-2,3,-23), (-2,-1,23), (-3,1,23), (-3,2,-23)								
Sapph	(0,7,-4)	10.703	71.73	0.615	0.9	3.722	3.28	46.52	46.64
	Equiv. Refl.: (0,-7,4), (7,0,4), (7,-7,-4), (-7,0,-4), (-7,7,4)								
Sapph	(3,5,-8)	11.202	83.65	0.584	1.2	1.255	1.49	15.68	15.76
	Equiv. Refl.: (3,-8,8), (5,3,8), (5,-8,-8), (8,-3,8), (8,-5,-8), (-3,8,-8), (-3,-5,8), (-5,8,8), (-5,-3,-8), (-8,3,-8), (-8,5,8)								
Quartz	(5,0,7)	10.841	74.13	0.56	0.8	3.204	2.55	40.05	40.13
	Equiv. Refl.: (5,-5,-7), (-5,0,-7), (-5,5,7)								
Quartz	(0,5,-7)	10.841	74.13	0.554	0.8	3.204	2.53	40.05	40.13
	Equiv. Refl.: (0,-5,7)								
Quartz	(4,0,8)	10.87	74.68	0.547	0.8	3.088	2.43	38.6	38.67
	Equiv. Refl.: (4,-4,-8), (-4,0,-8), (-4,4,8)								
Quartz	(-2,7,5)	10.756	72.6	0.545	0.7	3.531	2.59	44.14	44.22
	Equiv. Refl.: (-2,-5,-5)								
Quartz	(7,-2,-5)	10.756	72.6	0.543	0.7	3.531	2.58	44.14	44.21
	Equiv. Refl.: (7,-5,5), (-5,7,-5), (-5,-2,5)								
Quartz	(0,4,-8)	10.87	74.68	0.54	0.8	3.088	2.41	38.6	38.67
	Equiv. Refl.: (0,-4,8)								
Quartz	(2,5,5)	10.756	72.6	0.487	0.7	3.531	2.59	44.14	44.22
	Equiv. Refl.: (2,-7,-5)								
Quartz	(5,2,-5)	10.756	72.6	0.485	0.7	3.531	2.58	44.14	44.21
	Equiv. Refl.: (5,-7,5), (-7,2,5), (-7,5,-5)								
Sapph	(0,2,22)	10.923	75.73	0.477	0.8	2.868	2.29	35.85	35.92
	Equiv. Refl.: (0,-2,-22), (2,0,-22), (2,-2,22), (-2,0,22), (-2,2,-22)								
LiNbO3	(2,5,15)	10.973	76.79	0.465	1.4	2.647	3.68	33.08	33.29
	Equiv. Refl.: (2,5,-15), (2,-7,15), (2,-7,-15), (5,2,15), (5,2,-15), (5,-7,15), (5,-7,-15), (7,-2,15), (7,-2,-15), (7,-5,15), (7,-5,-15), (-2,7,15), (-2,7,-15), (-2,-5,15), (-2,-5,-15), (-5,7,15), (-5,7,-15), (-5,-2,15), (-5,-2,-15), (-7,2,15), (-7,2,-15), (-7,5,15), (-7,5,-15)								
Quartz	(3,3,-7)	11.036	78.27	0.406	0.6	2.341	1.41	29.26	29.29
Quartz	(3,-6,7)	11.036	78.27	0.404	0.6	2.341	1.41	29.26	29.29

Quartz	(-6,3,7)	11.036	78.27	0.403	0.6	2.341	1.41	29.26	29.29
	Equiv. Refl.: (-6,3,-7)								
Quartz	(3,3,7)	11.036	78.27	0.401	0.6	2.341	1.4	29.26	29.29
	Equiv. Refl.: (3,-6,-7)								
Sapph	(1,2,-22)	11.229	85.08	0.275	0.9	0.97	0.85	12.12	12.15
	Equiv. Refl.: (1,-3,22), (2,1,22), (2,-3,-22), (3,-1,22), (3,-2,-22), (-1,3,-22), (-1,-2,22), (-2,3,22), (-2,-1,-22), (-3,1,-22), (-3,2,22)								
Quartz	(-3,-3,7)	11.036	78.27	0.266	0.6	2.341	1.41	29.26	29.29
Quartz	(6,-3,7)	11.036	78.27	0.265	0.6	2.341	1.41	29.26	29.29
	Equiv. Refl.: (6,-3,-7), (-3,6,-7)								
Quartz	(-3,6,7)	11.036	78.27	0.262	0.6	2.341	1.4	29.26	29.29
	Equiv. Refl.: (-3,-3,-7)								
Sapph	(3,4,-13)	11.056	78.8	0.247	0.6	2.232	1.29	27.9	27.93
	Equiv. Refl.: (3,-7,13), (4,3,13), (4,-7,-13), (7,-3,13), (7,-4,-13), (-3,7,-13), (-3,-4,13), (-4,7,13), (-4,-3,-13), (-7,3,-13), (-7,4,13)								
Sapph	(0,1,-22)	10.608	70.24	0.223	0.4	4.048	1.79	50.6	50.63
	Equiv. Refl.: (0,-1,22), (1,0,22), (1,-1,-22), (-1,0,-22), (-1,1,22)								
LiNbO3	(3,5,-11)	10.906	75.37	0.22	0.9	2.941	2.65	36.77	36.86
	Equiv. Refl.: (3,-8,11), (5,3,11), (5,-8,-11), (8,-3,11), (8,-5,-11), (-3,8,-11), (-3,-5,11), (-5,8,11), (-5,-3,-11), (-8,3,-11), (-8,5,11)								
Sapph	(2,6,2)	10.89	75.07	0.126	0.3	3.006	1.05	37.57	37.58
	Equiv. Refl.: (2,-8,-2), (6,2,-2), (6,-8,2), (8,-2,-2), (8,-6,2), (-2,8,2), (-2,-6,-2), (-6,8,-2), (-6,-2,2), (-8,2,2), (-8,6,-2)								
Sapph	(3,3,15)	10.6	70.13	0.035	0.2	4.073	0.65	50.91	50.91
	Equiv. Refl.: (3,3,-15), (3,-6,15), (3,-6,-15), (6,-3,15), (6,-3,-15), (-3,6,15), (-3,6,-15), (-3,-3,15), (-3,-3,-15), (-6,3,15), (-6,3,-15)								

Ei =	10.739	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(4,4,8)	10.736	88.74	103.256	102.1	0.2361	24.11	2.95	24.29
	Equiv. Refl.: (4,8,4), (8,4,4)								
Si	(4,6,6)	10.708	85.62	22.8931	20.37	0.8217	16.74	10.27	19.64
	Equiv. Refl.: (6,4,6), (6,6,4)								
Ge	(4,6,6)	10.279	73.18	9.5623	9	3.2473	29.23	40.59	50.02
	Equiv. Refl.: (6,4,6), (6,6,4)								
Ge	(1,3,9)	10.453	76.75	7.3024	7.59	2.5289	19.2	31.61	36.99
	Equiv. Refl.: (1,9,3), (3,1,9), (3,9,1), (9,1,3), (9,3,1)								
Si	(0,4,8)	10.209	71.93	6.8166	5.78	3.5036	20.27	43.8	48.26
	Equiv. Refl.: (0,8,4), (4,0,8), (4,8,0), (8,0,4), (8,4,0)								
Si	(1,1,9)	10.399	75.55	5.4206	4.81	2.7683	13.32	34.6	37.08
	Equiv. Refl.: (1,9,1), (3,5,7), (3,7,5), (5,3,7), (5,7,3), (7,3,5), (7,5,3), (9,1,1)								
LiNbO3	(0,0,-24)	10.732	87.97	61.175	58.7	0.381	22.38	4.77	22.88
LiNbO3	(0,7,-10)	10.711	85.9	55.12	50.7	0.77	39.04	9.63	40.21
	Equiv. Refl.: (-7,0,-10)								
LiNbO3	(7,-7,-10)	10.711	85.9	55.119	50.7	0.77	39.04	9.63	40.21
LiNbO3	(0,-7,10)	10.711	85.9	54.516	50.7	0.77	39.04	9.63	40.21
	Equiv. Refl.: (7,0,10)								
LiNbO3	(-7,7,10)	10.711	85.9	54.515	50.7	0.77	39.04	9.63	40.21
LiNbO3	(0,0,24)	10.732	87.97	52.932	58.7	0.381	22.38	4.77	22.88
LiNbO3	(3,5,10)	10.711	85.9	46.377	42	0.77	32.36	9.63	33.76
	Equiv. Refl.: (5,-8,10), (8,-5,10), (-3,8,10), (-5,-3,10), (-8,3,10)								
LiNbO3	(3,-8,-10)	10.711	85.9	41.592	42	0.77	32.36	9.63	33.76
	Equiv. Refl.: (5,3,-10), (8,-3,-10), (-3,-5,-10), (-5,8,-10), (-8,5,-10)								
Sapph	(1,5,14)	10.715	86.17	30.637	26.2	0.719	18.86	8.98	20.89
	Equiv. Refl.: (1,-6,-14), (5,1,-14), (5,-6,14), (6,-1,-14), (6,-5,14), (-1,6,14), (-1,-5,-14), (-5,6,-14), (-5,-1,14), (-6,1,14), (-6,5,-14)								
LiNbO3	(2,-8,-8)	10.646	82.45	28.447	26.2	1.422	37.32	17.78	41.34
	Equiv. Refl.: (6,2,-8), (8,-2,-8), (-2,-6,-8), (-6,8,-8), (-8,6,-8)								
LiNbO3	(2,6,8)	10.646	82.45	27.764	26.2	1.422	37.32	17.78	41.34
	Equiv. Refl.: (6,-8,8), (8,-6,8), (-2,8,8), (-6,-2,8), (-8,2,8)								
Sapph	(0,5,16)	10.719	86.52	27.034	23.8	0.653	15.52	8.17	17.54
	Equiv. Refl.: (0,-5,-16), (5,0,-16), (5,-5,16), (-5,0,16), (-5,5,-16)								
Quartz	(0,2,-9)	10.727	87.24	26.085	22.8	0.517	11.82	6.47	13.47
	Equiv. Refl.: (0,-2,9)								
Quartz	(-2,0,-9)	10.727	87.24	26.076	22.8	0.517	11.82	6.47	13.47
Quartz	(-2,2,9)	10.727	87.24	26.073	22.8	0.517	11.81	6.47	13.47
Quartz	(2,0,9)	10.727	87.24	26.071	22.8	0.517	11.82	6.47	13.47
Quartz	(2,-2,-9)	10.727	87.24	26.069	22.8	0.517	11.81	6.47	13.47
Sapph	(3,5,4)	10.703	85.28	25.133	21.5	0.886	19.07	11.08	22.06
	Equiv. Refl.: (3,-8,-4), (5,3,-4), (5,-8,4), (8,-3,-4), (8,-5,4), (-3,8,4), (-3,-5,-4), (-5,8,-4), (-5,-3,4), (-8,3,4), (-8,5,-4)								
LiNbO3	(4,-4,20)	10.532	78.73	20.79	19.1	2.14	40.96	26.75	48.92
LiNbO3	(0,4,20)	10.532	78.73	20.789	19.1	2.14	40.96	26.75	48.92
	Equiv. Refl.: (-4,0,20)								
LiNbO3	(-4,4,-20)	10.532	78.73	20.705	19.1	2.14	40.96	26.75	48.92
LiNbO3	(0,-4,-20)	10.532	78.73	20.704	19.1	2.14	40.96	26.75	48.92
	Equiv. Refl.: (4,0,-20)								

Ei =	10.739	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(-1,6,-16)	10.542	79	18.995	17.7	2.087	37.02	26.09	45.29
	Equiv. Refl.: (-6,1,-16)								
LiNbO3	(1,5,-16)	10.542	79	18.994	17.7	2.087	37.02	26.09	45.29
	Equiv. Refl.: (5,-6,-16), (6,-5,-16), (-5,-1,-16)								
LiNbO3	(1,-6,16)	10.542	79	18.839	17.7	2.087	37.02	26.09	45.29
	Equiv. Refl.: (5,1,16), (6,-1,16), (-1,-5,16), (-5,6,16), (-6,5,16)								
LiNbO3	(3,5,-8)	10.37	74.94	17.783	15.8	2.89	45.66	36.13	58.22
	Equiv. Refl.: (5,-8,-8), (8,-5,-8), (-3,8,-8), (-5,-3,-8), (-8,3,-8)								
LiNbO3	(1,-3,22)	10.503	77.97	17.067	15.9	2.288	36.41	28.6	46.3
	Equiv. Refl.: (2,1,22), (3,-1,22), (-1,-2,22)								
LiNbO3	(-2,3,22)	10.503	77.97	17.066	15.9	2.288	36.41	28.6	46.3
	Equiv. Refl.: (-3,2,22)								
LiNbO3	(4,3,-14)	10.523	78.49	17.055	15.8	2.188	34.52	27.34	44.04
	Equiv. Refl.: (-3,-4,-14), (-4,7,-14), (-7,4,-14)								
LiNbO3	(3,-7,-14)	10.523	78.49	17.054	15.8	2.188	34.52	27.34	44.04
	Equiv. Refl.: (7,-3,-14)								
LiNbO3	(1,-8,0)	10.498	77.84	16.978	15.8	2.315	36.64	28.93	46.69
	Equiv. Refl.: (7,1,0), (8,-1,0), (-1,-7,0), (-7,8,0), (-8,7,0)								
LiNbO3	(3,-8,8)	10.37	74.94	16.866	15.8	2.89	45.66	36.13	58.22
	Equiv. Refl.: (5,3,8), (8,-3,8), (-3,-5,8), (-5,8,8), (-8,5,8)								
LiNbO3	(1,2,-22)	10.503	77.97	16.722	15.9	2.288	36.41	28.6	46.3
	Equiv. Refl.: (2,-3,-22), (3,-2,-22), (-1,3,-22), (-2,-1,-22), (-3,1,-22)								
LiNbO3	(1,7,0)	10.498	77.84	16.668	15.8	2.315	36.64	28.93	46.69
	Equiv. Refl.: (7,-8,0), (8,-7,0), (-1,8,0), (-7,-1,0), (-8,1,0)								
LiNbO3	(3,4,14)	10.523	78.49	16.158	15.8	2.188	34.52	27.34	44.04
	Equiv. Refl.: (4,-7,14), (7,-4,14), (-3,7,14), (-4,-3,14), (-7,3,14)								
LiNbO3	(0,7,8)	10.37	74.94	15.345	13.9	2.89	40.3	36.13	54.13
	Equiv. Refl.: (7,-7,8), (-7,0,8)								
LiNbO3	(0,-7,-8)	10.37	74.94	14.649	13.9	2.89	40.3	36.13	54.13
	Equiv. Refl.: (7,0,-8), (-7,7,-8)								
LiNbO3	(0,2,22)	10.223	72.17	14.218	12.8	3.453	44.34	43.17	61.88
	Equiv. Refl.: (2,-2,22), (-2,0,22)								
LiNbO3	(1,-4,20)	10.253	72.69	14.062	12.9	3.346	43.13	41.82	60.08
	Equiv. Refl.: (3,1,20), (4,-1,20), (-1,-3,20), (-3,4,20), (-4,3,20)								
LiNbO3	(2,6,-4)	10.185	71.52	13.93	12.7	3.589	45.73	44.86	64.06
	Equiv. Refl.: (6,-8,-4), (8,-6,-4), (-2,8,-4), (-6,-2,-4), (-8,2,-4)								
LiNbO3	(1,3,-20)	10.253	72.69	13.869	12.9	3.346	43.13	41.82	60.08
	Equiv. Refl.: (3,-4,-20), (4,-3,-20), (-1,4,-20), (-3,-1,-20), (-4,1,-20)								
LiNbO3	(2,-8,4)	10.185	71.52	13.867	12.7	3.589	45.73	44.86	64.06
	Equiv. Refl.: (6,2,4), (8,-2,4), (-2,-6,4), (-6,8,4), (-8,6,4)								
LiNbO3	(1,-7,-10)	10.156	71.03	13.764	12.3	3.692	45.43	46.15	64.76
	Equiv. Refl.: (6,1,-10), (7,-1,-10), (-1,-6,-10), (-6,7,-10), (-7,6,-10)								
LiNbO3	(0,-2,-22)	10.223	72.17	13.694	12.8	3.453	44.34	43.17	61.88
	Equiv. Refl.: (2,0,-22), (-2,2,-22)								
LiNbO3	(2,4,16)	10.263	72.88	13.596	12.4	3.309	41.07	41.36	58.29
	Equiv. Refl.: (4,-6,16), (6,-4,16), (-4,-2,16)								
LiNbO3	(-2,6,16)	10.263	72.88	13.595	12.4	3.309	41.07	41.36	58.29
	Equiv. Refl.: (-6,2,16)								

Ei = Cryst	10.739 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Sapph	(0,6,12)	10.69	84.54	13.387	12.1	1.026	12.39	12.83	17.83
	Equiv. Refl.: (0,6,-12), (0,-6,12), (0,-6,-12), (6,0,12), (6,0,-12), (6,-6,12), (6,-6,-12), (-6,0,12), (-6,0,-12), (-6,6,12), (-6,6,-12)								
LiNbO3	(2,-6,-16)	10.263	72.88	13.097	12.4	3.309	41.07	41.36	58.29
	Equiv. Refl.: (4,2,-16), (6,-2,-16), (-2,-4,-16), (-4,6,-16), (-6,4,-16)								
LiNbO3	(1,6,10)	10.156	71.03	13.026	12.3	3.692	45.43	46.15	64.76
	Equiv. Refl.: (6,-7,10), (7,-6,10), (-1,7,10), (-6,-1,10), (-7,1,10)								
LiNbO3	(1,-5,-18)	10.266	72.93	12.583	11.6	3.297	38.37	41.21	56.31
	Equiv. Refl.: (4,1,-18), (5,-1,-18), (-1,-4,-18), (-4,5,-18), (-5,4,-18)								
LiNbO3	(1,4,-18)	10.266	72.93	12.225	11.4	3.297	37.49	41.21	55.72
	Equiv. Refl.: (4,-5,-18), (5,-4,-18), (-1,5,-18), (-4,-1,-18), (-5,1,-18)								
LiNbO3	(1,4,18)	10.266	72.93	12.154	11.6	3.297	38.37	41.21	56.31
	Equiv. Refl.: (4,-5,18), (5,-4,18), (-1,5,18), (-4,-1,18), (-5,1,18)								
LiNbO3	(2,-7,12)	10.208	71.9	12.059	11.3	3.509	39.57	43.86	59.07
	Equiv. Refl.: (5,2,12), (7,-2,12), (-2,-5,12), (-5,7,12), (-7,5,12)								
LiNbO3	(2,5,-12)	10.208	71.9	11.992	11.3	3.509	39.57	43.86	59.07
	Equiv. Refl.: (5,-7,-12), (7,-5,-12), (-2,7,-12), (-5,-2,-12), (-7,2,-12)								
LiNbO3	(1,-5,18)	10.266	72.93	11.849	11.4	3.297	37.49	41.21	55.72
	Equiv. Refl.: (4,1,18), (5,-1,18), (-1,-4,18), (-4,5,18), (-5,4,18), (0,2,9), (0,-2,-9)								
Quartz	(2,-2,9)	10.727	87.24	11.845	11.4	0.517	5.87	6.47	8.74
Quartz	(2,0,-9)	10.727	87.24	11.844	11.3	0.517	5.87	6.47	8.74
Quartz	(-2,2,-9)	10.727	87.24	11.843	11.4	0.517	5.87	6.47	8.74
Quartz	(-2,0,9)	10.727	87.24	11.84	11.3	0.517	5.87	6.47	8.74
LiNbO3	(2,5,12)	10.208	71.9	11.71	10.8	3.509	37.92	43.86	57.98
	Equiv. Refl.: (5,-7,12), (7,-5,12), (-5,-2,12)								
LiNbO3	(-2,7,12)	10.208	71.9	11.709	10.8	3.509	37.92	43.86	57.98
	Equiv. Refl.: (-7,2,12)								
LiNbO3	(5,2,-12)	10.208	71.9	11.673	10.8	3.509	37.92	43.86	57.98
	Equiv. Refl.: (-2,-5,-12), (-5,7,-12), (-7,5,-12)								
LiNbO3	(2,-7,-12)	10.208	71.9	11.672	10.8	3.509	37.92	43.86	57.98
	Equiv. Refl.: (7,-2,-12)								
Quartz	(6,-1,-6)	10.638	82.14	11.382	9.5	1.482	14.03	18.53	23.24
Quartz	(6,-5,6)	10.638	82.14	11.381	9.5	1.482	14.03	18.53	23.24
	Equiv. Refl.: (-1,6,6)								
Quartz	(-1,-5,-6)	10.638	82.14	11.379	9.5	1.482	14.03	18.53	23.24
	Equiv. Refl.: (-5,6,-6), (-5,-1,6)								
Quartz	(-6,1,6)	10.638	82.14	11.337	9.5	1.482	14.03	18.53	23.24
Quartz	(1,-6,-6)	10.638	82.14	11.336	9.5	1.482	14.03	18.53	23.24
	Equiv. Refl.: (-6,5,-6)								
Quartz	(1,5,6)	10.638	82.14	11.335	9.5	1.482	14.03	18.53	23.24
Quartz	(5,1,-6)	10.638	82.14	11.334	9.5	1.482	14.03	18.53	23.24
	Equiv. Refl.: (5,-6,6)								
Quartz	(0,0,9)	10.323	74	10.942	8.9	3.079	27.38	38.48	47.23
	Equiv. Refl.: (0,0,-9)								
Sapph	(3,4,-10)	10.321	73.96	10.877	9	3.087	27.86	38.59	47.6
	Equiv. Refl.: (3,-7,10), (4,3,10), (4,-7,-10), (7,-3,10), (7,-4,-10), (-3,7,-10), (-3,-4,10), (-4,7,10), (-4,-3,-10), (-7,3,-10), (-7,4,10)								
Sapph	(0,7,2)	10.574	79.95	9.846	8.5	1.904	16.19	23.8	28.78
	Equiv. Refl.: (0,-7,-2), (7,0,-2), (7,-7,2), (-7,0,2), (-7,7,-2)								
Quartz	(4,4,3)	10.665	83.26	9.371	8	1.27	10.2	15.87	18.87
	Equiv. Refl.: (4,-8,-3)								
Quartz	(-8,4,-3)	10.665	83.26	9.37	8	1.27	10.2	15.87	18.87

Ei =	10.739	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(4,4,-3)	10.665	83.26	9.369	8	1.27	10.2	15.87	18.87
	Equiv. Refl.: (4,-8,3)								
Quartz	(-8,4,3)	10.665	83.26	9.368	8	1.27	10.2	15.87	18.87
Quartz	(-4,8,3)	10.665	83.26	8.79	8	1.27	10.2	15.87	18.87
	Equiv. Refl.: (-4,-4,-3)								
Quartz	(8,-4,3)	10.665	83.26	8.789	8	1.27	10.2	15.87	18.87
Quartz	(-4,8,-3)	10.665	83.26	8.788	8	1.27	10.2	15.87	18.87
	Equiv. Refl.: (-4,-4,3)								
Quartz	(8,-4,-3)	10.665	83.26	8.787	8	1.27	10.2	15.87	18.87
Quartz	(8,-2,-1)	10.569	79.79	8.288	7	1.934	13.53	24.18	27.71
	Equiv. Refl.: (8,-6,1), (-2,8,1), (-2,-6,-1), (-6,8,-1), (-6,-2,1)								
Quartz	(2,6,1)	10.569	79.79	8.194	7	1.934	13.53	24.18	27.71
	Equiv. Refl.: (2,-8,-1), (6,2,-1), (6,-8,1), (-8,2,1), (-8,6,-1)								
Quartz	(0,3,-8)	10.164	71.17	7.91	6.2	3.663	22.78	45.79	51.14
	Equiv. Refl.: (0,-3,8), (3,0,8), (3,-3,-8), (-3,0,-8), (-3,3,8)								
Sapph	(2,4,-14)	10.393	75.42	7.277	6.2	2.792	17.21	34.91	38.92
	Equiv. Refl.: (2,-6,14), (4,2,14), (4,-6,-14), (6,-2,14), (6,-4,-14), (-2,6,-14), (-2,-4,14), (-4,6,14), (-4,-2,-14), (-6,2,-14), (-6,4,14)								
Quartz	(6,1,4)	10.599	80.73	7.228	6.1	1.754	10.7	21.92	24.39
	Equiv. Refl.: (6,-7,-4)								
Quartz	(1,6,-4)	10.599	80.73	7.226	6.1	1.754	10.7	21.92	24.39
Quartz	(1,-7,4)	10.599	80.73	7.225	6.1	1.754	10.7	21.92	24.39
	Equiv. Refl.: (-7,1,-4), (-7,6,4)								
Quartz	(-6,7,4)	10.599	80.73	6.72	6.1	1.754	10.7	21.92	24.39
Quartz	(-6,-1,-4)	10.599	80.73	6.719	6.1	1.754	10.7	21.92	24.39
Quartz	(-1,-6,4)	10.599	80.73	6.718	6.1	1.754	10.7	21.92	24.39
Quartz	(7,-1,4)	10.599	80.73	6.717	6.1	1.754	10.7	21.92	24.39
	Equiv. Refl.: (-1,7,-4)								
Quartz	(7,-6,-4)	10.599	80.73	6.716	6.1	1.754	10.69	21.92	24.39
Quartz	(6,0,-5)	10.455	76.8	6.677	5.6	2.519	14.09	31.49	34.49
	Equiv. Refl.: (-6,0,5)								
Quartz	(0,6,5)	10.455	76.8	6.676	5.6	2.519	14.09	31.49	34.49
	Equiv. Refl.: (0,-6,-5), (6,-6,5), (-6,6,-5)								
Sapph	(1,2,20)	10.342	74.38	6.607	5.6	3.002	16.84	37.53	41.13
	Equiv. Refl.: (1,-3,-20), (2,1,-20), (2,-3,20), (3,-1,-20), (3,-2,20), (-1,3,20), (-1,-2,-20), (-2,3,-20), (-2,-1,20), (-3,1,20), (-3,2,-20)								
Sapph	(4,4,0)	10.423	76.06	6.493	5.6	2.665	14.9	33.31	36.49
	Equiv. Refl.: (4,-8,0), (8,-4,0), (-4,8,0), (-4,-4,0), (-8,4,0)								
Sapph	(1,6,-8)	10.578	80.08	6.448	5.9	1.879	11.15	23.49	26
	Equiv. Refl.: (1,-7,8), (6,1,8), (6,-7,-8), (7,-1,8), (7,-6,-8), (-1,7,-8), (-1,-6,8), (-6,7,8), (-6,-1,-8), (-7,1,-8), (-7,6,8)								
Quartz	(7,-3,-5)	10.556	79.42	6.167	5.2	2.007	10.47	25.08	27.18
	Equiv. Refl.: (7,-4,5), (-4,7,-5)								
Quartz	(-3,7,5)	10.556	79.42	6.165	5.2	2.007	10.47	25.08	27.18
	Equiv. Refl.: (-3,-4,-5), (-4,-3,5)								
Quartz	(4,-1,8)	10.573	79.93	6.054	5	1.908	9.63	23.85	25.72
	Equiv. Refl.: (4,-3,-8)								
Quartz	(-3,-1,-8)	10.573	79.93	6.051	5	1.908	9.63	23.85	25.72
Quartz	(-3,4,8)	10.573	79.93	6.048	5	1.908	9.62	23.85	25.71

Ei = Cryst	10.739 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(-1,4,-8) Equiv. Refl.: (-1,-3,8)	10.573	79.93	6.047	5	1.908	9.62	23.85	25.71
Quartz	(0,7,1) Equiv. Refl.: (0,-7,-1), (7,0,-1), (7,-7,1), (-7,0,1), (-7,7,-1)	10.263	72.88	6.045	4.9	3.308	16.28	41.35	44.44
Quartz	(4,-7,5) Equiv. Refl.: (-7,3,5)	10.556	79.42	5.831	5.2	2.007	10.47	25.08	27.18
Quartz	(4,3,-5) Equiv. Refl.: (-7,4,-5)	10.556	79.42	5.83	5.2	2.007	10.47	25.08	27.18
Quartz	(3,4,5) Equiv. Refl.: (3,-7,-5)	10.556	79.42	5.828	5.2	2.007	10.47	25.08	27.18
Quartz	(-4,1,-8) Equiv. Refl.: (-4,3,8)	10.573	79.93	5.688	5	1.908	9.63	23.85	25.72
Quartz	(3,1,8)	10.573	79.93	5.686	5	1.908	9.63	23.85	25.72
Quartz	(3,-4,-8)	10.573	79.93	5.683	5	1.908	9.62	23.85	25.71
Quartz	(1,3,-8) Equiv. Refl.: (1,-4,8)	10.573	79.93	5.682	5	1.908	9.62	23.85	25.71
Quartz	(6,-5,-6)	10.638	82.14	5.522	4.9	1.482	7.3	18.53	19.91
Quartz	(6,-1,6)	10.638	82.14	5.521	4.9	1.482	7.29	18.53	19.91
Quartz	(-5,6,6) Equiv. Refl.: (-5,-1,-6)	10.638	82.14	5.52	4.9	1.482	7.29	18.53	19.91
Quartz	(-1,-5,6)	10.638	82.14	5.518	4.9	1.482	7.29	18.53	19.91
Quartz	(-1,6,-6)	10.638	82.14	5.517	4.9	1.482	7.29	18.53	19.91
Sapph	(1,1,21) Equiv. Refl.: (1,1,-21), (1,-2,21), (1,-2,-21), (2,-1,21), (2,-1,-21), (-1,2,21), (-1,2,-21), (-1,-1,21), (-1,-1,-21), (-2,1,21), (-2,1,-21)	10.356	74.66	5.459	4.7	2.946	13.73	36.83	39.31
Quartz	(-6,5,6)	10.638	82.14	5.358	4.9	1.482	7.3	18.53	19.91
Quartz	(5,1,6) Equiv. Refl.: (5,-6,-6), (-6,1,-6)	10.638	82.14	5.357	4.9	1.482	7.29	18.53	19.91
Quartz	(1,5,-6)	10.638	82.14	5.355	4.9	1.482	7.29	18.53	19.91
Quartz	(1,-6,6)	10.638	82.14	5.354	4.9	1.482	7.29	18.53	19.91
Quartz	(4,4,2) Equiv. Refl.: (4,4,-2), (4,-8,2), (4,-8,-2)	10.352	74.57	5.312	4.3	2.965	12.82	37.06	39.22
Quartz	(-8,4,2) Equiv. Refl.: (-8,4,-2)	10.352	74.57	5.311	4.3	2.965	12.82	37.06	39.22
Quartz	(4,2,6) Equiv. Refl.: (4,-6,-6)	10.335	74.22	5.28	4.2	3.034	12.76	37.92	40.01
Quartz	(-6,2,-6)	10.335	74.22	5.278	4.2	3.034	12.76	37.92	40.01
Quartz	(-6,4,6)	10.335	74.22	5.276	4.2	3.034	12.75	37.92	40.01
Quartz	(2,4,-6) Equiv. Refl.: (2,-6,6)	10.335	74.22	5.275	4.2	3.034	12.75	37.92	40.01
Quartz	(1,1,-9)	10.627	81.72	5.264	4.6	1.562	7.2	19.53	20.81
Quartz	(1,-2,9)	10.627	81.72	5.262	4.6	1.562	7.19	19.53	20.81
Quartz	(8,-2,1) Equiv. Refl.: (8,-6,-1)	10.569	79.79	5.257	4.5	1.934	8.72	24.18	25.7
Quartz	(-2,8,-1) Equiv. Refl.: (-2,-6,1), (-6,8,1), (-6,-2,-1)	10.569	79.79	5.256	4.5	1.934	8.72	24.18	25.7
Quartz	(-2,1,-9) Equiv. Refl.: (-4,-4,2)	10.627	81.72	5.249	4.6	1.562	7.18	19.53	20.81
Quartz	(-4,8,2) Equiv. Refl.: (-4,8,-2), (-4,-4,-2)	10.352	74.57	5.248	4.3	2.965	12.82	37.06	39.22

Ei = Cryst	10.739 Refl (h,k,l)	keV EB [keV]	Θ B [$^\circ$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(8,-4,2)	10.352	74.57	5.247	4.3	2.965	12.82	37.06	39.22
	Equiv. Refl.: (8,-4,-2), (-2,1,9)								
Quartz	(1,-2,-9)	10.627	81.72	5.245	4.6	1.562	7.17	19.53	20.8
Quartz	(1,1,9)	10.627	81.72	5.244	4.6	1.562	7.17	19.53	20.8
Quartz	(5,3,2)	10.454	76.76	5.153	4.3	2.526	10.95	31.57	33.42
	Equiv. Refl.: (5,-8,-2)								
Quartz	(3,5,-2)	10.454	76.76	5.151	4.3	2.526	10.95	31.57	33.42
	Equiv. Refl.: (3,-8,2), (-8,3,-2), (-8,5,2)								
Quartz	(0,7,0)	10.199	71.75	5.132	4.2	3.541	14.7	44.26	46.64
	Equiv. Refl.: (0,-7,0), (7,0,0), (7,-7,0), (-7,0,0), (-7,7,0)								
Quartz	(-5,8,2)	10.454	76.76	5.128	4.3	2.526	10.95	31.57	33.42
	Equiv. Refl.: (-5,-3,-2)								
Quartz	(8,-3,2)	10.454	76.76	5.126	4.3	2.526	10.95	31.57	33.42
	Equiv. Refl.: (8,-5,-2), (-3,8,-2), (-3,-5,2)								
Quartz	(2,6,-1)	10.569	79.79	5.103	4.5	1.934	8.72	24.18	25.7
	Equiv. Refl.: (2,-8,1), (6,2,1), (6,-8,-1), (-8,2,-1), (-8,6,1)								
Quartz	(-4,6,6)	10.335	74.22	4.98	4.2	3.034	12.76	37.92	40.01
	Equiv. Refl.: (-4,-2,-6)								
Quartz	(6,-2,6)	10.335	74.22	4.978	4.2	3.034	12.76	37.92	40.01
Quartz	(6,-4,-6)	10.335	74.22	4.976	4.2	3.034	12.75	37.92	40.01
Quartz	(-2,6,-6)	10.335	74.22	4.975	4.2	3.034	12.75	37.92	40.01
	Equiv. Refl.: (-2,-4,6)								
Quartz	(-1,-1,9)	10.627	81.72	4.791	4.6	1.562	7.2	19.53	20.81
Quartz	(-1,2,-9)	10.627	81.72	4.79	4.6	1.562	7.19	19.53	20.81
Quartz	(2,-1,9)	10.627	81.72	4.777	4.6	1.562	7.18	19.53	20.81
Quartz	(2,-1,-9)	10.627	81.72	4.775	4.6	1.562	7.18	19.53	20.8
Quartz	(-1,2,9)	10.627	81.72	4.774	4.6	1.562	7.17	19.53	20.8
Quartz	(-1,-1,-9)	10.627	81.72	4.772	4.6	1.562	7.17	19.53	20.8
Quartz	(8,-4,0)	10.094	70.05	4.201	3.3	3.899	13	48.74	50.44
	Equiv. Refl.: (-4,8,0), (-4,-4,0)								
Sapph	(4,4,3)	10.521	78.43	4.125	3.9	2.198	8.57	27.48	28.78
	Equiv. Refl.: (4,4,-3), (4,-8,3), (4,-8,-3), (8,-4,3), (8,-4,-3), (-4,8,3), (-4,8,-3), (-4,-4,3), (-4,-4,-3), (-8,4,3), (-8,4,-3)								
Quartz	(-2,-4,-6)	10.335	74.22	4.049	3.3	3.034	9.96	37.92	39.21
Quartz	(6,-2,-6)	10.335	74.22	4.048	3.3	3.034	9.96	37.92	39.21
	Equiv. Refl.: (-2,6,6)								
Quartz	(6,-4,6)	10.335	74.22	4.047	3.3	3.034	9.95	37.92	39.21
Quartz	(-4,6,-6)	10.335	74.22	4.045	3.3	3.034	9.95	37.92	39.21
Quartz	(-4,-2,6)	10.335	74.22	4.044	3.3	3.034	9.95	37.92	39.21
Quartz	(4,4,0)	10.094	70.05	3.859	3.3	3.899	13	48.74	50.44
	Equiv. Refl.: (4,-8,0), (-8,4,0)								
Quartz	(2,4,6)	10.335	74.22	3.579	3.3	3.034	9.96	37.92	39.21
	Equiv. Refl.: (-6,2,6)								
Quartz	(2,-6,-6)	10.335	74.22	3.578	3.3	3.034	9.96	37.92	39.21
	Equiv. Refl.: (-6,4,-6)								
Quartz	(4,-6,6)	10.335	74.22	3.576	3.3	3.034	9.95	37.92	39.21
Quartz	(4,2,-6)	10.335	74.22	3.575	3.3	3.034	9.95	37.92	39.21
Quartz	(5,-1,-7)	10.443	76.51	3.566	3.2	2.577	8.15	32.21	33.23
Quartz	(5,-4,7)	10.443	76.51	3.565	3.2	2.577	8.14	32.21	33.23
Quartz	(-5,8,-2)	10.454	76.76	3.562	3.1	2.526	7.73	31.57	32.51
	Equiv. Refl.: (-5,-3,2)								

Ei =	10.739	keV						ΔEg	ΔEt
Cryst	Ref	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(8,-3,-2)	10.454	76.76	3.559	3.1	2.526	7.73	31.57	32.51
	Equiv. Refl.: (8,-5,2), (-3,-5,-2)								
Quartz	(-3,8,2)	10.454	76.76	3.558	3.1	2.526	7.73	31.57	32.51
Quartz	(0,1,9)	10.425	76.12	3.556	3.2	2.653	8.41	33.17	34.22
	Equiv. Refl.: (0,-1,-9), (-4,5,-7), (-4,-1,7)								
Quartz	(-1,-4,-7)	10.443	76.51	3.555	3.2	2.577	8.12	32.21	33.22
Quartz	(-1,5,7)	10.443	76.51	3.554	3.2	2.577	8.12	32.21	33.22
Quartz	(1,0,-9)	10.425	76.12	3.544	3.2	2.653	8.39	33.17	34.21
	Equiv. Refl.: (1,-1,9), (-1,0,9), (-1,1,-9)								
Quartz	(5,3,-2)	10.454	76.76	3.537	3.1	2.526	7.73	31.57	32.51
	Equiv. Refl.: (5,-8,2)								
Quartz	(3,5,2)	10.454	76.76	3.534	3.1	2.526	7.73	31.57	32.51
	Equiv. Refl.: (3,-8,-2), (-8,3,2), (-8,5,-2)								
Quartz	(3,-6,-6)	10.231	72.31	3.514	3.2	3.425	11.12	42.81	44.23
Quartz	(3,3,6)	10.231	72.31	3.513	3.2	3.425	11.12	42.81	44.23
	Equiv. Refl.: (3,3,-6), (3,-6,6), (-6,3,6)								
Quartz	(-6,3,-6)	10.231	72.31	3.512	3.2	3.425	11.12	42.81	44.23
Quartz	(6,-3,-6)	10.231	72.31	3.508	3.2	3.425	11.12	42.81	44.23
	Equiv. Refl.: (-3,6,6)								
Quartz	(6,-3,6)	10.231	72.31	3.507	3.2	3.425	11.12	42.81	44.23
	Equiv. Refl.: (-3,6,-6), (-3,-3,6), (-3,-3,-6)								
Sapph	(1,5,-13)	10.424	76.09	3.487	3.2	2.66	8.47	33.25	34.31
	Equiv. Refl.: (1,-6,13), (5,1,13), (5,-6,-13), (6,-1,13), (6,-5,-13), (-1,6,-13), (-1,-5,13), (-5,6,13), (-5,-1,-13), (-6,1,-13), (-6,5,13)								
Quartz	(-5,1,7)	10.443	76.51	3.477	3.2	2.577	8.15	32.21	33.23
Quartz	(-5,4,-7)	10.443	76.51	3.476	3.2	2.577	8.14	32.21	33.23
Quartz	(4,1,-7)	10.443	76.51	3.468	3.2	2.577	8.13	32.21	33.22
Quartz	(4,-5,7)	10.443	76.51	3.467	3.2	2.577	8.13	32.21	33.22
Quartz	(1,4,7)	10.443	76.51	3.466	3.2	2.577	8.12	32.21	33.22
Quartz	(1,-5,-7)	10.443	76.51	3.465	3.2	2.577	8.12	32.21	33.22
Sapph	(2,5,9)	10.331	74.15	3.25	2.9	3.05	8.95	38.12	39.16
	Equiv. Refl.: (2,5,-9), (2,-7,9), (2,-7,-9), (5,2,9), (5,2,-9), (5,-7,9), (5,-7,-9), (7,-2,9), (7,-2,-9), (7,-5,9), (7,-5,-9), (-2,7,9), (-2,7,-9), (-2,-5,9), (-2,-5,-9), (-5,7,9), (-5,7,-9), (-5,-2,9), (-5,-2,-9), (-7,2,9), (-7,2,-9), (-7,5,9), (-7,5,-9)								
Quartz	(8,-3,0)	10.199	71.75	3.173	2.9	3.541	10.22	44.26	45.43
	Equiv. Refl.: (8,-5,0), (-3,8,0), (-3,-5,0), (-5,8,0), (-5,-3,0)								
Quartz	(3,5,0)	10.199	71.75	3.045	2.9	3.541	10.22	44.26	45.43
	Equiv. Refl.: (3,-8,0), (5,3,0), (5,-8,0), (-8,3,0), (-8,5,0)								
LiNbO3	(2,4,-17)	10.58	80.11	2.996	5.1	1.871	9.49	23.39	25.24
	Equiv. Refl.: (2,-6,17), (4,2,17), (4,-6,-17), (6,-2,17), (6,-4,-17), (-2,6,-17), (-2,-4,17), (-4,6,17), (-4,-2,-17), (-6,2,-17), (-6,4,17)								
Quartz	(4,-3,8)	10.573	79.93	2.866	2.9	1.908	5.62	23.85	24.5
Quartz	(4,-1,-8)	10.573	79.93	2.865	2.9	1.908	5.62	23.85	24.5
	Equiv. Refl.: (-1,-3,-8)								
Quartz	(-1,4,8)	10.573	79.93	2.863	2.9	1.908	5.62	23.85	24.5
Quartz	(-3,4,-8)	10.573	79.93	2.86	2.9	1.908	5.61	23.85	24.5
	Equiv. Refl.: (-3,-1,8)								
Quartz	(1,3,8)	10.573	79.93	2.791	2.9	1.908	5.62	23.85	24.5
	Equiv. Refl.: (-4,3,-8)								

Ei =	10.739	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(1,-4,-8)	10.573	79.93	2.79	2.9	1.908	5.62	23.85	24.5
	Equiv. Refl.: (-4,1,8)								
Quartz	(3,1,-8)	10.573	79.93	2.786	2.9	1.908	5.62	23.85	24.5
	Equiv. Refl.: (3,-4,8)								
Quartz	(-7,0,-2)	10.454	76.76	2.742	2.7	2.526	6.76	31.57	32.29
Quartz	(0,7,-2)	10.454	76.76	2.741	2.7	2.526	6.76	31.57	32.29
	Equiv. Refl.: (0,-7,2), (7,0,2), (7,-7,-2), (-7,7,2)								
Quartz	(2,6,0)	10.506	78.06	2.673	2.5	2.272	5.73	28.4	28.97
	Equiv. Refl.: (2,-8,0), (6,2,0), (6,-8,0), (-8,2,0), (-8,6,0)								
LiNbO3	(1,6,-11)	10.36	74.74	2.624	4.1	2.93	11.9	36.63	38.51
	Equiv. Refl.: (1,-7,11), (6,1,11), (6,-7,-11), (7,-1,11), (7,-6,-11), (-1,7,-11), (-1,-6,11), (-6,7,11), (-6,-1,-11), (-7,1,-11), (-7,6,11)								
LiNbO3	(2,2,21)	10.554	79.35	2.615	4.5	2.02	9.14	25.24	26.85
	Equiv. Refl.: (2,2,-21), (2,-4,21), (2,-4,-21), (4,-2,21), (4,-2,-21), (-2,4,21), (-2,4,-21), (-2,-2,21), (-2,-2,-21), (-4,2,21), (-4,2,-21)								
Quartz	(5,-1,7)	10.443	76.51	2.458	2.4	2.577	6.23	32.21	32.81
	Equiv. Refl.: (5,-4,-7)								
Quartz	(-4,-1,-7)	10.443	76.51	2.457	2.4	2.577	6.23	32.21	32.81
Quartz	(-4,5,7)	10.443	76.51	2.456	2.4	2.577	6.23	32.21	32.81
Quartz	(-1,-4,7)	10.443	76.51	2.455	2.4	2.577	6.22	32.21	32.81
Quartz	(-1,5,-7)	10.443	76.51	2.454	2.4	2.577	6.22	32.21	32.81
Sapph	(0,7,-4)	10.703	85.28	2.402	3.6	0.886	3.15	11.08	11.52
	Equiv. Refl.: (0,-7,4), (7,0,4), (7,-7,-4), (-7,0,-4), (-7,7,4)								
Quartz	(3,4,-5)	10.556	79.42	2.047	2.3	2.007	4.67	25.08	25.51
	Equiv. Refl.: (3,-7,5), (-7,3,-5)								
Quartz	(-7,4,5)	10.556	79.42	2.046	2.3	2.007	4.66	25.08	25.51
Quartz	(4,3,5)	10.556	79.42	2.045	2.3	2.007	4.66	25.08	25.51
	Equiv. Refl.: (4,-7,-5), (-5,1,-7), (-5,4,7)								
Quartz	(4,1,7)	10.443	76.51	2.043	2.4	2.577	6.23	32.21	32.81
	Equiv. Refl.: (4,-5,-7)								
Quartz	(1,4,-7)	10.443	76.51	2.042	2.4	2.577	6.22	32.21	32.81
	Equiv. Refl.: (1,-5,7)								
Quartz	(8,-2,0)	10.506	78.06	2.012	2.5	2.272	5.73	28.4	28.97
	Equiv. Refl.: (8,-6,0), (-2,8,0), (-2,-6,0), (-6,8,0), (-6,-2,0)								
Quartz	(6,1,3)	10.155	71.02	1.942	2	3.694	7.46	46.18	46.78
	Equiv. Refl.: (6,-7,-3)								
Quartz	(1,6,-3)	10.155	71.02	1.941	2	3.694	7.46	46.18	46.78
	Equiv. Refl.: (1,-7,3)								
Quartz	(-7,1,-3)	10.155	71.02	1.94	2	3.694	7.46	46.18	46.78
	Equiv. Refl.: (-7,6,3)								
Quartz	(-2,4,-8)	10.473	77.21	1.905	2.2	2.438	5.25	30.47	30.92
	Equiv. Refl.: (-2,-2,8)								
Quartz	(4,-2,-8)	10.473	77.21	1.903	2.2	2.438	5.25	30.47	30.92
Quartz	(4,-2,8)	10.473	77.21	1.902	2.2	2.438	5.25	30.47	30.92
Quartz	(-2,4,8)	10.473	77.21	1.898	2.1	2.438	5.24	30.47	30.92
	Equiv. Refl.: (-2,-2,-8)								
Sapph	(3,5,1)	10.542	79	1.889	2.4	2.087	5.06	26.09	26.58
	Equiv. Refl.: (3,-8,-1), (5,3,-1), (5,-8,1), (8,-3,-1), (8,-5,1), (-3,8,1), (-3,-5,-1), (-5,8,-1), (-5,-3,1), (-8,3,1), (-8,5,-1)								
Quartz	(-7,1,4)	10.599	80.73	1.876	2.3	1.754	4.09	21.92	22.3
	Equiv. Refl.: (-7,6,-4)								

Ei = Cryst	10.739 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(6,1,-4) Equiv. Refl.: (6,-7,4)	10.599	80.73	1.874	2.3	1.754	4.09	21.92	22.3
Quartz	(1,6,4) Equiv. Refl.: (1,-7,-4)	10.599	80.73	1.873	2.3	1.754	4.09	21.92	22.3
Quartz	(-5,7,4) Equiv. Refl.: (-5,-2,-4)	10.19	71.6	1.85	2.1	3.572	7.34	44.65	45.25
Quartz	(7,-2,4) Equiv. Refl.: (7,-5,-4)	10.19	71.6	1.849	2.1	3.572	7.34	44.65	45.24
Quartz	(-2,7,-4) Equiv. Refl.: (-2,-5,4)	10.19	71.6	1.848	2.1	3.572	7.34	44.65	45.24
Quartz	(7,-1,-4)	10.599	80.73	1.843	2.3	1.754	4.09	21.92	22.3
Quartz	(7,-6,4)	10.599	80.73	1.842	2.3	1.754	4.09	21.92	22.3
Quartz	(-6,7,-4) Equiv. Refl.: (-6,-1,4)	10.599	80.73	1.841	2.3	1.754	4.09	21.92	22.3
Quartz	(-1,7,4) Equiv. Refl.: (-1,-6,-4)	10.599	80.73	1.84	2.3	1.754	4.09	21.92	22.3
Quartz	(5,2,4) Equiv. Refl.: (5,-7,-4)	10.19	71.6	1.803	2.1	3.572	7.34	44.65	45.25
Quartz	(-7,2,-4) Equiv. Refl.: (-7,5,4)	10.19	71.6	1.802	2.1	3.572	7.34	44.65	45.24
Quartz	(2,5,-4) Equiv. Refl.: (2,-7,4)	10.19	71.6	1.801	2.1	3.572	7.34	44.65	45.24
Quartz	(7,-3,5) Equiv. Refl.: (-3,7,-5), (-3,-4,5)	10.556	79.42	1.781	2.3	2.007	4.67	25.08	25.51
Quartz	(7,-4,-5)	10.556	79.42	1.78	2.3	2.007	4.66	25.08	25.51
Quartz	(-4,7,5) Equiv. Refl.: (-4,-3,-5)	10.556	79.42	1.779	2.3	2.007	4.66	25.08	25.51
Quartz	(7,-1,-3) Equiv. Refl.: (7,-6,3), (-1,-6,-3)	10.155	71.02	1.756	1.9	3.694	6.96	46.18	46.7
Quartz	(-1,7,3) Equiv. Refl.: (-6,7,-3), (-6,-1,3)	10.155	71.02	1.755	1.9	3.694	6.96	46.18	46.7
Quartz	(2,-4,8)	10.473	77.21	1.726	2.2	2.438	5.25	30.47	30.92
Quartz	(2,2,-8)	10.473	77.21	1.725	2.2	2.438	5.25	30.47	30.92
Quartz	(-4,2,8)	10.473	77.21	1.724	2.2	2.438	5.25	30.47	30.92
Quartz	(-4,2,-8)	10.473	77.21	1.723	2.2	2.438	5.25	30.47	30.92
Quartz	(2,2,8) Equiv. Refl.: (2,-4,-8)	10.473	77.21	1.719	2.1	2.438	5.24	30.47	30.92
Quartz	(-6,7,3) Equiv. Refl.: (-6,-1,-3)	10.155	71.02	1.665	2	3.694	7.46	46.18	46.78
Quartz	(7,-1,3) Equiv. Refl.: (-1,7,-3), (-1,-6,3)	10.155	71.02	1.664	2	3.694	7.46	46.18	46.78
Quartz	(7,-6,-3)	10.155	71.02	1.663	2	3.694	7.46	46.18	46.78
Quartz	(-7,1,3) Equiv. Refl.: (-7,6,-3)	10.155	71.02	1.564	1.9	3.694	6.96	46.18	46.7
Quartz	(1,6,3) Equiv. Refl.: (1,-7,-3), (6,1,-3), (6,-7,3)	10.155	71.02	1.563	1.9	3.694	6.96	46.18	46.7
Quartz	(2,5,4) Equiv. Refl.: (2,-7,-4)	10.19	71.6	1.533	1.7	3.572	6.14	44.65	45.07
Quartz	(-7,2,4) Equiv. Refl.: (-7,5,-4)	10.19	71.6	1.532	1.7	3.572	6.14	44.65	45.07

Ei =	10.739	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(5,2,-4)	10.19	71.6	1.531	1.7	3.572	6.13	44.65	45.06
	Equiv. Refl.: (5,-7,4)								
Sapph	(2,4,13)	10.093	70.03	1.514	1.8	3.903	7.1	48.79	49.3
	Equiv. Refl.: (2,-6,-13), (4,2,-13), (4,-6,13), (6,-2,-13), (6,-4,13), (-2,6,13), (-2,-4,-13), (-4,6,-13), (-4,-2,13), (-6,2,13), (-6,4,-13)								
Sapph	(2,3,17)	10.433	76.28	1.468	1.9	2.622	4.99	32.77	33.15
	Equiv. Refl.: (2,-5,-17), (3,2,-17), (3,-5,17), (5,-2,-17), (5,-3,17), (-2,5,17), (-2,-3,-17), (-3,5,-17), (-3,-2,17), (-5,2,17), (-5,3,-17)								
Quartz	(-2,7,4)	10.19	71.6	1.434	1.7	3.572	6.14	44.65	45.07
	Equiv. Refl.: (-2,-5,-4)								
Quartz	(7,-2,-4)	10.19	71.6	1.433	1.7	3.572	6.14	44.65	45.07
	Equiv. Refl.: (7,-5,4)								
Quartz	(-5,7,-4)	10.19	71.6	1.432	1.7	3.572	6.13	44.65	45.06
	Equiv. Refl.: (-5,-2,4)								
Quartz	(6,0,5)	10.455	76.8	1.303	1.6	2.519	4.14	31.49	31.76
	Equiv. Refl.: (6,-6,-5), (-6,0,-5), (-6,6,5)								
Quartz	(0,6,-5)	10.455	76.8	1.299	1.6	2.519	4.13	31.49	31.76
	Equiv. Refl.: (0,-6,5)								
Quartz	(5,-2,-7)	10.237	72.42	1.163	1.4	3.403	4.65	42.54	42.8
	Equiv. Refl.: (-2,5,7), (-2,-3,-7)								
Quartz	(5,-3,7)	10.237	72.42	1.162	1.4	3.403	4.65	42.54	42.8
Quartz	(-3,5,-7)	10.237	72.42	1.161	1.4	3.403	4.64	42.54	42.79
	Equiv. Refl.: (-3,-2,7)								
Quartz	(0,7,-1)	10.263	72.88	1.125	1.4	3.308	4.61	41.35	41.6
	Equiv. Refl.: (0,-7,1), (7,0,1), (7,-7,-1), (-7,0,-1), (-7,7,1)								
LiNbO3	(3,4,-13)	10.263	72.88	1.122	2.3	3.308	7.46	41.35	42.02
	Equiv. Refl.: (3,-7,13), (4,3,13), (4,-7,-13), (7,-3,13), (7,-4,-13), (-3,7,-13), (-3,-4,13), (-4,7,13), (-4,-3,-13), (-7,3,-13), (-7,4,13)								
Quartz	(8,-4,1)	10.159	71.09	1.085	1.2	3.679	4.51	45.99	46.21
	Equiv. Refl.: (8,-4,-1), (-4,8,1), (-4,8,-1), (-4,-4,1), (-4,-4,-1)								
Quartz	(2,3,7)	10.237	72.42	1.059	1.4	3.403	4.65	42.54	42.8
	Equiv. Refl.: (2,-5,-7), (-5,2,7), (-5,3,-7)								
Quartz	(3,2,-7)	10.237	72.42	1.058	1.4	3.403	4.64	42.54	42.79
	Equiv. Refl.: (3,-5,7)								
Sapph	(1,6,7)	10.416	75.9	0.965	1.4	2.697	3.73	33.71	33.92
	Equiv. Refl.: (1,-7,-7), (6,1,-7), (6,-7,7), (7,-1,-7), (7,-6,7), (-1,7,7), (-1,-6,-7), (-6,7,-7), (-6,-1,7), (-7,1,7), (-7,6,-7)								
Quartz	(1,0,9)	10.425	76.12	0.956	1.3	2.653	3.4	33.17	33.34
	Equiv. Refl.: (1,-1,-9), (-1,0,-9), (-1,1,9)								
Quartz	(0,1,-9)	10.425	76.12	0.953	1.3	2.653	3.39	33.17	33.34
	Equiv. Refl.: (0,-1,9)								
Quartz	(4,4,1)	10.159	71.09	0.884	1.2	3.679	4.51	45.99	46.21
	Equiv. Refl.: (4,4,-1), (4,-8,1), (4,-8,-1), (-8,4,1), (-8,4,-1)								
Sapph	(1,3,19)	10.567	79.73	0.861	1.4	1.946	2.72	24.32	24.47
	Equiv. Refl.: (1,-4,-19), (3,1,-19), (3,-4,19), (4,-1,-19), (4,-3,19), (-1,4,19), (-1,-3,-19), (-3,4,-19), (-3,-1,19), (-4,1,19), (-4,3,-19)								
Sapph	(1,6,-5)	10.15	70.93	0.781	1.1	3.712	4.09	46.4	46.58
	Equiv. Refl.: (1,-7,5), (6,1,5), (6,-7,-5), (7,-1,5), (7,-6,-5), (-1,7,-5), (-1,-6,5), (-6,7,5), (-6,-1,-5), (-7,1,-5), (-7,6,5)								
Quartz	(3,-5,-7)	10.237	72.42	0.692	0.9	3.403	3.07	42.54	42.65

Ei =	10.739	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(3,2,7)	10.237	72.42	0.691	0.9	3.403	3.07	42.54	42.65
	Equiv. Refl.: (-5,2,-7)								
Quartz	(2,-5,7)	10.237	72.42	0.69	0.9	3.403	3.07	42.54	42.65
	Equiv. Refl.: (-5,3,7)								
Quartz	(2,3,-7)	10.237	72.42	0.689	0.9	3.403	3.06	42.54	42.65
Quartz	(0,7,2)	10.454	76.76	0.653	1	2.526	2.48	31.57	31.67
	Equiv. Refl.: (0,-7,-2)								
Quartz	(7,0,-2)	10.454	76.76	0.652	1	2.526	2.48	31.57	31.67
	Equiv. Refl.: (7,-7,2), (-7,0,2), (-7,7,-2)								
Quartz	(-3,5,7)	10.237	72.42	0.594	0.9	3.403	3.07	42.54	42.65
	Equiv. Refl.: (-3,-2,-7)								
Quartz	(5,-2,7)	10.237	72.42	0.593	0.9	3.403	3.07	42.54	42.65
	Equiv. Refl.: (5,-3,-7)								
Quartz	(-2,5,-7)	10.237	72.42	0.592	0.9	3.403	3.07	42.54	42.65
	Equiv. Refl.: (-2,-3,7)								
LiNbO3	(2,6,-7)	10.504	78	0.547	1.7	2.283	3.94	28.54	28.81
	Equiv. Refl.: (2,-8,7), (6,2,7), (6,-8,-7), (8,-2,7), (8,-6,-7), (-2,8,-7), (-2,-6,7), (-6,8,7), (-6,-2,-7), (-8,2,-7), (-8,6,7)								
Quartz	(5,3,-1)	10.263	72.88	0.496	0.7	3.308	2.38	41.35	41.41
	Equiv. Refl.: (5,-8,1)								
Quartz	(3,5,1)	10.263	72.88	0.495	0.7	3.308	2.38	41.35	41.41
	Equiv. Refl.: (3,-8,-1), (-8,3,1), (-8,5,-1)								
Sapph	(0,1,-22)	10.608	81.03	0.477	1	1.695	1.71	21.19	21.26
	Equiv. Refl.: (0,-1,22), (1,0,22), (1,-1,-22), (-1,0,-22), (-1,1,22)								
LiNbO3	(1,7,3)	10.583	80.23	0.43	1.7	1.849	3.09	23.11	23.31
	Equiv. Refl.: (1,7,-3), (1,-8,3), (1,-8,-3), (7,1,3), (7,1,-3), (7,-8,3), (7,-8,-3), (8,-1,3), (8,-1,-3), (8,-7,3), (8,-7,-3), (-1,8,3), (-1,8,-3), (-1,-7,3), (-1,-7,-3), (-7,8,3), (-7,8,-3), (-7,-1,3), (-7,-1,-3), (-8,1,3), (-8,1,-3), (-8,7,3), (-8,7,-3)								
Quartz	(8,-3,-1)	10.263	72.88	0.429	0.7	3.308	2.38	41.35	41.41
	Equiv. Refl.: (8,-5,1), (-3,8,1), (-3,-5,-1), (-5,8,-1), (-5,-3,-1)								
LiNbO3	(2,6,5)	10.273	73.06	0.421	1.3	3.27	4.23	40.88	41.1
	Equiv. Refl.: (2,-8,-5), (6,2,-5), (6,-8,5), (8,-2,-5), (8,-6,5), (-2,8,5), (-2,-6,-5), (-6,8,-5), (-6,-2,5), (-8,2,5), (-8,6,-5)								
LiNbO3	(2,3,-19)	10.437	76.37	0.311	1.2	2.604	3.16	32.54	32.7
	Equiv. Refl.: (2,-5,19), (3,2,19), (3,-5,-19), (5,-2,19), (5,-3,-19), (-2,5,-19), (-2,-3,19), (-3,5,19), (-3,-2,-19), (-5,2,-19), (-5,3,19)								
Sapph	(3,4,11)	10.55	79.24	0.301	0.7	2.041	1.46	25.51	25.55
	Equiv. Refl.: (3,-7,-11), (4,3,-11), (4,-7,11), (7,-3,-11), (7,-4,11), (-3,7,11), (-3,-4,-11), (-4,7,-11), (-4,-3,11), (-7,3,11), (-7,4,-11)								
Quartz	(8,-3,1)	10.263	72.88	0.259	0.5	3.308	1.51	41.35	41.37
	Equiv. Refl.: (8,-5,-1), (-3,8,-1), (-3,-5,1), (-5,8,1), (-5,-3,-1)								
LiNbO3	(3,5,7)	10.224	72.19	0.22	0.9	3.45	3.12	43.12	43.24
	Equiv. Refl.: (3,-8,-7), (5,3,-7), (5,-8,7), (8,-3,-7), (8,-5,7), (-3,8,7), (-3,-5,-7), (-5,8,-7), (-5,-3,7), (-8,3,7), (-8,5,-7)								
Quartz	(3,5,-1)	10.263	72.88	0.205	0.5	3.308	1.51	41.35	41.37
	Equiv. Refl.: (3,-8,1), (5,3,1), (5,-8,-1), (-8,3,-1), (-8,5,1)								
Sapph	(3,3,15)	10.6	80.78	0.071	0.4	1.743	0.62	21.79	21.8
	Equiv. Refl.: (3,3,-15), (3,-6,15), (3,-6,-15), (6,-3,15), (6,-3,-15), (-3,6,15), (-3,6,-15), (-3,-3,15), (-3,-3,-15), (-6,3,15), (-6,3,-15)								
LiNbO3	(4,4,9)	10.44	76.46	0.021	0.4	2.586	0.91	32.33	32.34
	Equiv. Refl.: (4,4,-9), (4,-8,9), (4,-8,-9), (8,-4,9), (8,-4,-9), (-4,8,9), (-4,8,-9), (-4,-4,9), (-4,-4,-9), (-8,4,9), (-8,4,-9)								

Ei =	9.561	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(5,5,5)	9.49	83	25.5818	25.81	1.174	30.3	14.67	33.66
	Equiv. Refl.: (1,7,5), (5,1,7), (1,5,7), (5,7,1), (7,1,5), (7,5,1)								
Ge	(0,6,6)	9.298	76.53	21.7066	20.28	2.2901	46.45	28.63	54.56
	Equiv. Refl.: (2,2,8), (2,8,2), (6,0,6), (6,6,0), (8,2,2)								
Si	(0,0,8)	9.132	72.76	11.101	9.4	2.9665	27.87	37.08	46.39
	Equiv. Refl.: (0,8,0), (8,0,0)								
Si	(3,3,7)	9.343	77.74	9.4669	8.71	2.0768	18.09	25.96	31.64
	Equiv. Refl.: (3,7,3), (7,3,3)								
Quartz	(7,-1,0)	9.554	87.82	56.733	49.3	0.364	17.92	4.54	18.49
	Equiv. Refl.: (7,-6,0), (-1,7,0), (-1,-6,0), (-6,7,0), (-6,-1,0)								
Quartz	(1,6,0)	9.554	87.82	56.159	49.3	0.364	17.92	4.54	18.49
	Equiv. Refl.: (1,-7,0), (6,1,0), (6,-7,0), (-7,1,0), (-7,6,0)								
LiNbO3	(0,-5,14)	9.356	78.11	28.652	25.5	2.014	51.41	25.17	57.24
	Equiv. Refl.: (5,0,14)								
LiNbO3	(-5,5,14)	9.356	78.11	28.651	25.5	2.014	51.41	25.17	57.24
LiNbO3	(0,5,-14)	9.356	78.11	25.771	25.5	2.014	51.41	25.17	57.24
	Equiv. Refl.: (-5,0,-14)								
LiNbO3	(5,-5,-14)	9.356	78.11	25.77	25.5	2.014	51.41	25.17	57.24
LiNbO3	(2,2,-18)	9.38	78.84	24.834	23.4	1.885	44.19	23.57	50.08
	Equiv. Refl.: (2,-4,-18), (4,-2,-18), (-2,4,-18), (-2,-2,-18), (-4,2,-18)								
LiNbO3	(2,3,-16)	9.377	78.74	24.726	22.8	1.904	43.43	23.79	49.53
	Equiv. Refl.: (3,-5,-16), (5,-3,-16), (-2,5,-16), (-3,-2,-16), (-5,2,-16)								
LiNbO3	(2,-4,18)	9.38	78.84	23.865	23.4	1.885	44.19	23.57	50.08
	Equiv. Refl.: (4,-2,18)								
LiNbO3	(2,2,18)	9.38	78.84	23.864	23.4	1.885	44.19	23.57	50.08
	Equiv. Refl.: (-2,4,18), (-2,-2,18), (-4,2,18)								
LiNbO3	(2,-5,16)	9.377	78.74	22.531	22.8	1.904	43.43	23.79	49.53
	Equiv. Refl.: (3,2,16), (5,-2,16), (-2,-3,16), (-3,5,16), (-5,3,16)								
LiNbO3	(0,-3,18)	9.066	71.48	22.081	19.5	3.203	62.49	40.03	74.21
	Equiv. Refl.: (3,0,18), (-3,3,18)								
LiNbO3	(3,-3,18)	9.066	71.48	21.853	19.3	3.203	61.82	40.03	73.65
LiNbO3	(0,3,18)	9.066	71.48	21.852	19.3	3.203	61.82	40.03	73.65
	Equiv. Refl.: (-3,0,18)								
LiNbO3	(0,2,-20)	9.366	78.41	21.51	20.4	1.962	40.07	24.52	46.97
	Equiv. Refl.: (2,-2,-20), (-2,0,-20)								
LiNbO3	(1,6,-2)	9.162	73.38	21.306	19.6	2.853	55.87	35.66	66.28
	Equiv. Refl.: (6,-7,-2), (7,-6,-2), (-1,7,-2), (-6,-1,-2), (-7,1,-2)								
LiNbO3	(1,-7,2)	9.162	73.38	20.746	19.6	2.853	55.87	35.66	66.28
	Equiv. Refl.: (6,1,2), (7,-1,2), (-1,-6,2), (-6,7,2), (-7,6,2)								
LiNbO3	(0,3,-18)	9.066	71.48	20.419	19.5	3.203	62.49	40.03	74.21
	Equiv. Refl.: (3,-3,-18), (-3,0,-18)								
LiNbO3	(0,-2,20)	9.366	78.41	20.126	20.4	1.962	40.07	24.52	46.97
	Equiv. Refl.: (2,0,20), (-2,2,20)								
LiNbO3	(0,-3,-18)	9.066	71.48	20.123	19.3	3.203	61.82	40.03	73.65
	Equiv. Refl.: (3,0,-18), (-3,3,-18)								
LiNbO3	(3,4,8)	9.183	73.84	19.247	17.6	2.77	48.82	34.62	59.85
	Equiv. Refl.: (4,-7,8), (7,-4,8), (-3,7,8), (-4,-3,8), (-7,3,8)								

Ei = Cryst	9.561 Refl (h,k,l)	keV EB [keV]	Θ B [$^\circ$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
LiNbO3	(1,6,4)	9.292	76.37	17.921	17.2	2.318	39.91	28.97	49.32
	Equiv. Refl.: (6,-7,4), (7,-6,4), (-1,7,4), (-6,-1,4), (-7,1,4)								
LiNbO3	(3,-7,-8)	9.183	73.84	17.764	17.6	2.77	48.82	34.62	59.85
	Equiv. Refl.: (4,3,-8), (7,-3,-8), (-3,-4,-8), (-4,7,-8), (-7,4,-8)								
LiNbO3	(1,-7,-4)	9.292	76.37	17.025	17.2	2.318	39.91	28.97	49.32
	Equiv. Refl.: (6,1,-4), (7,-1,-4), (-1,-6,-4), (-6,7,-4), (-7,6,-4)								
LiNbO3	(0,-1,-20)	9.051	71.2	16.941	16	3.255	52.14	40.68	66.13
	Equiv. Refl.: (1,0,-20), (-1,1,-20)								
LiNbO3	(0,1,20)	9.051	71.2	16.919	16	3.255	52.14	40.68	66.13
	Equiv. Refl.: (1,-1,20), (-1,0,20)								
LiNbO3	(2,-7,-6)	9.089	71.91	16.66	15.8	3.122	49.46	39.03	63.01
	Equiv. Refl.: (5,2,-6), (7,-2,-6), (-2,-5,-6), (-5,7,-6), (-7,5,-6)								
LiNbO3	(2,5,6)	9.089	71.91	16.56	15.8	3.122	49.46	39.03	63.01
	Equiv. Refl.: (5,-7,6), (7,-5,6), (-2,7,6), (-5,-2,6), (-7,2,6)								
Sapph	(2,3,14)	9.362	78.3	16.525	14.1	1.98	28	24.75	37.37
	Equiv. Refl.: (2,-5,-14), (3,2,-14), (3,-5,14), (5,-2,-14), (5,-3,14), (-2,5,14), (-2,-3,-14), (-3,5,-14), (-3,-2,14), (-5,2,14), (-5,3,-14)								
Quartz	(7,-3,3)	9.507	83.91	16.397	14.4	1.02	14.66	12.75	19.42
	Equiv. Refl.: (7,-4,-3)								
Quartz	(-3,7,-3)	9.507	83.91	16.396	14.4	1.02	14.66	12.75	19.42
Quartz	(-3,-4,3)	9.507	83.91	16.395	14.4	1.02	14.65	12.75	19.42
Quartz	(-4,7,3)	9.507	83.91	16.387	14.4	1.02	14.65	12.75	19.42
Quartz	(-4,-3,-3)	9.507	83.91	16.386	14.4	1.02	14.65	12.75	19.42
LiNbO3	(3,3,-12)	9	70.27	16.325	15.1	3.428	51.68	42.85	67.13
	Equiv. Refl.: (3,-6,-12), (6,-3,-12), (-3,6,-12), (-3,-3,-12), (-6,3,-12)								
LiNbO3	(2,5,-6)	9.089	71.91	16.236	15.4	3.122	48.09	39.03	61.94
	Equiv. Refl.: (-2,7,-6), (-5,-2,-6), (-7,2,-6)								
LiNbO3	(5,-7,-6)	9.089	71.91	16.235	15.4	3.122	48.09	39.03	61.94
	Equiv. Refl.: (7,-5,-6)								
Quartz	(3,-7,3)	9.507	83.91	16.184	14.4	1.02	14.66	12.75	19.42
	Equiv. Refl.: (-7,3,-3), (-7,4,3)								
Quartz	(3,4,-3)	9.507	83.91	16.182	14.4	1.02	14.65	12.75	19.42
Quartz	(4,-7,-3)	9.507	83.91	16.174	14.4	1.02	14.65	12.75	19.42
Quartz	(4,3,3)	9.507	83.91	16.173	14.4	1.02	14.65	12.75	19.42
Sapph	(0,6,0)	9.027	70.75	15.911	13.1	3.339	43.81	41.73	60.5
	Equiv. Refl.: (0,-6,0), (6,0,0), (6,-6,0), (-6,0,0), (-6,6,0)								
LiNbO3	(2,-7,6)	9.089	71.91	15.901	15.4	3.122	48.09	39.03	61.94
	Equiv. Refl.: (5,2,6), (7,-2,6), (-2,-5,6), (-5,7,6), (-7,5,6)								
LiNbO3	(0,-4,16)	9.062	71.41	15.83	14.7	3.215	47.33	40.19	62.09
	Equiv. Refl.: (4,0,16), (-4,4,16)								
LiNbO3	(3,3,12)	9	70.27	15.42	15.1	3.428	51.68	42.85	67.13
	Equiv. Refl.: (3,-6,12), (6,-3,12), (-3,6,12), (-3,-3,12), (-6,3,12)								
Quartz	(-3,6,-5)	9.498	83.41	14.926	13	1.105	14.39	13.82	19.95
	Equiv. Refl.: (-3,-3,5)								
Quartz	(6,-3,5)	9.498	83.41	14.917	13	1.105	14.38	13.82	19.94
Quartz	(6,-3,-5)	9.498	83.41	14.916	13	1.105	14.38	13.82	19.94
Quartz	(-3,-3,-5)	9.498	83.41	14.914	13	1.105	14.38	13.82	19.94
Quartz	(-3,6,5)	9.498	83.41	14.911	13	1.105	14.38	13.82	19.94
LiNbO3	(0,4,-16)	9.062	71.41	14.763	14.7	3.215	47.33	40.19	62.09
	Equiv. Refl.: (4,-4,-16), (-4,0,-16)								

Ei = Cryst	9.561 Refl (h,k,l)	keV EB [keV]	ΘB [°]	IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(3,3,-5) Equiv. Refl.: (3,-6,5)	9.498	83.41	14.498	13	1.105	14.39	13.82	19.95
Quartz	(-6,3,-5)	9.498	83.41	14.489	13	1.105	14.38	13.82	19.94
Quartz	(-6,3,5)	9.498	83.41	14.488	13	1.105	14.38	13.82	19.94
Quartz	(3,3,5)	9.498	83.41	14.487	13	1.105	14.38	13.82	19.94
Quartz	(3,-6,-5)	9.498	83.41	14.483	13	1.105	14.38	13.82	19.94
Quartz	(-6,6,-3)	9.395	79.3	14.112	11.7	1.806	21.2	22.58	30.97
Quartz	(6,0,-3) Equiv. Refl.: (6,-6,3), (-6,0,3)	9.395	79.3	14.111	11.7	1.806	21.2	22.58	30.97
Quartz	(0,6,3) Equiv. Refl.: (0,-6,-3)	9.395	79.3	14.104	11.7	1.806	21.19	22.58	30.96
Sapph	(2,4,10) Equiv. Refl.: (2,-6,-10), (4,2,-10), (4,-6,10), (6,-2,-10), (6,-4,10), (-2,-4,-10), (-4,-6,-10), (-4,-2,10), (-6,2,10), (-6,4,-10)	9.282	76.12	12.113	10.2	2.362	24.12	29.53	38.13
Quartz	(7,-2,2) Equiv. Refl.: (7,-5,-2)	9.384	78.95	11.965	9.8	1.868	18.37	23.35	29.71
Quartz	(-2,7,-2)	9.384	78.95	11.963	9.8	1.868	18.37	23.35	29.71
Quartz	(-2,-5,2) Equiv. Refl.: (-5,7,2), (-5,-2,-2)	9.384	78.95	11.962	9.8	1.868	18.37	23.35	29.71
Quartz	(-7,2,-2) Equiv. Refl.: (-7,5,2)	9.384	78.95	11.62	9.8	1.868	18.37	23.35	29.71
Quartz	(2,5,-2) Equiv. Refl.: (2,-7,2)	9.384	78.95	11.618	9.8	1.868	18.37	23.35	29.71
Quartz	(5,2,2) Equiv. Refl.: (5,-7,-2)	9.384	78.95	11.617	9.8	1.868	18.37	23.35	29.71
Quartz	(1,-1,-8) Equiv. Refl.: (-1,1,8)	9.291	76.35	11.152	9.2	2.321	21.42	29.02	36.07
Quartz	(-1,0,-8)	9.291	76.35	11.151	9.2	2.321	21.42	29.02	36.06
Quartz	(1,0,8)	9.291	76.35	11.15	9.2	2.321	21.42	29.02	36.06
Quartz	(0,1,-8) Equiv. Refl.: (0,-1,8)	9.291	76.35	11.145	9.2	2.321	21.41	29.02	36.06
Quartz	(2,5,1) Equiv. Refl.: (2,-7,-1), (5,2,-1), (5,-7,1), (-7,2,1), (-7,5,-1)	9.171	73.58	10.763	9	2.818	25.45	35.23	43.46
Quartz	(7,-2,-1) Equiv. Refl.: (7,-5,1), (-2,7,1), (-2,-5,-1), (-5,7,-1), (-5,-2,1)	9.171	73.58	10.673	9	2.818	25.45	35.23	43.46
Quartz	(3,0,-7)	9.142	72.97	10.546	8.5	2.929	24.93	36.61	44.29
Quartz	(0,3,7) Equiv. Refl.: (0,-3,-7), (3,-3,7), (-3,0,7)	9.142	72.97	10.545	8.5	2.929	24.93	36.61	44.29
Quartz	(-3,3,-7)	9.142	72.97	10.544	8.5	2.929	24.93	36.61	44.29
Sapph	(2,5,3) Equiv. Refl.: (2,5,-3), (2,-7,3), (2,-7,-3), (5,2,3), (5,2,-3), (5,-7,3), (5,-7,-3), (7,-2,3), (7,-2,-3), (7,-5,3), (7,-5,-3), (-2,7,3), (-2,7,-3), (-2,-5,3), (-2,-5,-3), (-5,7,3), (-5,7,-3), (-5,-2,3), (-5,-2,-3), (-7,2,3), (-7,2,-3), (-7,5,3), (-7,5,-3)	9.504	83.72	10.203	10.3	1.053	10.8	13.16	17.02
Sapph	(2,4,-11) Equiv. Refl.: (2,-6,11), (4,2,11), (4,-6,-11), (6,-2,11), (6,-4,-11), (-2,6,-11), (-2,-4,11), (-4,6,11), (-4,-2,-11), (-6,2,-11), (-6,4,11)	9.536	85.86	10.177	11.2	0.692	7.78	8.65	11.63
Sapph	(2,5,0) Equiv. Refl.: (2,-7,0), (5,2,0), (5,-7,0), (7,-2,0), (7,-5,0), (-2,7,0), (-2,-5,0), (-5,7,0), (-5,-2,0), (-7,2,0), (-7,5,0)	9.395	79.31	9.974	8.9	1.805	16.15	22.56	27.74
Quartz	(-2,1,-8)	9.517	84.49	8.913	8.2	0.922	7.55	11.53	13.78
Quartz	(-2,1,8)	9.517	84.49	8.909	8.2	0.922	7.54	11.53	13.78

Ei = Cryst	9.561 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(1,-2,-8)	9.517	84.49	8.897	8.2	0.922	7.54	11.53	13.77
Quartz	(1,1,8)	9.517	84.49	8.894	8.2	0.922	7.53	11.53	13.77
Quartz	(1,1,-8)	9.517	84.49	8.882	8.2	0.922	7.52	11.53	13.77
Quartz	(1,-2,8)	9.517	84.49	8.877	8.2	0.922	7.52	11.53	13.76
Quartz	(7,-2,-2)	9.384	78.95	8.616	7.7	1.868	14.36	23.35	27.41
Equiv. Refl.: (7,-5,2)									
Quartz	(-2,7,2)	9.384	78.95	8.615	7.7	1.868	14.35	23.35	27.41
Quartz	(-2,-5,-2)	9.384	78.95	8.614	7.7	1.868	14.35	23.35	27.41
Equiv. Refl.: (-5,7,-2), (-5,-2,2)									
Quartz	(-7,2,2)	9.384	78.95	8.597	7.7	1.868	14.36	23.35	27.41
Equiv. Refl.: (-7,5,-2)									
Quartz	(2,-7,-2)	9.384	78.95	8.596	7.7	1.868	14.35	23.35	27.41
Quartz	(2,5,2)	9.384	78.95	8.595	7.7	1.868	14.35	23.35	27.41
Equiv. Refl.: (5,2,-2), (5,-7,2)									
Quartz	(3,4,2)	9.155	73.23	8.445	6.9	2.88	19.91	36	41.14
Equiv. Refl.: (3,-7,-2), (-7,3,2), (-7,4,-2)									
Quartz	(4,3,-2)	9.155	73.23	8.443	6.9	2.88	19.9	36	41.14
Equiv. Refl.: (4,-7,2)									
Quartz	(0,5,-5)	9.272	75.87	8.318	7	2.408	16.91	30.1	34.52
Equiv. Refl.: (5,0,5), (5,-5,-5), (-5,0,-5), (-5,5,5)									
Quartz	(0,-5,5)	9.272	75.87	8.317	7	2.408	16.91	30.1	34.52
Sapph	(3,4,2)	9.201	74.22	8.081	7.2	2.702	19.52	33.77	39.01
Equiv. Refl.: (3,-7,-2), (4,3,-2), (4,-7,2), (7,-3,-2), (7,-4,2), (-3,7,2), (-3,-4,-2), (-4,7,-2), (-4,-3,2), (-7,3,2), (-7,4,-2)									
Quartz	(7,-3,-2)	9.155	73.23	8.045	6.9	2.88	19.91	36	41.14
Equiv. Refl.: (7,-4,2), (-3,7,2)									
Quartz	(-3,-4,-2)	9.155	73.23	8.044	6.9	2.88	19.91	36	41.14
Quartz	(-4,7,-2)	9.155	73.23	8.043	6.9	2.88	19.9	36	41.14
Equiv. Refl.: (-4,-3,2)									
Quartz	(-6,1,4)	9.32	77.1	8.026	7	2.19	15.4	27.37	31.4
Equiv. Refl.: (-6,5,-4)									
Quartz	(1,5,4)	9.32	77.1	8.023	7	2.19	15.39	27.37	31.4
Equiv. Refl.: (1,-6,-4)									
Quartz	(5,1,-4)	9.32	77.1	8.017	7	2.19	15.38	27.37	31.4
Equiv. Refl.: (5,-6,4)									
Quartz	(6,-1,-4)	9.32	77.1	7.916	7	2.19	15.4	27.37	31.4
Equiv. Refl.: (6,-5,4)									
Quartz	(-1,6,4)	9.32	77.1	7.913	7	2.19	15.39	27.37	31.4
Equiv. Refl.: (-1,-5,-4)									
Quartz	(-5,-1,4)	9.32	77.1	7.907	7	2.19	15.38	27.37	31.4
Quartz	(-5,6,-4)	9.32	77.1	7.906	7	2.19	15.38	27.37	31.4
Quartz	(4,-4,6)	9.018	70.6	7.707	6.4	3.367	21.59	42.08	47.3
Equiv. Refl.: (-4,4,-6)									
Quartz	(4,0,-6)	9.018	70.6	7.706	6.4	3.367	21.58	42.08	47.3
Equiv. Refl.: (-4,0,6)									
Quartz	(0,4,6)	9.018	70.6	7.703	6.4	3.367	21.58	42.08	47.29
Equiv. Refl.: (0,-4,-6)									
Quartz	(2,-1,8)	9.517	84.49	7.41	8.2	0.922	7.55	11.53	13.78
Quartz	(2,-1,-8)	9.517	84.49	7.407	8.2	0.922	7.54	11.53	13.78
Quartz	(-1,2,8)	9.517	84.49	7.396	8.2	0.922	7.54	11.53	13.77

Ei = Cryst	9.561 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(-1,-1,-8)	9.517	84.49	7.392	8.2	0.922	7.53	11.53	13.77
Quartz	(-1,-1,8)	9.517	84.49	7.381	8.2	0.922	7.52	11.53	13.77
Quartz	(-1,2,-8)	9.517	84.49	7.375	8.2	0.922	7.52	11.53	13.76
Quartz	(6,0,2)	9.038	70.96	6.281	5.5	3.3	18	41.25	45
Equiv. Refl.: (6,-6,-2), (-6,0,-2), (-6,6,2)									
Quartz	(0,6,-2)	9.038	70.96	6.279	5.5	3.3	18	41.25	45
Equiv. Refl.: (0,-6,2)									
Quartz	(-7,3,3)	9.507	83.91	6.122	6	1.02	6.12	12.75	14.14
Equiv. Refl.: (-7,4,-3)									
Quartz	(4,3,-3)	9.507	83.91	6.117	6	1.02	6.11	12.75	14.14
Quartz	(4,-7,3)	9.507	83.91	6.115	6	1.02	6.11	12.75	14.13
Quartz	(3,-7,-3)	9.507	83.91	6.114	6	1.02	6.11	12.75	14.13
Quartz	(3,4,3)	9.507	83.91	6.113	6	1.02	6.11	12.75	14.13
Sapph	(1,3,16)	9.367	78.44	5.939	5.7	1.956	11.19	24.45	26.89
Equiv. Refl.: (1,-4,-16), (3,1,-16), (3,-4,16), (4,-1,-16), (4,-3,16), (-1,4,16), (-1,-3,-16), (-3,4,-16), (-3,-1,16), (-4,1,16), (-4,3,-16)									
LiNbO3	(1,6,-5)	9.388	79.09	5.48	8	1.843	14.74	23.04	27.35
Equiv. Refl.: (1,-7,5), (6,1,5), (6,-7,-5), (7,-1,5), (7,-6,-5), (-1,7,-5), (-1,-6,5), (-6,7,5), (-6,-1,-5), (-7,1,-5), (-7,6,5)									
Quartz	(7,-4,3)	9.507	83.91	5.189	6	1.02	6.12	12.75	14.14
Quartz	(7,-3,-3)	9.507	83.91	5.188	6	1.02	6.12	12.75	14.14
Quartz	(-4,-3,3)	9.507	83.91	5.183	6	1.02	6.11	12.75	14.14
Quartz	(-4,7,-3)	9.507	83.91	5.182	6	1.02	6.11	12.75	14.13
Quartz	(-3,7,3)	9.507	83.91	5.181	6	1.02	6.11	12.75	14.13
Quartz	(-3,-4,-3)	9.507	83.91	5.18	6	1.02	6.11	12.75	14.13
Quartz	(0,3,-7)	9.142	72.97	4.945	4.4	2.929	12.79	36.61	38.78
Equiv. Refl.: (0,-3,7)									
Quartz	(3,0,7)	9.142	72.97	4.944	4.4	2.929	12.79	36.61	38.78
Quartz	(-3,0,-7)	9.142	72.97	4.943	4.4	2.929	12.79	36.61	38.78
Quartz	(3,-3,-7)	9.142	72.97	4.942	4.4	2.929	12.79	36.61	38.78
Equiv. Refl.: (-3,3,7)									
Sapph	(0,4,14)	8.992	70.14	4.684	4.3	3.453	14.7	43.17	45.6
Equiv. Refl.: (0,-4,-14), (4,0,-14), (4,-4,14), (-4,0,14), (-4,4,-14)									
Quartz	(4,-2,7)	9.484	82.71	4.579	4.7	1.223	5.73	15.29	16.33
Quartz	(4,-2,-7)	9.484	82.71	4.578	4.7	1.223	5.73	15.29	16.33
Quartz	(-2,-2,-7)	9.484	82.71	4.577	4.7	1.223	5.73	15.29	16.33
Quartz	(-2,4,7)	9.484	82.71	4.573	4.7	1.223	5.73	15.29	16.33
Quartz	(-2,4,-7)	9.484	82.71	4.571	4.7	1.223	5.73	15.29	16.33
Equiv. Refl.: (-2,-2,7)									
Quartz	(6,0,3)	9.395	79.3	4.531	4.4	1.806	7.99	22.58	23.95
Equiv. Refl.: (-6,0,-3)									
Quartz	(6,-6,-3)	9.395	79.3	4.53	4.4	1.806	7.99	22.58	23.95
Equiv. Refl.: (-6,6,3)									
Quartz	(0,6,-3)	9.395	79.3	4.527	4.4	1.806	7.99	22.58	23.95
Equiv. Refl.: (0,-6,3)									
Quartz	(0,4,-6)	9.018	70.6	4.179	3.7	3.367	12.43	42.08	43.88
Equiv. Refl.: (0,-4,6), (-4,0,-6)									
Quartz	(4,0,6)	9.018	70.6	4.178	3.7	3.367	12.43	42.08	43.88
Equiv. Refl.: (4,-4,-6), (-4,4,6)									
Quartz	(-4,2,-7)	9.484	82.71	4.17	4.7	1.223	5.73	15.29	16.33

Ei = Cryst	9.561 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(-4,2,7)	9.484	82.71	4.169	4.7	1.223	5.73	15.29	16.33
Quartz	(2,2,7)	9.484	82.71	4.167	4.7	1.223	5.73	15.29	16.33
Quartz	(2,-4,-7)	9.484	82.71	4.163	4.7	1.223	5.73	15.29	16.33
Quartz	(2,2,-7)	9.484	82.71	4.161	4.7	1.223	5.73	15.29	16.33
	Equiv. Refl.: (2,-4,7)								
Sapph	(3,4,-4)	9.348	77.89	3.995	4.3	2.052	8.87	25.65	27.14
	Equiv. Refl.: (3,-7,4), (4,3,4), (4,-7,-4), (7,-3,4), (7,-4,-4), (-3,7,-4), (-3,-4,4), (-4,7,4), (-4,-3,-4), (-7,3,-4), (-7,4,4)								
LiNbO3	(2,4,13)	9.377	78.75	3.992	6.6	1.902	12.63	23.78	26.93
	Equiv. Refl.: (2,-6,-13), (4,2,-13), (4,-6,13), (6,-2,-13), (6,-4,13), (-2,6,13), (-2,-4,-13), (-4,6,-13), (-4,-2,13), (-6,2,13), (-6,4,-13)								
Sapph	(1,5,-7)	9.018	70.6	3.973	3.8	3.367	12.74	42.09	43.98
	Equiv. Refl.: (1,-6,7), (5,1,7), (5,-6,-7), (6,-1,7), (6,-5,-7), (-1,6,-7), (-1,-5,7), (-5,6,7), (-5,-1,-7), (-6,1,-7), (-6,5,7)								
Quartz	(-5,7,1)	9.171	73.58	3.805	3.5	2.818	9.78	35.23	36.56
	Equiv. Refl.: (-5,-2,-1)								
Quartz	(7,-2,1)	9.171	73.58	3.804	3.5	2.818	9.78	35.23	36.56
	Equiv. Refl.: (7,-5,-1), (-2,7,-1), (-2,-5,1)								
Quartz	(2,5,-1)	9.171	73.58	3.738	3.5	2.818	9.78	35.23	36.56
	Equiv. Refl.: (2,-7,1), (5,2,1), (5,-7,-1), (-7,2,-1)								
Quartz	(-7,5,1)	9.171	73.58	3.737	3.5	2.818	9.78	35.23	36.56
LiNbO3	(1,6,1)	9.129	72.71	3.64	5.4	2.976	16.18	37.2	40.57
	Equiv. Refl.: (1,-7,-1), (6,1,-1), (6,-7,1), (7,-1,-1), (7,-6,1), (-1,7,1), (-1,-6,-1), (-6,7,-1), (-6,-1,1), (-7,1,1), (-7,6,-1)								
Quartz	(0,1,8)	9.291	76.35	3.32	3.2	2.321	7.4	29.02	29.94
	Equiv. Refl.: (0,-1,-8)								
Quartz	(1,-1,8)	9.291	76.35	3.317	3.2	2.321	7.39	29.02	29.94
	Equiv. Refl.: (-1,1,-8)								
Quartz	(1,0,-8)	9.291	76.35	3.315	3.2	2.321	7.39	29.02	29.94
	Equiv. Refl.: (-1,0,8)								
Sapph	(0,6,6)	9.47	82.08	1.844	2.9	1.329	3.87	16.62	17.06
	Equiv. Refl.: (0,6,-6), (0,-6,6), (0,-6,-6), (6,0,6), (6,0,-6), (6,-6,6), (6,-6,-6), (-6,0,6), (-6,0,-6), (-6,6,6), (-6,6,-6)								
Sapph	(2,3,-13)	9.028	70.78	1.735	2.2	3.334	7.5	41.68	42.35
	Equiv. Refl.: (2,-5,13), (3,2,13), (3,-5,-13), (5,-2,13), (5,-3,-13), (-2,5,-13), (-2,-3,13), (-3,5,13), (-3,-2,-13), (-5,2,-13), (-5,3,13)								
Quartz	(5,-2,6)	9.365	78.37	1.725	2.2	1.968	4.42	24.6	25
	Equiv. Refl.: (5,-3,-6), (-3,-2,-6)								
Quartz	(-3,5,6)	9.365	78.37	1.724	2.2	1.968	4.42	24.6	25
Quartz	(-2,-3,6)	9.365	78.37	1.721	2.2	1.968	4.41	24.6	24.99
Quartz	(-2,5,-6)	9.365	78.37	1.72	2.2	1.968	4.41	24.6	24.99
Quartz	(7,-4,-2)	9.155	73.23	1.706	2.1	2.88	5.97	36	36.5
Quartz	(7,-3,2)	9.155	73.23	1.705	2.1	2.88	5.97	36	36.5
	Equiv. Refl.: (-3,7,-2), (-3,-4,2), (-4,7,2), (-4,-3,-2)								
Quartz	(0,5,5)	9.272	75.87	1.633	2.1	2.408	5.16	30.1	30.54
	Equiv. Refl.: (0,-5,-5)								
Quartz	(5,-5,5)	9.272	75.87	1.627	2.1	2.408	5.15	30.1	30.53
	Equiv. Refl.: (-5,5,-5)								
Quartz	(5,0,-5)	9.272	75.87	1.626	2.1	2.408	5.15	30.1	30.53
	Equiv. Refl.: (-5,0,5)								

Ei =	9.561	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,3,-17)	9.106	72.26	1.611	3.3	3.059	10.09	38.23	39.54
	Equiv. Refl.: (1,-4,17), (3,1,17), (3,-4,-17), (4,-1,17), (4,-3,-17), (-1,4,-17), (-1,-3,17), (-3,4,17), (-3,-1,-17), (-4,1,-17), (-4,3,17)								
Quartz	(3,4,-2)	9.155	73.23	1.569	2.1	2.88	5.97	36	36.5
	Equiv. Refl.: (3,-7,2), (4,3,2), (4,-7,-2), (-7,3,-2), (-7,4,2)								
Quartz	(-5,2,-6)	9.365	78.37	1.558	2.2	1.968	4.42	24.6	25
Quartz	(3,2,6)	9.365	78.37	1.557	2.2	1.968	4.42	24.6	25
	Equiv. Refl.: (-5,3,6)								
Quartz	(3,-5,-6)	9.365	78.37	1.555	2.2	1.968	4.42	24.6	25
Quartz	(2,3,-6)	9.365	78.37	1.553	2.2	1.968	4.41	24.6	24.99
	Equiv. Refl.: (2,-5,6)								
LiNbO3	(1,4,15)	9.252	75.39	1.521	3.4	2.493	8.52	31.16	32.3
	Equiv. Refl.: (1,4,-15), (1,-5,15), (1,-5,-15), (4,1,15), (4,1,-15), (4,-5,15), (4,-5,-15), (5,-1,15), (5,-1,-15), (5,-4,15), (5,-4,-15), (-1,5,15), (-1,5,-15), (-1,-4,15), (-1,-4,-15), (-4,5,15), (-4,5,-15), (-4,-1,15), (-4,-1,-15), (-5,1,15), (-5,1,-15), (-5,4,15), (-5,4,-15)								
LiNbO3	(3,4,-7)	9.019	70.61	1.482	3	3.365	10.24	42.07	43.29
	Equiv. Refl.: (3,-7,7), (4,3,7), (4,-7,-7), (7,-3,7), (7,-4,-7), (-3,7,-7), (-3,-4,7), (-4,7,7), (-4,-3,-7), (-7,3,-7), (-7,4,7)								
Sapph	(1,2,17)	9.038	70.96	1.351	1.9	3.301	6.16	41.26	41.71
	Equiv. Refl.: (1,-3,-17), (2,1,-17), (2,-3,17), (3,-1,-17), (3,-2,17), (-1,3,17), (-1,-2,-17), (-2,3,-17), (-2,-1,17), (-3,1,17), (-3,2,-17)								
Quartz	(0,6,2)	9.038	70.96	1.177	1.6	3.3	5.15	41.25	41.57
	Equiv. Refl.: (0,-6,-2), (-6,0,2), (-6,6,-2)								
Quartz	(6,0,-2)	9.038	70.96	1.176	1.6	3.3	5.15	41.25	41.57
	Equiv. Refl.: (6,-6,2)								
Sapph	(1,5,8)	9.206	74.33	1.134	1.7	2.683	4.62	33.53	33.85
	Equiv. Refl.: (1,-6,-8), (5,1,-8), (5,-6,8), (6,-1,-8), (6,-5,8), (-1,6,8), (-1,-5,-8), (-5,6,-8), (-5,-1,8), (-6,1,8), (-6,5,-8)								
LiNbO3	(1,5,11)	9.172	73.61	1.13	2.8	2.812	7.75	35.15	36
	Equiv. Refl.: (1,-6,-11), (5,1,-11), (5,-6,11), (6,-1,-11), (6,-5,11), (-1,6,11), (-1,-5,-11), (-5,6,-11), (-5,-1,11), (-6,1,11), (-6,5,-11)								
LiNbO3	(1,2,-19)	9.259	75.55	1.119	2.9	2.463	7.09	30.79	31.6
	Equiv. Refl.: (1,-3,19), (2,1,19), (2,-3,-19), (3,-1,19), (3,-2,-19), (-1,3,-19), (-1,-2,19), (-2,3,19), (-2,-1,-19), (-3,1,-19), (-3,2,19)								
Quartz	(2,-5,-6)	9.365	78.37	0.69	1.1	1.968	2.19	24.6	24.7
Quartz	(2,3,6)	9.365	78.37	0.688	1.1	1.968	2.19	24.6	24.7
Quartz	(-5,2,6)	9.365	78.37	0.687	1.1	1.968	2.19	24.6	24.7
	Equiv. Refl.: (-5,3,-6)								
Quartz	(3,2,-6)	9.365	78.37	0.682	1.1	1.968	2.18	24.6	24.7
	Equiv. Refl.: (3,-5,6)								
Sapph	(3,4,5)	9.457	81.55	0.549	1.4	1.421	1.93	17.77	17.87
	Equiv. Refl.: (3,-7,-5), (4,3,-5), (4,-7,5), (7,-3,-5), (7,-4,5), (-3,7,5), (-3,-4,-5), (-4,7,-5), (-4,-3,5), (-7,3,5), (-7,4,-5)								
Quartz	(-2,5,6)	9.365	78.37	0.497	1.1	1.968	2.19	24.6	24.7
Quartz	(-2,-3,-6)	9.365	78.37	0.496	1.1	1.968	2.19	24.6	24.7
Quartz	(5,-2,-6)	9.365	78.37	0.495	1.1	1.968	2.19	24.6	24.7
	Equiv. Refl.: (5,-3,6)								
Quartz	(-3,5,-6)	9.365	78.37	0.491	1.1	1.968	2.18	24.6	24.7
	Equiv. Refl.: (-3,-2,6)								
Quartz	(-1,6,-4)	9.32	77.1	0.346	0.7	2.19	1.63	27.37	27.42
	Equiv. Refl.: (-1,-5,4)								
Quartz	(6,-5,-4)	9.32	77.1	0.345	0.7	2.19	1.63	27.37	27.42

Quartz	(6,-1,4)	9.32	77.1	0.344	0.7	2.19	1.62	27.37	27.42
Quartz	(-5,6,4)	9.32	77.1	0.342	0.7	2.19	1.62	27.37	27.42
	Equiv. Refl.: (-5,-1,-4)								
Quartz	(1,5,-4)	9.32	77.1	0.331	0.7	2.19	1.63	27.37	27.42
	Equiv. Refl.: (1,-6,4)								
Quartz	(-6,1,-4)	9.32	77.1	0.329	0.7	2.19	1.62	27.37	27.42
	Equiv. Refl.: (-6,5,4)								
Quartz	(5,1,4)	9.32	77.1	0.326	0.7	2.19	1.62	27.37	27.42
	Equiv. Refl.: (5,-6,-4)								
Quartz	(7,-2,0)	9.099	72.11	0.325	0.6	3.086	1.93	38.57	38.62
	Equiv. Refl.: (7,-5,0), (-2,7,0), (-2,-5,0), (-5,7,0), (-5,-2,0)								
Sapph	(3,4,-1)	9.163	73.42	0.319	0.8	2.847	2.16	35.58	35.65
	Equiv. Refl.: (3,-7,1), (4,3,1), (4,-7,-1), (7,-3,1), (7,-4,-1), (-3,7,-1), (-3,-4,1), (-4,7,1), (-4,-3,-1), (-7,3,-1), (-7,4,1)								
Quartz	(2,5,0)	9.099	72.11	0.265	0.6	3.086	1.93	38.57	38.62
	Equiv. Refl.: (2,-7,0), (5,2,0), (5,-7,0), (-7,2,0), (-7,5,0)								

Ei = Cryst	11.682 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Si	(0,2,10)	11.64	85.17	14.931	13	0.987	12.8	12.34	17.78
	Equiv. Refl.: (2,6,8)								
Si	(4,4,8)	11.184	73.21	5.229	4.3	3.525	15.14	44.07	46.6
Si	(1,7,7)	11.357	76.46	3.993	3.6	2.814	10.04	35.17	36.57
	Equiv. Refl.: (3,3,9), (5,5,7)								
Ge	(0,2,10)	11.175	73.05	3.417	7	3.559	24.91	44.49	50.99
	Equiv. Refl.: (2,6,8)								
Ge	(1,5,9)	11.335	76	2.052	5.7	2.913	16.55	36.42	40
	Equiv. Refl.: (3,7,7)								
LiNbO3	(0,-6,18)	11.593	82.92	25	22.7	1.452	32.98	18.15	37.65
	Equiv. Refl.: (6,0,18), (-6,6,18)								
LiNbO3	(0,6,-18)	11.593	82.92	24.5	22.7	1.452	32.98	18.15	37.65
	Equiv. Refl.: (6,-6,-18), (-6,0,-18)								
LiNbO3	(0,6,18)	11.593	82.92	22.9	20.8	1.452	30.24	18.15	35.27
	Equiv. Refl.: (6,-6,18), (-6,0,18)								
LiNbO3	(3,-8,14)	11.573	82.16	22.4	19.8	1.608	31.81	20.09	37.63
	Equiv. Refl.: (5,3,14), (8,-3,14), (-3,-5,14), (-5,8,14), (-8,5,14)								
LiNbO3	(1,6,16)	11.59	82.81	22.2	20.1	1.474	29.6	18.43	34.86
	Equiv. Refl.: (6,-7,16), (7,-6,16), (-1,7,16), (-6,-1,16), (-7,1,16)								
LiNbO3	(2,-5,22)	11.555	81.55	22	19.7	1.736	34.22	21.7	40.52
	Equiv. Refl.: (3,2,22), (5,-2,22), (-2,-3,22), (-3,5,22), (-5,3,22)								
LiNbO3	(0,-6,-18)	11.593	82.92	21.9	20.8	1.452	30.24	18.15	35.27
	Equiv. Refl.: (6,0,-18), (-6,6,-18)								
LiNbO3	(2,-6,20)	11.581	82.47	21.8	19.9	1.545	30.8	19.31	36.35
	Equiv. Refl.: (4,2,20), (6,-2,20), (-2,-4,20), (-4,6,20), (-6,4,20)								
LiNbO3	(2,4,-20)	11.581	82.47	21.2	19.9	1.545	30.8	19.31	36.35
	Equiv. Refl.: (4,-6,-20), (6,-4,-20), (-2,6,-20), (-4,-2,-20), (-6,2,-20)								
LiNbO3	(2,3,-22)	11.555	81.55	21.1	19.7	1.736	34.22	21.7	40.52
	Equiv. Refl.: (3,-5,-22), (5,-3,-22), (-2,5,-22), (-3,-2,-22), (-5,2,-22)								
LiNbO3	(1,-7,-16)	11.59	82.81	20.9	20.1	1.474	29.6	18.43	34.86
	Equiv. Refl.: (6,1,-16), (7,-1,-16), (-1,-6,-16), (-6,7,-16), (-7,6,-16)								
LiNbO3	(3,5,-14)	11.573	82.16	20.5	19.8	1.608	31.81	20.09	37.63
	Equiv. Refl.: (5,-8,-14), (8,-5,-14), (-3,8,-14), (-5,-3,-14), (-8,3,-14)								
LiNbO3	(0,-7,-14)	11.573	82.16	18	16.9	1.608	27.11	20.09	33.74
	Equiv. Refl.: (7,0,-14), (-7,7,-14)								
LiNbO3	(0,7,14)	11.573	82.16	17.6	16.9	1.608	27.11	20.09	33.74
	Equiv. Refl.: (7,-7,14), (-7,0,14)								
Sapph	(0,7,-10)	11.562	81.78	16	13.2	1.687	22.24	21.09	30.65
	Equiv. Refl.: (0,-7,10), (7,0,10), (7,-7,-10), (-7,0,-10), (-7,7,10)								
LiNbO3	(0,-8,-4)	11.267	74.68	15.3	13.5	3.201	43.09	40.01	58.8
	Equiv. Refl.: (2,7,-2), (2,-9,2), (7,2,2), (7,-9,-2), (8,0,-4), (9,-2,2), (9,-7,-2), (-2,9,-2), (-2,-7,2), (-7,9,2), (-7,-2,-2), (-8,8,-4), (-9,2,-2), (-9,7,2)								
Sapph	(3,3,18)	11.615	83.88	15	12.7	1.253	15.94	15.66	22.34
	Equiv. Refl.: (3,3,-18), (3,-6,18), (3,-6,-18), (6,-3,18), (6,-3,-18), (-3,6,18), (-3,6,-18), (-3,-3,18), (-3,-3,-18), (-6,3,18), (-6,3,-18)								
LiNbO3	(0,8,4)	11.267	74.68	14.9	13.5	3.201	43.09	40.01	58.8
	Equiv. Refl.: (8,-8,4), (-8,0,4)								

Ei = Cryst	11.682 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
LiNbO3	(2,7,4)	11.521	80.49	14.8	13.7	1.958	26.74	24.47	36.25
	Equiv. Refl.: (7,-9,4), (9,-7,4), (-2,9,4), (-7,-2,4), (-9,2,4)								
LiNbO3	(2,-9,-4)	11.521	80.49	13.9	13.7	1.958	26.74	24.47	36.25
	Equiv. Refl.: (7,2,-4), (9,-2,-4), (-2,-7,-4), (-7,9,-4), (-9,7,-4)								
LiNbO3	(3,6,-6)	11.358	76.48	12.6	11.7	2.81	32.76	35.12	48.03
	Equiv. Refl.: (3,-9,6), (6,3,6), (6,-9,-6), (9,-3,6), (9,-6,-6), (-3,9,-6), (-3,-6,6), (-6,9,6), (-6,-3,-6), (-9,3,-6), (-9,6,6)								
LiNbO3	(3,-9,-6)	11.358	76.48	11.8	10.9	2.81	30.49	35.12	46.51
	Equiv. Refl.: (6,3,-6), (9,-3,-6), (-3,-6,-6), (-6,9,-6), (-9,6,-6)								
LiNbO3	(0,-3,-24)	11.514	80.28	11.7	10.9	2	21.85	25	33.2
	Equiv. Refl.: (3,0,-24), (-3,3,-24)								
LiNbO3	(0,3,-24)	11.514	80.28	11.5	10.8	2	21.59	25	33.04
	Equiv. Refl.: (3,-3,-24), (-3,0,-24)								
LiNbO3	(3,6,6)	11.358	76.48	11.4	10.9	2.81	30.49	35.12	46.51
	Equiv. Refl.: (6,-9,6), (9,-6,6), (-3,9,6), (-6,-3,6), (-9,3,6)								
LiNbO3	(4,5,8)	11.434	78.18	11.3	10.5	2.446	25.61	30.57	39.88
	Equiv. Refl.: (5,-9,8), (9,-5,8), (-4,9,8), (-5,-4,8), (-9,4,8)								
LiNbO3	(4,-9,-8)	11.434	78.18	10.9	10.5	2.446	25.61	30.57	39.88
	Equiv. Refl.: (5,4,-8), (9,-4,-8), (-4,-5,-8), (-5,9,-8), (-9,5,-8)								
LiNbO3	(1,1,24)	10.999	70.31	10.8	9.7	4.18	40.57	52.25	66.15
	Equiv. Refl.: (1,-2,24), (2,-1,24), (-1,2,24), (-1,-1,24), (-2,1,24)								
LiNbO3	(0,3,24)	11.514	80.28	10.7	10.9	2	21.85	25	33.2
	Equiv. Refl.: (0,4,-22), (1,1,-24), (1,-2,-24), (2,-1,-24), (3,-3,24), (4,-4,-22), (-1,2,-24), (-1,-1,-24), (-2,1,-24), (-3,0,24), (-4,0,-22)								
LiNbO3	(0,-3,24)	11.514	80.28	10.6	10.8	2	21.59	25	33.04
	Equiv. Refl.: (3,0,24), (-3,3,24)								
LiNbO3	(0,-4,22)	11.301	75.33	10.3	9.7	3.058	29.58	38.22	48.33
	Equiv. Refl.: (4,0,22), (-4,4,22)								
LiNbO3	(1,6,-14)	11.06	71.22	9.8	8.6	3.971	34.1	49.64	60.22
	Equiv. Refl.: (6,-7,-14), (7,-6,-14), (-1,7,-14), (-6,-1,-14), (-7,1,-14)								
LiNbO3	(0,5,-20)	11.328	75.86	9.5	8.4	2.943	24.82	36.79	44.38
	Equiv. Refl.: (5,-5,-20), (-5,0,-20), (0,8,0), (0,-8,0), (8,0,0), (8,-8,0), (-8,0,0), (-8,8,0)								
LiNbO3	(3,6,0)	11.037	70.87	9.4	8.4	4.053	33.95	50.66	60.99
	Equiv. Refl.: (6,-9,0), (9,-6,0), (-3,9,0), (-6,-3,0), (-9,3,0)								
LiNbO3	(1,-7,14)	11.06	71.22	9.2	8.6	3.971	34.1	49.64	60.22
	Equiv. Refl.: (3,-9,0), (6,1,14), (6,3,0), (7,-1,14), (9,-3,0), (-1,-6,14), (-3,-6,0), (-6,7,14), (-6,9,0), (-7,6,14), (-9,6,0)								
Quartz	(4,-1,-9)	11.583	82.53	9.1	7.5	1.531	11.45	19.14	22.3
LiNbO3	(3,-7,16)	11.078	71.5	9	8	3.909	31.41	48.86	58.08
	Equiv. Refl.: (4,3,16), (4,4,12), (4,-8,12), (4,-9,4), (5,4,4), (7,-3,16), (8,-4,12), (9,-4,4), (-3,-4,16), (-4,7,16), (-4,8,12), (-4,-4,12), (-4,-5,4), (-5,9,4), (-7,4,16), (-8,4,12), (-9,5,4), (1,5,17), (1,-6,-17), (5,1,-17), (5,-6,17), (6,-1,-17), (6,-5,17), (-1,6,17), (-1,-5,-17), (-5,6,-17), (-5,-1,17), (-6,1,17), (-6,5,-17), (4,-3,9), (-1,4,9), (-1,-3,-9), (-3,4,-9), (-3,-1,9)								
Quartz	(1,3,9)	11.583	82.53	8.9	7.5	1.531	11.44	19.14	22.3
	Equiv. Refl.: (1,-4,-9), (3,1,-9), (3,-4,9), (-4,1,9), (-4,3,-9)								
LiNbO3	(2,-8,10)	10.979	70.02	8.7	7.8	4.247	33.01	53.09	62.51
	Equiv. Refl.: (6,2,10), (8,-2,10), (-2,-6,10), (-6,8,10), (-8,6,10)								
LiNbO3	(4,4,-12)	11.027	70.73	8.6	8	4.085	32.81	51.06	60.69
	Equiv. Refl.: (4,-8,-12), (8,-4,-12), (-4,8,-12), (-4,-4,-12), (-8,4,-12)								

Ei =	11.682	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(3,4,-16)	11.078	71.5	8.5	8	3.909	31.41	48.86	58.08
	Equiv. Refl.: (4,5,-4), (4,-7,-16), (5,-9,-4), (7,-4,-16), (9,-5,-4), (-3,7,-16), (-4,9,-4), (-4,-3,-16), (-5,-4,-4), (-7,3,-16), (-9,4,-4)								
LiNbO3	(1,-4,-22)	11.042	70.94	8.4	7.6	4.036	30.81	50.45	59.11
	Equiv. Refl.: (2,6,-10), (3,1,-22), (4,-1,-22), (6,-8,-10), (8,-6,-10), (-1,-3,-22), (-2,8,-10), (-3,4,-22), (-4,3,-22), (-6,-2,-10), (-8,2,-10)								
Quartz	(4,5,-2)	11.608	83.56	8.3	7	1.318	9.18	16.47	18.86
	Equiv. Refl.: (4,-9,2), (5,4,2), (5,-9,-2), (-9,4,-2), (-9,5,2)								
LiNbO3	(0,-5,20)	11.328	75.86	8.2	8.4	2.943	24.82	36.79	44.38
	Equiv. Refl.: (1,3,22), (3,-4,22), (4,-3,22), (5,0,20), (-1,4,22), (-3,-1,22), (-4,1,22), (-5,5,20), (4,-1,9), (4,-3,-9), (-1,4,-9), (-1,-3,9), (-3,4,9), (-3,-1,-9)								
Quartz	(0,1,-10)	11.562	81.79	8.1	6.7	1.685	11.37	21.06	23.94
	Equiv. Refl.: (0,-1,10), (1,0,10), (1,3,-9), (1,-1,-10), (1,-4,9), (3,1,9), (3,-4,-9), (9,-4,2), (9,-5,-2), (-1,0,-10), (-1,1,10), (-4,1,-9), (-4,3,9), (-4,9,-2), (-4,-5,2), (-5,9,2), (-5,-4,-2)								
Sapph	(0,4,20)	11.284	75.01	7.9	6.4	3.129	19.89	39.11	43.88
	Equiv. Refl.: (0,-4,-20), (4,0,-20), (4,-4,20), (-4,0,20), (-4,4,-20), (0,1,10), (0,-1,-10), (1,0,-10), (1,-1,10), (-1,0,10), (-1,1,-10)								
Sapph	(1,2,23)	11.677	88.33	7	8.7	0.341	2.98	4.26	5.2
	Equiv. Refl.: (1,-3,-23), (2,1,-23), (2,-3,23), (3,-1,-23), (3,-2,23), (-1,3,23), (-1,-2,-23), (-2,3,-23), (-2,-1,23), (-3,1,23), (-3,2,-23)								
Sapph	(2,3,20)	11.581	82.47	6.9	6.1	1.544	9.46	19.3	21.5
	Equiv. Refl.: (2,-5,-20), (3,2,-20), (3,-5,20), (5,-2,-20), (5,-3,20), (-2,5,20), (-2,-3,-20), (-3,5,-20), (-3,-2,20), (-5,2,20), (-5,3,-20)								
Sapph	(3,5,10)	11.562	81.78	6.3	5.4	1.687	9.15	21.09	22.99
	Equiv. Refl.: (3,-8,-10), (5,3,-10), (5,-8,10), (8,-3,-10), (8,-5,10), (-3,8,10), (-3,-5,-10), (-5,8,-10), (-5,-3,10), (-8,3,10), (-8,5,-10)								
LiNbO3	(0,-8,2)	11.16	72.8	6.1	5.6	3.615	20.31	45.19	49.54
	Equiv. Refl.: (8,0,2), (-8,8,2)								
Quartz	(4,-2,9)	11.491	79.62	5.9	4.8	2.139	10.31	26.74	28.66
	Equiv. Refl.: (4,-2,-9), (-2,4,9), (-2,4,-9), (-2,-2,9), (-2,-2,-9)								
LiNbO3	(0,8,-2)	11.16	72.8	5.8	5.6	3.615	20.31	45.19	49.54
	Equiv. Refl.: (8,-8,-2), (-8,0,-2)								
Sapph	(2,6,-4)	11.015	70.55	5.7	4.7	4.126	19.19	51.57	55.02
	Equiv. Refl.: (2,-8,4), (6,2,4), (6,-8,-4), (8,-2,4), (8,-6,-4), (-2,8,-4), (-2,-6,4), (-6,8,4), (-6,-2,-4), (-8,2,-4), (-8,6,4), (4,4,5), (4,4,-5), (4,-8,5), (4,-8,-5), (-8,4,5), (-8,4,-5)								
Sapph	(0,7,8)	11.202	73.52	5.6	4.7	3.457	16.2	43.21	46.15
	Equiv. Refl.: (0,-7,-8), (7,0,-8), (7,-7,8), (-7,0,8), (-7,7,-8), (2,2,9), (2,2,-9), (2,-4,9), (2,-4,-9), (8,-4,5), (8,-4,-5), (-4,2,9), (-4,2,-9), (-4,8,5), (-4,8,-5), (-4,-4,5), (-4,-4,-5)								
Sapph	(1,3,-20)	10.979	70.03	5.5	4.5	4.246	18.99	53.07	56.37
	Equiv. Refl.: (1,5,-16), (1,-4,20), (1,-6,16), (3,1,20), (3,-4,-20), (4,-1,20), (4,-3,-20), (5,1,16), (5,-6,-16), (6,-1,16), (6,-5,-16), (-1,4,-20), (-1,6,-16), (-1,-3,20), (-1,-5,16), (-3,4,20), (-3,-1,-20), (-4,1,-20), (-4,3,20), (-5,6,16), (-5,-1,-16), (-6,1,-16), (-6,5,16), (3,6,0), (3,6,-1), (3,-9,0), (3,-9,1), (6,3,0), (6,3,1), (6,-9,0), (6,-9,-1), (8,-1,-3), (8,-7,3), (9,-4,-1), (9,-5,1), (-1,8,3), (-1,-7,-3), (-4,9,1), (-4,-5,-1), (-5,9,-1), (-5,-4,1), (-7,8,-3), (-7,-1,3), (-9,3,0), (-9,3,-1), (-9,6,0), (-9,6,1)								
Quartz	(0,7,4)	11.183	73.2	5.3	4.2	3.527	14.87	44.09	46.53
	Equiv. Refl.: (0,-7,-4), (1,7,3), (1,-8,-3), (4,5,1), (4,-9,-1), (5,4,-1), (5,-9,1), (7,0,-4), (7,1,-3), (7,-7,4), (7,-8,3), (-7,0,4), (-7,7,-4), (-8,1,3), (-8,7,-3), (-9,4,1), (-9,5,-1)								
Quartz	(1,7,-3)	11.526	80.62	5.2	4.2	1.931	8.03	24.13	25.43
	Equiv. Refl.: (1,-8,3), (7,1,3), (7,-8,-3), (-8,1,-3), (-8,7,3)								
Quartz	(2,6,-4)	11.465	78.93	5.1	4.1	2.286	9.29	28.57	30.05
	Equiv. Refl.: (2,-8,4), (6,2,4), (6,-8,-4), (-8,2,-4), (-8,6,4)								

Ei = Cryst	11.682 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(9,-3,0)	11.564	81.87	5	4.5	1.67	7.5	20.87	22.18
	Equiv. Refl.: (9,-6,0), (-3,9,0), (-3,-6,0), (-6,9,0), (-6,-3,0)								
Sapph	(1,7,0)	11.358	76.48	4.9	4.1	2.81	11.53	35.12	36.97
	Equiv. Refl.: (1,-8,0), (7,1,0), (7,-8,0), (8,-1,0), (8,-7,0), (-1,8,0), (-1,-7,0), (-7,8,0), (-7,-1,0), (-8,1,0), (-8,7,0), (8,-2,4), (8,-6,-4), (-2,8,-4), (-2,-6,4), (-6,8,4), (-6,-2,-4)								
Quartz	(0,6,-6)	11.126	72.25	4.8	3.8	3.74	14.03	46.74	48.81
	Equiv. Refl.: (0,-6,6), (6,0,6), (6,-6,-6), (-6,0,-6), (-6,6,6)								
Quartz	(6,-1,7)	11.414	77.7	4.7	3.8	2.548	9.69	31.84	33.28
	Equiv. Refl.: (6,-5,-7), (8,-1,3), (8,-7,-3), (9,-3,1), (9,-6,-1), (-1,6,-7), (-1,8,-3), (-1,-5,7), (-1,-7,3), (-3,9,-1), (-3,-6,1), (-6,9,1), (-6,-3,-1), (-7,8,3), (-7,-1,-3)								
Quartz	(1,5,-7)	11.414	77.7	4.6	3.8	2.548	9.69	31.84	33.28
	Equiv. Refl.: (1,-6,7), (5,1,7), (5,-6,-7), (-5,6,7), (-5,-1,-7), (-6,1,-7), (-6,5,7)								
Quartz	(1,4,8)	11.348	76.27	4.1	3.3	2.854	9.51	35.68	36.93
	Equiv. Refl.: (1,-5,-8), (4,1,-8), (4,-5,8), (-5,1,8), (-5,4,-8)								
Quartz	(5,-1,-8)	11.348	76.27	4	3.3	2.854	9.51	35.68	36.93
	Equiv. Refl.: (5,-4,8), (-1,5,8), (-1,-4,-8), (-4,5,-8), (-4,-1,8)								
LiNbO3	(2,7,-5)	11.599	83.17	3.9	6	1.399	8.33	17.48	19.36
	Equiv. Refl.: (2,-9,5), (7,2,5), (7,-9,-5), (9,-2,5), (9,-7,-5), (-2,9,-5), (-2,-7,5), (-7,9,5), (-7,-2,-5), (-9,2,-5), (-9,7,5), (7,-3,-6), (7,-4,6), (-3,7,6), (-3,-4,-6), (-4,7,-6), (-4,-3,6)								
Quartz	(3,4,6)	11.221	73.85	3.8	3.1	3.383	10.64	42.29	43.61
	Equiv. Refl.: (3,-7,-6), (4,3,-6), (4,-7,6), (-7,3,6), (-7,4,-6)								
Sapph	(2,2,21)	11.297	75.25	3.7	3.2	3.076	9.87	38.45	39.69
	Equiv. Refl.: (2,2,-21), (2,-4,21), (2,-4,-21), (4,-2,21), (4,-2,-21), (-2,4,21), (-2,4,-21), (-2,-2,21), (-2,-2,-21), (-4,2,21), (-4,2,-21), (2,4,-7), (2,-6,7), (4,2,7), (4,-6,-7), (-6,2,-7), (-6,4,7)								
Quartz	(6,-2,7)	11.131	72.34	3.6	3	3.72	11.09	46.5	47.8
	Equiv. Refl.: (6,-4,-7), (-2,6,-7), (-2,-4,7), (-4,6,7), (-4,-2,-7)								
Quartz	(4,5,-1)	11.437	78.25	3.5	3	2.43	7.25	30.38	31.23
	Equiv. Refl.: (4,-9,1), (5,4,1), (5,-9,-1), (-9,4,-1), (-9,5,1)								
Quartz	(9,-4,1)	11.437	78.25	3.4	3	2.43	7.25	30.38	31.23
	Equiv. Refl.: (9,-5,-1), (-4,9,-1), (-4,-5,1), (-5,9,1), (-5,-4,-1)								
Sapph	(2,4,16)	11.031	70.79	3.3	2.7	4.071	10.99	50.89	52.06
	Equiv. Refl.: (2,-6,-16), (4,2,-16), (4,-6,16), (6,-2,-16), (6,-4,16), (-2,6,16), (-2,-4,-16), (-4,6,-16), (-4,-2,16), (-6,2,16), (-6,4,-16), (1,6,5), (1,7,0), (1,-7,-5), (1,-8,0), (2,6,-3), (2,-8,3), (4,5,2), (4,-9,-2), (5,4,-2), (5,-9,2), (6,1,-5), (6,2,3), (6,-7,5), (6,-8,-3), (7,1,0), (7,-8,0), (8,-1,0), (8,-2,3), (8,-6,-3), (8,-7,0), (9,-4,-2), (9,-5,2), (-1,8,0), (-1,-7,0), (-2,8,-3), (-2,-6,3), (-4,9,2), (-4,-5,-2), (-5,9,-2), (-5,-4,2), (-6,8,3), (-6,-2,-3), (-7,1,5), (-7,6,-5), (-7,8,0), (-7,-1,0), (-8,1,0), (-8,2,-3), (-8,6,3), (-8,7,0), (-9,4,2), (-9,5,-2)								
Quartz	(4,4,4)	11.088	71.65	3.2	2.5	3.874	9.64	48.43	49.38
	Equiv. Refl.: (4,4,-4), (4,-8,4), (4,-8,-4), (-8,4,4), (-8,4,-4)								
Sapph	(2,6,-7)	11.351	76.34	3.1	2.7	2.84	7.68	35.5	36.32
	Equiv. Refl.: (2,-8,7), (6,2,7), (6,-8,-7), (8,-2,7), (8,-6,-7), (-2,8,-7), (-2,-6,7), (-6,8,7), (-6,-2,-7), (-8,2,-7), (-8,6,7), (8,-4,4), (8,-4,-4), (-4,8,4), (-4,8,-4), (-4,-4,4), (-4,-4,-4)								
Quartz	(7,-1,-5)	11.143	72.53	3	2.5	3.676	9.09	45.95	46.84
	Equiv. Refl.: (7,-6,5), (-1,7,5), (-1,-6,-5), (-6,7,-5), (-6,-1,5)								
Quartz	(5,-2,8)	11.16	72.8	2.8	2.4	3.616	8.86	45.2	46.06
	Equiv. Refl.: (5,-3,-8), (8,-1,-1), (8,-7,1), (-1,8,1), (-1,-7,-1), (-2,5,-8), (-2,-3,8), (-3,5,8), (-3,-2,-8), (-7,8,-1), (-7,-1,1)								
Quartz	(2,3,-8)	11.16	72.8	2.6	2.4	3.616	8.86	45.2	46.06
	Equiv. Refl.: (2,-5,8), (3,2,8), (3,-5,-8), (-5,2,-8), (-5,3,8)								

Ei =	11.682	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(1,7,1)	11.06	71.21	2.5	2.2	3.974	8.83	49.67	50.45
	Equiv. Refl.: (1,-8,-1), (7,1,-1), (7,-8,1), (-8,1,1), (-8,7,-1)								
Sapph	(1,7,3)	11.448	78.51	2.4	2.5	2.374	5.83	29.67	30.24
	Equiv. Refl.: (1,7,-3), (1,-8,3), (1,-8,-3), (7,1,3), (7,1,-3), (7,-8,3), (7,-8,-3), (8,-1,3), (8,-1,-3), (8,-7,3), (8,-7,-3), (-1,8,3), (-1,8,-3), (-1,-7,3), (-1,-7,-3), (-7,8,3), (-7,8,-3), (-7,-1,3), (-7,-1,-3), (-8,1,3), (-8,1,-3), (-8,7,3), (-8,7,-3), (3,5,-4), (3,-8,4), (5,3,4), (5,-8,-4), (-8,3,-4)								
Sapph	(1,6,13)	11.654	86.05	2.3	3.3	0.807	2.7	10.09	10.45
	Equiv. Refl.: (1,-7,-13), (4,4,9), (4,4,-9), (4,-8,9), (4,-8,-9), (6,1,-13), (6,-7,13), (7,-1,-13), (7,-6,13), (8,-4,9), (8,-4,-9), (-1,7,13), (-1,-6,-13), (-4,8,9), (-4,8,-9), (-4,-4,9), (-4,-4,-9), (-6,7,-13), (-6,-1,13), (-7,1,13), (-7,6,-13), (-8,4,9), (-8,4,-9), (0,3,-9), (0,-3,9), (3,0,9), (3,-3,-9), (8,-3,4), (8,-5,-4), (-3,0,-9), (-3,3,9), (-3,8,-4), (-3,-5,4), (-5,8,4), (-5,-3,-4), (-8,5,4)								
LiNbO3	(2,7,1)	11.39	77.17	2.1	3.3	2.66	8.82	33.25	34.4
	Equiv. Refl.: (2,-9,-1), (7,2,-1), (7,-9,1), (9,-2,-1), (9,-7,1), (-2,9,1), (-2,-7,-1), (-7,9,-1), (-7,-2,1), (-9,2,1), (-9,7,-1)								
Sapph	(2,6,5)	11.108	71.96	2	2.2	3.804	8.3	47.55	48.27
	Equiv. Refl.: (2,-8,-5), (6,2,-5), (6,-8,5), (8,-2,-5), (8,-6,5), (-2,8,5), (-2,-6,-5), (-6,8,-5), (-6,-2,5), (-8,2,5), (-8,6,-5)								
Quartz	(8,-2,-3)	11.056	71.15	1.9	1.9	3.988	7.73	49.85	50.44
	Equiv. Refl.: (8,-6,3), (-2,8,3), (-2,-6,-3), (-6,8,-3), (-6,-2,3)								
Sapph	(3,4,14)	11.331	75.92	1.8	2.1	2.93	6.15	36.63	37.14
	Equiv. Refl.: (3,-7,-14), (4,3,-14), (4,-7,14), (7,-3,-14), (7,-4,14), (-3,7,14), (-3,-4,-14), (-4,7,-14), (-4,-3,14), (-7,3,14), (-7,4,-14), (2,5,6), (2,-7,-6), (5,2,-6), (5,-1,8), (5,-4,-8), (5,-7,6), (7,-2,-6), (7,-5,6), (-1,5,-8), (-1,-4,8), (-2,7,6), (-2,-5,-6), (-4,5,8), (-4,-1,-8), (-5,7,-6), (-5,-2,6), (-7,2,6), (-7,5,-6)								
Quartz	(1,4,-8)	11.348	76.27	1.7	2	2.854	5.63	35.68	36.12
	Equiv. Refl.: (1,-5,8), (2,6,3), (2,-8,-3), (4,1,8), (4,-5,-8), (6,2,-3), (6,-8,3), (8,-1,1), (8,-7,-1), (-1,8,-1), (-1,-7,1), (-5,1,-8), (-5,4,8), (-7,8,1), (-7,-1,-1), (-8,2,3), (-8,6,-3)								
LiNbO3	(2,4,19)	11.239	74.18	1.6	2.6	3.31	8.46	41.38	42.24
	Equiv. Refl.: (2,-6,-19), (4,2,-19), (4,-6,19), (6,-2,-19), (6,-4,19), (-2,6,19), (-2,-4,-19), (-4,6,-19), (-4,-2,19), (-6,2,19), (-6,4,-19), (1,7,-1), (1,-8,1), (7,1,1), (7,-8,-1), (-8,1,-1), (-8,7,1)								
Sapph	(2,4,-17)	11.367	76.66	1.5	1.8	2.769	5.02	34.62	34.98
	Equiv. Refl.: (2,-6,17), (4,2,17), (4,-6,-17), (6,-2,17), (6,-4,-17), (-2,6,-17), (-2,-4,17), (-4,6,17), (-4,-2,-17), (-6,2,-17), (-6,4,17)								
LiNbO3	(1,3,-23)	11.442	78.36	1.2	2.4	2.406	5.79	30.07	30.62
	Equiv. Refl.: (1,-4,23), (3,1,23), (3,-4,-23), (4,-1,23), (4,-3,-23), (-1,4,-23), (-1,-3,23), (-3,4,23), (-3,-1,-23), (-4,1,-23), (-4,3,23)								
LiNbO3	(3,4,17)	11.372	76.78	1.1	2.1	2.745	5.8	34.31	34.8
	Equiv. Refl.: (3,-7,-17), (4,3,-17), (4,-7,17), (7,-3,-17), (7,-4,17), (-3,7,17), (-3,-4,-17), (-4,7,-17), (-4,-3,17), (-7,3,17), (-7,4,-17)								
Quartz	(3,4,-6)	11.221	73.85	1	1.1	3.383	3.85	42.29	42.47
	Equiv. Refl.: (3,-7,6), (4,3,6), (4,-7,-6), (6,1,5), (6,-7,-5), (7,-1,5), (7,-6,-5), (-1,7,-5), (-1,-6,5), (-6,7,5), (-6,-1,-5), (-7,3,-6), (-7,4,6)								

Ei =	11.682	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,4,21)	11.348	76.28	0.9	1.9	2.853	5.29	35.66	36.05
Equiv. Refl.: (1,4,-21), (1,5,-19), (1,-5,21), (1,-5,-21), (1,-6,19), (4,1,21), (4,1,-21), (4,-5,21), (4,-5,-21), (5,1,19), (5,-1,21), (5,-1,-21), (5,-4,21), (5,-4,-21), (5,-6,-19), (6,-1,19), (6,-5,-19), (-1,5,21), (-1,5,-21), (-1,6,-19), (-1,-4,21), (-1,-4,-21), (-1,-5,19), (-4,5,21), (-4,5,-21), (-4,-1,21), (-4,-1,-21), (-5,1,21), (-5,1,-21), (-5,4,21), (-5,4,-21), (-5,6,19), (-5,-1,-19), (-6,1,-19), (-6,5,19), (2,3,-19), (2,-5,19), (3,2,19), (3,5,7), (3,-5,-19), (3,-8,-7), (5,3,-7), (5,-2,19), (5,-3,-19), (5,-8,7), (8,-3,-7), (8,-5,7), (-2,5,-19), (-2,-3,19), (-3,5,19), (-3,8,7), (-3,-2,-19), (-3,-5,-7), (-5,2,-19), (-5,3,19), (-5,8,-7), (-5,-3,7), (-8,3,7), (-8,5,-7), (1,2,-9), (1,6,-5), (1,7,-2), (1,-3,9), (1,-7,5), (1,-8,2), (2,1,9), (2,4,7), (2,-3,-9), (2,-6,-7), (4,2,-7), (4,-6,7), (6,-2,-7), (6,-4,7), (7,1,2), (7,-3,6), (7,-4,-6), (7,-8,-2), (8,-1,2), (8,-7,-2), (-1,8,-2), (-1,-7,2), (-2,6,7), (-2,-4,-7), (-3,1,-9), (-3,2,9), (-3,7,-6), (-3,-4,6), (-4,6,-7), (-4,7,6), (-4,-2,7), (-4,-3,-6), (-6,2,7), (-6,4,-7), (-7,1,-5), (-7,6,5), (-7,8,2), (-7,-1,-2), (-8,1,-2), (-8,7,2)									
LiNbO3	(4,5,-7)	11.302	75.35	0.8	1.8	3.054	5.4	38.17	38.55
Equiv. Refl.: (4,-9,7), (5,4,7), (5,-9,-7), (9,-4,7), (9,-5,-7), (-4,9,-7), (-4,-5,7), (-5,9,7), (-5,-4,-7), (-9,4,-7), (-9,5,7), (3,-1,9), (3,-2,-9), (-1,3,-9), (-1,-2,9), (-2,3,9), (-2,-1,-9)									
LiNbO3	(2,6,-13)	11.59	82.81	0.7	2.1	1.473	3.11	18.41	18.67
Equiv. Refl.: (2,-8,13), (4,5,5), (4,-9,-5), (5,4,-5), (5,-9,5), (6,2,13), (6,-8,-13), (8,-2,13), (8,-6,-13), (9,-4,-5), (9,-5,5), (-2,8,-13), (-2,-6,13), (-4,9,5), (-4,-5,-5), (-5,9,-5), (-5,-4,5), (-6,8,13), (-6,-2,-13), (-8,2,-13), (-8,6,13), (-9,4,5), (-9,5,-5), (0,7,-4), (0,-7,4), (7,0,4), (7,-7,-4), (8,-2,-4), (8,-3,-4), (8,-5,4), (8,-6,4), (-2,8,4), (-2,-6,-4), (-3,8,4), (-3,-5,-4), (-5,8,-4), (-5,-3,4), (-6,8,-4), (-6,-2,4), (-7,0,-4), (-7,7,4)									
Sapph	(1,6,-11)	11.175	73.06	0.6	0.9	3.558	3.14	44.47	44.58
Equiv. Refl.: (1,-7,11), (6,1,11), (6,-7,-11), (7,-1,11), (7,-6,-11), (-1,7,-11), (-1,-6,11), (-6,7,11), (-6,-1,-11), (-7,1,-11), (-7,6,11), (3,5,4), (3,-8,-4), (5,3,-4), (5,-8,4), (7,-2,6), (7,-5,-6), (-2,7,-6), (-2,-5,6), (-5,7,6), (-5,-2,-6), (-8,3,4), (-8,5,-4)									
Sapph	(1,4,18)	11.015	70.55	0.5	0.7	4.125	3.08	51.57	51.66
Equiv. Refl.: (1,4,-18), (1,-5,18), (1,-5,-18), (2,5,12), (2,5,-12), (2,-7,12), (2,-7,-12), (4,1,18), (4,1,-18), (4,-5,18), (4,-5,-18), (5,2,12), (5,2,-12), (5,-1,18), (5,-1,-18), (5,-4,18), (5,-4,-18), (5,-7,12), (5,-7,-12), (7,-2,12), (7,-2,-12), (7,-5,12), (7,-5,-12), (-1,5,18), (-1,5,-18), (-1,-4,18), (-1,-4,-18), (-2,7,12), (-2,7,-12), (-2,-5,12), (-2,-5,-12), (-4,5,18), (-4,5,-18), (-4,-1,18), (-4,-1,-18), (-5,1,18), (-5,1,-18), (-5,4,18), (-5,4,-18), (-5,7,12), (-5,7,-12), (-5,-2,12), (-5,-2,-12), (-7,2,12), (-7,2,-12), (-7,5,12), (-7,5,-12), (0,6,6), (0,-6,-6), (1,2,9), (1,-3,-9), (2,1,-9), (2,5,-6), (2,6,4), (2,-3,9), (2,-7,6), (2,-8,-4), (3,-1,-9), (3,-2,9), (5,2,6), (5,-7,-6), (6,0,-6), (6,2,-4), (6,-1,-7), (6,-5,7), (6,-6,6), (6,-8,4), (-1,3,9), (-1,6,7), (-1,-2,-9), (-1,-5,-7), (-2,3,-9), (-2,-1,9), (-3,1,9), (-3,2,-9), (-5,6,-7), (-5,-1,7), (-6,0,6), (-6,6,-6), (-7,2,-6), (-7,5,6), (-8,2,4), (-8,6,-4)									
LiNbO3	(3,6,3)	11.118	72.12	0.4	1.1	3.768	4.03	47.1	47.28
Equiv. Refl.: (3,6,-3), (3,-9,3), (3,-9,-3), (6,3,3), (6,3,-3), (6,-9,3), (6,-9,-3), (9,-3,3), (9,-3,-3), (9,-6,3), (9,-6,-3), (-3,9,3), (-3,9,-3), (-3,-6,3), (-3,-6,-3), (-6,9,3), (-6,9,-3), (-6,-3,3), (-6,-3,-3), (-9,3,3), (-9,3,-3), (-9,6,3), (-9,6,-3), (0,3,9), (0,-3,-9), (1,5,7), (1,-6,-7), (2,3,8), (2,-5,-8), (3,0,-9), (3,2,-8), (3,-3,9), (3,-5,8), (4,5,0), (4,-9,0), (5,1,-7), (5,4,0), (5,-6,7), (5,-9,0), (9,-4,0), (9,-5,0), (-3,0,9), (-3,3,-9), (-4,9,0), (-4,-5,0), (-5,2,8), (-5,3,-8), (-5,9,0), (-5,-4,0), (-6,1,7), (-6,5,-7), (-9,4,0), (-9,5,0)									
LiNbO3	(2,6,11)	11.169	72.95	0.3	1	3.583	3.5	44.79	44.92
Equiv. Refl.: (2,-8,-11), (6,2,-11), (6,-8,11), (8,-2,-11), (8,-6,11), (-2,8,11), (-2,-6,-11), (-6,8,-11), (-6,-2,11), (-8,2,11), (-8,6,-11), (1,7,2), (1,-8,-2), (5,-2,-8), (5,-3,8), (7,1,-2), (7,-8,2), (8,-1,-2), (8,-7,2), (-1,8,2), (-1,-7,-2), (-2,5,8), (-2,-3,-8), (-3,5,-8), (-3,-2,8), (-7,8,-2), (-7,-1,2), (-8,1,2), (-8,7,-2)									
LiNbO3	(1,7,9)	11.243	74.24	0.2	0.8	3.296	2.75	41.2	41.3
Equiv. Refl.: (1,7,-9), (1,-8,9), (1,-8,-9), (3,5,13), (3,-8,-13), (5,3,-13), (5,-8,13), (7,1,9), (7,1,-9), (7,-8,9), (7,-8,-9), (8,-1,9), (8,-1,-9), (8,-3,-13), (8,-5,13), (8,-7,9), (8,-7,-9), (-1,8,9), (-1,8,-9), (-1,-7,9), (-1,-7,-9), (-3,8,13), (-3,-5,-13), (-5,8,-13), (-5,-3,13), (-7,8,9), (-7,8,-9), (-7,-1,9), (-7,-1,-9), (-8,1,9), (-8,1,-9), (-8,3,13), (-8,5,-13), (-8,7,9), (-8,7,-9), (0,0,24), (0,0,-24), (3,4,-13), (3,5,-8), (3,-7,13), (3,-8,8), (4,3,13), (4,-7,-13), (5,3,8), (5,-8,-8), (7,-3,13), (7,-4,-13), (8,-3,8), (8,-5,-8), (-3,7,-13), (-3,8,-8), (-3,-4,13), (-3,-5,8), (-4,7,13)									

(-4,-3,-13), (-5,8,8), (-5,-3,-8), (-7,3,-13), (-7,4,13), (-8,3,-8), (-8,5,8), (3,3,7), (3,3,-7)
(3,-6,7), (3,-6,-7), (6,-3,7), (6,-3,-7), (-3,6,7), (-3,6,-7), (-3,-3,7), (-3,-3,-7), (-6,3,7)
(-6,3,-7)

Sapph	(1,2,-22)	11.229	74	0.1	0.3	3.35	0.88	41.87	41.88
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Equiv. Refl.: (1,-3,22), (2,1,22), (2,6,8), (2,-3,-22), (2,-8,-8), (3,-1,22), (3,-2,-22), (6,2,-8), (6,-8,8)
(8,-2,-8), (8,-6,8), (-1,3,-22), (-1,-2,22), (-2,3,22), (-2,8,8), (-2,-1,-22), (-2,-6,-8), (-3,1,-22)
(-3,2,22), (-6,8,-8), (-6,-2,8), (-8,2,8), (-8,6,-8)

Ei = Cryst	11.136 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Si	(4,6,6)	10.708	74.06	6.377	5.4	3.181	17.32	39.76	43.37
Si	(1,3,9)	10.889	77.9	5.363	4.8	2.387	11.43	29.84	31.95
Ge	(4,4,8)	10.736	74.6	0.649	0.8	3.066	2.34	38.33	38.4
Ge	(1,7,7)	10.903	78.26	0.348	0.9	2.315	2	28.94	29.01
Equiv. Refl.: (3,3,9), (5,5,7)									
Quartz	(2,4,-7)	11.131	88.33	37.7	32.7	0.324	10.6	4.05	11.35
Equiv. Refl.: (2,-6,7), (4,2,7), (4,-6,-7), (-6,2,-7), (-6,4,7)									
Quartz	(2,4,-7)	11.131	88.33	37.7	32.7	0.324	10.6	4.05	11.35
Equiv. Refl.: (2,-6,7), (4,2,7), (4,-6,-7), (-6,2,-7), (-6,4,7)									
Quartz	(6,-2,7)	11.131	88.33	36.8	32.7	0.324	10.6	4.05	11.34
Equiv. Refl.: (6,-4,-7), (-2,6,-7), (-2,-4,7), (-4,6,7), (-4,-2,-7)									
Quartz	(0,6,-6)	11.126	87.55	33.1	28.2	0.476	13.41	5.95	14.67
Equiv. Refl.: (0,-6,6)									
Quartz	(6,0,6)	11.126	87.55	33	28.2	0.476	13.4	5.95	14.66
Equiv. Refl.: (6,-6,-6), (-6,0,-6), (-6,6,6)									
LiNbO3	(3,-7,16)	11.078	84.17	28.7	26.5	1.138	30.14	14.22	33.33
Equiv. Refl.: (4,3,16), (7,-3,16), (-3,-4,16), (-4,7,16), (-7,4,16)									
LiNbO3	(1,6,-14)	11.06	83.32	27.6	25.1	1.304	32.71	16.3	36.55
Equiv. Refl.: (6,-7,-14), (7,-6,-14), (-1,7,-14), (-6,-1,-14), (-7,1,-14)									
LiNbO3	(3,4,-16)	11.078	84.17	27	26.5	1.138	30.14	14.22	33.33
Equiv. Refl.: (4,-7,-16), (7,-4,-16), (-3,7,-16), (-4,-3,-16), (-7,3,-16)									
LiNbO3	(1,-7,14)	11.06	83.32	25.8	25.1	1.304	32.71	16.3	36.55
Equiv. Refl.: (6,1,14), (7,-1,14), (-1,-6,14), (-6,7,14), (-7,6,14)									
LiNbO3	(1,1,24)	10.999	81.01	24.2	22.1	1.762	38.9	22.03	44.7
Equiv. Refl.: (1,-2,24), (2,-1,24), (-1,2,24), (-1,-1,24), (-2,1,24)									
LiNbO3	(1,1,-24)	10.999	81.01	24.1	22.1	1.762	38.9	22.03	44.7
Equiv. Refl.: (1,-2,-24), (2,-1,-24), (-1,2,-24), (-1,-1,-24), (-2,1,-24)									
LiNbO3	(3,6,0)	11.037	82.34	23.4	21.8	1.498	32.57	18.72	37.57
Equiv. Refl.: (6,-9,0), (9,-6,0), (-3,9,0), (-6,-3,0), (-9,3,0)									
LiNbO3	(3,-9,0)	11.037	82.34	22.9	21.8	1.498	32.57	18.72	37.57
Equiv. Refl.: (6,3,0), (9,-3,0), (-3,-6,0), (-6,9,0), (-9,6,0)									
LiNbO3	(4,4,12)	11.027	81.99	21.8	20.1	1.568	31.48	19.59	37.08
Equiv. Refl.: (4,-8,12), (8,-4,12), (-4,8,12), (-4,-4,12), (-8,4,12)									
LiNbO3	(1,-4,-22)	11.042	82.54	21.5	20.3	1.459	29.58	18.23	34.74
Equiv. Refl.: (3,1,-22), (4,-1,-22), (-1,-3,-22), (-3,4,-22), (-4,3,-22)									
LiNbO3	(1,3,22)	11.042	82.54	20.9	20.3	1.459	29.58	18.23	34.74
Equiv. Refl.: (3,-4,22), (4,-3,22), (-1,4,22), (-3,-1,22), (-4,1,22)									
LiNbO3	(4,4,-12)	11.027	81.99	20.7	20.1	1.568	31.48	19.59	37.08
Equiv. Refl.: (4,-8,-12), (8,-4,-12), (-4,8,-12), (-4,-4,-12), (-8,4,-12)									
LiNbO3	(4,-9,4)	11.006	81.25	20.3	18.5	1.714	31.76	21.43	38.31
Equiv. Refl.: (5,4,4), (9,-4,4), (-4,-5,4), (-5,9,4), (-9,5,4)									
LiNbO3	(4,5,-4)	11.006	81.25	18.9	18.5	1.714	31.76	21.43	38.31
Equiv. Refl.: (5,-9,-4), (9,-5,-4), (-4,9,-4), (-5,-4,-4), (-9,4,-4)									
LiNbO3	(2,-8,10)	10.979	80.36	18	16.8	1.891	31.67	23.63	39.52
Equiv. Refl.: (6,2,10), (8,-2,10), (-2,-6,10), (-6,8,10), (-8,6,10)									
LiNbO3	(4,5,2)	10.897	78.1	17.7	16.2	2.346	37.96	29.32	47.97
Equiv. Refl.: (5,-9,2), (9,-5,2), (-4,9,2), (-5,-4,2), (-9,4,2)									

Ei = Cryst	11.136 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
LiNbO3	(2,6,-10)	10.979	80.36	17.4	16.8	1.891	31.67	23.63	39.52
	Equiv. Refl.: (4,-9,-2), (5,4,-2), (6,-8,-10), (8,-6,-10), (9,-4,-2), (-2,8,-10), (-4,-5,-2), (-5,9,-2), (-6,-2,-10), (-8,2,-10), (-9,5,-2)								
LiNbO3	(3,3,18)	10.816	76.24	15.8	14.2	2.727	38.78	34.09	51.64
	Equiv. Refl.: (3,-6,18), (6,-3,18), (-3,6,18), (-3,-3,18), (-6,3,18)								
LiNbO3	(3,3,-18)	10.816	76.24	15.1	14.2	2.727	38.78	34.09	51.64
	Equiv. Refl.: (3,-6,-18), (6,-3,-18), (-3,6,-18), (-3,-3,-18), (-6,3,-18)								
LiNbO3	(1,-8,-6)	10.835	76.66	14.7	13.6	2.641	36.02	33.02	48.86
	Equiv. Refl.: (7,1,-6), (8,-1,-6), (-1,-7,-6), (-7,8,-6), (-8,7,-6)								
LiNbO3	(1,7,6)	10.835	76.66	14.6	13.6	2.641	36.02	33.02	48.86
	Equiv. Refl.: (7,-8,6), (8,-7,6), (-1,8,6), (-7,-1,6), (-8,1,6)								
LiNbO3	(0,7,-10)	10.711	74.13	14	12.7	3.166	40.32	39.58	56.5
	Equiv. Refl.: (7,-7,-10), (-7,0,-10)								
LiNbO3	(1,7,-6)	10.835	76.66	13.9	12.9	2.641	33.98	33.02	47.38
	Equiv. Refl.: (7,-8,-6), (8,-7,-6), (-1,8,-6), (-7,-1,-6), (-8,1,-6)								
LiNbO3	(0,-7,10)	10.711	74.13	13.8	12.7	3.166	40.32	39.58	56.5
	Equiv. Refl.: (7,0,10), (-7,7,10)								
LiNbO3	(1,-8,6)	10.835	76.66	13.5	12.9	2.641	33.98	33.02	47.38
	Equiv. Refl.: (7,1,6), (8,-1,6), (-1,-7,6), (-7,8,6), (-8,7,6)								
Sapph	(2,6,-4)	11.015	81.55	13	11.1	1.653	18.34	20.67	27.63
	Equiv. Refl.: (2,-8,4), (6,2,4), (6,-8,-4), (8,-2,4), (8,-6,-4), (-2,8,-4), (-2,-6,4), (-6,8,4), (-6,-2,-4), (-8,2,-4), (-8,6,4)								
LiNbO3	(2,-8,-8)	10.646	72.94	12.3	11.3	3.417	38.54	42.72	57.53
	Equiv. Refl.: (6,2,-8), (8,-2,-8), (-2,-6,-8), (-6,8,-8), (-8,6,-8)								
LiNbO3	(0,4,20)	10.532	71.04	12.1	11.1	3.825	42.31	47.82	63.84
	Equiv. Refl.: (0,-4,-20), (2,6,8), (4,0,-20), (4,-4,20), (6,-8,8), (8,-6,8), (-2,8,8), (-4,0,20), (-4,4,-20), (-6,-2,8), (-8,2,8)								
LiNbO3	(3,5,10)	10.711	74.13	11.7	10.6	3.166	33.4	39.58	51.79
	Equiv. Refl.: (5,-8,10), (8,-5,10), (-3,8,10), (-5,-3,10), (-8,3,10), (1,3,-20), (1,6,10), (1,-4,20), (1,-7,-10), (3,1,20), (3,-4,-20), (4,-1,20), (4,-3,-20), (6,1,-10), (6,-7,10), (7,-1,-10), (7,-6,10), (-1,4,-20), (-1,7,10), (-1,-3,20), (-1,-6,-10), (-3,4,20), (-3,-1,-20), (-4,1,-20), (-4,3,20), (-6,7,-10), (-6,-1,10), (-7,1,10), (-7,6,-10)								
LiNbO3	(2,-5,-20)	10.804	75.97	11.5	10.5	2.783	29.31	34.78	45.49
	Equiv. Refl.: (3,2,-20), (5,-2,-20), (-2,-3,-20), (-3,5,-20), (-5,3,-20), (-4,6,-7)								
Quartz	(6,-2,-7)	11.131	88.33	11.4	11.9	0.324	3.87	4.05	5.6
	Equiv. Refl.: (6,-4,7), (-2,6,7), (-2,-4,-7), (-4,-2,7)								
LiNbO3	(1,5,-16)	10.542	71.2	11.2	10.1	3.791	38.23	47.39	60.89
	Equiv. Refl.: (5,-6,-16), (6,-5,-16), (-1,6,-16), (-5,-1,-16), (-6,1,-16)								
LiNbO3	(1,-6,16)	10.542	71.2	11.1	10.1	3.791	38.23	47.39	60.89
	Equiv. Refl.: (5,1,16), (6,-1,16), (-1,-5,16), (-5,6,16), (-6,5,16)								
LiNbO3	(3,-8,-10)	10.711	74.13	10.8	10.6	3.166	33.4	39.58	51.79
	Equiv. Refl.: (5,3,-10), (8,-3,-10), (-3,-5,-10), (-5,8,-10), (-8,5,-10)								
LiNbO3	(2,3,20)	10.804	75.97	10.7	10.5	2.783	29.31	34.78	45.49
	Equiv. Refl.: (3,-5,20), (5,-3,20), (-2,5,20), (-3,-2,20), (-5,2,20)								
LiNbO3	(1,-3,22)	10.503	70.59	10.6	9.6	3.923	37.59	49.04	61.79
	Equiv. Refl.: (1,-8,0), (2,1,22), (3,-1,22), (7,1,0), (8,-1,0), (-1,-2,22), (-1,-7,0), (-2,3,22), (-3,2,22), (-7,8,0), (-8,7,0), (2,4,7), (2,-6,-7), (4,2,-7), (4,-6,7), (-6,2,7), (-6,4,-7)								
LiNbO3	(1,7,0)	10.498	70.51	10.5	9.6	3.941	37.83	49.26	62.11
	Equiv. Refl.: (7,-8,0), (8,-7,0), (-1,8,0), (-7,-1,0), (-8,1,0)								
LiNbO3	(1,2,-22)	10.503	70.59	10.4	9.6	3.923	37.59	49.04	61.79
	Equiv. Refl.: (2,-3,-22), (3,-2,-22), (-1,3,-22), (-2,-1,-22), (-3,1,-22)								

Ei =	11.136	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
LiNbO3	(3,-7,-14)	10.523	70.9	10.3	9.2	3.856	35.63	48.2	59.94
	Equiv. Refl.: (4,3,-14), (7,-3,-14), (-3,-4,-14), (-4,7,-14), (-7,4,-14), (2,6,5), (2,-8,-5), (6,2,-5), (6,-8,5), (8,-2,-5), (8,-6,5), (-2,8,5), (-2,-6,-5), (-6,8,-5), (-6,-2,5), (-8,2,5), (-8,6,-5), (4,4,-4), (4,-8,4)								
Quartz	(4,4,4)	11.088	84.68	10.2	8.9	1.037	9.22	12.96	15.9
	Equiv. Refl.: (4,-8,-4), (-8,4,4), (-8,4,-4)								
Quartz	(8,-4,4)	11.088	84.68	10	8.9	1.037	9.22	12.96	15.9
	Equiv. Refl.: (8,-4,-4), (-4,8,4), (-4,8,-4), (-4,-4,4), (-4,-4,-4)								
LiNbO3	(3,4,14)	10.523	70.9	9.8	9.2	3.856	35.63	48.2	59.94
	Equiv. Refl.: (4,-7,14), (7,-4,14), (-3,7,14), (-4,-3,14), (-7,3,14)								
Quartz	(0,5,7)	10.841	76.79	9.1	7.1	2.613	18.62	32.67	37.6
	Equiv. Refl.: (0,-5,-7), (5,0,-7), (5,-5,7), (-5,0,7), (-5,5,-7)								
Quartz	(2,6,-3)	11.056	83.11	8.8	7.6	1.345	10.21	16.82	19.67
	Equiv. Refl.: (2,-8,3), (6,2,3), (6,-8,-3), (-8,2,-3), (-8,6,3)								
Quartz	(8,-2,3)	11.056	83.11	8.7	7.6	1.345	10.21	16.82	19.67
	Equiv. Refl.: (8,-6,-3), (-2,8,-3), (-2,-6,3), (-6,8,3), (-6,-2,-3)								
Quartz	(0,4,8)	10.87	77.46	8.6	7	2.476	17.3	30.96	35.46
	Equiv. Refl.: (0,-4,-8), (4,0,-8), (4,-4,8), (-4,0,8), (-4,4,-8)								
Quartz	(3,5,-3)	10.764	75.14	8.3	6.5	2.954	19.26	36.92	41.64
	Equiv. Refl.: (3,-8,3), (5,3,3), (5,-8,-3), (8,-3,3), (8,-5,-3), (-3,8,-3), (-3,-5,3), (-5,8,3), (-5,-3,-3), (-8,3,-3), (-8,5,3)								
LiNbO3	(0,0,-24)	10.732	74.52	8	7.5	3.083	23.06	38.54	44.92
	Equiv. Refl.: (8,-1,0), (8,-7,0), (-1,8,0), (-1,-7,0), (-7,8,0), (-7,-1,0)								
Quartz	(1,7,0)	11	81.04	7.8	6.6	1.757	11.68	21.96	24.87
	Equiv. Refl.: (1,-8,0), (7,1,0), (7,-8,0), (-8,1,0), (-8,7,0)								
Sapph	(2,4,16)	11.031	82.14	7.6	6.8	1.538	10.51	19.22	21.9
	Equiv. Refl.: (2,-6,-16), (4,2,-16), (4,-6,16), (6,-2,-16), (6,-4,16), (-2,6,16), (-2,-4,-16), (-4,6,-16), (-4,-2,16), (-6,2,16), (-6,4,-16)								
Sapph	(1,5,14)	10.715	74.2	7.5	6.2	3.152	19.52	39.4	43.97
	Equiv. Refl.: (1,-6,-14), (3,5,4), (3,-8,-4), (5,1,-14), (5,3,-4), (5,-6,14), (5,-8,4), (6,-1,-14), (6,-5,14), (8,-3,-4), (8,-5,4), (-1,6,14), (-1,-5,-14), (-3,8,4), (-3,-5,-4), (-5,6,-14), (-5,8,-4), (-5,-1,14), (-5,-3,4), (-6,1,14), (-6,5,-14), (-8,3,4), (-8,5,-4)								
Quartz	(8,-1,-1)	11.06	83.29	7.2	6.4	1.311	8.43	16.39	18.43
	Equiv. Refl.: (8,-7,1), (-1,8,1), (-1,-7,-1), (-7,8,-1), (-7,-1,1)								
Quartz	(1,7,1)	11.06	83.29	7.1	6.4	1.311	8.43	16.39	18.43
	Equiv. Refl.: (1,-8,-1), (7,1,-1), (7,-8,1), (-8,1,1), (-8,7,-1)								
LiNbO3	(0,0,24)	10.732	74.52	6.9	7.5	3.083	23.06	38.54	44.92
Sapph	(4,4,6)	10.809	76.08	6.7	5.7	2.759	15.63	34.49	37.87
	Equiv. Refl.: (4,4,-6), (4,-8,6), (4,-8,-6), (8,-4,6), (8,-4,-6), (-4,8,6), (-4,8,-6), (-4,-4,6), (-4,-4,-6), (-8,4,6), (-8,4,-6)								
Quartz	(8,-2,-3)	11.056	83.11	6.5	5.5	1.345	7.38	16.82	18.37
	Equiv. Refl.: (8,-6,3), (-2,8,3), (-2,-6,-3), (-6,8,-3), (-6,-2,3)								
Sapph	(0,5,16)	10.719	74.27	6	5.1	3.136	16.06	39.2	42.36
	Equiv. Refl.: (0,-5,-16), (5,0,-16), (5,-5,16), (-5,0,16), (-5,5,-16), (8,-1,1), (8,-7,-1), (-1,8,-1), (-1,-7,1), (-7,8,1), (-7,-1,-1)								
Quartz	(2,6,3)	11.056	83.11	5.9	5.5	1.345	7.39	16.82	18.37
	Equiv. Refl.: (2,-8,-3), (6,2,-3), (6,-8,3), (-8,2,3), (-8,6,-3)								
Quartz	(1,7,-1)	11.06	83.29	5.5	5.2	1.311	6.78	16.39	17.73
	Equiv. Refl.: (1,-8,1), (7,1,1), (7,-8,-1), (-8,1,-1), (-8,7,1)								

Ei =	11.136	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(0,7,2)	10.574	71.72	5.3	4.6	3.678	16.76	45.98	48.94
	Equiv. Refl.: (0,-7,-2), (7,0,-2), (7,-7,2), (-7,0,2), (-7,7,-2)								
Quartz	(1,5,6)	10.638	72.8	5.1	4.2	3.446	14.52	43.08	45.46
	Equiv. Refl.: (1,-6,-6), (5,1,-6), (5,-6,6), (6,-1,-6), (6,-5,6), (-1,6,6), (-1,-5,-6), (-5,6,-6), (-5,-1,6), (-6,1,6), (-6,5,-6)								
Quartz	(0,2,-9)	10.727	74.41	4.9	3.9	3.106	12.23	38.83	40.71
	Equiv. Refl.: (0,-2,9), (2,0,9), (2,-2,-9), (-2,0,-9), (-2,2,9)								
Quartz	(2,6,2)	10.754	74.95	4.8	3.9	2.994	11.67	37.43	39.21
	Equiv. Refl.: (2,-8,-2), (6,2,-2), (6,-8,2), (8,-2,-1), (8,-2,-2), (8,-6,1), (8,-6,2), (-2,8,1), (-2,8,2), (-2,-6,-1), (-2,-6,-2), (-6,8,-1), (-6,8,-2), (-6,-2,1), (-6,-2,2), (-8,2,2), (-8,6,-2)								
Sapph	(0,6,12)	10.69	73.73	4.7	3.9	3.249	12.83	40.61	42.59
	Equiv. Refl.: (0,6,-12), (0,-6,12), (0,-6,-12), (6,0,12), (6,0,-12), (6,-6,12), (6,-6,-12), (-6,0,12), (-6,0,-12), (-6,6,12), (-6,6,-12), (2,6,1), (2,-8,-1), (6,2,-1), (6,-8,1), (-8,2,1), (-8,6,-1)								
Quartz	(0,6,6)	11.126	87.55	4.2	5.3	0.476	2.53	5.95	6.46
	Equiv. Refl.: (0,-6,-6), (6,-6,6), (-6,6,-6)								
Quartz	(6,0,-6)	11.126	87.55	4.1	5.3	0.476	2.52	5.95	6.46
	Equiv. Refl.: (-6,0,6)								
Quartz	(4,4,3)	10.665	73.27	3.9	3.2	3.347	10.56	41.84	43.15
	Equiv. Refl.: (4,4,-3), (4,-8,3), (4,-8,-3), (-8,4,3), (-8,4,-3)								
Quartz	(1,6,-4)	10.599	72.13	3.8	3.1	3.591	11.07	44.88	46.23
	Equiv. Refl.: (1,-7,4), (6,1,4), (6,-7,-4), (-7,1,-4), (-7,6,4)								
Sapph	(2,6,-1)	10.859	77.19	3.7	3.4	2.531	8.59	31.64	32.79
	Equiv. Refl.: (2,-8,1), (6,2,1), (6,-8,-1), (8,-2,1), (8,-6,-1), (-2,8,-1), (-2,-6,1), (-6,8,1), (-6,-2,-1), (-8,2,-1), (-8,6,1), (8,-4,3), (8,-4,-3), (-4,8,3), (-4,8,-3), (-4,-4,3), (-4,-4,-3)								
Sapph	(1,6,-8)	10.578	71.79	3.6	3.2	3.663	11.54	45.79	47.22
	Equiv. Refl.: (1,-7,8), (6,1,8), (6,-7,-8), (7,-1,8), (7,-6,-8), (-1,7,-8), (-1,-6,8), (-6,7,8), (-6,-1,-8), (-7,1,-8), (-7,6,8), (7,-1,4), (7,-6,-4), (-1,7,-4), (-1,-6,4), (-6,7,4), (-6,-1,-4)								
Quartz	(1,3,-8)	10.573	71.71	3.3	2.7	3.681	9.96	46.01	47.07
	Equiv. Refl.: (1,-4,8), (3,1,8), (3,-4,-8), (4,-1,8), (4,-3,-8), (7,-3,-5), (7,-4,5), (-1,4,-8), (-1,-3,8), (-3,4,8), (-3,7,5), (-3,-1,-8), (-3,-4,-5), (-4,1,-8), (-4,3,8), (-4,7,-5), (-4,-3,5)								
Quartz	(3,4,5)	10.556	71.43	3.1	2.9	3.741	10.83	46.76	48
	Equiv. Refl.: (3,-7,-5), (4,3,-5), (4,-7,5), (-7,3,5), (-7,4,-5)								
Quartz	(3,5,3)	10.764	75.14	3	2.8	2.954	8.16	36.92	37.81
	Equiv. Refl.: (3,-8,-3), (5,3,-3), (5,-8,3), (-8,3,3), (-8,5,-3)								
Quartz	(8,-3,-3)	10.764	75.14	2.8	2.8	2.954	8.16	36.92	37.81
	Equiv. Refl.: (8,-5,3), (-3,8,3), (-3,-5,-3), (-5,8,-3), (-5,-3,3)								
Sapph	(3,5,7)	11.048	82.8	2.7	3.1	1.407	4.43	17.58	18.13
	Equiv. Refl.: (3,-8,-7), (5,3,-7), (5,-8,7), (8,-3,-7), (8,-5,7), (-3,8,7), (-3,-5,-7), (-5,8,-7), (-5,-3,7), (-8,3,7), (-8,5,-7)								
Quartz	(2,6,-1)	10.569	71.64	2.6	2.4	3.697	9.02	46.21	47.08
	Equiv. Refl.: (2,-8,1), (6,2,1), (6,-8,-1), (8,-2,1), (8,-6,-1), (-2,8,-1), (-2,-6,1), (-6,8,1), (-6,-2,-1), (-8,2,-1), (-8,6,1)								
LiNbO3	(1,6,13)	10.814	76.18	2.5	3.9	2.74	10.72	34.25	35.88
	Equiv. Refl.: (1,-7,-13), (6,1,-13), (6,-7,13), (7,-1,-13), (7,-6,13), (-1,7,13), (-1,-6,-13), (-6,7,-13), (-6,-1,13), (-7,1,13), (-7,6,-13)								
LiNbO3	(4,5,5)	11.088	84.67	2.4	5.3	1.039	5.49	12.99	14.1
	Equiv. Refl.: (4,-9,-5), (5,4,-5), (5,-9,5), (9,-4,-5), (9,-5,5), (-4,9,5), (-4,-5,-5), (-5,9,-5), (-5,-4,5), (-9,4,5), (-9,5,-5), (1,1,9), (1,1,-9), (1,-2,9), (1,-2,-9), (6,-1,6), (6,-5,-6), (-1,6,-6), (-1,-5,6), (-2,1,9), (-2,1,-9), (-5,6,6), (-5,-1,-6)								

Ei =	11.136	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(4,4,3)	10.521	70.87	2.3	2.3	3.863	8.87	48.29	49.1
	Equiv. Refl.: (4,4,-3), (4,-8,3), (4,-8,-3), (8,-4,3), (8,-4,-3), (-4,8,3), (-4,8,-3), (-4,-4,3), (-4,-4,-3), (-8,4,3), (-8,4,-3)								
Quartz	(1,2,-9)	11.019	81.7	2.2	2.5	1.624	4	20.3	20.69
	Equiv. Refl.: (1,-3,9), (2,1,9), (2,-3,-9), (-3,1,-9), (-3,2,9)								
LiNbO3	(3,6,3)	11.118	86.73	2.1	6	0.636	3.84	7.95	8.83
	Equiv. Refl.: (3,6,-3), (3,-9,3), (3,-9,-3), (6,3,3), (6,3,-3), (6,-9,3), (6,-9,-3), (9,-3,3), (9,-3,-3), (9,-6,3), (9,-6,-3), (-3,9,3), (-3,9,-3), (-3,-6,3), (-3,-6,-3), (-6,9,3), (-6,9,-3), (-6,-3,3), (-6,-3,-3), (-9,3,3), (-9,3,-3), (-9,6,3), (-9,6,-3)								
Quartz	(1,5,-6)	10.638	72.8	2	2.2	3.446	7.54	43.08	43.74
	Equiv. Refl.: (1,-6,6), (2,5,-5), (2,-7,5), (5,1,6), (5,2,5), (5,-6,-6), (5,-7,-5), (-6,1,-6), (-6,5,6), (-7,2,-5), (-7,5,5)								
Quartz	(2,-1,9)	10.627	72.61	1.9	2.1	3.487	7.43	43.59	44.22
	Equiv. Refl.: (2,-1,-9), (-1,2,-9), (-1,3,-9), (-1,-1,9), (-1,-2,9), (-2,3,9), (-2,-1,-9)								
Quartz	(3,-1,9)	11.019	81.7	1.8	2.5	1.624	3.99	20.3	20.69
	Equiv. Refl.: (3,-2,-9), (7,-2,5), (7,-5,-5), (-1,2,9), (-1,-1,-9), (-2,7,-5), (-2,-5,5), (-5,7,5), (-5,-2,-5)								
Quartz	(0,2,9)	10.727	74.41	1.7	2	3.106	6.07	38.83	39.3
	Equiv. Refl.: (0,-2,-9), (2,0,-9), (2,-2,9), (-2,0,9), (-2,2,-9)								
LiNbO3	(2,4,-17)	10.58	71.81	1.6	2.7	3.659	9.83	45.74	46.78
	Equiv. Refl.: (2,-6,17), (4,2,17), (4,-6,-17), (6,-2,17), (6,-4,-17), (-2,6,-17), (-2,-4,17), (-4,6,17), (-4,-2,-17), (-6,2,-17), (-6,4,17), (2,6,-2), (2,-8,2), (6,2,2), (6,-8,-2), (-8,2,-2), (-8,6,2)								
LiNbO3	(2,2,21)	10.554	71.39	1.5	2.5	3.749	9.47	46.86	47.81
	Equiv. Refl.: (2,2,-21), (2,-4,21), (2,-4,-21), (4,-2,21), (4,-2,-21), (-2,4,21), (-2,4,-21), (-2,-2,21), (-2,-2,-21), (-4,2,21), (-4,2,-21)								
Quartz	(1,3,8)	10.573	71.71	1.4	1.6	3.681	5.81	46.01	46.37
	Equiv. Refl.: (1,-4,-8), (2,6,0), (2,-8,0), (3,1,-8), (3,-4,8), (4,-1,-8), (4,-3,8), (6,2,0), (6,-8,0), (8,-2,2), (8,-6,-2), (-1,4,8), (-1,-3,-8), (-2,8,-2), (-2,-6,2), (-3,4,-8), (-3,-1,8), (-4,1,8), (-4,3,-8), (-6,8,2), (-6,-2,-2), (-8,2,0), (-8,6,0)								
Sapph	(3,5,-5)	10.798	75.85	1.3	1.7	2.808	4.81	35.1	35.43
	Equiv. Refl.: (3,-8,5), (5,3,5), (5,-8,-5), (8,-3,5), (8,-5,-5), (-3,8,-5), (-3,-5,5), (-5,8,5), (-5,-3,-5), (-8,3,-5), (-8,5,5)								
Sapph	(1,4,18)	11.015	81.56	1.2	1.8	1.653	2.96	20.66	20.87
	Equiv. Refl.: (1,4,-18), (1,-5,18), (1,-5,-18), (4,1,18), (4,1,-18), (4,-5,18), (4,-5,-18), (5,-1,18), (5,-1,-18), (5,-4,18), (5,-4,-18), (-1,5,18), (-1,5,-18), (-1,-4,18), (-1,-4,-18), (-4,5,18), (-4,5,-18), (-4,-1,18), (-4,-1,-18), (-5,1,18), (-5,1,-18), (-5,4,18), (-5,4,-18), (0,7,3), (0,-7,-3), (1,2,9), (1,-3,-9), (2,1,-9), (2,-3,9), (3,4,-5), (3,-7,5), (4,3,5), (4,-2,8), (4,-2,-8), (4,-7,-5), (7,0,-3), (7,-7,3), (8,-2,0), (8,-6,0), (-2,4,8), (-2,4,-8), (-2,8,0), (-2,-2,8), (-2,-2,-8), (-2,-6,0), (-3,1,9), (-3,2,-9), (-6,8,0), (-6,-2,0), (-7,0,3), (-7,3,-5), (-7,4,5), (-7,7,-3)								
LiNbO3	(4,5,-1)	10.869	77.43	1.1	2.4	2.482	5.85	31.03	31.57
	Equiv. Refl.: (4,-9,1), (5,4,1), (5,-9,-1), (9,-4,1), (9,-5,-1), (-4,9,-1), (-4,-5,1), (-5,9,1), (-5,-4,-1), (-9,4,-1), (-9,5,1), (2,5,12), (2,5,-12), (2,-7,12), (2,-7,-12), (3,5,1), (3,-8,-1), (5,2,12), (5,2,-12), (5,3,-1), (5,-7,12), (5,-7,-12), (5,-8,1), (7,-2,12), (7,-2,-12), (7,-5,12), (7,-5,-12), (8,-3,-1), (8,-5,1), (-2,7,12), (-2,7,-12), (-2,-5,12), (-2,-5,-12), (-3,8,1), (-3,-5,-1), (-5,7,12), (-5,7,-12), (-5,8,-1), (-5,-2,12), (-5,-2,-12), (-5,-3,1), (-7,2,12), (-7,2,-12), (-7,5,12), (-7,5,-12), (-8,3,1), (-8,5,-1), (0,7,-3), (0,-7,3), (2,2,8), (2,2,-8), (2,-4,8), (2,-4,-8), (3,-1,-9), (3,-2,9), (7,0,3), (7,-7,-3), (-1,3,9), (-1,-2,-9), (-2,3,-9), (-2,-1,9), (-4,2,8), (-4,2,-8), (-7,0,-3), (-7,7,3)								
Quartz	(1,6,4)	10.599	72.13	1	1.2	3.591	4.23	44.88	45.08
	Equiv. Refl.: (1,-7,-4), (6,1,-4), (6,-7,4), (7,-3,5), (7,-4,-5), (-3,7,-5), (-3,-4,5), (-4,7,5), (-4,-3,-5), (-7,1,4), (-7,6,-4)								

Ei =	11.136	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,2,23)	10.923	78.78	0.9	2.2	2.209	4.76	27.61	28.02
	Equiv. Refl.: (1,5,17), (1,-3,-23), (1,-6,-17), (2,1,-23), (2,-3,23), (3,-1,-23), (3,-2,23), (5,1,-17), (5,-6,17) (6,-1,-17), (6,-5,17), (-1,3,23), (-1,6,17), (-1,-2,-23), (-1,-5,-17), (-2,3,-23), (-2,-1,23), (-3,1,23) (-3,2,-23), (-5,6,-17), (-5,-1,17), (-6,1,17), (-6,5,-17), (7,-1,-4), (7,-6,4), (-1,7,4), (-1,-6,-4) (-6,7,-4), (-6,-1,4)								
Sapph	(0,7,-4)	10.703	73.96	0.7	1	3.201	3.24	40.01	40.14
	Equiv. Refl.: (0,-7,4), (7,0,4), (7,-7,-4), (-7,0,-4), (-7,7,4), (0,4,-8), (0,5,-7), (0,-4,8), (0,-5,7) (4,0,8), (4,-4,-8), (5,0,7), (5,-5,-7), (-4,0,-8), (-4,4,8), (-5,0,-7), (-5,5,7)								
LiNbO3	(2,5,15)	10.973	80.17	0.6	1.9	1.929	3.64	24.11	24.39
	Equiv. Refl.: (2,5,-15), (2,-7,15), (2,-7,-15), (5,2,15), (5,2,-15), (5,-7,15), (5,-7,-15), (7,-2,15), (7,-2,-15) (7,-5,15), (7,-5,-15), (-2,7,15), (-2,7,-15), (-2,-5,15), (-2,-5,-15), (-5,7,15), (-5,7,-15), (-5,-2,15) (-5,-2,-15), (-7,2,15), (-7,2,-15), (-7,5,15), (-7,5,-15), (0,2,22), (0,-2,-22), (2,0,-22), (2,-2,22) (-2,0,22), (-2,2,-22), (2,5,5), (2,-7,-5), (3,3,7), (3,3,-7), (3,-6,7), (3,-6,-7), (5,2,-5) (5,-7,5), (7,-2,-5), (7,-5,5), (-2,7,5), (-2,-5,-5), (-5,7,-5), (-5,-2,5), (-6,3,7), (-6,3,-7) (-7,2,5), (-7,5,-5)								
Sapph	(1,3,19)	10.567	71.6	0.5	0.8	3.703	2.82	46.29	46.38
	Equiv. Refl.: (1,-4,-19), (3,1,-19), (3,-4,19), (4,-1,-19), (4,-3,19), (-1,4,19), (-1,-3,-19), (-3,4,-19), (-3,-1,19) (-4,1,19), (-4,3,-19)								
Sapph	(3,4,-13)	11.056	83.14	0.4	1	1.34	1.27	16.75	16.8
	Equiv. Refl.: (3,-7,13), (4,3,13), (4,-7,-13), (7,-3,13), (7,-4,-13), (-3,7,-13), (-3,-4,13), (-4,7,13), (-4,-3,-13) (-7,3,-13), (-7,4,13), (6,-3,7), (6,-3,-7), (-3,6,7), (-3,6,-7), (-3,-3,7), (-3,-3,-7)								
LiNbO3	(2,6,-7)	10.504	70.61	0.3	1	3.92	4.08	49	49.17
	Equiv. Refl.: (2,-8,7), (3,5,-11), (3,-8,11), (5,3,11), (5,-8,-11), (6,2,7), (6,-8,-7), (8,-2,7), (8,-3,11) (8,-5,-11), (8,-6,-7), (-2,8,-7), (-2,-6,7), (-3,8,-11), (-3,-5,11), (-5,8,11), (-5,-3,-11), (-6,8,7) (-6,-2,-7), (-8,2,-7), (-8,3,-11), (-8,5,11), (-8,6,7)								
LiNbO3	(1,7,3)	10.583	71.87	0.2	0.9	3.646	3.2	45.57	45.68
	Equiv. Refl.: (1,7,-3), (1,-8,3), (1,-8,-3), (7,1,3), (7,1,-3), (7,-8,3), (7,-8,-3), (8,-1,3), (8,-1,-3) (8,-7,3), (8,-7,-3), (-1,8,3), (-1,8,-3), (-1,-7,3), (-1,-7,-3), (-7,8,3), (-7,8,-3), (-7,-1,3) (-7,-1,-3), (-8,1,3), (-8,1,-3), (-8,7,3), (-8,7,-3), (0,1,-22), (0,-1,22), (1,0,22), (1,-1,-22) (2,6,2), (2,-8,-2), (3,4,11), (3,-7,-11), (4,3,-11), (4,-7,11), (6,2,-2), (6,-8,2), (7,-3,-11) (7,-4,11), (8,-2,-2), (8,-6,2), (-1,0,-22), (-1,1,22), (-2,8,2), (-2,-6,-2), (-3,7,11), (-3,-4,-11) (-4,7,-11), (-4,-3,11), (-6,8,-2), (-6,-2,2), (-7,3,11), (-7,4,-11), (-8,2,2), (-8,6,-2)								
Sapph	(3,3,15)	10.6	72.16	0	0.2	3.585	0.64	44.81	44.82
	Equiv. Refl.: (3,3,-15), (3,-6,15), (3,-6,-15), (6,-3,15), (6,-3,-15), (-3,6,15), (-3,6,-15), (-3,-3,15), (-3,-3,-15) (-6,3,15), (-6,3,-15)								

Ei =	9.881	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(0,4,8)	9.801	82.7	31.714	30	1.265	38	15.82	41.16
Ge	(0,6,6)	9.298	70.22	14.687	13.2	3.554	46.96	44.42	64.64
	Equiv. Refl.: (2,2,8)								
Si	(0,6,6)	9.685	78.58	13.517	11.5	1.995	23.02	24.94	33.94
	Equiv. Refl.: (2,2,8)								
Ge	(5,5,5)	9.49	73.82	10.687	10.7	2.867	30.61	35.83	47.13
	Equiv. Refl.: (1,5,7)								
Si	(3,3,7)	9.343	71.01	6.251	5.5	3.401	18.66	42.51	46.43
Quartz	(0,6,-4)	9.873	87.66	36.4	32.6	0.404	13.17	5.05	14.1
	Equiv. Refl.: (0,-6,4), (6,0,4), (6,-6,-4), (-6,0,-4), (-6,6,4)								
LiNbO3	(1,-7,8)	9.795	82.42	31.9	29.4	1.314	38.68	16.43	42.02
	Equiv. Refl.: (6,1,8), (7,-1,8), (-1,-6,8), (-6,7,8), (-7,6,8)								
LiNbO3	(0,-7,-2)	9.774	81.58	30.8	28.6	1.463	41.83	18.29	45.66
	Equiv. Refl.: (7,0,-2), (-7,7,-2)								
LiNbO3	(0,7,2)	9.774	81.58	29.2	28.6	1.463	41.83	18.29	45.66
	Equiv. Refl.: (7,-7,2), (-7,0,2)								
LiNbO3	(1,6,-8)	9.795	82.42	29	29.4	1.314	38.68	16.43	42.02
	Equiv. Refl.: (6,-7,-8), (7,-6,-8), (-1,7,-8), (-6,-1,-8), (-7,1,-8)								
Sapph	(2,5,6)	9.822	83.73	24.2	20.9	1.086	22.73	13.57	26.48
	Equiv. Refl.: (2,5,-6), (2,-7,6), (2,-7,-6), (5,2,6), (5,2,-6), (5,-7,6), (5,-7,-6), (7,-2,6), (7,-2,-6), (7,-5,6), (7,-5,-6), (-2,7,6), (-2,7,-6), (-2,-5,6), (-2,-5,-6), (-5,7,6), (-5,7,-6), (-5,-2,6), (-5,-2,-6), (-7,2,6), (-7,2,-6), (-7,5,6), (-7,5,-6)								
LiNbO3	(2,4,-14)	9.661	77.88	24	21.9	2.122	46.55	26.52	53.58
	Equiv. Refl.: (4,-6,-14), (6,-4,-14), (-2,6,-14), (-4,-2,-14), (-6,2,-14)								
LiNbO3	(2,-6,14)	9.661	77.88	22.7	21.9	2.122	46.55	26.52	53.58
	Equiv. Refl.: (4,2,14), (6,-2,14), (-2,-4,14), (-4,6,14), (-6,4,14)								
LiNbO3	(3,4,-10)	9.567	75.53	22.1	20.1	2.551	51.32	31.88	60.42
	Equiv. Refl.: (4,-7,-10), (7,-4,-10), (-3,7,-10), (-4,-3,-10), (-7,3,-10)								
LiNbO3	(3,-7,10)	9.567	75.53	21.3	20.1	2.551	51.32	31.88	60.42
	Equiv. Refl.: (4,3,10), (7,-3,10), (-3,-4,10), (-4,7,10), (-7,4,10), (7,-1,-2), (7,-6,2), (-1,7,2), (-1,-6,-2), (-6,7,-2), (-6,-1,2)								
LiNbO3	(1,-3,-20)	9.671	78.16	21.1	20.1	2.072	41.63	25.9	49.03
	Equiv. Refl.: (2,1,-20), (3,-1,-20), (-1,-2,-20), (-2,3,-20), (-3,2,-20)								
LiNbO3	(1,2,20)	9.671	78.16	20.9	20.1	2.072	41.63	25.9	49.03
	Equiv. Refl.: (2,-3,20), (3,-2,20), (-1,3,20), (-2,-1,20), (-3,1,20)								
Quartz	(1,6,2)	9.826	83.93	20.5	17.9	1.05	18.8	13.13	22.93
	Equiv. Refl.: (1,-7,-2), (6,1,-2), (6,-7,2), (-7,1,2), (-7,6,-2)								
LiNbO3	(3,-8,2)	9.774	81.58	18.7	19	1.463	27.76	18.29	33.25
	Equiv. Refl.: (5,3,2), (8,-3,2), (-3,-5,2), (-5,8,2), (-8,5,2)								
LiNbO3	(4,4,0)	9.634	77.15	18.5	17.9	2.254	40.27	28.17	49.15
	Equiv. Refl.: (4,-8,0), (8,-4,0), (-4,8,0), (-4,-4,0), (-8,4,0)								
Sapph	(0,3,18)	9.705	79.16	18.3	15.4	1.893	29.11	23.66	37.51
	Equiv. Refl.: (0,3,-18), (0,-3,18), (0,-3,-18), (3,0,18), (3,0,-18), (3,-3,18), (3,-3,-18), (-3,0,18), (-3,0,-18), (-3,3,18), (-3,3,-18)								
LiNbO3	(3,5,-2)	9.774	81.58	17.9	19	1.463	27.76	18.29	33.25
	Equiv. Refl.: (5,-8,-2), (8,-5,-2), (-3,8,-2), (-5,-3,-2), (-8,3,-2)								
LiNbO3	(0,-5,14)	9.356	71.23	17.8	15.8	3.357	52.98	41.96	67.58
	Equiv. Refl.: (5,0,14), (-5,5,14)								

Ei =	9.881	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(0,5,-14)	9.356	71.23	16.1	15.8	3.357	52.98	41.96	67.58
	Equiv. Refl.: (5,-5,-14), (-5,0,-14)								
LiNbO3	(2,2,-18)	9.38	71.68	14.9	13.9	3.271	45.52	40.89	61.19
	Equiv. Refl.: (2,3,-16), (2,-4,-18), (3,-5,-16), (4,-2,-18), (5,-3,-16), (-2,4,-18), (-2,5,-16), (-2,-2,-18), (-3,-2,-16), (-4,2,-18), (-5,2,-16)								
LiNbO3	(2,2,18)	9.38	71.68	14.3	13.9	3.271	45.52	40.89	61.19
	Equiv. Refl.: (2,-4,18), (4,-2,18), (-2,4,18), (-2,-2,18), (-4,2,18)								
LiNbO3	(2,-5,16)	9.377	71.62	13.6	13.6	3.283	44.74	41.04	60.71
	Equiv. Refl.: (3,2,16), (5,-2,16), (-2,-3,16), (-3,5,16), (-5,3,16)								
LiNbO3	(0,2,-20)	9.366	71.42	13.4	12.4	3.322	41.26	41.52	58.54
	Equiv. Refl.: (2,-2,-20), (-2,0,-20)								
Sapph	(0,1,20)	9.664	77.96	13.3	11.1	2.107	23.41	26.34	35.24
	Equiv. Refl.: (0,-1,-20), (1,0,-20), (1,-1,20), (-1,0,20), (-1,1,-20)								
LiNbO3	(0,-2,20)	9.366	71.42	12.6	12.4	3.322	41.26	41.52	58.54
	Equiv. Refl.: (2,0,20), (-2,2,20)								
LiNbO3	(1,6,4)	9.292	70.11	12.3	11.5	3.574	41.1	44.68	60.7
	Equiv. Refl.: (6,-7,4), (7,-6,4), (-1,7,4), (-6,-1,4), (-7,1,4)								
LiNbO3	(1,-7,-4)	9.292	70.11	11.7	11.5	3.574	41.1	44.68	60.7
	Equiv. Refl.: (6,1,-4), (7,-1,-4), (-1,-6,-4), (-6,7,-4), (-7,6,-4)								
Quartz	(1,4,-6)	9.589	76.03	11.1	9.1	2.458	22.43	30.73	38.05
	Equiv. Refl.: (1,-5,6), (4,1,6), (4,-5,-6), (5,-1,6), (5,-4,-6), (-1,5,-6), (-1,-4,6), (-4,5,6), (-4,-1,-6), (-5,1,-6), (-5,4,6)								
Sapph	(1,6,1)	9.877	88.31	10.6	14.3	0.292	4.16	3.65	5.54
	Equiv. Refl.: (1,-7,-1), (2,3,14), (2,-5,-14), (3,2,-14), (3,-5,14), (5,-2,-14), (5,-3,14), (6,1,-1), (6,-7,1), (7,-1,-1), (7,-6,1), (-1,7,1), (-1,-6,-1), (-2,5,14), (-2,-3,-14), (-3,5,-14), (-3,-2,14), (-5,2,14), (-5,3,-14), (-6,7,-1), (-6,-1,1), (-7,1,1), (-7,6,-1)								
Sapph	(3,3,12)	9.691	78.74	10.1	9	1.967	17.71	24.59	30.3
	Equiv. Refl.: (3,3,-12), (3,-6,12), (3,-6,-12), (6,-3,12), (6,-3,-12), (-3,6,12), (-3,6,-12), (-3,-3,12), (-3,-3,-12), (-6,3,12), (-6,3,-12)								
Sapph	(1,5,-10)	9.641	77.34	8.8	7.7	2.22	17.04	27.75	32.56
	Equiv. Refl.: (1,-6,10), (5,1,10), (5,-6,-10), (6,-1,10), (6,-5,-10), (-1,6,-10), (-1,-5,10), (-5,6,10), (-5,-1,-10), (-6,1,-10), (-6,5,10)								
Quartz	(4,-1,7)	9.595	76.18	8.5	7	2.431	17.13	30.38	34.88
	Equiv. Refl.: (4,-3,-7), (7,-1,0), (7,-6,0), (-1,4,-7), (-1,7,0), (-1,-3,7), (-1,-6,0), (-3,4,7), (-3,-1,-7), (-6,7,0), (-6,-1,0)								
Quartz	(1,6,0)	9.554	75.22	8.4	7.1	2.607	18.49	32.59	37.47
	Equiv. Refl.: (1,-7,0), (6,1,0), (6,-7,0), (-7,1,0), (-7,6,0)								
Quartz	(0,6,3)	9.395	71.95	8.2	6.8	3.22	21.86	40.25	45.8
	Equiv. Refl.: (0,-6,-3), (6,0,-3), (6,-6,3), (-6,0,3), (-6,6,-3)								
Quartz	(1,3,-7)	9.595	76.18	8.1	7.1	2.431	17.14	30.38	34.88
	Equiv. Refl.: (1,-4,7), (3,1,7), (3,-4,-7), (-4,1,-7), (-4,3,7)								
Quartz	(0,1,-8)	9.291	70.1	7.5	6.2	3.577	22.09	44.71	49.87
	Equiv. Refl.: (0,-1,8), (1,0,8), (1,-1,-8), (-1,0,-8), (-1,1,8)								
LiNbO3	(1,3,19)	9.865	86.76	7.1	14.3	0.559	7.98	6.98	10.61
	Equiv. Refl.: (1,-4,-19), (3,1,-19), (3,-4,19), (4,-1,-19), (4,-3,19), (-1,4,19), (-1,-3,-19), (-3,4,-19), (-3,-1,19), (-4,1,19), (-4,3,-19), (7,-2,2), (7,-5,-2), (-2,7,-2), (-2,-5,2), (-5,7,2), (-5,-2,-2)								
Quartz	(2,5,-2)	9.384	71.74	6.9	5.8	3.26	18.95	40.74	44.93
	Equiv. Refl.: (2,-7,2), (5,2,2), (5,-7,-2), (-7,2,-2), (-7,5,2)								
Quartz	(1,6,-2)	9.826	83.93	6.4	6.2	1.05	6.48	13.13	14.64
	Equiv. Refl.: (1,-7,2), (6,1,2), (6,-7,-2), (-7,1,-2), (-7,6,2)								

Ei =	9.881	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(3,4,-3)	9.507	74.19	6.2	5.4	2.798	15.12	34.98	38.11
	Equiv. Refl.: (3,-7,3), (7,-3,3), (7,-4,-3), (-3,7,-3), (-3,-4,3), (-4,7,3), (-4,-3,-3), (-7,3,-3), (-7,4,3)								
Quartz	(4,3,3)	9.507	74.19	6.1	5.4	2.798	15.12	34.98	38.11
	Equiv. Refl.: (4,-7,-3), (6,-3,5), (6,-3,-5), (-3,6,5), (-3,6,-5), (-3,-3,5), (-3,-3,-5)								
Sapph	(2,5,0)	9.395	71.96	6	5.2	3.219	16.65	40.23	43.54
	Equiv. Refl.: (2,-7,0), (5,2,0), (5,-7,0), (7,-2,0), (7,-5,0), (-2,7,0), (-2,-5,0), (-5,7,0), (-5,-2,0), (-7,2,0), (-7,5,0)								
Quartz	(3,3,5)	9.498	73.99	5.9	5.2	2.835	14.84	35.44	38.42
	Equiv. Refl.: (3,3,-5), (3,-6,5), (3,-6,-5), (-6,3,5), (-6,3,-5)								
Quartz	(7,-1,2)	9.826	83.93	5.8	6.2	1.05	6.48	13.13	14.64
	Equiv. Refl.: (7,-6,-2), (-1,7,-2), (-1,-6,2), (-6,7,2), (-6,-1,-2)								
Quartz	(1,5,4)	9.32	70.6	5.5	4.6	3.48	15.89	43.51	46.32
	Equiv. Refl.: (1,-6,-4), (5,1,-4), (5,-6,4), (-6,1,4), (-6,5,-4)								
Quartz	(2,5,2)	9.384	71.74	5.4	4.5	3.26	14.81	40.74	43.35
	Equiv. Refl.: (2,-7,-2), (5,2,-2), (5,-7,2), (6,-1,-4), (6,-5,4), (7,-2,-2), (7,-5,2), (-1,6,4), (-1,-5,-4), (-2,7,2), (-2,-5,-2), (-5,6,-4), (-5,7,-2), (-5,-1,4), (-5,-2,2), (-7,2,2), (-7,5,-2)								
LiNbO3	(1,1,21)	9.695	78.85	5	7.2	1.947	13.98	24.33	28.06
	Equiv. Refl.: (1,1,-21), (1,-2,21), (1,-2,-21), (2,-1,21), (2,-1,-21), (-1,2,21), (-1,2,-21), (-1,-1,21), (-1,-1,-21), (-2,1,21), (-2,1,-21)								
Quartz	(1,3,7)	9.595	76.18	4.7	4.1	2.431	9.95	30.38	31.97
	Equiv. Refl.: (1,-4,-7), (3,1,-7), (3,-4,7), (-4,1,7), (-4,3,-7)								
Quartz	(2,5,-3)	9.728	79.9	4.5	4.3	1.76	7.52	22.01	23.26
	Equiv. Refl.: (2,-7,3), (5,2,3), (5,-7,-3), (-7,2,-3), (-7,5,3)								
Quartz	(4,-1,-7)	9.595	76.18	4.3	4.1	2.431	9.94	30.38	31.97
	Equiv. Refl.: (4,-3,7), (7,-2,3), (7,-5,-3), (-1,4,7), (-1,-3,-7), (-2,7,-3), (-2,-5,3), (-3,4,-7), (-3,-1,7), (-5,7,3), (-5,-2,-3)								
LiNbO3	(1,6,7)	9.64	77.33	4.2	6.3	2.221	13.93	27.77	31.07
	Equiv. Refl.: (1,-7,-7), (6,1,-7), (6,-7,7), (7,-1,-7), (7,-6,7), (-1,7,7), (-1,-6,-7), (-6,7,-7), (-6,-1,7), (-7,1,7), (-7,6,-7), (2,5,3), (2,5,-3), (2,-7,3), (2,-7,-3), (5,2,3), (5,2,-3), (5,-7,3), (5,-7,-3), (7,-2,3), (7,-2,-3), (7,-5,3), (7,-5,-3), (-2,7,3), (-2,7,-3), (-2,-5,3), (-2,-5,-3), (-5,7,3), (-5,7,-3), (-5,-2,3), (-5,-2,-3), (-7,2,3), (-7,2,-3), (-7,5,3), (-7,5,-3), (6,-2,-5), (6,-4,5), (7,-1,-1), (7,-6,1), (-1,7,1), (-1,-6,-1), (-2,6,5), (-2,-4,-5), (-4,6,-5), (-4,-2,5), (-6,7,-1), (-6,-1,1)								
Quartz	(6,-2,5)	9.609	76.52	4.1	3.7	2.368	8.88	29.6	30.91
	Equiv. Refl.: (6,-4,-5), (-2,6,-5), (-2,-4,5), (-4,6,5), (-4,-2,-5)								
Quartz	(1,6,1)	9.623	76.87	4	3.8	2.305	8.8	28.81	30.12
	Equiv. Refl.: (1,-7,-1), (2,4,-5), (2,-6,5), (4,2,5), (4,-6,-5), (6,1,-1), (6,-7,1), (-6,2,-5), (-6,4,5), (-7,1,1), (-7,6,-1)								
Quartz	(2,4,5)	9.609	76.52	3.9	3.7	2.368	8.88	29.6	30.91
	Equiv. Refl.: (2,-6,-5), (4,2,-5), (4,-6,5), (-6,2,5), (-6,4,-5)								
Sapph	(1,3,16)	9.367	71.44	3.7	3.5	3.318	11.53	41.47	43.05
	Equiv. Refl.: (1,-4,-16), (3,1,-16), (3,-4,16), (4,-1,-16), (4,-3,16), (-1,4,16), (-1,-3,-16), (-3,4,-16), (-3,-1,16), (-4,1,16), (-4,3,-16)								
Quartz	(0,2,-8)	9.628	77	3.6	3.4	2.281	7.68	28.52	29.53
	Equiv. Refl.: (0,-2,8), (2,0,8), (2,-2,-8), (-2,0,-8), (-2,2,8)								
Quartz	(1,1,8)	9.517	74.4	3.4	2.8	2.76	7.77	34.49	35.36
	Equiv. Refl.: (1,-2,-8), (-2,1,8), (-2,1,-8)								
Quartz	(1,1,-8)	9.517	74.4	3.3	2.8	2.76	7.76	34.49	35.36
	Equiv. Refl.: (1,-2,8)								

Ei =	9.881	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,6,-5)	9.388	71.83	3.2	4.7	3.243	15.22	40.54	43.3
	Equiv. Refl.: (1,-7,5), (6,1,5), (6,-7,-5), (7,-1,5), (7,-6,-5), (-1,7,-5), (-1,-6,5), (-6,7,5), (-6,-1,-5) (-7,1,-5), (-7,6,5), (0,4,-16), (0,-4,16), (4,0,16), (4,-4,-16), (-4,0,-16), (-4,4,16)								
Quartz	(0,6,4)	9.873	87.66	3	5.3	0.404	2.15	5.05	5.48
	Equiv. Refl.: (0,-6,-4), (6,0,-4), (6,-6,4), (-6,0,4), (-6,6,-4)								
Quartz	(0,6,-3)	9.395	71.95	2.8	2.6	3.22	8.24	40.25	41.08
	Equiv. Refl.: (0,-6,3), (6,0,3), (6,-6,-3), (-6,0,-3), (-6,6,3)								
LiNbO3	(3,4,11)	9.784	81.98	2.7	5.8	1.392	8.06	17.4	19.18
	Equiv. Refl.: (3,-7,-11), (4,3,-11), (4,-7,11), (7,-3,-11), (7,-4,11), (-3,7,11), (-3,-4,-11), (-4,7,-11), (-4,-3,11) (-7,3,11), (-7,4,-11), (2,4,-11), (2,-6,11), (4,2,11), (4,-6,-11), (6,-2,11), (6,-4,-11), (-2,6,-11) (-2,-4,11), (-4,6,11), (-4,-2,-11), (-6,2,-11), (-6,4,11)								
Sapph	(3,4,-4)	9.348	71.1	2.5	2.7	3.384	9.13	42.3	43.27
	Equiv. Refl.: (3,-7,4), (4,3,4), (4,-7,-4), (7,-3,4), (7,-4,-4), (-3,7,-4), (-3,-4,4), (-4,7,4), (-4,-3,-4) (-7,3,-4), (-7,4,4), (2,-1,8), (2,-1,-8), (-1,2,8), (-1,2,-8), (-1,-1,8), (-1,-1,-8)								
LiNbO3	(2,4,13)	9.377	71.62	2.4	4	3.282	13.04	41.03	43.05
	Equiv. Refl.: (2,-6,-13), (4,2,-13), (4,-6,13), (6,-2,-13), (6,-4,13), (-2,6,13), (-2,-4,-13), (-4,6,-13), (-4,-2,13) (-6,2,13), (-6,4,-13)								
Quartz	(3,4,3)	9.507	74.19	2	2.3	2.798	6.3	34.98	35.54
	Equiv. Refl.: (3,-7,-3), (4,3,-3), (4,-7,3), (-7,3,3), (-7,4,-3)								
Quartz	(1,6,-1)	9.623	76.87	1.9	2.3	2.305	5.36	28.81	29.3
	Equiv. Refl.: (1,-7,1), (6,1,1), (6,-7,-1), (-7,1,-1), (-7,6,1)								
Quartz	(0,1,8)	9.291	70.1	1.8	2.1	3.577	7.63	44.71	45.35
	Equiv. Refl.: (0,2,8), (0,-1,-8), (0,-2,-8), (1,0,-8), (1,-1,8), (2,0,-8), (2,-2,8), (4,-2,7), (4,-2,-7) (7,-1,1), (7,-6,-1), (-1,0,8), (-1,1,-8), (-1,7,-1), (-1,-6,1), (-2,0,8), (-2,2,-8), (-2,4,7) (-2,4,-7), (-2,-2,7), (-2,-2,-7), (-6,7,1), (-6,-1,-1)								
Quartz	(7,-3,-3)	9.507	74.19	1.7	2.3	2.798	6.31	34.98	35.54
	Equiv. Refl.: (7,-4,3), (-3,7,3), (-3,-4,-3), (-4,7,-3), (-4,-3,3)								
Quartz	(2,2,7)	9.484	73.7	1.6	2	2.89	5.92	36.12	36.61
	Equiv. Refl.: (2,2,-7), (2,-4,7), (2,-4,-7), (-4,2,7), (-4,2,-7)								
LiNbO3	(1,5,-13)	9.682	78.47	1.3	3.3	2.016	6.68	25.2	26.07
	Equiv. Refl.: (1,-6,13), (5,1,13), (5,-6,-13), (6,-1,13), (6,-5,-13), (-1,6,-13), (-1,-5,13), (-5,6,13), (-5,-1,-13) (-6,1,-13), (-6,5,13), (1,3,-17), (1,-4,17), (3,1,17), (3,-4,-17), (4,-1,17), (4,-3,-17), (-1,4,-17) (-1,-3,17), (-3,4,17), (-3,-1,-17), (-4,1,-17), (-4,3,17)								
Quartz	(5,-2,6)	9.365	71.4	1.1	1.4	3.326	4.56	41.58	41.83
	Equiv. Refl.: (5,-3,-6), (-2,5,-6), (-2,-3,6), (-3,5,6), (-3,-2,-6)								
Quartz	(2,3,-6)	9.365	71.4	1	1.4	3.326	4.55	41.58	41.83
	Equiv. Refl.: (2,-5,6), (3,2,6), (3,-5,-6), (-5,2,-6), (-5,3,6)								
Sapph	(0,6,6)	9.47	73.41	0.9	1.4	2.943	3.98	36.79	37
	Equiv. Refl.: (0,6,-6), (0,-6,6), (0,-6,-6), (6,0,6), (6,0,-6), (6,-6,6), (6,-6,-6), (-6,0,6), (-6,0,-6) (-6,6,6), (-6,6,-6)								
Quartz	(-2,7,3)	9.728	79.9	0.8	1.2	1.76	2.16	22.01	22.11
	Equiv. Refl.: (-2,-5,-3)								
Quartz	(7,-2,-3)	9.728	79.9	0.7	1.2	1.76	2.16	22.01	22.11
	Equiv. Refl.: (7,-5,3), (-5,7,-3), (-5,-2,3)								
LiNbO3	(2,5,9)	9.571	75.61	0.6	2	2.536	5.08	31.7	32.1
	Equiv. Refl.: (2,5,-9), (2,-7,9), (2,-7,-9), (5,2,9), (5,2,-9), (5,-7,9), (5,-7,-9), (7,-2,9), (7,-2,-9) (7,-5,9), (7,-5,-9), (-2,7,9), (-2,7,-9), (-2,-5,9), (-2,-5,-9), (-5,7,9), (-5,7,-9), (-5,-2,9) (-5,-2,-9), (-7,2,9), (-7,2,-9), (-7,5,9), (-7,5,-9), (2,5,3), (2,-7,-3), (5,2,-3), (5,-7,3) (-7,2,3), (-7,5,-3)								

Ei =	9.881	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(2,3,17)	9.722	79.72	0.5	2.1	1.792	3.68	22.4	22.7
Equiv. Refl.: (2,-5,-17), (3,2,-17), (3,3,15), (3,3,-15), (3,5,1), (3,-5,17), (3,-6,15), (3,-6,-15), (3,-8,-1), (5,3,-1), (5,-2,-17), (5,-3,17), (5,-8,1), (6,-3,15), (6,-3,-15), (8,-3,-1), (8,-5,1), (-2,5,17), (-2,-3,-17), (-3,5,-17), (-3,6,15), (-3,6,-15), (-3,8,1), (-3,-2,17), (-3,-3,15), (-3,-3,-15), (-3,-5,-1), (-5,2,17), (-5,3,-17), (-5,8,-1), (-5,-3,1), (-6,3,15), (-6,3,-15), (-8,3,1), (-8,5,-1), (5,-1,-6), (5,-4,6), (-1,5,6), (-1,-4,-6), (-4,5,-6), (-4,-1,6)									
Sapph	(3,4,-7)	9.742	80.37	0.4	1.1	1.676	1.79	20.95	21.03
Equiv. Refl.: (3,-7,7), (4,3,7), (4,-7,-7), (7,-3,7), (7,-4,-7), (-3,7,-7), (-3,-4,7), (-4,7,7), (-4,-3,-7), (-7,3,-7), (-7,4,7), (2,3,6), (2,-5,-6), (3,2,-6), (3,-5,6), (-5,2,6), (-5,3,-6)									
Sapph	(3,4,5)	9.457	73.16	0.3	0.7	2.991	1.99	37.39	37.45
Equiv. Refl.: (3,-7,-5), (4,3,-5), (4,-7,5), (7,-3,-5), (7,-4,5), (-3,7,5), (-3,-4,-5), (-4,7,-5), (-4,-3,5), (-7,3,5), (-7,4,-5), (1,4,6), (1,-5,-6), (4,1,-6), (4,-5,6), (5,-2,-6), (5,-3,6), (-2,5,6), (-2,-3,-6), (-3,5,-6), (-3,-2,6), (-5,1,6), (-5,4,-6)									
Quartz	(1,5,-4)	9.32	70.6	0.2	0.5	3.48	1.69	43.51	43.54
Equiv. Refl.: (1,-6,4), (5,1,4), (5,-6,-4), (6,-1,4), (6,-5,-4), (-1,6,-4), (-1,-5,4), (-5,6,4), (-5,-1,-4), (-6,1,-4), (-6,5,4)									
LiNbO3	(4,4,3)	9.727	79.86	0	0.6	1.768	1.06	22.1	22.12
Equiv. Refl.: (4,4,-3), (4,-8,3), (4,-8,-3), (8,-4,3), (8,-4,-3), (-4,8,3), (-4,8,-3), (-4,-4,3), (-4,-4,-3), (-8,4,3), (-8,4,-3)									

Ei =	12.1	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(2,4,10)	12.004	82.77	6.3409	13.52	1.536	20.76	19.2	28.28
	Equiv. Refl.: (2,10,4), (4,2,10), (4,10,2), (10,2,4), (10,4,2)								
Si	(0,2,10)	11.64	74.16	4.6661	3.85	3.4332	13.22	42.92	44.91
	Equiv. Refl.: (0,10,2), (2,0,10), (2,6,8), (2,8,6), (2,10,0), (6,2,8), (6,8,2), (8,2,6), (8,6,2), (10,0,2), (10,2,0)								
Si	(1,5,9)	11.807	77.37	3.6135	3.25	2.7114	8.8	33.89	35.02
	Equiv. Refl.: (1,9,5), (3,7,7), (5,1,9), (5,9,1), (7,3,7), (7,7,3), (9,1,5), (9,5,1)								
Ge	(3,5,9)	11.751	76.2	1.9701	5.42	2.9711	16.09	37.14	40.48
	Equiv. Refl.: (3,9,5), (5,3,9), (5,9,3), (9,3,5), (9,5,3)								
LiNbO3	(3,-8,-16)	12.08	86.72	39.385	35.1	0.693	24.35	8.67	25.84
	Equiv. Refl.: (5,3,-16), (8,-3,-16), (-3,-5,-16), (-5,8,-16), (-8,5,-16)								
LiNbO3	(0,-7,16)	12.08	86.72	36.15	33.9	0.693	23.49	8.67	25.03
	Equiv. Refl.: (7,0,16)								
LiNbO3	(-7,7,16)	12.08	86.72	36.149	33.9	0.693	23.49	8.67	25.03
LiNbO3	(0,7,-16)	12.08	86.72	34.969	33.9	0.693	23.49	8.67	25.03
	Equiv. Refl.: (-7,0,-16)								
LiNbO3	(7,-7,-16)	12.08	86.72	34.968	33.9	0.693	23.49	8.67	25.03
LiNbO3	(3,5,16)	12.08	86.72	34.774	35.1	0.693	24.35	8.67	25.84
	Equiv. Refl.: (5,-8,16), (8,-5,16), (-5,-3,16)								
LiNbO3	(-3,8,16)	12.08	86.72	34.773	35.1	0.693	24.35	8.67	25.84
	Equiv. Refl.: (-8,3,16)								
LiNbO3	(0,5,22)	12.047	84.61	34.223	30	1.141	34.26	14.26	37.11
	Equiv. Refl.: (5,-5,22), (-5,0,22)								
LiNbO3	(0,-5,-22)	12.047	84.61	32.668	30	1.141	34.26	14.26	37.11
	Equiv. Refl.: (5,0,-22), (-5,5,-22)								
LiNbO3	(5,5,0)	12.042	84.39	30.164	27.3	1.189	32.47	14.87	35.71
	Equiv. Refl.: (5,-10,0), (10,-5,0), (-5,10,0), (-5,-5,0), (-10,5,0)								
LiNbO3	(1,-9,4)	12.014	83.17	20.581	18.8	1.448	27.2	18.11	32.68
	Equiv. Refl.: (8,1,4), (9,-1,4), (-1,-8,4), (-8,9,4), (-9,8,4)								
LiNbO3	(1,8,-4)	12.014	83.17	19.773	18.8	1.448	27.2	18.11	32.68
	Equiv. Refl.: (8,-9,-4), (9,-8,-4), (-1,9,-4), (-8,-1,-4), (-9,1,-4)								
LiNbO3	(0,-2,26)	11.955	81.11	17.712	16.2	1.893	30.59	23.66	38.67
	Equiv. Refl.: (2,0,26), (-2,2,26)								
LiNbO3	(0,2,-26)	11.955	81.11	17.604	16.2	1.893	30.59	23.66	38.67
	Equiv. Refl.: (2,-2,-26), (-2,0,-26)								
LiNbO3	(0,8,10)	11.989	82.24	17.144	15.2	1.65	25.12	20.62	32.5
	Equiv. Refl.: (8,-8,10), (-8,0,10)								
LiNbO3	(0,-8,-10)	11.989	82.24	15.093	15.2	1.65	25.12	20.62	32.5
	Equiv. Refl.: (8,0,-10), (-8,8,-10)								
LiNbO3	(1,8,2)	11.914	79.94	14.622	13.4	2.147	28.81	26.83	39.37
	Equiv. Refl.: (8,-9,2), (9,-8,2), (-1,9,2), (-8,-1,2), (-9,1,2)								
LiNbO3	(1,-9,-2)	11.914	79.94	14.404	13.4	2.147	28.81	26.83	39.37
	Equiv. Refl.: (8,1,-2), (9,-1,-2), (-1,-8,-2), (-8,9,-2), (-9,8,-2)								
LiNbO3	(0,8,-8)	11.685	74.95	12.843	11.2	3.253	36.46	40.67	54.62
	Equiv. Refl.: (-8,0,-8)								
LiNbO3	(8,-8,-8)	11.685	74.95	12.842	11.2	3.253	36.46	40.67	54.62
LiNbO3	(2,5,18)	11.84	78.11	12.601	11.6	2.548	29.55	31.85	43.44
	Equiv. Refl.: (5,-7,18), (7,-5,18), (-2,7,18), (-5,-2,18), (-7,2,18)								

Ei =	12.1	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(2,-9,8)	11.931	80.4	12.539	11.6	2.046	23.7	25.58	34.87
	Equiv. Refl.: (7,2,8), (9,-2,8), (-2,-7,8), (-7,9,8), (-9,7,8)								
LiNbO3	(2,-7,-18)	11.84	78.11	12.529	11.6	2.548	29.55	31.85	43.44
	Equiv. Refl.: (5,2,-18), (7,-2,-18), (-2,-5,-18), (-5,7,-18), (-7,5,-18)								
LiNbO3	(2,6,14)	11.821	77.67	12.506	11.3	2.645	29.94	33.06	44.61
	Equiv. Refl.: (6,-8,14), (8,-6,14), (-2,8,14), (-6,-2,14), (-8,2,14)								
LiNbO3	(2,2,24)	11.764	76.46	12.194	11.1	2.914	32.37	36.43	48.73
	Equiv. Refl.: (2,-4,24), (4,-2,24), (-2,4,24), (-2,-2,24), (-4,2,24)								
LiNbO3	(2,2,-24)	11.764	76.46	12.167	11.1	2.914	32.37	36.43	48.73
	Equiv. Refl.: (2,-4,-24), (4,-2,-24), (-2,4,-24), (-2,-2,-24), (-4,2,-24)								
LiNbO3	(2,-7,18)	11.84	78.11	12.163	11.2	2.548	28.57	31.85	42.78
	Equiv. Refl.: (5,2,18), (7,-2,18), (-2,-5,18), (-5,7,18), (-7,5,18)								
LiNbO3	(0,-8,8)	11.685	74.95	12.117	11.2	3.253	36.46	40.67	54.62
	Equiv. Refl.: (8,0,8), (-8,8,8)								
LiNbO3	(-6,8,-14)	11.821	77.67	12.065	11.3	2.645	29.94	33.06	44.61
	Equiv. Refl.: (-8,6,-14)								
LiNbO3	(2,-8,-14)	11.821	77.67	12.064	11.3	2.645	29.94	33.06	44.61
	Equiv. Refl.: (6,2,-14), (8,-2,-14), (-2,-6,-14)								
LiNbO3	(2,5,-18)	11.84	78.11	12.002	11.2	2.548	28.57	31.85	42.78
	Equiv. Refl.: (5,-7,-18), (7,-5,-18), (-2,7,-18), (-5,-2,-18), (-7,2,-18)								
LiNbO3	(2,7,-8)	11.931	80.4	11.941	11.6	2.046	23.7	25.58	34.87
	Equiv. Refl.: (7,-9,-8), (9,-7,-8), (-2,9,-8), (-7,-2,-8), (-9,2,-8)								
LiNbO3	(1,-8,12)	11.79	77	11.369	10.4	2.793	29.11	34.92	45.46
	Equiv. Refl.: (7,1,12), (8,-1,12), (-1,-7,12)								
LiNbO3	(-7,8,12)	11.79	77	11.368	10.4	2.793	29.11	34.92	45.46
	Equiv. Refl.: (-8,7,12)								
LiNbO3	(1,5,20)	11.829	77.85	11.154	10.2	2.605	26.6	32.56	42.05
	Equiv. Refl.: (5,-6,20), (6,-5,20), (-1,6,20), (-5,-1,20), (-6,1,20)								
LiNbO3	(1,7,-12)	11.79	77	11.133	10.4	2.793	29.11	34.92	45.46
	Equiv. Refl.: (-1,8,-12), (-7,-1,-12), (-8,1,-12)								
LiNbO3	(7,-8,-12)	11.79	77	11.132	10.4	2.793	29.11	34.92	45.46
	Equiv. Refl.: (8,-7,-12)								
Sapph	(3,6,0)	11.941	80.7	11.108	8.9	1.981	17.61	24.77	30.39
	Equiv. Refl.: (3,-9,0), (6,3,0), (6,-9,0), (9,-3,0), (9,-6,0), (-3,9,0), (-3,-6,0), (-6,9,0), (-6,-3,0), (-9,3,0), (-9,6,0)								
LiNbO3	(1,-6,-20)	11.829	77.85	11.092	10.2	2.605	26.6	32.56	42.05
	Equiv. Refl.: (5,1,-20), (6,-1,-20), (-1,-5,-20), (-5,6,-20), (-6,5,-20)								
LiNbO3	(4,5,-10)	11.745	76.08	10.836	9.5	2.999	28.54	37.49	47.11
	Equiv. Refl.: (5,-9,-10), (9,-5,-10), (-4,9,-10), (-5,-4,-10), (-9,4,-10)								
LiNbO3	(2,-5,22)	11.555	72.74	10.576	9.4	3.76	35.28	47	58.77
	Equiv. Refl.: (3,2,22), (5,-2,22), (-2,-3,22), (-3,5,22), (-5,3,22)								
LiNbO3	(0,-6,18)	11.593	73.35	10.444	9.4	3.618	34	45.23	56.58
	Equiv. Refl.: (6,0,18), (-6,6,18)								
LiNbO3	(1,7,12)	11.79	77	10.334	9.4	2.793	26.34	34.92	43.74
	Equiv. Refl.: (7,-8,12), (8,-7,12), (-1,8,12), (-7,-1,12), (-8,1,12)								
LiNbO3	(0,6,-18)	11.593	73.35	10.231	9.4	3.618	34	45.23	56.58
	Equiv. Refl.: (6,-6,-18), (-6,0,-18)								
LiNbO3	(2,3,-22)	11.555	72.74	10.162	9.4	3.76	35.28	47	58.77
	Equiv. Refl.: (3,-5,-22), (5,-3,-22), (-2,5,-22), (-3,-2,-22), (-5,2,-22)								

Ei =	12.1	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,-8,-12)	11.79	77	10.141	9.4	2.793	26.34	34.92	43.74
	Equiv. Refl.: (7,1,-12), (8,-1,-12), (-1,-7,-12), (-7,8,-12), (-8,7,-12)								
LiNbO3	(4,-9,10)	11.745	76.08	10.127	9.5	2.999	28.54	37.49	47.11
	Equiv. Refl.: (5,4,10), (9,-4,10), (-4,-5,10), (-5,9,10), (-9,5,10)								
LiNbO3	(3,-8,14)	11.573	73.03	10.124	8.9	3.693	32.8	46.16	56.63
	Equiv. Refl.: (5,3,14), (8,-3,14), (-3,-5,14), (-5,8,14), (-8,5,14)								
LiNbO3	(2,-6,20)	11.581	73.16	9.83	8.7	3.662	31.75	45.78	55.71
	Equiv. Refl.: (4,2,20), (6,-2,20), (-2,-4,20), (-4,6,20), (-6,4,20)								
LiNbO3	(0,6,18)	11.593	73.35	9.809	8.6	3.618	31.17	45.23	54.93
	Equiv. Refl.: (6,-6,18), (-6,0,18)								
LiNbO3	(2,7,-2)	11.417	70.65	9.785	8.6	4.248	36.45	53.11	64.41
	Equiv. Refl.: (-2,9,-2), (-7,-2,-2), (-9,2,-2)								
LiNbO3	(7,-9,-2)	11.417	70.65	9.784	8.6	4.248	36.45	53.11	64.41
	Equiv. Refl.: (9,-7,-2)								
LiNbO3	(2,-9,2)	11.417	70.65	9.773	8.6	4.248	36.45	53.11	64.41
	Equiv. Refl.: (7,2,2), (9,-2,2), (-2,-7,2), (-7,9,2), (-9,7,2)								
LiNbO3	(1,6,16)	11.59	73.31	9.597	8.4	3.629	30.5	45.36	54.66
	Equiv. Refl.: (6,-7,16), (7,-6,16), (-1,7,16), (-6,-1,16), (-7,1,16)								
LiNbO3	(3,5,-14)	11.573	73.03	9.555	8.9	3.693	32.8	46.16	56.63
	Equiv. Refl.: (5,-8,-14), (8,-5,-14), (-3,8,-14), (-5,-3,-14), (-8,3,-14)								
LiNbO3	(2,4,-20)	11.581	73.16	9.547	8.7	3.662	31.75	45.78	55.71
	Equiv. Refl.: (4,-6,-20), (6,-4,-20), (-2,6,-20), (-4,-2,-20), (-6,2,-20)								
LiNbO3	(0,-6,-18)	11.593	73.35	9.391	8.6	3.618	31.17	45.23	54.93
	Equiv. Refl.: (6,0,-18), (-6,6,-18)								
LiNbO3	(0,1,26)	11.709	75.4	9.356	8.5	3.151	26.91	39.39	47.71
	Equiv. Refl.: (1,-1,26), (-1,0,26)								
LiNbO3	(-1,1,-26)	11.709	75.4	9.217	8.5	3.151	26.91	39.39	47.71
LiNbO3	(0,-1,-26)	11.709	75.4	9.216	8.5	3.151	26.91	39.39	47.71
	Equiv. Refl.: (1,0,-26)								
LiNbO3	(1,-7,-16)	11.59	73.31	9.06	8.4	3.629	30.5	45.36	54.66
	Equiv. Refl.: (6,1,-16), (7,-1,-16), (-1,-6,-16), (-6,7,-16), (-7,6,-16)								
LiNbO3	(0,-7,-14)	11.573	73.03	8.325	7.6	3.693	27.92	46.16	53.95
	Equiv. Refl.: (7,0,-14), (-7,7,-14)								
LiNbO3	(0,7,14)	11.573	73.03	8.159	7.6	3.693	27.92	46.16	53.95
	Equiv. Refl.: (7,-7,14), (-7,0,14)								
LiNbO3	(2,7,4)	11.521	72.21	7.946	7.1	3.883	27.55	48.54	55.81
	Equiv. Refl.: (7,-9,4), (9,-7,4), (-2,9,4), (-7,-2,4), (-9,2,4)								
Sapph	(0,7,-10)	11.562	72.85	7.864	6.2	3.734	22.99	46.67	52.03
	Equiv. Refl.: (0,-7,10), (7,0,10), (7,-7,-10), (-7,0,-10), (-7,7,10)								
Quartz	(-3,9,-3)	12.066	85.68	7.813	6.9	0.915	6.32	11.44	13.07
	Equiv. Refl.: (-6,9,3), (-6,-3,-3)								
Quartz	(-3,-6,3)	12.066	85.68	7.812	6.9	0.915	6.32	11.44	13.07
Quartz	(9,-3,3)	12.066	85.68	7.81	6.9	0.915	6.32	11.44	13.07
	Equiv. Refl.: (9,-6,-3)								
Sapph	(1,1,24)	11.748	76.14	7.602	6.1	2.986	18.19	37.32	41.52
	Equiv. Refl.: (1,1,-24), (1,-2,24), (1,-2,-24), (2,-1,24), (2,-1,-24), (-1,2,24), (-1,2,-24), (-1,-1,24), (-1,-1,-24), (-2,1,24), (-2,1,-24)								
Quartz	(6,-9,-3)	12.066	85.68	7.507	6.9	0.915	6.32	11.44	13.07
Quartz	(3,-9,3)	12.066	85.68	7.506	6.9	0.915	6.32	11.44	13.07
	Equiv. Refl.: (6,3,3)								
Quartz	(3,6,-3)	12.066	85.68	7.505	6.9	0.915	6.32	11.44	13.07

Ei =	12.1	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-9,3,-3)	12.066	85.68	7.504	6.9	0.915	6.32	11.44	13.07
	Equiv. Refl.: (-9,6,3)								
LiNbO3	(2,-9,-4)	11.521	72.21	7.453	7.1	3.883	27.55	48.54	55.81
	Equiv. Refl.: (7,2,-4), (9,-2,-4), (-2,-7,-4), (-7,9,-4), (-9,7,-4)								
Sapph	(4,5,-4)	11.904	79.67	7.296	6.1	2.205	13.4	27.56	30.65
	Equiv. Refl.: (4,-9,4), (5,4,4), (5,-9,-4), (9,-4,4), (9,-5,-4), (-4,9,-4), (-4,-5,4), (-5,9,4), (-5,-4,-4), (-9,4,-4), (-9,5,4)								
Quartz	(9,-3,-3)	12.066	85.68	7.08	6.2	0.915	5.71	11.44	12.78
	Equiv. Refl.: (9,-6,3)								
Quartz	(-6,9,-3)	12.066	85.68	7.079	6.2	0.915	5.71	11.44	12.78
	Equiv. Refl.: (-6,-3,3)								
Quartz	(-3,-6,-3)	12.066	85.68	7.078	6.2	0.915	5.71	11.44	12.78
Quartz	(-3,9,3)	12.066	85.68	7.076	6.2	0.915	5.71	11.44	12.78
LiNbO3	(4,5,8)	11.434	70.9	6.874	6.3	4.189	26.37	52.37	58.63
	Equiv. Refl.: (5,-9,8), (9,-5,8), (-4,9,8), (-5,-4,8), (-9,4,8)								
Quartz	(2,7,1)	11.981	81.96	6.831	5.5	1.71	9.46	21.37	23.37
	Equiv. Refl.: (2,-9,-1)								
Quartz	(7,2,-1)	11.981	81.96	6.83	5.5	1.71	9.46	21.37	23.37
	Equiv. Refl.: (7,-9,1), (-9,2,1), (-9,7,-1)								
Quartz	(4,3,7)	11.959	81.24	6.739	5.5	1.865	10.18	23.32	25.44
	Equiv. Refl.: (4,-7,-7)								
Quartz	(-7,3,-7)	11.959	81.24	6.734	5.5	1.865	10.17	23.32	25.44
Quartz	(3,4,-7)	11.959	81.24	6.733	5.5	1.865	10.17	23.32	25.44
	Equiv. Refl.: (-7,4,7)								
Quartz	(3,-7,7)	11.959	81.24	6.732	5.5	1.865	10.17	23.32	25.44
LiNbO3	(4,-9,-8)	11.434	70.9	6.622	6.3	4.189	26.37	52.37	58.63
	Equiv. Refl.: (5,4,-8), (9,-4,-8), (-4,-5,-8), (-5,9,-8), (-9,5,-8)								
Sapph	(2,6,11)	12.052	84.9	6.46	5.9	1.079	6.41	13.49	14.93
	Equiv. Refl.: (2,-8,-11), (6,2,-11), (6,-8,11), (8,-2,-11), (8,-6,11), (-2,8,11), (-2,-6,-11), (-6,8,-11), (-6,-2,11), (-8,2,11), (-8,6,-11)								
Quartz	(-4,7,7)	11.959	81.24	6.452	5.5	1.865	10.18	23.32	25.44
	Equiv. Refl.: (-4,-3,-7)								
Quartz	(7,-3,7)	11.959	81.24	6.447	5.5	1.865	10.17	23.32	25.44
Quartz	(7,-4,-7)	11.959	81.24	6.446	5.5	1.865	10.17	23.32	25.44
	Equiv. Refl.: (-3,-4,7)								
Quartz	(-3,7,-7)	11.959	81.24	6.445	5.5	1.865	10.17	23.32	25.44
Quartz	(-9,3,3)	12.066	85.68	6.439	6.2	0.915	5.71	11.44	12.78
	Equiv. Refl.: (-9,6,-3)								
Quartz	(3,6,3)	12.066	85.68	6.437	6.2	0.915	5.71	11.44	12.78
	Equiv. Refl.: (6,3,-3), (6,-9,3)								
Quartz	(3,-9,-3)	12.066	85.68	6.435	6.2	0.915	5.71	11.44	12.78
Quartz	(-2,9,1)	11.981	81.96	6.417	5.5	1.71	9.46	21.37	23.37
	Equiv. Refl.: (-2,-7,-1)								
Quartz	(9,-2,-1)	11.981	81.96	6.416	5.5	1.71	9.46	21.37	23.37
	Equiv. Refl.: (9,-7,1), (-7,9,-1), (-7,-2,1)								
LiNbO3	(0,-3,-24)	11.514	72.1	6.246	5.8	3.908	22.48	48.85	53.77
	Equiv. Refl.: (3,0,-24), (-3,3,-24)								
LiNbO3	(0,3,-24)	11.514	72.1	6.132	5.7	3.908	22.22	48.85	53.66
	Equiv. Refl.: (-3,0,-24)								
LiNbO3	(3,-3,-24)	11.514	72.1	6.131	5.7	3.908	22.22	48.85	53.66

Ei = Cryst	12.1 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
LiNbO3	(0,3,24)	11.514	72.1	6.079	5.8	3.908	22.48	48.85	53.77
	Equiv. Refl.: (3,-3,24), (-3,0,24)								
LiNbO3	(0,-3,24)	11.514	72.1	6.024	5.7	3.908	22.22	48.85	53.66
	Equiv. Refl.: (3,0,24), (-3,3,24)								
Quartz	(0,7,-5)	11.701	75.24	5.907	4.6	3.188	14.81	39.84	42.51
	Equiv. Refl.: (0,-7,5)								
Quartz	(7,0,5)	11.701	75.24	5.903	4.6	3.188	14.8	39.84	42.5
	Equiv. Refl.: (7,-7,-5), (-7,0,-5), (-7,7,5)								
Sapph	(3,3,18)	11.615	73.73	5.674	4.7	3.531	16.48	44.14	47.12
	Equiv. Refl.: (3,3,-18), (3,-6,18), (3,-6,-18), (6,-3,18), (6,-3,-18), (-3,6,18), (-3,6,-18), (-3,-3,18), (-3,-3,-18), (-6,3,18), (-6,3,-18)								
Quartz	(2,6,5)	11.97	81.59	5.349	4.3	1.789	7.75	22.36	23.67
	Equiv. Refl.: (2,-8,-5)								
Quartz	(-8,2,5)	11.97	81.59	5.347	4.3	1.789	7.75	22.36	23.67
	Equiv. Refl.: (-8,6,-5)								
Quartz	(6,2,-5)	11.97	81.59	5.346	4.3	1.789	7.75	22.36	23.67
Quartz	(6,-8,5)	11.97	81.59	5.345	4.3	1.789	7.75	22.36	23.67
Quartz	(0,6,7)	11.87	78.8	5.276	4.2	2.396	10.13	29.94	31.61
	Equiv. Refl.: (0,-6,-7)								
Quartz	(6,0,-7)	11.87	78.8	5.268	4.2	2.396	10.12	29.94	31.61
	Equiv. Refl.: (6,-6,7), (-6,0,7), (-6,6,-7)								
Quartz	(-2,8,5)	11.97	81.59	5.1	4.3	1.789	7.75	22.36	23.67
	Equiv. Refl.: (-2,-6,-5)								
Quartz	(8,-2,-5)	11.97	81.59	5.098	4.3	1.789	7.75	22.36	23.67
	Equiv. Refl.: (8,-6,5), (-6,-2,5)								
Quartz	(-6,8,-5)	11.97	81.59	5.097	4.3	1.789	7.75	22.36	23.67
Sapph	(1,7,6)	11.714	75.48	5.027	4.1	3.134	12.72	39.17	41.18
	Equiv. Refl.: (1,7,-6), (1,-8,6), (1,-8,-6), (7,1,6), (7,1,-6), (7,-8,6), (7,-8,-6), (8,-1,6), (8,-1,-6), (8,-7,6), (8,-7,-6), (-1,8,6), (-1,8,-6), (-1,-7,6), (-1,-7,-6), (-7,8,6), (-7,8,-6), (-7,-1,6), (-7,-1,-6), (-8,1,6), (-8,1,-6), (-8,7,6), (-8,7,-6)								
Quartz	(-8,1,-4)	11.918	80.06	5.019	4	2.12	8.57	26.5	27.85
Quartz	(1,7,-4)	11.918	80.06	5.018	4	2.12	8.57	26.5	27.85
	Equiv. Refl.: (1,-8,4), (7,-8,-4), (-8,7,4)								
Quartz	(7,1,4)	11.918	80.06	5.017	4	2.12	8.57	26.5	27.85
Quartz	(2,7,-1)	11.981	81.96	4.923	4.2	1.71	7.11	21.37	22.52
	Equiv. Refl.: (2,-9,1), (7,2,1), (7,-9,-1)								
Quartz	(-9,2,-1)	11.981	81.96	4.922	4.2	1.71	7.11	21.37	22.52
	Equiv. Refl.: (-9,7,1)								
Quartz	(-2,9,-1)	11.981	81.96	4.87	4.2	1.71	7.11	21.37	22.52
	Equiv. Refl.: (-2,-7,1), (-7,9,1), (-7,-2,-1)								
Quartz	(9,-2,1)	11.981	81.96	4.869	4.2	1.71	7.11	21.37	22.52
	Equiv. Refl.: (9,-7,-1)								
Quartz	(8,-1,4)	11.918	80.06	4.82	4	2.12	8.57	26.5	27.85
	Equiv. Refl.: (-1,8,-4), (-1,-7,4)								
Quartz	(8,-7,-4)	11.918	80.06	4.819	4	2.12	8.57	26.5	27.85
	Equiv. Refl.: (-7,8,4), (-7,-1,-4)								
Sapph	(1,6,-14)	11.915	79.97	4.523	3.9	2.14	8.36	26.74	28.02
	Equiv. Refl.: (1,-7,14), (6,1,14), (6,-7,-14), (7,-1,14), (7,-6,-14), (-1,7,-14), (-1,-6,14), (-6,7,14), (-6,-1,-14), (-7,1,-14), (-7,6,14)								

Ei =	12.1	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(2,4,19)	12.067	85.76	4.502	4.7	0.897	4.2	11.21	11.97
	Equiv. Refl.: (2,-6,-19), (4,2,-19), (4,-6,19), (6,-2,-19), (6,-4,19), (-2,6,19), (-2,-4,-19), (-4,6,-19), (-4,-2,19), (-6,2,19), (-6,4,-19)								
Sapph	(4,5,5)	11.99	82.26	4.272	3.9	1.644	6.46	20.55	21.55
	Equiv. Refl.: (4,-9,-5), (5,4,-5), (5,-9,5), (9,-4,-5), (9,-5,5), (-4,9,5), (-4,-5,-5), (-5,9,-5), (-5,-4,5), (-9,4,5), (-9,5,-5)								
Quartz	(4,-1,-9)	11.583	73.19	4.149	3.2	3.656	11.84	45.7	47.2
Quartz	(4,-3,9)	11.583	73.19	4.147	3.2	3.656	11.84	45.7	47.2
	Equiv. Refl.: (9,-3,2), (9,-6,-2), (-1,4,9), (-3,9,-2), (-3,-6,2), (-6,9,2), (-6,-3,-2)								
Quartz	(-1,-3,-9)	11.583	73.19	4.146	3.2	3.656	11.83	45.7	47.2
	Equiv. Refl.: (-3,4,-9), (-3,-1,9)								
Quartz	(3,6,-2)	11.79	77	4.117	3.4	2.794	9.37	34.92	36.16
	Equiv. Refl.: (6,-9,-2), (-9,6,2)								
Quartz	(3,-9,2)	11.79	77	4.116	3.4	2.794	9.37	34.92	36.16
	Equiv. Refl.: (6,3,2), (-9,3,-2)								
Quartz	(0,8,-1)	11.712	75.45	4.097	3.2	3.139	10.2	39.24	40.55
	Equiv. Refl.: (0,-8,1), (8,0,1), (8,-8,-1), (-8,0,-1), (-8,8,1)								
Quartz	(-4,1,9)	11.583	73.19	4.086	3.2	3.656	11.84	45.7	47.2
Quartz	(-4,3,-9)	11.583	73.19	4.085	3.2	3.656	11.84	45.7	47.2
Quartz	(1,3,9)	11.583	73.19	4.084	3.2	3.656	11.83	45.7	47.2
	Equiv. Refl.: (1,-4,-9), (3,1,-9), (3,-4,9)								
Quartz	(0,1,-10)	11.562	72.86	3.995	3.1	3.733	11.76	46.66	48.12
	Equiv. Refl.: (0,-1,10)								
Quartz	(1,0,10)	11.562	72.86	3.993	3.1	3.733	11.75	46.66	48.12
	Equiv. Refl.: (-1,0,-10)								
Quartz	(1,-1,-10)	11.562	72.86	3.992	3.1	3.733	11.75	46.66	48.11
	Equiv. Refl.: (-1,1,10)								
Quartz	(0,1,10)	11.562	72.86	3.882	3.1	3.733	11.41	46.66	48.03
	Equiv. Refl.: (0,-1,-10)								
Quartz	(1,0,-10)	11.562	72.86	3.88	3.1	3.733	11.4	46.66	48.03
Quartz	(1,-1,10)	11.562	72.86	3.879	3.1	3.733	11.4	46.66	48.03
	Equiv. Refl.: (-1,0,10)								
Quartz	(-1,1,-10)	11.562	72.86	3.878	3.1	3.733	11.4	46.66	48.03
Quartz	(-3,4,9)	11.583	73.19	3.748	3	3.656	10.87	45.7	46.97
	Equiv. Refl.: (-3,-1,-9)								
Quartz	(4,-3,-9)	11.583	73.19	3.747	3	3.656	10.87	45.7	46.97
	Equiv. Refl.: (-1,-3,9)								
Quartz	(4,-1,9)	11.583	73.19	3.746	3	3.656	10.87	45.7	46.97
	Equiv. Refl.: (-1,4,-9)								
Quartz	(3,1,9)	11.583	73.19	3.724	3	3.656	10.87	45.7	46.97
	Equiv. Refl.: (3,-4,-9)								
Quartz	(6,3,-2)	11.79	77	3.723	3.1	2.794	8.53	34.92	35.95
	Equiv. Refl.: (6,-9,2), (-9,3,2), (-9,6,-2)								
Quartz	(1,3,-9)	11.583	73.19	3.722	3	3.656	10.87	45.7	46.97
	Equiv. Refl.: (1,-4,9), (3,-9,-2), (-4,3,9)								
Quartz	(3,6,2)	11.79	77	3.721	3.1	2.794	8.53	34.92	35.95
	Equiv. Refl.: (-3,7,7), (-3,-4,-7), (-4,1,-9)								
Quartz	(-4,7,-7)	11.959	81.24	3.72	3.2	1.865	6	23.32	24.08
	Equiv. Refl.: (-4,-3,7)								
Quartz	(7,-3,-7)	11.959	81.24	3.719	3.2	1.865	6	23.32	24.08
Quartz	(7,-4,7)	11.959	81.24	3.718	3.2	1.865	6	23.32	24.08

Ei = Cryst	12.1 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(3,-6,-8)	11.896	79.47	3.717	3.1	2.25	6.93	28.12	28.96
Quartz	(3,3,8)	11.896	79.47	3.716	3.1	2.25	6.93	28.12	28.96
Quartz	(2,4,-8)	11.985	82.09	3.714	3.2	1.68	5.39	21	21.68
	Equiv. Refl.: (-6,3,-8)								
Quartz	(-6,3,8)	11.896	79.47	3.713	3.1	2.25	6.93	28.12	28.96
Quartz	(9,-3,-2)	11.79	77	3.712	3.1	2.794	8.53	34.92	35.95
	Equiv. Refl.: (9,-6,2), (-6,2,-8), (-6,4,8), (-6,9,-2), (-6,-3,2)								
Quartz	(2,-6,8)	11.985	82.09	3.711	3.2	1.68	5.39	21	21.68
	Equiv. Refl.: (3,3,-8), (3,-6,8), (-3,9,2), (-3,-6,-2)								
Quartz	(4,2,8)	11.985	82.09	3.708	3.2	1.68	5.38	21	21.68
	Equiv. Refl.: (4,-6,-8)								
Quartz	(3,4,7)	11.959	81.24	3.591	3.2	1.865	6	23.32	24.08
	Equiv. Refl.: (3,-7,-7)								
Quartz	(4,3,-7)	11.959	81.24	3.59	3.2	1.865	6	23.32	24.08
Quartz	(4,-7,7)	11.959	81.24	3.589	3.2	1.865	6	23.32	24.08
	Equiv. Refl.: (-2,-4,8), (-7,3,7)								
Quartz	(6,-2,8)	11.985	82.09	3.587	3.2	1.68	5.39	21	21.68
	Equiv. Refl.: (6,-4,-8), (-2,6,-8), (-7,4,-7)								
Quartz	(-4,6,8)	11.985	82.09	3.583	3.2	1.68	5.38	21	21.68
	Equiv. Refl.: (-4,-2,-8)								
Quartz	(7,1,-4)	11.918	80.06	3.548	3	2.12	6.41	26.5	27.26
	Equiv. Refl.: (7,-8,4)								
Quartz	(1,7,4)	11.918	80.06	3.546	3	2.12	6.4	26.5	27.26
	Equiv. Refl.: (1,-8,-4)								
Quartz	(-8,1,4)	11.918	80.06	3.545	3	2.12	6.4	26.5	27.26
	Equiv. Refl.: (-8,7,-4)								
Quartz	(-3,6,8)	11.896	79.47	3.485	3.1	2.25	6.93	28.12	28.96
	Equiv. Refl.: (-3,-3,-8)								
Quartz	(6,-3,8)	11.896	79.47	3.483	3.1	2.25	6.93	28.12	28.96
Quartz	(6,3,-8)	11.896	79.47	3.482	3.1	2.25	6.93	28.12	28.96
Quartz	(-3,-3,8)	11.896	79.47	3.48	3.1	2.25	6.92	28.12	28.96
Quartz	(-3,6,-8)	11.896	79.47	3.479	3.1	2.25	6.92	28.12	28.96
Sapph	(2,6,-10)	11.852	78.38	3.441	3.3	2.488	8.11	31.1	32.14
	Equiv. Refl.: (2,-8,10), (6,2,10), (6,-8,-10), (8,-2,10), (8,-6,-10), (-2,8,-10), (-2,-6,10), (-6,8,10), (-6,-2,-10), (-8,2,-10), (-8,6,10)								
Quartz	(-7,-1,4)	11.918	80.06	3.407	3	2.12	6.41	26.5	27.26
Quartz	(-7,8,-4)	11.918	80.06	3.406	3	2.12	6.41	26.5	27.26
Quartz	(-1,8,4)	11.918	80.06	3.405	3	2.12	6.4	26.5	27.26
	Equiv. Refl.: (-1,-7,-4)								
Quartz	(8,-1,-4)	11.918	80.06	3.404	3	2.12	6.4	26.5	27.26
	Equiv. Refl.: (8,-7,4)								
Quartz	(4,0,9)	11.855	78.44	3.273	3	2.474	7.46	30.93	31.82
	Equiv. Refl.: (4,-4,-9), (-4,0,-9)								
Quartz	(-4,4,9)	11.855	78.44	3.272	3	2.474	7.46	30.93	31.82
Quartz	(0,4,-9)	11.855	78.44	3.268	3	2.474	7.45	30.93	31.81
	Equiv. Refl.: (0,-4,9)								
Quartz	(-1,7,-6)	11.775	76.68	3.157	2.5	2.864	7.05	35.8	36.48
	Equiv. Refl.: (-6,7,6), (-6,-1,-6)								
Quartz	(-1,-6,6)	11.775	76.68	3.156	2.5	2.864	7.04	35.8	36.48

Ei = Cryst	12.1 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(7,-1,6) Equiv. Refl.: (7,-6,-6)	11.775	76.68	3.153	2.5	2.864	7.04	35.8	36.48
Quartz	(-5,9,-1) Equiv. Refl.: (-5,-4,1)	11.437	70.95	3.093	2.7	4.179	11.3	52.24	53.45
Quartz	(9,-4,-1) Equiv. Refl.: (9,-5,1), (-4,9,1), (-4,-5,-1)	11.437	70.95	3.092	2.7	4.179	11.3	52.24	53.45
Quartz	(6,-1,7) Equiv. Refl.: (6,-5,-7), (-1,6,-7), (-1,-5,7)	11.414	70.61	3.065	2.4	4.258	10.01	53.23	54.16
Quartz	(-5,6,7) Equiv. Refl.: (-5,-1,-7)	11.414	70.61	3.062	2.3	4.258	10	53.23	54.16
Quartz	(4,-2,9) Equiv. Refl.: (4,-2,-9)	11.491	71.74	3.061	2.7	3.992	10.66	49.89	51.02
Quartz	(-2,4,-9) Equiv. Refl.: (-2,-2,9)	11.491	71.74	3.06	2.7	3.992	10.65	49.89	51.02
Quartz	(-2,4,9) Equiv. Refl.: (-2,-2,-9)	11.491	71.74	3.059	2.7	3.992	10.65	49.89	51.02
Quartz	(1,-6,7)	11.414	70.61	3.049	2.4	4.258	10.01	53.23	54.16
Quartz	(1,5,-7) Equiv. Refl.: (-6,1,-7), (-6,5,7)	11.414	70.61	3.048	2.4	4.258	10.01	53.23	54.16
Quartz	(5,1,7) Equiv. Refl.: (5,-6,-7)	11.414	70.61	3.045	2.3	4.258	10	53.23	54.16
Quartz	(4,5,1) Equiv. Refl.: (4,-9,-1), (5,4,-1), (5,-9,1), (-9,4,1), (-9,5,-1)	11.437	70.95	3.024	2.7	4.179	11.3	52.24	53.45
Quartz	(5,4,2) Equiv. Refl.: (5,-9,-2)	11.608	73.61	3.013	2.7	3.559	9.49	44.48	45.49
Quartz	(4,5,-2) Equiv. Refl.: (4,-9,2), (-9,4,-2), (-9,5,2)	11.608	73.61	3.012	2.7	3.559	9.49	44.48	45.49
Quartz	(-4,2,9) Equiv. Refl.: (-4,2,-9)	11.491	71.74	2.948	2.7	3.992	10.66	49.89	51.02
Quartz	(2,2,-9) Equiv. Refl.: (2,-4,9)	11.491	71.74	2.947	2.7	3.992	10.65	49.89	51.02
Quartz	(2,2,9)	11.491	71.74	2.946	2.7	3.992	10.65	49.89	51.02
Quartz	(2,-4,-9)	11.491	71.74	2.945	2.7	3.992	10.65	49.89	51.02
Quartz	(-5,9,2) Equiv. Refl.: (-5,-4,-2)	11.608	73.61	2.927	2.7	3.559	9.49	44.48	45.49
Quartz	(9,-4,2) Equiv. Refl.: (9,-5,-2), (-4,9,-2), (-4,-5,2)	11.608	73.61	2.926	2.7	3.559	9.49	44.48	45.49
Quartz	(6,1,6) Equiv. Refl.: (6,-7,-6)	11.775	76.68	2.922	2.5	2.864	7.05	35.8	36.48
Quartz	(1,-7,6)	11.775	76.68	2.921	2.5	2.864	7.05	35.8	36.48
Quartz	(1,6,-6)	11.775	76.68	2.92	2.5	2.864	7.04	35.8	36.48
Quartz	(-7,1,-6) Equiv. Refl.: (-7,6,6)	11.775	76.68	2.918	2.5	2.864	7.04	35.8	36.48
Quartz	(1,6,6) Equiv. Refl.: (1,-7,-6), (-7,1,6), (-7,6,-6)	11.775	76.68	2.909	2.3	2.864	6.52	35.8	36.39
Quartz	(6,1,-6) Equiv. Refl.: (6,-7,6)	11.775	76.68	2.905	2.3	2.864	6.52	35.8	36.38
Sapph	(2,3,20) Equiv. Refl.: (2,-5,-20), (3,2,-20), (3,-5,20), (5,-2,-20), (5,-3,20), (-2,-5,20), (-2,-3,-20), (-3,5,-20), (-3,-2,20), (-5,2,20), (-5,3,-20)	11.581	73.16	2.872	2.7	3.662	9.78	45.77	46.81

Ei =	12.1	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(1,7,-3)	11.526	72.28	2.828	2.1	3.867	8.3	48.34	49.05
	Equiv. Refl.: (7,1,3), (7,-8,-3), (-8,1,-3), (-8,7,3)								
Quartz	(1,-8,3)	11.526	72.28	2.827	2.1	3.867	8.3	48.34	49.05
Sapph	(3,5,10)	11.562	72.85	2.713	2.5	3.734	9.45	46.67	47.62
	Equiv. Refl.: (3,-8,-10), (5,3,-10), (5,-8,10), (8,-3,-10), (8,-5,10), (-3,8,10), (-3,-5,-10), (-5,8,-10), (-5,-3,10), (-8,3,10), (-8,5,-10)								
Quartz	(6,2,4)	11.465	71.35	2.652	2.4	4.084	9.61	51.05	51.95
	Equiv. Refl.: (6,-8,-4)								
Quartz	(-8,2,-4)	11.465	71.35	2.651	2.4	4.084	9.61	51.05	51.95
	Equiv. Refl.: (-8,6,4)								
Quartz	(2,6,-4)	11.465	71.35	2.65	2.4	4.084	9.6	51.05	51.95
	Equiv. Refl.: (2,-8,4)								
Quartz	(8,-1,-3)	11.526	72.28	2.57	2.3	3.867	8.87	48.34	49.15
	Equiv. Refl.: (-1,8,3), (-1,-7,-3), (-7,8,-3), (-7,-1,3)								
Quartz	(8,-7,3)	11.526	72.28	2.569	2.3	3.867	8.87	48.34	49.15
Quartz	(8,-2,4)	11.465	71.35	2.552	2.4	4.084	9.61	51.05	51.95
	Equiv. Refl.: (8,-6,-4), (-6,8,4), (-6,-2,-4)								
Quartz	(-2,8,-4)	11.465	71.35	2.551	2.4	4.084	9.6	51.05	51.95
	Equiv. Refl.: (-2,-6,4)								
Quartz	(1,7,3)	11.526	72.28	2.479	2.3	3.867	8.87	48.34	49.15
	Equiv. Refl.: (1,-8,-3), (7,1,-3), (7,-8,3)								
Quartz	(-8,1,3)	11.526	72.28	2.478	2.3	3.867	8.87	48.34	49.15
	Equiv. Refl.: (-8,7,-3)								
Sapph	(4,5,-1)	11.76	76.38	2.431	2.4	2.932	6.93	36.66	37.3
	Equiv. Refl.: (4,-9,1), (5,4,1), (5,-9,-1), (9,-4,1), (9,-5,-1), (-4,9,-1), (-4,-5,1), (-5,9,1), (-5,-4,-1), (-9,4,-1), (-9,5,1)								
Quartz	(3,6,0)	11.564	72.89	2.412	2.1	3.725	7.75	46.56	47.2
	Equiv. Refl.: (3,-9,0), (6,3,0), (6,-9,0), (-9,3,0), (-9,6,0)								
Quartz	(7,-1,-6)	11.775	76.68	2.382	2.3	2.864	6.52	35.8	36.39
	Equiv. Refl.: (7,-6,6), (-1,7,6), (-1,-6,-6)								
Quartz	(-6,-1,6)	11.775	76.68	2.38	2.3	2.864	6.52	35.8	36.38
Quartz	(-6,7,-6)	11.775	76.68	2.379	2.3	2.864	6.51	35.8	36.38
LiNbO3	(1,6,-17)	11.871	78.84	2.375	3.6	2.386	8.61	29.83	31.05
	Equiv. Refl.: (1,-7,17), (6,1,17), (6,-7,-17), (7,-1,17), (7,-6,-17), (-1,7,-17), (-1,-6,17), (-6,7,17), (-6,-1,-17), (-7,1,-17), (-7,6,17)								
Quartz	(8,-1,3)	11.526	72.28	2.371	2.1	3.867	8.3	48.34	49.05
	Equiv. Refl.: (-1,-7,3), (-7,8,3)								
Quartz	(8,-7,-3)	11.526	72.28	2.37	2.1	3.867	8.3	48.34	49.05
	Equiv. Refl.: (-1,8,-3), (-7,-1,-3)								
Sapph	(2,5,15)	11.812	77.48	2.323	2.3	2.688	6.21	33.6	34.17
	Equiv. Refl.: (2,5,-15), (2,-7,15), (2,-7,-15), (5,2,15), (5,2,-15), (5,-7,15), (5,-7,-15), (7,-2,15), (7,-2,-15), (7,-5,15), (7,-5,-15), (-2,7,15), (-2,7,-15), (-2,-5,15), (-2,-5,-15), (-5,7,15), (-5,7,-15), (-5,-2,15), (-5,-2,-15), (-7,2,15), (-7,2,-15), (-7,5,15), (-7,5,-15)								
Quartz	(0,-4,-9)	11.855	78.44	1.99	2.2	2.474	5.43	30.93	31.4
Quartz	(0,4,9)	11.855	78.44	1.989	2.2	2.474	5.43	30.93	31.4
Quartz	(-4,4,-9)	11.855	78.44	1.985	2.2	2.474	5.42	30.93	31.4
Quartz	(4,0,-9)	11.855	78.44	1.984	2.2	2.474	5.41	30.93	31.4
	Equiv. Refl.: (4,-4,9), (-4,0,9)								
Quartz	(0,8,0)	11.656	74.43	1.934	2.1	3.372	6.99	42.15	42.72
	Equiv. Refl.: (0,-8,0), (8,0,0), (8,-8,0), (-8,0,0), (-8,8,0)								

Ei =	12.1	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(2,7,7)	11.804	77.31	1.909	3	2.726	8.15	34.07	35.03
	Equiv. Refl.: (2,-9,-7), (7,2,-7), (7,-9,7), (9,-2,-7), (9,-7,7), (-2,9,7), (-2,-7,-7), (-7,9,-7), (-7,-2,7), (-9,2,7), (-9,7,-7)								
Quartz	(9,-3,0)	11.564	72.89	1.888	2.1	3.725	7.75	46.56	47.2
	Equiv. Refl.: (9,-6,0), (-3,9,0), (-3,-6,0), (-6,9,0), (-6,-3,0)								
Quartz	(4,5,3)	11.888	79.27	1.847	2.1	2.294	4.71	28.67	29.05
	Equiv. Refl.: (4,-9,-3), (5,4,-3), (5,-9,3), (-9,4,3), (-9,5,-3)								
Quartz	(9,-4,-3)	11.888	79.27	1.793	2.1	2.294	4.71	28.67	29.05
	Equiv. Refl.: (9,-5,3), (-5,9,-3), (-5,-4,3)								
Quartz	(-4,9,3)	11.888	79.27	1.792	2.1	2.294	4.71	28.67	29.05
	Equiv. Refl.: (-4,-5,-3)								
Quartz	(4,4,-5)	11.61	73.63	1.755	1.9	3.553	6.67	44.42	44.91
Quartz	(4,-8,5)	11.61	73.63	1.754	1.9	3.553	6.67	44.42	44.91
	Equiv. Refl.: (-8,4,5), (-8,4,-5)								
Quartz	(4,4,5)	11.61	73.63	1.753	1.9	3.553	6.66	44.42	44.91
	Equiv. Refl.: (4,-8,-5)								
Quartz	(-4,-4,5)	11.61	73.63	1.726	1.9	3.553	6.67	44.42	44.91
Quartz	(8,-4,5)	11.61	73.63	1.725	1.9	3.553	6.66	44.42	44.91
	Equiv. Refl.: (8,-4,-5), (-4,8,5), (-4,8,-5), (-4,-4,-5)								
Quartz	(4,5,-1)	11.437	70.95	1.689	1.8	4.179	7.49	52.24	52.77
	Equiv. Refl.: (5,4,1), (5,-9,-1)								
Quartz	(4,-9,1)	11.437	70.95	1.688	1.8	4.179	7.49	52.24	52.77
	Equiv. Refl.: (-9,4,-1), (-9,5,1)								
Sapph	(1,5,17)	11.662	74.53	1.678	1.9	3.348	6.35	41.85	42.33
	Equiv. Refl.: (1,-6,-17), (5,1,-17), (5,-6,17), (6,-1,-17), (6,-5,17), (-1,6,17), (-1,-5,-17), (-5,6,-17), (-5,-1,17), (-6,1,17), (-6,5,-17)								
Quartz	(9,-4,1)	11.437	70.95	1.673	1.8	4.179	7.49	52.24	52.77
	Equiv. Refl.: (9,-5,-1), (-4,9,-1), (-4,-5,1), (-5,9,1), (-5,-4,-1)								
Quartz	(2,0,10)	11.835	77.98	1.651	1.9	2.577	4.79	32.21	32.57
	Equiv. Refl.: (-2,0,-10)								
Quartz	(2,-2,-10)	11.835	77.98	1.65	1.9	2.577	4.79	32.21	32.57
	Equiv. Refl.: (-2,2,10)								
Quartz	(0,2,-10)	11.835	77.98	1.645	1.9	2.577	4.78	32.21	32.57
	Equiv. Refl.: (0,-2,10)								
Quartz	(3,6,-1)	11.621	73.83	1.606	1.6	3.509	5.78	43.86	44.24
	Equiv. Refl.: (3,-9,1), (6,3,1), (6,-9,-1), (-9,3,-1), (-9,6,1)								
LiNbO3	(2,7,-5)	11.599	73.46	1.545	2.4	3.594	8.61	44.92	45.74
	Equiv. Refl.: (2,-9,5), (7,2,5), (7,-9,-5), (9,-2,5), (9,-7,-5), (-2,9,-5), (-2,-7,5), (-7,9,5), (-7,-2,-5), (-9,2,-5), (-9,7,5)								
LiNbO3	(3,4,-19)	11.989	82.22	1.544	3.1	1.654	5.08	20.67	21.28
	Equiv. Refl.: (3,-7,19), (4,3,19), (4,-7,-19), (7,-3,19), (7,-4,-19), (-3,7,-19), (-3,-4,19), (-4,7,19), (-4,-3,-19), (-7,3,-19), (-7,4,19)								
Quartz	(8,-6,-5)	11.97	81.59	1.446	1.6	1.789	2.93	22.36	22.56
	Equiv. Refl.: (-2,8,-5)								
Quartz	(8,-2,5)	11.97	81.59	1.445	1.6	1.789	2.93	22.36	22.56
	Equiv. Refl.: (-2,-6,5)								
Quartz	(-6,8,5)	11.97	81.59	1.444	1.6	1.789	2.92	22.36	22.56
	Equiv. Refl.: (-6,-2,-5)								
Quartz	(3,5,5)	11.701	75.24	1.429	1.6	3.188	5.05	39.84	40.16
	Equiv. Refl.: (3,-8,-5), (-8,3,5), (-8,5,-5)								

Ei = Cryst	12.1 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(5,3,-5)	11.701	75.24	1.428	1.6	3.188	5.05	39.84	40.16
	Equiv. Refl.: (5,-8,5)								
Quartz	(-5,-4,-3)	11.888	79.27	1.419	1.6	2.294	3.74	28.67	28.91
Quartz	(-5,9,3)	11.888	79.27	1.418	1.6	2.294	3.73	28.67	28.91
Quartz	(9,-4,3)	11.888	79.27	1.417	1.6	2.294	3.73	28.67	28.91
	Equiv. Refl.: (9,-5,-3)								
Quartz	(-4,9,-3)	11.888	79.27	1.415	1.6	2.294	3.73	28.67	28.91
	Equiv. Refl.: (-4,-5,3)								
Quartz	(8,-5,5)	11.701	75.24	1.398	1.6	3.188	5.05	39.84	40.16
	Equiv. Refl.: (-3,-5,-5)								
Quartz	(8,-3,-5)	11.701	75.24	1.397	1.6	3.188	5.05	39.84	40.16
	Equiv. Refl.: (-3,8,5)								
Quartz	(9,-3,1)	11.621	73.83	1.396	1.6	3.509	5.78	43.86	44.24
	Equiv. Refl.: (9,-6,-1), (-5,8,-5), (-5,-3,5), (-6,9,1), (-6,-3,-1)								
Quartz	(-3,9,-1)	11.621	73.83	1.395	1.6	3.509	5.78	43.86	44.24
	Equiv. Refl.: (-3,-6,1)								
LiNbO3	(2,7,1)	11.39	70.28	1.37	2.1	4.337	9.13	54.21	54.98
	Equiv. Refl.: (2,-9,-1), (7,2,-1), (7,-9,1), (9,-2,-1), (9,-7,1), (-2,9,1), (-2,-7,-1), (-7,9,-1), (-7,-2,1), (-9,2,1), (-9,7,-1)								
Quartz	(5,4,3)	11.888	79.27	1.343	1.6	2.294	3.74	28.67	28.91
	Equiv. Refl.: (5,-9,-3)								
Quartz	(-9,4,-3)	11.888	79.27	1.341	1.6	2.294	3.73	28.67	28.91
	Equiv. Refl.: (-9,5,3)								
Quartz	(4,5,-3)	11.888	79.27	1.34	1.6	2.294	3.73	28.67	28.91
	Equiv. Refl.: (4,-9,3)								
Quartz	(0,8,2)	11.879	79.04	1.286	1.5	2.342	3.58	29.28	29.49
	Equiv. Refl.: (0,-8,-2), (8,0,-2), (8,-8,2), (-8,0,2)								
Quartz	(-8,8,-2)	11.879	79.04	1.285	1.5	2.342	3.57	29.28	29.49
Sapph	(1,7,3)	11.448	71.11	1.267	1.5	4.141	6.03	51.77	52.12
	Equiv. Refl.: (1,7,-3), (1,-8,3), (1,-8,-3), (7,1,3), (7,1,-3), (7,-8,3), (7,-8,-3), (8,-1,3), (8,-1,-3), (8,-7,3), (8,-7,-3), (-1,8,3), (-1,8,-3), (-1,-7,3), (-1,-7,-3), (-7,8,3), (-7,8,-3), (-7,-1,3), (-7,-1,-3), (-8,1,3), (-8,1,-3), (-8,7,3), (-8,7,-3)								
Quartz	(2,-8,5)	11.97	81.59	1.19	1.6	1.789	2.93	22.36	22.56
	Equiv. Refl.: (-8,2,-5), (-8,6,5)								
Quartz	(2,6,-5)	11.97	81.59	1.189	1.6	1.789	2.93	22.36	22.56
Quartz	(6,2,5)	11.97	81.59	1.188	1.6	1.789	2.92	22.36	22.56
	Equiv. Refl.: (6,-8,-5)								
Quartz	(-6,2,8)	11.985	82.09	1.177	1.5	1.68	2.46	21	21.15
	Equiv. Refl.: (-6,4,-8)								
Quartz	(4,2,-8)	11.985	82.09	1.176	1.5	1.68	2.46	21	21.15
Quartz	(2,4,8)	11.985	82.09	1.175	1.5	1.68	2.45	21	21.15
	Equiv. Refl.: (2,-6,-8), (4,-6,8)								
Quartz	(5,2,-6)	11.408	70.54	1.158	1.3	4.276	5.46	53.46	53.73
	Equiv. Refl.: (5,-7,6)								
Quartz	(2,-7,-6)	11.408	70.54	1.157	1.3	4.276	5.46	53.46	53.73
	Equiv. Refl.: (-7,2,6), (-7,5,-6)								
Quartz	(2,5,6)	11.408	70.54	1.156	1.3	4.276	5.45	53.46	53.73
Quartz	(-5,7,-6)	11.408	70.54	1.13	1.3	4.276	5.46	53.46	53.73
	Equiv. Refl.: (-5,-2,6)								
Quartz	(7,-2,-6)	11.408	70.54	1.129	1.3	4.276	5.46	53.46	53.73
	Equiv. Refl.: (7,-5,6), (-2,7,6), (-2,-5,-6)								

Ei =	12.1	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(7,0,-5)	11.701	75.24	1.11	1.3	3.188	4.12	39.84	40.06
	Equiv. Refl.: (7,-7,5), (-7,0,5), (-7,7,-5)								
Quartz	(0,7,5)	11.701	75.24	1.109	1.3	3.188	4.11	39.84	40.06
	Equiv. Refl.: (0,-7,-5)								
Quartz	(-5,8,5)	11.701	75.24	1.072	1.2	3.188	3.91	39.84	40.04
	Equiv. Refl.: (-5,-3,-5)								
LiNbO3	(4,5,11)	11.922	80.16	1.071	2.2	2.098	4.72	26.23	26.65
	Equiv. Refl.: (4,-9,-11), (5,4,-11), (5,-9,11), (9,-4,-11), (9,-5,11), (-4,9,11), (-4,-5,-11), (-5,9,-11), (-5,-4,11), (-9,4,11), (-9,5,-11), (-3,8,-5), (-3,-5,5)								
Quartz	(8,-3,5)	11.701	75.24	1.07	1.2	3.188	3.91	39.84	40.04
	Equiv. Refl.: (8,-5,-5)								
Quartz	(6,-2,-8)	11.985	82.09	1.065	1.5	1.68	2.46	21	21.15
	Equiv. Refl.: (6,-4,8), (-4,-2,8)								
Quartz	(-2,6,8)	11.985	82.09	1.064	1.5	1.68	2.45	21	21.15
	Equiv. Refl.: (-2,-4,-8), (-4,6,-8)								
Quartz	(4,5,2)	11.608	73.61	1.052	1.2	3.559	4.31	44.48	44.69
	Equiv. Refl.: (5,4,-2), (5,-9,2), (-9,4,2), (-9,5,-2)								
Quartz	(4,-9,-2)	11.608	73.61	1.051	1.2	3.559	4.31	44.48	44.69
Sapph	(3,5,-11)	11.767	76.53	1.048	1.3	2.898	3.83	36.23	36.43
	Equiv. Refl.: (3,-8,11), (5,3,11), (5,-8,-11), (8,-3,11), (8,-5,-11), (-3,8,-11), (-3,-5,11), (-5,8,11), (-5,-3,-11), (-8,3,-11), (-8,5,11)								
Quartz	(9,-4,-2)	11.608	73.61	1.042	1.2	3.559	4.31	44.48	44.69
	Equiv. Refl.: (9,-5,2), (-5,9,-2), (-5,-4,2)								
Quartz	(-4,9,2)	11.608	73.61	1.041	1.2	3.559	4.31	44.48	44.69
	Equiv. Refl.: (-4,-5,-2)								
Quartz	(5,3,5)	11.701	75.24	1.016	1.2	3.188	3.92	39.84	40.04
	Equiv. Refl.: (5,-8,-5)								
Quartz	(3,5,-5)	11.701	75.24	1.015	1.2	3.188	3.91	39.84	40.04
	Equiv. Refl.: (3,-8,5)								
Quartz	(-8,3,-5)	11.701	75.24	1.014	1.2	3.188	3.91	39.84	40.04
	Equiv. Refl.: (-8,5,5)								
Quartz	(6,0,7)	11.87	78.8	0.9	1.1	2.396	2.74	29.94	30.07
	Equiv. Refl.: (6,-6,-7), (-6,6,7)								
Quartz	(0,6,-7)	11.87	78.8	0.899	1.1	2.396	2.74	29.94	30.07
	Equiv. Refl.: (0,-6,7), (-6,0,-7)								
LiNbO3	(1,3,-23)	11.442	71.02	0.757	1.4	4.162	5.99	52.03	52.37
	Equiv. Refl.: (1,-4,23), (3,1,23), (3,-4,-23), (4,-1,23), (4,-3,-23), (-1,4,-23), (-1,-3,23), (-3,4,23), (-3,-1,-23), (-4,1,-23), (-4,3,23)								
LiNbO3	(1,8,5)	12.089	87.55	0.755	3.5	0.519	1.81	6.48	6.73
	Equiv. Refl.: (1,-9,-5), (8,1,-5), (8,-9,5), (9,-1,-5), (9,-8,5), (-1,9,5), (-1,-8,-5), (-8,9,-5), (-8,-1,5), (-9,1,5), (-9,8,-5)								
Quartz	(0,8,1)	11.712	75.45	0.733	0.9	3.139	2.91	39.24	39.35
	Equiv. Refl.: (0,-8,-1)								
Quartz	(8,0,-1)	11.712	75.45	0.732	0.9	3.139	2.91	39.24	39.35
	Equiv. Refl.: (8,-8,1), (-8,0,1), (-8,8,-1)								
Sapph	(1,3,22)	11.819	77.62	0.731	1	2.656	2.72	33.2	33.31
	Equiv. Refl.: (1,-4,-22), (3,1,-22), (3,-4,22), (4,-1,-22), (4,-3,22), (-1,4,22), (-1,-3,-22), (-3,4,-22), (-3,-1,22), (-4,1,22), (-4,3,-22)								

Ei =	12.1	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(3,4,17)	11.372	70.03	0.713	1.4	4.397	6	54.97	55.3
	Equiv. Refl.: (3,-7,-17), (4,3,-17), (4,-7,17), (7,-3,-17), (7,-4,17), (-3,7,17), (-3,-4,-17), (-4,7,-17), (-4,-3,17), (-7,3,17), (-7,4,-17)								
Sapph	(1,2,23)	11.677	74.81	0.693	0.9	3.286	3.08	41.08	41.19
	Equiv. Refl.: (1,-3,-23), (2,1,-23), (2,-3,23), (3,-1,-23), (3,-2,23), (-1,3,23), (-1,-2,-23), (-2,3,-23), (-2,-1,23), (-3,1,23), (-3,2,-23)								
Quartz	(5,0,8)	11.716	75.53	0.682	0.9	3.122	2.72	39.02	39.12
	Equiv. Refl.: (5,-5,-8), (-5,0,-8), (-5,5,8)								
Quartz	(0,5,-8)	11.716	75.53	0.68	0.9	3.122	2.71	39.02	39.12
	Equiv. Refl.: (0,-5,8)								
Sapph	(3,4,-16)	11.919	80.07	0.667	1	2.117	2.14	26.47	26.55
	Equiv. Refl.: (3,-7,16), (4,3,16), (4,-7,-16), (7,-3,16), (7,-4,-16), (-3,7,-16), (-3,-4,16), (-4,7,16), (-4,-3,-16), (-7,3,-16), (-7,4,16)								
Quartz	(1,1,-10)	11.745	76.08	0.656	0.8	3	2.33	37.49	37.57
	Equiv. Refl.: (1,-2,10), (1,-2,-10)								
Quartz	(1,1,10)	11.745	76.08	0.655	0.8	3	2.33	37.49	37.57
Quartz	(-2,1,10)	11.745	76.08	0.653	0.8	3	2.32	37.49	37.57
	Equiv. Refl.: (-2,1,-10)								
Quartz	(9,-2,0)	11.926	80.27	0.6	0.8	2.075	1.65	25.94	25.99
	Equiv. Refl.: (9,-7,0), (-2,9,0), (-2,-7,0), (-7,9,0), (-7,-2,0)								
LiNbO3	(1,2,-25)	11.769	76.57	0.594	1.4	2.889	4.07	36.11	36.34
	Equiv. Refl.: (1,-3,25), (2,1,25), (2,-3,-25), (3,-1,25), (3,-2,-25), (-1,3,-25), (-1,-2,25), (-2,3,25), (-2,-1,-25), (-3,1,-25), (-3,2,25)								
Sapph	(1,6,13)	11.654	74.4	0.59	0.8	3.379	2.8	42.23	42.33
	Equiv. Refl.: (1,-7,-13), (6,1,-13), (6,-7,13), (7,-1,-13), (7,-6,13), (-1,7,13), (-1,-6,-13), (-6,7,-13), (-6,-1,13), (-7,1,13), (-7,6,-13)								
LiNbO3	(1,5,-19)	11.495	71.8	0.523	1.2	3.979	4.64	49.73	49.95
	Equiv. Refl.: (1,-6,19), (5,1,19), (5,-6,-19), (6,-1,19), (6,-5,-19), (-1,6,-19), (-1,-5,19), (-5,6,19), (-5,-1,-19), (-6,1,-19), (-6,5,19)								
Quartz	(-1,2,10)	11.745	76.08	0.51	0.8	3	2.33	37.49	37.57
	Equiv. Refl.: (-1,2,-10), (-1,-1,10), (-1,-1,-10)								
Quartz	(2,-1,10)	11.745	76.08	0.508	0.8	3	2.33	37.49	37.57
Quartz	(2,-1,-10)	11.745	76.08	0.507	0.8	3	2.32	37.49	37.57
Quartz	(0,8,-2)	11.879	79.04	0.478	0.7	2.342	1.69	29.28	29.33
	Equiv. Refl.: (0,-8,2), (8,0,2), (8,-8,-2), (-8,0,-2), (-8,8,2)								
Quartz	(2,7,0)	11.926	80.27	0.456	0.8	2.075	1.65	25.94	25.99
	Equiv. Refl.: (2,-9,0), (7,2,0), (7,-9,0), (-9,2,0), (-9,7,0)								
Sapph	(3,6,3)	12.027	83.68	0.441	0.9	1.34	1.22	16.75	16.79
	Equiv. Refl.: (3,6,-3), (3,-9,3), (3,-9,-3), (6,3,3), (6,3,-3), (6,-9,3), (6,-9,-3), (9,-3,3), (9,-3,-3), (9,-6,3), (9,-6,-3), (-3,9,3), (-3,9,-3), (-3,-6,3), (-3,-6,-3), (-6,9,3), (-6,9,-3), (-6,-3,3), (-6,-3,-3), (-9,3,3), (-9,3,-3), (-9,6,3), (-9,6,-3)								
LiNbO3	(3,6,9)	11.748	76.14	0.438	1.2	2.986	3.49	37.33	37.49
	Equiv. Refl.: (3,6,-9), (3,-9,9), (3,-9,-9), (6,3,9), (6,3,-9), (6,-9,9), (6,-9,-9), (9,-3,9), (9,-3,-9), (9,-6,9), (9,-6,-9), (-3,9,9), (-3,9,-9), (-3,-6,9), (-3,-6,-9), (-6,9,9), (-6,9,-9), (-6,-3,9), (-6,-3,-9), (-9,3,9), (-9,3,-9), (-9,6,9), (-9,6,-9)								
Quartz	(0,2,10)	11.835	77.98	0.406	0.6	2.577	1.62	32.21	32.26
	Equiv. Refl.: (0,-2,-10)								
Quartz	(8,-2,-4)	11.465	71.35	0.405	0.5	4.084	2.09	51.05	51.09
	Equiv. Refl.: (8,-6,4)								
Quartz	(-2,-6,-4)	11.465	71.35	0.404	0.5	4.084	2.08	51.05	51.09
	Equiv. Refl.: (-6,8,-4), (-6,-2,4)								
Quartz	(-2,8,4)	11.465	71.35	0.403	0.5	4.084	2.08	51.05	51.09

Ei =	12.1	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-2,0,10)	11.835	77.98	0.4	0.6	2.577	1.6	32.21	32.25
Quartz	(2,0,-10)	11.835	77.98	0.399	0.6	2.577	1.6	32.21	32.25
	Equiv. Refl.: (2,-2,10), (-2,2,-10)								
Quartz	(7,-2,6)	11.408	70.54	0.368	0.5	4.276	2.1	53.46	53.5
	Equiv. Refl.: (7,-5,-6)								
Quartz	(-2,7,-6)	11.408	70.54	0.367	0.5	4.276	2.1	53.46	53.5
	Equiv. Refl.: (-2,-5,6), (-5,7,6), (-5,-2,-6)								
Quartz	(-1,6,7)	11.414	70.61	0.334	0.4	4.258	1.85	53.23	53.26
	Equiv. Refl.: (-1,-5,-7), (-5,6,-7)								
Quartz	(-5,-1,7)	11.414	70.61	0.333	0.4	4.258	1.85	53.23	53.26
Quartz	(6,-1,-7)	11.414	70.61	0.332	0.4	4.258	1.85	53.23	53.26
	Equiv. Refl.: (6,-5,7)								
Quartz	(-7,2,-6)	11.408	70.54	0.32	0.5	4.276	2.1	53.46	53.5
	Equiv. Refl.: (-7,5,6)								
Quartz	(2,5,-6)	11.408	70.54	0.319	0.5	4.276	2.1	53.46	53.5
	Equiv. Refl.: (2,-7,6), (5,2,6), (5,-7,-6)								
Quartz	(6,2,-4)	11.465	71.35	0.316	0.5	4.084	2.09	51.05	51.09
	Equiv. Refl.: (6,-8,4), (-8,2,4), (-8,6,-4)								
Quartz	(2,6,4)	11.465	71.35	0.315	0.5	4.084	2.08	51.05	51.09
Quartz	(2,-8,-4)	11.465	71.35	0.314	0.5	4.084	2.08	51.05	51.09
LiNbO3	(2,3,23)	11.938	80.62	0.308	1.1	2	2.3	24.99	25.1
	Equiv. Refl.: (2,-5,-23), (3,2,-23), (3,-5,23), (5,-2,-23), (5,-3,23), (-2,5,23), (-2,-3,-23), (-3,5,-23), (-3,-2,23), (-5,2,23), (-5,3,-23)								
LiNbO3	(2,6,-13)	11.59	73.31	0.303	0.9	3.628	3.21	45.35	45.46
	Equiv. Refl.: (2,-8,13), (6,2,13), (6,-8,-13), (8,-2,13), (8,-6,-13), (-2,8,-13), (-2,-6,13), (-6,8,13), (-6,-2,-13), (-8,2,-13), (-8,6,13)								
Quartz	(4,5,0)	11.379	70.13	0.268	0.4	4.374	1.77	54.67	54.7
	Equiv. Refl.: (4,-9,0), (5,4,0), (5,-9,0), (-9,4,0), (-9,5,0)								
Quartz	(9,-4,0)	11.379	70.13	0.26	0.4	4.374	1.77	54.67	54.7
	Equiv. Refl.: (9,-5,0), (-4,9,0), (-4,-5,0), (-5,9,0), (-5,-4,0)								
Quartz	(1,5,7)	11.414	70.61	0.25	0.4	4.258	1.85	53.23	53.26
	Equiv. Refl.: (1,-6,-7)								
Quartz	(5,1,-7)	11.414	70.61	0.249	0.4	4.258	1.85	53.23	53.26
	Equiv. Refl.: (5,-6,7)								
Quartz	(-6,1,7)	11.414	70.61	0.248	0.4	4.258	1.85	53.23	53.26
	Equiv. Refl.: (-6,5,-7)								
LiNbO3	(1,8,-1)	11.889	79.28	0.184	0.8	2.291	1.91	28.64	28.7
	Equiv. Refl.: (1,-9,1), (8,1,1), (8,-9,-1), (9,-1,1), (9,-8,-1), (-1,9,-1), (-1,-8,1), (-8,9,1), (-8,-1,-1), (-9,1,-1), (-9,8,1)								
Sapph	(0,0,24)	11.455	71.21	0.121	0.3	4.117	1.05	51.47	51.48
	Equiv. Refl.: (0,0,-24)								
LiNbO3	(3,3,21)	11.849	78.3	0.096	0.6	2.506	1.46	31.32	31.36
	Equiv. Refl.: (3,3,-21), (3,-6,21), (3,-6,-21), (6,-3,21), (6,-3,-21), (-3,6,21), (-3,6,-21), (-3,-3,21), (-3,-3,-21), (-6,3,21), (-6,3,-21)								
Sapph	(2,6,8)	11.501	71.89	0.083	0.2	3.956	0.88	49.45	49.46
	Equiv. Refl.: (2,-8,-8), (6,2,-8), (6,-8,8), (8,-2,-8), (8,-6,8), (-2,8,8), (-2,-6,-8), (-6,8,-8), (-6,-2,8), (-8,2,8), (-8,6,-8)								
Sapph	(4,5,2)	11.789	76.97	0.07	0.2	2.799	0.66	34.99	35
	Equiv. Refl.: (4,-9,-2), (5,4,-2), (5,-9,2), (9,-4,-2), (9,-5,2), (-4,9,2), (-4,-5,-2), (-5,9,-2), (-5,-4,2), (-9,4,2), (-9,5,-2)								
Sapph	(4,4,12)	11.893	79.38	0.056	0.2	2.268	0.52	28.35	28.35
	Equiv. Refl.: (4,4,-12), (4,-8,12), (4,-8,-12), (8,-4,12), (8,-4,-12), (-4,8,12), (-4,8,-12), (-4,-4,12), (-4,-4,-12)								

(-8,4,12), (-8,4,-12)

LiNbO3	(4,4,15)	11.739	75.96	0.015	0.2	3.025	0.7	37.81	37.82
Equiv. Refl.: (4,4,-15), (4,-8,15), (4,-8,-15), (8,-4,15), (8,-4,-15), (-4,8,15), (-4,8,-15), (-4,-4,15), (-4,-4,-15)									
(-8,4,15), (-8,4,-15)									

Ei =	11.544	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Si	(4,4,8)	11.184	75.65	5.9088	5.07	2.9532	14.97	36.92	39.84
	Equiv. Refl.: (4,8,4), (8,4,4)								
Si	(1,7,7)	11.357	79.68	5.2578	4.72	2.1022	9.93	26.28	28.09
	Equiv. Refl.: (3,3,9), (3,9,3), (5,5,7), (5,7,5), (7,1,7), (7,5,5), (7,7,1), (9,3,3)								
Ge	(0,2,10)	11.175	75.47	3.7974	7.83	2.9918	23.42	37.4	44.13
	Equiv. Refl.: (0,10,2), (2,0,10), (2,6,8), (2,8,6), (2,10,0), (6,2,8), (6,8,2), (8,2,6), (8,6,2), (10,0,2), (10,2,0)								
Si	(1,3,9)	10.889	70.6	3.3066	2.91	4.0649	11.82	50.81	52.17
	Equiv. Refl.: (1,9,3), (3,1,9), (3,9,1), (9,1,3), (9,3,1)								
Ge	(1,5,9)	11.335	79.08	2.4546	6.98	2.2279	15.55	27.85	31.89
	Equiv. Refl.: (1,9,5), (3,7,7), (5,1,9), (5,9,1), (7,3,7), (7,7,3), (9,1,5), (9,5,1)								
Ge	(1,7,7)	10.903	70.81	1.7105	4.6	4.0167	18.46	50.21	53.49
	Equiv. Refl.: (3,3,9), (3,9,3), (5,5,7), (5,7,5), (7,1,7), (7,5,5), (7,7,1), (9,3,3)								
LiNbO3	(2,7,4)	11.521	86.41	39.571	36.5	0.725	26.47	9.06	27.98
	Equiv. Refl.: (7,-9,4), (9,-7,4), (-2,9,4), (-7,-2,4), (-9,2,4)								
LiNbO3	(2,-9,-4)	11.521	86.41	36.953	36.5	0.725	26.47	9.06	27.98
	Equiv. Refl.: (7,2,-4), (9,-2,-4), (-2,-7,-4), (-7,9,-4), (-9,7,-4)								
LiNbO3	(0,-3,-24)	11.514	85.9	27.568	26.1	0.828	21.64	10.35	23.98
	Equiv. Refl.: (3,0,-24), (-3,3,-24)								
LiNbO3	(0,3,-24)	11.514	85.9	27.065	25.8	0.828	21.38	10.35	23.76
	Equiv. Refl.: (3,-3,-24), (-3,0,-24)								
LiNbO3	(0,3,24)	11.514	85.9	25.065	26.1	0.828	21.64	10.35	23.98
	Equiv. Refl.: (3,-3,24), (-3,0,24)								
LiNbO3	(0,-3,24)	11.514	85.9	24.837	25.8	0.828	21.38	10.35	23.76
	Equiv. Refl.: (3,0,24)								
LiNbO3	(-3,3,24)	11.514	85.9	24.836	25.8	0.828	21.38	10.35	23.76
LiNbO3	(2,7,-2)	11.417	81.48	22.154	20.2	1.729	34.99	21.61	41.12
	Equiv. Refl.: (7,-9,-2), (9,-7,-2), (-2,9,-2), (-7,-2,-2), (-9,2,-2)								
LiNbO3	(2,-9,2)	11.417	81.48	22.127	20.2	1.729	34.99	21.61	41.12
	Equiv. Refl.: (7,2,2), (9,-2,2), (-2,-7,2), (-7,9,2), (-9,7,2)								
LiNbO3	(0,-8,-4)	11.267	77.42	18.808	16.5	2.576	42.64	32.21	53.44
	Equiv. Refl.: (8,0,-4), (-8,8,-4)								
LiNbO3	(0,8,4)	11.267	77.42	18.296	16.5	2.576	42.64	32.21	53.44
	Equiv. Refl.: (8,-8,4), (-8,0,4)								
LiNbO3	(3,6,-6)	11.358	79.7	16.708	15.5	2.097	32.43	26.21	41.7
	Equiv. Refl.: (-3,9,-6), (-6,-3,-6), (-9,3,-6)								
LiNbO3	(6,-9,-6)	11.358	79.7	16.707	15.5	2.097	32.43	26.21	41.7
	Equiv. Refl.: (9,-6,-6)								
LiNbO3	(4,5,8)	11.434	82.09	16.699	15.8	1.604	25.35	20.05	32.33
	Equiv. Refl.: (5,-9,8), (9,-5,8), (-4,9,8), (-5,-4,8), (-9,4,8)								
LiNbO3	(3,-9,6)	11.358	79.7	16.662	15.5	2.097	32.43	26.21	41.7
	Equiv. Refl.: (6,3,6), (9,-3,6), (-3,-6,6), (-6,9,6), (-9,6,6)								
LiNbO3	(4,-9,-8)	11.434	82.09	16.046	15.8	1.604	25.35	20.05	32.32
	Equiv. Refl.: (5,4,-8), (9,-4,-8), (-4,-5,-8), (-5,9,-8), (-9,5,-8)								
LiNbO3	(3,-9,-6)	11.358	79.7	15.634	14.4	2.097	30.18	26.21	39.97
	Equiv. Refl.: (6,3,-6), (9,-3,-6), (-3,-6,-6), (-6,9,-6), (-9,6,-6)								
Quartz	(-1,8,3)	11.526	86.77	15.357	13	0.651	8.49	8.14	11.76
	Equiv. Refl.: (-1,-7,-3)								

Ei =	11.544	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(-7,8,-3)	11.526	86.77	15.356	13	0.651	8.49	8.14	11.76
Quartz	(-7,-1,3)	11.526	86.77	15.355	13	0.651	8.49	8.14	11.76
Quartz	(8,-1,-3)	11.526	86.77	15.354	13	0.651	8.49	8.14	11.76
Quartz	(8,-7,3)	11.526	86.77	15.353	13	0.651	8.49	8.14	11.76
LiNbO3	(3,6,6)	11.358	79.7	15.056	14.4	2.097	30.18	26.21	39.97
Equiv. Refl.: (6,-9,6), (9,-6,6), (-3,9,6), (-6,-3,6), (-9,3,6)									
Quartz	(1,7,3)	11.526	86.77	14.764	13	0.651	8.49	8.14	11.76
Equiv. Refl.: (1,-8,-3), (7,1,-3), (7,-8,3)									
Quartz	(-8,1,3)	11.526	86.77	14.761	13	0.651	8.49	8.14	11.76
Quartz	(-8,7,-3)	11.526	86.77	14.76	13	0.651	8.49	8.14	11.76
Quartz	(-8,1,-3)	11.526	86.77	14.478	12.2	0.651	7.94	8.14	11.38
Equiv. Refl.: (-8,7,3)									
Quartz	(1,7,-3)	11.526	86.77	14.477	12.2	0.651	7.94	8.14	11.37
Equiv. Refl.: (7,1,3), (7,-8,-3)									
Quartz	(1,-8,3)	11.526	86.77	14.475	12.2	0.651	7.94	8.14	11.37
Quartz	(8,-1,3)	11.526	86.77	13.287	12.2	0.651	7.94	8.14	11.38
Equiv. Refl.: (8,-7,-3), (-1,-7,3), (-7,8,3)									
Quartz	(-7,-1,-3)	11.526	86.77	13.286	12.2	0.651	7.94	8.14	11.37
Quartz	(-1,8,-3)	11.526	86.77	13.285	12.2	0.651	7.94	8.14	11.37
LiNbO3	(0,4,-22)	11.301	78.23	13.155	12.2	2.405	29.28	30.07	41.97
Equiv. Refl.: (4,-4,-22), (-4,0,-22)									
LiNbO3	(0,-4,22)	11.301	78.23	12.625	12.2	2.405	29.28	30.07	41.97
Equiv. Refl.: (4,0,22), (-4,4,22)									
LiNbO3	(0,5,-20)	11.328	78.9	12.137	10.8	2.265	24.58	28.31	37.49
Equiv. Refl.: (5,-5,-20), (-5,0,-20)									
LiNbO3	(1,1,24)	10.999	72.33	12.09	10.9	3.678	40.15	45.98	61.04
Equiv. Refl.: (1,-2,24), (2,-1,24), (-1,-1,24)									
LiNbO3	(-1,2,24)	10.999	72.33	12.089	10.9	3.678	40.15	45.98	61.04
Equiv. Refl.: (-2,1,24)									
LiNbO3	(1,1,-24)	10.999	72.33	12.013	10.9	3.678	40.15	45.98	61.04
Equiv. Refl.: (1,-2,-24), (2,-1,-24), (-1,2,-24), (-1,-1,-24), (-2,1,-24)									
Quartz	(4,-2,9)	11.491	84.5	11.139	9.2	1.111	10.2	13.88	17.23
Equiv. Refl.: (4,-2,-9)									
Quartz	(-2,4,-9)	11.491	84.5	11.135	9.2	1.111	10.19	13.88	17.22
Quartz	(-2,-2,9)	11.491	84.5	11.133	9.2	1.111	10.19	13.88	17.22
Quartz	(-2,-2,-9)	11.491	84.5	11.131	9.2	1.111	10.19	13.88	17.22
Quartz	(-2,4,9)	11.491	84.5	11.129	9.2	1.111	10.19	13.88	17.22
LiNbO3	(1,6,-14)	11.06	73.36	10.861	9.8	3.451	33.75	43.14	54.77
Equiv. Refl.: (6,-7,-14), (7,-6,-14), (-1,7,-14), (-6,-1,-14), (-7,1,-14)									
LiNbO3	(4,5,2)	10.897	70.72	10.727	9.7	4.037	39.18	50.47	63.89
Equiv. Refl.: (5,-9,2), (9,-5,2), (-4,9,2), (-5,-4,2), (-9,4,2)									
Quartz	(-4,2,-9)	11.491	84.5	10.691	9.2	1.111	10.2	13.88	17.23
Quartz	(-4,2,9)	11.491	84.5	10.69	9.2	1.111	10.2	13.88	17.23
Quartz	(2,-4,9)	11.491	84.5	10.688	9.2	1.111	10.19	13.88	17.22
Quartz	(2,2,-9)	11.491	84.5	10.686	9.2	1.111	10.19	13.88	17.22
Quartz	(2,2,9)	11.491	84.5	10.683	9.2	1.111	10.19	13.88	17.22
Quartz	(2,-4,-9)	11.491	84.5	10.681	9.2	1.111	10.19	13.88	17.22
LiNbO3	(3,6,0)	11.037	72.95	10.568	9.5	3.54	33.61	44.25	55.57
Equiv. Refl.: (6,-9,0), (9,-6,0), (-3,9,0), (-6,-3,0), (-9,3,0)									

Ei =	11.544	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(4,-9,-2)	10.897	70.72	10.563	9.7	4.037	39.18	50.47	63.89
	Equiv. Refl.: (5,4,-2), (9,-4,-2), (-4,-5,-2), (-5,9,-2), (-9,5,-2)								
LiNbO3	(0,-5,20)	11.328	78.9	10.522	10.8	2.265	24.58	28.31	37.49
	Equiv. Refl.: (5,0,20), (-5,5,20)								
LiNbO3	(1,-7,14)	11.06	73.36	10.45	9.8	3.451	33.75	43.14	54.77
	Equiv. Refl.: (6,1,14), (7,-1,14), (-1,-6,14), (-6,7,14), (-7,6,14)								
LiNbO3	(3,-9,0)	11.037	72.95	10.346	9.5	3.54	33.61	44.25	55.57
	Equiv. Refl.: (6,3,0), (9,-3,0), (-3,-6,0), (-6,9,0), (-9,6,0)								
LiNbO3	(3,-7,16)	11.078	73.67	10.271	9.2	3.382	31.09	42.28	52.48
	Equiv. Refl.: (4,3,16), (7,-3,16), (-3,-4,16), (-4,7,16), (-7,4,16)								
LiNbO3	(4,4,12)	11.027	72.79	10.182	9.1	3.575	32.47	44.69	55.24
	Equiv. Refl.: (4,-8,12), (8,-4,12), (-4,8,12), (-4,-4,12), (-8,4,12)								
LiNbO3	(4,-9,4)	11.006	72.45	10.152	9	3.652	32.77	45.65	56.19
	Equiv. Refl.: (5,4,4), (9,-4,4), (-4,-5,4), (-5,9,4), (-9,5,4)								
Sapph	(0,4,20)	11.284	77.82	9.803	7.9	2.491	19.67	31.14	36.83
	Equiv. Refl.: (0,-4,-20), (4,0,-20), (4,-4,20), (-4,0,20), (-4,4,-20)								
LiNbO3	(3,4,-16)	11.078	73.67	9.71	9.2	3.382	31.09	42.28	52.48
	Equiv. Refl.: (4,-7,-16), (7,-4,-16), (-3,7,-16), (-4,-3,-16), (-7,3,-16)								
LiNbO3	(4,4,-12)	11.027	72.79	9.695	9.1	3.575	32.47	44.69	55.24
	Equiv. Refl.: (-4,8,-12), (-4,-4,-12), (-8,4,-12)								
LiNbO3	(4,-8,-12)	11.027	72.79	9.694	9.1	3.575	32.47	44.69	55.24
	Equiv. Refl.: (8,-4,-12)								
LiNbO3	(2,-8,10)	10.979	72	9.664	8.7	3.751	32.67	46.89	57.15
	Equiv. Refl.: (6,2,10), (8,-2,10), (-2,-6,10), (-6,8,10), (-8,6,10)								
LiNbO3	(4,5,-4)	11.006	72.45	9.501	9	3.652	32.77	45.65	56.19
	Equiv. Refl.: (5,-9,-4), (9,-5,-4), (-4,9,-4), (-5,-4,-4), (-9,4,-4)								
LiNbO3	(1,-4,-22)	11.042	73.04	9.487	8.7	3.521	30.5	44.02	53.55
	Equiv. Refl.: (3,1,-22), (4,-1,-22), (-1,-3,-22), (-3,4,-22), (-4,3,-22)								
LiNbO3	(2,6,-10)	10.979	72	9.38	8.7	3.751	32.67	46.89	57.15
	Equiv. Refl.: (6,-8,-10), (8,-6,-10), (-2,8,-10), (-6,-2,-10), (-8,2,-10)								
LiNbO3	(1,3,22)	11.042	73.04	9.238	8.7	3.521	30.5	44.02	53.55
	Equiv. Refl.: (3,-4,22), (4,-3,22), (-1,4,22), (-3,-1,22), (-4,1,22)								
Quartz	(-5,9,-1)	11.437	82.2	8.28	6.8	1.582	10.81	19.78	22.54
	Equiv. Refl.: (-5,-4,1)								
Quartz	(-4,9,1)	11.437	82.2	8.279	6.8	1.582	10.81	19.78	22.54
	Equiv. Refl.: (-4,-5,-1)								
Quartz	(9,-4,-1)	11.437	82.2	8.278	6.8	1.582	10.81	19.78	22.54
	Equiv. Refl.: (9,-5,1)								
Quartz	(5,4,-1)	11.437	82.2	8.082	6.8	1.582	10.81	19.78	22.54
	Equiv. Refl.: (5,-9,1)								
Quartz	(4,5,1)	11.437	82.2	8.081	6.8	1.582	10.81	19.78	22.54
	Equiv. Refl.: (4,-9,-1)								
Quartz	(-9,4,1)	11.437	82.2	8.08	6.8	1.582	10.81	19.78	22.54
	Equiv. Refl.: (-9,5,-1)								
Quartz	(6,-8,-4)	11.465	83.28	8.036	6.8	1.361	9.19	17.02	19.34
Quartz	(6,2,4)	11.465	83.28	8.034	6.8	1.361	9.19	17.02	19.34
	Equiv. Refl.: (-8,2,-4), (-8,6,4)								
Quartz	(2,6,-4)	11.465	83.28	8.031	6.8	1.361	9.19	17.02	19.34
	Equiv. Refl.: (2,-8,4)								
Quartz	(-6,8,4)	11.465	83.28	7.708	6.8	1.361	9.19	17.02	19.34

Ei =	11.544	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(8,-2,4)	11.465	83.28	7.706	6.8	1.361	9.19	17.02	19.34
	Equiv. Refl.: (8,-6,-4), (-6,-2,-4)								
Quartz	(-2,8,-4)	11.465	83.28	7.704	6.8	1.361	9.19	17.02	19.34
	Equiv. Refl.: (-2,-6,4)								
LiNbO3	(0,-8,2)	11.16	75.18	6.723	6.6	3.055	20.12	38.19	43.16
	Equiv. Refl.: (8,0,2), (-8,8,2)								
Sapph	(1,5,-16)	11.335	79.08	6.719	5.8	2.227	12.87	27.84	30.67
	Equiv. Refl.: (1,-6,16), (5,1,16), (5,-6,-16), (6,-1,16), (6,-5,-16), (-1,6,-16), (-1,-5,16), (-5,6,16), (-5,-1,-16), (-6,1,-16), (-6,5,16)								
Sapph	(0,7,8)	11.202	76.01	6.632	5.6	2.875	16.02	35.94	39.35
	Equiv. Refl.: (0,-7,-8), (7,0,-8), (7,-7,8), (-7,0,8), (-7,7,-8)								
Sapph	(1,6,10)	10.959	71.68	6.438	5.2	3.822	19.91	47.77	51.75
	Equiv. Refl.: (1,-7,-10), (6,1,-10), (6,-7,10), (7,-1,-10), (7,-6,10), (-1,7,10), (-1,-6,-10), (-6,7,-10), (-6,-1,10), (-7,1,10), (-7,6,-10)								
Sapph	(2,6,-4)	11.015	72.59	6.413	5.2	3.62	18.97	45.24	49.06
	Equiv. Refl.: (2,-8,4), (6,2,4), (6,-8,-4), (8,-2,4), (8,-6,-4), (-2,8,-4), (-2,-6,4), (-6,8,4), (-6,-2,-4), (-8,2,-4), (-8,6,4)								
Quartz	(-1,6,-7)	11.414	81.39	6.388	5.5	1.749	9.58	21.86	23.87
Quartz	(6,-1,7)	11.414	81.39	6.387	5.5	1.749	9.58	21.86	23.87
Quartz	(6,-5,-7)	11.414	81.39	6.386	5.5	1.749	9.58	21.86	23.87
	Equiv. Refl.: (-1,-5,7)								
Quartz	(-5,6,7)	11.414	81.39	6.38	5.5	1.749	9.57	21.86	23.86
	Equiv. Refl.: (-5,-1,-7)								
Quartz	(1,-6,7)	11.414	81.39	6.35	5.5	1.749	9.58	21.86	23.87
Quartz	(1,5,-7)	11.414	81.39	6.349	5.5	1.749	9.58	21.86	23.87
	Equiv. Refl.: (-6,1,-7)								
Quartz	(-6,5,7)	11.414	81.39	6.348	5.5	1.749	9.58	21.86	23.87
Quartz	(5,1,7)	11.414	81.39	6.342	5.5	1.749	9.57	21.86	23.86
	Equiv. Refl.: (5,-6,-7)								
LiNbO3	(0,8,-2)	11.16	75.18	6.315	6.6	3.055	20.12	38.19	43.16
	Equiv. Refl.: (-8,0,-2)								
LiNbO3	(8,-8,-2)	11.16	75.18	6.314	6.6	3.055	20.12	38.19	43.16
Sapph	(1,7,0)	11.358	79.7	6.284	5.4	2.097	11.41	26.21	28.59
	Equiv. Refl.: (1,-8,0), (7,1,0), (7,-8,0), (8,-1,0), (8,-7,0), (-1,8,0), (-1,-7,0), (-7,8,0), (-7,-1,0), (-8,1,0), (-8,7,0)								
Quartz	(7,0,-4)	11.183	75.64	6.227	5	2.955	14.71	36.94	39.76
	Equiv. Refl.: (7,-7,4)								
Quartz	(-7,0,4)	11.183	75.64	6.226	5	2.955	14.71	36.94	39.76
	Equiv. Refl.: (-7,7,-4)								
Quartz	(0,7,4)	11.183	75.64	6.223	5	2.955	14.71	36.94	39.76
	Equiv. Refl.: (0,-7,-4)								
Sapph	(1,3,-20)	10.979	72.01	6.14	5	3.75	18.78	46.87	50.49
	Equiv. Refl.: (1,-4,20), (3,1,20), (3,-4,-20), (4,-1,20), (4,-3,-20), (-1,4,-20), (-1,-3,20), (-3,4,20), (-3,-1,-20), (-4,1,-20), (-4,3,20)								
Quartz	(-5,1,8)	11.348	79.43	5.397	4.4	2.154	9.41	26.92	28.52
	Equiv. Refl.: (-5,4,-8)								
Quartz	(1,-5,-8)	11.348	79.43	5.396	4.4	2.154	9.41	26.92	28.52
Quartz	(1,4,8)	11.348	79.43	5.395	4.4	2.154	9.4	26.92	28.52
Quartz	(0,4,8)	10.87	70.33	5.394	4.3	4.126	17.91	51.58	54.6
	Equiv. Refl.: (0,-4,-8)								

Ei =	11.544	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(4,0,-8)	10.87	70.33	5.392	4.3	4.126	17.9	51.58	54.6
	Equiv. Refl.: (-4,0,8)								
Quartz	(4,-4,8)	10.87	70.33	5.391	4.3	4.126	17.9	51.58	54.6
	Equiv. Refl.: (-4,4,-8)								
Quartz	(4,1,-8)	11.348	79.43	5.39	4.4	2.154	9.4	26.92	28.52
	Equiv. Refl.: (4,-5,8)								
Quartz	(0,6,-6)	11.126	74.53	5.287	4.3	3.195	13.88	39.93	42.27
	Equiv. Refl.: (0,-6,6)								
Quartz	(6,0,6)	11.126	74.53	5.281	4.3	3.195	13.86	39.93	42.27
	Equiv. Refl.: (-6,0,-6)								
Quartz	(6,-6,-6)	11.126	74.53	5.28	4.3	3.195	13.86	39.93	42.27
	Equiv. Refl.: (-6,6,6)								
Quartz	(4,5,-1)	11.437	82.2	5.225	4.5	1.582	7.17	19.78	21.04
	Equiv. Refl.: (5,4,1), (5,-9,-1)								
Quartz	(4,-9,1)	11.437	82.2	5.224	4.5	1.582	7.17	19.78	21.04
	Equiv. Refl.: (-9,4,-1), (-9,5,1)								
Quartz	(5,-4,8)	11.348	79.43	5.222	4.4	2.154	9.41	26.92	28.52
Quartz	(5,-1,-8)	11.348	79.43	5.221	4.4	2.154	9.41	26.92	28.52
Quartz	(-1,5,8)	11.348	79.43	5.22	4.4	2.154	9.41	26.92	28.52
Quartz	(-1,-4,-8)	11.348	79.43	5.219	4.4	2.154	9.4	26.92	28.52
Quartz	(-4,5,-8)	11.348	79.43	5.215	4.4	2.154	9.4	26.92	28.52
	Equiv. Refl.: (-4,-1,8)								
Quartz	(9,-4,1)	11.437	82.2	5.171	4.5	1.582	7.17	19.78	21.03
	Equiv. Refl.: (9,-5,-1), (-4,9,-1), (-4,-5,1), (-5,9,1), (-5,-4,-1)								
Quartz	(-4,-3,6)	11.221	76.41	4.659	3.8	2.79	10.52	34.88	36.43
Quartz	(-4,7,-6)	11.221	76.41	4.658	3.8	2.79	10.52	34.88	36.43
Quartz	(-3,7,6)	11.221	76.41	4.655	3.8	2.79	10.52	34.88	36.43
	Equiv. Refl.: (-3,-4,-6)								
Quartz	(7,-3,-6)	11.221	76.41	4.654	3.8	2.79	10.51	34.88	36.43
	Equiv. Refl.: (7,-4,6)								
Sapph	(2,2,21)	11.297	78.13	4.62	4	2.427	9.76	30.34	31.87
	Equiv. Refl.: (2,2,-21), (2,-4,21), (2,-4,-21), (4,-2,21), (4,-2,-21), (-2,4,21), (-2,4,-21), (-2,-2,21), (-2,-2,-21), (-4,2,21), (-4,2,-21)								
Quartz	(4,3,-6)	11.221	76.41	4.571	3.8	2.79	10.52	34.88	36.43
	Equiv. Refl.: (4,-7,6)								
Quartz	(3,4,6)	11.221	76.41	4.568	3.8	2.79	10.52	34.88	36.43
Quartz	(3,-7,-6)	11.221	76.41	4.567	3.8	2.79	10.52	34.88	36.43
	Equiv. Refl.: (-7,3,6), (-7,4,-6)								
Quartz	(2,4,-7)	11.131	74.63	4.31	3.5	3.173	10.97	39.66	41.15
	Equiv. Refl.: (2,-6,7)								
Quartz	(4,-6,-7)	11.131	74.63	4.309	3.5	3.173	10.96	39.66	41.14
	Equiv. Refl.: (-6,2,-7), (-6,4,7)								
Quartz	(4,2,7)	11.131	74.63	4.308	3.5	3.173	10.96	39.66	41.14
Quartz	(6,-4,-7)	11.131	74.63	4.209	3.5	3.173	10.96	39.66	41.14
	Equiv. Refl.: (-2,6,-7), (-2,-4,7)								
Quartz	(6,-2,7)	11.131	74.63	4.208	3.5	3.173	10.96	39.66	41.14
	Equiv. Refl.: (-4,6,7)								
Quartz	(-4,-2,-7)	11.131	74.63	4.207	3.5	3.173	10.96	39.66	41.14
Quartz	(8,-1,0)	11	72.34	4.165	3.3	3.675	12.08	45.94	47.5
	Equiv. Refl.: (8,-7,0), (-1,8,0), (-1,-7,0), (-7,8,0), (-7,-1,0)								

Ei =	11.544	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(1,7,0)	11	72.34	4.09	3.3	3.675	12.08	45.94	47.5
	Equiv. Refl.: (1,-8,0), (7,1,0), (7,-8,0), (-8,1,0), (-8,7,0)								
Sapph	(1,7,3)	11.448	82.61	4.051	3.8	1.498	5.76	18.72	19.59
	Equiv. Refl.: (1,7,-3), (1,-8,3), (1,-8,-3), (7,1,3), (7,1,-3), (7,-8,3), (7,-8,-3), (8,-1,3), (8,-1,-3), (8,-7,3), (8,-7,-3), (-1,8,3), (-1,8,-3), (-1,-7,3), (-1,-7,-3), (-7,8,3), (-7,8,-3), (-7,-1,3), (-7,-1,-3), (-8,1,3), (-8,1,-3), (-8,7,3), (-8,7,-3)								
Sapph	(2,6,-7)	11.351	79.52	3.864	3.6	2.136	7.59	26.7	27.76
	Equiv. Refl.: (2,-8,7), (6,2,7), (6,-8,-7), (8,-2,7), (8,-6,-7), (-2,8,-7), (-2,-6,7), (-6,8,7), (-6,-2,-7), (-8,2,-7), (-8,6,7)								
Quartz	(2,6,-3)	11.056	73.27	3.725	3	3.469	10.56	43.36	44.63
	Equiv. Refl.: (2,-8,3)								
Quartz	(-8,2,-3)	11.056	73.27	3.724	3	3.469	10.56	43.36	44.63
Quartz	(-8,6,3)	11.056	73.27	3.723	3	3.469	10.56	43.36	44.63
Quartz	(6,2,3)	11.056	73.27	3.722	3	3.469	10.56	43.36	44.63
	Equiv. Refl.: (6,-8,-3)								
Quartz	(-2,8,-3)	11.056	73.27	3.704	3	3.469	10.56	43.36	44.63
	Equiv. Refl.: (-2,-6,3)								
Quartz	(8,-2,3)	11.056	73.27	3.703	3	3.469	10.56	43.36	44.63
Quartz	(8,-6,-3)	11.056	73.27	3.702	3	3.469	10.56	43.36	44.63
Quartz	(-6,8,3)	11.056	73.27	3.701	3	3.469	10.56	43.36	44.63
	Equiv. Refl.: (-6,-2,-3)								
Quartz	(1,-7,-5)	11.143	74.86	3.602	2.9	3.124	9	39.05	40.07
Quartz	(1,6,5)	11.143	74.86	3.601	2.9	3.124	8.99	39.05	40.07
Quartz	(-7,6,-5)	11.143	74.86	3.6	2.9	3.124	8.99	39.05	40.07
Quartz	(6,1,-5)	11.143	74.86	3.599	2.9	3.124	8.99	39.05	40.07
	Equiv. Refl.: (6,-7,5), (-7,1,5)								
Sapph	(2,4,16)	11.031	72.86	3.559	3.1	3.56	10.87	44.5	45.81
	Equiv. Refl.: (2,-6,-16), (4,2,-16), (4,-6,16), (6,-2,-16), (6,-4,16), (-2,6,16), (-2,-4,-16), (-4,6,-16), (-4,-2,16), (-6,2,16), (-6,4,-16)								
Quartz	(4,-8,4)	11.088	73.84	3.467	2.9	3.344	9.54	41.8	42.88
Quartz	(4,4,-4)	11.088	73.84	3.466	2.9	3.344	9.54	41.8	42.88
	Equiv. Refl.: (-8,4,4), (-8,4,-4)								
Quartz	(4,4,4)	11.088	73.84	3.464	2.9	3.344	9.54	41.8	42.88
	Equiv. Refl.: (4,-8,-4)								
Quartz	(-4,8,-4)	11.088	73.84	3.395	2.9	3.344	9.54	41.8	42.88
Quartz	(8,-4,4)	11.088	73.84	3.394	2.9	3.344	9.54	41.8	42.88
	Equiv. Refl.: (8,-4,-4), (-4,-4,4)								
Quartz	(-4,8,4)	11.088	73.84	3.393	2.9	3.344	9.54	41.8	42.88
Quartz	(-4,-4,-4)	11.088	73.84	3.392	2.9	3.344	9.54	41.8	42.88
Quartz	(5,2,-6)	11.408	81.21	3.293	2.9	1.785	5.22	22.31	22.91
	Equiv. Refl.: (5,-7,6)								
Quartz	(-7,2,6)	11.408	81.21	3.291	2.9	1.785	5.22	22.31	22.91
Quartz	(-7,5,-6)	11.408	81.21	3.29	2.9	1.785	5.22	22.31	22.91
Quartz	(2,-7,-6)	11.408	81.21	3.289	2.9	1.785	5.22	22.31	22.91
Quartz	(2,5,6)	11.408	81.21	3.288	2.9	1.785	5.21	22.31	22.91
Quartz	(-1,7,5)	11.143	74.86	3.25	2.9	3.124	9	39.05	40.07
	Equiv. Refl.: (-1,-6,-5)								
Quartz	(7,-6,5)	11.143	74.86	3.249	2.9	3.124	8.99	39.05	40.07
Quartz	(7,-1,-5)	11.143	74.86	3.248	2.9	3.124	8.99	39.05	40.07
	Equiv. Refl.: (-6,7,-5), (-6,-1,5)								

Ei =	11.544	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-3,5,8)	11.16	75.17	3.221	2.9	3.056	8.76	38.2	39.2
	Equiv. Refl.: (-3,-2,-8)								
Quartz	(5,-3,-8)	11.16	75.17	3.22	2.9	3.056	8.76	38.2	39.2
	Equiv. Refl.: (-2,5,-8)								
Quartz	(5,-2,8)	11.16	75.17	3.219	2.9	3.056	8.76	38.2	39.19
	Equiv. Refl.: (-2,-3,8)								
Quartz	(-5,-2,6)	11.408	81.21	3.207	2.9	1.785	5.22	22.31	22.91
Quartz	(-5,7,-6)	11.408	81.21	3.206	2.9	1.785	5.22	22.31	22.91
Quartz	(7,-2,-6)	11.408	81.21	3.204	2.9	1.785	5.22	22.31	22.91
	Equiv. Refl.: (7,-5,6)								
Quartz	(-2,7,6)	11.408	81.21	3.202	2.9	1.785	5.22	22.31	22.91
	Equiv. Refl.: (-2,-5,-6)								
Quartz	(8,-1,-1)	11.06	73.34	3.163	2.5	3.454	8.73	43.17	44.04
	Equiv. Refl.: (8,-7,1), (-1,8,1), (-1,-7,-1), (-7,8,-1), (-7,-1,1)								
Sapph	(4,4,9)	11.273	77.57	3.143	2.8	2.544	7.17	31.81	32.6
	Equiv. Refl.: (4,4,-9), (4,-8,9), (4,-8,-9), (8,-4,9), (8,-4,-9), (-4,8,9), (-4,8,-9), (-4,-4,9), (-4,-4,-9), (-8,4,9), (-8,4,-9)								
Quartz	(1,7,1)	11.06	73.34	3.111	2.5	3.454	8.73	43.17	44.04
	Equiv. Refl.: (1,-8,-1), (7,1,-1), (7,-8,1), (-8,1,1), (-8,7,-1)								
Quartz	(3,5,-4)	11.183	75.64	3.057	2.5	2.955	7.44	36.94	37.68
	Equiv. Refl.: (3,-8,4), (5,3,4), (5,-8,-4), (-8,3,-4)								
Quartz	(-8,5,4)	11.183	75.64	3.056	2.5	2.955	7.44	36.94	37.68
Quartz	(3,0,9)	11.21	76.19	3.054	2.5	2.837	7.23	35.46	36.19
	Equiv. Refl.: (3,-3,-9), (-3,0,-9), (-3,3,9)								
Quartz	(2,-5,8)	11.16	75.17	3.047	2.9	3.056	8.76	38.2	39.2
	Equiv. Refl.: (3,2,8), (3,-5,-8)								
Quartz	(2,3,-8)	11.16	75.17	3.046	2.9	3.056	8.76	38.2	39.19
	Equiv. Refl.: (-5,2,-8), (-5,3,8)								
Quartz	(0,-3,9)	11.21	76.19	3.045	2.5	2.837	7.21	35.46	36.19
Quartz	(0,3,-9)	11.21	76.19	3.044	2.5	2.837	7.21	35.46	36.19
Quartz	(8,-3,4)	11.183	75.64	3.017	2.5	2.955	7.44	36.94	37.68
	Equiv. Refl.: (-3,8,-4), (-3,-5,4), (-5,8,4), (-5,-3,-4)								
Quartz	(8,-5,-4)	11.183	75.64	3.016	2.5	2.955	7.44	36.94	37.68
Quartz	(-1,5,-8)	11.348	79.43	2.957	2.6	2.154	5.57	26.92	27.49
	Equiv. Refl.: (-1,-4,8)								
Quartz	(5,-1,8)	11.348	79.43	2.956	2.6	2.154	5.56	26.92	27.49
	Equiv. Refl.: (5,-4,-8)								
Quartz	(-4,5,8)	11.348	79.43	2.955	2.6	2.154	5.56	26.92	27.49
	Equiv. Refl.: (-4,-1,-8)								
Quartz	(1,4,-8)	11.348	79.43	2.887	2.6	2.154	5.56	26.92	27.49
	Equiv. Refl.: (1,-5,8)								
Quartz	(-5,1,-8)	11.348	79.43	2.886	2.6	2.154	5.56	26.92	27.49
	Equiv. Refl.: (-5,4,8)								
Quartz	(4,1,8)	11.348	79.43	2.885	2.6	2.154	5.56	26.92	27.49
	Equiv. Refl.: (4,-5,-8)								
LiNbO3	(2,7,1)	11.39	80.64	2.874	4.6	1.902	8.72	23.78	25.33
	Equiv. Refl.: (2,-9,-1), (7,2,-1), (7,-9,1), (9,-2,-1), (9,-7,1), (-2,9,1), (-2,-7,-1), (-7,9,-1), (-7,-2,1), (-9,2,1), (-9,7,-1)								
Sapph	(3,4,14)	11.331	78.98	2.63	2.7	2.249	6.09	28.11	28.76
	Equiv. Refl.: (3,-7,-14), (4,3,-14), (4,-7,14), (7,-3,-14), (7,-4,14), (-3,7,14), (-3,-4,-14), (-4,7,-14), (-4,-3,14), (-7,3,14), (-7,4,-14)								

Ei =	11.544	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(2,6,5)	11.108	74.2	2.589	2.5	3.266	8.2	40.83	41.65
	Equiv. Refl.: (2,-8,-5), (6,2,-5), (6,-8,5), (8,-2,-5), (8,-6,5), (-2,8,5), (-2,-6,-5), (-6,8,-5), (-6,-2,5), (-8,2,5), (-8,6,-5)								
Quartz	(-2,8,3)	11.056	73.27	2.509	2.2	3.469	7.65	43.36	44.03
	Equiv. Refl.: (-2,-6,-3), (-6,8,-3)								
Quartz	(8,-2,-3)	11.056	73.27	2.508	2.2	3.469	7.64	43.36	44.03
	Equiv. Refl.: (8,-6,3), (-6,-2,3)								
Sapph	(2,4,-17)	11.367	79.95	1.999	2.4	2.045	4.97	25.57	26.04
	Equiv. Refl.: (2,-6,17), (4,2,17), (4,-6,-17), (6,-2,17), (6,-4,-17), (-2,6,-17), (-2,-4,17), (-4,6,17), (-4,-2,-17), (-6,2,-17), (-6,4,17)								
Quartz	(2,6,3)	11.056	73.27	1.951	2.2	3.469	7.65	43.36	44.03
	Equiv. Refl.: (2,-8,-3), (6,-8,3)								
Quartz	(6,2,-3)	11.056	73.27	1.95	2.2	3.469	7.64	43.36	44.03
	Equiv. Refl.: (-8,2,3), (-8,6,-3)								
Sapph	(2,6,-1)	10.859	70.16	1.935	2.1	4.164	8.9	52.06	52.81
	Equiv. Refl.: (2,-8,1), (6,2,1), (6,-8,-1), (8,-2,1), (8,-6,-1), (-2,8,-1), (-2,-6,1), (-6,8,1), (-6,-2,-1), (-8,2,-1), (-8,6,1)								
Quartz	(8,-1,1)	11.06	73.34	1.93	2	3.454	7.02	43.17	43.74
	Equiv. Refl.: (8,-7,-1), (-1,8,-1), (-1,-7,1), (-7,8,1), (-7,-1,-1)								
LiNbO3	(2,4,19)	11.239	76.81	1.875	3.1	2.706	8.37	33.82	34.84
	Equiv. Refl.: (2,-6,-19), (4,2,-19), (4,-6,19), (6,-2,-19), (6,-4,19), (-2,6,19), (-2,-4,-19), (-4,6,-19), (-4,-2,19), (-6,2,19), (-6,4,-19)								
LiNbO3	(1,3,-23)	11.442	82.37	1.851	3.7	1.545	5.72	19.32	20.15
	Equiv. Refl.: (1,-4,23), (3,1,23), (3,-4,-23), (4,-1,23), (4,-3,-23), (-1,4,-23), (-1,-3,23), (-3,4,23), (-3,-1,-23), (-4,1,-23), (-4,3,23)								
Quartz	(1,7,-1)	11.06	73.34	1.794	2	3.454	7.02	43.17	43.74
	Equiv. Refl.: (1,-8,1), (7,1,1), (7,-8,-1)								
Quartz	(-8,1,-1)	11.06	73.34	1.793	2	3.454	7.02	43.17	43.74
	Equiv. Refl.: (-8,7,1)								
LiNbO3	(1,5,-19)	11.495	84.7	1.749	4.1	1.072	4.43	13.4	14.11
	Equiv. Refl.: (1,-6,19), (5,1,19), (5,-6,-19), (6,-1,19), (6,-5,-19), (-1,6,-19), (-1,-5,19), (-5,6,19), (-5,-1,-19), (-6,1,-19), (-6,5,19)								
LiNbO3	(3,4,17)	11.372	80.1	1.414	2.8	2.014	5.74	25.17	25.82
	Equiv. Refl.: (3,-7,-17), (4,3,-17), (4,-7,17), (7,-3,-17), (7,-4,17), (-3,7,17), (-3,-4,-17), (-4,7,-17), (-4,-3,17), (-7,3,17), (-7,4,-17)								
Quartz	(3,4,-6)	11.221	76.41	1.225	1.4	2.79	3.81	34.88	35.09
Quartz	(3,-7,6)	11.221	76.41	1.224	1.4	2.79	3.81	34.88	35.09
	Equiv. Refl.: (4,3,6), (4,-7,-6)								
Quartz	(-7,3,-6)	11.221	76.41	1.222	1.4	2.79	3.8	34.88	35.09
	Equiv. Refl.: (-7,4,6)								
Quartz	(-6,7,5)	11.143	74.86	1.143	1.3	3.124	4.19	39.05	39.27
	Equiv. Refl.: (-6,-1,-5)								
Quartz	(7,-6,-5)	11.143	74.86	1.142	1.3	3.124	4.18	39.05	39.27
	Equiv. Refl.: (-1,7,-5), (-1,-6,5)								
Quartz	(7,-1,5)	11.143	74.86	1.141	1.3	3.124	4.18	39.05	39.27
LiNbO3	(1,4,21)	11.348	79.44	1.132	2.4	2.152	5.23	26.9	27.4
	Equiv. Refl.: (1,4,-21), (1,-5,21), (1,-5,-21), (4,1,21), (4,1,-21), (4,-5,21), (4,-5,-21), (5,-1,21), (5,-1,-21), (5,-4,21), (5,-4,-21), (-1,5,21), (-1,5,-21), (-1,-4,21), (-1,-4,-21), (-4,5,21), (-4,5,-21), (-4,-1,21), (-4,-1,-21), (-5,1,21), (-5,1,-21), (-5,4,21), (-5,4,-21)								

Ei =	11.544	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Quartz	(8,-2,-4)	11.465	83.28	1.127	1.5	1.361	1.99	17.02	17.13
	Equiv. Refl.: (8,-6,4), (-6,8,-4)								
Quartz	(-6,-2,4)	11.465	83.28	1.126	1.5	1.361	1.99	17.02	17.13
Quartz	(-2,-6,-4)	11.465	83.28	1.124	1.5	1.361	1.98	17.02	17.13
Quartz	(-2,8,4)	11.465	83.28	1.123	1.5	1.361	1.98	17.02	17.13
Quartz	(8,-1,2)	11.237	76.75	1.112	1.3	2.718	3.62	33.98	34.17
	Equiv. Refl.: (8,-7,-2), (-1,8,-2), (-1,-7,2), (-7,-1,-2)								
Quartz	(-7,8,2)	11.237	76.75	1.111	1.3	2.718	3.62	33.98	34.17
Sapph	(2,3,-19)	11.191	75.8	1.108	1.4	2.922	4.16	36.52	36.76
	Equiv. Refl.: (2,-5,19), (3,2,19), (3,-5,-19), (5,-2,19), (5,-3,-19), (-2,-5,-19), (-2,-3,19), (-3,5,19), (-3,-2,-19), (-5,2,-19), (-5,3,19)								
Quartz	(6,1,5)	11.143	74.86	1.1	1.3	3.124	4.19	39.05	39.27
	Equiv. Refl.: (6,-7,-5)								
Quartz	(1,6,-5)	11.143	74.86	1.099	1.3	3.124	4.19	39.05	39.27
	Equiv. Refl.: (1,-7,5), (-7,6,5)								
Quartz	(-7,1,-5)	11.143	74.86	1.098	1.3	3.124	4.18	39.05	39.27
Quartz	(-4,6,-7)	11.131	74.63	1.08	1.3	3.173	4	39.66	39.86
	Equiv. Refl.: (-4,-2,7)								
Quartz	(6,-2,-7)	11.131	74.63	1.079	1.3	3.173	4	39.66	39.86
Quartz	(6,-4,7)	11.131	74.63	1.078	1.3	3.173	4	39.66	39.86
Quartz	(-2,6,7)	11.131	74.63	1.077	1.3	3.173	3.99	39.66	39.86
	Equiv. Refl.: (-2,-4,-7)								
LiNbO3	(4,5,-7)	11.302	78.25	1.046	2.2	2.401	5.34	30.01	30.48
	Equiv. Refl.: (4,-9,7), (5,4,7), (5,-9,-7), (9,-4,7), (9,-5,-7), (-4,9,-7), (-4,-5,7), (-5,9,7), (-5,-4,-7), (-9,4,-7), (-9,5,7)								
Quartz	(1,7,-2)	11.237	76.75	1.045	1.3	2.718	3.62	33.98	34.17
	Equiv. Refl.: (1,-8,2), (7,1,2), (7,-8,-2), (-8,1,-2), (-8,7,2)								
Sapph	(3,5,7)	11.048	73.15	1.042	1.3	3.497	4.58	43.71	43.95
	Equiv. Refl.: (3,-8,-7), (5,3,-7), (5,-8,7), (8,-3,-7), (8,-5,7), (-3,8,7), (-3,-5,-7), (-5,8,-7), (-5,-3,7), (-8,3,7), (-8,5,-7)								
Quartz	(1,2,-9)	11.019	72.66	1.026	1.1	3.604	4.14	45.05	45.24
	Equiv. Refl.: (1,-3,9), (2,-3,-9)								
Quartz	(2,1,9)	11.019	72.66	1.025	1.1	3.604	4.13	45.05	45.24
Quartz	(-3,1,-9)	11.019	72.66	1.023	1.1	3.604	4.13	45.05	45.24
	Equiv. Refl.: (-3,2,9)								
Quartz	(-3,-4,6)	11.221	76.41	1.022	1.4	2.79	3.81	34.88	35.09
Quartz	(-3,7,-6)	11.221	76.41	1.021	1.4	2.79	3.81	34.88	35.09
	Equiv. Refl.: (-4,7,6), (-4,-3,-6)								
Quartz	(7,-3,6)	11.221	76.41	1.019	1.4	2.79	3.8	34.88	35.09
	Equiv. Refl.: (7,-4,-6)								
Quartz	(4,2,-7)	11.131	74.63	1.008	1.3	3.173	4	39.66	39.86
	Equiv. Refl.: (4,-6,7)								
Quartz	(-6,2,7)	11.131	74.63	1.007	1.3	3.173	4	39.66	39.86
	Equiv. Refl.: (-6,4,-7)								
Quartz	(2,4,7)	11.131	74.63	1.006	1.3	3.173	3.99	39.66	39.86
	Equiv. Refl.: (2,-6,-7)								
Quartz	(-1,3,-9)	11.019	72.66	0.884	1.1	3.604	4.14	45.05	45.24
	Equiv. Refl.: (-1,-2,9)								
Quartz	(-2,3,9)	11.019	72.66	0.883	1.1	3.604	4.14	45.05	45.24
Quartz	(-2,-1,-9)	11.019	72.66	0.882	1.1	3.604	4.13	45.05	45.24

Ei =	11.544	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(3,-1,9)	11.019	72.66	0.881	1.1	3.604	4.13	45.05	45.24
	Equiv. Refl.: (3,-2,-9)								
Quartz	(-8,2,4)	11.465	83.28	0.859	1.5	1.361	1.99	17.02	17.13
	Equiv. Refl.: (-8,6,-4)								
Quartz	(6,2,-4)	11.465	83.28	0.858	1.5	1.361	1.99	17.02	17.13
	Equiv. Refl.: (6,-8,4)								
Quartz	(2,6,4)	11.465	83.28	0.855	1.5	1.361	1.98	17.02	17.13
Quartz	(2,-8,-4)	11.465	83.28	0.854	1.5	1.361	1.98	17.02	17.13
Quartz	(0,7,-4)	11.183	75.64	0.834	1.1	2.955	3.16	36.94	37.07
	Equiv. Refl.: (0,-7,4)								
Quartz	(7,0,4)	11.183	75.64	0.831	1.1	2.955	3.16	36.94	37.07
	Equiv. Refl.: (7,-7,-4), (-7,0,-4), (-7,7,4)								
Quartz	(7,-2,6)	11.408	81.21	0.817	1.1	1.785	2.01	22.31	22.4
	Equiv. Refl.: (7,-5,-6)								
Quartz	(-5,-2,-6)	11.408	81.21	0.815	1.1	1.785	2	22.31	22.4
Quartz	(-2,7,-6)	11.408	81.21	0.814	1.1	1.785	2	22.31	22.4
	Equiv. Refl.: (-2,-5,6), (-5,7,6)								
LiNbO3	(4,5,5)	11.088	73.84	0.811	1.7	3.345	5.68	41.82	42.2
	Equiv. Refl.: (4,-9,-5), (5,4,-5), (5,-9,5), (9,-4,-5), (9,-5,5), (-4,9,5), (-4,-5,-5), (-5,9,-5), (-5,-4,5), (-9,4,5), (-9,5,-5)								
Quartz	(8,-3,-4)	11.183	75.64	0.803	1	2.955	2.93	36.94	37.06
	Equiv. Refl.: (8,-5,4), (-3,8,4), (-3,-5,-4), (-5,8,-4)								
Quartz	(-5,-3,4)	11.183	75.64	0.802	1	2.955	2.93	36.94	37.06
Quartz	(-1,6,7)	11.414	81.39	0.755	1	1.749	1.77	21.86	21.93
	Equiv. Refl.: (-1,-5,-7), (-5,6,-7)								
Quartz	(-5,-1,7)	11.414	81.39	0.753	1	1.749	1.77	21.86	21.93
Quartz	(6,-1,-7)	11.414	81.39	0.752	1	1.749	1.76	21.86	21.93
	Equiv. Refl.: (6,-5,7)								
Sapph	(1,6,-11)	11.175	75.48	0.733	1	2.99	3.1	37.38	37.5
	Equiv. Refl.: (1,-7,11), (6,1,11), (6,-7,-11), (7,-1,11), (7,-6,-11), (-1,7,-11), (-1,-6,11), (-6,7,11), (-6,-1,-11), (-7,1,-11), (-7,6,11)								
LiNbO3	(4,5,-1)	10.869	70.31	0.712	1.5	4.13	6.06	51.63	51.98
	Equiv. Refl.: (4,-9,1), (5,4,1), (5,-9,-1), (9,-4,1), (9,-5,-1), (-4,9,-1), (-4,-5,1), (-5,9,1), (-5,-4,-1), (-9,4,-1), (-9,5,1)								
Quartz	(3,5,4)	11.183	75.64	0.71	1	2.955	2.93	36.94	37.06
	Equiv. Refl.: (3,-8,-4), (5,-8,4), (-8,3,4), (-8,5,-4)								
Quartz	(5,3,-4)	11.183	75.64	0.709	1	2.955	2.93	36.94	37.06
Quartz	(-7,2,-6)	11.408	81.21	0.702	1.1	1.785	2.01	22.31	22.4
Quartz	(-7,5,6)	11.408	81.21	0.701	1.1	1.785	2.01	22.31	22.4
Quartz	(2,5,-6)	11.408	81.21	0.699	1.1	1.785	2	22.31	22.4
	Equiv. Refl.: (2,-7,6), (5,2,6)								
Quartz	(5,-7,-6)	11.408	81.21	0.698	1.1	1.785	2	22.31	22.4
Quartz	(0,6,6)	11.126	74.53	0.599	0.8	3.195	2.61	39.93	40.02
	Equiv. Refl.: (0,-6,-6)								
Quartz	(6,0,-6)	11.126	74.53	0.596	0.8	3.195	2.6	39.93	40.02
	Equiv. Refl.: (6,-6,6), (-6,6,-6)								
Quartz	(-6,0,6)	11.126	74.53	0.595	0.8	3.195	2.6	39.93	40.02
Sapph	(1,4,18)	11.015	72.59	0.588	0.8	3.619	3.05	45.24	45.34
	Equiv. Refl.: (1,4,-18), (1,-5,18), (1,-5,-18), (4,1,18), (4,1,-18), (4,-5,18), (4,-5,-18), (5,-1,18), (5,-1,-18), (5,-4,18), (5,-4,-18), (-1,5,18), (-1,5,-18), (-1,-4,18), (-1,-4,-18), (-4,5,18), (-4,5,-18), (-4,-1,18), (-4,-1,-18), (-5,1,18), (-5,1,-18), (-5,4,18), (-5,4,-18)								

Ei =	11.544	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,5,17)	10.85	70.04	0.566	1.3	4.194	5.34	52.42	52.69
	Equiv. Refl.: (1,-6,-17), (5,1,-17), (5,-6,17), (6,-1,-17), (6,-5,17), (-1,6,17), (-1,-5,-17), (-5,6,-17), (-5,-1,17), (-6,1,17), (-6,5,-17)								
Quartz	(1,2,9)	11.019	72.66	0.554	0.7	3.604	2.68	45.05	45.13
	Equiv. Refl.: (1,-3,-9)								
Quartz	(-3,1,9)	11.019	72.66	0.553	0.7	3.604	2.68	45.05	45.13
	Equiv. Refl.: (-3,2,-9)								
Quartz	(2,-3,9)	11.019	72.66	0.552	0.7	3.604	2.68	45.05	45.13
Quartz	(2,1,-9)	11.019	72.66	0.551	0.7	3.604	2.67	45.05	45.13
Quartz	(1,5,7)	11.414	81.39	0.55	1	1.749	1.77	21.86	21.93
	Equiv. Refl.: (1,-6,-7), (4,5,0), (4,-9,0), (5,4,0), (5,-6,7), (5,-9,0), (-9,4,0), (-9,5,0)								
Quartz	(5,1,-7)	11.414	81.39	0.548	1	1.749	1.77	21.86	21.93
Quartz	(-6,1,7)	11.414	81.39	0.547	1	1.749	1.76	21.86	21.93
	Equiv. Refl.: (-6,5,-7)								
Quartz	(-1,3,9)	11.019	72.66	0.537	0.7	3.604	2.68	45.05	45.13
	Equiv. Refl.: (-1,-2,-9)								
Sapph	(2,5,12)	11.003	72.39	0.536	0.8	3.663	2.9	45.79	45.88
	Equiv. Refl.: (2,5,-12), (2,-7,12), (2,-7,-12), (5,2,12), (5,2,-12), (5,-7,12), (5,-7,-12), (7,-2,12), (7,-2,-12), (7,-5,12), (7,-5,-12), (-2,7,12), (-2,7,-12), (-2,-5,12), (-2,-5,-12), (-5,7,12), (-5,7,-12), (-5,-2,12), (-5,-2,-12), (-7,2,12), (-7,2,-12), (-7,5,12), (-7,5,-12), (3,-2,9)								
Quartz	(3,-1,-9)	11.019	72.66	0.535	0.7	3.604	2.68	45.05	45.13
	Equiv. Refl.: (-2,3,-9), (-2,-1,9)								
LiNbO3	(1,2,23)	10.923	71.12	0.53	1.3	3.947	4.93	49.34	49.58
	Equiv. Refl.: (1,-3,-23), (2,1,-23), (2,-3,23), (3,-1,-23), (3,-2,23), (-1,3,23), (-1,-2,-23), (-2,3,-23), (-2,-1,23), (-3,1,23), (-3,2,-23), (9,-4,0), (9,-5,0), (-4,9,0), (-4,-5,0), (-5,9,0), (-5,-4,0)								
LiNbO3	(3,6,3)	11.118	74.38	0.456	1.2	3.227	3.98	40.33	40.53
	Equiv. Refl.: (3,6,-3), (3,-9,3), (3,-9,-3), (6,3,3), (6,3,-3), (6,-9,3), (6,-9,-3), (9,-3,3), (9,-3,-3), (9,-6,3), (9,-6,-3), (-3,9,3), (-3,9,-3), (-3,-6,3), (-3,-6,-3), (-6,9,3), (-6,9,-3), (-6,-3,3), (-6,-3,-3), (-9,3,3), (-9,3,-3), (-9,6,3), (-9,6,-3)								
Quartz	(0,3,9)	11.21	76.19	0.455	0.7	2.837	1.96	35.46	35.52
	Equiv. Refl.: (0,-3,-9)								
Quartz	(3,-3,9)	11.21	76.19	0.453	0.7	2.837	1.96	35.46	35.52
Quartz	(3,0,9)	11.21	76.19	0.452	0.7	2.837	1.95	35.46	35.52
	Equiv. Refl.: (-3,0,9), (-3,3,-9)								
Quartz	(3,2,-8)	11.16	75.17	0.439	0.6	3.056	1.94	38.2	38.25
	Equiv. Refl.: (3,-5,8)								
Quartz	(2,3,8)	11.16	75.17	0.438	0.6	3.056	1.94	38.2	38.25
	Equiv. Refl.: (2,-5,-8)								
Quartz	(-5,2,8)	11.16	75.17	0.434	0.6	3.056	1.92	38.2	38.25
	Equiv. Refl.: (-5,3,-8)								
Quartz	(-4,0,-8)	10.87	70.33	0.426	0.6	4.126	2.49	51.58	51.64
	Equiv. Refl.: (-4,4,8)								
Quartz	(4,0,8)	10.87	70.33	0.425	0.6	4.126	2.49	51.58	51.64
	Equiv. Refl.: (4,-4,-8)								
Quartz	(0,4,-8)	10.87	70.33	0.42	0.6	4.126	2.46	51.58	51.64
	Equiv. Refl.: (0,-4,8)								
Quartz	(1,7,2)	11.237	76.75	0.4	0.6	2.718	1.71	33.98	34.02
	Equiv. Refl.: (1,-8,-2)								
Quartz	(7,1,-2)	11.237	76.75	0.399	0.6	2.718	1.71	33.98	34.02
	Equiv. Refl.: (7,-8,2), (-8,1,2), (-8,7,-2)								

Ei =	11.544	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-3,5,-8)	11.16	75.17	0.388	0.6	3.056	1.94	38.2	38.25
	Equiv. Refl.: (-3,-2,8)								
Quartz	(-2,5,8)	11.16	75.17	0.387	0.6	3.056	1.94	38.2	38.25
	Equiv. Refl.: (-2,-3,-8)								
Quartz	(-1,8,2)	11.237	76.75	0.385	0.6	2.718	1.71	33.98	34.02
	Equiv. Refl.: (-1,-7,-2)								
Quartz	(5,-3,8)	11.16	75.17	0.383	0.6	3.056	1.92	38.2	38.25
	Equiv. Refl.: (8,-1,-2), (8,-7,2), (-7,8,-2), (-7,-1,2)								
Quartz	(5,-2,-8)	11.16	75.17	0.382	0.6	3.056	1.92	38.2	38.25
LiNbO3	(2,6,11)	11.169	75.35	0.38	1.1	3.018	3.46	37.73	37.89
	Equiv. Refl.: (2,-8,-11), (6,2,-11), (6,-8,11), (8,-2,-11), (8,-6,11), (-2,8,11), (-2,-6,-11), (-6,8,-11), (-6,-2,11), (-8,2,11), (-8,6,-11)								
Sapph	(0,2,22)	10.923	71.12	0.363	0.6	3.948	2.34	49.35	49.4
	Equiv. Refl.: (0,-2,-22), (2,0,-22), (2,-2,22), (-2,0,22), (-2,-2,-22)								
LiNbO3	(2,5,15)	10.973	71.9	0.346	1	3.774	3.77	47.17	47.32
	Equiv. Refl.: (2,5,-15), (2,-7,15), (2,-7,-15), (5,2,15), (5,2,-15), (5,-7,15), (5,-7,-15), (7,-2,15), (7,-2,-15), (7,-5,15), (7,-5,-15), (-2,7,15), (-2,7,-15), (-2,-5,15), (-2,-5,-15), (-5,7,15), (-5,7,-15), (-5,-2,15), (-5,-2,-15), (-7,2,15), (-7,2,-15), (-7,5,15), (-7,5,-15)								
Sapph	(0,0,24)	11.455	82.88	0.329	0.7	1.442	1.03	18.02	18.05
	Equiv. Refl.: (0,0,-24)								
Sapph	(2,6,8)	11.501	85.05	0.299	0.8	1.001	0.85	12.51	12.54
	Equiv. Refl.: (2,-8,-8), (6,2,-8), (6,-8,8), (8,-2,-8), (8,-6,8), (-2,8,8), (-2,-6,-8), (-6,8,-8), (-6,-2,8), (-8,2,8), (-8,6,-8)								
Quartz	(3,3,-7)	11.036	72.93	0.28	0.4	3.545	1.45	44.31	44.33
Quartz	(3,-6,7)	11.036	72.93	0.279	0.4	3.545	1.45	44.31	44.33
Quartz	(-6,3,7)	11.036	72.93	0.278	0.4	3.545	1.44	44.31	44.33
	Equiv. Refl.: (-6,3,-7)								
Quartz	(3,3,7)	11.036	72.93	0.277	0.4	3.545	1.44	44.31	44.33
	Equiv. Refl.: (3,-6,-7)								
LiNbO3	(1,7,9)	11.243	76.89	0.274	1	2.689	2.72	33.62	33.73
	Equiv. Refl.: (1,7,-9), (1,-8,9), (1,-8,-9), (7,1,9), (7,1,-9), (7,-8,9), (7,-8,-9), (8,-1,9), (8,-1,-9), (8,-7,9), (8,-7,-9), (-1,8,9), (-1,8,-9), (-1,-7,9), (-1,-7,-9), (-7,8,9), (-7,8,-9), (-7,-1,9), (-7,-1,-9), (-8,1,9), (-8,1,-9), (-8,7,9), (-8,7,-9)								
Sapph	(3,5,-8)	11.202	76.01	0.267	0.5	2.875	1.52	35.94	35.97
	Equiv. Refl.: (3,-8,8), (5,3,8), (5,-8,-8), (8,-3,8), (8,-5,-8), (-3,8,-8), (-3,-5,8), (-5,8,8), (-5,-3,-8), (-8,3,-8), (-8,5,8)								
LiNbO3	(3,5,13)	11.337	79.14	0.262	1.1	2.215	2.39	27.68	27.78
	Equiv. Refl.: (3,-8,-13), (5,3,-13), (5,-8,13), (8,-3,-13), (8,-5,13), (-3,8,13), (-3,-5,-13), (-5,8,-13), (-5,-3,13), (-8,3,13), (-8,5,-13)								
Quartz	(-3,6,-7)	11.036	72.93	0.187	0.4	3.545	1.45	44.31	44.33
	Equiv. Refl.: (-3,-3,7)								
Quartz	(6,-3,7)	11.036	72.93	0.186	0.4	3.545	1.44	44.31	44.33
	Equiv. Refl.: (6,-3,-7)								
Quartz	(-3,6,7)	11.036	72.93	0.185	0.4	3.545	1.44	44.31	44.33
	Equiv. Refl.: (-3,-3,-7)								
LiNbO3	(3,5,-11)	10.906	70.86	0.172	0.7	4.007	2.71	50.09	50.16
	Equiv. Refl.: (3,-8,11), (5,3,11), (5,-8,-11), (8,-3,11), (8,-5,-11), (-3,8,-11), (-3,-5,11), (-5,8,11), (-5,-3,-11), (-8,3,-11), (-8,5,11)								
Sapph	(3,4,-13)	11.056	73.29	0.168	0.4	3.467	1.32	43.33	43.35
	Equiv. Refl.: (3,-7,13), (4,3,13), (4,-7,-13), (7,-3,13), (7,-4,-13), (-3,7,-13), (-3,-4,13), (-4,7,13), (-4,-3,-13), (-7,3,-13), (-7,4,13)								
Sapph	(1,2,-22)	11.229	76.6	0.103	0.3	2.751	0.87	34.39	34.4

Equiv. Refl.: (1,-3,22), (2,1,22), (2,-3,-22), (3,-1,22), (3,-2,-22), (-1,3,-22), (-1,-2,22), (-2,3,22), (-2,-1,-22)
(-3,1,-22), (-3,2,22)

Sapph **(2,6,2)** **10.89** **70.63** **0.1** **0.3** **4.059** **1.08** **50.74** **50.75**

Equiv. Refl.: (2,-8,-2), (6,2,-2), (6,-8,2), (8,-2,-2), (8,-6,2), (-2,8,2), (-2,-6,-2), (-6,8,-2), (-6,-2,2)
(-8,2,2), (-8,6,-2)

Ei =	10.207	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(0,4,8)	9.801	73.78	13.9732	12.8	2.9684	37.98	37.1	53.1
	Equiv. Refl.: (0,8,4), (4,0,8), (4,8,0), (8,0,4), (8,4,0)								
Ge	(1,1,9)	9.983	77.98	11.2086	11.45	2.1742	24.89	27.18	36.85
	Equiv. Refl.: (1,9,1), (3,5,7), (3,7,5), (5,3,7), (5,7,3), (7,3,5), (7,5,3), (9,1,1)								
Si	(0,6,6)	9.685	71.61	8.2618	6.99	3.3944	23.73	42.43	48.62
	Equiv. Refl.: (2,2,8), (2,8,2), (6,0,6), (6,6,0), (8,2,2)								
Si	(5,5,5)	9.885	75.57	6.6632	5.91	2.6255	15.51	32.82	36.3
	Equiv. Refl.: (1,7,5), (5,1,7), (1,5,7), (5,7,1), (7,1,5), (7,5,1)								
LiNbO3	(2,6,-4)	10.185	86.26	70.633	65.5	0.668	43.69	8.34	44.48
	Equiv. Refl.: (-2,8,-4), (-6,-2,-4), (-8,2,-4)								
LiNbO3	(6,-8,-4)	10.185	86.26	70.632	65.5	0.668	43.69	8.34	44.48
	Equiv. Refl.: (8,-6,-4)								
LiNbO3	(2,-8,4)	10.185	86.26	70.289	65.5	0.668	43.69	8.34	44.48
	Equiv. Refl.: (6,2,4), (8,-2,4), (-2,-6,4), (-6,8,4), (-8,6,4)								
LiNbO3	(1,-7,-10)	10.156	84.25	46.673	42.2	1.029	43.4	12.86	45.27
	Equiv. Refl.: (6,1,-10), (7,-1,-10), (-1,-6,-10), (-6,7,-10), (-7,6,-10)								
LiNbO3	(1,6,10)	10.156	84.25	43.974	42.2	1.029	43.4	12.86	45.27
	Equiv. Refl.: (6,-7,10), (7,-6,10), (-1,7,10), (-6,-1,10), (-7,1,10)								
Quartz	(0,7,0)	10.199	87.72	39.027	34.4	0.407	14	5.09	14.89
	Equiv. Refl.: (0,-7,0), (7,0,0), (7,-7,0), (-7,0,0), (-7,7,0)								
Quartz	(3,-3,-8)	10.164	84.74	27.696	23.1	0.94	21.7	11.75	24.68
	Equiv. Refl.: (-3,3,8)								
Quartz	(0,3,-8)	10.164	84.74	27.695	23.1	0.94	21.7	11.75	24.68
	Equiv. Refl.: (0,-3,8), (3,0,8)								
Quartz	(-3,0,-8)	10.164	84.74	27.694	23.1	0.94	21.7	11.75	24.68
Quartz	(8,-3,0)	10.199	87.72	26.579	24	0.407	9.75	5.09	11
	Equiv. Refl.: (8,-5,0), (-3,8,0), (-3,-5,0), (-5,8,0), (-5,-3,0)								
Quartz	(3,5,0)	10.199	87.72	25.408	24	0.407	9.75	5.09	11
	Equiv. Refl.: (3,-8,0), (5,3,0), (5,-8,0), (-8,3,0), (-8,5,0)								
LiNbO3	(3,-8,-4)	9.896	75.83	23.518	21	2.577	54.22	32.22	63.07
	Equiv. Refl.: (5,3,-4), (8,-3,-4), (-3,-5,-4), (-5,8,-4), (-8,5,-4)								
LiNbO3	(3,5,4)	9.896	75.83	22.897	21	2.577	54.22	32.22	63.07
	Equiv. Refl.: (5,-8,4), (8,-5,4), (-3,8,4), (-5,-3,4), (-8,3,4)								
LiNbO3	(4,4,-6)	10	78.45	22.707	20.9	2.086	43.51	26.08	50.73
	Equiv. Refl.: (4,-8,-6), (8,-4,-6), (-4,8,-6), (-4,-4,-6), (-8,4,-6)								
LiNbO3	(4,4,6)	10	78.45	21.891	20.9	2.086	43.51	26.08	50.73
	Equiv. Refl.: (4,-8,6), (8,-4,6), (-4,8,6), (-4,-4,6), (-8,4,6)								
LiNbO3	(1,-6,-14)	9.956	77.28	20.856	19.4	2.304	44.71	28.8	53.18
	Equiv. Refl.: (5,1,-14), (6,-1,-14), (-1,-5,-14), (-5,6,-14), (-6,5,-14)								
LiNbO3	(1,5,14)	9.956	77.28	20.757	19.4	2.304	44.71	28.8	53.18
	Equiv. Refl.: (5,-6,14), (6,-5,14), (-1,6,14), (-5,-1,14), (-6,1,14)								
LiNbO3	(2,6,2)	10.067	80.49	20.24	19.6	1.71	33.58	21.37	39.8
	Equiv. Refl.: (6,-8,2), (8,-6,2), (-2,8,2), (-6,-2,2), (-8,2,2)								
LiNbO3	(2,-8,-2)	10.067	80.49	19.936	19.6	1.71	33.58	21.37	39.8
	Equiv. Refl.: (6,2,-2), (8,-2,-2), (-2,-6,-2), (-6,8,-2), (-8,6,-2)								
LiNbO3	(0,-5,-16)	9.976	77.8	19.215	17.2	2.207	37.96	27.59	46.93
	Equiv. Refl.: (5,0,-16), (-5,5,-16)								

Ei = Cryst	10.207 Refl (h,k,l)	keV EB [keV]	Θ B [$^\circ$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
LiNbO3	(0,-6,-12) Equiv. Refl.: (6,0,-12), (-6,6,-12)	9.92	76.37	18.914	17.5	2.474	43.38	30.93	53.28
LiNbO3	(0,6,12) Equiv. Refl.: (6,-6,12), (-6,0,12)	9.92	76.37	18.459	17.5	2.474	43.38	30.93	53.28
LiNbO3	(0,1,-22) Equiv. Refl.: (1,-1,-22), (-1,0,-22)	9.936	76.76	17.365	16.5	2.402	39.67	30.02	49.75
LiNbO3	(0,-1,22) Equiv. Refl.: (1,0,22), (-1,1,22)	9.936	76.76	17.314	16.5	2.402	39.67	30.02	49.75
LiNbO3	(0,5,16) Equiv. Refl.: (5,-5,16), (-5,0,16)	9.976	77.8	16.649	17.2	2.207	37.96	27.59	46.93
LiNbO3	(0,6,-12) Equiv. Refl.: (6,-6,-12), (-6,0,-12)	9.92	76.37	16.602	15.6	2.474	38.58	30.93	49.45
LiNbO3	(0,-6,12) Equiv. Refl.: (6,0,12), (-6,6,12)	9.92	76.37	15.957	15.6	2.474	38.58	30.93	49.45
LiNbO3	(0,7,-4) Equiv. Refl.: (7,-7,-4), (-7,0,-4), (0,5,-14), (0,-5,14), (5,0,14), (5,-5,-14), (-5,0,-14), (-5,5,14)	9.896	75.83	15.84	15	2.577	38.73	32.22	50.38
LiNbO3	(0,-7,4) Equiv. Refl.: (7,0,4), (-7,7,4)	9.896	75.83	15.529	15	2.577	38.73	32.22	50.38
LiNbO3	(0,-7,-2) Equiv. Refl.: (7,0,-2), (-7,7,-2)	9.774	73.26	15.236	14	3.07	43.07	38.38	57.68
LiNbO3	(2,4,-14) Equiv. Refl.: (4,-6,-14), (6,-4,-14), (-2,6,-14), (-4,-2,-14), (-6,2,-14)	9.661	71.17	15.153	13.8	3.481	47.93	43.51	64.73
LiNbO3	(1,-7,8) Equiv. Refl.: (6,1,8), (7,-1,8), (-1,-6,8), (-6,7,8), (-7,6,8)	9.795	73.66	14.521	13.3	2.993	39.81	37.41	54.63
LiNbO3	(0,7,2) Equiv. Refl.: (7,-7,2), (-7,0,2)	9.774	73.26	14.478	14	3.07	43.07	38.38	57.68
LiNbO3	(2,-6,14) Equiv. Refl.: (4,2,14), (6,-2,14), (-2,-4,14), (-4,6,14), (-6,4,14)	9.661	71.17	14.425	13.8	3.481	47.93	43.51	64.73
LiNbO3	(1,6,-8) Equiv. Refl.: (6,-7,-8), (7,-6,-8), (-1,7,-8), (-6,-1,-8), (-7,1,-8)	9.795	73.66	13.28	13.3	2.993	39.81	37.41	54.63
LiNbO3	(1,-3,-20) Equiv. Refl.: (2,1,-20), (3,-1,-20), (-1,-2,-20), (-2,3,-20), (-3,2,-20)	9.671	71.34	13.159	12.4	3.446	42.86	43.08	60.77
LiNbO3	(1,2,20) Equiv. Refl.: (2,-3,20), (3,-2,20), (-2,-1,20)	9.671	71.34	13.06	12.4	3.446	42.86	43.08	60.77
LiNbO3	(-1,3,20) Equiv. Refl.: (-3,1,20)	9.671	71.34	13.059	12.4	3.446	42.86	43.08	60.77
LiNbO3	(4,4,0) Equiv. Refl.: (4,-8,0), (8,-4,0), (-4,8,0), (-4,-4,0), (-8,4,0)	9.634	70.7	12.377	11.6	3.574	41.45	44.67	60.94
Sapph	(2,3,-16) Equiv. Refl.: (2,-5,16), (3,2,16), (3,-5,-16), (5,-2,16), (5,-3,-16), (-2,5,-16), (-2,-3,16), (-3,5,16), (-3,-2,-16), (-5,2,-16), (-5,3,16)	10.066	80.46	12.217	10.5	1.715	18.07	21.44	28.04
Quartz	(-5,7,4) Equiv. Refl.: (-5,-2,-4)	10.19	86.71	12.196	11.9	0.587	6.99	7.33	10.13
Quartz	(7,-5,-4)	10.19	86.71	12.19	11.9	0.587	6.99	7.33	10.13
Quartz	(7,-2,4)	10.19	86.71	12.187	11.9	0.587	6.99	7.33	10.13
Quartz	(-2,-5,4)	10.19	86.71	12.184	11.9	0.587	6.99	7.33	10.13
Quartz	(-2,7,-4)	10.19	86.71	12.182	11.9	0.587	6.99	7.33	10.13
Quartz	(5,2,4) Equiv. Refl.: (5,-7,-4)	10.19	86.71	11.855	11.9	0.587	6.99	7.33	10.13
Quartz	(-7,5,4)	10.19	86.71	11.849	11.9	0.587	6.99	7.33	10.13
Quartz	(-7,2,-4)	10.19	86.71	11.846	11.9	0.587	6.99	7.33	10.13

Ei =	10.207	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(2,5,-4)	10.19	86.71	11.844	11.9	0.587	6.99	7.33	10.13
Quartz	(2,-7,4)	10.19	86.71	11.842	11.9	0.587	6.99	7.33	10.13
Sapph	(0,3,18)	9.705	71.95	11.082	9	3.327	30.03	41.58	51.29
	Equiv. Refl.: (0,3,-18), (0,-3,18), (0,-3,-18), (3,0,18), (3,0,-18), (3,-3,18), (3,-3,-18), (-3,0,18), (-3,0,-18), (-3,3,18), (-3,3,-18)								
Quartz	(2,5,4)	10.19	86.71	10.417	10	0.587	5.87	7.33	9.39
	Equiv. Refl.: (2,-7,-4)								
Quartz	(-7,5,-4)	10.19	86.71	10.411	10	0.587	5.86	7.33	9.39
Quartz	(-7,2,4)	10.19	86.71	10.409	10	0.587	5.86	7.33	9.39
Quartz	(5,2,-4)	10.19	86.71	10.404	10	0.587	5.86	7.33	9.39
Quartz	(5,-7,4)	10.19	86.71	10.402	10	0.587	5.86	7.33	9.39
Sapph	(2,5,6)	9.822	74.21	9.745	8.1	2.886	23.44	36.08	43.03
	Equiv. Refl.: (2,5,-6), (2,-7,6), (2,-7,-6), (5,2,6), (5,2,-6), (5,-7,6), (5,-7,-6), (7,-2,6), (7,-2,-6), (7,-5,6), (7,-5,-6), (-2,7,6), (-2,7,-6), (-2,-5,6), (-2,-5,-6), (-5,7,6), (-5,7,-6), (-5,-2,6), (-5,-2,-6), (-7,2,6), (-7,2,-6), (-7,5,6), (-7,5,-6)								
Quartz	(-2,-5,-4)	10.19	86.71	9.685	10	0.587	5.87	7.33	9.39
Quartz	(-2,7,4)	10.19	86.71	9.684	10	0.587	5.87	7.33	9.39
Quartz	(7,-5,4)	10.19	86.71	9.681	10	0.587	5.86	7.33	9.39
Quartz	(7,-2,-4)	10.19	86.71	9.68	10	0.587	5.86	7.33	9.39
Quartz	(-5,-2,4)	10.19	86.71	9.671	10	0.587	5.86	7.33	9.39
Quartz	(-5,7,-4)	10.19	86.71	9.67	10	0.587	5.86	7.33	9.39
Quartz	(8,-4,0)	10.094	81.48	9.599	8.1	1.53	12.38	19.12	22.78
	Equiv. Refl.: (-4,8,0), (-4,-4,0)								
LiNbO3	(3,-8,2)	9.774	73.26	9.381	9.3	3.07	28.55	38.38	47.83
	Equiv. Refl.: (5,3,2), (8,-3,2), (-3,-5,2), (-5,8,2), (-8,5,2)								
Sapph	(0,2,-20)	10.009	78.69	9.275	8	2.041	16.42	25.52	30.34
	Equiv. Refl.: (0,-2,20), (2,0,20), (2,-2,-20), (-2,0,-20), (-2,2,20)								
LiNbO3	(3,5,-2)	9.774	73.26	8.982	9.3	3.07	28.55	38.38	47.83
	Equiv. Refl.: (5,-8,-2), (8,-5,-2), (-3,8,-2), (-5,-3,-2), (-8,3,-2)								
Quartz	(4,4,0)	10.094	81.48	8.744	8.1	1.53	12.38	19.12	22.78
	Equiv. Refl.: (4,-8,0), (-8,4,0)								
Sapph	(3,4,8)	9.916	76.28	8.602	7.5	2.492	18.59	31.15	36.28
	Equiv. Refl.: (3,-7,-8), (4,3,-8), (4,-7,8), (7,-3,-8), (7,-4,8), (-3,7,8), (-3,-4,-8), (-4,7,-8), (-4,-3,8), (-7,3,8), (-7,4,-8)								
Sapph	(0,1,20)	9.664	71.22	8.404	7	3.471	24.14	43.38	49.65
	Equiv. Refl.: (0,-1,-20), (1,0,-20), (1,-1,20), (-1,0,20), (-1,1,-20)								
Quartz	(-6,7,-2)	9.826	74.29	8.342	6.8	2.871	19.4	35.89	40.8
Quartz	(7,-1,-2)	9.826	74.29	8.341	6.8	2.871	19.39	35.89	40.8
	Equiv. Refl.: (-1,7,2), (-1,-6,-2), (-6,-1,2)								
Quartz	(7,-6,2)	9.826	74.29	8.34	6.8	2.871	19.39	35.89	40.8
Quartz	(6,1,-2)	9.826	74.29	8.044	6.8	2.871	19.39	35.89	40.8
	Equiv. Refl.: (6,-7,2)								
Quartz	(1,6,2)	9.826	74.29	8.043	6.8	2.871	19.39	35.89	40.8
	Equiv. Refl.: (1,-7,-2), (-7,1,2), (-7,6,-2)								
Quartz	(6,-7,-3)	10.155	84.21	7.59	6.9	1.035	7.11	12.94	14.77
Quartz	(6,1,3)	10.155	84.21	7.588	6.9	1.035	7.11	12.94	14.77
Quartz	(1,6,-3)	10.155	84.21	7.584	6.9	1.035	7.11	12.94	14.77
Quartz	(1,-7,3)	10.155	84.21	7.583	6.9	1.035	7.11	12.94	14.77
Quartz	(-7,1,-3)	10.155	84.21	7.581	6.9	1.035	7.11	12.94	14.77
Quartz	(-7,6,3)	10.155	84.21	7.58	6.9	1.035	7.11	12.94	14.77

Ei =	10.207	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Sapph	(1,6,4)	10.048	79.88	7.263	6.7	1.822	12.17	22.77	25.82
	Equiv. Refl.: (1,-7,-4), (6,1,-4), (6,-7,4), (7,-1,-4), (7,-6,4), (-1,7,4), (-1,-6,-4), (-6,7,-4), (-6,-1,4), (-7,1,4), (-7,6,-4)								
Quartz	(1,-3,8)	9.953	77.19	7.145	6.2	2.321	14.29	29.01	32.34
Quartz	(1,2,-8)	9.953	77.19	7.143	6.2	2.321	14.29	29.01	32.34
Quartz	(-3,1,-8)	9.953	77.19	7.137	6.2	2.321	14.28	29.01	32.33
Quartz	(-3,2,8)	9.953	77.19	7.135	6.2	2.321	14.27	29.01	32.33
Quartz	(2,1,8)	9.953	77.19	7.133	6.1	2.321	14.27	29.01	32.33
	Equiv. Refl.: (2,-3,-8)								
Quartz	(-1,3,-8)	9.953	77.19	7.12	6.2	2.321	14.29	29.01	32.34
Quartz	(-1,-2,8)	9.953	77.19	7.119	6.2	2.321	14.29	29.01	32.34
Quartz	(3,-1,8)	9.953	77.19	7.112	6.2	2.321	14.28	29.01	32.33
Quartz	(3,-2,-8)	9.953	77.19	7.111	6.2	2.321	14.27	29.01	32.33
Quartz	(-2,3,8)	9.953	77.19	7.109	6.1	2.321	14.27	29.01	32.33
	Equiv. Refl.: (-2,-1,-8)								
Quartz	(7,-1,-3)	10.155	84.21	7.038	6.4	1.035	6.64	12.94	14.54
Quartz	(7,-6,3)	10.155	84.21	7.037	6.4	1.035	6.63	12.94	14.54
	Equiv. Refl.: (-1,-6,-3)								
Quartz	(-1,7,3)	10.155	84.21	7.035	6.4	1.035	6.63	12.94	14.54
Quartz	(-6,7,-3)	10.155	84.21	7.033	6.4	1.035	6.63	12.94	14.54
	Equiv. Refl.: (-6,-1,3)								
Quartz	(4,-4,-7)	9.921	76.41	6.944	6	2.467	14.71	30.84	34.17
	Equiv. Refl.: (-4,4,7)								
Quartz	(4,0,7)	9.921	76.41	6.943	6	2.467	14.71	30.84	34.17
	Equiv. Refl.: (-4,0,-7)								
Quartz	(0,4,-7)	9.921	76.41	6.941	6	2.467	14.7	30.84	34.17
	Equiv. Refl.: (0,-4,7)								
Quartz	(-6,7,3)	10.155	84.21	6.619	6.9	1.035	7.11	12.94	14.77
Quartz	(-6,-1,-3)	10.155	84.21	6.617	6.9	1.035	7.11	12.94	14.77
Quartz	(-1,-6,3)	10.155	84.21	6.613	6.9	1.035	7.11	12.94	14.77
Quartz	(-1,7,-3)	10.155	84.21	6.612	6.9	1.035	7.11	12.94	14.77
Quartz	(7,-1,3)	10.155	84.21	6.611	6.9	1.035	7.11	12.94	14.77
Quartz	(7,-6,-3)	10.155	84.21	6.61	6.9	1.035	7.11	12.94	14.77
Quartz	(-3,-4,4)	9.98	77.89	6.458	5.5	2.191	12.16	27.39	29.96
Quartz	(-3,7,-4)	9.98	77.89	6.457	5.5	2.191	12.16	27.39	29.96
Quartz	(-4,7,4)	9.98	77.89	6.455	5.5	2.191	12.15	27.39	29.96
	Equiv. Refl.: (-4,-3,-4)								
Quartz	(7,-3,4)	9.98	77.89	6.454	5.5	2.191	12.15	27.39	29.96
	Equiv. Refl.: (7,-4,-4)								
Quartz	(3,4,-4)	9.98	77.89	6.3	5.5	2.191	12.16	27.39	29.96
	Equiv. Refl.: (3,-7,4)								
Quartz	(4,3,4)	9.98	77.89	6.297	5.5	2.191	12.15	27.39	29.96
	Equiv. Refl.: (-7,3,-4), (-7,4,4)								
Quartz	(4,-7,-4)	9.98	77.89	6.296	5.5	2.191	12.15	27.39	29.96
Quartz	(-7,1,3)	10.155	84.21	6.199	6.4	1.035	6.64	12.94	14.54
	Equiv. Refl.: (-7,6,-3)								
Quartz	(1,6,3)	10.155	84.21	6.198	6.4	1.035	6.63	12.94	14.54
Quartz	(1,-7,-3)	10.155	84.21	6.196	6.4	1.035	6.63	12.94	14.54
Quartz	(6,1,-3)	10.155	84.21	6.195	6.4	1.035	6.63	12.94	14.54
	Equiv. Refl.: (6,-7,3)								

Ei =	10.207	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(3,3,12)	9.691	71.7	6.154	5.4	3.375	18.27	42.19	45.98
	Equiv. Refl.: (3,3,-12), (3,-6,12), (3,-6,-12), (6,-3,12), (6,-3,-12), (-3,6,12), (-3,6,-12), (-3,-3,12), (-3,-3,-12), (-6,3,12), (-6,3,-12)								
Sapph	(1,4,15)	9.939	76.84	5.982	5.3	2.386	12.73	29.82	32.43
	Equiv. Refl.: (1,4,-15), (1,-5,15), (1,-5,-15), (4,1,15), (4,1,-15), (4,-5,15), (4,-5,-15), (5,-1,15), (5,-1,-15), (5,-4,15), (5,-4,-15), (-1,5,15), (-1,5,-15), (-1,-4,15), (-1,-4,-15), (-4,5,15), (-4,5,-15), (-4,-1,15), (-4,-1,-15), (-5,1,15), (-5,1,-15), (-5,4,15), (-5,4,-15)								
Quartz	(5,1,5)	9.935	76.74	5.911	5.2	2.406	12.49	30.08	32.57
	Equiv. Refl.: (5,-6,-5)								
Quartz	(1,5,-5)	9.935	76.74	5.906	5.2	2.406	12.48	30.08	32.56
	Equiv. Refl.: (1,-6,5)								
Quartz	(-6,1,-5)	9.935	76.74	5.904	5.2	2.406	12.48	30.08	32.56
	Equiv. Refl.: (-6,5,5)								
Quartz	(6,-6,-4)	9.873	75.3	5.869	5.1	2.678	13.57	33.48	36.13
	Equiv. Refl.: (-6,6,4)								
Quartz	(0,6,-4)	9.873	75.3	5.868	5.1	2.678	13.57	33.48	36.13
	Equiv. Refl.: (0,-6,4), (6,0,4), (-6,0,-4)								
Quartz	(1,-3,-8)	9.953	77.19	5.867	4.9	2.321	11.34	29.01	31.15
	Equiv. Refl.: (2,1,-8), (2,-3,8)								
Quartz	(1,2,8)	9.953	77.19	5.865	4.9	2.321	11.34	29.01	31.15
Quartz	(-3,1,8)	9.953	77.19	5.864	4.9	2.321	11.34	29.01	31.15
	Equiv. Refl.: (-3,2,-8)								
Quartz	(-5,6,5)	9.935	76.74	5.819	5.2	2.406	12.49	30.08	32.57
	Equiv. Refl.: (-5,-1,-5)								
Quartz	(-1,6,-5)	9.935	76.74	5.815	5.2	2.406	12.48	30.08	32.56
	Equiv. Refl.: (-1,-5,5)								
Quartz	(6,-1,5)	9.935	76.74	5.812	5.2	2.406	12.48	30.08	32.56
	Equiv. Refl.: (6,-5,-5)								
Quartz	(-1,4,-7)	9.595	70.06	5.783	4.8	3.703	17.68	46.29	49.55
Quartz	(-1,-3,7)	9.595	70.06	5.782	4.8	3.703	17.68	46.29	49.55
Quartz	(-3,4,7)	9.595	70.06	5.781	4.8	3.703	17.68	46.29	49.55
	Equiv. Refl.: (-3,-1,-7)								
Quartz	(4,-1,7)	9.595	70.06	5.777	4.8	3.703	17.67	46.29	49.55
	Equiv. Refl.: (4,-3,-7)								
Sapph	(1,5,-10)	9.641	70.82	5.704	4.9	3.55	17.56	44.37	47.72
	Equiv. Refl.: (1,-6,10), (5,1,10), (5,-6,-10), (6,-1,10), (6,-5,-10), (-1,6,-10), (-1,-5,10), (-5,6,10), (-5,-1,-10), (-6,1,-10), (-6,5,10)								
Quartz	(-2,3,-8)	9.953	77.19	5.598	4.9	2.321	11.35	29.01	31.15
	Equiv. Refl.: (-2,-1,8)								
Quartz	(-1,3,8)	9.953	77.19	5.597	4.9	2.321	11.34	29.01	31.15
Quartz	(3,-1,-8)	9.953	77.19	5.596	4.9	2.321	11.34	29.01	31.15
	Equiv. Refl.: (3,-2,8)								
Quartz	(-1,-2,-8)	9.953	77.19	5.595	4.9	2.321	11.34	29.01	31.15
Quartz	(1,-4,7)	9.595	70.06	5.57	4.8	3.703	17.68	46.29	49.55
Quartz	(1,3,-7)	9.595	70.06	5.569	4.8	3.703	17.68	46.29	49.55
Quartz	(3,1,7)	9.595	70.06	5.568	4.8	3.703	17.68	46.29	49.55
	Equiv. Refl.: (3,-4,-7)								
Quartz	(-4,1,-7)	9.595	70.06	5.565	4.8	3.703	17.67	46.29	49.55
	Equiv. Refl.: (-4,3,7)								

Ei =	10.207	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Sapph	(1,6,-2)	9.911	76.17	4.589	4.3	2.512	10.75	31.4	33.19
	Equiv. Refl.: (1,-7,2), (6,1,2), (6,-7,-2), (7,-1,2), (7,-6,-2), (-1,7,-2), (-1,-6,2), (-6,7,2), (-6,-1,-2), (-7,1,-2), (-7,6,2)								
Quartz	(-4,-4,-1)	10.159	84.46	4.512	4.3	0.991	4.3	12.38	13.11
Quartz	(-4,8,1)	10.159	84.46	4.511	4.3	0.991	4.3	12.38	13.11
	Equiv. Refl.: (-4,8,-1), (-4,-4,1)								
Quartz	(8,-4,1)	10.159	84.46	4.509	4.3	0.991	4.3	12.38	13.11
	Equiv. Refl.: (8,-4,-1)								
Sapph	(2,4,13)	10.093	81.43	4.29	4.4	1.538	6.76	19.22	20.37
	Equiv. Refl.: (2,-6,-13), (4,2,-13), (4,-6,13), (6,-2,-13), (6,-4,13), (-2,6,13), (-2,-4,-13), (-4,6,-13), (-4,-2,13), (-6,2,13), (-6,4,-13)								
Sapph	(1,5,11)	9.886	75.59	3.888	3.7	2.624	9.76	32.79	34.22
	Equiv. Refl.: (1,-6,-11), (5,1,-11), (5,-6,11), (6,-1,-11), (6,-5,11), (-1,6,11), (-1,-5,-11), (-5,6,-11), (-5,-1,11), (-6,1,11), (-6,5,-11)								
Quartz	(4,4,1)	10.159	84.46	3.606	4.3	0.991	4.3	12.38	13.11
	Equiv. Refl.: (4,4,-1), (4,-8,1), (4,-8,-1)								
Quartz	(-8,4,1)	10.159	84.46	3.604	4.3	0.991	4.3	12.38	13.11
	Equiv. Refl.: (-8,4,-1)								
Quartz	(1,3,7)	9.595	70.06	3.39	2.8	3.703	10.26	46.29	47.42
	Equiv. Refl.: (1,-4,-7)								
Quartz	(-4,3,-7)	9.595	70.06	3.388	2.8	3.703	10.26	46.29	47.41
Quartz	(-4,1,7)	9.595	70.06	3.387	2.8	3.703	10.26	46.29	47.41
Quartz	(3,1,-7)	9.595	70.06	3.384	2.8	3.703	10.25	46.29	47.41
	Equiv. Refl.: (3,-4,7)								
Quartz	(3,4,4)	9.98	77.89	3.251	3	2.191	6.46	27.39	28.14
	Equiv. Refl.: (3,-7,-4), (4,3,-4), (4,-7,4), (-7,4,-4)								
Quartz	(-7,3,4)	9.98	77.89	3.249	2.9	2.191	6.46	27.39	28.14
Quartz	(-1,4,7)	9.595	70.06	3.14	2.8	3.703	10.26	46.29	47.42
Quartz	(-1,-3,-7)	9.595	70.06	3.139	2.8	3.703	10.26	46.29	47.42
Quartz	(4,-3,7)	9.595	70.06	3.138	2.8	3.703	10.26	46.29	47.41
Quartz	(4,-1,-7)	9.595	70.06	3.137	2.8	3.703	10.26	46.29	47.41
Quartz	(-3,-1,7)	9.595	70.06	3.134	2.8	3.703	10.25	46.29	47.41
Quartz	(-3,4,-7)	9.595	70.06	3.133	2.8	3.703	10.25	46.29	47.41
Quartz	(6,-2,-5)	9.609	70.29	2.983	2.5	3.657	9.16	45.71	46.62
Quartz	(6,-4,5)	9.609	70.29	2.982	2.5	3.657	9.16	45.71	46.62
Quartz	(-2,6,5)	9.609	70.29	2.979	2.5	3.657	9.15	45.71	46.62
	Equiv. Refl.: (-2,-4,-5), (-4,6,-5), (-4,-2,5)								
Quartz	(7,-1,-1)	9.623	70.52	2.941	2.5	3.611	9.08	45.13	46.04
Quartz	(7,-6,1)	9.623	70.52	2.94	2.5	3.611	9.08	45.13	46.04
	Equiv. Refl.: (-1,7,1), (-1,-6,-1), (-6,7,-1), (-6,-1,1)								
Quartz	(6,-2,5)	9.609	70.29	2.899	2.5	3.657	9.16	45.71	46.62
	Equiv. Refl.: (6,-4,-5), (-4,6,5), (-4,-2,-5)								
Quartz	(-2,-4,5)	9.609	70.29	2.896	2.5	3.657	9.15	45.71	46.62
Quartz	(-2,6,-5)	9.609	70.29	2.895	2.5	3.657	9.15	45.71	46.62
Quartz	(-6,4,5)	9.609	70.29	2.842	2.5	3.657	9.16	45.71	46.62
Quartz	(4,2,5)	9.609	70.29	2.841	2.5	3.657	9.16	45.71	46.62
	Equiv. Refl.: (4,-6,-5), (-6,2,-5)								
Quartz	(2,4,-5)	9.609	70.29	2.839	2.5	3.657	9.15	45.71	46.62
Quartz	(2,-6,5)	9.609	70.29	2.838	2.5	3.657	9.15	45.71	46.62

Ei =	10.207	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[°]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
LiNbO3	(1,1,21)	9.695	71.77	2.795	4.3	3.362	14.42	42.03	44.43
	Equiv. Refl.: (1,1,-21), (1,-2,21), (1,-2,-21), (2,-1,21), (2,-1,-21), (-1,2,21), (-1,2,-21), (-1,-1,21), (-1,-1,-21), (-2,1,21), (-2,1,-21)								
Quartz	(-6,2,5)	9.609	70.29	2.784	2.5	3.657	9.16	45.71	46.62
Quartz	(-6,4,-5)	9.609	70.29	2.783	2.5	3.657	9.16	45.71	46.62
Quartz	(2,4,5)	9.609	70.29	2.781	2.5	3.657	9.15	45.71	46.62
	Equiv. Refl.: (2,-6,-5), (4,2,-5), (4,-6,5)								
Quartz	(-3,7,4)	9.98	77.89	2.694	3	2.191	6.46	27.39	28.14
	Equiv. Refl.: (-3,-4,-4), (-4,7,-4)								
Quartz	(7,-4,4)	9.98	77.89	2.693	2.9	2.191	6.46	27.39	28.14
	Equiv. Refl.: (-4,-3,4)								
Quartz	(7,-3,-4)	9.98	77.89	2.692	2.9	2.191	6.46	27.39	28.14
LiNbO3	(1,6,7)	9.64	70.82	2.621	4	3.551	14.38	44.38	46.65
	Equiv. Refl.: (1,-7,-7), (6,1,-7), (6,-7,7), (7,-1,-7), (7,-6,7), (-1,7,7), (-1,-6,-7), (-6,7,-7), (-6,-1,7), (-7,1,7), (-7,6,-7)								
Quartz	(1,6,1)	9.623	70.52	2.569	2.5	3.611	9.08	45.13	46.04
	Equiv. Refl.: (1,-7,-1), (6,1,-1), (6,-7,1), (-7,1,1), (-7,6,-1)								
Sapph	(1,6,-5)	10.15	83.93	2.444	3.6	1.086	3.9	13.58	14.13
	Equiv. Refl.: (1,-7,5), (6,1,5), (6,-7,-5), (7,-1,5), (7,-6,-5), (-1,7,-5), (-1,-6,5), (-6,7,5), (-6,-1,-5), (-7,1,-5), (-7,6,5)								
Quartz	(2,5,-3)	9.728	72.37	2.427	2.4	3.243	7.76	40.54	41.27
	Equiv. Refl.: (2,-7,3), (5,2,3), (5,-7,-3), (-7,5,3)								
Quartz	(-7,2,-3)	9.728	72.37	2.426	2.4	3.243	7.76	40.54	41.27
Quartz	(-2,-5,3)	9.728	72.37	2.365	2.4	3.243	7.76	40.54	41.27
	Equiv. Refl.: (-5,7,3)								
Quartz	(7,-2,3)	9.728	72.37	2.364	2.4	3.243	7.76	40.54	41.27
	Equiv. Refl.: (7,-5,-3), (-2,7,-3), (-5,-2,-3)								
Quartz	(1,6,-2)	9.826	74.29	2.073	2.3	2.871	6.69	35.89	36.51
	Equiv. Refl.: (1,-7,2)								
Quartz	(-7,1,-2)	9.826	74.29	2.072	2.3	2.871	6.68	35.89	36.51
	Equiv. Refl.: (-7,6,2)								
Quartz	(6,-7,-2)	9.826	74.29	2.071	2.3	2.871	6.68	35.89	36.51
Quartz	(6,1,2)	9.826	74.29	2.07	2.3	2.871	6.68	35.89	36.51
Quartz	(2,-2,-8)	9.628	70.6	1.932	2.2	3.594	7.93	44.92	45.62
	Equiv. Refl.: (-2,2,8)								
Quartz	(2,0,8)	9.628	70.6	1.931	2.2	3.594	7.93	44.92	45.62
	Equiv. Refl.: (-2,0,-8)								
Quartz	(0,2,-8)	9.628	70.6	1.93	2.2	3.594	7.93	44.92	45.61
	Equiv. Refl.: (0,-2,8)								
Quartz	(7,-1,2)	9.826	74.29	1.904	2.3	2.871	6.68	35.89	36.51
	Equiv. Refl.: (-1,7,-2), (-1,-6,2)								
Quartz	(7,-6,-2)	9.826	74.29	1.903	2.3	2.871	6.68	35.89	36.51
Quartz	(-6,7,2)	9.826	74.29	1.902	2.3	2.871	6.68	35.89	36.51
	Equiv. Refl.: (-6,-1,-2)								
Sapph	(0,4,-16)	9.723	72.28	1.518	1.9	3.261	6.32	40.77	41.25
	Equiv. Refl.: (0,-4,16), (4,0,16), (4,-4,-16), (-4,0,-16), (-4,4,16)								
LiNbO3	(1,3,19)	9.865	75.13	1.492	3	2.71	8.24	33.87	34.86
	Equiv. Refl.: (1,-4,-19), (3,1,-19), (3,-4,19), (4,-1,-19), (4,-3,19), (-1,4,19), (-1,-3,-19), (-3,4,-19), (-3,-1,19), (-4,1,19), (-4,3,-19)								
Quartz	(0,5,6)	10.022	79.06	1.36	1.9	1.972	3.67	24.65	24.92
	Equiv. Refl.: (0,-5,-6)								

Ei =	10.207	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(5,0,-6)	10.022	79.06	1.355	1.9	1.972	3.66	24.65	24.92
	Equiv. Refl.: (5,-5,6), (-5,5,-6)								
Quartz	(-5,0,6)	10.022	79.06	1.354	1.9	1.972	3.66	24.65	24.92
LiNbO3	(3,4,11)	9.784	73.45	1.341	2.7	3.032	8.32	37.9	38.81
	Equiv. Refl.: (3,-7,-11), (4,3,-11), (4,-7,11), (7,-3,-11), (7,-4,11), (-3,7,11), (-3,-4,-11), (-4,7,-11), (-4,-3,11), (-7,3,11), (-7,4,-11)								
Sapph	(1,2,-19)	9.904	76	1.335	1.9	2.546	4.72	31.82	32.17
	Equiv. Refl.: (1,-3,19), (2,1,19), (2,-3,-19), (3,-1,19), (3,-2,-19), (-1,3,-19), (-1,-2,19), (-2,3,19), (-2,-1,-19), (-3,1,-19), (-3,2,19)								
Quartz	(1,6,-1)	9.623	70.52	1.263	1.5	3.611	5.52	45.13	45.47
	Equiv. Refl.: (6,1,1), (6,-7,-1), (-7,1,-1), (-7,6,1)								
Quartz	(1,-7,1)	9.623	70.52	1.262	1.5	3.611	5.52	45.13	45.47
Quartz	(7,-1,1)	9.623	70.52	1.218	1.5	3.611	5.52	45.13	45.47
	Equiv. Refl.: (7,-6,-1)								
Quartz	(-1,7,-1)	9.623	70.52	1.217	1.5	3.611	5.52	45.13	45.47
	Equiv. Refl.: (-1,-6,1), (-6,7,1), (-6,-1,-1)								
Quartz	(0,2,8)	9.628	70.6	1.187	1.5	3.594	5.33	44.92	45.24
	Equiv. Refl.: (0,-2,-8)								
Quartz	(2,-2,8)	9.628	70.6	1.186	1.5	3.594	5.32	44.92	45.23
Quartz	(2,0,-8)	9.628	70.6	1.185	1.5	3.594	5.32	44.92	45.23
	Equiv. Refl.: (-2,0,8), (-2,2,-8)								
Sapph	(1,6,1)	9.877	75.38	1.12	1.6	2.662	4.3	33.27	33.55
	Equiv. Refl.: (1,-7,-1), (6,1,-1), (6,-7,1), (7,-1,-1), (7,-6,1), (-1,7,1), (-1,-6,-1), (-6,7,-1), (-6,-1,1), (-7,1,1), (-7,6,-1)								
Sapph	(2,2,18)	10.048	79.88	0.889	1.5	1.821	2.77	22.76	22.93
	Equiv. Refl.: (2,2,-18), (2,-4,18), (2,-4,-18), (4,-2,18), (4,-2,-18), (-2,4,18), (-2,4,-18), (-2,-2,18), (-2,-2,-18), (-4,2,18), (-4,2,-18)								
LiNbO3	(1,5,-13)	9.682	71.53	0.856	2	3.408	6.9	42.6	43.16
	Equiv. Refl.: (1,-6,13), (5,1,13), (5,-6,-13), (6,-1,13), (6,-5,-13), (-1,6,-13), (-1,-5,13), (-5,6,13), (-5,-1,-13), (-6,1,-13), (-6,5,13)								
LiNbO3	(2,6,-1)	10.037	79.53	0.713	2.3	1.887	4.35	23.59	23.99
	Equiv. Refl.: (2,-8,1), (6,2,1), (6,-8,-1), (8,-2,1), (8,-6,-1), (-2,8,-1), (-2,-6,1), (-6,8,1), (-6,-2,-1), (-8,2,-1), (-8,6,1)								
Sapph	(1,3,-17)	9.76	72.98	0.688	1.1	3.124	3.45	39.05	39.2
	Equiv. Refl.: (1,-4,17), (3,1,17), (3,-4,-17), (4,-1,17), (4,-3,-17), (-1,4,-17), (-1,-3,17), (-3,4,17), (-3,-1,-17), (-4,1,-17), (-4,3,17)								
Quartz	(0,6,4)	9.873	75.3	0.486	0.8	2.678	2.22	33.48	33.55
	Equiv. Refl.: (0,-6,-4)								
Quartz	(6,0,-4)	9.873	75.3	0.484	0.8	2.678	2.22	33.48	33.55
	Equiv. Refl.: (6,-6,4), (-6,0,4), (-6,6,-4)								
Quartz	(-2,7,3)	9.728	72.37	0.432	0.7	3.243	2.23	40.54	40.6
	Equiv. Refl.: (-2,-5,-3)								
Quartz	(7,-2,-3)	9.728	72.37	0.431	0.7	3.243	2.23	40.54	40.6
	Equiv. Refl.: (7,-5,3), (-5,7,-3), (-5,-2,3)								
Quartz	(2,5,3)	9.728	72.37	0.361	0.7	3.243	2.23	40.54	40.6
	Equiv. Refl.: (2,-7,-3)								
Quartz	(5,-7,3)	9.728	72.37	0.36	0.7	3.243	2.23	40.54	40.6
	Equiv. Refl.: (-7,2,3), (-7,5,-3)								
Quartz	(5,2,-3)	9.728	72.37	0.359	0.7	3.243	2.22	40.54	40.6
LiNbO3	(3,5,-5)	9.987	78.08	0.342	1.5	2.155	3.21	26.93	27.12
	Equiv. Refl.: (3,-8,5), (5,3,5), (5,-8,-5), (8,-3,5), (8,-5,-5), (-3,8,-5), (-3,-5,5), (-5,8,5), (-5,-3,-5), (-8,3,-5), (-8,5,5)								

LiNbO3	(2,3,17)	9.722	72.27	0.299	1.2	3.262	3.8	40.78	40.96
Equiv. Refl.: (2,-5,-17), (3,2,-17), (3,-5,17), (5,-2,-17), (5,-3,17), (-2,5,17), (-2,-3,-17), (-3,5,-17), (-3,-2,17), (-5,2,17), (-5,3,-17)									
Quartz	(5,-5,-6)	10.022	79.06	0.283	0.7	1.972	1.31	24.65	24.69
Equiv. Refl.: (-5,5,6)									
Quartz	(5,0,6)	10.022	79.06	0.282	0.7	1.972	1.31	24.65	24.69
Equiv. Refl.: (-5,0,-6)									
Quartz	(0,5,-6)	10.022	79.06	0.279	0.7	1.972	1.3	24.65	24.69
Equiv. Refl.: (0,-5,6)									
LiNbO3	(3,5,1)	9.744	72.67	0.259	1.1	3.185	3.48	39.81	39.96
Equiv. Refl.: (3,-8,-1), (5,3,-1), (5,-8,1), (8,-3,-1), (8,-5,1), (-3,8,1), (-3,-5,-1), (-5,8,-1), (-5,-3,1), (-8,3,1), (-8,5,-1)									
Sapph	(3,4,-7)	9.742	72.64	0.249	0.6	3.192	1.85	39.89	39.94
Equiv. Refl.: (3,-7,7), (4,3,7), (4,-7,-7), (7,-3,7), (7,-4,-7), (-3,7,-7), (-3,-4,7), (-4,7,7), (-4,-3,-7), (-7,3,-7), (-7,4,7)									
LiNbO3	(3,3,15)	9.859	74.99	0.125	0.8	2.737	2.24	34.21	34.28
Equiv. Refl.: (3,3,-15), (3,-6,15), (3,-6,-15), (6,-3,15), (6,-3,-15), (-3,6,15), (-3,6,-15), (-3,-3,15), (-3,-3,-15), (-6,3,15), (-6,3,-15)									
LiNbO3	(4,4,3)	9.727	72.35	0.02	0.3	3.248	1.09	40.59	40.61
Equiv. Refl.: (4,4,-3), (4,-8,3), (4,-8,-3), (8,-4,3), (8,-4,-3), (-4,8,3), (-4,8,-3), (-4,-4,3), (-4,-4,-3), (-8,4,3), (-8,4,-3)									

Ei =	12.527	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Si	(2,4,10)	12.504	86.52	15.044	13.2	0.762	10.03	9.52	13.83
Ge	(0,8,8)	12.397	81.75	5.094	10.9	1.817	19.85	22.71	30.16
Si	(3,5,9)	12.241	77.73	3.338	2.9	2.726	7.78	34.07	34.95
Ge	(2,4,10)	12.004	73.38	2.942	6.1	3.739	22.79	46.74	52
Si	(1,5,9)	11.807	70.48	1.878	2	4.44	9.09	55.5	56.24
	Equiv. Refl.: (3,7,7)								
Ge	(1,1,11)	12.153	75.96	1.775	4.9	3.133	15.29	39.16	42.03
	Equiv. Refl.: (5,7,7)								
Quartz	(0,8,-4)	12.526	89.43	106.6	89.8	0.125	11.21	1.56	11.31
	Equiv. Refl.: (0,-8,4), (8,0,4), (8,-8,-4), (-8,0,-4), (-8,8,4)								
Quartz	(0,8,4)	12.526	89.43	81.1	70.2	0.125	8.77	1.56	8.9
	Equiv. Refl.: (0,-8,-4), (8,0,-4), (8,-8,4), (-8,0,4), (-8,8,-4)								
LiNbO3	(1,-6,22)	12.519	87.93	56.8	52.4	0.453	23.7	5.66	24.36
	Equiv. Refl.: (5,1,22), (6,-1,22), (-1,-5,22), (-5,6,22), (-6,5,22)								
LiNbO3	(1,5,-22)	12.519	87.93	55.1	52.4	0.453	23.7	5.66	24.36
	Equiv. Refl.: (5,-6,-22), (6,-5,-22), (-1,6,-22), (-5,-1,-22), (-6,1,-22)								
LiNbO3	(0,9,0)	12.514	87.43	45	41.1	0.563	23.11	7.03	24.16
	Equiv. Refl.: (9,-9,0), (-9,0,0)								
LiNbO3	(0,-9,0)	12.514	87.43	42.5	41.1	0.563	23.11	7.03	24.16
	Equiv. Refl.: (9,0,0), (-9,9,0)								
LiNbO3	(1,4,-24)	12.481	85.11	28.2	25.7	1.073	27.61	13.41	30.7
	Equiv. Refl.: (1,-5,24), (4,1,24), (4,-5,-24), (5,-1,24), (5,-4,-24), (-1,5,-24), (-1,-4,24), (-4,5,24), (-4,-1,-24), (-5,1,-24), (-5,4,24)								
LiNbO3	(1,4,24)	12.481	85.11	28	25.6	1.073	27.42	13.41	30.52
	Equiv. Refl.: (4,-5,24), (5,-4,24), (-1,5,24), (-4,-1,24), (-5,1,24)								
LiNbO3	(1,-5,-24)	12.481	85.11	27.9	25.6	1.073	27.42	13.41	30.52
	Equiv. Refl.: (4,1,-24), (5,-1,-24), (-1,-4,-24), (-4,5,-24), (-5,4,-24)								
LiNbO3	(3,7,-4)	12.488	85.46	26.6	24.5	0.995	24.35	12.43	27.34
	Equiv. Refl.: (7,-10,-4), (10,-7,-4), (-3,10,-4), (-7,-3,-4), (-10,3,-4)								
LiNbO3	(3,-10,4)	12.488	85.46	26	24.5	0.995	24.35	12.43	27.34
	Equiv. Refl.: (7,3,4), (10,-3,4), (-3,-7,4), (-7,10,4), (-10,7,4)								
LiNbO3	(1,8,8)	12.407	82.07	13.8	13	1.745	22.65	21.81	31.44
	Equiv. Refl.: (3,-10,-2), (7,3,-2), (8,-9,8), (9,-8,8), (10,-3,-2), (-1,9,8), (-3,-7,-2), (-7,10,-2), (-8,-1,8), (-9,1,8), (-10,7,-2)								
LiNbO3	(1,-9,-8)	12.407	82.07	13.6	13	1.745	22.65	21.81	31.44
	Equiv. Refl.: (8,1,-8), (9,-1,-8), (-1,-8,-8), (-8,9,-8), (-9,8,-8)								
LiNbO3	(3,4,20)	12.31	79.31	13.5	12.3	2.365	29.01	29.56	41.42
	Equiv. Refl.: (3,-7,-20), (4,3,-20), (4,-7,20), (7,-3,-20), (7,-4,20), (-3,7,20), (-3,-4,-20), (-4,7,-20), (-4,-3,20), (-7,3,20), (-7,4,-20)								
LiNbO3	(3,7,2)	12.391	81.56	13.3	12.8	1.859	23.71	23.24	33.2
	Equiv. Refl.: (7,-10,2), (10,-7,2), (-3,10,2), (-7,-3,2), (-10,3,2), (3,5,-14), (3,-8,14), (5,3,14), (5,-8,-14), (8,-3,14), (8,-5,-14), (-3,8,-14), (-3,-5,14), (-5,8,14), (-5,-3,-14), (-8,3,-14), (-8,5,14)								
Quartz	(9,-1,1)	12.501	86.32	13	10.7	0.805	8.6	10.06	13.24
	Equiv. Refl.: (9,-8,-1), (-1,9,-1), (-1,-8,1), (-8,9,1), (-8,-1,-1)								
Quartz	(1,8,-1)	12.501	86.32	12.3	10.7	0.805	8.6	10.06	13.24
	Equiv. Refl.: (1,-9,1), (8,1,1), (8,-9,-1), (-9,1,-1), (-9,8,1)								
Quartz	(7,-1,7)	12.48	85.03	11.9	9.5	1.089	10.4	13.62	17.14
	Equiv. Refl.: (7,-6,-7), (-1,7,-7), (-1,-6,7), (-6,7,7), (-6,-1,-7)								

Ei =	12.527	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(2,6,-16)	12.318	79.52	11.6	10.5	2.318	24.45	28.97	37.91
	Equiv. Refl.: (6,-8,-16), (8,-6,-16), (-2,8,-16), (-6,-2,-16), (-8,2,-16), (0,6,18), (0,6,-18), (0,-6,18), (0,-6,-18), (6,0,18), (6,0,-18), (6,-6,18), (6,-6,-18), (-6,0,18), (-6,0,-18), (-6,6,18), (-6,6,-18)								
LiNbO3	(3,6,12)	12.272	78.42	11.4	10.4	2.567	26.74	32.08	41.76
	Equiv. Refl.: (6,-9,12), (9,-6,12), (-3,9,12), (-6,-3,12), (-9,3,12), (1,6,-7), (1,-7,7), (6,1,7), (6,-7,-7), (-7,1,-7), (-7,6,7)								
LiNbO3	(0,5,22)	12.047	74.08	11.3	9.9	3.573	35.31	44.66	56.93
	Equiv. Refl.: (2,-8,16), (5,-5,22), (6,2,16), (8,-2,16), (-2,-6,16), (-5,0,22), (-6,8,16), (-8,6,16)								
LiNbO3	(2,-9,-10)	12.229	77.47	11.2	9.9	2.784	27.66	34.8	44.46
	Equiv. Refl.: (3,-9,-12), (6,3,-12), (7,2,-10), (9,-2,-10), (9,-3,-12), (-2,-7,-10), (-3,-6,-12), (-6,9,-12), (-7,9,-10), (-9,6,-12), (-9,7,-10)								
LiNbO3	(0,-5,-22)	12.047	74.08	10.8	9.9	3.573	35.31	44.66	56.93
	Equiv. Refl.: (5,0,-22), (5,5,6), (5,-10,6), (10,-5,6), (-5,5,-22), (-5,10,6), (-5,-5,6), (-10,5,6)								
LiNbO3	(2,7,10)	12.229	77.47	10.4	9.9	2.784	27.66	34.8	44.46
	Equiv. Refl.: (5,5,0), (5,-10,0), (7,-9,10), (9,-7,10), (10,-5,0), (-2,9,10), (-5,10,0), (-5,-5,0), (-7,-2,10), (-9,2,10), (-10,5,0)								
LiNbO3	(4,6,-2)	12.155	76	10.3	9.1	3.123	28.38	39.04	48.27
	Equiv. Refl.: (5,5,-6), (5,-10,-6), (6,-10,-2), (10,-5,-6), (10,-6,-2), (-4,10,-2), (-5,10,-6), (-5,-5,-6), (-6,-4,-2), (-10,4,-2), (-10,5,-6)								
LiNbO3	(3,-9,12)	12.272	78.42	10.1	9.2	2.567	23.62	32.08	39.84
	Equiv. Refl.: (6,3,12), (9,-3,12), (-3,-6,12), (-6,9,12), (-9,6,12)								
LiNbO3	(4,-10,2)	12.155	76	10	9.1	3.123	28.38	39.04	48.27
	Equiv. Refl.: (6,4,2), (10,-4,2), (-4,-6,2), (-6,10,2), (-10,6,2)								
LiNbO3	(3,6,-12)	12.272	78.42	9.9	9.2	2.567	23.62	32.08	39.84
	Equiv. Refl.: (6,-9,-12), (9,-6,-12), (-3,9,-12), (-6,-3,-12), (-9,3,-12)								
LiNbO3	(1,2,26)	12.195	76.77	9.7	8.8	2.944	25.98	36.8	45.05
	Equiv. Refl.: (1,-3,-26), (2,1,-26), (2,4,22), (2,-3,26), (2,-6,-22), (3,-1,-26), (3,-2,26), (4,2,-22), (4,-6,22), (6,-2,-22), (6,-4,22), (-1,3,26), (-1,-2,-26), (-2,3,-26), (-2,6,22), (-2,-1,26), (-2,-4,-22), (-3,1,26), (-3,2,-26), (-4,6,-22), (-4,-2,22), (-6,2,22), (-6,4,-22)								
LiNbO3	(4,6,4)	12.253	78	9.5	8.8	2.663	23.32	33.28	40.64
	Equiv. Refl.: (4,-10,-4), (6,4,-4), (6,-10,4), (10,-4,-4), (10,-6,4), (-4,10,4), (-4,-6,-4), (-6,10,-4), (-6,-4,4), (-10,4,4), (-10,6,-4)								
LiNbO3	(4,6,7)	12.52	88.03	9.3	14.4	0.43	6.18	5.38	8.19
	Equiv. Refl.: (4,-10,-7), (6,4,-7), (6,-10,7), (10,-4,-7), (10,-6,7), (-4,10,7), (-4,-6,-7), (-6,10,-7), (-6,-4,7), (-10,4,7), (-10,6,-7)								
LiNbO3	(0,2,-26)	11.955	72.61	9.1	8	3.923	31.51	49.04	58.29
	Equiv. Refl.: (0,-2,26), (2,0,26), (2,-2,-26), (-2,0,-26), (-2,2,26)								
LiNbO3	(1,-9,4)	12.014	73.55	8.6	7.6	3.699	28.01	46.23	54.06
	Equiv. Refl.: (8,1,4), (9,-1,4), (-1,-8,4), (-8,9,4), (-9,8,4)								
Sapph	(2,7,4)	12.461	84.13	8.5	7.3	1.288	9.46	16.1	18.67
	Equiv. Refl.: (2,-9,-4), (7,2,-4), (7,-9,4), (9,-2,-4), (9,-7,4), (-2,9,4), (-2,-7,-4), (-7,9,-4), (-7,-2,4), (-9,2,4), (-9,7,-4)								
LiNbO3	(3,-8,-16)	12.08	74.65	8.4	7.3	3.438	25.06	42.98	49.75
	Equiv. Refl.: (5,3,-16), (8,-3,-16), (-3,-5,-16), (-5,8,-16), (-8,5,-16)								
LiNbO3	(1,8,-4)	12.014	73.55	8.3	7.6	3.699	28.01	46.23	54.06
	Equiv. Refl.: (8,-9,-4), (9,-8,-4), (-1,9,-4), (-8,-1,-4), (-9,1,-4)								
LiNbO3	(1,8,2)	11.914	72	8.2	7.3	4.07	29.66	50.88	58.89
	Equiv. Refl.: (8,-9,2), (9,-8,2), (-1,9,2), (-8,-1,2), (-9,1,2)								

Ei =	12.527	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,-9,-2)	11.914	72	8.1	7.3	4.07	29.66	50.88	58.89
	Equiv. Refl.: (8,1,-2), (9,-1,-2), (-1,-8,-2), (-8,9,-2), (-9,8,-2), (9,-3,4), (9,-6,-4), (-3,9,-4), (-3,-6,4), (-6,9,4), (-6,-3,-4)								
LiNbO3	(2,6,14)	11.821	70.67	8	7	4.394	30.84	54.93	62.99
	Equiv. Refl.: (6,-8,14), (8,-6,14), (-2,8,14), (-6,-2,14), (-8,2,14)								
LiNbO3	(0,8,10)	11.989	73.15	7.9	6.8	3.794	25.86	47.43	54.02
	Equiv. Refl.: (2,5,18), (2,-7,-18), (5,2,-18), (5,-7,18), (7,-2,-18), (7,-5,18), (8,-8,10), (-2,7,18), (-2,-5,-18), (-5,7,-18), (-5,-2,18), (-7,2,18), (-7,5,-18), (-8,0,10)								
LiNbO3	(2,-8,-14)	11.821	70.67	7.8	7	4.394	30.84	54.93	62.99
	Equiv. Refl.: (6,2,-14), (8,-2,-14), (-2,-6,-14), (-6,8,-14), (-8,6,-14)								
LiNbO3	(0,-7,16)	12.08	74.65	7.7	7	3.438	24.16	42.98	49.31
	Equiv. Refl.: (7,0,16), (-7,7,16), (2,4,-20), (2,-6,20), (4,2,20), (4,-6,-20), (6,-2,20), (6,-4,-20), (-2,6,-20), (-2,-4,20), (-4,6,20), (-4,-2,-20), (-6,2,-20), (-6,4,20), (3,6,-4), (3,-9,4), (6,3,4), (6,-9,-4), (-9,3,-4), (-9,6,4)								
LiNbO3	(2,-7,18)	11.84	70.94	7.6	6.8	4.328	29.41	54.1	61.57
	Equiv. Refl.: (5,2,18), (7,-2,18), (-2,-5,18), (-5,7,18), (-7,5,18)								
LiNbO3	(0,7,-16)	12.08	74.65	7.5	7	3.438	24.16	42.98	49.31
	Equiv. Refl.: (1,-8,12), (2,5,-18), (3,5,16), (5,-7,-18), (5,-8,16), (7,1,12), (7,-5,-18), (7,-7,-16), (8,-1,12), (8,-5,16), (-1,-7,12), (-2,7,-18), (-3,8,16), (-5,-2,-18), (-5,-3,16), (-7,0,-16), (-7,2,-18), (-7,8,12), (-8,3,16), (-8,7,12), (8,-3,-6), (8,-5,6), (-3,8,6), (-3,-5,-6), (-5,8,-6), (-5,-3,6)								
LiNbO3	(1,7,-12)	11.79	70.25	7.4	6.7	4.498	29.97	56.23	63.72
	Equiv. Refl.: (7,-8,-12), (8,-7,-12), (-1,8,-12), (-7,-1,-12), (-8,1,-12), (3,5,6), (3,-8,-6), (5,3,-6), (5,-8,6), (-8,3,6), (-8,5,-6)								
Quartz	(9,-1,0)	12.448	83.58	7.2	6	1.409	8.45	17.61	19.54
	Equiv. Refl.: (9,-8,0), (-1,9,0), (-1,-8,0), (-8,9,0), (-8,-1,0)								
Sapph	(2,6,-13)	12.498	86.07	7.1	6.8	0.86	5.82	10.75	12.22
	Equiv. Refl.: (2,-8,13), (6,2,13), (6,-8,-13), (8,-2,13), (8,-6,-13), (-2,8,-13), (-2,-6,13), (-6,8,13), (-6,-2,-13), (-8,2,-13), (-8,6,13)								
LiNbO3	(0,-8,-10)	11.989	73.15	7	6.8	3.794	25.86	47.43	54.02
	Equiv. Refl.: (8,0,-10), (-8,8,-10), (1,8,0), (1,-9,0), (8,1,0), (8,-9,0), (-9,1,0), (-9,8,0)								
LiNbO3	(1,5,20)	11.829	70.78	6.9	6.3	4.367	27.38	54.58	61.07
	Equiv. Refl.: (1,-6,-20), (5,1,-20), (5,-6,20), (6,-1,-20), (6,-5,20), (-1,6,20), (-1,-5,-20), (-5,6,-20), (-5,-1,20), (-6,1,20), (-6,5,-20)								
LiNbO3	(2,-9,8)	11.931	72.25	6.8	6.1	4.01	24.39	50.13	55.74
	Equiv. Refl.: (7,2,8), (9,-2,8), (-2,-7,8), (-7,9,8), (-9,7,8)								
LiNbO3	(1,7,12)	11.79	70.25	6.7	6	4.498	27.11	56.23	62.42
	Equiv. Refl.: (7,-8,12), (8,-7,12), (-1,8,12), (-7,-1,12), (-8,1,12)								
LiNbO3	(1,-8,-12)	11.79	70.25	6.6	6	4.498	27.11	56.23	62.42
	Equiv. Refl.: (7,1,-12), (8,-1,-12), (-1,-7,-12), (-7,8,-12), (-8,7,-12)								
LiNbO3	(2,7,-8)	11.931	72.25	6.4	6.1	4.01	24.39	50.13	55.74
	Equiv. Refl.: (7,-9,-8), (9,-7,-8), (-2,9,-8), (-7,-2,-8), (-9,2,-8)								
Sapph	(0,1,26)	12.5	86.27	6.3	6	0.817	4.93	10.21	11.34
	Equiv. Refl.: (0,-1,-26), (1,0,-26), (1,-1,26), (-1,0,26), (-1,1,-26)								
Quartz	(2,7,3)	12.412	82.25	6.2	5.2	1.706	8.82	21.32	23.07
	Equiv. Refl.: (2,-9,-3), (7,2,-3), (7,-9,3), (-9,2,3), (-9,7,-3)								
Quartz	(9,-2,-3)	12.412	82.25	6.1	5.2	1.706	8.82	21.32	23.07
	Equiv. Refl.: (9,-7,3), (-2,9,3), (-2,-7,-3), (-7,9,-3), (-7,-2,3)								
Sapph	(3,6,0)	11.941	72.41	5.8	4.6	3.973	18.2	49.66	52.89
	Equiv. Refl.: (3,-9,0), (6,3,0), (6,-9,0), (9,-3,0), (9,-6,0), (-3,9,0), (-3,-6,0), (-6,9,0), (-6,-3,0), (-9,3,0), (-9,6,0), (3,6,4), (3,-9,-4), (6,3,-4), (6,-9,4), (-3,9,4), (-3,-6,-4), (-9,3,4), (-9,6,-4)								

Ei =	12.527	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(9,-3,-4)	12.441	83.3	5.7	5	1.472	7.31	18.4	19.8
	Equiv. Refl.: (9,-6,4), (-6,9,-4), (-6,-3,4)								
Quartz	(8,-1,-5)	12.405	82.01	5.5	4.5	1.759	7.98	21.99	23.39
	Equiv. Refl.: (8,-7,5), (-1,8,5), (-1,-7,-5), (-7,8,-5), (-7,-1,5)								
Quartz	(1,7,5)	12.405	82.01	5.4	4.5	1.759	7.98	21.99	23.39
	Equiv. Refl.: (1,7,-5), (1,-8,5), (1,-8,-5), (5,1,-8), (5,-6,8), (7,1,5), (7,1,-5), (7,-8,5), (7,-8,-5), (-8,1,5), (-8,1,-5), (-8,7,5), (-8,7,-5)								
Sapph	(0,8,4)	12.186	76.6	5.3	4.4	2.985	13.11	37.31	39.55
	Equiv. Refl.: (0,-8,-4), (8,0,-4), (8,-8,4), (-8,0,4), (-8,8,-4), (1,5,8), (1,-6,-8), (6,-1,-8), (6,-5,8), (8,-1,5), (8,-7,-5), (-1,6,8), (-1,8,-5), (-1,-5,-8), (-1,-7,5), (-5,6,-8), (-5,-1,8), (-6,1,8), (-6,5,-8), (-7,8,5), (-7,-1,-5)								
Quartz	(0,3,10)	12.275	78.48	4.9	4	2.552	10.09	31.91	33.46
	Equiv. Refl.: (0,-3,-10), (3,0,-10), (3,-3,10), (-3,0,10), (-3,3,-10)								
Quartz	(4,5,-4)	12.27	78.36	4.8	3.8	2.58	9.84	32.25	33.71
	Equiv. Refl.: (4,-9,4), (5,4,4), (5,-9,-4), (7,-2,-7), (7,-5,7), (9,-4,4), (9,-5,-4), (-2,7,7), (-2,-5,-7), (-4,9,-4), (-4,-5,4), (-5,7,-7), (-5,9,4), (-5,-2,7), (-5,-4,-4), (-9,4,-4), (-9,5,4)								
Quartz	(2,5,7)	12.135	75.63	4.7	3.8	3.21	12.18	40.13	41.93
	Equiv. Refl.: (2,-7,-7), (5,2,-7), (5,-7,7), (-7,2,7), (-7,5,-7)								
LiNbO3	(1,6,19)	12.463	84.21	4.4	6	1.271	7.65	15.89	17.63
	Equiv. Refl.: (1,-7,-19), (6,1,-19), (6,-7,19), (7,-1,-19), (7,-6,19), (-1,7,19), (-1,-6,-19), (-6,7,-19), (-6,-1,19), (-7,1,19), (-7,6,-19)								
Sapph	(4,5,-4)	11.904	71.85	4.3	3.4	4.106	13.85	51.32	53.15
	Equiv. Refl.: (4,-9,4), (5,4,4), (5,-9,-4), (9,-4,4), (9,-5,-4), (-4,9,-4), (-4,-5,4), (-5,9,4), (-5,-4,-4), (-9,4,-4), (-9,5,4)								
Sapph	(1,6,16)	12.476	84.81	4.1	4	1.139	4.57	14.23	14.95
	Equiv. Refl.: (1,-7,-16), (6,1,-16), (6,-7,16), (7,-1,-16), (7,-6,16), (-1,7,16), (-1,-6,-16), (-6,7,-16), (-6,-1,16), (-7,1,16), (-7,6,-16)								
Quartz	(1,6,7)	12.48	85.03	3.8	3.4	1.089	3.68	13.62	14.11
	Equiv. Refl.: (1,-7,-7), (6,1,-7), (6,-7,7), (-7,1,7), (-7,6,-7)								
Quartz	(7,-1,-7)	12.48	85.03	3.6	3.4	1.089	3.68	13.62	14.11
	Equiv. Refl.: (7,-6,7), (-1,7,7), (-1,-6,-7), (-6,7,-7), (-6,-1,7)								
Quartz	(2,3,9)	12.12	75.36	3.2	2.5	3.272	8.22	40.91	41.72
	Equiv. Refl.: (2,-5,-9), (3,2,-9), (3,-5,9), (5,-2,-9), (5,-3,9), (-2,5,9), (-2,-3,-9), (-3,5,-9), (-3,-2,9), (-5,2,9), (-5,3,-9)								
Quartz	(0,6,7)	11.87	71.36	3.1	2.5	4.227	10.48	52.83	53.86
	Equiv. Refl.: (0,-6,-7), (3,4,-7), (3,-7,7), (4,3,7), (4,-7,-7), (6,0,-7), (6,-6,7), (-6,0,7), (-6,6,-7), (-7,3,-7), (-7,4,7)								
Quartz	(2,3,-9)	12.12	75.36	3	2.3	3.272	7.67	40.91	41.62
	Equiv. Refl.: (2,7,1), (2,-5,9), (2,-9,-1), (3,2,9), (3,-5,-9), (5,-2,9), (5,-3,-9), (7,2,-1), (7,-3,7), (7,-4,-7), (7,-9,1), (9,-2,2), (9,-7,-2), (-2,5,-9), (-2,9,-2), (-2,-3,9), (-2,-7,2), (-3,5,9), (-3,7,-7), (-3,-2,-9), (-3,-4,7), (-4,7,7), (-4,-3,-7), (-5,2,-9), (-5,3,9), (-7,9,2), (-7,-2,-2), (-9,2,1), (-9,7,-1)								
Sapph	(1,4,21)	12.165	76.2	2.9	2.4	3.078	7.52	38.47	39.2
	Equiv. Refl.: (1,4,-21), (1,-5,21), (1,-5,-21), (4,1,21), (4,1,-21), (4,-5,21), (4,-5,-21), (5,-1,21), (5,-1,-21), (5,-4,21), (5,-4,-21), (-1,5,21), (-1,5,-21), (-1,-4,21), (-1,-4,-21), (-4,5,21), (-4,5,-21), (-4,-1,21), (-4,-1,-21), (-5,1,21), (-5,1,-21), (-5,4,21), (-5,4,-21), (1,7,-4), (1,-8,4), (2,7,-2), (2,-9,2), (7,1,4), (7,2,2), (7,-8,-4), (7,-9,-2), (-8,1,-4), (-8,7,4), (-9,2,-2), (-9,7,2)								
Quartz	(3,6,-2)	11.79	70.25	2.8	2.2	4.499	9.68	56.23	57.06
	Equiv. Refl.: (3,-9,2), (6,3,2), (6,-9,-2), (8,-1,4), (8,-7,-4), (9,-2,-1), (9,-3,2), (9,-6,-2), (9,-7,1), (-1,8,-4), (-1,-7,4), (-2,9,1), (-2,-7,-1), (-3,9,-2), (-3,-6,2), (-6,9,2), (-6,-3,-2), (-7,8,4), (-7,9,-1), (-7,-1,-4), (-7,-2,1), (-9,3,-2), (-9,6,2)								

Ei =	12.527	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(0,5,-20)	12.153	75.97	2.7	2.6	3.13	8.07	39.12	39.95
	Equiv. Refl.: (0,-5,20), (5,0,20), (5,-5,-20), (-5,0,-20), (-5,5,20)								
LiNbO3	(2,7,-11)	12.399	81.81	2.6	4	1.804	7.22	22.55	23.68
	Equiv. Refl.: (2,-9,11), (7,2,11), (7,-9,-11), (9,-2,11), (9,-7,-11), (-2,9,-11), (-2,-7,11), (-7,9,11), (-7,-2,-11), (-9,2,-11), (-9,7,11)								
Sapph	(1,5,-19)	12.345	80.22	2.5	2.5	2.159	5.36	26.98	27.51
	Equiv. Refl.: (1,-6,19), (5,1,19), (5,-6,-19), (6,-1,19), (6,-5,-19), (-1,6,-19), (-1,-5,19), (-5,6,19), (-5,-1,-19), (-6,1,-19), (-6,5,19)								
Sapph	(1,6,-14)	11.915	72.02	2.4	2.1	4.066	8.63	50.82	51.55
	Equiv. Refl.: (1,-7,14), (6,1,14), (6,-7,-14), (7,-1,14), (7,-6,-14), (-1,7,-14), (-1,-6,14), (-6,7,14), (-6,-1,-14), (-7,1,-14), (-7,6,14), (1,2,10), (1,2,-10), (1,-3,10), (2,1,10), (2,1,-10), (2,-3,10), (2,-3,-10), (3,-1,-10), (3,-2,10), (5,4,-4), (5,-9,4), (8,-2,-5), (8,-6,5), (9,-4,-4), (9,-5,4), (-1,3,10), (-1,-2,-10), (-2,3,-10), (-2,8,5), (-2,-1,10), (-2,-6,-5), (-3,1,10), (-3,1,-10), (-3,2,10), (-3,2,-10), (-4,9,4), (-4,-5,-4), (-5,9,-4), (-5,-4,4), (-6,8,-5), (-6,-2,5), (-9,4,4)								
LiNbO3	(1,1,27)	12.312	79.36	2.3	3.5	2.353	8.12	29.42	30.52
	Equiv. Refl.: (1,1,-27), (1,-2,27), (1,-2,-27), (2,-1,27), (2,-1,-27), (-1,2,27), (-1,2,-27), (-1,-1,27), (-1,-1,-27), (-2,1,27), (-2,1,-27), (1,-3,-10), (2,6,5), (2,-8,-5), (4,5,4), (4,-9,-4), (6,2,-5), (6,-8,5), (-8,2,5), (-8,6,-5), (-9,5,-4)								
Sapph	(4,5,-7)	12.216	77.2	2	2.2	2.846	6.25	35.58	36.12
	Equiv. Refl.: (4,-9,7), (5,4,7), (5,-9,-7), (9,-4,7), (9,-5,-7), (-4,9,-7), (-4,-5,7), (-5,9,7), (-5,-4,-7), (-9,4,-7), (-9,5,7)								
Quartz	(3,6,2)	11.79	70.25	1.9	2	4.499	8.81	56.23	56.92
	Equiv. Refl.: (3,-1,10), (3,-2,-10), (3,-9,-2), (6,3,-2), (6,-9,2), (9,-3,-2), (9,-6,2), (-1,3,-10), (-1,-2,10), (-2,3,10), (-2,-1,-10), (-3,9,2), (-3,-6,-2), (-6,9,-2), (-6,-3,2), (-9,3,2), (-9,6,-2)								
Sapph	(2,6,-10)	11.852	71.11	1.8	2	4.287	8.37	53.59	54.24
	Equiv. Refl.: (2,-8,10), (6,2,10), (6,-8,-10), (8,-2,10), (8,-6,-10), (-2,8,-10), (-2,-6,10), (-6,8,10), (-6,-2,-10), (-8,2,-10), (-8,6,10), (2,7,-1), (2,-9,1), (4,4,6), (4,4,-6), (4,-8,6), (4,-8,-6), (7,2,1), (7,-9,-1), (9,-2,1), (9,-3,3), (9,-6,-3), (9,-7,-1), (-2,9,-1), (-2,-7,1), (-3,9,-3), (-3,-6,3), (-6,9,3), (-6,-3,-3), (-7,9,1), (-7,-2,-1), (-8,4,6), (-8,4,-6), (-9,2,-1), (-9,7,1)								
LiNbO3	(4,6,-5)	12.326	79.73	1.7	2.9	2.269	6.48	28.36	29.09
	Equiv. Refl.: (4,-10,5), (6,4,5), (6,-10,-5), (10,-4,5), (10,-6,-5), (-4,10,-5), (-4,-6,5), (-6,10,5), (-6,-4,-5), (-10,4,-5), (-10,6,5), (2,6,11), (2,-8,-11), (6,2,-11), (6,-8,11), (8,-2,-11), (8,-6,11), (-2,8,11), (-2,-6,-11), (-6,8,-11), (-6,-2,11), (-8,2,11), (-8,6,-11), (0,4,-9), (0,-4,9), (2,5,-7), (2,-7,7), (3,3,8), (3,3,-8), (3,6,-3), (3,-6,8), (3,-6,-8), (3,-9,3), (4,0,9), (4,-4,-9), (5,2,7), (5,-7,-7), (6,3,3), (6,-9,-3), (7,-2,7), (7,-5,-7), (8,-4,6), (8,-4,-6), (-2,7,-7), (-2,-5,7), (-4,0,-9), (-4,4,9), (-4,8,6), (-4,8,-6), (-4,-4,6), (-4,-4,-6), (-5,7,7), (-5,-2,-7), (-6,3,8), (-6,3,-8), (-7,2,-7), (-7,5,7), (-9,3,-3), (-9,6,3)								
Sapph	(0,7,14)	12.472	84.63	1.6	2.2	1.178	2.58	14.72	14.95
	Equiv. Refl.: (0,-7,-14), (4,5,5), (4,-9,-5), (5,4,-5), (5,-9,5), (7,0,-14), (7,-7,14), (9,-4,-5), (9,-5,5), (-4,9,5), (-4,-5,-5), (-5,9,-5), (-5,-4,5), (-7,0,14), (-7,7,-14), (-9,4,5), (-9,5,-5), (1,7,4), (1,8,1), (1,-8,-4), (1,-9,-1), (6,-3,8), (6,-3,-8), (7,1,-4), (7,-1,6), (7,-6,-6), (7,-8,4), (8,1,-1), (8,-9,1), (9,-3,-3), (9,-6,3), (-1,7,-6), (-1,-6,6), (-3,6,8), (-3,6,-8), (-3,9,3), (-3,-3,8), (-3,-3,-8), (-3,-6,-3), (-6,7,6), (-6,9,-3), (-6,-1,-6), (-6,-3,3), (-8,1,4), (-8,7,-4), (-9,1,1), (-9,8,-1)								
Quartz	(1,6,6)	11.775	70.04	1.5	1.5	4.549	6.74	56.86	57.26
	Equiv. Refl.: (1,6,-6), (1,-7,6), (1,-7,-6), (3,4,7), (3,5,-6), (3,6,3), (3,-7,-7), (3,-8,6), (3,-9,-3), (4,3,-7), (4,-7,7), (5,3,6), (5,-8,-6), (6,1,6), (6,1,-6), (6,3,-3), (6,-7,6), (6,-7,-6), (6,-9,3), (7,-3,-7), (7,-4,7), (8,-1,-4), (8,-7,4), (-1,8,4), (-1,-7,-4), (-3,7,7), (-3,-4,-7), (-4,7,-7), (-4,-3,7), (-7,1,6), (-7,1,-6), (-7,3,7), (-7,4,-7), (-7,6,6), (-7,6,-6), (-7,8,-4), (-7,-1,4), (-8,3,-6), (-8,5,6), (-9,3,3), (-9,6,-3)								

Ei =	12.527	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,6,-17)	11.871	71.38	1.4	2.1	4.22	8.91	52.76	53.5
Equiv. Refl.: (1,-7,17), (6,1,17), (6,-7,-17), (7,-1,17), (7,-6,-17), (-1,7,-17), (-1,-6,17), (-6,7,17), (-6,-1,-17), (-7,1,-17), (-7,6,17), (1,7,9), (1,7,-9), (1,-8,9), (1,-8,-9), (2,7,1), (2,-9,-1), (7,1,9), (7,1,-9), (7,2,-1), (7,-8,9), (7,-8,-9), (7,-9,1), (8,-1,9), (8,-1,-9), (8,-7,9), (8,-7,-9), (9,-2,-1), (9,-7,1), (-1,8,9), (-1,8,-9), (-1,-7,9), (-1,-7,-9), (-2,9,1), (-2,-7,-1), (-7,8,9), (-7,8,-9), (-7,9,-1), (-7,-1,9), (-7,-1,-9), (-7,-2,1), (-8,1,9), (-8,1,-9), (-8,7,9), (-8,7,-9), (-9,2,1), (-9,7,-1), (1,4,9), (1,-5,-9), (2,4,-8), (2,-6,8), (4,1,-9), (4,2,8), (4,-5,9), (4,-6,-8), (5,-1,-9), (5,-4,9), (-1,5,9), (-1,-4,-9), (-4,5,-9), (-4,-1,9), (-5,1,9), (-5,4,-9), (-6,2,-8), (-6,4,8)									
LiNbO3	(4,6,1)	12.13	75.54	1.3	2.1	3.23	6.82	40.38	40.95
Equiv. Refl.: (4,-10,-1), (6,4,-1), (6,-10,1), (10,-4,-1), (10,-6,1), (-4,10,1), (-4,-6,-1), (-6,10,-1), (-6,-4,1), (-10,4,1), (-10,6,-1), (2,5,15), (2,5,-15), (2,-7,15), (2,-7,-15), (5,2,15), (5,2,-15), (5,-7,15), (5,-7,-15), (7,-2,15), (7,-2,-15), (7,-5,15), (7,-5,-15), (-2,7,15), (-2,7,-15), (-2,-5,15), (-2,-5,-15), (-5,7,15), (-5,7,-15), (-5,-2,15), (-5,-2,-15), (-7,2,15), (-7,2,-15), (-7,5,15), (-7,5,-15), (6,-2,8), (6,-4,-8), (7,-1,-6), (7,-6,6), (8,-3,6), (8,-5,-6), (-1,7,6), (-1,-6,-6), (-2,6,-8), (-2,-4,8), (-3,8,-6), (-3,-5,6), (-4,6,8), (-4,-2,-8), (-5,8,6), (-5,-3,-6), (-6,7,-6), (-6,-1,6)									
LiNbO3	(2,7,7)	11.804	70.44	1.2	1.9	4.45	8.43	55.63	56.26
Equiv. Refl.: (2,-9,-7), (7,2,-7), (7,-9,7), (9,-2,-7), (9,-7,7), (-2,9,7), (-2,-7,-7), (-7,9,-7), (-7,-2,7), (-9,2,7), (-9,7,-7), (0,4,-22), (0,-4,22), (3,6,6), (3,6,-6), (3,-9,6), (3,-9,-6), (4,0,22), (4,-4,-22), (6,3,6), (6,3,-6), (6,-9,6), (6,-9,-6), (9,-3,6), (9,-3,-6), (9,-6,6), (9,-6,-6), (-3,9,6), (-3,9,-6), (-3,-6,6), (-3,-6,-6), (-4,0,-22), (-4,4,22), (-6,9,6), (-6,9,-6), (-6,-3,6), (-6,-3,-6), (-9,3,6), (-9,3,-6), (-9,6,6), (-9,6,-6), (0,4,9), (0,-4,-9), (4,0,-9), (4,-4,9), (-4,0,9), (-4,4,-9)									
Sapph	(2,3,-22)	12.38	81.21	1.1	1.4	1.937	2.78	24.21	24.37
Equiv. Refl.: (2,-5,22), (3,2,22), (3,-5,-22), (5,-2,22), (5,-3,-22), (-2,5,-22), (-2,-3,22), (-3,5,22), (-3,-2,-22), (-5,2,-22), (-5,3,22), (2,7,2), (2,-9,-2), (4,5,3), (4,-9,-3), (5,4,-3), (5,-9,3), (7,2,-2), (7,-9,2), (9,-1,-1), (9,-2,-2), (9,-7,2), (9,-8,1), (-1,9,1), (-1,-8,-1), (-2,9,2), (-2,-7,-2), (-7,9,-2), (-7,-2,2), (-8,9,-1), (-8,-1,1), (-9,2,2), (-9,4,3), (-9,5,-3), (-9,7,-2)									
LiNbO3	(1,3,25)	12.252	77.97	1	1.9	2.668	4.99	33.36	33.73
Equiv. Refl.: (1,-4,-25), (3,1,-25), (3,-4,25), (4,-1,-25), (4,-3,25), (-1,4,25), (-1,-3,-25), (-3,4,-25), (-3,-1,25), (-4,1,25), (-4,3,-25), (2,4,19), (2,7,-2), (2,-6,-19), (2,-9,2), (3,5,13), (3,-8,-13), (4,2,-19), (4,-6,19), (5,3,-13), (5,-8,13), (6,-2,-19), (6,-4,19), (7,2,2), (7,-9,-2), (8,-3,-13), (8,-5,13), (9,-2,2), (9,-7,-2), (-2,6,19), (-2,9,-2), (-2,-4,-19), (-2,-7,2), (-3,8,13), (-3,-5,-13), (-4,6,-19), (-4,-2,19), (-5,8,-13), (-5,-3,13), (-6,2,19), (-6,4,-19), (-7,9,2), (-7,-2,-2), (-8,3,13), (-8,5,-13), (-9,2,-2), (-9,7,2), (0,2,-10), (0,-2,10), (2,0,10), (2,-2,-10), (9,-4,-3), (9,-5,3), (-2,0,-10), (-2,2,10), (-4,9,3), (-4,-5,-3), (-5,9,-3), (-5,-4,3)									
LiNbO3	(4,5,-13)	12.318	79.52	0.9	1.9	2.317	4.4	28.96	29.29
Equiv. Refl.: (4,-9,13), (5,4,13), (5,-9,-13), (9,-4,13), (9,-5,-13), (-4,9,-13), (-4,-5,13), (-5,9,13), (-5,-4,-13), (-9,4,-13), (-9,5,13), (0,8,-3), (0,-8,3), (8,0,3), (8,-8,-3), (-8,0,-3), (-8,8,3)									
LiNbO3	(3,7,-1)	12.367	80.83	0.8	1.8	2.021	3.66	25.27	25.53
Equiv. Refl.: (3,-10,1), (7,3,1), (7,-10,-1), (10,-3,1), (10,-7,-1), (-3,10,-1), (-3,-7,1), (-7,10,1), (-7,-3,-1), (-10,3,-1), (-10,7,1), (0,8,2), (0,-8,-2), (4,5,-3), (4,-9,3), (5,4,3), (5,-9,-3), (8,0,-2), (8,-8,2), (9,-4,3), (9,-5,-3), (-4,9,-3), (-4,-5,3), (-5,9,3), (-5,-4,-3), (-8,0,2), (-8,8,-2), (-9,4,-3), (-9,5,3)									
LiNbO3	(3,4,-19)	11.989	73.14	0.7	1.4	3.796	5.25	47.45	47.74
Equiv. Refl.: (3,-7,19), (4,3,19), (4,-7,-19), (7,-3,19), (7,-4,-19), (-3,7,-19), (-3,-4,19), (-4,7,19), (-4,-3,-19), (-7,3,-19), (-7,4,19), (0,3,-10), (0,-3,10), (3,0,10), (3,-3,-10), (8,-2,5), (8,-6,-5), (-2,8,-5), (-2,-6,5), (-3,0,-10), (-3,3,10), (-6,8,5), (-6,-2,-5)									

Ei =	12.527	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(4,5,11)	11.922	72.12	0.6	1.2	4.041	4.88	50.51	50.74
Equiv. Refl.: (4,-9,-11), (5,4,-11), (5,-9,11), (9,-4,-11), (9,-5,11), (-4,9,11), (-4,-5,-11), (-5,9,-11), (-5,-4,11), (-9,4,11), (-9,5,-11), (4,5,8), (4,-9,-8), (5,4,-8), (5,-9,8), (9,-4,-8), (9,-5,8), (-4,9,8), (-4,-5,-8), (-5,9,-8), (-5,-4,8), (-9,4,8), (-9,5,-8), (1,4,-9), (1,-5,9), (2,6,-5), (2,-8,5), (4,1,9), (4,-5,-9), (5,-1,9), (5,-4,-9), (6,2,5), (6,-8,-5), (9,-2,3), (9,-7,-3), (-1,5,-9), (-1,-4,9), (-2,9,-3), (-2,-7,3), (-4,5,9), (-4,-1,-9), (-5,1,-9), (-5,4,9), (-7,9,3), (-7,-2,-3), (-8,2,-5), (-8,6,5)									
Sapph	(1,3,22)	11.819	70.64	0.5	0.6	4.402	2.81	55.02	55.09
Equiv. Refl.: (1,-4,-22), (3,1,-22), (3,-4,22), (4,-1,-22), (4,-3,22), (-1,4,22), (-1,-3,-22), (-3,4,-22), (-3,-1,22), (-4,1,22), (-4,3,-22), (0,6,-7), (0,-6,7), (1,5,-8), (1,-6,8), (2,4,8), (2,7,-3), (2,-6,-8), (2,-9,3), (4,2,-8), (4,-6,8), (5,1,8), (5,-6,-8), (6,0,7), (6,-1,8), (6,-2,-8), (6,-4,8), (6,-5,-8), (6,-6,-7), (7,2,3), (7,-9,-3), (-1,6,-8), (-1,-5,8), (-2,6,8), (-2,-4,-8), (-4,6,-8), (-4,-2,8), (-5,6,8), (-5,-1,-8), (-6,0,-7), (-6,1,-8), (-6,2,8), (-6,4,-8), (-6,5,8), (-6,6,7), (-9,2,-3), (-9,7,3)									
LiNbO3	(1,7,15)	12.458	83.98	0.4	1.6	1.321	2.13	16.51	16.65
Equiv. Refl.: (1,7,-15), (1,-8,15), (1,-8,-15), (7,1,15), (7,1,-15), (7,-8,15), (7,-8,-15), (8,-1,15), (8,-1,-15), (8,-7,15), (8,-7,-15), (-1,8,15), (-1,8,-15), (-1,-7,15), (-1,-7,-15), (-7,8,15), (-7,8,-15), (-7,-1,15), (-7,-1,-15), (-8,1,15), (-8,1,-15), (-8,7,15), (-8,7,-15), (0,3,24), (0,3,-24), (0,-3,24), (0,-3,-24), (1,3,-23), (1,-4,23), (3,0,24), (3,0,-24), (3,1,23), (3,4,-16), (3,-3,24), (3,-3,-24), (3,-4,-23), (3,-7,16), (4,3,16), (4,-1,23), (4,-3,-23), (4,-7,-16), (7,-3,16), (7,-4,-16), (-1,4,-23), (-1,-3,23), (-3,0,24), (-3,0,-24), (-3,3,24), (-3,3,-24), (-3,4,23), (-3,7,-16), (-3,-1,-23), (-3,-4,16), (-4,1,-23), (-4,3,23), (-4,7,16), (-4,-3,-16), (-7,3,-16), (-7,4,16)									
Quartz	(0,2,10)	11.835	70.86	0.3	0.4	4.348	1.67	54.34	54.37
Equiv. Refl.: (0,8,-2), (0,-2,-10), (0,-8,2), (2,0,-10), (2,7,0), (2,-2,10), (2,-9,0), (7,2,0), (7,-9,0), (8,0,2), (8,-8,-2), (9,-2,0), (9,-7,0), (-2,0,10), (-2,2,-10), (-2,9,0), (-2,-7,0), (-7,9,0), (-7,-2,0), (-8,0,-2), (-8,8,2), (-9,2,0), (-9,7,0)									
LiNbO3	(1,8,-7)	12.286	78.74	0.2	0.7	2.494	1.78	31.18	31.23
Equiv. Refl.: (1,-9,7), (2,3,23), (2,-5,-23), (3,2,-23), (3,5,-17), (3,-5,23), (3,-8,17), (5,3,17), (5,-2,-23), (5,-3,23), (5,-8,-17), (8,1,7), (8,-3,17), (8,-5,-17), (8,-9,-7), (9,-1,7), (9,-8,-7), (-1,9,-7), (-1,-8,7), (-2,5,23), (-2,-3,-23), (-3,5,-23), (-3,8,-17), (-3,-2,23), (-3,-5,17), (-5,2,23), (-5,3,-23), (-5,8,17), (-5,-3,-17), (-8,3,-17), (-8,5,17), (-8,9,7), (-8,-1,-7), (-9,1,-7), (-9,8,7), (3,4,17), (3,6,3), (3,6,-3), (3,-7,-17), (3,-9,3), (3,-9,-3), (4,3,-17), (4,-7,17), (6,3,3), (6,3,-3), (6,-9,3), (6,-9,-3), (7,-3,-17), (7,-4,17), (9,-3,3), (9,-3,-3), (9,-6,3), (9,-6,-3), (-3,7,17), (-3,9,3), (-3,9,-3), (-3,-4,-17), (-3,-6,3), (-3,-6,-3), (-4,7,-17), (-4,-3,17), (-6,9,3), (-6,9,-3), (-6,-3,3), (-6,-3,-3), (-7,3,17), (-7,4,-17), (-9,3,3), (-9,3,-3), (-9,6,3), (-9,6,-3)									
LiNbO3	(1,8,5)	12.089	74.8	0.1	0.5	3.403	1.87	42.54	42.58
Equiv. Refl.: (1,8,-1), (1,-9,1), (1,-9,-5), (3,3,21), (3,3,-21), (3,-6,21), (3,-6,-21), (6,-3,21), (6,-3,-21), (8,1,1), (8,1,-5), (8,-9,5), (8,-9,-1), (9,-1,1), (9,-1,-5), (9,-8,5), (9,-8,-1), (-1,9,5), (-1,9,-1), (-1,-8,1), (-1,-8,-5), (-3,6,21), (-3,6,-21), (-3,-3,21), (-3,-3,-21), (-6,3,21), (-6,3,-21), (-8,9,1), (-8,9,-5), (-8,-1,5), (-8,-1,-1), (-9,1,5), (-9,1,-1), (-9,8,1), (-9,8,-5)									
LiNbO3	(5,5,3)	12.116	75.29	0	0.2	3.288	0.54	41.11	41.11
Equiv. Refl.: (5,5,-3), (5,-10,3), (5,-10,-3), (10,-5,3), (10,-5,-3), (-5,10,3), (-5,10,-3), (-5,-5,3), (-5,-5,-3), (-10,5,3), (-10,5,-3), (4,4,12), (4,4,-12), (4,5,2), (4,-8,12), (4,-8,-12), (4,-9,-2), (5,4,-2), (5,-9,2), (8,-4,12), (8,-4,-12), (9,-4,-2), (9,-5,2), (-4,8,12), (-4,8,-12), (-4,9,2), (-4,-4,12), (-4,-4,-12), (-4,-5,-2), (-5,9,-2), (-5,-4,2), (-8,4,12), (-8,4,-12), (-9,4,2), (-9,5,-2)									

Ei = Cryst	11.959 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Si	(0,2,10) Equiv. Refl.: (2,6,8)	11.64	76.75	5.604	4.6	2.817	13.08	35.21	37.56
Si	(1,5,9) Equiv. Refl.: (3,7,7)	11.807	80.86	5.011	4.5	1.924	8.7	24.05	25.57
Si	(1,7,7) Equiv. Refl.: (3,3,9), (5,5,7)	11.357	71.75	3.103	2.6	3.944	10.26	49.3	50.36
Ge	(3,5,9)	11.751	79.3	2.448	6.9	2.26	15.5	28.26	32.23
Ge	(1,5,9) Equiv. Refl.: (3,7,7)	11.335	71.41	1.693	4.5	4.023	18.11	50.29	53.45
Quartz	(4,3,7) Equiv. Refl.: (4,-7,-7)	11.959	89.6	143.9	121.4	0.083	10.07	1.04	10.12
Quartz	(3,4,-7) Equiv. Refl.: (3,-7,7), (-7,3,-7), (-7,4,7)	11.959	89.6	143.8	121.3	0.083	10.06	1.04	10.11
Quartz	(-4,7,7) Equiv. Refl.: (-4,-3,-7)	11.959	89.6	137.7	121.4	0.083	10.07	1.04	10.12
Quartz	(7,-3,7) Equiv. Refl.: (-3,-4,7)	11.959	89.6	137.6	121.3	0.083	10.06	1.04	10.12
Quartz	(7,-4,7) Equiv. Refl.: (-3,7,-7)	11.959	89.6	137.5	121.3	0.083	10.06	1.04	10.11
LiNbO3	(0,-2,26) Equiv. Refl.: (2,0,26), (-2,2,26)	11.955	88.44	101.5	92.9	0.326	30.28	4.08	30.56
LiNbO3	(0,2,-26) Equiv. Refl.: (2,-2,-26), (-2,0,-26)	11.955	88.44	100.9	92.9	0.326	30.28	4.08	30.56
Quartz	(7,-3,-7) Equiv. Refl.: (-3,7,7), (-3,-4,-7), (-4,7,-7), (-4,-3,7)	11.959	89.6	78	71.6	0.083	5.93	1.04	6.02
Quartz	(7,-4,7)	11.959	89.6	77.9	71.5	0.083	5.93	1.04	6.02
Quartz	(3,4,7) Equiv. Refl.: (3,-7,-7), (4,3,-7), (4,-7,7), (-7,3,7)	11.959	89.6	75.2	71.6	0.083	5.94	1.04	6.03
Quartz	(-7,4,-7)	11.959	89.6	75.1	71.5	0.083	5.93	1.04	6.02
Sapph	(3,6,0) Equiv. Refl.: (3,-9,0), (6,3,0), (6,-9,0), (9,-3,0), (9,-6,0), (-3,9,0), (-3,-6,0), (-6,9,0), (-6,-3,0), (-9,3,0), (-9,6,0)	11.941	86.85	31.7	26.5	0.658	17.42	8.22	19.26
LiNbO3	(2,-9,8) Equiv. Refl.: (7,2,8), (9,-2,8), (-2,-7,8), (-7,9,8), (-9,7,8)	11.931	86.05	30.7	28.4	0.826	23.47	10.32	25.64
LiNbO3	(1,8,2) Equiv. Refl.: (8,-9,2), (9,-8,2), (-1,9,2), (-8,-1,2), (-9,1,2)	11.914	85.03	29.8	27.4	1.041	28.52	13.01	31.35
LiNbO3	(1,-9,-2) Equiv. Refl.: (8,1,-2), (9,-1,-2), (-1,-8,-2), (-8,9,-2), (-9,8,-2)	11.914	85.03	29.3	27.4	1.041	28.52	13.01	31.35
LiNbO3	(2,7,-8) Equiv. Refl.: (7,-9,-8), (9,-7,-8), (-2,9,-8), (-7,-2,-8), (-9,2,-8)	11.931	86.05	28.6	28.4	0.826	23.47	10.32	25.64
LiNbO3	(2,5,18) Equiv. Refl.: (5,-7,18), (7,-5,18), (-2,7,18), (-5,-2,18), (-7,2,18)	11.84	81.92	18.7	17.2	1.697	29.25	21.21	36.14
LiNbO3	(2,-7,-18) Equiv. Refl.: (5,2,-18), (7,-2,-18), (-2,-5,-18), (-5,7,-18), (-7,5,-18)	11.84	81.92	18.6	17.2	1.697	29.25	21.21	36.14
LiNbO3	(2,-7,18) Equiv. Refl.: (5,2,18), (7,-2,18), (-2,-5,18), (-5,7,18), (-7,5,18)	11.84	81.92	18	16.7	1.697	28.28	21.21	35.36

Ei =	11.959	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(2,5,-18)	11.84	81.92	17.8	16.7	1.697	28.28	21.21	35.36
	Equiv. Refl.: (2,6,14), (5,-7,-18), (6,-8,14), (7,-5,-18), (8,-6,14), (-2,7,-18), (-2,8,14), (-5,-2,-18), (-6,-2,14), (-7,2,-18), (-8,2,14)								
LiNbO3	(2,-8,-14)	11.821	81.28	17.2	16.2	1.833	29.64	22.92	37.47
	Equiv. Refl.: (6,2,-14), (8,-2,-14), (-2,-6,-14), (-6,8,-14), (-8,6,-14)								
LiNbO3	(2,2,24)	11.764	79.63	16	14.6	2.189	32.04	27.36	42.13
	Equiv. Refl.: (2,2,-24), (2,-4,24), (2,-4,-24), (4,-2,24), (4,-2,-24), (-2,4,24), (-2,4,-24), (-2,-2,24), (-2,-2,-24), (-4,2,24), (-4,2,-24)								
LiNbO3	(0,8,-8)	11.685	77.71	15.8	13.9	2.605	36.09	32.56	48.61
	Equiv. Refl.: (1,5,20), (5,-6,20), (6,-5,20), (8,-8,-8), (-1,6,20), (-5,-1,20), (-6,1,20), (-8,0,-8)								
LiNbO3	(1,-6,-20)	11.829	81.54	15.7	14.8	1.778	26.34	22.23	34.47
	Equiv. Refl.: (5,1,-20), (6,-1,-20), (-1,-5,-20), (-5,6,-20), (-6,5,-20)								
LiNbO3	(1,-8,12)	11.79	80.35	15.4	14.2	2.033	28.82	25.41	38.42
	Equiv. Refl.: (7,1,12), (8,-1,12), (-1,-7,12), (-7,8,12), (-8,7,12)								
LiNbO3	(1,7,-12)	11.79	80.35	15.1	14.2	2.033	28.82	25.41	38.42
	Equiv. Refl.: (7,-8,-12), (8,-7,-12), (-1,8,-12), (-7,-1,-12), (-8,1,-12)								
LiNbO3	(0,-8,8)	11.685	77.71	14.9	13.9	2.605	36.09	32.56	48.61
	Equiv. Refl.: (8,0,8), (-8,8,8)								
Sapph	(4,5,-4)	11.904	84.5	13.8	11.5	1.151	13.26	14.39	19.56
	Equiv. Refl.: (4,-9,4), (5,4,4), (5,-9,-4), (9,-4,4), (9,-5,-4), (-4,9,-4), (-4,-5,4), (-5,9,4), (-5,-4,-4), (-9,4,-4), (-9,5,4)								
LiNbO3	(1,7,12)	11.79	80.35	13.7	12.8	2.033	26.08	25.41	36.41
	Equiv. Refl.: (7,-8,12), (8,-7,12), (-1,8,12), (-7,-1,12), (-8,1,12)								
LiNbO3	(4,5,-10)	11.745	79.14	13.6	12.3	2.295	28.26	28.69	40.27
	Equiv. Refl.: (5,-9,-10), (9,-5,-10), (-4,9,-10), (-5,-4,-10), (-9,4,-10)								
LiNbO3	(1,-8,-12)	11.79	80.35	13.5	12.8	2.033	26.08	25.41	36.41
	Equiv. Refl.: (7,1,-12), (8,-1,-12), (-1,-7,-12), (-7,8,-12), (-8,7,-12)								
LiNbO3	(4,-9,10)	11.745	79.14	12.7	12.3	2.295	28.26	28.69	40.27
	Equiv. Refl.: (5,4,10), (9,-4,10), (-4,-5,10), (-5,9,10), (-9,5,10)								
LiNbO3	(0,-6,18)	11.593	75.79	12.3	11.1	3.029	33.66	37.87	50.67
	Equiv. Refl.: (2,-5,22), (3,2,22), (5,-2,22), (6,0,18), (-2,-3,22), (-3,5,22), (-5,3,22), (-6,6,18)								
LiNbO3	(0,6,-18)	11.593	75.79	12.1	11.1	3.029	33.66	37.87	50.67
	Equiv. Refl.: (6,-6,-18), (-6,0,-18)								
LiNbO3	(3,-8,14)	11.573	75.4	11.9	10.4	3.115	32.46	38.93	50.69
	Equiv. Refl.: (5,3,14), (8,-3,14), (-3,-5,14), (-5,8,14), (-8,5,14)								
LiNbO3	(0,-8,-4)	11.267	70.41	11.8	10.3	4.256	44	53.2	69.04
	Equiv. Refl.: (2,3,-22), (3,-5,-22), (5,-3,-22), (8,0,-4), (-2,5,-22), (-3,-2,-22), (-5,2,-22), (-8,8,-4)								
LiNbO3	(0,1,26)	11.709	78.27	11.7	10.7	2.482	26.65	31.03	40.9
	Equiv. Refl.: (1,-1,26), (-1,0,26)								
LiNbO3	(0,8,4)	11.267	70.41	11.5	10.3	4.256	44	53.2	69.04
	Equiv. Refl.: (0,-1,-26), (1,0,-26), (8,-8,4), (-1,1,-26), (-8,0,4)								
LiNbO3	(0,6,18)	11.593	75.79	11.3	10.2	3.029	30.86	37.87	48.85
	Equiv. Refl.: (6,-6,18), (-6,0,18)								
LiNbO3	(2,-6,20)	11.581	75.56	11.2	10.2	3.08	31.43	38.5	49.7
	Equiv. Refl.: (4,2,20), (6,-2,20), (-2,-4,20), (-4,6,20), (-6,4,20)								
LiNbO3	(1,6,16)	11.59	75.73	11	9.9	3.041	30.2	38.02	48.55
	Equiv. Refl.: (6,-7,16), (7,-6,16), (-1,7,16), (-6,-1,16), (-7,1,16)								
LiNbO3	(2,4,-20)	11.581	75.56	10.9	10.2	3.08	31.43	38.5	49.7
	Equiv. Refl.: (3,5,-14), (4,-6,-20), (5,-8,-14), (6,-4,-20), (8,-5,-14), (-2,6,-20), (-3,8,-14), (-4,-2,-20), (-5,-3,-14), (-6,2,-20), (-8,3,-14)								
LiNbO3	(0,-6,-18)	11.593	75.79	10.8	10.2	3.029	30.86	37.87	48.85
	Equiv. Refl.: (6,0,-18), (-6,6,-18)								

Ei =	11.959	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,-7,-16)	11.59	75.73	10.7	9.9	3.041	30.2	38.02	48.55
	Equiv. Refl.: (2,7,-2), (2,-9,2), (6,1,-16), (7,2,2), (7,-1,-16), (7,-9,-2), (9,-2,2), (9,-7,-2), (-1,-6,-16) (-2,9,-2), (-2,-7,2), (-6,7,-16), (-7,6,-16), (-7,9,2), (-7,-2,-2), (-9,2,-2), (-9,7,2)								
Quartz	(1,7,-4)	11.918	85.28	10.1	8.6	0.987	8.48	12.34	14.97
	Equiv. Refl.: (1,-8,4), (7,1,4), (7,-8,-4), (-8,1,-4), (-8,7,4)								
Sapph	(1,1,24)	11.748	79.21	9.8	7.9	2.279	17.99	28.48	33.69
	Equiv. Refl.: (1,1,-24), (1,-2,24), (1,-2,-24), (2,-1,24), (2,-1,-24), (-1,2,24), (-1,2,-24), (-1,-1,24), (-1,-1,-24) (-2,1,24), (-2,1,-24)								
LiNbO3	(0,-7,-14)	11.573	75.4	9.7	8.9	3.115	27.65	38.93	47.75
	Equiv. Refl.: (7,0,-14), (-7,7,-14), (8,-1,4), (8,-7,-4), (-1,8,-4), (-1,-7,4), (-7,8,4), (-7,-1,-4)								
LiNbO3	(0,7,14)	11.573	75.4	9.5	8.9	3.115	27.65	38.93	47.75
	Equiv. Refl.: (3,6,-6), (3,-9,6), (6,3,6), (6,-9,-6), (7,-7,14), (9,-3,6), (9,-6,-6), (-3,9,-6), (-3,-6,6) (-6,9,6), (-6,-3,-6), (-7,0,14), (-9,3,-6), (-9,6,6)								
LiNbO3	(2,7,4)	11.521	74.45	9.2	8.2	3.328	27.28	41.59	49.74
	Equiv. Refl.: (7,-9,4), (9,-7,4), (-2,9,4), (-7,-2,4), (-9,2,4), (0,7,-10), (0,-7,10), (7,0,10), (7,-7,-10) (-7,0,-10), (-7,7,10)								
Sapph	(1,6,-14)	11.915	85.09	9	8.1	1.027	8.27	12.83	15.27
	Equiv. Refl.: (1,-7,14), (6,1,14), (6,-7,-14), (7,-1,14), (7,-6,-14), (-1,7,-14), (-1,-6,14), (-6,7,14), (-6,-1,-14) (-7,1,-14), (-7,6,14)								
LiNbO3	(3,-9,-6)	11.358	71.76	8.9	7.9	3.941	31.11	49.26	58.26
	Equiv. Refl.: (6,3,-6), (9,-3,-6), (-3,-6,-6), (-6,9,-6), (-9,6,-6)								
LiNbO3	(2,-9,-4)	11.521	74.45	8.6	8.2	3.328	27.28	41.59	49.74
	Equiv. Refl.: (3,6,6), (6,-9,6), (7,2,-4), (9,-2,-4), (9,-6,6), (-2,-7,-4), (-3,9,6), (-6,-3,6), (-7,9,-4) (-9,3,6), (-9,7,-4)								
LiNbO3	(0,4,-22)	11.301	70.91	8.1	7.3	4.139	30.17	51.74	59.89
	Equiv. Refl.: (4,-4,-22), (-4,0,-22), (0,6,7), (0,-6,-7), (6,0,-7), (6,-6,7), (-6,0,7), (-6,6,-7)								
LiNbO3	(0,-4,22)	11.301	70.91	7.8	7.3	4.139	30.17	51.74	59.89
	Equiv. Refl.: (4,0,22), (4,5,8), (5,-9,8), (9,-5,8), (-4,4,22), (-4,9,8), (-5,-4,8), (-9,4,8)								
LiNbO3	(4,-9,-8)	11.434	72.96	7.5	7.1	3.665	26.11	45.81	52.73
	Equiv. Refl.: (5,4,-8), (9,-4,-8), (-4,-5,-8), (-5,9,-8), (-9,5,-8)								
Quartz	(0,7,-5)	11.701	78.07	7.4	5.8	2.526	14.65	31.58	34.81
	Equiv. Refl.: (0,-7,5), (7,0,5), (7,-7,-5), (-7,0,-5), (-7,7,5)								
LiNbO3	(0,-3,-24)	11.514	74.33	7.2	6.6	3.355	22.27	41.94	47.48
	Equiv. Refl.: (3,0,-24), (-3,3,-24), (1,7,4), (1,-8,-4), (7,1,-4), (7,-8,4), (-8,1,4), (-8,7,-4)								
LiNbO3	(0,5,-20)	11.328	71.3	7.1	6.3	4.047	25.31	50.59	56.57
	Equiv. Refl.: (5,-5,-20), (-5,0,-20)								
LiNbO3	(0,3,-24)	11.514	74.33	7	6.6	3.355	22.01	41.94	47.36
	Equiv. Refl.: (3,-3,-24), (-3,0,-24)								
Quartz	(8,-1,-4)	11.918	85.28	6.9	6.4	0.987	6.33	12.34	13.87
	Equiv. Refl.: (8,-7,4), (-1,8,4), (-1,-7,-4), (-7,8,-4), (-7,-1,4)								
Sapph	(3,3,18)	11.615	76.23	6.7	5.6	2.93	16.3	36.63	40.09
	Equiv. Refl.: (3,3,-18), (3,-6,18), (3,-6,-18), (6,-3,18), (6,-3,-18), (-3,6,18), (-3,6,-18), (-3,-3,18), (-3,-3,-18) (-6,3,18), (-6,3,-18)								
LiNbO3	(0,3,24)	11.514	74.33	6.6	6.6	3.355	22.27	41.94	47.48
	Equiv. Refl.: (3,-3,24), (-3,0,24)								
LiNbO3	(0,-3,24)	11.514	74.33	6.5	6.6	3.355	22.01	41.94	47.36
	Equiv. Refl.: (3,0,24), (-3,3,24)								
Quartz	(3,3,8)	11.896	84.12	6.4	5.6	1.231	6.85	15.39	16.85
	Equiv. Refl.: (3,3,-8), (3,-6,8), (3,-6,-8), (-6,3,8), (-6,3,-8)								

Ei =	11.959	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(0,-5,20)	11.328	71.3	6.2	6.3	4.047	25.31	50.59	56.57
	Equiv. Refl.: (5,0,20), (-5,5,20)								
Sapph	(0,4,20)	11.284	70.66	6.1	4.8	4.197	20.33	52.46	56.26
	Equiv. Refl.: (0,-4,-20), (4,0,-20), (4,-4,20), (-4,0,20), (-4,4,-20)								
Sapph	(1,7,6)	11.714	78.37	6	5.1	2.461	12.58	30.76	33.23
	Equiv. Refl.: (1,7,-6), (1,-8,6), (1,-8,-6), (7,1,6), (7,1,-6), (7,-8,6), (7,-8,-6), (8,-1,6), (8,-1,-6), (8,-7,6), (8,-7,-6), (-1,8,6), (-1,8,-6), (-1,-7,6), (-1,-7,-6), (-7,8,6), (-7,8,-6), (-7,-1,6), (-7,-1,-6), (-8,1,6), (-8,1,-6), (-8,7,6), (-8,7,-6), (6,-3,8), (6,-3,-8), (-3,6,8), (-3,6,-8), (-3,-3,8), (-3,-3,-8)								
Sapph	(2,6,-10)	11.852	82.33	5.7	5	1.61	8.02	20.13	21.67
	Equiv. Refl.: (2,-8,10), (6,2,10), (6,-8,-10), (8,-2,10), (8,-6,-10), (-2,8,-10), (-2,-6,10), (-6,8,10), (-6,-2,-10), (-8,2,-10), (-8,6,10)								
Quartz	(3,6,-2)	11.79	80.35	5.6	4.6	2.033	9.26	25.42	27.05
	Equiv. Refl.: (3,-9,2), (6,3,2), (6,-9,-2), (-9,3,-2), (-9,6,2)								
Quartz	(0,4,-9)	11.855	82.43	5.5	4.6	1.59	7.37	19.88	21.2
	Equiv. Refl.: (0,-4,9), (4,0,9), (4,-4,-9), (-4,0,-9), (-4,4,9)								
Quartz	(9,-3,2)	11.79	80.35	5.4	4.6	2.033	9.26	25.42	27.05
	Equiv. Refl.: (9,-6,-2), (-3,9,-2), (-3,-6,2), (-6,9,2), (-6,-3,-2)								
Quartz	(0,8,-1)	11.712	78.34	5.1	4.1	2.468	10.09	30.85	32.46
	Equiv. Refl.: (0,-8,1), (8,0,1), (8,-8,-1), (-8,0,-1), (-8,8,1)								
Quartz	(3,6,2)	11.79	80.35	5	4.1	2.033	8.43	25.42	26.78
	Equiv. Refl.: (3,-9,-2), (6,3,-2), (6,-9,2), (9,-3,-2), (9,-6,2), (-3,9,2), (-3,-6,-2), (-6,9,-2), (-6,-3,2), (-9,3,2), (-9,6,-2)								
Quartz	(4,-1,-9)	11.583	75.59	4.9	3.8	3.072	11.71	38.4	40.15
	Equiv. Refl.: (4,-3,9), (-1,4,9), (-1,-3,-9), (-3,4,-9), (-3,-1,9)								
Quartz	(1,3,9)	11.583	75.59	4.8	3.8	3.072	11.7	38.4	40.14
	Equiv. Refl.: (1,-4,-9), (3,1,-9), (3,-4,9), (-4,1,9), (-4,3,-9)								
Quartz	(0,1,-10)	11.562	75.2	4.7	3.7	3.159	11.63	39.49	41.17
	Equiv. Refl.: (0,-1,10), (1,0,10), (-1,0,-10)								
Quartz	(1,-1,-10)	11.562	75.2	4.6	3.7	3.159	11.62	39.49	41.16
	Equiv. Refl.: (-1,1,10)								
Quartz	(0,1,10)	11.562	75.2	4.5	3.6	3.159	11.28	39.49	41.07
	Equiv. Refl.: (0,-1,-10), (1,0,-10), (1,-1,10), (-1,0,10), (-1,1,-10)								
Quartz	(1,3,-9)	11.583	75.59	4.4	3.5	3.072	10.75	38.4	39.88
	Equiv. Refl.: (1,-4,9), (3,1,9), (3,-4,-9), (4,-1,9), (4,-3,-9), (-1,4,-9), (-1,-3,9), (-3,4,9), (-3,-1,-9), (-4,1,-9), (-4,3,9)								
LiNbO3	(1,6,-17)	11.871	83.06	4.2	5.8	1.456	8.52	18.2	20.09
	Equiv. Refl.: (1,-7,17), (6,1,17), (6,-7,-17), (7,-1,17), (7,-6,-17), (-1,7,-17), (-1,-6,17), (-6,7,17), (-6,-1,-17), (-7,1,-17), (-7,6,17)								
Sapph	(1,5,-16)	11.335	71.41	4.1	3.3	4.023	13.31	50.28	52.01
	Equiv. Refl.: (1,-6,16), (5,1,16), (5,-6,-16), (6,-1,16), (6,-5,-16), (-1,6,-16), (-1,-5,16), (-5,6,16), (-5,-1,-16), (-6,1,-16), (-6,5,16)								
Quartz	(4,5,-2)	11.608	76.09	4	3.2	2.962	9.39	37.02	38.19
	Equiv. Refl.: (4,-9,2), (5,4,2), (5,-9,-2), (7,-1,6), (7,-6,-6), (-1,7,-6), (-1,-6,6), (-6,7,6), (-6,-1,-6), (-9,4,-2), (-9,5,2)								
Quartz	(4,-2,9)	11.491	73.92	3.9	3.1	3.448	10.54	43.1	44.37
	Equiv. Refl.: (4,-2,-9), (9,-4,-1), (9,-5,1), (-2,4,9), (-2,4,-9), (-2,-2,9), (-2,-2,-9), (-4,9,1), (-4,-5,-1), (-5,9,-1), (-5,-4,1)								
Quartz	(4,5,3)	11.888	83.77	3.8	3.6	1.306	4.66	16.32	16.98
	Equiv. Refl.: (4,-9,-3), (5,4,-3), (5,-9,3), (-9,4,3), (-9,5,-3)								

Ei =	11.959	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(1,6,6)	11.775	79.93	3.7	3	2.124	6.45	26.55	27.32
	Equiv. Refl.: (1,6,-6), (1,-7,6), (1,-7,-6), (6,1,6), (6,1,-6), (6,-7,6), (6,-7,-6), (9,-4,-3), (9,-5,3) (-4,9,3), (-4,-5,-3), (-5,9,-3), (-5,-4,3), (-7,1,6), (-7,1,-6), (-7,6,6), (-7,6,-6)								
Sapph	(2,5,15)	11.812	81.01	3.6	3.2	1.892	6.14	23.65	24.44
	Equiv. Refl.: (2,5,-15), (2,-7,15), (2,-7,-15), (5,2,15), (5,2,-15), (5,-7,15), (5,-7,-15), (7,-2,15), (7,-2,-15) (7,-5,15), (7,-5,-15), (-2,7,15), (-2,7,-15), (-2,-5,15), (-2,-5,-15), (-5,7,15), (-5,7,-15), (-5,-2,15) (-5,-2,-15), (-7,2,15), (-7,2,-15), (-7,5,15), (-7,5,-15)								
Sapph	(4,5,-1)	11.76	79.52	3.5	3.1	2.212	6.85	27.65	28.48
	Equiv. Refl.: (4,-9,1), (5,4,1), (5,-9,-1), (9,-4,1), (9,-5,-1), (-4,9,-1), (-4,-5,1), (-5,9,1), (-5,-4,-1) (-9,4,-1), (-9,5,1), (0,4,9), (0,-4,-9), (4,0,-9), (4,-4,9), (9,-4,2), (9,-5,-2), (-4,0,9) (-4,4,-9), (-4,9,-2), (-4,-5,2), (-5,9,2), (-5,-4,-2)								
Sapph	(2,3,20)	11.581	75.56	3.4	3.1	3.079	9.67	38.49	39.69
	Equiv. Refl.: (2,-5,-20), (3,2,-20), (3,-5,20), (5,-2,-20), (5,-3,20), (-2,5,20), (-2,-3,-20), (-3,5,-20), (-3,-2,20) (-5,2,20), (-5,3,-20), (2,2,9), (2,2,-9), (2,-4,9), (2,-4,-9), (4,5,1), (4,-9,-1), (5,4,-1) (5,-9,1), (-4,2,9), (-4,2,-9), (-9,4,1), (-9,5,-1)								
Sapph	(1,7,0)	11.358	71.76	3.3	3	3.941	11.79	49.26	50.65
	Equiv. Refl.: (1,-8,0), (7,1,0), (7,-8,0), (8,-1,0), (8,-7,0), (-1,8,0), (-1,-7,0), (-7,8,0), (-7,-1,0) (-8,1,0), (-8,7,0), (6,-1,7), (6,-5,-7), (7,-1,-6), (7,-6,6), (-1,6,-7), (-1,7,6), (-1,-5,7) (-1,-6,-6), (-5,6,7), (-5,-1,-7), (-6,7,-6), (-6,-1,6)								
Sapph	(3,5,10)	11.562	75.2	3.2	3	3.16	9.35	39.51	40.6
	Equiv. Refl.: (3,-8,-10), (5,3,-10), (5,-8,10), (8,-3,-10), (8,-5,10), (-3,8,10), (-3,-5,-10), (-5,8,-10), (-5,-3,10) (-8,3,10), (-8,5,-10), (1,5,-7), (1,-6,7), (5,1,7), (5,-6,-7), (-6,1,-7), (-6,5,7)								
Quartz	(0,8,0)	11.656	77.07	3.1	2.5	2.745	6.91	34.31	35
	Equiv. Refl.: (0,-8,0), (3,6,0), (3,-9,0), (6,3,0), (6,-9,0), (8,0,0), (8,-8,0), (-8,0,0), (-8,8,0) (-9,3,0), (-9,6,0)								
Sapph	(2,2,21)	11.297	70.85	3	2.4	4.154	10.1	51.92	52.89
	Equiv. Refl.: (2,2,-21), (2,-4,21), (2,-4,-21), (4,-2,21), (4,-2,-21), (-2,4,21), (-2,4,-21), (-2,-2,21), (-2,-2,-21) (-4,2,21), (-4,2,-21), (0,2,-10), (0,-2,10), (2,0,10), (2,6,-4), (2,-2,-10), (2,-8,4), (6,2,4) (6,-8,-4), (8,-1,-3), (8,-7,3), (-1,8,3), (-1,-7,-3), (-2,0,-10), (-2,2,10), (-5,9,3), (-5,-4,-3) (-7,8,-3), (-7,-1,3), (-8,2,-4), (-8,6,4)								
Quartz	(1,7,3)	11.526	74.53	2.9	2.7	3.31	8.77	41.38	42.3
	Equiv. Refl.: (1,-8,-3), (7,1,-3), (7,-8,3), (8,-2,4), (8,-6,-4), (9,-3,0), (9,-6,0), (-2,8,-4), (-2,-6,4) (-3,9,0), (-3,-6,0), (-6,8,4), (-6,9,0), (-6,-2,-4), (-6,-3,0), (-8,1,3), (-8,7,-3)								
Quartz	(1,7,-3)	11.526	74.53	2.8	2.5	3.31	8.21	41.38	42.18
	Equiv. Refl.: (1,-8,3), (7,1,3), (7,-8,-3), (9,-4,3), (9,-5,-3), (-4,9,-3), (-4,-5,3), (-8,1,-3), (-8,7,3)								
Quartz	(1,4,8)	11.348	71.61	2.7	2.4	3.976	9.72	49.7	50.65
	Equiv. Refl.: (1,-5,-8), (4,1,-8), (4,4,5), (4,4,-5), (4,-5,8), (4,-8,5), (4,-8,-5), (5,-1,-8), (5,-4,8) (-1,5,8), (-1,-4,-8), (-4,5,-8), (-4,-1,8), (-5,1,8), (-5,4,-8), (-8,4,5), (-8,4,-5)								
LiNbO3	(2,7,7)	11.804	80.77	2.6	4.1	1.943	8.06	24.29	25.59
	Equiv. Refl.: (2,-9,-7), (7,2,-7), (7,-9,7), (9,-2,-7), (9,-7,7), (-2,9,7), (-2,-7,-7), (-7,9,-7), (-7,-2,7) (-9,2,7), (-9,7,-7), (4,5,-3), (4,-9,3), (5,4,3), (5,-9,-3), (8,-1,3), (8,-7,-3), (-1,8,-3) (-1,-7,3), (-7,8,3), (-7,-1,-3), (-9,4,-3), (-9,5,3)								
Quartz	(8,-4,5)	11.61	76.12	2.4	2.2	2.955	6.59	36.94	37.53
	Equiv. Refl.: (8,-4,-5), (-4,8,5), (-4,8,-5), (-4,-4,5), (-4,-4,-5)								
LiNbO3	(4,5,11)	11.922	85.5	2.3	5	0.941	4.66	11.77	12.66
	Equiv. Refl.: (4,-9,-11), (5,4,-11), (5,-9,11), (9,-4,-11), (9,-5,11), (-4,9,11), (-4,-5,-11), (-5,9,-11), (-5,-4,11) (-9,4,11), (-9,5,-11)								
Quartz	(0,8,2)	11.879	83.39	2.1	2.6	1.386	3.54	17.32	17.68
	Equiv. Refl.: (0,-8,-2), (8,0,-2), (8,-8,2), (-8,0,2), (-8,8,-2)								

Ei =	11.959	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(1,5,17)	11.662	77.2	2	2.3	2.717	6.28	33.96	34.54
	Equiv. Refl.: (1,-6,-17), (5,1,-17), (5,-6,17), (6,-1,-17), (6,-5,17), (-1,6,17), (-1,-5,-17), (-5,6,-17), (-5,-1,17), (-6,1,17), (-6,5,-17)								
Quartz	(3,6,-1)	11.621	76.35	1.9	2	2.904	5.71	36.3	36.75
	Equiv. Refl.: (3,-9,1), (4,5,-1), (4,-9,1), (5,4,1), (5,-9,-1), (6,3,1), (6,-9,-1), (9,-4,1), (9,-5,-1), (-4,9,-1), (-4,-5,1), (-5,9,1), (-5,-4,-1), (-9,3,-1), (-9,4,-1), (-9,5,1), (-9,6,1)								
LiNbO3	(2,7,-5)	11.599	75.91	1.8	2.8	3.002	8.52	37.52	38.48
	Equiv. Refl.: (2,-9,5), (7,2,5), (7,-9,-5), (9,-2,5), (9,-7,-5), (-2,9,-5), (-2,-7,5), (-7,9,5), (-7,-2,-5), (-9,2,-5), (-9,7,5), (2,6,-7), (2,-8,7), (6,2,7), (6,-8,-7), (8,-2,7), (8,-6,-7), (-2,8,-7), (-2,-6,7), (-6,8,7), (-6,-2,-7), (-8,2,-7), (-8,6,7), (3,5,5), (3,-8,-5), (5,3,-5), (5,-8,5), (-8,3,5), (-8,5,-5)								
Quartz	(8,-3,-5)	11.701	78.07	1.7	2	2.526	4.99	31.58	31.97
	Equiv. Refl.: (8,-5,5), (9,-3,1), (9,-6,-1), (-3,8,5), (-3,9,-1), (-3,-5,-5), (-3,-6,1), (-5,8,-5), (-5,-3,5), (-6,9,1), (-6,-3,-1)								
Sapph	(4,4,9)	11.273	70.51	1.6	1.8	4.234	7.42	52.92	53.44
	Equiv. Refl.: (4,4,-9), (4,-8,9), (4,-8,-9), (8,-4,9), (8,-4,-9), (-4,8,9), (-4,8,-9), (-4,-4,9), (-4,-4,-9), (-8,4,9), (-8,4,-9)								
LiNbO3	(2,7,1)	11.39	72.26	1.5	2.4	3.826	9.03	47.82	48.66
	Equiv. Refl.: (2,-9,-1), (7,2,-1), (7,-9,1), (9,-2,-1), (9,-7,1), (-2,9,1), (-2,-7,-1), (-7,9,-1), (-7,-2,1), (-9,2,1), (-9,7,-1)								
Sapph	(1,7,3)	11.448	73.19	1.4	1.7	3.613	5.96	45.16	45.55
	Equiv. Refl.: (1,7,-3), (1,-8,3), (1,-8,-3), (3,4,14), (3,4,-16), (3,5,-11), (3,-7,16), (3,-7,-14), (3,-8,11), (4,3,16), (4,3,-14), (4,-7,14), (4,-7,-16), (5,3,11), (5,-8,-11), (7,1,3), (7,1,-3), (7,-3,16), (7,-3,-14), (7,-4,14), (7,-4,-16), (7,-8,3), (7,-8,-3), (8,-1,3), (8,-1,-3), (8,-3,11), (8,-5,-11), (8,-7,3), (8,-7,-3), (-1,8,3), (-1,8,-3), (-1,-7,3), (-1,-7,-3), (-3,7,14), (-3,7,-16), (-3,8,-11), (-3,-4,16), (-3,-4,-14), (-3,-5,11), (-4,7,16), (-4,7,-14), (-4,-3,14), (-4,-3,-16), (-5,8,11), (-5,-3,-11), (-7,3,14), (-7,3,-16), (-7,4,16), (-7,4,-14), (-7,8,3), (-7,8,-3), (-7,-1,3), (-7,-1,-3), (-8,1,3), (-8,1,-3), (-8,3,-11), (-8,5,11), (-8,7,3), (-8,7,-3), (0,6,-7), (0,7,5), (0,-6,7), (0,-7,-5), (6,0,7), (6,-6,-7), (7,0,-5), (7,-7,5), (9,-2,0), (9,-7,0), (-2,9,0), (-2,-7,0), (-6,0,-7), (-6,6,7), (-7,0,5), (-7,7,-5), (-7,9,0), (-7,-2,0)								
Quartz	(1,4,-8)	11.348	71.61	1.3	1.4	3.976	5.75	49.7	50.04
	Equiv. Refl.: (1,-5,8), (2,5,6), (2,-7,-6), (3,5,-5), (3,-8,5), (4,1,8), (4,-5,-8), (5,2,-6), (5,3,5), (5,-1,8), (5,-4,-8), (5,-7,6), (5,-8,-5), (7,-2,-6), (7,-5,6), (8,-3,5), (8,-5,-5), (-1,5,-8), (-1,-4,8), (-2,7,6), (-2,-5,-6), (-3,8,-5), (-3,-5,5), (-4,5,8), (-4,-1,-8), (-5,1,-8), (-5,4,8), (-5,7,-6), (-5,8,5), (-5,-2,6), (-5,-3,-5), (-7,2,6), (-7,5,-6), (-8,3,-5), (-8,5,5)								
LiNbO3	(2,4,19)	11.239	70.02	1.2	2	4.347	8.66	54.34	55.03
	Equiv. Refl.: (2,-6,-19), (4,2,-19), (4,-6,19), (6,-2,-19), (6,-4,19), (-2,6,19), (-2,-4,-19), (-4,6,-19), (-4,-2,19), (-6,2,19), (-6,4,-19), (4,5,2), (4,-9,-2), (5,4,-2), (5,-9,2), (9,-4,-2), (9,-5,2), (-4,9,2), (-4,-5,-2), (-5,9,-2), (-5,-4,2), (-9,4,2), (-9,5,-2)								
Sapph	(2,4,-17)	11.367	71.9	1.1	1.3	3.91	5.14	48.87	49.14
	Equiv. Refl.: (2,-6,17), (4,2,17), (4,-6,-17), (6,-2,17), (6,-4,-17), (-2,6,-17), (-2,-4,17), (-4,6,17), (-4,-2,-17), (-6,2,-17), (-6,4,17)								
Sapph	(1,3,22)	11.819	81.21	1	1.5	1.848	2.69	23.1	23.26
	Equiv. Refl.: (1,-4,-22), (3,1,-22), (3,-4,22), (4,-1,-22), (4,-3,22), (-1,4,22), (-1,-3,-22), (-3,4,-22), (-3,-1,22), (-4,1,22), (-4,3,-22), (2,7,0), (2,-9,0), (7,2,0), (7,-9,0), (-9,2,0), (-9,7,0)								
Quartz	(0,5,-8)	11.716	78.44	0.9	1.1	2.447	2.68	30.58	30.7
	Equiv. Refl.: (0,8,1), (0,-5,8), (0,-8,-1), (5,0,8), (5,-5,-8), (8,0,-1), (8,-8,1), (-5,0,-8), (-5,5,8), (-8,0,1), (-8,8,-1)								

Ei =	11.959	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,2,-25)	11.769	79.78	0.8	1.9	2.157	4.02	26.96	27.25
Equiv. Refl.: (1,3,-23), (1,-3,25), (1,-4,23), (2,1,25), (2,3,23), (2,-3,-25), (2,-5,-23), (3,1,23), (3,2,-23), (3,4,17), (3,-1,25), (3,-2,-25), (3,-4,-23), (3,-5,23), (3,-7,-17), (4,3,-17), (4,-1,23), (4,-3,-23), (4,-7,17), (5,-2,-23), (5,-3,23), (7,-3,-17), (7,-4,17), (-1,3,-25), (-1,4,-23), (-1,-2,25), (-1,-3,23), (-2,3,25), (-2,5,23), (-2,-1,-25), (-2,-3,-23), (-3,1,-25), (-3,2,25), (-3,4,23), (-3,5,-23), (-3,7,17), (-3,-1,-23), (-3,-2,23), (-3,-4,-17), (-4,1,-23), (-4,3,23), (-4,7,-17), (-4,-3,17), (-5,2,23), (-5,3,-23), (-7,3,17), (-7,4,-17), (1,2,23), (1,-3,-23), (2,1,-23), (2,-3,23), (3,-1,-23), (3,-2,23), (-1,3,23), (-1,-2,-23), (-2,3,-23), (-2,-1,23), (-3,1,23), (-3,2,-23), (0,8,-2), (0,-8,2), (1,1,10), (1,1,-10), (1,-2,10), (1,-2,-10), (8,0,2), (8,-8,-2), (-2,1,10), (-2,1,-10), (-8,0,-2), (-8,8,2)									
LiNbO3	(1,4,21)	11.348	71.61	0.7	1.4	3.975	5.41	49.69	49.98
Equiv. Refl.: (1,4,-21), (1,-5,21), (1,-5,-21), (4,1,21), (4,1,-21), (4,5,-7), (4,-5,21), (4,-5,-21), (4,-9,7), (5,4,7), (5,-1,21), (5,-1,-21), (5,-4,21), (5,-4,-21), (5,-9,-7), (9,-4,7), (9,-5,-7), (-1,5,21), (-1,5,-21), (-1,-4,21), (-1,-4,-21), (-4,5,21), (-4,5,-21), (-4,9,-7), (-4,-1,21), (-4,-1,-21), (-4,-5,7), (-5,1,21), (-5,1,-21), (-5,4,21), (-5,4,-21), (-5,9,7), (-5,-4,-7), (-9,4,-7), (-9,5,7), (1,6,13), (1,-7,-13), (6,1,-13), (6,-7,13), (7,-1,-13), (7,-6,13), (-1,7,13), (-1,-6,-13), (-6,7,-13), (-6,-1,13), (-7,1,13), (-7,6,-13), (2,-1,10), (-1,2,10), (-1,2,-10), (-1,-1,10), (-1,-1,-10)									
LiNbO3	(1,5,-19)	11.495	73.98	0.6	1.3	3.434	4.59	42.92	43.17
Equiv. Refl.: (1,-6,19), (3,6,9), (3,6,-9), (3,-9,9), (3,-9,-9), (5,1,19), (5,-6,-19), (6,3,9), (6,3,-9), (6,-1,19), (6,-5,-19), (6,-9,9), (6,-9,-9), (9,-3,9), (9,-3,-9), (9,-6,9), (9,-6,-9), (-1,6,-19), (-1,-5,19), (-3,9,9), (-3,9,-9), (-3,-6,9), (-3,-6,-9), (-5,6,19), (-5,-1,-19), (-6,1,-19), (-6,5,19), (-6,9,9), (-6,9,-9), (-6,-3,9), (-6,-3,-9), (-9,3,9), (-9,3,-9), (-9,6,9), (-9,6,-9), (0,2,10), (0,-2,-10), (2,0,-10), (2,-1,-10), (2,-2,10), (-2,0,10), (-2,2,-10)									
Quartz	(8,-2,-4)	11.465	73.47	0.5	0.6	3.55	2.06	44.37	44.42
Equiv. Refl.: (8,-6,4), (-2,8,4), (-2,-6,-4), (-6,8,-4), (-6,-2,4)									
LiNbO3	(2,6,-13)	11.59	75.73	0.4	1	3.041	3.18	38.01	38.14
Equiv. Refl.: (2,-8,13), (6,2,13), (6,-8,-13), (8,-2,13), (8,-6,-13), (-2,8,-13), (-2,-6,13), (-6,8,13), (-6,-2,-13), (-8,2,-13), (-8,6,13), (2,5,-6), (2,6,4), (2,-7,6), (2,-8,-4), (5,2,6), (5,-7,-6), (6,2,-4), (6,-1,-7), (6,-5,7), (6,-8,4), (7,-2,6), (7,-5,-6), (-1,6,7), (-1,-5,-7), (-2,7,-6), (-2,-5,6), (-5,6,-7), (-5,7,6), (-5,-1,7), (-5,-2,-6), (-7,2,-6), (-7,5,6), (-8,2,4), (-8,6,-4)									
LiNbO3	(1,8,-1)	11.889	83.79	0.3	1.4	1.302	1.88	16.28	16.38
Equiv. Refl.: (1,-9,1), (8,1,1), (8,-9,-1), (9,-1,1), (9,-8,-1), (-1,9,-1), (-1,-8,1), (-8,9,1), (-8,-1,-1), (-9,1,-1), (-9,8,1), (1,5,7), (1,-6,-7), (4,5,0), (4,-9,0), (5,1,-7), (5,4,0), (5,-6,7), (5,-9,0), (9,-4,0), (9,-5,0), (-4,9,0), (-4,-5,0), (-5,9,0), (-5,-4,0), (-6,1,7), (-6,5,-7), (-9,4,0), (-9,5,0)									
LiNbO3	(1,7,9)	11.243	70.07	0.2	0.6	4.336	2.82	54.19	54.27
Equiv. Refl.: (1,7,-9), (1,-8,9), (1,-8,-9), (3,5,13), (3,-8,-13), (5,3,-13), (5,-8,13), (7,1,9), (7,1,-9), (7,-8,9), (7,-8,-9), (8,-1,9), (8,-1,-9), (8,-3,-13), (8,-5,13), (8,-7,9), (8,-7,-9), (-1,8,9), (-1,8,-9), (-1,-7,9), (-1,-7,-9), (-3,8,13), (-3,-5,-13), (-5,8,-13), (-5,-3,13), (-7,8,9), (-7,8,-9), (-7,-1,9), (-7,-1,-9), (-8,1,9), (-8,1,-9), (-8,3,13), (-8,5,-13), (-8,7,9), (-8,7,-9)									
LiNbO3	(3,3,21)	11.849	82.21	0.1	0.9	1.637	1.44	20.46	20.51
Equiv. Refl.: (3,3,-21), (3,-6,21), (3,-6,-21), (6,-3,21), (6,-3,-21), (-3,6,21), (-3,6,-21), (-3,-3,21), (-3,-3,-21), (-6,3,21), (-6,3,-21), (0,0,24), (0,0,-24), (2,6,8), (2,-8,-8), (4,4,12), (4,4,-12), (4,5,2), (4,-8,12), (4,-8,-12), (4,-9,-2), (5,4,-2), (5,-9,2), (6,2,-8), (6,-8,8), (8,-2,-8), (8,-4,12), (8,-4,-12), (8,-6,8), (9,-4,-2), (9,-5,2), (-2,8,8), (-2,-6,-8), (-4,8,12), (-4,8,-12), (-4,9,2), (-4,-4,12), (-4,-4,-12), (-4,-5,-2), (-5,9,-2), (-5,-4,2), (-6,8,-8), (-6,-2,8), (-8,2,8), (-8,4,12), (-8,4,-12), (-8,6,-8), (-9,4,2), (-9,5,-2)									
LiNbO3	(4,4,15)	11.739	78.99	0	0.3	2.327	0.69	29.09	29.1
Equiv. Refl.: (4,4,-15), (4,-8,15), (4,-8,-15), (8,-4,15), (8,-4,-15), (-4,8,15), (-4,8,-15), (-4,-4,15), (-4,-4,-15), (-8,4,15), (-8,4,-15)									

Ei =	10.535	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(1,3,9)	10.453	82.85	14.386	15.1	1.322	20	16.52	25.94
Ge	(4,6,6)	10.279	77.35	13.725	12.9	2.364	30.4	29.55	42.4
Si	(0,4,8)	10.209	75.72	8.702	7.4	2.682	19.91	33.52	38.99
Si	(1,1,9)	10.399	80.79	8.269	7.7	1.709	13.08	21.36	25.05
	Equiv. Refl.: (3,5,7)								
Ge	(1,1,9)	9.983	71.37	6.872	6.9	3.551	24.35	44.39	50.63
	Equiv. Refl.: (3,5,7)								
LiNbO3	(0,4,20)	10.532	88.62	171.9	158.9	0.253	40.27	3.17	40.39
	Equiv. Refl.: (4,-4,20), (-4,0,20)								
LiNbO3	(0,-4,-20)	10.532	88.62	171.2	158.9	0.253	40.27	3.17	40.39
	Equiv. Refl.: (4,0,-20), (-4,4,-20)								
LiNbO3	(3,-7,-14)	10.523	87.25	72.2	67.2	0.505	33.94	6.32	34.52
	Equiv. Refl.: (4,3,-14), (7,-3,-14), (-3,-4,-14), (-4,7,-14), (-7,4,-14)								
LiNbO3	(3,4,14)	10.523	87.25	68.3	67.2	0.505	33.94	6.32	34.52
	Equiv. Refl.: (4,-7,14), (7,-4,14), (-3,7,14), (-4,-3,14), (-7,3,14)								
LiNbO3	(1,-3,22)	10.503	85.55	46.6	43.7	0.82	35.8	10.25	37.23
	Equiv. Refl.: (2,1,22), (3,-1,22), (-1,-2,22), (-2,3,22), (-3,2,22)								
LiNbO3	(1,2,-22)	10.503	85.55	45.6	43.7	0.82	35.8	10.25	37.23
	Equiv. Refl.: (2,-3,-22), (3,-2,-22), (-1,3,-22), (-2,-1,-22), (-3,1,-22)								
LiNbO3	(1,-8,0)	10.498	85.19	43.4	40.7	0.886	36.03	11.07	37.69
	Equiv. Refl.: (7,1,0), (8,-1,0), (-1,-7,0), (-7,8,0), (-8,7,0)								
LiNbO3	(1,7,0)	10.498	85.19	42.6	40.7	0.886	36.03	11.07	37.69
	Equiv. Refl.: (7,-8,0), (8,-7,0), (-1,8,0), (-7,-1,0), (-8,1,0)								
LiNbO3	(3,5,-8)	10.37	79.85	26.7	23.8	1.887	44.88	23.58	50.7
	Equiv. Refl.: (5,-8,-8), (8,-5,-8), (-3,8,-8), (-5,-3,-8), (-8,3,-8)								
LiNbO3	(3,-8,8)	10.37	79.85	25.3	23.8	1.887	44.88	23.58	50.7
	Equiv. Refl.: (5,3,8), (8,-3,8), (-3,-5,8), (-5,8,8), (-8,5,8)								
LiNbO3	(0,7,8)	10.37	79.85	23	21	1.887	39.62	23.58	46.11
	Equiv. Refl.: (7,-7,8), (-7,0,8)								
LiNbO3	(0,-7,-8)	10.37	79.85	21.9	21	1.887	39.62	23.58	46.11
	Equiv. Refl.: (7,0,-8), (-7,7,-8)								
LiNbO3	(1,-4,20)	10.253	76.71	18.5	17	2.488	42.4	31.1	52.59
	Equiv. Refl.: (3,1,20), (4,-1,20), (-1,-3,20), (-3,4,20), (-4,3,20)								
LiNbO3	(0,2,22)	10.223	76.03	18.3	16.6	2.621	43.59	32.76	54.53
	Equiv. Refl.: (2,-2,22), (-2,0,22)								
LiNbO3	(1,3,-20)	10.253	76.71	18.2	17	2.488	42.4	31.1	52.59
	Equiv. Refl.: (3,-4,-20), (4,-3,-20), (-1,4,-20), (-3,-1,-20), (-4,1,-20)								
LiNbO3	(2,4,16)	10.263	76.95	18	16.5	2.442	40.38	30.52	50.61
	Equiv. Refl.: (4,-6,16), (6,-4,16), (-2,6,16), (-4,-2,16), (-6,2,16)								
LiNbO3	(0,-2,-22)	10.223	76.03	17.6	16.6	2.621	43.59	32.76	54.53
	Equiv. Refl.: (2,0,-22), (2,6,-4), (6,-8,-4), (8,-6,-4), (-2,2,-22), (-2,8,-4), (-6,-2,-4), (-8,2,-4)								
LiNbO3	(2,-8,4)	10.185	75.19	17.5	16.1	2.784	44.95	34.81	56.85
	Equiv. Refl.: (6,2,4), (8,-2,4), (-2,-6,4), (-6,8,4), (-8,6,4)								
LiNbO3	(2,-6,-16)	10.263	76.95	17.3	16.5	2.442	40.38	30.52	50.61
	Equiv. Refl.: (4,2,-16), (6,-2,-16), (-2,-4,-16), (-4,6,-16), (-6,4,-16)								
LiNbO3	(1,-7,-10)	10.156	74.58	17.1	15.4	2.907	44.65	36.33	57.57
	Equiv. Refl.: (6,1,-10), (7,-1,-10), (-1,-6,-10), (-6,7,-10), (-7,6,-10)								

Ei =	10.535	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,-5,-18)	10.266	77.03	16.7	15.5	2.427	37.72	30.34	48.41
	Equiv. Refl.: (4,1,-18), (5,-1,-18), (-1,-4,-18), (-4,5,-18), (-5,4,-18)								
LiNbO3	(1,4,-18)	10.266	77.03	16.2	15.2	2.427	36.86	30.34	47.74
	Equiv. Refl.: (1,6,10), (4,-5,-18), (5,-4,-18), (6,-7,10), (7,-6,10), (-1,5,-18), (-1,7,10), (-4,-1,-18), (-5,1,-18), (-6,-1,10), (-7,1,10)								
LiNbO3	(1,4,18)	10.266	77.03	16.1	15.5	2.427	37.72	30.34	48.41
	Equiv. Refl.: (4,-5,18), (5,-4,18), (-1,5,18), (-4,-1,18), (-5,1,18)								
LiNbO3	(1,-5,18)	10.266	77.03	15.7	15.2	2.427	36.86	30.34	47.74
	Equiv. Refl.: (4,1,18), (5,-1,18), (-1,-4,18), (-4,5,18), (-5,4,18)								
Sapph	(4,4,3)	10.521	87.03	15.5	15.4	0.547	8.41	6.84	10.84
	Equiv. Refl.: (4,4,-3), (4,-8,3), (4,-8,-3), (8,-4,3), (8,-4,-3), (-4,8,3), (-4,8,-3), (-4,-4,3), (-4,-4,-3), (-8,4,3), (-8,4,-3)								
LiNbO3	(2,-7,12)	10.208	75.68	15.4	14.5	2.689	38.9	33.61	51.41
	Equiv. Refl.: (5,2,12), (7,-2,12), (-2,-5,12), (-5,7,12), (-7,5,12), (0,0,9), (0,0,-9)								
LiNbO3	(2,5,-12)	10.208	75.68	15.3	14.5	2.689	38.9	33.61	51.41
	Equiv. Refl.: (5,-7,-12), (7,-5,-12), (-2,7,-12), (-5,-2,-12), (-7,2,-12)								
Sapph	(3,4,-10)	10.321	78.43	15.2	12.7	2.157	27.36	26.96	38.41
	Equiv. Refl.: (3,-7,10), (4,3,10), (4,-7,-10), (7,-3,10), (7,-4,-10), (-3,7,-10), (-3,-4,10), (-4,7,10), (-4,-3,-10), (-7,3,-10), (-7,4,10)								
LiNbO3	(2,5,12)	10.208	75.68	14.6	13.9	2.689	37.28	33.61	50.19
	Equiv. Refl.: (2,-7,-12), (5,2,-12), (5,-7,12), (7,-2,-12), (7,-5,12), (-2,7,12), (-2,-5,-12), (-5,7,-12), (-5,-2,12), (-7,2,12), (-7,5,-12)								
LiNbO3	(4,4,-6)	10	71.67	14.1	12.8	3.491	44.76	43.64	62.51
	Equiv. Refl.: (4,-8,-6), (8,-4,-6), (-4,8,-6), (-4,-4,-6), (-8,4,-6)								
LiNbO3	(1,-6,-14)	9.956	70.92	13.7	12.6	3.643	45.99	45.54	64.73
	Equiv. Refl.: (5,1,-14), (6,-1,-14), (-1,-5,-14), (-5,6,-14), (-6,5,-14)								
LiNbO3	(1,5,14)	9.956	70.92	13.6	12.6	3.643	45.99	45.54	64.73
	Equiv. Refl.: (4,4,6), (4,-8,6), (5,-6,14), (6,-5,14), (8,-4,6), (-1,6,14), (-4,8,6), (-4,-4,6), (-5,-1,14), (-6,1,14), (-8,4,6)								
LiNbO3	(0,-6,-12)	9.92	70.32	12.9	11.8	3.768	44.62	47.1	64.88
	Equiv. Refl.: (6,0,-12), (-6,6,-12)								
LiNbO3	(0,6,12)	9.92	70.32	12.6	11.8	3.768	44.62	47.1	64.88
	Equiv. Refl.: (6,-6,12), (-6,0,12), (0,6,5), (0,-6,-5), (6,0,-5), (6,-6,5), (-6,0,5), (-6,6,-5)								
LiNbO3	(0,-5,-16)	9.976	71.26	12.3	10.9	3.575	39.05	44.68	59.34
	Equiv. Refl.: (5,0,-16), (-5,5,-16)								
LiNbO3	(0,1,-22)	9.936	70.58	11.9	11	3.714	40.8	46.42	61.8
	Equiv. Refl.: (0,-1,22), (1,0,22), (1,-1,-22), (-1,0,-22), (-1,1,22)								
LiNbO3	(0,6,-12)	9.92	70.32	11.5	10.5	3.768	39.68	47.1	61.58
	Equiv. Refl.: (6,-6,-12), (-6,0,-12)								
Sapph	(2,4,-14)	10.393	80.59	11.4	9.7	1.745	16.9	21.81	27.6
	Equiv. Refl.: (2,-6,14), (4,2,14), (4,-6,-14), (6,-2,14), (6,-4,-14), (-2,6,-14), (-2,-4,14), (-4,6,14), (-4,-2,-14), (-6,2,-14), (-6,4,14)								
LiNbO3	(2,6,2)	10.067	72.85	11.2	10.6	3.25	34.52	40.63	53.31
	Equiv. Refl.: (6,-8,2), (8,-6,2), (-2,8,2), (-6,-2,2), (-8,2,2)								
LiNbO3	(0,-6,12)	9.92	70.32	11.1	10.5	3.768	39.68	47.1	61.58
	Equiv. Refl.: (2,-8,-2), (6,0,12), (6,2,-2), (8,-2,-2), (-2,-6,-2), (-6,6,12), (-6,8,-2), (-8,6,-2)								
LiNbO3	(0,5,16)	9.976	71.26	10.9	10.9	3.575	39.05	44.68	59.34
	Equiv. Refl.: (5,-5,16), (-5,0,16), (4,4,0), (4,-8,0), (8,-4,0), (-4,8,0), (-4,-4,0), (-8,4,0)								
Quartz	(0,3,-8)	10.164	74.75	9.9	7.8	2.872	22.36	35.9	42.3
	Equiv. Refl.: (0,-3,8), (3,0,8), (3,-3,-8), (-3,0,-8), (-3,3,8)								

Ei =	10.535	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(1,2,20)	10.342	79.03	9.5	8.1	2.042	16.54	25.53	30.42
	Equiv. Refl.: (1,-3,-20), (2,1,-20), (2,-3,20), (3,-1,-20), (3,-2,20), (-1,3,20), (-1,-2,-20), (-2,3,-20), (-2,-1,20), (-3,1,20), (-3,2,-20)								
Quartz	(3,5,-2)	10.454	82.88	9.2	8.2	1.316	10.75	16.45	19.65
	Equiv. Refl.: (3,-8,2), (5,3,2), (5,-8,-2), (8,-3,2), (8,-5,-2), (-3,8,-2), (-3,-5,2), (-5,8,2), (-5,-3,-2), (-8,3,-2), (-8,5,2)								
Sapph	(0,5,-14)	10.061	72.76	9.1	7.4	3.27	24.24	40.88	47.52
	Equiv. Refl.: (0,-5,14), (5,0,14), (5,-5,-14), (-5,0,-14), (-5,5,14)								
Quartz	(0,7,1)	10.263	76.96	8	6.6	2.441	15.99	30.51	34.44
	Equiv. Refl.: (0,-7,-1), (7,0,-1), (7,-7,1), (-7,0,1), (-7,7,-1)								
Quartz	(2,6,0)	10.506	85.78	7.9	7.2	0.777	5.63	9.71	11.22
	Equiv. Refl.: (2,-8,0), (6,2,0), (6,-8,0), (-8,2,0), (-8,6,0)								
Sapph	(1,1,21)	10.356	79.43	7.6	6.9	1.966	13.48	24.57	28.02
	Equiv. Refl.: (1,1,-21), (1,-2,21), (1,-2,-21), (2,-1,21), (2,-1,-21), (-1,2,21), (-1,2,-21), (-1,-1,21), (-1,-1,-21), (-2,1,21), (-2,1,-21)								
Quartz	(4,4,2)	10.352	79.3	7.4	6.3	1.991	12.59	24.89	27.9
	Equiv. Refl.: (4,4,-2), (4,-8,2), (4,-8,-2), (-8,4,2), (-8,4,-2)								
Quartz	(8,-4,2)	10.352	79.3	7.3	6.3	1.991	12.59	24.89	27.9
	Equiv. Refl.: (8,-4,-2), (-4,8,2), (-4,8,-2), (-4,-4,2), (-4,-4,-2)								
Quartz	(2,4,-6)	10.335	78.8	7.2	6	2.085	12.52	26.07	28.92
	Equiv. Refl.: (2,-6,6), (4,2,6), (4,-6,-6), (-6,2,-6), (-6,4,6)								
Quartz	(6,-2,6)	10.335	78.8	6.8	6	2.085	12.53	26.07	28.92
	Equiv. Refl.: (6,-4,-6), (8,-2,0), (8,-6,0), (-2,6,-6), (-2,8,0), (-2,-4,6), (-2,-6,0), (-4,6,6), (-4,-2,-6), (-6,8,0), (-6,-2,0)								
Sapph	(2,3,-16)	10.066	72.84	6.7	5.7	3.254	18.62	40.67	44.73
	Equiv. Refl.: (2,-5,16), (3,2,16), (3,-5,-16), (5,-2,16), (5,-3,-16), (-2,5,-16), (-2,-3,16), (-3,5,16), (-3,-2,-16), (-5,2,-16), (-5,3,16)								
Quartz	(5,-1,-7)	10.443	82.4	6.4	5.7	1.405	8	17.57	19.3
	Equiv. Refl.: (5,-4,7), (-4,5,-7), (-4,-1,7)								
Quartz	(3,5,2)	10.454	82.88	6.3	5.8	1.316	7.59	16.45	18.12
	Equiv. Refl.: (3,-8,-2), (5,3,-2), (5,-8,2), (8,-3,-2), (8,-5,2), (-1,5,7), (-1,-4,-7), (-3,8,2), (-3,-5,-2), (-5,8,-2), (-5,-3,2), (-8,3,2), (-8,5,-2)								
Quartz	(0,7,0)	10.199	75.49	6.2	5.3	2.727	14.43	34.09	37.01
	Equiv. Refl.: (0,-7,0), (1,4,7), (1,-5,-7), (4,1,-7), (4,-5,7), (7,0,0), (7,-7,0), (-5,1,7), (-5,4,-7), (-7,0,0), (-7,7,0)								
Quartz	(0,1,9)	10.425	81.73	6	5.4	1.531	8.26	19.14	20.85
	Equiv. Refl.: (0,-1,-9), (1,0,-9), (1,-1,9), (-1,0,9), (-1,1,-9)								
Sapph	(3,4,8)	9.916	70.26	5.9	5.1	3.781	19.17	47.26	51
	Equiv. Refl.: (3,-7,-8), (4,3,-8), (4,-7,8), (7,-3,-8), (7,-4,8), (-3,7,8), (-3,-4,-8), (-4,7,-8), (-4,-3,8), (-7,3,8), (-7,4,-8)								
Quartz	(6,-2,-6)	10.335	78.8	5.8	4.7	2.085	9.78	26.07	27.84
	Equiv. Refl.: (6,-4,6), (-2,6,6), (-2,-4,-6)								
Sapph	(0,2,-20)	10.009	71.81	5.7	4.9	3.461	16.91	43.26	46.45
	Equiv. Refl.: (0,-2,20), (2,0,20), (2,-2,-20), (-2,0,-20), (-2,2,20), (-4,6,-6), (-4,-2,6)								
Sapph	(1,5,-13)	10.424	81.68	5.6	5.4	1.541	8.31	19.26	20.98
	Equiv. Refl.: (1,-6,13), (5,1,13), (5,-6,-13), (6,-1,13), (6,-5,-13), (-1,6,-13), (-1,-5,13), (-5,6,13), (-5,-1,-13), (-6,1,-13), (-6,5,13)								
Quartz	(0,7,-2)	10.454	82.88	5.5	5	1.316	6.64	16.45	17.74
	Equiv. Refl.: (0,-7,2), (7,0,2), (7,-7,-2), (-7,0,-2), (-7,7,2)								
Quartz	(2,4,6)	10.335	78.8	5.1	4.7	2.085	9.78	26.07	27.84
	Equiv. Refl.: (2,-6,-6), (4,2,-6), (4,-6,6), (8,-4,0), (-4,8,0), (-4,-4,0), (-6,2,6), (-6,4,-6)								

Ei =	10.535	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(0,4,-7)	9.921	70.35	5	4	3.762	15.15	47.03	49.41
	Equiv. Refl.: (0,-4,7), (3,3,6), (3,3,-6), (3,-6,6), (3,-6,-6), (4,0,7), (4,-4,-7), (6,-3,6), (6,-3,-6) (-3,6,6), (-3,6,-6), (-3,-3,6), (-3,-3,-6), (-4,0,-7), (-4,4,7), (-6,3,6), (-6,3,-6)								
Quartz	(1,2,-8)	9.953	70.87	4.9	4	3.655	14.73	45.69	48
	Equiv. Refl.: (1,-3,8), (2,1,8), (2,-3,-8), (3,-1,8), (3,-2,-8), (-1,3,-8), (-1,-2,8), (-2,3,8), (-2,-1,-8) (-3,1,-8), (-3,2,8)								
Quartz	(4,4,0)	10.094	73.37	4.7	4.1	3.147	12.76	39.34	41.35
	Equiv. Refl.: (4,-8,0), (5,-1,7), (5,-4,-7), (-1,5,-7), (-1,-4,7), (-4,5,7), (-4,-1,-7), (-8,4,0)								
Quartz	(4,-2,8)	10.473	83.76	4.6	4.5	1.152	5.15	14.4	15.29
	Equiv. Refl.: (4,-2,-8), (-2,4,8), (-2,4,-8), (-2,-2,8), (-2,-2,-8)								
Sapph	(2,5,9)	10.331	78.69	4.4	4.2	2.106	8.79	26.33	27.76
	Equiv. Refl.: (2,5,-9), (2,-7,9), (2,-7,-9), (5,2,9), (5,2,-9), (5,-7,9), (5,-7,-9), (7,-2,9), (7,-2,-9) (7,-5,9), (7,-5,-9), (-2,7,9), (-2,7,-9), (-2,-5,9), (-2,-5,-9), (-5,7,9), (-5,7,-9), (-5,-2,9) (-5,-2,-9), (-7,2,9), (-7,2,-9), (-7,5,9), (-7,5,-9), (1,4,-7), (1,-5,7), (4,1,7), (4,-5,-7) (8,-3,0), (8,-5,0), (-3,8,0), (-3,-5,0), (-5,1,-7), (-5,4,7), (-5,8,0), (-5,-3,0)								
Sapph	(1,6,4)	10.048	72.51	4.3	3.8	3.319	12.53	41.49	43.34
	Equiv. Refl.: (1,-7,-4), (6,1,-4), (6,-7,4), (7,-1,-4), (7,-6,4), (-1,7,4), (-1,-6,-4), (-6,7,-4), (-6,-1,4) (-7,1,4), (-7,6,-4), (7,-3,4), (7,-4,-4), (-3,7,-4), (-3,-4,4), (-4,7,4), (-4,-3,-4)								
Quartz	(1,5,-5)	9.935	70.56	4.2	3.5	3.717	12.87	46.47	48.21
	Equiv. Refl.: (1,-6,5), (2,2,-8), (2,-4,8), (3,4,-4), (3,5,0), (3,-7,4), (3,-8,0), (4,3,4), (4,-7,-4) (5,1,5), (5,3,0), (5,-6,-5), (5,-8,0), (-4,2,8), (-4,2,-8), (-6,1,-5), (-6,5,5), (-7,3,-4) (-7,4,4), (-8,3,0), (-8,5,0)								
Quartz	(2,2,8)	10.473	83.76	4.1	4.5	1.152	5.14	14.4	15.29
	Equiv. Refl.: (2,-4,-8), (6,-1,5), (6,-5,-5), (-1,6,-5), (-1,-5,5), (-5,6,5), (-5,-1,-5)								
LiNbO3	(1,6,-11)	10.36	79.55	4	6	1.943	11.69	24.29	26.95
	Equiv. Refl.: (1,-7,11), (6,1,11), (6,-7,-11), (7,-1,11), (7,-6,-11), (-1,7,-11), (-1,-6,11), (-6,7,11), (-6,-1,-11) (-7,1,-11), (-7,6,11), (1,4,15), (1,4,-15), (1,-5,15), (1,-5,-15), (4,1,15), (4,1,-15), (4,-5,15) (4,-5,-15), (5,-1,15), (5,-1,-15), (5,-4,15), (5,-4,-15), (-1,5,15), (-1,5,-15), (-1,-4,15), (-1,-4,-15) (-4,5,15), (-4,5,-15), (-4,-1,15), (-4,-1,-15), (-5,1,15), (-5,1,-15), (-5,4,15), (-5,4,-15)								
Quartz	(1,2,8)	9.953	70.87	3.5	3.2	3.655	11.68	45.69	47.16
	Equiv. Refl.: (1,-3,-8), (2,1,-8), (2,-3,8), (-3,1,8), (-3,2,-8)								
Quartz	(3,-1,-8)	9.953	70.87	3.4	3.2	3.655	11.68	45.69	47.16
	Equiv. Refl.: (3,-2,8), (-1,3,8), (-1,-2,-8), (-2,3,-8), (-2,-1,8)								
Sapph	(1,6,-2)	9.911	70.18	3.3	2.9	3.796	11.08	47.45	48.73
	Equiv. Refl.: (1,-7,2), (6,1,2), (6,-7,-2), (7,-1,2), (7,-6,-2), (-1,7,-2), (-1,-6,2), (-6,7,2), (-6,-1,-2) (-7,1,-2), (-7,6,2)								
Quartz	(1,6,-3)	10.155	74.56	3.1	2.5	2.909	7.32	36.37	37.1
	Equiv. Refl.: (1,-7,3), (6,1,3), (6,-7,-3), (-7,1,-3), (-7,6,3)								
Quartz	(7,-2,4)	10.19	75.3	2.9	2.6	2.764	7.2	34.55	35.29
	Equiv. Refl.: (7,-5,-4), (-2,7,-4), (-2,-5,4), (-5,7,4), (-5,-2,-4)								
Sapph	(2,3,17)	10.433	82	2.7	3.3	1.48	4.9	18.5	19.14
	Equiv. Refl.: (2,-5,-17), (3,2,-17), (3,-5,17), (5,-2,-17), (5,-3,17), (-2,5,17), (-2,-3,-17), (-3,5,-17), (-3,-2,17) (-5,2,17), (-5,3,-17), (0,6,-5), (0,-6,5), (6,0,5), (6,-6,-5), (-6,0,-5), (-6,6,5)								
Quartz	(2,5,-4)	10.19	75.3	2.6	2.6	2.764	7.2	34.55	35.29
	Equiv. Refl.: (2,-7,4), (5,2,4), (5,-7,-4), (7,-1,-3), (7,-6,3), (-1,7,3), (-1,-6,-3), (-6,7,-3), (-6,-1,3) (-7,2,-4), (-7,5,4)								
Quartz	(7,-1,3)	10.155	74.56	2.4	2.5	2.909	7.32	36.37	37.1
	Equiv. Refl.: (7,-6,-3), (-1,7,-3), (-1,-6,3), (-6,7,3), (-6,-1,-3)								

Ei =	10.535	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(1,6,3)	10.155	74.56	1.9	2.3	2.909	6.83	36.37	37
	Equiv. Refl.: (1,-7,-3), (2,5,4), (2,-7,-4), (5,2,-4), (5,-7,4), (6,1,-3), (6,-7,3), (-7,1,3), (-7,2,4), (-7,5,-4), (-7,6,-3)								
Sapph	(2,4,13)	10.093	73.35	1.8	2.2	3.151	6.97	39.39	40
	Equiv. Refl.: (2,-6,-13), (4,2,-13), (4,-6,13), (6,-2,-13), (6,-4,13), (-2,6,13), (-2,-4,-13), (-4,6,-13), (-4,-2,13), (-6,2,13), (-6,4,-13), (7,-2,-4), (7,-5,4), (-2,7,4), (-2,-5,-4), (-5,7,-4), (-5,-2,4)								
Quartz	(3,4,4)	9.98	71.31	1.7	1.9	3.563	6.67	44.54	45.03
	Equiv. Refl.: (3,-7,-4), (4,3,-4), (4,-7,4), (-7,3,4), (-7,4,-4)								
Sapph	(1,6,7)	10.416	81.36	1.6	2.3	1.6	3.66	20	20.33
	Equiv. Refl.: (1,-7,-7), (6,1,-7), (6,-7,7), (7,-1,-7), (7,-6,7), (-1,7,7), (-1,-6,-7), (-6,7,-7), (-6,-1,7), (-7,1,7), (-7,6,-7), (0,1,-9), (0,-1,9), (1,0,9), (1,-1,-9), (-1,0,-9), (-1,1,9)								
LiNbO3	(2,6,-7)	10.504	85.62	1.5	4.8	0.807	3.86	10.09	10.81
	Equiv. Refl.: (2,-8,7), (3,4,-13), (3,-7,13), (4,3,13), (4,-7,-13), (6,2,7), (6,-8,-7), (7,-3,13), (7,-4,-13), (8,-2,7), (8,-6,-7), (-2,8,-7), (-2,-6,7), (-3,7,-13), (-3,-4,13), (-4,7,13), (-4,-3,-13), (-6,8,7), (-6,-2,-7), (-7,3,-13), (-7,4,13), (-8,2,-7), (-8,6,7), (0,7,-1), (0,-7,1), (5,-2,-7), (5,-3,7), (7,0,1), (7,-3,-4), (7,-4,4), (7,-7,-1), (-2,5,7), (-2,-3,-7), (-3,5,-7), (-3,7,4), (-3,-2,7), (-3,-4,-4), (-4,7,-4), (-4,-3,4), (-7,0,-1), (-7,7,1)								
Quartz	(2,3,7)	10.237	76.34	1.4	1.8	2.56	4.57	31.99	32.32
	Equiv. Refl.: (2,-5,-7), (3,2,-7), (3,-5,7), (-5,2,7), (-5,3,-7)								
Quartz	(8,-4,1)	10.159	74.65	1.3	1.5	2.892	4.43	36.15	36.42
	Equiv. Refl.: (8,-4,-1), (-4,8,1), (-4,8,-1), (-4,-4,1), (-4,-4,-1)								
Quartz	(0,7,2)	10.454	82.88	1.2	1.9	1.316	2.44	16.45	16.63
	Equiv. Refl.: (0,-7,-2), (7,0,-2), (7,-7,2), (-7,0,2), (-7,7,-2)								
Quartz	(4,4,1)	10.159	74.65	1.1	1.5	2.892	4.43	36.15	36.42
	Equiv. Refl.: (4,4,-1), (4,-8,1), (4,-8,-1), (-8,4,1), (-8,4,-1)								
Sapph	(1,6,-5)	10.15	74.46	1	1.4	2.93	4.02	36.63	36.85
	Equiv. Refl.: (1,-7,5), (6,1,5), (6,-7,-5), (7,-1,5), (7,-6,-5), (-1,7,-5), (-1,-6,5), (-6,7,5), (-6,-1,-5), (-7,1,-5), (-7,6,5)								
Sapph	(1,2,-19)	9.904	70.06	0.9	1.3	3.821	4.87	47.77	48.01
	Equiv. Refl.: (1,-3,19), (2,1,19), (2,-3,-19), (3,-1,19), (3,-2,-19), (-1,3,-19), (-1,-2,19), (-2,3,19), (-2,-1,-19), (-3,1,-19), (-3,2,19), (2,3,-7), (2,-5,7), (3,2,7), (3,-5,-7), (-5,2,-7), (-5,3,7)								
Quartz	(0,5,6)	10.022	72.04	0.8	1.1	3.415	3.78	42.69	42.85
	Equiv. Refl.: (0,-5,-6), (5,0,-6), (5,-2,7), (5,-3,-7), (5,-5,6), (-2,5,-7), (-2,-3,7), (-3,5,7), (-3,-2,-7), (-5,0,6), (-5,5,-6)								
Quartz	(3,5,1)	10.263	76.96	0.7	1	2.441	2.34	30.51	30.6
	Equiv. Refl.: (3,-8,-1), (5,3,-1), (5,-8,1)								
Quartz	(8,-3,-1)	10.263	76.96	0.6	1	2.441	2.34	30.51	30.6
	Equiv. Refl.: (8,-5,1), (-3,8,1), (-3,-5,-1), (-5,8,-1), (-5,-3,1), (-8,3,1), (-8,5,-1)								
LiNbO3	(2,3,-19)	10.437	82.16	0.5	2.1	1.45	3.1	18.12	18.38
	Equiv. Refl.: (2,6,5), (2,-5,19), (2,-8,-5), (3,2,19), (3,-5,-19), (5,-2,19), (5,-3,-19), (6,2,-5), (6,-8,5), (8,-2,-5), (8,-6,5), (-2,5,-19), (-2,8,5), (-2,-3,19), (-2,-6,-5), (-3,5,19), (-3,-2,-19), (-5,2,-19), (-5,3,19), (-6,8,-5), (-6,-2,5), (-8,2,5), (-8,6,-5), (2,2,18), (2,2,-18), (2,-4,18), (2,-4,-18), (4,-2,18), (4,-2,-18), (-2,4,18), (-2,4,-18), (-2,-2,18), (-2,-2,-18), (-4,2,18), (-4,2,-18)								
LiNbO3	(2,6,-1)	10.037	72.31	0.4	1.3	3.36	4.49	42	42.24
	Equiv. Refl.: (2,-8,1), (6,2,1), (6,-8,-1), (8,-2,1), (8,-6,-1), (-2,8,-1), (-2,-6,1), (-6,8,1), (-6,-2,-1), (-8,2,-1), (-8,6,1)								
LiNbO3	(3,5,7)	10.224	76.05	0.3	1.2	2.617	3.06	32.71	32.85
	Equiv. Refl.: (3,-8,-7), (5,3,-7), (5,-8,7), (8,-3,-7), (8,-5,7), (-3,8,7), (-3,-5,-7), (-5,8,-7), (-5,-3,7), (-8,3,7), (-8,5,-7), (3,5,-1), (3,-8,1), (5,3,1), (5,-8,-1), (8,-3,1), (8,-5,-1), (-3,8,-1), (-3,-5,1), (-5,8,1), (-5,-3,-1), (-8,3,-1), (-8,5,1)								
LiNbO3	(3,5,-5)	9.987	71.44	0.2	0.9	3.538	3.31	44.22	44.35
	Equiv. Refl.: (3,-8,5), (5,3,5), (5,-8,-5), (8,-3,5), (8,-5,-5), (-3,8,-5), (-3,-5,5), (-5,8,5), (-5,-3,-5)								

	(-8,3,-5), (-8,5,5), (0,5,-6), (0,-5,6), (5,0,6), (5,-5,-6), (-5,0,-6), (-5,5,6)								
LiNbO3	(4,4,9)	10.44	82.32	0	0.6	1.421	0.89	17.76	17.78
	Equiv. Refl.: (4,4,-9), (4,-8,9), (4,-8,-9), (8,-4,9), (8,-4,-9), (-4,8,9), (-4,8,-9), (-4,-4,9), (-4,-4,-9)								
	(-8,4,9), (-8,4,-9)								

Ei = Cryst	12.968 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Si	(0,8,8)	12.914	84.77	8.616	7.6	1.187	8.98	14.84	17.35
Ge	(0,6,10)	12.779	80.2	3.901	8.4	2.239	18.82	27.99	33.73
	Equiv. Refl.: (6,6,8)								
Ge	(3,3,11)	12.919	85.02	3.889	11.2	1.13	12.7	14.12	18.99
	Equiv. Refl.: (3,7,9)								
Si	(2,4,10)	12.504	74.63	3.154	2.9	3.566	10.36	44.57	45.76
Si	(1,1,11)	12.659	77.47	2.804	2.4	2.882	6.94	36.02	36.68
	Equiv. Refl.: (5,7,7)								
Ge	(0,8,8)	12.397	72.94	2.588	5.4	3.98	21.43	49.75	54.17
Si	(3,5,9)	12.241	70.72	1.621	1.8	4.537	8.04	56.71	57.27
Ge	(1,3,11)	12.542	75.27	1.536	4.2	3.409	14.42	42.62	44.99
	Equiv. Refl.: (1,7,9), (5,5,9)								
LiNbO3	(4,-10,-10)	12.921	85.09	25.271	22.7	1.113	25.31	13.91	28.89
	Equiv. Refl.: (6,4,-10), (10,-4,-10), (-4,-6,-10), (-6,10,-10), (-10,6,-10)								
LiNbO3	(4,6,10)	12.921	85.09	24.59	22.7	1.113	25.31	13.91	28.89
	Equiv. Refl.: (6,-10,10), (10,-6,10), (-6,-4,10)								
LiNbO3	(-4,10,10)	12.921	85.09	24.589	22.7	1.113	25.31	13.91	28.89
	Equiv. Refl.: (-10,4,10)								
LiNbO3	(3,3,-24)	12.938	86.08	23.143	21.7	0.888	19.23	11.1	22.2
	Equiv. Refl.: (3,-6,-24), (6,-3,-24), (-3,6,-24), (-3,-3,-24), (-6,3,-24)								
LiNbO3	(3,-6,24)	12.938	86.08	22.244	21.7	0.888	19.23	11.1	22.2
	Equiv. Refl.: (6,-3,24)								
LiNbO3	(3,3,24)	12.938	86.08	22.243	21.7	0.888	19.23	11.1	22.2
	Equiv. Refl.: (-3,6,24), (-3,-3,24), (-6,3,24)								
LiNbO3	(3,7,8)	12.866	82.82	16.65	15.1	1.634	24.68	20.42	32.04
	Equiv. Refl.: (7,-10,8), (10,-7,8), (-3,10,8), (-7,-3,8), (-10,3,8)								
LiNbO3	(3,-10,-8)	12.866	82.82	16.293	15.1	1.634	24.68	20.42	32.04
	Equiv. Refl.: (7,3,-8), (10,-3,-8), (-3,-7,-8), (-7,10,-8), (-10,7,-8)								
LiNbO3	(0,4,26)	12.888	83.65	14.213	13.3	1.443	19.2	18.03	26.34
	Equiv. Refl.: (4,-4,26), (-4,0,26)								
LiNbO3	(0,-9,6)	12.799	80.73	14.037	12.7	2.116	26.85	26.45	37.69
	Equiv. Refl.: (9,0,6), (-9,9,6)								
LiNbO3	(0,9,-6)	12.799	80.73	13.954	12.7	2.116	26.85	26.45	37.69
	Equiv. Refl.: (9,-9,-6), (-9,0,-6)								
LiNbO3	(0,-4,-26)	12.888	83.65	13.628	13.3	1.443	19.2	18.03	26.34
	Equiv. Refl.: (4,0,-26), (-4,4,-26)								
Quartz	(2,-7,8)	12.923	85.2	13.285	11	1.089	11.93	13.61	18.1
Quartz	(2,5,-8)	12.923	85.2	13.284	11	1.089	11.93	13.61	18.1
Quartz	(-7,2,-8)	12.923	85.2	13.281	11	1.089	11.93	13.61	18.1
	Equiv. Refl.: (-7,5,8)								
Quartz	(5,2,8)	12.923	85.2	13.277	10.9	1.089	11.92	13.61	18.1
	Equiv. Refl.: (5,-7,-8)								
Quartz	(-2,7,-8)	12.923	85.2	13.273	11	1.089	11.93	13.61	18.1
Quartz	(-2,-5,8)	12.923	85.2	13.272	11	1.089	11.93	13.61	18.1
Quartz	(7,-2,8)	12.923	85.2	13.269	11	1.089	11.93	13.61	18.1
Quartz	(7,-5,-8)	12.923	85.2	13.268	11	1.089	11.93	13.61	18.1
Quartz	(-5,7,8)	12.923	85.2	13.265	10.9	1.089	11.92	13.61	18.1
	Equiv. Refl.: (-5,-2,-8)								

Ei = Cryst	12.968 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
LiNbO3	(1,-7,20)	12.772	80.03	12.932	11.6	2.28	26.5	28.5	38.92
Equiv. Refl.: (6,1,20), (7,-1,20), (-1,-6,20), (-6,7,20), (-7,6,20)									
LiNbO3	(0,-8,14)	12.765	79.84	12.917	11.2	2.324	26.06	29.05	39.03
Equiv. Refl.: (8,0,14), (-8,8,14)									
Quartz	(0,2,11)	12.949	86.92	12.893	10.9	0.697	7.63	8.71	11.58
Equiv. Refl.: (0,-2,-11)									
Quartz	(2,0,-11)	12.949	86.92	12.87	10.9	0.697	7.62	8.71	11.57
Equiv. Refl.: (-2,0,11)									
Quartz	(2,-2,11)	12.949	86.92	12.867	10.9	0.697	7.61	8.71	11.57
Equiv. Refl.: (-2,2,-11)									
LiNbO3	(1,6,-20)	12.772	80.03	12.633	11.6	2.28	26.5	28.5	38.92
Equiv. Refl.: (6,-7,-20), (7,-6,-20), (-1,7,-20), (-6,-1,-20), (-7,1,-20)									
LiNbO3	(2,-10,0)	12.744	79.34	12.584	11.3	2.442	27.6	30.52	41.15
Equiv. Refl.: (8,2,0), (10,-2,0), (-2,-8,0), (-8,10,0), (-10,8,0)									
LiNbO3	(2,8,0)	12.744	79.34	12.406	11.3	2.442	27.6	30.52	41.15
Equiv. Refl.: (8,-10,0), (10,-8,0), (-2,10,0), (-8,-2,0), (-10,2,0)									
LiNbO3	(0,-9,-6)	12.799	80.73	12.081	10.8	2.116	22.94	26.45	35.01
Equiv. Refl.: (9,0,-6), (-9,9,-6)									
LiNbO3	(0,8,-14)	12.765	79.84	11.673	11.2	2.324	26.06	29.05	39.03
Equiv. Refl.: (8,-8,-14), (-8,0,-14)									
LiNbO3	(0,-2,-28)	12.826	81.52	11.442	10.6	1.935	20.45	24.18	31.67
Equiv. Refl.: (2,0,-28), (-2,2,-28)									
LiNbO3	(2,-2,28)	12.826	81.52	11.372	10.6	1.935	20.45	24.18	31.67
LiNbO3	(0,2,28)	12.826	81.52	11.371	10.6	1.935	20.45	24.18	31.67
Equiv. Refl.: (-2,0,28)									
LiNbO3	(0,9,6)	12.799	80.73	11.253	10.8	2.116	22.94	26.45	35.01
Equiv. Refl.: (9,-9,6), (-9,0,6)									
Quartz	(3,7,0)	12.95	86.98	11.163	9.2	0.684	6.32	8.56	10.64
Equiv. Refl.: (3,-10,0), (7,3,0), (7,-10,0), (-10,3,0), (-10,7,0)									
Sapph	(0,8,10)	12.947	86.76	10.753	9.5	0.735	6.99	9.19	11.54
Equiv. Refl.: (0,-8,-10), (8,0,-10), (8,-8,10), (-8,0,10), (-8,8,-10)									
Quartz	(10,-3,0)	12.95	86.98	10.482	9.2	0.684	6.32	8.56	10.64
Equiv. Refl.: (10,-7,0), (-3,10,0), (-3,-7,0), (-7,10,0), (-7,-3,0)									
LiNbO3	(1,8,-10)	12.694	78.2	9.635	8.6	2.709	23.23	33.86	41.06
Equiv. Refl.: (8,-9,-10), (9,-8,-10), (-1,9,-10), (-8,-1,-10), (-9,1,-10)									
LiNbO3	(4,-9,-14)	12.535	75.16	9.503	8.2	3.437	28.18	42.96	51.38
Equiv. Refl.: (5,4,-14), (9,-4,-14), (-4,-5,-14), (-5,9,-14), (-9,5,-14)									
LiNbO3	(0,1,-28)	12.598	76.28	9.466	8.4	3.166	26.57	39.58	47.67
Equiv. Refl.: (1,-1,-28), (-1,0,-28)									
LiNbO3	(0,-1,28)	12.598	76.28	9.447	8.4	3.166	26.57	39.58	47.67
Equiv. Refl.: (1,0,28), (-1,1,28)									
LiNbO3	(4,-10,8)	12.639	77.06	9.289	8.2	2.979	24.29	37.23	44.46
Equiv. Refl.: (6,4,8), (10,-4,8), (-4,-6,8), (-6,10,8), (-10,6,8)									
LiNbO3	(1,-9,10)	12.694	78.2	9.266	8.6	2.709	23.23	33.86	41.06
Equiv. Refl.: (8,1,10), (9,-1,10), (-1,-8,10), (-8,9,10), (-9,8,10)									
LiNbO3	(5,-9,14)	12.535	75.16	9.143	8.2	3.437	28.18	42.96	51.38
Equiv. Refl.: (9,-5,14)									
LiNbO3	(4,5,14)	12.535	75.16	9.142	8.2	3.437	28.18	42.96	51.38
Equiv. Refl.: (-4,9,14), (-5,-4,14), (-9,4,14)									

Ei =	12.968	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,4,-24)	12.481	74.25	8.839	7.8	3.657	28.42	45.71	53.82
Equiv. Refl.: (4,-5,-24), (5,-4,-24), (-1,5,-24), (-4,-1,-24), (-5,1,-24)									
LiNbO3	(1,-5,24)	12.481	74.25	8.832	7.8	3.657	28.42	45.71	53.82
Equiv. Refl.: (4,1,24), (5,-1,24), (-1,-4,24), (-4,5,24), (-5,4,24)									
LiNbO3	(4,6,-8)	12.639	77.06	8.807	8.2	2.979	24.29	37.23	44.46
Equiv. Refl.: (6,-10,-8), (10,-6,-8), (-4,10,-8), (-6,-4,-8), (-10,4,-8)									
LiNbO3	(1,4,24)	12.481	74.25	8.787	7.7	3.657	28.23	45.71	53.72
Equiv. Refl.: (4,-5,24), (5,-4,24), (-1,5,24), (-4,-1,24), (-5,1,24)									
LiNbO3	(1,-5,-24)	12.481	74.25	8.739	7.7	3.657	28.23	45.71	53.72
Equiv. Refl.: (4,1,-24), (5,-1,-24), (-1,-4,-24), (-4,5,-24), (-5,4,-24)									
Quartz	(-6,4,-9)	12.884	83.49	8.342	6.7	1.48	9.88	18.5	20.98
Quartz	(-6,2,9)	12.884	83.49	8.34	6.7	1.48	9.88	18.5	20.98
Quartz	(2,4,9)	12.884	83.49	8.338	6.7	1.48	9.88	18.5	20.97
Equiv. Refl.: (2,-6,-9), (4,-6,9)									
Quartz	(4,2,-9)	12.884	83.49	8.337	6.7	1.48	9.88	18.5	20.97
Quartz	(6,-4,9)	12.884	83.49	8.069	6.7	1.48	9.88	18.5	20.98
Quartz	(6,-2,-9)	12.884	83.49	8.066	6.7	1.48	9.88	18.5	20.98
Quartz	(-2,6,9)	12.884	83.49	8.065	6.7	1.48	9.88	18.5	20.97
Equiv. Refl.: (-2,-4,-9), (-4,6,-9), (-4,-2,9)									
LiNbO3	(4,4,-18)	12.554	75.48	8.022	7.2	3.359	24.06	41.99	48.39
Equiv. Refl.: (4,-8,-18), (8,-4,-18), (-4,8,-18), (-4,-4,-18), (-8,4,-18)									
LiNbO3	(3,4,20)	12.31	71.66	7.935	6.9	4.298	29.87	53.72	61.47
Equiv. Refl.: (4,-7,20), (7,-4,20), (-3,7,20), (-4,-3,20), (-7,3,20)									
LiNbO3	(3,-7,-20)	12.31	71.66	7.924	6.9	4.298	29.87	53.72	61.47
Equiv. Refl.: (4,3,-20), (7,-3,-20), (-3,-4,-20), (-4,7,-20), (-7,4,-20)									
LiNbO3	(1,-6,22)	12.519	74.88	7.804	7	3.505	24.37	43.81	50.13
Equiv. Refl.: (5,1,22), (6,-1,22), (-1,-5,22), (-5,6,22), (-6,5,22)									
LiNbO3	(4,4,18)	12.554	75.48	7.802	7.2	3.359	24.06	41.99	48.39
Equiv. Refl.: (4,-8,18), (8,-4,18), (-4,8,18), (-4,-4,18), (-8,4,18)									
LiNbO3	(3,7,-4)	12.488	74.36	7.744	6.9	3.631	25.05	45.39	51.84
Equiv. Refl.: (7,-10,-4), (10,-7,-4), (-3,10,-4), (-7,-3,-4), (-10,3,-4)									
LiNbO3	(1,-4,26)	12.661	77.52	7.678	7.1	2.871	20.36	35.88	41.26
Equiv. Refl.: (3,1,26), (4,-1,26), (-1,-3,26), (-3,4,26), (-4,3,26)									
LiNbO3	(0,9,0)	12.514	74.8	7.628	6.7	3.523	23.77	44.04	50.04
Equiv. Refl.: (9,-9,0), (-9,0,0)									
LiNbO3	(3,-10,4)	12.488	74.36	7.585	6.9	3.631	25.05	45.39	51.84
Equiv. Refl.: (7,3,4), (10,-3,4), (-3,-7,4), (-7,10,4), (-10,7,4)									
LiNbO3	(1,5,-22)	12.519	74.88	7.583	7	3.505	24.37	43.81	50.13
Equiv. Refl.: (5,-6,-22), (6,-5,-22), (-1,6,-22), (-5,-1,-22), (-6,1,-22)									
LiNbO3	(1,3,-26)	12.661	77.52	7.528	7.1	2.871	20.36	35.88	41.26
Equiv. Refl.: (3,-4,-26), (4,-3,-26), (-1,4,-26), (-3,-1,-26), (-4,1,-26)									
Quartz	(-6,9,-5)	12.908	84.51	7.45	6.1	1.247	7.63	15.59	17.35
Quartz	(-3,9,5)	12.908	84.51	7.449	6.1	1.247	7.63	15.59	17.35
Equiv. Refl.: (-3,-6,-5)									
Quartz	(-6,-3,5)	12.908	84.51	7.448	6.1	1.247	7.63	15.59	17.35
Quartz	(9,-3,-5)	12.908	84.51	7.443	6.1	1.247	7.62	15.59	17.35
Equiv. Refl.: (9,-6,5)									
LiNbO3	(2,-9,-10)	12.229	70.56	7.243	6.2	4.577	28.47	57.22	63.91
Equiv. Refl.: (7,2,-10), (9,-2,-10), (-2,-7,-10), (-7,9,-10), (-9,7,-10)									
LiNbO3	(0,-9,0)	12.514	74.8	7.227	6.7	3.523	23.77	44.04	50.04
Equiv. Refl.: (9,0,0), (-9,9,0)									

Ei = Cryst	12.968 Refl (h,k,l)	keV EB [keV]	Θ B [$^\circ$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(2,4,-9) Equiv. Refl.: (2,-6,9)	12.884	83.49	6.265	5.2	1.48	7.76	18.5	20.06
Quartz	(4,2,9) Equiv. Refl.: (-6,2,-9)	12.884	83.49	6.258	5.2	1.48	7.75	18.5	20.06
Quartz	(4,-6,-9) Equiv. Refl.: (-6,4,9)	12.884	83.49	6.257	5.2	1.48	7.75	18.5	20.06
Quartz	(-2,6,-9) Equiv. Refl.: (-2,-4,9)	12.884	83.49	6.246	5.2	1.48	7.76	18.5	20.06
Quartz	(6,-2,9) Equiv. Refl.: (-4,-2,-9)	12.884	83.49	6.239	5.2	1.48	7.75	18.5	20.06
Quartz	(6,-4,-9) Equiv. Refl.: (-4,6,9)	12.884	83.49	6.238	5.2	1.48	7.75	18.5	20.06
LiNbO3	(3,-9,12) Equiv. Refl.: (6,3,12), (9,-3,12), (-3,-6,12), (-6,9,12), (-9,6,12)	12.272	71.14	6.068	5.5	4.429	24.29	55.36	60.46
LiNbO3	(3,6,-12) Equiv. Refl.: (6,-9,-12), (9,-6,-12), (-3,9,-12), (-6,-3,-12), (-9,3,-12)	12.272	71.14	5.966	5.5	4.429	24.29	55.36	60.46
LiNbO3	(5,5,6) Equiv. Refl.: (5,-10,6), (10,-5,6), (-5,10,6), (-5,-5,6), (-10,5,6)	12.337	72.06	5.865	5.3	4.199	22.32	52.49	57.04
LiNbO3	(4,6,4) Equiv. Refl.: (6,-10,4), (10,-6,4), (-4,10,4), (-6,-4,4), (-10,4,4)	12.253	70.89	5.849	5.3	4.493	23.98	56.17	61.07
LiNbO3	(4,-10,-4) Equiv. Refl.: (6,4,-4), (10,-4,-4), (-4,-6,-4), (-6,10,-4), (-10,6,-4)	12.253	70.89	5.824	5.3	4.493	23.98	56.17	61.07
LiNbO3	(2,-6,-22) Equiv. Refl.: (4,2,-22), (6,-2,-22), (-2,-4,-22), (-4,6,-22), (-6,4,-22)	12.285	71.32	5.739	5.3	4.384	23.11	54.8	59.47
Quartz	(10,-4,-2) Equiv. Refl.: (-4,10,2), (-4,-6,-2)	12.907	84.45	5.73	4.6	1.26	5.81	15.75	16.79
Quartz	(10,-6,2) Equiv. Refl.: (-6,10,-2), (-6,-4,2)	12.907	84.45	5.729	4.6	1.26	5.81	15.75	16.79
LiNbO3	(2,4,22) Equiv. Refl.: (4,-6,22), (6,-4,22), (-2,6,22), (-4,-2,22), (-6,2,22)	12.285	71.32	5.72	5.3	4.384	23.11	54.8	59.47
Sapph	(2,2,24) Equiv. Refl.: (2,2,-24), (2,-4,24), (2,-4,-24), (4,-2,24), (4,-2,-24), (-2,4,24), (-2,4,-24), (-2,-2,24), (-2,-2,-24), (-4,2,24), (-4,2,-24)	12.585	76.04	5.71	4.6	3.225	14.78	40.31	42.93
Quartz	(9,-4,-5)	12.743	79.31	5.65	4.6	2.448	11.16	30.6	32.57
Quartz	(9,-5,5)	12.743	79.31	5.649	4.6	2.448	11.16	30.6	32.57
Quartz	(-4,9,5) Equiv. Refl.: (-4,-5,-5), (-5,9,-5), (-5,-4,5)	12.743	79.31	5.648	4.6	2.448	11.16	30.6	32.57
Quartz	(-9,4,5)	12.743	79.31	5.63	4.6	2.448	11.16	30.6	32.57
Quartz	(-9,5,-5)	12.743	79.31	5.629	4.6	2.448	11.16	30.6	32.57
Quartz	(4,5,5) Equiv. Refl.: (4,-9,-5), (5,4,-5), (5,-9,5)	12.743	79.31	5.628	4.6	2.448	11.16	30.6	32.57
LiNbO3	(5,5,-6) Equiv. Refl.: (5,-10,-6), (10,-5,-6), (-5,10,-6), (-5,-5,-6), (-10,5,-6)	12.337	72.06	5.625	5.3	4.199	22.32	52.49	57.04
Quartz	(6,-10,-1) Equiv. Refl.: (-10,4,-1), (-10,6,1)	12.753	79.56	5.518	4.4	2.389	10.48	29.86	31.65
Quartz	(4,6,-1) Equiv. Refl.: (4,-10,1), (6,4,1)	12.753	79.56	5.517	4.4	2.389	10.48	29.86	31.65
Quartz	(-8,4,7) Equiv. Refl.: (-8,4,-7)	12.898	84.05	5.5	4.6	1.352	6.19	16.9	17.99
Quartz	(4,-8,-7)	12.898	84.05	5.499	4.6	1.352	6.19	16.9	17.99
Quartz	(4,4,7)	12.898	84.05	5.498	4.6	1.352	6.18	16.9	17.99

Ei = Cryst	12.968 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(4,-8,7)	12.898	84.05	5.497	4.6	1.352	6.18	16.9	17.99
Quartz	(4,4,-7)	12.898	84.05	5.496	4.6	1.352	6.18	16.9	17.99
Quartz	(8,-4,-7)	12.898	84.05	5.48	4.6	1.352	6.19	16.9	17.99
Quartz	(8,-4,7)	12.898	84.05	5.479	4.6	1.352	6.19	16.9	17.99
	Equiv. Refl.: (-4,8,7)								
Quartz	(-4,-4,-7)	12.898	84.05	5.478	4.6	1.352	6.18	16.9	17.99
Quartz	(-4,8,-7)	12.898	84.05	5.477	4.6	1.352	6.18	16.9	17.99
	Equiv. Refl.: (-4,-4,7)								
Quartz	(10,-4,1)	12.753	79.56	5.338	4.4	2.389	10.48	29.86	31.65
	Equiv. Refl.: (10,-6,-1), (-6,10,1), (-6,-4,-1)								
Quartz	(-4,10,-1)	12.753	79.56	5.337	4.4	2.389	10.48	29.86	31.65
	Equiv. Refl.: (-4,-6,1)								
Quartz	(4,-4,-10)	12.866	82.8	5.221	4.3	1.637	7	20.47	21.63
	Equiv. Refl.: (-4,4,10)								
Quartz	(4,0,10)	12.866	82.8	5.219	4.3	1.637	6.99	20.47	21.63
	Equiv. Refl.: (-4,0,-10)								
Quartz	(0,4,-10)	12.866	82.8	5.218	4.3	1.637	6.99	20.47	21.63
	Equiv. Refl.: (0,-4,10)								
Quartz	(4,6,2)	12.907	84.45	5.213	4.6	1.26	5.81	15.75	16.79
	Equiv. Refl.: (4,-10,-2), (-10,4,2), (-10,6,-2)								
Quartz	(6,4,-2)	12.907	84.45	5.212	4.6	1.26	5.81	15.75	16.79
	Equiv. Refl.: (6,-10,2)								
Sapph	(3,5,-14)	12.472	74.1	4.792	3.7	3.693	13.7	46.17	48.16
	Equiv. Refl.: (3,-8,14), (5,3,14), (5,-8,-14), (8,-3,14), (8,-5,-14), (-3,8,-14), (-3,-5,14), (-5,8,14), (-5,-3,-14), (-8,3,-14), (-8,5,14)								
Sapph	(1,8,-1)	12.863	82.69	4.668	4.1	1.663	6.74	20.79	21.86
	Equiv. Refl.: (1,-9,1), (8,1,1), (8,-9,-1), (9,-1,1), (9,-8,-1), (-1,9,-1), (-1,-8,1), (-8,9,1), (-8,-1,-1), (-9,1,-1), (-9,8,1)								
Quartz	(-2,-7,-4)	12.778	80.18	4.659	3.6	2.244	8.14	28.05	29.21
	Equiv. Refl.: (-7,9,-4), (-7,-2,4)								
Quartz	(-2,9,4)	12.778	80.18	4.658	3.6	2.244	8.14	28.05	29.21
Quartz	(9,-2,-4)	12.778	80.18	4.655	3.6	2.244	8.13	28.05	29.21
	Equiv. Refl.: (9,-7,4)								
Quartz	(7,-4,-8)	12.757	79.65	4.591	3.6	2.367	8.6	29.59	30.82
	Equiv. Refl.: (-4,7,8), (-4,-3,-8)								
Quartz	(7,-3,8)	12.757	79.65	4.59	3.6	2.367	8.6	29.59	30.82
	Equiv. Refl.: (-3,7,-8), (-3,-4,8)								
Quartz	(-5,8,-6)	12.304	71.58	4.54	3.4	4.319	14.48	53.98	55.89
	Equiv. Refl.: (-5,-3,6)								
Quartz	(8,-3,-6)	12.304	71.58	4.539	3.4	4.319	14.48	53.98	55.89
	Equiv. Refl.: (8,-5,6), (-3,8,6), (-3,-5,-6)								
Quartz	(4,-7,-8)	12.757	79.65	4.536	3.6	2.367	8.6	29.59	30.82
Quartz	(4,3,8)	12.757	79.65	4.535	3.6	2.367	8.6	29.59	30.82
	Equiv. Refl.: (-7,4,8)								
Quartz	(3,4,-8)	12.757	79.65	4.534	3.6	2.367	8.6	29.59	30.82
	Equiv. Refl.: (3,-7,8), (-7,3,-8)								
Quartz	(6,-9,-5)	12.908	84.51	4.519	3.9	1.247	4.9	15.59	16.34
Quartz	(6,3,5)	12.908	84.51	4.518	3.9	1.247	4.9	15.59	16.34
Quartz	(-9,6,5)	12.908	84.51	4.517	3.9	1.247	4.9	15.59	16.34
Quartz	(-9,3,-5)	12.908	84.51	4.516	3.9	1.247	4.9	15.59	16.34

Ei = Cryst	12.968 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(3,6,-5) Equiv. Refl.: (3,-9,5)	12.908	84.51	4.515	3.9	1.247	4.9	15.59	16.34
Quartz	(5,3,-6) Equiv. Refl.: (5,-8,6)	12.304	71.58	4.508	3.4	4.319	14.48	53.98	55.89
Quartz	(3,5,6) Equiv. Refl.: (3,-8,-6), (-8,3,6), (-8,5,-6)	12.304	71.58	4.507	3.4	4.319	14.47	53.98	55.89
Quartz	(2,7,4) Equiv. Refl.: (7,2,-4), (7,-9,4)	12.778	80.18	4.494	3.6	2.244	8.14	28.05	29.21
Quartz	(2,-9,-4)	12.778	80.18	4.493	3.6	2.244	8.14	28.05	29.21
Quartz	(-9,2,4) Equiv. Refl.: (-9,7,-4)	12.778	80.18	4.491	3.6	2.244	8.13	28.05	29.21
Quartz	(-6,9,5)	12.908	84.51	4.482	3.9	1.247	4.9	15.59	16.34
Quartz	(-6,-3,-5)	12.908	84.51	4.481	3.9	1.247	4.9	15.59	16.34
Quartz	(9,-6,-5)	12.908	84.51	4.48	3.9	1.247	4.9	15.59	16.34
Quartz	(9,-3,5) Equiv. Refl.: (-3,-6,5)	12.908	84.51	4.479	3.9	1.247	4.9	15.59	16.34
Quartz	(-3,9,-5)	12.908	84.51	4.478	3.9	1.247	4.9	15.59	16.34
Quartz	(0,8,-4) Equiv. Refl.: (0,-8,4)	12.526	75	4.398	3.3	3.474	11.58	43.42	44.94
Quartz	(8,0,4) Equiv. Refl.: (8,-8,-4), (-8,0,-4), (-8,8,4)	12.526	75	4.396	3.3	3.474	11.57	43.42	44.94
Sapph	(0,6,18) Equiv. Refl.: (0,6,-18), (0,-6,18), (0,-6,-18), (6,0,18), (6,0,-18), (6,-6,18), (6,-6,-18), (-6,0,18), (-6,0,-18), (-6,6,18), (-6,6,-18)	12.461	73.93	4.386	3.4	3.735	12.87	46.69	48.43
Quartz	(-9,8,-3)	12.915	84.83	4.376	3.7	1.172	4.35	14.65	15.29
Quartz	(1,8,3) Equiv. Refl.: (1,-9,-3), (-9,1,3)	12.915	84.83	4.375	3.7	1.172	4.35	14.65	15.29
Quartz	(8,1,-3)	12.915	84.83	4.373	3.7	1.172	4.35	14.65	15.29
Quartz	(8,-9,3)	12.915	84.83	4.372	3.7	1.172	4.35	14.65	15.29
Quartz	(6,-3,-9) Equiv. Refl.: (-3,6,9), (-3,6,-9), (-3,-3,9), (-3,-3,-9)	12.802	80.81	4.343	3.5	2.097	7.34	26.21	27.22
Quartz	(6,-3,9)	12.802	80.81	4.342	3.5	2.097	7.33	26.21	27.22
Quartz	(-6,3,9)	12.802	80.81	4.324	3.5	2.097	7.34	26.21	27.22
Quartz	(3,3,9) Equiv. Refl.: (3,3,-9), (3,-6,9), (3,-6,-9), (-6,3,-9)	12.802	80.81	4.323	3.5	2.097	7.33	26.21	27.22
Quartz	(-1,9,3) Equiv. Refl.: (-1,-8,-3)	12.915	84.83	3.912	3.7	1.172	4.35	14.65	15.29
Quartz	(9,-1,-3) Equiv. Refl.: (9,-8,3)	12.915	84.83	3.911	3.7	1.172	4.35	14.65	15.29
Quartz	(-8,9,-3) Equiv. Refl.: (-8,-1,3)	12.915	84.83	3.909	3.7	1.172	4.35	14.65	15.29
Quartz	(7,-6,-7)	12.48	74.23	3.874	2.9	3.662	10.75	45.78	47.02
Quartz	(7,-1,7)	12.48	74.23	3.873	2.9	3.662	10.75	45.78	47.02
Quartz	(-6,-1,-7)	12.48	74.23	3.872	2.9	3.662	10.75	45.78	47.02
Quartz	(-1,7,-7) Equiv. Refl.: (-1,-6,7), (-6,7,7)	12.48	74.23	3.871	2.9	3.662	10.75	45.78	47.02
Quartz	(-8,9,3) Equiv. Refl.: (-8,-1,-3)	12.915	84.83	3.834	3.5	1.172	4.06	14.65	15.2
Quartz	(-1,9,-3)	12.915	84.83	3.833	3.5	1.172	4.05	14.65	15.2
Quartz	(-1,-8,3)	12.915	84.83	3.832	3.5	1.172	4.05	14.65	15.2

Ei = Cryst	12.968 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(9,-1,3) Equiv. Refl.: (9,-8,-3)	12.915	84.83	3.831	3.5	1.172	4.05	14.65	15.2
Quartz	(8,1,3) Equiv. Refl.: (8,-9,-3)	12.915	84.83	3.77	3.5	1.172	4.06	14.65	15.2
Quartz	(1,-9,3)	12.915	84.83	3.769	3.5	1.172	4.05	14.65	15.2
Quartz	(1,8,-3) Equiv. Refl.: (-9,1,-3), (-9,8,3)	12.915	84.83	3.768	3.5	1.172	4.05	14.65	15.2
Quartz	(9,-8,-2) Equiv. Refl.: (-1,9,-2), (-1,-8,2), (-8,9,2), (-8,-1,-2)	12.658	77.45	3.728	3	2.887	8.55	36.09	37.09
Quartz	(9,-1,2)	12.658	77.45	3.727	3	2.887	8.55	36.09	37.09
Quartz	(-7,1,-7) Equiv. Refl.: (-7,6,7)	12.48	74.23	3.715	2.9	3.662	10.75	45.78	47.02
Quartz	(6,1,7)	12.48	74.23	3.714	2.9	3.662	10.75	45.78	47.02
Quartz	(1,6,-7) Equiv. Refl.: (1,8,-2), (1,-7,7), (1,-9,2), (6,-7,-7), (8,1,2), (8,-9,-2)	12.48	74.23	3.713	2.9	3.662	10.75	45.78	47.02
Quartz	(-9,1,-2) Equiv. Refl.: (-9,8,2)	12.658	77.45	3.712	3	2.887	8.55	36.09	37.09
Sapph	(0,2,-26) Equiv. Refl.: (0,-2,26), (2,0,26), (2,-2,-26), (-2,0,-26), (-2,2,26)	12.769	79.95	3.675	3.2	2.298	7.24	28.72	29.62
Sapph	(4,5,11) Equiv. Refl.: (4,-9,-11), (5,4,-11), (5,-9,11), (9,-4,-11), (9,-5,11), (-4,9,11), (-4,-5,-11), (-5,9,-11), (-5,-4,11), (-9,4,11), (-9,5,-11)	12.87	82.93	3.655	3.3	1.607	5.37	20.09	20.8
Quartz	(5,1,-8) Equiv. Refl.: (5,-6,8)	12.248	70.82	3.495	2.7	4.512	12.08	56.4	57.68
Quartz	(-6,5,-8)	12.248	70.82	3.493	2.7	4.512	12.07	56.4	57.68
Quartz	(-6,1,8)	12.248	70.82	3.492	2.7	4.512	12.07	56.4	57.68
Quartz	(1,5,8) Equiv. Refl.: (1,-6,-8)	12.248	70.82	3.491	2.7	4.512	12.06	56.4	57.68
Quartz	(-5,6,-8) Equiv. Refl.: (-5,-1,8)	12.248	70.82	3.489	2.7	4.512	12.08	56.4	57.68
Quartz	(6,-5,8)	12.248	70.82	3.487	2.7	4.512	12.07	56.4	57.68
Quartz	(6,-1,-8)	12.248	70.82	3.486	2.7	4.512	12.07	56.4	57.68
Quartz	(-1,-5,-8)	12.248	70.82	3.485	2.7	4.512	12.06	56.4	57.68
Quartz	(-1,6,8)	12.248	70.82	3.484	2.7	4.512	12.06	56.4	57.68
Quartz	(9,-3,4) Equiv. Refl.: (9,-6,-4)	12.441	73.62	3.403	2.6	3.813	9.93	47.66	48.69
Quartz	(-3,9,-4) Equiv. Refl.: (-3,-6,4), (-6,9,4), (-6,-3,-4)	12.441	73.62	3.401	2.6	3.813	9.93	47.66	48.68
Quartz	(-3,7,8)	12.757	79.65	3.378	3	2.367	7.14	29.59	30.44
Quartz	(-3,-4,-8)	12.757	79.65	3.377	3	2.367	7.14	29.59	30.44
Quartz	(-4,7,-8)	12.757	79.65	3.376	3	2.367	7.14	29.59	30.44
Quartz	(-4,-3,8)	12.757	79.65	3.375	3	2.367	7.14	29.59	30.44
Quartz	(7,-3,-8) Equiv. Refl.: (7,-4,8)	12.757	79.65	3.374	3	2.367	7.14	29.59	30.44
Quartz	(2,5,8) Equiv. Refl.: (2,-7,-8)	12.923	85.2	3.343	3	1.089	3.3	13.61	14.01
Quartz	(-7,5,-8)	12.923	85.2	3.342	3	1.089	3.3	13.61	14.01
Quartz	(3,4,8) Equiv. Refl.: (3,-7,-8), (-7,2,8)	12.757	79.65	3.34	3	2.367	7.14	29.59	30.44
Quartz	(4,-7,8)	12.757	79.65	3.338	3	2.367	7.14	29.59	30.44

Ei =	12.968	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(4,3,-8)	12.757	79.65	3.337	3	2.367	7.14	29.59	30.44
	Equiv. Refl.: (-7,3,8), (-7,4,-8)								
Quartz	(5,2,-8)	12.923	85.2	3.335	3	1.089	3.3	13.61	14.01
	Equiv. Refl.: (5,-7,8)								
Quartz	(0,8,4)	12.526	75	3.283	2.6	3.474	9.06	43.42	44.36
	Equiv. Refl.: (0,-8,-4)								
Quartz	(8,-8,4)	12.526	75	3.282	2.6	3.474	9.06	43.42	44.36
Quartz	(8,0,-4)	12.526	75	3.281	2.6	3.474	9.06	43.42	44.36
	Equiv. Refl.: (-8,0,4), (-8,8,-4)								
Quartz	(-9,3,-4)	12.441	73.62	3.258	2.6	3.813	9.93	47.66	48.69
	Equiv. Refl.: (-9,6,4)								
Quartz	(3,6,-4)	12.441	73.62	3.257	2.6	3.813	9.93	47.66	48.68
	Equiv. Refl.: (3,-9,4)								
Quartz	(6,3,4)	12.441	73.62	3.256	2.6	3.813	9.93	47.66	48.68
	Equiv. Refl.: (6,-9,-4)								
Quartz	(9,-1,1)	12.501	74.58	3.21	2.5	3.577	8.89	44.71	45.58
	Equiv. Refl.: (9,-8,-1), (-1,9,-1), (-1,-8,1), (-8,9,1), (-8,-1,-1)								
Sapph	(2,7,4)	12.461	73.93	3.208	2.6	3.735	9.77	46.69	47.7
	Equiv. Refl.: (2,-9,-4), (7,2,-4), (7,-9,4), (9,-2,-4), (9,-7,4), (-2,9,4), (-2,-7,-4), (-7,9,-4), (-7,-2,4), (-9,2,4), (-9,7,-4)								
Quartz	(-2,-5,-8)	12.923	85.2	3.206	3	1.089	3.3	13.61	14.01
Quartz	(7,-5,8)	12.923	85.2	3.205	3	1.089	3.3	13.61	14.01
	Equiv. Refl.: (-2,7,8)								
Quartz	(7,-2,-8)	12.923	85.2	3.203	3	1.089	3.3	13.61	14.01
Quartz	(-5,7,-8)	12.923	85.2	3.198	3	1.089	3.3	13.61	14.01
	Equiv. Refl.: (-5,-2,8)								
Quartz	(10,-4,-1)	12.753	79.56	3.138	2.5	2.389	5.94	29.86	30.45
	Equiv. Refl.: (10,-6,1), (-4,10,1), (-4,-6,-1), (-6,10,-1), (-6,-4,1)								
Quartz	(-1,4,10)	12.616	76.62	3.107	2.5	3.085	7.58	38.56	39.3
	Equiv. Refl.: (-1,-3,-10), (-3,4,-10)								
Quartz	(-3,-1,10)	12.616	76.62	3.105	2.5	3.085	7.57	38.56	39.3
Sapph	(4,5,-10)	12.682	77.95	3.102	2.9	2.768	7.93	34.6	35.5
	Equiv. Refl.: (4,-9,10), (5,4,10), (5,-9,-10), (9,-4,10), (9,-5,-10), (-4,9,-10), (-4,-5,10), (-5,9,10), (-5,-4,-10), (-9,4,-10), (-9,5,10), (2,7,3), (2,-9,-3), (4,-1,-10), (4,-3,10), (7,2,-3), (7,-9,3)								
Quartz	(-9,2,3)	12.412	73.17	3.101	2.3	3.923	9.11	49.04	49.88
	Equiv. Refl.: (-9,7,-3)								
Quartz	(1,3,10)	12.616	76.62	3.088	2.5	3.085	7.58	38.56	39.3
Quartz	(1,-4,-10)	12.616	76.62	3.087	2.5	3.085	7.58	38.56	39.3
	Equiv. Refl.: (3,-4,10)								
Quartz	(3,1,-10)	12.616	76.62	3.085	2.5	3.085	7.57	38.56	39.3
	Equiv. Refl.: (9,-1,0), (9,-8,0), (-1,9,0), (-1,-8,0), (-4,-5,4), (-5,9,4), (-5,-4,-4), (-8,9,0), (-8,-1,0)								
Quartz	(9,-4,4)	12.27	71.11	3.084	2.3	4.437	10.17	55.47	56.39
	Equiv. Refl.: (9,-5,-4), (-4,9,-4)								
Quartz	(-4,1,10)	12.616	76.62	3.082	2.5	3.085	7.57	38.56	39.3
	Equiv. Refl.: (-4,3,-10)								
Quartz	(6,2,-6)	12.56	75.59	3.078	2.3	3.333	7.79	41.66	42.38
	Equiv. Refl.: (6,-8,6), (-8,6,-6)								
Quartz	(-8,2,6)	12.56	75.59	3.077	2.3	3.333	7.79	41.66	42.38
Quartz	(2,6,6)	12.56	75.59	3.075	2.3	3.333	7.79	41.66	42.38
	Equiv. Refl.: (2,-8,-6)								

Ei = Cryst	12.968 Refl (h,k,l)	keV EB [keV]	ΘB [°]	\int IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(4,6,1)	12.753	79.56	3.074	2.5	2.389	5.94	29.86	30.45
	Equiv. Refl.: (4,-10,-1), (6,4,-1), (6,-10,1), (-10,4,1), (-10,6,-1)								
Sapph	(2,4,-20)	12.43	73.43	3.071	2.8	3.858	10.63	48.23	49.38
	Equiv. Refl.: (2,-6,20), (4,2,20), (4,-6,-20), (6,-2,20), (6,-4,-20), (-2,6,-20), (-2,-4,20), (-4,6,20), (-4,-2,-20), (-6,2,-20), (-6,4,20)								
Quartz	(4,5,-4)	12.27	71.11	3.067	2.3	4.437	10.17	55.47	56.39
	Equiv. Refl.: (4,-9,4), (5,4,4), (5,-9,-4)								
Quartz	(-9,4,-4)	12.27	71.11	3.066	2.3	4.437	10.17	55.47	56.39
	Equiv. Refl.: (-9,5,4)								
Quartz	(-2,9,3)	12.412	73.17	3.056	2.3	3.923	9.12	49.04	49.88
	Equiv. Refl.: (-2,-7,-3), (-7,9,-3), (-7,-2,3)								
Quartz	(9,-2,-3)	12.412	73.17	3.055	2.3	3.923	9.11	49.04	49.88
	Equiv. Refl.: (9,-7,3)								
Quartz	(-9,1,-1)	12.501	74.58	3.033	2.5	3.577	8.89	44.71	45.58
	Equiv. Refl.: (-9,8,1)								
Quartz	(1,8,-1)	12.501	74.58	3.032	2.5	3.577	8.89	44.71	45.58
	Equiv. Refl.: (1,-9,1), (8,1,1), (8,-9,-1)								
Sapph	(1,5,20)	12.7	78.33	3.018	2.8	2.679	7.53	33.49	34.33
	Equiv. Refl.: (1,-6,-20), (5,1,-20), (5,-6,20), (6,-1,-20), (6,-5,20), (-1,6,20), (-1,-5,-20), (-5,6,-20), (-5,-1,20), (-6,1,20), (-6,5,-20)								
Quartz	(1,8,0)	12.448	73.73	3.013	2.3	3.785	8.73	47.32	48.12
	Equiv. Refl.: (1,-9,0), (8,1,0), (8,-9,0), (-9,1,0), (-9,8,0)								
Quartz	(-6,8,-6)	12.56	75.59	3.005	2.3	3.333	7.79	41.66	42.38
Quartz	(8,-2,-6)	12.56	75.59	3.004	2.3	3.333	7.79	41.66	42.38
	Equiv. Refl.: (8,-6,6), (-6,-2,6)								
Quartz	(-2,8,6)	12.56	75.59	3.001	2.3	3.333	7.79	41.66	42.38
	Equiv. Refl.: (-2,-6,-6)								
Quartz	(7,1,-5)	12.405	73.06	2.77	2.1	3.95	8.25	49.37	50.06
	Equiv. Refl.: (7,-8,5)								
Quartz	(-8,7,-5)	12.405	73.06	2.769	2.1	3.95	8.25	49.37	50.06
Quartz	(1,7,5)	12.405	73.06	2.768	2.1	3.95	8.25	49.37	50.06
	Equiv. Refl.: (1,-8,-5), (-8,1,5)								
Quartz	(0,3,10)	12.275	71.18	2.722	2.4	4.419	10.42	55.24	56.22
	Equiv. Refl.: (0,-3,-10), (3,0,-10), (3,-3,10), (-3,0,10), (-3,3,-10)								
Sapph	(2,7,-8)	12.893	83.82	2.588	2.7	1.404	3.77	17.56	17.96
	Equiv. Refl.: (2,-9,8), (7,2,8), (7,-9,-8), (9,-2,8), (9,-7,-8), (-2,9,-8), (-2,-7,8), (-7,9,8), (-7,-2,-8), (-9,2,-8), (-9,7,8)								
Quartz	(0,6,8)	12.674	77.77	2.587	2.4	2.811	6.66	35.14	35.76
	Equiv. Refl.: (0,-6,-8), (6,0,-8), (6,-6,8), (-6,0,8)								
Quartz	(-6,6,-8)	12.674	77.77	2.586	2.4	2.811	6.66	35.14	35.76
Quartz	(5,4,5)	12.743	79.31	2.398	2.1	2.448	5.24	30.6	31.04
	Equiv. Refl.: (5,-9,-5), (-9,4,-5), (-9,5,5)								
Quartz	(4,5,-5)	12.743	79.31	2.397	2.1	2.448	5.24	30.6	31.04
	Equiv. Refl.: (4,-9,5)								
Quartz	(-7,8,-5)	12.405	73.06	2.396	2.1	3.95	8.25	49.37	50.06
	Equiv. Refl.: (-7,-1,5)								
Quartz	(8,-1,-5)	12.405	73.06	2.395	2.1	3.95	8.25	49.37	50.06
	Equiv. Refl.: (8,-7,5)								
Quartz	(-1,8,5)	12.405	73.06	2.394	2.1	3.95	8.25	49.37	50.06
	Equiv. Refl.: (-1,-7,-5)								

Ei = Cryst	12.968 Refl (h,k,l)	keV EB [keV]	Θ B [$^{\circ}$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(-8,1,-5) Equiv. Refl.: (-8,7,5)	12.405	73.06	2.361	2	3.95	7.99	49.37	50.02
Quartz	(1,7,-5) Equiv. Refl.: (1,-8,5)	12.405	73.06	2.36	2	3.95	7.99	49.37	50.02
Quartz	(7,1,5) Equiv. Refl.: (7,-8,-5)	12.405	73.06	2.359	2	3.95	7.99	49.37	50.02
Quartz	(8,-1,5) Equiv. Refl.: (8,-7,-5)	12.405	73.06	2.313	2	3.95	7.99	49.37	50.02
Quartz	(-1,8,-5) Equiv. Refl.: (-1,-7,5)	12.405	73.06	2.312	2	3.95	7.99	49.37	50.02
Quartz	(-7,8,5) Equiv. Refl.: (-7,-1,-5)	12.405	73.06	2.311	2	3.95	7.99	49.37	50.02
Quartz	(4,-2,10) Equiv. Refl.: (4,-2,-10)	12.532	75.09	2.303	2	3.452	6.97	43.16	43.71
Quartz	(-2,4,-10) Equiv. Refl.: (-2,-2,10)	12.532	75.09	2.301	2	3.452	6.97	43.16	43.71
Quartz	(-2,4,10) Equiv. Refl.: (-2,-2,-10), (-4,2,10)	12.532	75.09	2.299	2	3.452	6.96	43.16	43.71
Quartz	(9,-4,5) Equiv. Refl.: (9,-5,-5), (-4,2,-10), (-4,9,-5), (-5,9,5), (-5,-4,-5)	12.743	79.31	2.298	2.1	2.448	5.24	30.6	31.04
Quartz	(-4,-5,5)	12.743	79.31	2.297	2.1	2.448	5.24	30.6	31.04
Quartz	(2,2,-10) Equiv. Refl.: (2,-4,10)	12.532	75.09	2.296	2	3.452	6.97	43.16	43.71
Quartz	(2,-4,-10)	12.532	75.09	2.295	2	3.452	6.96	43.16	43.71
Quartz	(2,2,10) Equiv. Refl.: (3,6,4), (3,-9,-4), (6,3,-4), (-9,3,4), (-9,6,-4)	12.532	75.09	2.294	2	3.452	6.96	43.16	43.71
Quartz	(6,-9,4) Equiv. Refl.: (9,-3,-4), (9,-6,4), (-3,9,4), (-3,-6,-4), (-6,9,-4), (-6,-3,4)	12.441	73.62	2.293	2	3.813	7.55	47.66	48.26
Quartz	(0,2,-11) Equiv. Refl.: (0,-2,11)	12.949	86.92	1.987	2.7	0.697	1.85	8.71	8.9
LiNbO3	(2,7,13) Equiv. Refl.: (2,-9,-13), (7,2,-13), (7,-9,13), (9,-2,-13), (9,-7,13), (-2,9,13), (-2,-7,-13), (-7,9,-13), (-7,-2,13), (-9,2,13), (-9,7,-13)	12.78	80.24	1.974	3	2.231	6.8	27.88	28.7
Quartz	(-2,2,11)	12.949	86.92	1.965	2.6	0.697	1.83	8.71	8.9
Quartz	(2,-2,-11)	12.949	86.92	1.964	2.6	0.697	1.83	8.71	8.9
Quartz	(2,0,11) Equiv. Refl.: (-2,0,-11)	12.949	86.92	1.963	2.6	0.697	1.83	8.71	8.9
Quartz	(8,1,-2)	12.658	77.45	1.923	2	2.887	5.63	36.09	36.53
Quartz	(1,8,2) Equiv. Refl.: (1,-9,-2), (8,-9,2), (-9,1,2), (-9,8,-2)	12.658	77.45	1.922	2	2.887	5.63	36.09	36.53
Sapph	(0,5,22) Equiv. Refl.: (0,-5,-22), (5,0,-22), (5,-5,22), (-5,0,22), (-5,5,-22)	12.917	84.9	1.842	2.4	1.157	2.74	14.46	14.72
Quartz	(-1,9,2) Equiv. Refl.: (-1,-8,-2), (-8,9,-2), (-8,-1,2)	12.658	77.45	1.735	2	2.887	5.63	36.09	36.53
Quartz	(9,-1,-2) Equiv. Refl.: (9,-8,2)	12.658	77.45	1.734	2	2.887	5.63	36.09	36.52
Quartz	(0,4,10) Equiv. Refl.: (0,-4,-10)	12.866	82.8	1.678	2	1.637	3.19	20.47	20.72
Quartz	(4,0,-10) Equiv. Refl.: (4,-4,10), (-4,0,10), (-4,4,-10)	12.866	82.8	1.672	1.9	1.637	3.18	20.47	20.71

Ei =	12.968	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Sapph	(4,4,15)	12.645	77.18	1.61	1.8	2.95	5.32	36.88	37.26
	Equiv. Refl.: (4,4,-15), (4,-8,15), (4,-8,-15), (8,-4,15), (8,-4,-15), (-4,8,15), (-4,8,-15), (-4,-4,15), (-4,-4,-15), (-8,4,15), (-8,4,-15)								
Sapph	(2,6,-13)	12.498	74.52	1.521	1.7	3.591	6.02	44.89	45.29
	Equiv. Refl.: (2,-8,13), (6,2,13), (6,-8,-13), (8,-2,13), (8,-6,-13), (-2,8,-13), (-2,-6,13), (-6,8,13), (-6,-2,-13), (-8,2,-13), (-8,6,13)								
Quartz	(0,6,-8)	12.674	77.77	1.485	1.6	2.811	4.58	35.14	35.43
	Equiv. Refl.: (0,-6,8), (6,0,8), (6,-6,-8), (-6,0,-8)								
Quartz	(-6,6,8)	12.674	77.77	1.484	1.6	2.811	4.58	35.14	35.43
LiNbO3	(1,6,19)	12.463	73.96	1.435	2.1	3.729	7.91	46.61	47.28
	Equiv. Refl.: (1,-7,-19), (6,1,-19), (6,-7,19), (7,-1,-19), (7,-6,19), (-1,7,19), (-1,-6,-19), (-6,7,-19), (-6,-1,19), (-7,1,19), (-7,6,-19)								
LiNbO3	(2,4,-23)	12.646	77.2	1.373	2.2	2.945	6.45	36.82	37.38
	Equiv. Refl.: (2,-6,23), (4,2,23), (4,-6,-23), (6,-2,23), (6,-4,-23), (-2,6,-23), (-2,-4,23), (-4,6,23), (-4,-2,-23), (-6,2,-23), (-6,4,23)								
Quartz	(0,1,-11)	12.701	78.35	1.37	1.5	2.673	4.09	33.41	33.66
	Equiv. Refl.: (0,-1,11)								
Quartz	(1,-1,-11)	12.701	78.35	1.369	1.5	2.673	4.08	33.41	33.66
Quartz	(1,0,11)	12.701	78.35	1.368	1.5	2.673	4.08	33.41	33.66
	Equiv. Refl.: (-1,1,11)								
Quartz	(-1,0,-11)	12.701	78.35	1.367	1.5	2.673	4.08	33.41	33.66
LiNbO3	(1,1,27)	12.312	71.69	1.343	2	4.291	8.4	53.63	54.29
	Equiv. Refl.: (1,1,-27), (1,-2,27), (1,-2,-27), (2,-1,27), (2,-1,-27), (-1,2,27), (-1,2,-27), (-1,-1,27), (-1,-1,-27), (-2,1,27), (-2,1,-27)								
Sapph	(4,5,-7)	12.216	70.39	1.274	1.4	4.621	6.47	57.76	58.12
	Equiv. Refl.: (4,-9,7), (5,4,7), (5,-9,-7), (9,-4,7), (9,-5,-7), (-4,9,-7), (-4,-5,7), (-5,9,7), (-5,-4,-7), (-9,4,-7), (-9,5,7)								
Sapph	(0,1,26)	12.5	74.57	1.255	1.4	3.58	5.09	44.75	45.04
	Equiv. Refl.: (0,-1,-26), (1,0,-26), (1,-1,26), (-1,0,26), (-1,1,-26)								
Quartz	(8,-6,-6)	12.56	75.59	1.254	1.3	3.333	4.35	41.66	41.89
	Equiv. Refl.: (-6,8,6), (-6,-2,-6)								
Quartz	(8,-2,6)	12.56	75.59	1.253	1.3	3.333	4.35	41.66	41.89
	Equiv. Refl.: (-2,8,-6), (-2,-6,6)								
Quartz	(10,-4,0)	12.702	78.37	1.248	1.4	2.669	3.76	33.37	33.58
	Equiv. Refl.: (10,-6,0), (-4,10,0), (-4,-6,0), (-6,10,0), (-6,-4,0)								
Quartz	(4,6,0)	12.702	78.37	1.242	1.4	2.669	3.76	33.37	33.58
	Equiv. Refl.: (4,-10,0), (6,4,0), (6,-10,0), (-10,4,0), (-10,6,0)								
LiNbO3	(2,7,-11)	12.399	72.97	1.236	1.9	3.973	7.47	49.66	50.22
	Equiv. Refl.: (2,-9,11), (7,2,11), (7,-9,-11), (9,-2,11), (9,-7,-11), (-2,9,-11), (-2,-7,11), (-7,9,11), (-7,-2,-11), (-9,2,-11), (-9,7,11)								
Sapph	(2,7,7)	12.759	79.71	1.228	1.5	2.354	3.51	29.43	29.64
	Equiv. Refl.: (2,-9,-7), (7,2,-7), (7,-9,7), (9,-2,-7), (9,-7,7), (-2,9,7), (-2,-7,-7), (-7,9,-7), (-7,-2,7), (-9,2,7), (-9,7,-7)								
Quartz	(4,5,4)	12.27	71.11	1.21	1.3	4.437	5.72	55.47	55.76
	Equiv. Refl.: (4,-9,-4), (-9,4,4), (-9,5,-4)								
Quartz	(5,4,-4)	12.27	71.11	1.209	1.3	4.437	5.72	55.47	55.76
	Equiv. Refl.: (5,-9,4)								
Quartz	(-4,-5,-4)	12.27	71.11	1.192	1.3	4.437	5.72	55.47	55.76
Quartz	(9,-4,-4)	12.27	71.11	1.191	1.3	4.437	5.72	55.47	55.76
	Equiv. Refl.: (9,-5,4), (-4,9,4), (-5,9,-4), (-5,-4,4)								

Ei =	12.968	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(1,5,-19)	12.345	72.17	1.185	1.3	4.171	5.54	52.14	52.44
	Equiv. Refl.: (1,-6,19), (5,1,19), (5,-6,-19), (6,-1,19), (6,-5,-19), (-1,6,-19), (-1,-5,19), (-5,6,19), (-5,-1,-19), (-6,1,-19), (-6,5,19)								
Quartz	(-8,4,6)	12.217	70.41	1.16	1.2	4.616	5.66	57.7	57.98
	Equiv. Refl.: (-8,4,-6)								
Quartz	(4,4,6)	12.217	70.41	1.159	1.2	4.616	5.65	57.7	57.98
	Equiv. Refl.: (4,4,-6), (4,-8,6), (4,-8,-6)								
Quartz	(-2,9,-4)	12.778	80.18	1.137	1.3	2.244	2.89	28.05	28.2
Quartz	(-2,-7,4)	12.778	80.18	1.136	1.3	2.244	2.89	28.05	28.2
	Equiv. Refl.: (-7,9,4), (-7,-2,-4)								
Quartz	(9,-2,4)	12.778	80.18	1.135	1.3	2.244	2.88	28.05	28.2
	Equiv. Refl.: (9,-7,-4)								
LiNbO3	(4,6,7)	12.52	74.89	1.126	1.8	3.502	6.39	43.77	44.23
	Equiv. Refl.: (4,-10,-7), (6,4,-7), (6,-10,7), (10,-4,-7), (10,-6,7), (-4,10,7), (-4,-6,-7), (-6,10,-7), (-6,-4,7), (-10,4,7), (-10,6,-7)								
Sapph	(1,6,16)	12.476	74.16	1.117	1.3	3.679	4.72	45.99	46.23
	Equiv. Refl.: (1,-7,-16), (6,1,-16), (6,-7,16), (7,-1,-16), (7,-6,16), (-1,7,16), (-1,-6,-16), (-6,7,-16), (-6,-1,16), (-7,1,16), (-7,6,-16)								
Quartz	(8,-4,6)	12.217	70.41	1.116	1.2	4.616	5.66	57.7	57.98
Quartz	(8,-4,-6)	12.217	70.41	1.115	1.2	4.616	5.66	57.7	57.98
	Equiv. Refl.: (-4,8,6), (-4,8,-6), (-4,-4,6), (-4,-4,-6)								
Quartz	(6,2,6)	12.56	75.59	1.107	1.3	3.333	4.36	41.66	41.89
Quartz	(6,-8,-6)	12.56	75.59	1.106	1.3	3.333	4.36	41.66	41.89
	Equiv. Refl.: (-8,6,6)								
Quartz	(2,6,-6)	12.56	75.59	1.105	1.3	3.333	4.35	41.66	41.89
	Equiv. Refl.: (2,-8,6), (-8,2,-6)								
Sapph	(2,3,23)	12.787	80.42	1.034	1.3	2.188	2.89	27.36	27.51
	Equiv. Refl.: (2,-5,-23), (3,2,-23), (3,-5,23), (5,-2,-23), (5,-3,23), (-2,5,23), (-2,-3,-23), (-3,5,-23), (-3,-2,23), (-5,2,23), (-5,3,-23)								
Quartz	(10,-5,1)	12.67	77.69	1.028	1.2	2.83	3.36	35.37	35.53
	Equiv. Refl.: (-5,10,1), (-5,10,-1), (-5,-5,1), (-5,-5,-1)								
Quartz	(10,-5,-1)	12.67	77.69	1.027	1.2	2.83	3.36	35.37	35.53
Quartz	(2,-9,4)	12.778	80.18	1.025	1.3	2.244	2.89	28.05	28.2
Quartz	(2,7,-4)	12.778	80.18	1.024	1.3	2.244	2.89	28.05	28.2
	Equiv. Refl.: (5,5,1), (5,5,-1), (5,-10,1), (5,-10,-1), (7,2,4), (7,-9,-4), (-10,5,1), (-10,5,-1)								
Quartz	(-9,2,-4)	12.778	80.18	1.023	1.3	2.244	2.88	28.05	28.2
	Equiv. Refl.: (-9,7,4)								
LiNbO3	(1,5,23)	12.873	83.07	0.985	2.2	1.577	3.48	19.71	20.01
	Equiv. Refl.: (1,-6,-23), (4,6,-5), (4,-10,5), (5,1,-23), (5,-6,23), (6,4,5), (6,-1,-23), (6,-5,23), (6,-10,-5), (10,-4,5), (10,-6,-5), (-1,6,23), (-1,-5,-23), (-4,10,-5), (-4,-6,5), (-5,6,-23), (-5,-1,23), (-6,1,23), (-6,5,-23), (-6,10,5), (-6,-4,-5), (-10,4,-5), (-10,6,5)								
Quartz	(6,1,-7)	12.48	74.23	0.943	1	3.662	3.81	45.78	45.94
Quartz	(6,-7,7)	12.48	74.23	0.942	1	3.662	3.81	45.78	45.94
Quartz	(1,-7,-7)	12.48	74.23	0.941	1	3.662	3.81	45.78	45.94
Quartz	(1,6,7)	12.48	74.23	0.94	1	3.662	3.8	45.78	45.94
Quartz	(-7,1,7)	12.48	74.23	0.939	1	3.662	3.8	45.78	45.94
	Equiv. Refl.: (-7,6,-7)								
Quartz	(3,1,10)	12.616	76.62	0.925	1	3.085	3.04	38.56	38.68
	Equiv. Refl.: (3,-4,-10)								

Ei = Cryst	12.968 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(1,3,-10)	12.616	76.62	0.922	1	3.085	3.03	38.56	38.68
	Equiv. Refl.: (1,-4,10), (-4,1,-10)								
Quartz	(-4,3,10)	12.616	76.62	0.921	1	3.085	3.03	38.56	38.68
Sapph	(2,7,-5)	12.543	75.3	0.909	1.1	3.403	3.73	42.54	42.7
	Equiv. Refl.: (2,-9,5), (7,2,5), (7,-9,-5), (9,-2,5), (9,-7,-5), (-2,9,-5), (-2,-7,5), (-7,9,5), (-7,-2,-5), (-9,2,-5), (-9,7,5)								
LiNbO3	(3,6,15)	12.915	84.82	0.896	2.4	1.175	2.78	14.68	14.94
	Equiv. Refl.: (3,6,-15), (3,-9,15), (3,-9,-15), (6,3,15), (6,3,-15), (6,-9,15), (6,-9,-15), (9,-3,15), (9,-3,-15), (9,-6,15), (9,-6,-15), (-3,9,15), (-3,9,-15), (-3,-6,15), (-3,-6,-15), (-6,9,15), (-6,9,-15), (-6,-3,15), (-6,-3,-15), (-9,3,15), (-9,3,-15), (-9,6,15), (-9,6,-15)								
Quartz	(-6,7,-7)	12.48	74.23	0.889	1	3.662	3.81	45.78	45.94
	Equiv. Refl.: (-6,-1,7)								
Quartz	(-1,7,7)	12.48	74.23	0.887	1	3.662	3.81	45.78	45.94
	Equiv. Refl.: (-1,-6,-7)								
Quartz	(7,-1,-7)	12.48	74.23	0.886	1	3.662	3.8	45.78	45.94
	Equiv. Refl.: (7,-6,7)								
Quartz	(5,3,6)	12.304	71.58	0.883	0.9	4.319	4.02	53.98	54.13
	Equiv. Refl.: (5,-8,-6), (-8,3,-6), (-8,5,6)								
Quartz	(3,5,-6)	12.304	71.58	0.882	0.9	4.319	4.02	53.98	54.13
Quartz	(3,-8,6)	12.304	71.58	0.881	0.9	4.319	4.02	53.98	54.13
Quartz	(1,4,9)	12.294	71.45	0.846	0.9	4.352	4.1	54.4	54.55
	Equiv. Refl.: (1,-5,-9)								
Quartz	(4,1,-9)	12.294	71.45	0.845	0.9	4.352	4.09	54.4	54.55
	Equiv. Refl.: (4,-5,9), (-5,1,9), (-5,4,-9)								
Quartz	(-1,-4,-9)	12.294	71.45	0.823	0.9	4.352	4.1	54.4	54.55
Quartz	(5,-1,-9)	12.294	71.45	0.822	0.9	4.352	4.09	54.4	54.55
	Equiv. Refl.: (5,-4,9), (-1,5,9), (-4,-1,9)								
Quartz	(-4,5,-9)	12.294	71.45	0.821	0.9	4.352	4.09	54.4	54.55
Sapph	(2,7,1)	12.323	71.86	0.78	0.9	4.249	3.97	53.11	53.26
	Equiv. Refl.: (2,-9,-1), (7,2,-1), (7,-9,1), (9,-2,-1), (9,-7,1), (-2,9,1), (-2,-7,-1), (-7,9,-1), (-7,-2,1), (-9,2,1), (-9,7,-1)								
Quartz	(8,-3,6)	12.304	71.58	0.769	0.9	4.319	4.02	53.98	54.13
	Equiv. Refl.: (8,-5,-6), (-5,8,6), (-5,-3,-6)								
Quartz	(-3,8,-6)	12.304	71.58	0.768	0.9	4.319	4.02	53.98	54.13
	Equiv. Refl.: (-3,-5,6)								
Quartz	(-3,4,10)	12.616	76.62	0.748	1	3.085	3.04	38.56	38.68
Quartz	(-3,-1,-10)	12.616	76.62	0.747	1	3.085	3.04	38.56	38.68
Quartz	(4,-1,10)	12.616	76.62	0.745	1	3.085	3.03	38.56	38.68
	Equiv. Refl.: (-1,-3,10)								
Quartz	(4,-3,-10)	12.616	76.62	0.744	1	3.085	3.03	38.56	38.68
	Equiv. Refl.: (-1,4,-10)								
Sapph	(3,6,6)	12.28	71.25	0.736	0.9	4.403	3.9	55.04	55.17
	Equiv. Refl.: (3,6,-6), (3,-9,6), (3,-9,-6), (6,3,6), (6,3,-6), (6,-9,6), (6,-9,-6), (9,-3,6), (9,-3,-6), (9,-6,6), (9,-6,-6), (-3,9,6), (-3,9,-6), (-3,-6,6), (-3,-6,-6), (-6,9,6), (-6,9,-6), (-6,-3,6), (-6,-3,-6), (-9,3,6), (-9,3,-6), (-9,6,6), (-9,6,-6)								
Sapph	(1,6,-17)	12.773	80.06	0.675	0.9	2.273	2.15	28.41	28.49
	Equiv. Refl.: (1,-7,17), (6,1,17), (6,-7,-17), (7,-1,17), (7,-6,-17), (-1,7,-17), (-1,-6,17), (-6,7,17), (-6,-1,-17), (-7,1,-17), (-7,6,17)								
Sapph	(3,5,13)	12.223	70.48	0.63	0.8	4.596	3.57	57.45	57.57
	Equiv. Refl.: (3,-8,-13), (5,3,-13), (5,-8,13), (8,-3,-13), (8,-5,13), (-3,8,13), (-3,-5,-13), (-5,8,-13), (-5,-3,13), (-8,3,13), (-8,5,-13)								

Ei = Cryst	12.968 Refl (h,k,l)	keV EB [keV]	Θ B [$^{\circ}$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
LiNbO3	(3,7,-7)	12.749	79.46	0.622	1.4	2.413	3.44	30.16	30.36
	Equiv. Refl.: (3,-10,7), (7,3,7), (7,-10,-7), (10,-3,7), (10,-7,-7), (-3,10,-7), (-3,-7,7), (-7,10,7), (-7,-3,-7), (-10,3,-7), (-10,7,7)								
LiNbO3	(1,3,25)	12.252	70.87	0.618	1.1	4.497	5.16	56.22	56.45
	Equiv. Refl.: (1,-4,-25), (3,1,-25), (3,-4,25), (4,-1,-25), (4,-3,25), (-1,4,25), (-1,-3,-25), (-3,4,-25), (-3,-1,25), (-4,1,25), (-4,3,-25)								
Sapph	(1,2,-25)	12.579	75.92	0.578	0.8	3.251	2.53	40.64	40.72
	Equiv. Refl.: (1,-3,25), (2,1,25), (2,-3,-25), (3,-1,25), (3,-2,-25), (-1,3,-25), (-1,-2,25), (-2,3,25), (-2,-1,-25), (-3,1,-25), (-3,2,25)								
Sapph	(2,5,18)	12.731	79.03	0.564	0.8	2.514	2.03	31.43	31.49
	Equiv. Refl.: (2,5,-18), (2,-7,18), (2,-7,-18), (5,2,18), (5,2,-18), (5,-7,18), (5,-7,-18), (7,-2,18), (7,-2,-18), (7,-5,18), (7,-5,-18), (-2,7,18), (-2,7,-18), (-2,-5,18), (-2,-5,-18), (-5,7,18), (-5,7,-18), (-5,-2,18), (-5,-2,-18), (-7,2,18), (-7,2,-18), (-7,5,18), (-7,5,-18)								
Sapph	(2,3,-22)	12.38	72.68	0.545	0.7	4.045	2.87	50.56	50.64
	Equiv. Refl.: (2,7,-2), (2,-5,22), (2,-9,2), (3,2,22), (3,-5,-22), (5,-2,22), (5,-3,-22), (7,2,2), (7,-9,-2), (9,-2,2), (9,-7,-2), (-2,5,-22), (-2,9,-2), (-2,-3,22), (-2,-7,2), (-3,5,22), (-3,-2,-22), (-5,2,-22), (-5,3,22), (-7,9,2), (-7,-2,-2), (-9,2,-2), (-9,7,2)								
Sapph	(0,7,14)	12.472	74.1	0.544	0.7	3.693	2.65	46.17	46.24
	Equiv. Refl.: (0,-7,-14), (7,0,-14), (7,-7,14), (-7,0,14), (-7,7,-14)								
LiNbO3	(4,5,-13)	12.318	71.78	0.536	1.1	4.268	4.55	53.35	53.54
	Equiv. Refl.: (4,-9,13), (5,4,13), (5,-9,-13), (9,-4,13), (9,-5,-13), (-4,9,-13), (-4,-5,13), (-5,9,13), (-5,-4,-13), (-9,4,-13), (-9,5,13)								
LiNbO3	(2,8,3)	12.814	81.17	0.502	1.4	2.014	2.73	25.17	25.32
	Equiv. Refl.: (2,8,-3), (2,-10,3), (2,-10,-3), (8,2,3), (8,2,-3), (8,-10,3), (8,-10,-3), (10,-2,3), (10,-2,-3), (10,-8,3), (10,-8,-3), (-2,10,3), (-2,10,-3), (-2,-8,3), (-2,-8,-3), (-8,10,3), (-8,10,-3), (-8,-2,3), (-8,-2,-3), (-10,2,3), (-10,2,-3), (-10,8,3), (-10,8,-3)								
LiNbO3	(3,7,5)	12.56	75.58	0.477	1.1	3.334	3.6	41.68	41.83
	Equiv. Refl.: (3,-10,-5), (7,3,-5), (7,-10,5), (10,-3,-5), (10,-7,5), (-3,10,5), (-3,-7,-5), (-7,10,-5), (-7,-3,5), (-10,3,5), (-10,7,-5)								
Quartz	(0,3,-10)	12.275	71.18	0.432	0.5	4.419	2.42	55.24	55.3
	Equiv. Refl.: (0,-3,10)								
Quartz	(3,0,10)	12.275	71.18	0.428	0.5	4.419	2.41	55.24	55.29
	Equiv. Refl.: (3,-3,-10), (-3,0,-10), (-3,3,10)								
LiNbO3	(2,5,21)	12.79	80.5	0.423	1.2	2.17	2.6	27.12	27.24
	Equiv. Refl.: (2,5,-21), (2,-7,21), (2,-7,-21), (5,2,21), (5,2,-21), (5,-7,21), (5,-7,-21), (7,-2,21), (7,-2,-21), (7,-5,21), (7,-5,-21), (-2,7,21), (-2,7,-21), (-2,-5,21), (-2,-5,-21), (-5,7,21), (-5,7,-21), (-5,-2,21), (-5,-2,-21), (-7,2,21), (-7,2,-21), (-7,5,21), (-7,5,-21)								
LiNbO3	(3,7,-1)	12.367	72.49	0.413	0.9	4.092	3.78	51.15	51.29
	Equiv. Refl.: (3,-10,1), (7,3,1), (7,-10,-1), (10,-3,1), (10,-7,-1), (-3,10,-1), (-3,-7,1), (-7,10,1), (-7,-3,-1), (-10,3,-1), (-10,7,1)								
LiNbO3	(3,5,19)	12.92	85.07	0.406	1.6	1.118	1.77	13.98	14.09
	Equiv. Refl.: (3,-8,-19), (5,3,-19), (5,-8,19), (8,-3,-19), (8,-5,19), (-3,8,19), (-3,-5,-19), (-5,8,-19), (-5,-3,19), (-8,3,19), (-8,5,-19)								
Quartz	(1,8,1)	12.501	74.58	0.385	0.5	3.577	1.65	44.71	44.74
	Equiv. Refl.: (1,-9,-1), (8,1,-1), (8,-9,1), (-9,1,1), (-9,8,-1)								
Quartz	(1,4,-9)	12.294	71.45	0.352	0.5	4.352	2.02	54.4	54.44
	Equiv. Refl.: (-5,1,-9), (-5,4,9)								
Quartz	(1,-5,9)	12.294	71.45	0.351	0.5	4.352	2.02	54.4	54.44
Quartz	(4,1,9)	12.294	71.45	0.35	0.5	4.352	2.02	54.4	54.44
	Equiv. Refl.: (4,-5,-9)								

Ei =	12.968	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-5,6,8)	12.248	70.82	0.344	0.4	4.512	1.95	56.4	56.43
	Equiv. Refl.: (-5,-1,-8)								
Quartz	(5,-1,9)	12.294	71.45	0.343	0.5	4.352	2.02	54.4	54.44
	Equiv. Refl.: (5,-4,-9), (-1,-4,9)								
Quartz	(-1,5,-9)	12.294	71.45	0.342	0.5	4.352	2.02	54.4	54.44
	Equiv. Refl.: (-1,6,-8), (-1,-5,8)								
Quartz	(6,-1,8)	12.248	70.82	0.341	0.4	4.512	1.94	56.4	56.43
	Equiv. Refl.: (6,-5,-8), (-4,5,9), (-4,-1,-9)								
Sapph	(4,5,8)	12.355	72.31	0.34	0.5	4.136	2.06	51.7	51.75
	Equiv. Refl.: (4,-9,-8), (5,4,-8), (5,-9,8), (9,-4,-8), (9,-5,8), (-4,9,8), (-4,-5,-8), (-5,9,-8), (-5,-4,8), (-9,4,8), (-9,5,-8)								
Sapph	(1,8,2)	12.889	83.68	0.315	0.7	1.436	0.95	17.96	17.98
	Equiv. Refl.: (1,-9,-2), (8,1,-2), (8,-9,2), (9,-1,-2), (9,-8,2), (-1,9,2), (-1,-8,-2), (-8,9,-2), (-8,-1,2), (-9,1,2), (-9,8,-2)								
Sapph	(0,8,-8)	12.627	76.82	0.302	0.5	3.036	1.51	37.95	37.98
	Equiv. Refl.: (0,-8,8), (8,0,8), (8,-8,-8), (-8,0,-8), (-8,8,8)								
Quartz	(5,1,8)	12.248	70.82	0.294	0.4	4.512	1.95	56.4	56.43
	Equiv. Refl.: (5,-6,-8)								
Quartz	(1,5,-8)	12.248	70.82	0.292	0.4	4.512	1.94	56.4	56.43
	Equiv. Refl.: (1,-6,8)								
Quartz	(-6,1,-8)	12.248	70.82	0.291	0.4	4.512	1.94	56.4	56.43
	Equiv. Refl.: (-6,5,8)								
LiNbO3	(2,6,17)	12.583	76	0.288	0.8	3.233	2.66	40.41	40.5
	Equiv. Refl.: (2,-8,-17), (6,2,-17), (6,-8,17), (8,-2,-17), (8,-6,17), (-2,8,17), (-2,-6,-17), (-6,8,-17), (-6,-2,17), (-8,2,17), (-8,6,-17)								
Sapph	(1,3,-23)	12.245	70.77	0.28	0.4	4.523	1.93	56.53	56.57
	Equiv. Refl.: (1,-4,23), (3,1,23), (3,-4,-23), (4,-1,23), (4,-3,-23), (-1,4,-23), (-1,-3,23), (-3,4,23), (-3,-1,-23), (-4,1,-23), (-4,3,23)								
Quartz	(9,-1,-1)	12.501	74.58	0.274	0.5	3.577	1.65	44.71	44.74
	Equiv. Refl.: (9,-8,1), (-1,9,1), (-1,-8,-1), (-2,9,-3), (-2,-7,3), (-8,9,-1), (-8,-1,1)								
Quartz	(9,-2,3)	12.412	73.17	0.273	0.4	3.923	1.45	49.04	49.06
	Equiv. Refl.: (9,-7,-3), (-7,9,3), (-7,-2,-3)								
Sapph	(3,4,-19)	12.883	83.45	0.252	0.6	1.489	0.86	18.62	18.64
	Equiv. Refl.: (3,-7,19), (4,3,19), (4,-7,-19), (7,-3,19), (7,-4,-19), (-3,7,-19), (-3,-4,19), (-4,7,19), (-4,-3,-19), (-7,3,-19), (-7,4,19)								
Sapph	(0,3,24)	12.312	71.7	0.232	0.4	4.289	1.6	53.61	53.64
	Equiv. Refl.: (0,3,-24), (0,-3,24), (0,-3,-24), (3,0,24), (3,0,-24), (3,-3,24), (3,-3,-24), (-3,0,24), (-3,0,-24), (-3,3,24), (-3,3,-24)								
LiNbO3	(2,3,-25)	12.717	78.7	0.219	0.8	2.591	2.02	32.38	32.45
	Equiv. Refl.: (2,-5,25), (3,2,25), (3,-5,-25), (5,-2,25), (5,-3,-25), (-2,5,-25), (-2,-3,25), (-3,5,25), (-3,-2,-25), (-5,2,-25), (-5,3,25)								
Quartz	(2,7,-3)	12.412	73.17	0.218	0.4	3.923	1.45	49.04	49.06
	Equiv. Refl.: (2,-9,3), (7,2,3), (-9,2,-3), (-9,7,3)								
Quartz	(7,-9,-3)	12.412	73.17	0.217	0.4	3.923	1.44	49.04	49.06
LiNbO3	(1,8,11)	12.858	82.55	0.215	0.9	1.697	1.6	21.21	21.27
	Equiv. Refl.: (1,-9,-11), (8,1,-11), (8,-9,11), (9,-1,-11), (9,-8,11), (-1,9,11), (-1,-8,-11), (-8,9,-11), (-8,-1,11), (-9,1,11), (-9,8,-11)								
Quartz	(0,5,9)	12.635	76.98	0.211	0.4	2.998	1.08	37.47	37.49
	Equiv. Refl.: (0,-5,-9)								
Quartz	(5,0,-9)	12.635	76.98	0.209	0.4	2.998	1.07	37.47	37.49
	Equiv. Refl.: (-5,0,9)								
Quartz	(5,-5,9)	12.635	76.98	0.208	0.4	2.998	1.07	37.47	37.49

	Equiv. Refl.: (-5,5,-9)								
Sapph	(3,6,9)	12.69	78.12	0.198	0.4	2.729	1.08	34.11	34.13
	Equiv. Refl.: (3,6,-9), (3,-9,9), (3,-9,-9), (6,3,9), (6,3,-9), (6,-9,9), (6,-9,-9), (9,-3,9), (9,-3,-9), (9,-6,9), (9,-6,-9), (-3,9,9), (-3,9,-9), (-3,-6,9), (-3,-6,-9), (-6,9,9), (-6,9,-9), (-6,-3,9), (-6,-3,-9), (-9,3,9), (-9,3,-9), (-9,6,9), (-9,6,-9)								
LiNbO3	(1,7,15)	12.458	73.88	0.172	0.6	3.749	2.2	46.86	46.91
	Equiv. Refl.: (1,7,-15), (1,-8,15), (1,-8,-15), (7,1,15), (7,1,-15), (7,-8,15), (7,-8,-15), (8,-1,15), (8,-1,-15), (8,-7,15), (8,-7,-15), (-1,8,15), (-1,8,-15), (-1,-7,15), (-1,-7,-15), (-7,8,15), (-7,8,-15), (-7,-1,15), (-7,-1,-15), (-8,1,15), (-8,1,-15), (-8,7,15), (-8,7,-15)								
LiNbO3	(3,5,-17)	12.35	72.24	0.132	0.5	4.152	2.04	51.91	51.95
	Equiv. Refl.: (3,-8,17), (5,3,17), (5,-8,-17), (8,-3,17), (8,-5,-17), (-3,8,-17), (-3,-5,17), (-5,8,17), (-5,-3,-17), (-8,3,-17), (-8,5,17)								
Sapph	(3,4,17)	12.23	70.58	0.105	0.2	4.572	1.03	57.15	57.16
	Equiv. Refl.: (3,-7,-17), (4,3,-17), (4,-7,17), (7,-3,-17), (7,-4,17), (-3,7,17), (-3,-4,-17), (-4,7,-17), (-4,-3,17), (-7,3,17), (-7,4,-17)								
LiNbO3	(1,8,-7)	12.286	71.33	0.101	0.4	4.381	1.84	54.76	54.8
	Equiv. Refl.: (1,-9,7), (8,1,7), (8,-9,-7), (9,-1,7), (9,-8,-7), (-1,9,-7), (-1,-8,7), (-8,9,7), (-8,-1,-7), (-9,1,-7), (-9,8,7)								
Sapph	(1,7,12)	12.721	78.79	0.074	0.2	2.571	0.59	32.13	32.14
	Equiv. Refl.: (1,7,-12), (1,-8,12), (1,-8,-12), (7,1,12), (7,1,-12), (7,-8,12), (7,-8,-12), (8,-1,12), (8,-1,-12), (8,-7,12), (8,-7,-12), (-1,8,12), (-1,8,-12), (-1,-7,12), (-1,-7,-12), (-7,8,12), (-7,8,-12), (-7,-1,12), (-7,-1,-12), (-8,1,12), (-8,1,-12), (-8,7,12), (-8,7,-12)								
LiNbO3	(5,5,9)	12.697	78.26	0.01	0.2	2.695	0.48	33.69	33.69
	Equiv. Refl.: (5,5,-9), (5,-10,9), (5,-10,-9), (10,-5,9), (10,-5,-9), (-5,10,9), (-5,10,-9), (-5,-5,9), (-5,-5,-9), (-10,5,9), (-10,5,-9)								

Ei = Cryst	12.385 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μrad]	Width [μrad]	Ei cot Θ [meV/μrad]	Δ E [meV]	Δ Eg 2m, 50μm [meV]	Δ Et 2m, 50μm [meV]
Si	(3,5,9)	12.241	81.24	4.451	4	1.908	7.7	23.85	25.06
Ge	(2,4,10)	12.004	75.75	3.368	7	3.147	22.16	39.33	45.14
Si	(0,2,10)	11.64	70.03	3.304	3	4.5	13.51	56.25	57.85
	Equiv. Refl.: (2,6,8)								
Si	(1,5,9)	11.807	72.43	2.493	2.3	3.922	8.99	49.02	49.84
	Equiv. Refl.: (3,7,7)								
Ge	(1,1,11)	12.153	78.89	2.187	6.1	2.433	14.86	30.41	33.85
	Equiv. Refl.: (5,7,7)								
Ge	(3,5,9)	11.751	71.59	1.566	4.2	4.123	17.16	51.54	54.32
LiNbO3	(3,4,20)	12.31	83.67	22.932	20.9	1.373	28.74	17.17	33.47
	Equiv. Refl.: (4,-7,20), (7,-4,20), (-3,7,20), (-4,-3,20), (-7,3,20)								
LiNbO3	(3,-7,-20)	12.31	83.67	22.897	20.9	1.373	28.74	17.17	33.47
	Equiv. Refl.: (4,3,-20), (7,-3,-20), (-3,-4,-20), (-4,7,-20), (-7,4,-20)								
LiNbO3	(5,5,6)	12.337	84.97	21.057	19.7	1.091	21.51	13.63	25.47
	Equiv. Refl.: (5,-10,6), (10,-5,6), (-5,10,6), (-5,-5,6), (-10,5,6)								
LiNbO3	(2,6,-16)	12.318	84.03	20.445	18.7	1.294	24.22	16.18	29.13
	Equiv. Refl.: (-2,8,-16), (-6,-2,-16), (-8,2,-16)								
LiNbO3	(6,-8,-16)	12.318	84.03	20.444	18.7	1.294	24.22	16.18	29.13
	Equiv. Refl.: (8,-6,-16)								
LiNbO3	(5,5,-6)	12.337	84.97	20.143	19.7	1.091	21.51	13.63	25.47
	Equiv. Refl.: (5,-10,-6), (10,-5,-6), (-5,10,-6), (-5,-5,-6), (-10,5,-6)								
LiNbO3	(2,-8,16)	12.318	84.03	19.447	18.7	1.294	24.22	16.18	29.13
	Equiv. Refl.: (6,2,16), (8,-2,16), (-2,-6,16), (-6,8,16), (-8,6,16)								
LiNbO3	(3,6,12)	12.272	82.26	17.166	15.7	1.684	26.48	21.05	33.83
	Equiv. Refl.: (6,-9,12), (9,-6,12), (-6,-3,12)								
LiNbO3	(-3,9,12)	12.272	82.26	17.165	15.7	1.684	26.48	21.05	33.83
	Equiv. Refl.: (-9,3,12)								
LiNbO3	(3,-9,-12)	12.272	82.26	16.811	15.7	1.684	26.48	21.05	33.83
	Equiv. Refl.: (6,3,-12), (9,-3,-12), (-3,-6,-12), (-6,9,-12), (-9,6,-12)								
LiNbO3	(2,-9,-10)	12.229	80.88	15.455	13.8	1.987	27.39	24.84	36.98
	Equiv. Refl.: (7,2,-10), (9,-2,-10), (-2,-7,-10), (-7,9,-10), (-9,7,-10)								
LiNbO3	(3,-9,12)	12.272	82.26	14.836	13.9	1.684	23.4	21.05	31.48
	Equiv. Refl.: (6,3,12), (9,-3,12), (-3,-6,12), (-6,9,12), (-9,6,12)								
LiNbO3	(2,-6,-22)	12.285	82.71	14.786	14.1	1.584	22.27	19.8	29.8
	Equiv. Refl.: (4,2,-22), (6,-2,-22), (-2,-4,-22), (-4,6,-22), (-6,4,-22)								
LiNbO3	(4,-6,22)	12.285	82.71	14.734	14.1	1.584	22.27	19.8	29.8
	Equiv. Refl.: (6,-4,22)								
LiNbO3	(2,4,22)	12.285	82.71	14.733	14.1	1.584	22.27	19.8	29.8
	Equiv. Refl.: (-2,6,22), (-4,-2,22), (-6,2,22)								
LiNbO3	(3,6,-12)	12.272	82.26	14.57	13.9	1.684	23.4	21.05	31.48
	Equiv. Refl.: (6,-9,-12), (9,-6,-12), (-3,9,-12), (-6,-3,-12), (-9,3,-12)								
LiNbO3	(2,7,10)	12.229	80.88	14.45	13.8	1.987	27.39	24.84	36.98
	Equiv. Refl.: (7,-9,10), (9,-7,10), (-2,9,10), (-7,-2,10), (-9,2,10)								
LiNbO3	(0,5,22)	12.047	76.58	13.536	11.8	2.956	34.96	36.95	50.87
	Equiv. Refl.: (5,-5,22), (-5,0,22)								
LiNbO3	(4,6,4)	12.253	81.64	13.417	12.7	1.821	23.11	22.76	32.44
	Equiv. Refl.: (6,-10,4), (10,-6,4), (-4,10,4), (-6,-4,4), (-10,4,4)								

Ei =	12.385	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(4,-10,-4)	12.253	81.64	13.357	12.7	1.821	23.11	22.76	32.43
	Equiv. Refl.: (6,4,-4), (10,-4,-4), (-4,-6,-4), (-6,10,-4), (-10,6,-4)								
LiNbO3	(0,-5,-22)	12.047	76.58	12.941	11.8	2.956	34.96	36.95	50.87
	Equiv. Refl.: (5,0,-22), (-5,5,-22)								
LiNbO3	(4,6,-2)	12.155	78.94	12.826	11.6	2.421	28.11	30.26	41.3
	Equiv. Refl.: (6,-10,-2), (10,-6,-2), (-4,10,-2), (-6,-4,-2), (-10,4,-2)								
LiNbO3	(1,2,26)	12.195	79.94	12.589	11.7	2.196	25.74	27.45	37.63
	Equiv. Refl.: (2,-3,26), (3,-2,26), (-1,3,26), (-2,-1,26), (-3,1,26)								
LiNbO3	(1,-3,-26)	12.195	79.94	12.565	11.7	2.196	25.74	27.45	37.63
	Equiv. Refl.: (2,1,-26), (3,-1,-26), (-1,-2,-26), (-2,3,-26), (-3,2,-26)								
LiNbO3	(4,-10,2)	12.155	78.94	12.422	11.6	2.421	28.11	30.26	41.3
	Equiv. Refl.: (6,4,2), (10,-4,2), (-4,-6,2)								
LiNbO3	(-6,10,2)	12.155	78.94	12.421	11.6	2.421	28.11	30.26	41.3
	Equiv. Refl.: (-10,6,2)								
LiNbO3	(5,5,0)	12.042	76.48	12.361	11.1	2.977	33.13	37.21	49.82
	Equiv. Refl.: (5,-10,0), (10,-5,0), (-5,10,0), (-5,-5,0), (-10,5,0)								
Quartz	(-5,8,-6)	12.304	83.43	11.832	9.7	1.426	13.86	17.83	22.58
	Equiv. Refl.: (-5,-3,6)								
Quartz	(8,-3,-6)	12.304	83.43	11.83	9.7	1.426	13.86	17.83	22.58
	Equiv. Refl.: (8,-5,6), (-3,8,6)								
Quartz	(-3,-5,-6)	12.304	83.43	11.829	9.7	1.426	13.86	17.83	22.58
Quartz	(5,3,-6)	12.304	83.43	11.742	9.7	1.426	13.86	17.83	22.58
	Equiv. Refl.: (5,-8,6)								
Quartz	(-8,3,6)	12.304	83.43	11.74	9.7	1.426	13.86	17.83	22.58
	Equiv. Refl.: (-8,5,-6)								
Quartz	(3,5,6)	12.304	83.43	11.739	9.7	1.426	13.86	17.83	22.58
	Equiv. Refl.: (3,-8,-6)								
LiNbO3	(0,-2,26)	11.955	74.85	10.257	9.3	3.353	31.2	41.92	52.26
	Equiv. Refl.: (2,0,26), (-2,2,26)								
LiNbO3	(3,-8,-16)	12.08	77.26	10.225	8.9	2.8	24.82	35	42.91
	Equiv. Refl.: (5,3,-16), (8,-3,-16), (-3,-5,-16), (-5,8,-16), (-8,5,-16)								
LiNbO3	(0,2,-26)	11.955	74.85	10.197	9.3	3.353	31.2	41.92	52.26
	Equiv. Refl.: (2,-2,-26), (-2,0,-26)								
LiNbO3	(1,-9,4)	12.014	75.95	10.112	8.9	3.101	27.74	38.76	47.66
	Equiv. Refl.: (8,1,4), (9,-1,4), (-1,-8,4), (-8,9,4), (-9,8,4)								
LiNbO3	(0,8,-8)	11.685	70.64	9.843	8.6	4.351	37.21	54.38	65.89
	Equiv. Refl.: (8,-8,-8), (-8,0,-8)								
LiNbO3	(1,8,-4)	12.014	75.95	9.728	8.9	3.101	27.74	38.76	47.66
	Equiv. Refl.: (8,-9,-4), (9,-8,-4), (-1,9,-4), (-8,-1,-4), (-9,1,-4)								
LiNbO3	(1,8,2)	11.914	74.15	9.4	8.4	3.517	29.38	43.96	52.88
	Equiv. Refl.: (8,-9,2), (9,-8,2), (-1,9,2), (-8,-1,2), (-9,1,2)								
LiNbO3	(0,-7,16)	12.08	77.26	9.378	8.6	2.8	23.94	35	42.4
	Equiv. Refl.: (7,0,16), (-7,7,16)								
LiNbO3	(0,-8,8)	11.685	70.64	9.305	8.6	4.351	37.21	54.38	65.89
	Equiv. Refl.: (8,0,8), (-8,8,8)								
LiNbO3	(1,-9,-2)	11.914	74.15	9.265	8.4	3.517	29.38	43.96	52.88
	Equiv. Refl.: (8,1,-2), (9,-1,-2), (-1,-8,-2), (-8,9,-2), (-9,8,-2)								
LiNbO3	(0,8,10)	11.989	75.47	9.246	8	3.209	25.61	40.11	47.59
	Equiv. Refl.: (8,-8,10), (-8,0,10)								
LiNbO3	(2,2,24)	11.764	71.77	9.205	8.1	4.078	33.02	50.98	60.74
	Equiv. Refl.: (2,-4,24), (4,-2,24), (-2,-2,24)								

Ei = Cryst	12.385 Refl (h,k,l)	keV EB [keV]	Θ B [$^{\circ}$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
LiNbO3	(-2,4,24)	11.764	71.77	9.204	8.1	4.078	33.02	50.98	60.74
	Equiv. Refl.: (-4,2,24)								
LiNbO3	(2,2,-24)	11.764	71.77	9.184	8.1	4.078	33.02	50.98	60.74
	Equiv. Refl.: (2,-4,-24), (4,-2,-24), (-2,4,-24), (-2,-2,-24), (-4,2,-24)								
LiNbO3	(0,7,-16)	12.08	77.26	9.081	8.6	2.8	23.94	35	42.4
	Equiv. Refl.: (7,-7,-16), (-7,0,-16)								
LiNbO3	(3,5,16)	12.08	77.26	9.064	8.9	2.8	24.82	35	42.91
	Equiv. Refl.: (5,-8,16), (8,-5,16), (-3,8,16), (-5,-3,16), (-8,3,16)								
LiNbO3	(2,6,14)	11.821	72.64	9.004	7.9	3.872	30.54	48.4	57.23
	Equiv. Refl.: (6,-8,14), (8,-6,14), (-2,8,14), (-6,-2,14), (-8,2,14)								
LiNbO3	(2,5,18)	11.84	72.95	8.906	7.9	3.799	30.14	47.49	56.25
	Equiv. Refl.: (5,-7,18), (7,-5,18), (-2,7,18), (-5,-2,18), (-7,2,18)								
LiNbO3	(2,-7,-18)	11.84	72.95	8.857	7.9	3.799	30.14	47.49	56.25
	Equiv. Refl.: (5,2,-18), (7,-2,-18), (-2,-5,-18), (-5,7,-18), (-7,5,-18)								
LiNbO3	(2,-8,-14)	11.821	72.64	8.696	7.9	3.872	30.54	48.4	57.23
	Equiv. Refl.: (6,2,-14), (8,-2,-14), (-2,-6,-14), (-6,8,-14), (-8,6,-14)								
LiNbO3	(2,-7,18)	11.84	72.95	8.587	7.7	3.799	29.13	47.49	55.72
	Equiv. Refl.: (5,2,18), (7,-2,18), (-2,-5,18), (-5,7,18), (-7,5,18)								
LiNbO3	(2,5,-18)	11.84	72.95	8.477	7.7	3.799	29.13	47.49	55.72
	Equiv. Refl.: (5,-7,-18), (7,-5,-18), (-2,7,-18), (-5,-2,-18), (-7,2,-18)								
LiNbO3	(1,-8,12)	11.79	72.17	8.392	7.5	3.984	29.69	49.8	57.98
	Equiv. Refl.: (7,1,12), (8,-1,12), (-1,-7,12), (-7,8,12), (-8,7,12)								
LiNbO3	(1,7,-12)	11.79	72.17	8.223	7.5	3.984	29.69	49.8	57.98
	Equiv. Refl.: (7,-8,-12), (8,-7,-12), (-1,8,-12), (-7,-1,-12), (-8,1,-12)								
LiNbO3	(0,-8,-10)	11.989	75.47	8.173	8	3.209	25.61	40.11	47.59
	Equiv. Refl.: (8,0,-10), (-8,8,-10)								
LiNbO3	(4,5,-10)	11.745	71.5	8.045	7	4.145	29.11	51.81	59.43
	Equiv. Refl.: (5,-9,-10), (9,-5,-10), (-4,9,-10), (-5,-4,-10), (-9,4,-10)								
LiNbO3	(2,-9,8)	11.931	74.43	7.785	7	3.451	24.16	43.13	49.44
	Equiv. Refl.: (7,2,8), (9,-2,8), (-2,-7,8), (-7,9,8), (-9,7,8)								
LiNbO3	(1,5,20)	11.829	72.77	7.768	7.1	3.842	27.12	48.02	55.15
	Equiv. Refl.: (5,-6,20), (6,-5,20), (-1,6,20), (-5,-1,20), (-6,1,20)								
LiNbO3	(1,-6,-20)	11.829	72.77	7.726	7.1	3.842	27.12	48.02	55.15
	Equiv. Refl.: (5,1,-20), (6,-1,-20), (-1,-5,-20), (-5,6,-20), (-6,5,-20)								
Quartz	(5,1,-8)	12.248	81.46	7.643	6.2	1.859	11.56	23.24	25.95
Quartz	(5,-6,8)	12.248	81.46	7.642	6.2	1.859	11.56	23.24	25.95
Quartz	(-6,5,-8)	12.248	81.46	7.636	6.2	1.859	11.55	23.24	25.95
Quartz	(-6,1,8)	12.248	81.46	7.635	6.2	1.859	11.55	23.24	25.95
Quartz	(1,5,8)	12.248	81.46	7.633	6.2	1.859	11.55	23.24	25.95
Quartz	(1,-6,-8)	12.248	81.46	7.632	6.2	1.859	11.54	23.24	25.95
Quartz	(-5,6,-8)	12.248	81.46	7.628	6.2	1.859	11.56	23.24	25.95
	Equiv. Refl.: (-5,-1,8)								
Quartz	(6,-5,8)	12.248	81.46	7.622	6.2	1.859	11.55	23.24	25.95
Quartz	(6,-1,-8)	12.248	81.46	7.621	6.2	1.859	11.55	23.24	25.95
Quartz	(-1,-5,-8)	12.248	81.46	7.618	6.2	1.859	11.55	23.24	25.95
Quartz	(-1,6,8)	12.248	81.46	7.617	6.2	1.859	11.54	23.24	25.95
LiNbO3	(4,-9,10)	11.745	71.5	7.535	7	4.145	29.11	51.81	59.43
	Equiv. Refl.: (5,4,10), (9,-4,10), (-4,-5,10), (-5,9,10), (-9,5,10)								
LiNbO3	(1,7,12)	11.79	72.17	7.439	6.7	3.984	26.85	49.8	56.58
	Equiv. Refl.: (7,-8,12), (8,-7,12), (-1,8,12), (-7,-1,12), (-8,1,12)								

Ei = Cryst	12.385 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(0,3,10)	12.275	82.35	7.355	6	1.663	9.98	20.79	23.06
	Equiv. Refl.: (0,-3,-10), (-3,0,10)								
Quartz	(3,0,-10)	12.275	82.35	7.354	6	1.663	9.98	20.79	23.06
	Equiv. Refl.: (3,-3,10), (-3,3,-10)								
LiNbO3	(-7,8,-12)	11.79	72.17	7.305	6.7	3.984	26.85	49.8	56.58
	Equiv. Refl.: (-8,7,-12)								
LiNbO3	(1,-8,-12)	11.79	72.17	7.304	6.7	3.984	26.85	49.8	56.58
	Equiv. Refl.: (7,1,-12), (8,-1,-12), (-1,-7,-12)								
LiNbO3	(2,7,-8)	11.931	74.43	7.282	7	3.451	24.16	43.13	49.44
	Equiv. Refl.: (7,-9,-8), (9,-7,-8), (-2,9,-8), (-7,-2,-8), (-9,2,-8)								
LiNbO3	(0,1,26)	11.709	70.99	7.095	6.4	4.267	27.44	53.34	59.98
	Equiv. Refl.: (1,-1,26), (-1,0,26)								
LiNbO3	(0,-1,-26)	11.709	70.99	6.992	6.4	4.267	27.44	53.34	59.98
	Equiv. Refl.: (1,0,-26), (-1,1,-26)								
Sapph	(0,8,4)	12.186	79.71	6.959	5.8	2.248	12.97	28.1	30.95
	Equiv. Refl.: (0,-8,-4), (8,0,-4), (8,-8,4), (-8,0,4), (-8,8,-4)								
Quartz	(-4,9,-4)	12.27	82.17	6.87	5.7	1.703	9.74	21.29	23.41
	Equiv. Refl.: (-4,-5,4), (-5,9,4), (-5,-4,-4)								
Quartz	(9,-4,4)	12.27	82.17	6.869	5.7	1.703	9.73	21.29	23.41
	Equiv. Refl.: (9,-5,-4)								
Quartz	(4,5,-4)	12.27	82.17	6.827	5.7	1.703	9.74	21.29	23.41
	Equiv. Refl.: (4,-9,4), (5,4,4), (5,-9,-4)								
Quartz	(-9,5,4)	12.27	82.17	6.826	5.7	1.703	9.74	21.29	23.41
Quartz	(-9,4,-4)	12.27	82.17	6.825	5.7	1.703	9.73	21.29	23.41
Sapph	(3,6,0)	11.941	74.61	6.631	5.3	3.409	18	42.61	46.26
	Equiv. Refl.: (3,-9,0), (6,3,0), (6,-9,0), (9,-3,0), (9,-6,0), (-3,9,0), (-3,-6,0), (-6,9,0), (-6,-3,0), (-9,3,0), (-9,6,0)								
Sapph	(2,3,-22)	12.38	88.35	6.485	7.7	0.357	2.75	4.46	5.24
	Equiv. Refl.: (2,-5,22), (3,2,22), (3,-5,-22), (5,-2,22), (5,-3,-22), (-2,5,-22), (-2,-3,22), (-3,5,22), (-3,-2,-22), (-5,2,-22), (-5,3,22)								
Quartz	(-5,7,-7)	12.135	78.47	6.033	4.8	2.527	12.06	31.59	33.81
Quartz	(-5,-2,7)	12.135	78.47	6.032	4.8	2.527	12.06	31.59	33.81
Quartz	(-2,-5,-7)	12.135	78.47	6.03	4.8	2.527	12.05	31.59	33.81
Quartz	(-2,7,7)	12.135	78.47	6.029	4.8	2.527	12.05	31.59	33.81
Quartz	(7,-2,-7)	12.135	78.47	6.027	4.8	2.527	12.05	31.59	33.81
	Equiv. Refl.: (7,-5,7)								
Quartz	(5,2,-7)	12.135	78.47	5.927	4.8	2.527	12.06	31.59	33.81
	Equiv. Refl.: (5,-7,7)								
Quartz	(2,5,7)	12.135	78.47	5.924	4.8	2.527	12.05	31.59	33.81
Quartz	(2,-7,-7)	12.135	78.47	5.923	4.8	2.527	12.05	31.59	33.81
Quartz	(-7,2,7)	12.135	78.47	5.922	4.8	2.527	12.05	31.59	33.81
	Equiv. Refl.: (-7,-5,-7)								
Sapph	(1,1,24)	11.748	71.54	5.638	4.5	4.135	18.6	51.68	54.93
	Equiv. Refl.: (1,1,-24), (1,-2,24), (1,-2,-24), (2,-1,24), (2,-1,-24), (-1,2,24), (-1,2,-24), (-1,-1,24), (-1,-1,-24), (-2,1,24), (-2,1,-24)								
Sapph	(1,5,-19)	12.345	85.4	5.606	5.3	0.997	5.3	12.47	13.55
	Equiv. Refl.: (1,-6,19), (5,1,19), (5,-6,-19), (6,-1,19), (6,-5,-19), (-1,6,-19), (-1,-5,19), (-5,6,19), (-5,-1,-19), (-6,1,-19), (-6,5,19)								

Ei = Cryst	12.385 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Sapph	(4,5,-4)	11.904	73.98	4.874	3.9	3.556	13.7	44.45	46.52
	Equiv. Refl.: (4,-9,4), (5,4,4), (5,-9,-4), (9,-4,4), (9,-5,-4), (-4,9,-4), (-4,-5,4), (-5,9,4), (-5,-4,-4), (-9,4,-4), (-9,5,4)								
Quartz	(0,7,-5)	11.701	70.87	4.497	3.5	4.297	15.14	53.71	55.8
	Equiv. Refl.: (0,-7,5)								
Quartz	(7,0,5)	11.701	70.87	4.495	3.5	4.297	15.13	53.71	55.8
	Equiv. Refl.: (7,-7,-5), (-7,0,-5), (-7,7,5)								
LiNbO3	(1,1,27)	12.312	83.76	4.39	5.9	1.354	8.03	16.93	18.74
	Equiv. Refl.: (1,1,-27), (1,-2,27), (1,-2,-27), (2,-1,27), (2,-1,-27), (-1,2,27), (-1,2,-27), (-1,-1,27), (-1,-1,-27), (-2,1,27), (-2,1,-27)								
Quartz	(-2,9,-2)	12.145	78.69	4.226	3.3	2.477	8.27	30.96	32.04
	Equiv. Refl.: (-2,-7,2)								
Quartz	(9,-2,2)	12.145	78.69	4.225	3.3	2.477	8.26	30.96	32.04
	Equiv. Refl.: (9,-7,-2), (-7,9,2), (-7,-2,-2)								
Quartz	(4,3,7)	11.959	74.92	4.051	3.1	3.336	10.41	41.7	42.98
	Equiv. Refl.: (4,-7,-7)								
Quartz	(3,4,-7)	11.959	74.92	4.047	3.1	3.336	10.4	41.7	42.98
	Equiv. Refl.: (-7,3,-7), (-7,4,7)								
Quartz	(3,-7,7)	11.959	74.92	4.046	3.1	3.336	10.4	41.7	42.98
Quartz	(2,7,-2)	12.145	78.69	4.02	3.3	2.477	8.27	30.96	32.04
	Equiv. Refl.: (2,-9,2)								
Quartz	(7,2,2)	12.145	78.69	4.019	3.3	2.477	8.26	30.96	32.04
	Equiv. Refl.: (7,-9,-2), (-9,2,-2), (-9,7,2)								
Quartz	(-4,7,7)	11.959	74.92	3.885	3.1	3.336	10.41	41.7	42.98
	Equiv. Refl.: (-4,-3,-7)								
Quartz	(7,-3,7)	11.959	74.92	3.882	3.1	3.336	10.4	41.7	42.98
	Equiv. Refl.: (-3,-4,7)								
Quartz	(7,-4,-7)	11.959	74.92	3.881	3.1	3.336	10.4	41.7	42.98
	Equiv. Refl.: (-3,7,-7)								
Quartz	(2,7,1)	11.981	75.32	3.866	3	3.243	9.67	40.54	41.68
	Equiv. Refl.: (2,-9,-1), (-9,2,1), (-9,7,-1)								
Quartz	(7,2,-1)	11.981	75.32	3.865	3	3.243	9.67	40.54	41.68
	Equiv. Refl.: (7,-9,1)								
Sapph	(1,7,6)	11.714	71.05	3.812	3.1	4.253	13	53.16	54.73
	Equiv. Refl.: (1,7,-6), (1,-8,6), (1,-8,-6), (7,1,6), (7,1,-6), (7,-8,6), (7,-8,-6), (8,-1,6), (8,-1,-6), (8,-7,6), (8,-7,-6), (-1,8,6), (-1,8,-6), (-1,-7,6), (-1,-7,-6), (-7,8,6), (-7,8,-6), (-7,-1,6), (-7,-1,-6), (-8,1,6), (-8,1,-6), (-8,7,6), (-8,7,-6)								
Quartz	(-5,2,9)	12.12	78.13	3.806	3.1	2.603	8.14	32.53	33.54
	Equiv. Refl.: (-5,3,-9)								
Quartz	(5,-2,-9)	12.12	78.13	3.805	3.1	2.603	8.14	32.53	33.54
	Equiv. Refl.: (5,-3,9)								
Quartz	(3,-5,9)	12.12	78.13	3.802	3.1	2.603	8.14	32.53	33.53
Quartz	(3,2,-9)	12.12	78.13	3.801	3.1	2.603	8.13	32.53	33.53
	Equiv. Refl.: (-3,5,-9)								
Quartz	(2,-5,-9)	12.12	78.13	3.8	3.1	2.603	8.13	32.53	33.53
	Equiv. Refl.: (-3,-2,9)								
Quartz	(2,3,9)	12.12	78.13	3.799	3.1	2.603	8.13	32.53	33.53
	Equiv. Refl.: (-2,5,9)								
Quartz	(-2,-3,-9)	12.12	78.13	3.798	3.1	2.603	8.13	32.53	33.53

Ei = Cryst	12.385 Refl (h,k,l)	keV EB [keV]	Θ B [$^\circ$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Sapph	(1,4,21)	12.165	79.19	3.574	3.1	2.365	7.43	29.56	30.48
	Equiv. Refl.: (1,4,-21), (1,-5,21), (1,-5,-21), (4,1,21), (4,1,-21), (4,-5,21), (4,-5,-21), (5,-1,21), (5,-1,-21), (5,-4,21), (5,-4,-21), (-1,5,21), (-1,5,-21), (-1,-4,21), (-1,-4,-21), (-4,5,21), (-4,5,-21), (-4,-1,21), (-4,-1,-21), (-5,1,21), (-5,1,-21), (-5,4,21), (-5,4,-21)								
Quartz	(0,6,7)	11.87	73.41	3.527	2.8	3.689	10.36	46.11	47.26
	Equiv. Refl.: (0,-6,-7)								
Quartz	(6,0,-7)	11.87	73.41	3.522	2.8	3.689	10.35	46.11	47.26
	Equiv. Refl.: (6,-6,7), (-6,0,7), (-6,6,-7)								
Quartz	(2,3,-9)	12.12	78.13	3.515	2.9	2.603	7.59	32.53	33.41
Quartz	(2,-5,9)	12.12	78.13	3.514	2.9	2.603	7.58	32.53	33.4
Quartz	(3,2,9)	12.12	78.13	3.513	2.9	2.603	7.58	32.53	33.4
Quartz	(3,-5,-9)	12.12	78.13	3.512	2.9	2.603	7.58	32.53	33.4
Quartz	(-5,2,-9)	12.12	78.13	3.505	2.9	2.603	7.57	32.53	33.4
	Equiv. Refl.: (-5,3,9)								
Sapph	(0,5,-20)	12.153	78.9	3.493	3.3	2.429	7.99	30.37	31.4
	Equiv. Refl.: (0,-5,20), (5,0,20), (5,-5,-20), (-5,0,-20), (-5,5,20)								
Quartz	(-2,-3,9)	12.12	78.13	3.489	2.9	2.603	7.59	32.53	33.41
Quartz	(-2,5,-9)	12.12	78.13	3.488	2.9	2.603	7.58	32.53	33.4
Quartz	(-3,-2,-9)	12.12	78.13	3.487	2.9	2.603	7.58	32.53	33.4
Quartz	(-3,5,9)	12.12	78.13	3.486	2.9	2.603	7.58	32.53	33.4
Quartz	(5,-2,9)	12.12	78.13	3.479	2.9	2.603	7.57	32.53	33.4
	Equiv. Refl.: (5,-3,-9)								
Quartz	(4,5,4)	12.27	82.17	3.425	3.2	1.703	5.49	21.29	21.98
	Equiv. Refl.: (4,-9,-4)								
Quartz	(-9,4,4)	12.27	82.17	3.424	3.2	1.703	5.48	21.29	21.98
	Equiv. Refl.: (-9,5,-4)								
Quartz	(5,4,-4)	12.27	82.17	3.422	3.2	1.703	5.48	21.29	21.98
	Equiv. Refl.: (5,-9,4)								
Sapph	(4,5,-7)	12.216	80.51	3.413	3	2.069	6.18	25.87	26.59
	Equiv. Refl.: (4,-9,7), (5,4,7), (5,-9,-7), (9,-4,7), (9,-5,-7), (-4,9,-7), (-4,-5,7), (-5,9,7), (-5,-4,-7), (-9,4,-7), (-9,5,7)								
Quartz	(9,-5,4)	12.27	82.17	3.369	3.2	1.703	5.48	21.29	21.98
	Equiv. Refl.: (-4,-5,-4)								
Quartz	(9,-4,-4)	12.27	82.17	3.368	3.2	1.703	5.48	21.29	21.98
	Equiv. Refl.: (-4,9,4)								
Quartz	(-5,9,-4)	12.27	82.17	3.366	3.2	1.703	5.48	21.29	21.98
	Equiv. Refl.: (-5,-4,4)								
Quartz	(3,-1,-10)	12.101	77.7	3.322	2.6	2.701	7.05	33.76	34.49
	Equiv. Refl.: (3,-2,10)								
Quartz	(-2,3,-10)	12.101	77.7	3.318	2.6	2.701	7.04	33.76	34.49
Quartz	(-2,-1,10)	12.101	77.7	3.317	2.6	2.701	7.04	33.76	34.49
Quartz	(-1,-2,-10)	12.101	77.7	3.315	2.6	2.701	7.04	33.76	34.49
Quartz	(-1,3,10)	12.101	77.7	3.314	2.6	2.701	7.04	33.76	34.49
Quartz	(-2,9,1)	11.981	75.32	3.255	3	3.243	9.67	40.54	41.68
	Equiv. Refl.: (-2,-7,-1)								
Quartz	(9,-2,-1)	11.981	75.32	3.254	3	3.243	9.67	40.54	41.68
	Equiv. Refl.: (9,-7,1), (-7,9,-1), (-7,-2,1)								
Quartz	(-3,1,10)	12.101	77.7	3.21	2.6	2.701	7.05	33.76	34.49
	Equiv. Refl.: (-3,2,-10)								
Quartz	(2,1,-10)	12.101	77.7	3.206	2.6	2.701	7.04	33.76	34.49
	Equiv. Refl.: (2,-3,10)								
Quartz	(1,2,10)	12.101	77.7	3.204	2.6	2.701	7.04	33.76	34.49

Ei =	12.385	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(1,-3,-10)	12.101	77.7	3.202	2.6	2.701	7.04	33.76	34.49
Quartz	(-8,4,-6)	12.217	80.56	3.199	2.6	2.06	5.42	25.75	26.32
Quartz	(-8,4,6)	12.217	80.56	3.198	2.6	2.06	5.42	25.75	26.32
Quartz	(4,4,6)	12.217	80.56	3.196	2.6	2.06	5.41	25.75	26.31
	Equiv. Refl.: (4,4,-6), (4,-8,6), (4,-8,-6)								
Quartz	(8,-1,4)	11.918	74.22	3.176	2.5	3.499	8.76	43.74	44.61
	Equiv. Refl.: (8,-7,-4), (-1,8,-4), (-1,-7,4), (-7,8,4), (-7,-1,-4)								
LiNbO3	(4,6,-5)	12.326	84.43	3.175	5.3	1.208	6.41	15.1	16.41
	Equiv. Refl.: (4,-10,5), (6,4,5), (6,-10,-5), (10,-4,5), (10,-6,-5), (-4,10,-5), (-4,-6,5), (-6,10,5), (-6,-4,-5), (-10,4,-5), (-10,6,5)								
Quartz	(9,-3,2)	11.79	72.16	3.155	2.4	3.985	9.57	49.81	50.72
	Equiv. Refl.: (9,-6,-2), (-3,9,-2), (-3,-6,2), (-6,9,2), (-6,-3,-2)								
Quartz	(3,6,-2)	11.79	72.16	3.132	2.4	3.985	9.57	49.81	50.72
	Equiv. Refl.: (3,-9,2), (6,3,2), (6,-9,-2), (-9,3,-2), (-9,6,2)								
Quartz	(-8,1,-4)	11.918	74.22	3.13	2.5	3.499	8.76	43.74	44.61
Quartz	(1,7,-4)	11.918	74.22	3.129	2.5	3.499	8.76	43.74	44.61
	Equiv. Refl.: (1,-8,4), (7,1,4), (7,-8,-4), (-8,7,4)								
Quartz	(8,-4,6)	12.217	80.56	3.067	2.6	2.06	5.42	25.75	26.32
Quartz	(8,-4,-6)	12.217	80.56	3.065	2.6	2.06	5.42	25.75	26.32
Quartz	(-4,8,6)	12.217	80.56	3.063	2.6	2.06	5.41	25.75	26.31
	Equiv. Refl.: (-4,8,-6), (-4,-4,6), (-4,-4,-6)								
Quartz	(1,4,9)	12.294	83.06	2.909	2.6	1.508	3.93	18.85	19.26
Quartz	(1,-5,-9)	12.294	83.06	2.908	2.6	1.508	3.92	18.85	19.26
Quartz	(4,1,-9)	12.294	83.06	2.906	2.6	1.508	3.92	18.85	19.26
Quartz	(-5,1,9)	12.294	83.06	2.905	2.6	1.508	3.92	18.85	19.26
	Equiv. Refl.: (-5,4,-9)								
Quartz	(4,-5,9)	12.294	83.06	2.904	2.6	1.508	3.92	18.85	19.26
Quartz	(-8,3,-6)	12.304	83.43	2.884	2.7	1.426	3.86	17.83	18.24
	Equiv. Refl.: (-8,5,6)								
Quartz	(5,3,6)	12.304	83.43	2.883	2.7	1.426	3.86	17.83	18.24
	Equiv. Refl.: (5,-8,-6)								
Quartz	(3,5,-6)	12.304	83.43	2.879	2.7	1.426	3.86	17.83	18.24
Quartz	(3,-8,6)	12.304	83.43	2.878	2.7	1.426	3.85	17.83	18.24
Quartz	(6,3,-2)	11.79	72.16	2.83	2.2	3.985	8.72	49.81	50.57
	Equiv. Refl.: (6,-9,2), (-9,3,2), (-9,6,-2)								
Quartz	(3,6,2)	11.79	72.16	2.829	2.2	3.985	8.71	49.81	50.57
	Equiv. Refl.: (3,-9,-2)								
Quartz	(-3,9,-3)	12.066	76.96	2.824	2.3	2.869	6.46	35.86	36.44
	Equiv. Refl.: (-6,9,3), (-6,-3,-3)								
Quartz	(2,7,-1)	11.981	75.32	2.823	2.2	3.243	7.27	40.54	41.19
	Equiv. Refl.: (2,-9,1), (7,2,1), (7,-9,-1), (-3,-6,3), (-9,2,-1), (-9,7,1)								
Quartz	(9,-3,3)	12.066	76.96	2.822	2.3	2.869	6.46	35.86	36.44
	Equiv. Refl.: (9,-3,-2), (9,-6,2), (9,-6,-3), (-6,9,-2), (-6,-3,2)								
Quartz	(-3,9,2)	11.79	72.16	2.821	2.2	3.985	8.71	49.81	50.57
	Equiv. Refl.: (-3,-6,-2)								
Quartz	(-2,9,-1)	11.981	75.32	2.794	2.2	3.243	7.27	40.54	41.19
	Equiv. Refl.: (-2,-7,1), (-7,9,1), (-7,-2,-1)								
Quartz	(9,-2,1)	11.981	75.32	2.793	2.2	3.243	7.27	40.54	41.19
	Equiv. Refl.: (9,-7,-1)								
Quartz	(0,8,-1)	11.712	71.03	2.782	2.4	4.258	10.43	53.22	54.23
	Equiv. Refl.: (0,-8,1), (8,0,1), (8,-8,-1), (-8,0,-1), (-8,8,1)								

Ei =	12.385	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	ΘB	$\int IR d\Theta$	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(2,7,1)	12.323	84.29	2.771	3.1	1.239	3.8	15.49	15.95
	Equiv. Refl.: (2,-9,-1), (7,2,-1), (7,-9,1), (9,-2,-1), (9,-7,1), (-2,9,1), (-2,-7,-1), (-7,9,-1), (-7,-2,1), (-9,2,1), (-9,7,-1)								
Quartz	(-3,1,-10)	12.101	77.7	2.758	2.5	2.701	6.78	33.76	34.43
	Equiv. Refl.: (-3,2,10)								
Quartz	(1,2,-10)	12.101	77.7	2.757	2.5	2.701	6.78	33.76	34.43
Quartz	(1,-3,10)	12.101	77.7	2.756	2.5	2.701	6.78	33.76	34.43
Quartz	(2,1,10)	12.101	77.7	2.755	2.5	2.701	6.77	33.76	34.43
	Equiv. Refl.: (2,-3,-10)								
Quartz	(2,6,5)	11.97	75.12	2.696	2.4	3.29	7.92	41.13	41.88
	Equiv. Refl.: (2,-8,-5)								
Quartz	(6,2,-5)	11.97	75.12	2.695	2.4	3.29	7.92	41.13	41.88
	Equiv. Refl.: (-8,2,5), (-8,6,-5)								
Quartz	(6,-8,5)	11.97	75.12	2.694	2.4	3.29	7.92	41.13	41.88
Quartz	(3,-1,10)	12.101	77.7	2.671	2.5	2.701	6.78	33.76	34.43
	Equiv. Refl.: (3,-2,-10), (-1,-2,10)								
Quartz	(-1,3,-10)	12.101	77.7	2.67	2.5	2.701	6.78	33.76	34.43
Quartz	(-2,3,10)	12.101	77.7	2.669	2.5	2.701	6.77	33.76	34.43
	Equiv. Refl.: (-2,-1,-10)								
Quartz	(-1,-4,-9)	12.294	83.06	2.621	2.6	1.508	3.93	18.85	19.26
Quartz	(-1,5,9)	12.294	83.06	2.62	2.6	1.508	3.92	18.85	19.26
Quartz	(-4,-1,9)	12.294	83.06	2.619	2.6	1.508	3.92	18.85	19.26
Quartz	(5,-1,-9)	12.294	83.06	2.618	2.6	1.508	3.92	18.85	19.26
	Equiv. Refl.: (5,-4,9), (-4,5,-9)								
Sapph	(1,6,-14)	11.915	74.17	2.585	2.4	3.512	8.54	43.9	44.72
	Equiv. Refl.: (1,-7,14), (6,1,14), (6,-7,-14), (7,-1,14), (7,-6,-14), (-1,7,-14), (-1,-6,14), (-6,7,14), (-6,-1,-14), (-7,1,-14), (-7,6,14)								
Quartz	(-2,8,5)	11.97	75.12	2.576	2.4	3.29	7.92	41.13	41.88
	Equiv. Refl.: (-2,-6,-5)								
Quartz	(8,-2,-5)	11.97	75.12	2.575	2.4	3.29	7.92	41.13	41.88
	Equiv. Refl.: (8,-6,5), (-6,-2,5)								
Quartz	(-6,8,-5)	11.97	75.12	2.574	2.4	3.29	7.92	41.13	41.88
Quartz	(-5,8,6)	12.304	83.43	2.484	2.7	1.426	3.86	17.83	18.24
Quartz	(8,-3,6)	12.304	83.43	2.483	2.7	1.426	3.86	17.83	18.24
	Equiv. Refl.: (8,-5,-6), (-5,-3,-6)								
Quartz	(-3,-5,6)	12.304	83.43	2.481	2.7	1.426	3.86	17.83	18.24
Quartz	(-3,8,-6)	12.304	83.43	2.479	2.7	1.426	3.85	17.83	18.24
Quartz	(2,5,-7)	12.135	78.47	2.461	2.3	2.527	5.75	31.59	32.11
	Equiv. Refl.: (5,2,7), (5,-7,-7)								
Quartz	(2,-7,7)	12.135	78.47	2.46	2.3	2.527	5.75	31.59	32.11
	Equiv. Refl.: (-7,2,-7), (-7,5,7)								
Quartz	(3,6,-3)	12.066	76.96	2.456	2.3	2.869	6.46	35.86	36.44
	Equiv. Refl.: (3,-9,3), (6,3,3), (6,-9,-3)								
Quartz	(-9,3,-3)	12.066	76.96	2.455	2.3	2.869	6.46	35.86	36.44
	Equiv. Refl.: (-9,6,3)								
Quartz	(-2,-5,7)	12.135	78.47	2.45	2.3	2.527	5.75	31.59	32.11
	Equiv. Refl.: (-5,7,7), (-5,-2,-7)								
Quartz	(7,-5,-7)	12.135	78.47	2.449	2.3	2.527	5.75	31.59	32.11
	Equiv. Refl.: (-2,7,-7)								
Quartz	(7,-2,7)	12.135	78.47	2.448	2.3	2.527	5.75	31.59	32.11

Ei =	12.385	keV							
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	ΔEg	ΔEt
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	2m, 50μm	2m, 50μm
								[meV]	[meV]
Quartz	(4,0,9)	11.855	73.17	2.349	2	3.746	7.62	46.82	47.44
Quartz	(4,-4,-9)	11.855	73.17	2.348	2	3.746	7.62	46.82	47.44
	Equiv. Refl.: (-4,0,-9), (-4,4,9)								
Quartz	(0,4,-9)	11.855	73.17	2.345	2	3.746	7.61	46.82	47.44
	Equiv. Refl.: (0,-4,9)								
Sapph	(2,6,-10)	11.852	73.13	2.344	2.2	3.756	8.29	46.95	47.67
	Equiv. Refl.: (2,-8,10), (6,2,10), (6,-8,-10), (8,-2,10), (8,-6,-10), (-2,8,-10), (-2,-6,10), (-6,8,10), (-6,-2,-10), (-8,2,-10), (-8,6,10)								
Sapph	(2,6,11)	12.052	76.69	2.311	2.2	2.931	6.56	36.63	37.21
	Equiv. Refl.: (2,-8,-11), (6,2,-11), (6,-8,11), (8,-2,-11), (8,-6,11), (-2,8,11), (-2,-6,-11), (-6,8,-11), (-6,-2,11), (-8,2,11), (-8,6,-11)								
Quartz	(9,-3,-3)	12.066	76.96	2.306	2	2.869	5.84	35.86	36.33
	Equiv. Refl.: (9,-6,3), (-6,9,-3), (-6,-3,3)								
Quartz	(-3,9,3)	12.066	76.96	2.305	2	2.869	5.83	35.86	36.33
	Equiv. Refl.: (-3,-6,-3)								
Sapph	(2,7,-2)	12.351	85.76	2.295	3.1	0.917	2.81	11.47	11.81
	Equiv. Refl.: (2,-9,2), (7,2,2), (7,-9,-2), (9,-2,2), (9,-7,-2), (-2,9,-2), (-2,-7,2), (-7,9,2), (-7,-2,-2), (-9,2,-2), (-9,7,2)								
LiNbO3	(3,7,-1)	12.367	86.91	2.283	5.4	0.668	3.62	8.35	9.1
	Equiv. Refl.: (3,-10,1), (7,3,1), (7,-10,-1), (10,-3,1), (10,-7,-1), (-3,10,-1), (-3,-7,1), (-7,10,1), (-7,-3,-1), (-10,3,-1), (-10,7,1)								
Quartz	(3,3,8)	11.896	73.85	1.92	2	3.587	7.09	44.84	45.39
	Equiv. Refl.: (3,-6,-8)								
Quartz	(-6,3,8)	11.896	73.85	1.919	2	3.587	7.08	44.84	45.39
	Equiv. Refl.: (-6,3,-8)								
Quartz	(3,3,-8)	11.896	73.85	1.918	2	3.587	7.08	44.84	45.39
	Equiv. Refl.: (3,-6,8)								
Sapph	(3,6,6)	12.28	82.52	1.873	2.3	1.626	3.74	20.33	20.67
	Equiv. Refl.: (3,6,-6), (3,-9,6), (3,-9,-6), (6,3,6), (6,3,-6), (6,-9,6), (6,-9,-6), (9,-3,6), (9,-3,-6), (9,-6,6), (9,-6,-6), (-3,9,6), (-3,9,-6), (-3,-6,6), (-3,-6,-6), (-6,9,6), (-6,9,-6), (-6,-3,6), (-6,-3,-6), (-9,3,6), (-9,3,-6), (-9,6,6), (-9,6,-6)								
Sapph	(4,5,5)	11.99	75.49	1.86	2.1	3.206	6.61	40.08	40.62
	Equiv. Refl.: (4,-9,-5), (5,4,-5), (5,-9,5), (9,-4,-5), (9,-5,5), (-4,9,5), (-4,-5,-5), (-5,9,-5), (-5,-4,5), (-9,4,5), (-9,5,-5)								
Quartz	(-3,6,8)	11.896	73.85	1.806	2	3.587	7.09	44.84	45.39
	Equiv. Refl.: (-3,-3,-8)								
Quartz	(6,-3,8)	11.896	73.85	1.805	2	3.587	7.08	44.84	45.39
Quartz	(6,-3,-8)	11.896	73.85	1.804	2	3.587	7.08	44.84	45.39
Quartz	(-3,6,-8)	11.896	73.85	1.803	2	3.587	7.08	44.84	45.39
	Equiv. Refl.: (-3,-3,8)								
Quartz	(-9,3,3)	12.066	76.96	1.795	2	2.869	5.84	35.86	36.33
	Equiv. Refl.: (-9,6,-3)								
Quartz	(3,6,3)	12.066	76.96	1.794	2	2.869	5.83	35.86	36.33
	Equiv. Refl.: (3,-9,-3), (6,3,-3), (6,-9,3)								
Quartz	(7,1,-4)	11.918	74.22	1.783	1.9	3.499	6.55	43.74	44.22
	Equiv. Refl.: (7,-8,4)								
Quartz	(1,7,4)	11.918	74.22	1.782	1.9	3.499	6.55	43.74	44.22
	Equiv. Refl.: (1,-8,-4), (-8,1,4), (-8,7,-4)								
Quartz	(-1,7,-6)	11.775	71.94	1.744	1.8	4.039	7.2	50.49	51
	Equiv. Refl.: (-6,7,6), (-6,-1,-6)								

Ei = Cryst	12.385 RefI (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(-1,-6,6)	11.775	71.94	1.743	1.8	4.039	7.2	50.49	51
Quartz	(7,-1,6) Equiv. Refl.: (7,-6,-6)	11.775	71.94	1.742	1.8	4.039	7.2	50.49	51
Quartz	(7,-3,-7) Equiv. Refl.: (-3,7,7), (-3,-4,-7), (-4,7,-7), (-4,-3,7)	11.959	74.92	1.735	1.8	3.336	6.14	41.7	42.15
Sapph	(1,7,9) Equiv. Refl.: (1,7,-9), (1,-8,9), (1,-8,-9), (7,1,9), (7,1,-9), (7,-8,9), (7,-8,-9), (8,-1,9), (8,-1,-9), (8,-7,9), (8,-7,-9), (-1,8,9), (-1,8,-9), (-1,-7,9), (-1,-7,-9), (-7,8,9), (-7,8,-9), (-7,-1,9), (-7,-1,-9), (-8,1,9), (-8,1,-9), (-8,7,9), (-8,7,-9), (7,-4,7)	12.143	78.66	1.734	2	2.483	4.99	31.04	31.44
Quartz	(-7,8,-4) Equiv. Refl.: (-7,-1,4)	11.918	74.22	1.715	1.9	3.499	6.55	43.74	44.22
Quartz	(8,-1,-4) Equiv. Refl.: (8,-7,4), (-1,8,4), (-1,-7,-4)	11.918	74.22	1.714	1.9	3.499	6.55	43.74	44.22
Quartz	(3,4,7) Equiv. Refl.: (3,-7,-7), (4,3,-7)	11.959	74.92	1.677	1.8	3.336	6.14	41.7	42.15
Quartz	(4,-7,7) Equiv. Refl.: (-7,3,7)	11.959	74.92	1.676	1.8	3.336	6.14	41.7	42.15
Quartz	(-7,4,-7)	11.959	74.92	1.675	1.8	3.336	6.13	41.7	42.15
Quartz	(2,4,-8)	11.985	75.4	1.627	1.7	3.226	5.51	40.33	40.7
Quartz	(2,-6,8) Equiv. Refl.: (-6,2,-8), (-6,4,8)	11.985	75.4	1.626	1.7	3.226	5.51	40.33	40.7
Quartz	(4,2,8) Equiv. Refl.: (4,-6,-8)	11.985	75.4	1.624	1.7	3.226	5.5	40.33	40.7
Quartz	(1,-7,6) Equiv. Refl.: (1,-7,-6), (6,1,6), (6,-7,-6), (-7,6,-6)	11.775	71.94	1.619	1.8	4.039	7.2	50.49	51
Quartz	(1,6,6) Equiv. Refl.: (1,6,-6), (-7,1,6)	11.775	71.94	1.618	1.7	4.039	6.67	50.49	50.92
Quartz	(6,1,-6) Equiv. Refl.: (-7,1,-6), (-7,6,6)	11.775	71.94	1.617	1.6	4.039	6.66	50.49	50.92
Quartz	(6,-7,6)	11.775	71.94	1.616	1.6	4.039	6.66	50.49	50.92
LiNbO3	(4,5,-13) Equiv. Refl.: (4,-9,13), (5,4,13), (5,-9,-13), (9,-4,13), (9,-5,-13), (-4,9,-13), (-4,-5,13), (-5,9,13), (-5,-4,-13), (-9,4,-13), (-9,5,13)	12.318	84.04	1.608	3.4	1.293	4.35	16.16	16.73
LiNbO3	(1,6,-17) Equiv. Refl.: (1,-7,17), (6,1,17), (6,-7,-17), (7,-1,17), (7,-6,-17), (-1,7,-17), (-1,-6,17), (-6,7,17), (-6,-1,-17), (-7,1,-17), (-7,6,17)	11.871	73.44	1.602	2.4	3.682	8.81	46.03	46.87
LiNbO3	(4,6,1) Equiv. Refl.: (4,-10,-1), (6,4,-1), (6,-10,1), (10,-4,-1), (10,-6,1), (-4,10,1), (-4,-6,-1), (-6,10,-1), (-6,-4,1), (-10,4,1), (-10,6,-1)	12.13	78.36	1.596	2.6	2.552	6.74	31.9	32.6
Sapph	(4,5,-1) Equiv. Refl.: (4,-9,1), (5,4,1), (5,-9,-1), (9,-4,1), (9,-5,-1), (-4,9,-1), (-4,-5,1), (-5,9,1), (-5,-4,-1), (-9,4,-1), (-9,5,1)	11.76	71.71	1.569	1.7	4.093	7.09	51.16	51.65
Sapph	(0,4,-22) Equiv. Refl.: (0,-4,22), (4,0,22), (4,-4,-22), (-4,0,-22), (-4,4,22)	12.103	77.74	1.524	1.8	2.691	4.8	33.64	33.98
Quartz	(0,8,0) Equiv. Refl.: (0,-8,0), (8,0,0), (8,-8,0), (-8,0,0), (-8,8,0)	11.656	70.24	1.507	1.6	4.449	7.14	55.61	56.06
Sapph	(4,5,8) Equiv. Refl.: (4,-9,-8), (5,4,-8), (5,-9,8), (9,-4,-8), (9,-5,8), (-4,9,8), (-4,-5,-8), (-5,9,-8), (-5,-4,8), (-9,4,8), (-9,5,-8)	12.355	85.99	1.504	2.3	0.867	1.98	10.84	11.02
Quartz	(-2,-4,8)	11.985	75.4	1.499	1.7	3.226	5.51	40.33	40.7

Ei =	12.385	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(6,-2,8)	11.985	75.4	1.498	1.7	3.226	5.51	40.33	40.7
	Equiv. Refl.: (6,-4,-8), (-2,6,-8)								
Quartz	(-4,6,8)	11.985	75.4	1.497	1.7	3.226	5.5	40.33	40.7
	Equiv. Refl.: (-4,-2,-8)								
Quartz	(7,-1,-6)	11.775	71.94	1.467	1.7	4.039	6.67	50.49	50.92
	Equiv. Refl.: (7,-6,6), (-1,7,6), (-1,-6,-6)								
Quartz	(-6,7,-6)	11.775	71.94	1.465	1.6	4.039	6.66	50.49	50.92
	Equiv. Refl.: (-6,-1,6)								
Sapph	(2,5,15)	11.812	72.5	1.451	1.6	3.904	6.35	48.8	49.21
	Equiv. Refl.: (2,5,-15), (2,-7,15), (2,-7,-15), (5,2,15), (5,2,-15), (5,-7,15), (5,-7,-15), (7,-2,15), (7,-2,-15), (7,-5,15), (7,-5,-15), (-2,7,15), (-2,7,-15), (-2,-5,15), (-2,-5,-15), (-5,7,15), (-5,7,-15), (-5,-2,15), (-5,-2,-15), (-7,2,15), (-7,2,-15), (-7,5,15), (-7,5,-15)								
LiNbO3	(1,3,25)	12.252	81.6	1.386	2.7	1.829	4.93	22.86	23.39
	Equiv. Refl.: (1,-4,-25), (3,1,-25), (3,-4,25), (4,-1,-25), (4,-3,25), (-1,4,25), (-1,-3,-25), (-3,4,-25), (-3,-1,25), (-4,1,25), (-4,3,-25)								
LiNbO3	(2,7,7)	11.804	72.38	1.378	2.1	3.933	8.33	49.16	49.86
	Equiv. Refl.: (2,-9,-7), (7,2,-7), (7,-9,7), (9,-2,-7), (9,-7,7), (-2,9,7), (-2,-7,-7), (-7,9,-7), (-7,-2,7), (-9,2,7), (-9,7,-7)								
Quartz	(2,7,2)	12.145	78.69	1.372	1.6	2.477	3.87	30.96	31.2
	Equiv. Refl.: (2,-9,-2), (7,2,-2), (7,-9,2), (-9,2,2), (-9,7,-2)								
Quartz	(0,4,9)	11.855	73.17	1.351	1.5	3.746	5.54	46.82	47.15
	Equiv. Refl.: (0,-4,-9)								
Quartz	(4,-4,9)	11.855	73.17	1.348	1.5	3.746	5.53	46.82	47.15
	Equiv. Refl.: (-4,0,9), (-4,4,-9)								
Quartz	(4,0,-9)	11.855	73.17	1.347	1.5	3.746	5.53	46.82	47.15
Sapph	(3,5,13)	12.223	80.72	1.335	1.7	2.023	3.42	25.29	25.52
	Equiv. Refl.: (3,-8,-13), (5,3,-13), (5,-8,13), (8,-3,-13), (8,-5,13), (-3,8,13), (-3,-5,-13), (-5,8,-13), (-5,-3,13), (-8,3,13), (-8,5,-13)								
Quartz	(9,-2,-2)	12.145	78.69	1.33	1.6	2.477	3.87	30.96	31.2
	Equiv. Refl.: (-2,9,2), (-2,-7,-2), (-7,9,-2), (-7,-2,2)								
Quartz	(9,-7,2)	12.145	78.69	1.329	1.6	2.477	3.87	30.96	31.2
Sapph	(1,5,17)	11.662	70.32	1.308	1.5	4.429	6.5	55.36	55.74
	Equiv. Refl.: (1,-6,-17), (5,1,-17), (5,-6,17), (6,-1,-17), (6,-5,17), (-1,6,17), (-1,-5,-17), (-5,6,-17), (-5,-1,17), (-6,1,17), (-6,5,-17)								
Sapph	(2,4,19)	12.067	76.99	1.248	1.5	2.862	4.29	35.78	36.04
	Equiv. Refl.: (2,-6,-19), (4,2,-19), (4,-6,19), (6,-2,-19), (6,-4,19), (-2,6,19), (-2,-4,-19), (-4,6,-19), (-4,-2,19), (-6,2,19), (-6,4,-19)								
Quartz	(4,-9,-3)	11.888	73.72	1.206	1.3	3.617	4.81	45.22	45.47
	Equiv. Refl.: (5,4,-3), (5,-9,3), (-9,4,3), (-9,5,-3)								
Quartz	(4,5,3)	11.888	73.72	1.205	1.3	3.617	4.81	45.22	45.47
Quartz	(9,-4,-3)	11.888	73.72	1.172	1.3	3.617	4.81	45.22	45.47
	Equiv. Refl.: (9,-5,3), (-4,9,3), (-4,-5,-3), (-5,9,-3), (-5,-4,3)								
Quartz	(8,0,3)	12.153	78.9	1.156	1.4	2.43	3.35	30.38	30.56
	Equiv. Refl.: (8,-8,-3), (-8,0,-3), (-8,8,3)								
Quartz	(0,8,-3)	12.153	78.9	1.154	1.4	2.43	3.34	30.38	30.56
	Equiv. Refl.: (0,-8,3)								
Quartz	(2,0,10)	11.835	72.85	1.148	1.3	3.821	4.91	47.76	48.02
	Equiv. Refl.: (2,-2,-10), (-2,0,-10), (-2,2,10)								
Quartz	(0,2,-10)	11.835	72.85	1.145	1.3	3.821	4.89	47.76	48.01
	Equiv. Refl.: (0,-2,10)								

Ei =	12.385	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR \, d\Theta$	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(3,5,5)	11.701	70.87	1.091	1.2	4.297	5.16	53.71	53.96
	Equiv. Refl.: (3,-8,-5), (-8,3,5), (-8,5,-5)								
Quartz	(5,3,-5)	11.701	70.87	1.09	1.2	4.297	5.16	53.71	53.96
	Equiv. Refl.: (5,-8,5)								
Quartz	(8,-3,-5)	11.701	70.87	1.068	1.2	4.297	5.16	53.71	53.96
	Equiv. Refl.: (8,-5,5), (-3,8,5), (-3,-5,-5)								
Quartz	(-5,8,-5)	11.701	70.87	1.067	1.2	4.297	5.16	53.71	53.96
	Equiv. Refl.: (-5,-3,5)								
Quartz	(0,3,-10)	12.275	82.35	1.064	1.4	1.663	2.31	20.79	20.92
	Equiv. Refl.: (0,-3,10)								
Quartz	(-3,3,10)	12.275	82.35	1.057	1.4	1.663	2.3	20.79	20.92
Quartz	(3,-3,-10)	12.275	82.35	1.056	1.4	1.663	2.3	20.79	20.92
	Equiv. Refl.: (-3,0,-10)								
Quartz	(3,0,10)	12.275	82.35	1.055	1.4	1.663	2.3	20.79	20.92
Quartz	(-5,1,-9)	12.294	83.06	0.937	1.3	1.508	1.93	18.85	18.95
	Equiv. Refl.: (-5,4,9)								
Quartz	(1,4,-9)	12.294	83.06	0.936	1.3	1.508	1.92	18.85	18.95
Quartz	(1,-5,9)	12.294	83.06	0.935	1.3	1.508	1.92	18.85	18.95
Quartz	(4,1,9)	12.294	83.06	0.933	1.3	1.508	1.92	18.85	18.95
Quartz	(4,-5,-9)	12.294	83.06	0.932	1.3	1.508	1.92	18.85	18.95
Quartz	(-5,9,3)	11.888	73.72	0.927	1.1	3.617	3.82	45.22	45.38
	Equiv. Refl.: (-5,-4,-3)								
Quartz	(9,-4,3)	11.888	73.72	0.926	1.1	3.617	3.81	45.22	45.38
	Equiv. Refl.: (9,-5,-3)								
Quartz	(-4,9,-3)	11.888	73.72	0.925	1.1	3.617	3.81	45.22	45.38
	Equiv. Refl.: (-4,-5,3)								
Quartz	(5,-1,9)	12.294	83.06	0.911	1.3	1.508	1.93	18.85	18.95
	Equiv. Refl.: (5,-4,-9)								
Quartz	(-1,-4,9)	12.294	83.06	0.91	1.3	1.508	1.92	18.85	18.95
Quartz	(-1,5,-9)	12.294	83.06	0.909	1.3	1.508	1.92	18.85	18.95
Quartz	(-4,-1,-9)	12.294	83.06	0.906	1.3	1.508	1.92	18.85	18.95
Quartz	(-4,5,9)	12.294	83.06	0.905	1.3	1.508	1.92	18.85	18.95
Quartz	(5,4,3)	11.888	73.72	0.88	1.1	3.617	3.82	45.22	45.38
	Equiv. Refl.: (5,-9,-3)								
Quartz	(-9,4,-3)	11.888	73.72	0.879	1.1	3.617	3.81	45.22	45.38
	Equiv. Refl.: (-9,5,3)								
Quartz	(4,5,-3)	11.888	73.72	0.878	1.1	3.617	3.81	45.22	45.38
	Equiv. Refl.: (4,-9,3)								
Quartz	(0,8,2)	11.879	73.57	0.85	1	3.651	3.65	45.64	45.79
	Equiv. Refl.: (0,-8,-2), (7,0,-5), (7,-7,5), (-7,0,5), (-7,7,-5)								
Quartz	(0,7,5)	11.701	70.87	0.849	1	4.297	4.21	53.71	53.88
	Equiv. Refl.: (0,-7,-5), (8,0,-2), (8,-8,2), (-8,0,2), (-8,8,-2)								
LiNbO3	(3,4,-19)	11.989	75.46	0.834	1.6	3.211	5.19	40.14	40.47
	Equiv. Refl.: (3,-7,19), (4,3,19), (4,-7,-19), (7,-3,19), (7,-4,-19), (-3,7,-19), (-3,-4,19), (-4,7,19), (-4,-3,-19), (-7,3,-19), (-7,4,19)								
Quartz	(-5,8,5)	11.701	70.87	0.821	0.9	4.297	4.01	53.71	53.86
	Equiv. Refl.: (-5,-3,-5)								
Quartz	(-3,8,-5)	11.701	70.87	0.82	0.9	4.297	4	53.71	53.86
	Equiv. Refl.: (-3,-5,5)								

Ei =	12.385	keV							
Cryst	Ref	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	ΔEg	ΔEt
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	2m, 50μm	2m, 50μm
								[meV]	[meV]
Quartz	(8,-3,5)	11.701	70.87	0.819	0.9	4.297	4	53.71	53.86
	Equiv. Refl.: (8,-5,-5)								
Quartz	(8,-2,5)	11.97	75.12	0.81	0.9	3.29	2.99	41.13	41.23
	Equiv. Refl.: (8,-6,-5), (-2,8,-5), (-2,-6,5)								
Quartz	(-6,8,5)	11.97	75.12	0.809	0.9	3.29	2.99	41.13	41.23
	Equiv. Refl.: (-6,-2,-5)								
Quartz	(5,3,5)	11.701	70.87	0.78	0.9	4.297	4.01	53.71	53.86
	Equiv. Refl.: (5,-8,-5)								
Quartz	(3,5,-5)	11.701	70.87	0.779	0.9	4.297	4	53.71	53.86
	Equiv. Refl.: (3,-8,5)								
Quartz	(-8,3,-5)	11.701	70.87	0.778	0.9	4.297	4	53.71	53.86
	Equiv. Refl.: (-8,5,5)								
Quartz	(-5,-1,-8)	12.248	81.46	0.777	1	1.859	1.86	23.24	23.31
Quartz	(-5,6,8)	12.248	81.46	0.776	1	1.859	1.86	23.24	23.31
Sapph	(3,5,-11)	11.767	71.83	0.774	1	4.066	3.92	50.82	50.97
	Equiv. Refl.: (3,-8,11), (5,3,11), (5,-8,-11), (8,-3,11), (8,-5,-11), (-3,8,-11), (-3,-5,11), (-5,8,11), (-5,-3,-11), (-8,3,-11), (-8,5,11)								
Quartz	(6,-5,-8)	12.248	81.46	0.771	1	1.859	1.85	23.24	23.31
	Equiv. Refl.: (-1,6,-8), (-1,-5,8)								
Quartz	(6,-1,8)	12.248	81.46	0.77	1	1.859	1.85	23.24	23.31
Sapph	(0,3,24)	12.312	83.78	0.691	1.1	1.35	1.55	16.88	16.95
	Equiv. Refl.: (0,3,-24), (0,-3,24), (0,-3,-24), (3,0,24), (3,0,-24), (3,-3,24), (3,-3,-24), (-3,0,24), (-3,0,-24), (-3,3,24), (-3,3,-24)								
LiNbO3	(4,5,11)	11.922	74.29	0.677	1.4	3.485	4.82	43.56	43.82
	Equiv. Refl.: (4,-9,-11), (5,4,-11), (5,-9,11), (9,-4,-11), (9,-5,11), (-4,9,11), (-4,-5,-11), (-5,9,-11), (-5,-4,11), (-9,4,11), (-9,5,-11)								
Quartz	(2,-8,5)	11.97	75.12	0.673	0.9	3.29	2.99	41.13	41.23
Quartz	(2,6,-5)	11.97	75.12	0.672	0.9	3.29	2.99	41.13	41.23
	Equiv. Refl.: (-8,2,-5), (-8,6,5)								
Quartz	(6,2,5)	11.97	75.12	0.671	0.9	3.29	2.99	41.13	41.23
	Equiv. Refl.: (6,-8,-5)								
Quartz	(5,1,8)	12.248	81.46	0.654	1	1.859	1.86	23.24	23.31
Quartz	(5,-6,-8)	12.248	81.46	0.653	1	1.859	1.86	23.24	23.31
Quartz	(1,5,-8)	12.248	81.46	0.648	1	1.859	1.85	23.24	23.31
	Equiv. Refl.: (1,-6,8)								
Quartz	(-6,1,-8)	12.248	81.46	0.647	1	1.859	1.85	23.24	23.31
	Equiv. Refl.: (-6,5,8)								
Quartz	(-6,2,8)	11.985	75.4	0.633	0.8	3.226	2.51	40.33	40.41
	Equiv. Refl.: (-6,4,-8)								
Quartz	(2,4,8)	11.985	75.4	0.632	0.8	3.226	2.51	40.33	40.41
	Equiv. Refl.: (2,-6,-8), (4,2,-8), (4,-6,8)								
Sapph	(1,3,-23)	12.245	81.37	0.618	1	1.88	1.84	23.5	23.57
	Equiv. Refl.: (1,-4,23), (3,1,23), (3,-4,-23), (4,-1,23), (4,-3,-23), (-1,4,-23), (-1,-3,23), (-3,4,23), (-3,-1,-23), (-4,1,-23), (-4,3,23)								
Quartz	(6,-6,-7)	11.87	73.41	0.604	0.8	3.689	2.79	46.11	46.2
Quartz	(0,6,-7)	11.87	73.41	0.603	0.8	3.689	2.79	46.11	46.2
	Equiv. Refl.: (0,-6,7), (6,0,7), (-6,0,-7), (-6,6,7)								
Quartz	(6,-2,-8)	11.985	75.4	0.575	0.8	3.226	2.51	40.33	40.41
	Equiv. Refl.: (6,-4,8), (-4,-2,8)								
Quartz	(-2,6,8)	11.985	75.4	0.574	0.8	3.226	2.51	40.33	40.41
	Equiv. Refl.: (-2,-4,-8), (-4,6,-8)								

Ei =	12.385	keV							
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	ΔEg	ΔEt
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	2m, 50μm	2m, 50μm
								[meV]	[meV]
Quartz	(0,8,1)	11.712	71.03	0.56	0.7	4.258	2.98	53.22	53.31
Equiv. Refl.: (0,-8,-1), (8,0,-1), (8,-8,1), (-8,0,1), (-8,8,-1)									
Sapph	(1,2,23)	11.677	70.53	0.54	0.7	4.378	3.15	54.72	54.81
Equiv. Refl.: (1,-3,-23), (2,1,-23), (2,-3,23), (3,-1,-23), (3,-2,23), (-1,3,23), (-1,-2,-23), (-2,3,-23), (-2,-1,23), (-3,1,23), (-3,2,-23)									
LiNbO3	(3,5,-17)	12.35	85.71	0.522	2.1	0.929	1.95	11.61	11.78
Equiv. Refl.: (3,-8,17), (5,3,17), (5,-8,-17), (8,-3,17), (8,-5,-17), (-3,8,-17), (-3,-5,17), (-5,8,17), (-5,-3,-17), (-8,3,-17), (-8,5,17)									
Sapph	(1,3,22)	11.819	72.61	0.52	0.7	3.88	2.78	48.5	48.58
Equiv. Refl.: (1,-4,-22), (3,1,-22), (3,-4,22), (4,-1,-22), (4,-3,22), (-1,4,22), (-1,-3,-22), (-3,4,-22), (-3,-1,22), (-4,1,22), (-4,3,-22)									
Quartz	(5,0,8)	11.716	71.09	0.517	0.7	4.244	2.77	53.05	53.12
Equiv. Refl.: (5,-5,-8), (-5,0,-8), (-5,5,8)									
Quartz	(0,5,-8)	11.716	71.09	0.516	0.7	4.244	2.76	53.05	53.12
Equiv. Refl.: (0,-5,8)									
Quartz	(1,1,10)	11.745	71.49	0.489	0.6	4.146	2.38	51.82	51.88
Equiv. Refl.: (1,1,-10), (1,-2,10), (1,-2,-10)									
Quartz	(-2,1,10)	11.745	71.49	0.487	0.6	4.146	2.37	51.82	51.87
Equiv. Refl.: (-2,1,-10)									
Sapph	(1,6,13)	11.654	70.22	0.466	0.6	4.454	2.86	55.68	55.75
Equiv. Refl.: (1,-7,-13), (6,1,-13), (6,-7,13), (7,-1,-13), (7,-6,13), (-1,7,13), (-1,-6,-13), (-6,7,-13), (-6,-1,13), (-7,1,13), (-7,6,-13)									
LiNbO3	(1,2,-25)	11.769	71.86	0.445	1	4.059	4.16	50.73	50.9
Equiv. Refl.: (1,-3,25), (2,1,25), (2,-3,-25), (3,-1,25), (3,-2,-25), (-1,3,-25), (-1,-2,25), (-2,3,25), (-2,-1,-25), (-3,1,-25), (-3,2,25)									
Sapph	(3,4,-16)	11.919	74.23	0.419	0.6	3.497	2.18	43.72	43.77
Equiv. Refl.: (3,-7,16), (4,3,16), (4,-7,-16), (7,-3,16), (7,-4,-16), (-3,7,-16), (-3,-4,16), (-4,7,16), (-4,-3,-16), (-7,3,-16), (-7,4,16)									
Quartz	(-1,2,10)	11.745	71.49	0.384	0.6	4.146	2.38	51.82	51.88
Equiv. Refl.: (-1,2,-10), (-1,-1,10), (-1,-1,-10)									
Quartz	(2,-1,10)	11.745	71.49	0.382	0.6	4.146	2.37	51.82	51.87
Equiv. Refl.: (2,-1,-10)									
Quartz	(9,-2,0)	11.926	74.35	0.372	0.5	3.469	1.69	43.37	43.4
Equiv. Refl.: (9,-7,0), (-2,9,0), (-2,-7,0), (-7,9,0), (-7,-2,0)									
LiNbO3	(3,6,9)	11.748	71.54	0.334	0.9	4.135	3.57	51.69	51.81
Equiv. Refl.: (3,6,-9), (3,-9,9), (3,-9,-9), (6,3,9), (6,3,-9), (6,-9,9), (6,-9,-9), (9,-3,9), (9,-3,-9), (9,-6,9), (9,-6,-9), (-3,9,9), (-3,9,-9), (-3,-6,9), (-3,-6,-9), (-6,9,9), (-6,9,-9), (-6,-3,9), (-6,-3,-9), (-9,3,9), (-9,3,-9), (-9,6,9), (-9,6,-9)									
Quartz	(0,8,-2)	11.879	73.57	0.319	0.5	3.651	1.73	45.64	45.67
Equiv. Refl.: (0,-8,2), (8,0,2), (8,-8,-2), (-8,0,-2), (-8,8,2)									
Quartz	(0,2,10)	11.835	72.85	0.286	0.4	3.821	1.65	47.76	47.79
Equiv. Refl.: (0,-2,-10), (2,7,0), (2,-9,0), (7,2,0), (7,-9,0), (-9,2,0), (-9,7,0)									
Quartz	(2,0,-10)	11.835	72.85	0.281	0.4	3.821	1.63	47.76	47.79
Equiv. Refl.: (-2,0,10), (-2,2,-10)									
Quartz	(2,-2,10)	11.835	72.85	0.28	0.4	3.821	1.63	47.76	47.79
LiNbO3	(1,8,-7)	12.286	82.74	0.247	1.1	1.577	1.76	19.71	19.79
Equiv. Refl.: (1,-9,7), (8,1,7), (8,-9,-7), (9,-1,7), (9,-8,-7), (-1,9,-7), (-1,-8,7), (-8,9,7), (-8,-1,-7), (-9,1,-7), (-9,8,7)									
Sapph	(3,4,17)	12.23	80.93	0.217	0.5	1.977	0.98	24.71	24.73
Equiv. Refl.: (3,-7,-17), (4,3,-17), (4,-7,17), (7,-3,-17), (7,-4,17), (-3,7,17), (-3,-4,-17), (-4,7,-17), (-4,-3,17), (-7,3,17), (-7,4,-17)									

Ei =	12.385	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(3,6,3)	12.027	76.18	0.204	0.4	3.046	1.25	38.08	38.1
Equiv. Refl.: (3,6,-3), (3,-9,3), (3,-9,-3), (6,3,3), (6,3,-3), (6,-9,3), (6,-9,-3), (9,-3,3), (9,-3,-3) (9,-6,3), (9,-6,-3), (-3,9,3), (-3,9,-3), (-3,-6,3), (-3,-6,-3), (-6,9,3), (-6,9,-3), (-6,-3,3) (-6,-3,-3), (-9,3,3), (-9,3,-3), (-9,6,3), (-9,6,-3)									
LiNbO3	(2,3,23)	11.938	74.56	0.191	0.7	3.42	2.35	42.75	42.82
Equiv. Refl.: (2,-5,-23), (3,2,-23), (3,-5,23), (5,-2,-23), (5,-3,23), (-2,5,23), (-2,-3,-23), (-3,5,-23), (-3,-2,23) (-5,2,23), (-5,3,-23)									
LiNbO3	(1,8,5)	12.089	77.45	0.151	0.7	2.758	1.85	34.47	34.52
Equiv. Refl.: (1,-9,-5), (8,1,-5), (8,-9,5), (9,-1,-5), (9,-8,5), (-1,9,5), (-1,-8,-5), (-8,9,-5), (-8,-1,5) (-9,1,5), (-9,8,-5)									
LiNbO3	(1,8,-1)	11.889	73.73	0.124	0.5	3.616	1.95	45.2	45.24
Equiv. Refl.: (1,-9,1), (8,1,1), (8,-9,-1), (9,-1,1), (9,-8,-1), (-1,9,-1), (-1,-8,1), (-8,9,1), (-8,-1,-1) (-9,1,-1), (-9,8,1)									
LiNbO3	(3,3,21)	11.849	73.08	0.068	0.4	3.769	1.49	47.11	47.13
Equiv. Refl.: (3,3,-21), (3,-6,21), (3,-6,-21), (6,-3,21), (6,-3,-21), (-3,6,21), (-3,6,-21), (-3,-3,21), (-3,-3,-21) (-6,3,21), (-6,3,-21)									
Sapph	(4,5,2)	11.789	72.15	0.052	0.2	3.989	0.67	49.86	49.87
Equiv. Refl.: (4,-9,-2), (5,4,-2), (5,-9,2), (9,-4,-2), (9,-5,2), (-4,9,2), (-4,-5,-2), (-5,9,-2), (-5,-4,2) (-9,4,2), (-9,5,-2)									
Sapph	(4,4,12)	11.893	73.79	0.038	0.1	3.599	0.54	44.99	45
Equiv. Refl.: (4,4,-12), (4,-8,12), (4,-8,-12), (8,-4,12), (8,-4,-12), (-4,8,12), (-4,8,-12), (-4,-4,12), (-4,-4,-12) (-8,4,12), (-8,4,-12)									
LiNbO3	(4,4,15)	11.739	71.41	0.012	0.2	4.166	0.71	52.07	52.08
Equiv. Refl.: (4,4,-15), (4,-8,15), (4,-8,-15), (8,-4,15), (8,-4,-15), (-4,8,15), (-4,8,-15), (-4,-4,15), (-4,-4,-15) (-8,4,15), (-8,4,-15)									
LiNbO3	(5,5,3)	12.116	78.05	0.01	0.2	2.622	0.54	32.77	32.78
Equiv. Refl.: (5,5,-3), (5,-10,3), (5,-10,-3), (10,-5,3), (10,-5,-3), (-5,10,3), (-5,10,-3), (-5,-5,3), (-5,-5,-3) (-10,5,3), (-10,5,-3)									

Ei = Cryst	10.871 Refl	keV EB	keV EB	ΘB	 IR dΘ	Width	Ei cotΘ	ΔE	ΔEg	ΔEt
	(h,k,l)	[keV]	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	2m, 50μm	2m, 50μm
									[meV]	[meV]
Ge	(4,4,8)	10.736	80.97	13.363	13.1	1.727	22.58	21.58	31.23	
Si	(4,6,6)	10.708	80.06	10.34	8.9	1.906	16.93	23.82	29.23	
Ge	(4,6,6)	10.279	71.01	7.733	7.4	3.741	27.52	46.76	54.26	
Ge	(1,3,9)	10.453	74.06	5.495	5.8	3.105	18.04	38.81	42.8	
Si	(1,1,9)	10.399	73.06	4.606	4.1	3.312	13.47	41.4	43.54	
	Equiv. Refl.: (3,5,7)									
Quartz	(0,4,8)	10.87	89.42	182.338	154	0.11	16.9	1.37	16.96	
	Equiv. Refl.: (0,-4,-8)									
Quartz	(-4,0,8)	10.87	89.42	182.275	154	0.11	16.9	1.37	16.95	
Quartz	(4,0,-8)	10.87	89.42	182.272	154	0.11	16.9	1.37	16.95	
Quartz	(4,-4,8)	10.87	89.42	182.25	153.9	0.11	16.9	1.37	16.95	
	Equiv. Refl.: (-4,4,-8)									
LiNbO3	(1,-8,-6)	10.835	85.36	42.885	40	0.882	35.26	11.03	36.95	
	Equiv. Refl.: (7,1,-6), (8,-1,-6), (-1,-7,-6), (-7,8,-6), (-8,7,-6)									
LiNbO3	(1,7,6)	10.835	85.36	42.606	40	0.882	35.26	11.03	36.95	
	Equiv. Refl.: (7,-8,6), (8,-7,6), (-1,8,6), (-7,-1,6), (-8,1,6)									
LiNbO3	(1,7,-6)	10.835	85.36	40.654	37.7	0.882	33.27	11.03	35.05	
	Equiv. Refl.: (7,-8,-6), (8,-7,-6), (-1,8,-6), (-7,-1,-6), (-8,1,-6)									
LiNbO3	(1,-8,6)	10.835	85.36	39.203	37.7	0.882	33.27	11.03	35.05	
	Equiv. Refl.: (7,1,6), (8,-1,6), (-1,-7,6), (-7,8,6), (-8,7,6)									
LiNbO3	(3,3,18)	10.816	84.25	38.399	34.7	1.095	37.96	13.68	40.35	
	Equiv. Refl.: (3,-6,18), (6,-3,18), (-3,-3,18)									
LiNbO3	(-3,6,18)	10.816	84.25	38.398	34.7	1.095	37.96	13.68	40.35	
	Equiv. Refl.: (-6,3,18)									
LiNbO3	(3,3,-18)	10.816	84.25	36.602	34.7	1.095	37.96	13.68	40.35	
	Equiv. Refl.: (3,-6,-18), (6,-3,-18), (-3,6,-18), (-3,-3,-18), (-6,3,-18)									
Quartz	(5,0,-7)	10.841	85.77	27.222	22.7	0.803	18.2	10.04	20.79	
	Equiv. Refl.: (5,-5,7), (-5,0,7)									
Quartz	(-5,5,-7)	10.841	85.77	27.221	22.7	0.803	18.2	10.04	20.79	
Quartz	(0,5,7)	10.841	85.77	27.216	22.7	0.803	18.2	10.04	20.78	
	Equiv. Refl.: (0,-5,-7)									
LiNbO3	(2,-5,-20)	10.804	83.63	25.29	23.6	1.214	28.71	15.18	32.48	
	Equiv. Refl.: (3,2,-20), (5,-2,-20), (-2,-3,-20), (-3,5,-20), (-5,3,-20)									
LiNbO3	(2,3,20)	10.804	83.63	23.38	23.6	1.214	28.71	15.18	32.48	
	Equiv. Refl.: (3,-5,20), (5,-3,20), (-2,5,20), (-3,-2,20), (-5,2,20)									
LiNbO3	(0,7,-10)	10.711	80.17	22.859	21	1.883	39.47	23.54	45.96	
	Equiv. Refl.: (7,-7,-10), (-7,0,-10)									
LiNbO3	(0,-7,10)	10.711	80.17	22.613	21	1.883	39.47	23.54	45.96	
	Equiv. Refl.: (7,0,10), (-7,7,10)									
LiNbO3	(3,5,10)	10.711	80.17	19.223	17.4	1.883	32.71	23.54	40.3	
	Equiv. Refl.: (5,-8,10), (8,-5,10), (-3,8,10), (-5,-3,10), (-8,3,10)									
LiNbO3	(2,-8,-8)	10.646	78.32	18.262	16.8	2.247	37.73	28.08	47.03	
	Equiv. Refl.: (6,2,-8), (8,-2,-8), (-2,-6,-8), (-6,8,-8), (-8,6,-8)									
LiNbO3	(2,6,8)	10.646	78.32	17.831	16.8	2.247	37.73	28.08	47.03	
	Equiv. Refl.: (6,-8,8), (8,-6,8), (-2,8,8), (-6,-2,8), (-8,2,8)									
LiNbO3	(3,-8,-10)	10.711	80.17	17.272	17.4	1.883	32.71	23.54	40.3	
	Equiv. Refl.: (5,3,-10), (8,-3,-10), (-3,-5,-10), (-5,8,-10), (-8,5,-10)									

Ei = Cryst	10.871 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Sapph	(2,6,-1)	10.859	87.31	16.941	16.4	0.511	8.4	6.38	10.55
	Equiv. Refl.: (2,-8,1), (6,2,1), (6,-8,-1), (8,-2,1), (8,-6,-1), (-2,8,-1), (-2,-6,1), (-6,8,1), (-6,-2,-1), (-8,2,-1), (-8,6,1)								
LiNbO3	(0,4,20)	10.532	75.65	16.224	14.9	2.781	41.41	34.76	54.06
	Equiv. Refl.: (4,-4,20), (-4,0,20)								
LiNbO3	(0,-4,-20)	10.532	75.65	16.159	14.9	2.781	41.41	34.76	54.06
	Equiv. Refl.: (4,0,-20), (-4,4,-20)								
Quartz	(-4,4,8)	10.87	89.42	15.816	21.4	0.11	2.35	1.37	2.72
Quartz	(-4,0,-8)	10.87	89.42	15.81	21.4	0.11	2.35	1.37	2.72
Quartz	(4,-4,-8)	10.87	89.42	15.805	21.4	0.11	2.35	1.37	2.72
Quartz	(4,0,8)	10.87	89.42	15.799	21.4	0.11	2.35	1.37	2.72
Quartz	(0,4,-8)	10.87	89.42	15.606	21.3	0.11	2.33	1.37	2.71
Quartz	(0,-4,8)	10.87	89.42	15.604	21.3	0.11	2.33	1.37	2.71
Sapph	(4,4,6)	10.809	83.89	15.354	13.1	1.164	15.28	14.55	21.1
	Equiv. Refl.: (4,4,-6), (4,-8,6), (4,-8,-6), (8,-4,6), (8,-4,-6), (-4,8,6), (-4,8,-6), (-4,-4,6), (-4,-4,-6), (-8,4,6), (-8,4,-6)								
LiNbO3	(3,5,-8)	10.37	72.54	15.234	13.5	3.42	46.16	42.75	62.91
	Equiv. Refl.: (-3,8,-8), (-5,-3,-8), (-8,3,-8)								
LiNbO3	(5,-8,-8)	10.37	72.54	15.233	13.5	3.42	46.16	42.75	62.91
	Equiv. Refl.: (8,-5,-8)								
Quartz	(-3,8,-3)	10.764	81.95	14.741	12.2	1.538	18.82	19.23	26.91
	Equiv. Refl.: (-3,-5,3)								
Quartz	(8,-5,-3)	10.764	81.95	14.74	12.2	1.538	18.82	19.23	26.91
Quartz	(8,-3,3)	10.764	81.95	14.739	12.2	1.538	18.82	19.23	26.91
	Equiv. Refl.: (-5,8,3), (-5,-3,-3)								
Quartz	(3,5,-3)	10.764	81.95	14.702	12.2	1.538	18.82	19.23	26.91
	Equiv. Refl.: (3,-8,3)								
Quartz	(-8,5,3)	10.764	81.95	14.701	12.2	1.538	18.82	19.23	26.91
Quartz	(5,3,3)	10.764	81.95	14.7	12.2	1.538	18.82	19.23	26.91
	Equiv. Refl.: (5,-8,-3), (-8,3,-3)								
LiNbO3	(1,5,-16)	10.542	75.86	14.683	13.7	2.738	37.42	34.23	50.72
	Equiv. Refl.: (-1,6,-16), (-5,-1,-16), (-6,1,-16)								
LiNbO3	(5,-6,-16)	10.542	75.86	14.682	13.7	2.738	37.42	34.23	50.72
	Equiv. Refl.: (6,-5,-16)								
LiNbO3	(1,-6,16)	10.542	75.86	14.564	13.7	2.738	37.42	34.23	50.72
	Equiv. Refl.: (5,1,16), (6,-1,16), (-1,-5,16), (-5,6,16), (-6,5,16)								
LiNbO3	(3,-8,8)	10.37	72.54	14.462	13.5	3.42	46.16	42.75	62.91
	Equiv. Refl.: (5,3,8), (8,-3,8), (-3,-5,8), (-5,8,8), (-8,5,8)								
LiNbO3	(4,5,-1)	10.869	88.97	13.791	29.4	0.195	5.72	2.43	6.21
	Equiv. Refl.: (4,-9,1), (5,4,1), (5,-9,-1), (9,-4,1), (9,-5,-1), (-4,9,-1), (-4,-5,1), (-5,9,1), (-5,-4,-1), (-9,4,-1), (-9,5,1)								
LiNbO3	(1,-3,22)	10.503	75.05	13.646	12.7	2.902	36.8	36.27	51.67
	Equiv. Refl.: (2,1,22), (3,-1,22), (-1,-2,22), (-2,3,22), (-3,2,22)								
LiNbO3	(0,0,-24)	10.732	80.84	13.64	12.9	1.754	22.61	21.92	31.49
LiNbO3	(1,-8,0)	10.498	74.95	13.629	12.7	2.924	37.04	36.55	52.03
	Equiv. Refl.: (7,1,0), (8,-1,0), (-1,-7,0), (-7,8,0), (-8,7,0)								
LiNbO3	(3,-7,-14)	10.523	75.46	13.416	12.4	2.819	34.89	35.24	49.59
	Equiv. Refl.: (4,3,-14), (7,-3,-14), (-3,-4,-14), (-4,7,-14), (-7,4,-14)								
LiNbO3	(1,7,0)	10.498	74.95	13.385	12.7	2.924	37.04	36.55	52.03
	Equiv. Refl.: (-1,8,0), (-7,-1,0), (-8,1,0)								

Ei =	10.871	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(7,-8,0)	10.498	74.95	13.384	12.7	2.924	37.04	36.55	52.03
	Equiv. Refl.: (8,-7,0)								
LiNbO3	(1,2,-22)	10.503	75.05	13.375	12.7	2.902	36.8	36.27	51.67
	Equiv. Refl.: (2,-3,-22), (3,-2,-22), (-1,3,-22), (-2,-1,-22), (-3,1,-22)								
LiNbO3	(0,7,8)	10.37	72.54	13.147	11.9	3.42	40.74	42.75	59.05
	Equiv. Refl.: (7,-7,8), (-7,0,8)								
LiNbO3	(3,4,14)	10.523	75.46	12.723	12.4	2.819	34.89	35.24	49.59
	Equiv. Refl.: (4,-7,14), (7,-4,14), (-3,7,14), (-4,-3,14), (-7,3,14)								
LiNbO3	(0,2,22)	10.223	70.12	12.665	11.4	3.93	44.83	49.13	66.51
	Equiv. Refl.: (2,-2,22), (-2,0,22)								
LiNbO3	(0,-7,-8)	10.37	72.54	12.562	11.9	3.42	40.74	42.75	59.05
	Equiv. Refl.: (7,0,-8), (-7,7,-8)								
LiNbO3	(1,-4,20)	10.253	70.59	12.453	11.4	3.831	43.61	47.89	64.77
	Equiv. Refl.: (3,1,20), (4,-1,20), (-1,-3,20)								
LiNbO3	(-3,4,20)	10.253	70.59	12.452	11.4	3.831	43.61	47.89	64.77
	Equiv. Refl.: (-4,3,20)								
Sapph	(1,5,14)	10.715	80.28	12.405	10.2	1.862	19.08	23.27	30.09
	Equiv. Refl.: (1,-6,-14), (5,1,-14), (5,-6,14), (6,-1,-14), (6,-5,14), (-1,6,14), (-1,-5,-14), (-5,6,-14), (-5,-1,14), (-6,1,14), (-6,5,-14)								
LiNbO3	(1,3,-20)	10.253	70.59	12.285	11.4	3.831	43.61	47.89	64.77
	Equiv. Refl.: (3,-4,-20), (4,-3,-20), (-1,4,-20), (-3,-1,-20), (-4,1,-20)								
LiNbO3	(0,-2,-22)	10.223	70.12	12.206	11.4	3.93	44.83	49.13	66.51
	Equiv. Refl.: (2,0,-22), (-2,2,-22)								
Sapph	(3,5,4)	10.703	79.9	12.045	10	1.936	19.29	24.2	30.95
	Equiv. Refl.: (3,-8,-4), (5,3,-4), (5,-8,4), (8,-3,-4), (8,-5,4), (-3,8,4), (-3,-5,-4), (-5,8,-4), (-5,-3,4), (-8,3,4), (-8,5,-4)								
LiNbO3	(2,4,16)	10.263	70.75	12.01	10.9	3.797	41.52	47.46	63.06
	Equiv. Refl.: (4,-6,16), (6,-4,16), (-2,6,16), (-4,-2,16), (-6,2,16)								
LiNbO3	(0,0,24)	10.732	80.84	11.824	12.9	1.754	22.61	21.92	31.49
LiNbO3	(2,-6,-16)	10.263	70.75	11.577	10.9	3.797	41.52	47.46	63.06
	Equiv. Refl.: (4,2,-16), (6,-2,-16), (-2,-4,-16), (-4,6,-16), (-6,4,-16)								
LiNbO3	(1,-5,-18)	10.266	70.8	11.368	10.2	3.787	38.79	47.33	61.19
	Equiv. Refl.: (4,1,-18), (5,-1,-18), (-1,-4,-18), (-4,5,-18), (-5,4,-18)								
LiNbO3	(1,4,-18)	10.266	70.8	11.038	10	3.787	37.9	47.33	60.63
	Equiv. Refl.: (4,-5,-18), (5,-4,-18), (-1,5,-18), (-4,-1,-18), (-5,1,-18)								
LiNbO3	(1,4,18)	10.266	70.8	10.987	10.2	3.787	38.79	47.33	61.19
	Equiv. Refl.: (4,-5,18), (5,-4,18), (-1,5,18), (-4,-1,18), (-5,1,18)								
LiNbO3	(1,-5,18)	10.266	70.8	10.704	10	3.787	37.9	47.33	60.63
	Equiv. Refl.: (4,1,18), (5,-1,18), (-1,-4,18), (-4,5,18), (-5,4,18)								
Sapph	(0,5,16)	10.719	80.41	9.988	8.6	1.836	15.7	22.95	27.81
	Equiv. Refl.: (0,-5,-16), (5,0,-16), (5,-5,16), (-5,0,16), (-5,5,-16)								
Sapph	(3,4,-10)	10.321	71.7	9.889	7.8	3.596	28.18	44.95	53.06
	Equiv. Refl.: (3,-7,10), (4,3,10), (4,-7,-10), (7,-3,10), (7,-4,-10), (-3,7,-10), (-3,-4,10), (-4,7,10), (-4,-3,-10), (-7,3,-10), (-7,4,10)								
Quartz	(0,0,9)	10.323	71.73	9.514	7.7	3.588	27.7	44.85	52.72
	Equiv. Refl.: (0,0,-9)								
Quartz	(8,-2,-2)	10.754	81.59	8.388	7.1	1.608	11.41	20.1	23.11
	Equiv. Refl.: (8,-6,2)								
Quartz	(-2,8,2)	10.754	81.59	8.387	7.1	1.608	11.4	20.1	23.11
	Equiv. Refl.: (-2,-6,-2), (-6,-2,2)								
Quartz	(-6,8,-2)	10.754	81.59	8.386	7.1	1.608	11.4	20.1	23.11

Ei = Cryst	10.871 Refl (h,k,l)	keV EB [keV]	Θ B [$^\circ$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(-8,2,2)	10.754	81.59	8.24	7.1	1.608	11.41	20.1	23.11
Quartz	(2,6,2)	10.754	81.59	8.239	7.1	1.608	11.4	20.1	23.11
	Equiv. Refl.: (2,-8,-2), (6,2,-2), (-8,6,-2)								
Quartz	(6,-8,2)	10.754	81.59	8.238	7.1	1.608	11.4	20.1	23.11
Quartz	(0,2,-9)	10.727	80.65	7.963	6.7	1.79	11.96	22.38	25.37
	Equiv. Refl.: (0,-2,9)								
Quartz	(-2,0,-9)	10.727	80.65	7.96	6.7	1.79	11.95	22.38	25.37
	Equiv. Refl.: (-2,2,9)								
Quartz	(2,0,9)	10.727	80.65	7.959	6.7	1.79	11.95	22.38	25.37
Quartz	(2,-2,-9)	10.727	80.65	7.958	6.7	1.79	11.95	22.38	25.37
Quartz	(6,-1,-6)	10.638	78.12	7.484	6.2	2.287	14.19	28.59	31.92
Quartz	(6,-5,6)	10.638	78.12	7.483	6.2	2.287	14.19	28.59	31.91
	Equiv. Refl.: (-1,6,6), (-1,-5,-6)								
Quartz	(-5,6,-6)	10.638	78.12	7.482	6.2	2.287	14.19	28.59	31.91
	Equiv. Refl.: (-5,-1,6)								
Quartz	(-6,1,6)	10.638	78.12	7.456	6.2	2.287	14.19	28.59	31.92
Quartz	(-6,5,-6)	10.638	78.12	7.455	6.2	2.287	14.19	28.59	31.91
Quartz	(1,5,6)	10.638	78.12	7.454	6.2	2.287	14.19	28.59	31.91
	Equiv. Refl.: (1,-6,-6), (5,1,-6), (5,-6,6)								
Sapph	(0,7,2)	10.574	76.58	7.338	6.3	2.594	16.38	32.43	36.33
	Equiv. Refl.: (0,-7,-2), (7,0,-2), (7,-7,2), (-7,0,2), (-7,7,-2)								
Sapph	(0,6,12)	10.69	79.54	6.956	6.2	2.007	12.54	25.09	28.05
	Equiv. Refl.: (0,6,-12), (0,-6,12), (0,-6,-12), (6,0,12), (6,0,-12), (6,-6,12), (6,-6,-12), (-6,0,12), (-6,0,-12), (-6,6,12), (-6,6,-12)								
LiNbO3	(1,6,13)	10.814	84.11	6.549	9.3	1.122	10.47	14.03	17.5
	Equiv. Refl.: (1,-7,-13), (6,1,-13), (6,-7,13), (7,-1,-13), (7,-6,13), (-1,7,13), (-1,-6,-13), (-6,7,-13), (-6,-1,13), (-7,1,13), (-7,6,-13)								
Quartz	(8,-2,-1)	10.569	76.46	6.216	5.2	2.618	13.69	32.72	35.47
	Equiv. Refl.: (8,-6,1), (-2,8,1), (-2,-6,-1), (-6,8,-1), (-6,-2,1)								
Sapph	(2,4,-14)	10.393	72.95	6.187	5.2	3.333	17.41	41.67	45.16
	Equiv. Refl.: (2,-6,14), (4,2,14), (4,-6,-14), (6,-2,14), (6,-4,-14), (-2,6,-14), (-2,-4,14), (-4,6,14), (-4,-2,-14), (-6,2,-14), (-6,4,14)								
Quartz	(3,-8,-3)	10.764	81.95	6.167	5.2	1.538	7.98	19.23	20.82
Quartz	(3,5,3)	10.764	81.95	6.166	5.2	1.538	7.98	19.23	20.82
Quartz	(5,3,-3)	10.764	81.95	6.164	5.2	1.538	7.98	19.23	20.82
	Equiv. Refl.: (5,-8,3), (-8,3,3), (-8,5,-3)								
Quartz	(2,6,1)	10.569	76.46	6.147	5.2	2.618	13.69	32.72	35.47
	Equiv. Refl.: (2,-8,-1), (6,2,-1), (6,-8,1), (-8,2,1), (-8,6,-1)								
Quartz	(4,4,3)	10.665	78.82	5.874	4.8	2.149	10.32	26.86	28.77
	Equiv. Refl.: (4,-8,-3)								
Quartz	(4,4,-3)	10.665	78.82	5.873	4.8	2.149	10.32	26.86	28.77
	Equiv. Refl.: (4,-8,3), (-8,4,3), (-8,4,-3)								
Sapph	(1,2,20)	10.342	72.06	5.719	4.8	3.52	17.03	44	47.18
	Equiv. Refl.: (1,-3,-20), (2,1,-20), (2,-3,20), (3,-1,-20), (3,-2,20), (-1,3,20), (-1,-2,-20), (-2,3,-20), (-2,-1,20), (-3,1,20), (-3,2,-20)								
Quartz	(-3,8,3)	10.764	81.95	5.705	5.2	1.538	7.98	19.23	20.82
	Equiv. Refl.: (-3,-5,-3)								
Quartz	(8,-3,-3)	10.764	81.95	5.704	5.2	1.538	7.98	19.23	20.82
	Equiv. Refl.: (8,-5,3)								

Ei = Cryst	10.871 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μrad]	Width [μrad]	Ei cot Θ [meV/μrad]	Δ E [meV]	Δ Eg 2m, 50μm [meV]	Δ Et 2m, 50μm [meV]
Quartz	(-5,8,-3) Equiv. Refl.: (-5,-3,3)	10.764	81.95	5.703	5.2	1.538	7.98	19.23	20.82
Sapph	(4,4,0) Equiv. Refl.: (4,-8,0), (8,-4,0), (-4,8,0), (-4,-4,0), (-8,4,0)	10.423	73.49	5.669	4.7	3.222	15.07	40.27	43
Quartz	(-4,8,3) Equiv. Refl.: (-4,-4,-3)	10.665	78.82	5.518	4.8	2.149	10.32	26.86	28.77
Quartz	(8,-4,3) Equiv. Refl.: (-4,8,-3), (-4,-4,3)	10.665	78.82	5.517	4.8	2.149	10.32	26.86	28.77
Quartz	(8,-4,-3)	10.665	78.82	5.516	4.8	2.149	10.32	26.86	28.77
Quartz	(0,6,5) Equiv. Refl.: (0,-6,-5), (6,0,-5), (-6,0,5)	10.455	74.1	5.512	4.6	3.096	14.25	38.7	41.24
Quartz	(6,-6,5) Equiv. Refl.: (-6,6,-5)	10.455	74.1	5.511	4.6	3.096	14.25	38.7	41.24
Quartz	(6,1,4) Equiv. Refl.: (6,-7,-4)	10.599	77.15	5.41	4.4	2.48	10.82	31	32.84
Quartz	(1,6,-4) Equiv. Refl.: (-7,1,-4)	10.599	77.15	5.408	4.4	2.48	10.82	31	32.84
Quartz	(1,-7,4) Equiv. Refl.: (-7,6,4)	10.599	77.15	5.407	4.4	2.48	10.82	31	32.84
Quartz	(0,7,1) Equiv. Refl.: (0,-7,-1), (7,0,-1), (7,-7,1), (-7,0,1), (-7,7,-1)	10.263	70.75	5.342	4.3	3.796	16.47	47.45	50.23
Quartz	(-6,7,4) Equiv. Refl.: (-6,-1,-4)	10.599	77.15	5.037	4.4	2.48	10.82	31	32.84
Quartz	(-1,-6,4)	10.599	77.15	5.036	4.4	2.48	10.82	31	32.84
Quartz	(7,-1,4) Equiv. Refl.: (-1,7,-4)	10.599	77.15	5.035	4.4	2.48	10.82	31	32.84
Quartz	(7,-6,-4)	10.599	77.15	5.034	4.4	2.48	10.82	31	32.84
Sapph	(1,6,-8) Equiv. Refl.: (1,-7,8), (6,1,8), (6,-7,-8), (7,-1,8), (7,-6,-8), (-1,7,-8), (-1,-6,8), (-6,7,8), (-6,-1,-8), (-7,1,-8), (-7,6,8)	10.578	76.67	4.981	4.4	2.575	11.28	32.19	34.11
Quartz	(7,-3,-5) Equiv. Refl.: (7,-4,5)	10.556	76.18	4.879	4	2.674	10.59	33.43	35.07
Quartz	(-4,7,-5)	10.556	76.18	4.878	4	2.674	10.59	33.43	35.07
Quartz	(-3,7,5) Equiv. Refl.: (-3,-4,-5), (-4,-3,5)	10.556	76.18	4.877	4	2.674	10.59	33.43	35.06
Sapph	(1,1,21) Equiv. Refl.: (1,1,-21), (1,-2,21), (1,-2,-21), (2,-1,21), (2,-1,-21), (-1,2,21), (-1,2,-21), (-1,-1,21), (-1,-1,-21), (-2,1,21), (-2,1,-21)	10.356	72.3	4.713	4	3.47	13.9	43.37	45.54
Quartz	(4,-7,5)	10.556	76.18	4.619	4	2.674	10.59	33.43	35.07
Quartz	(4,3,-5) Equiv. Refl.: (-7,3,5), (-7,4,-5)	10.556	76.18	4.618	4	2.674	10.59	33.43	35.07
Quartz	(3,4,5) Equiv. Refl.: (3,-7,-5)	10.556	76.18	4.616	4	2.674	10.59	33.43	35.06
Quartz	(4,4,2) Equiv. Refl.: (4,4,-2)	10.352	72.22	4.588	3.7	3.486	12.97	43.58	45.47
Quartz	(4,-8,2) Equiv. Refl.: (4,-8,-2), (-8,4,2), (-8,4,-2)	10.352	72.22	4.587	3.7	3.486	12.97	43.58	45.47
Quartz	(4,2,6) Equiv. Refl.: (4,-6,-6)	10.335	71.92	4.583	3.6	3.548	12.91	44.35	46.19
Quartz	(-6,2,-6)	10.335	71.92	4.58	3.6	3.548	12.9	44.35	46.19
Quartz	(-6,4,6)	10.335	71.92	4.579	3.6	3.548	12.9	44.35	46.19

Ei = Cryst	10.871 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(2,4,-6) Equiv. Refl.: (2,-6,6)	10.335	71.92	4.578	3.6	3.548	12.9	44.35	46.19
Quartz	(-4,8,2) Equiv. Refl.: (-4,8,-2), (-4,-4,2), (-4,-4,-2)	10.352	72.22	4.534	3.7	3.486	12.97	43.58	45.47
Quartz	(8,-4,2) Equiv. Refl.: (8,-4,-2)	10.352	72.22	4.533	3.7	3.486	12.97	43.58	45.47
Quartz	(4,-1,8) Equiv. Refl.: (4,-3,-8)	10.573	76.56	4.517	3.8	2.597	9.74	32.46	33.89
Quartz	(-3,-1,-8)	10.573	76.56	4.515	3.8	2.597	9.74	32.46	33.89
Quartz	(-3,4,8)	10.573	76.56	4.513	3.7	2.597	9.74	32.46	33.89
Quartz	(-1,4,-8) Equiv. Refl.: (-1,-3,8)	10.573	76.56	4.512	3.7	2.597	9.73	32.46	33.89
Quartz	(5,-7,-5)	10.756	81.64	4.481	3.9	1.597	6.3	19.97	20.94
Quartz	(5,2,5)	10.756	81.64	4.48	3.9	1.597	6.3	19.97	20.94
Quartz	(-7,2,-5)	10.756	81.64	4.478	3.9	1.597	6.29	19.97	20.94
Quartz	(-7,5,5)	10.756	81.64	4.477	3.9	1.597	6.29	19.97	20.94
Quartz	(2,5,-5) Equiv. Refl.: (2,-7,5)	10.756	81.64	4.474	3.9	1.597	6.29	19.97	20.93
Quartz	(-4,6,6)	10.335	71.92	4.328	3.6	3.548	12.91	44.35	46.19
Quartz	(-4,-2,-6)	10.335	71.92	4.327	3.6	3.548	12.91	44.35	46.19
Quartz	(6,-2,6)	10.335	71.92	4.326	3.6	3.548	12.9	44.35	46.19
Quartz	(6,-4,-6)	10.335	71.92	4.324	3.6	3.548	12.9	44.35	46.19
Quartz	(-2,6,-6) Equiv. Refl.: (-2,-4,6)	10.335	71.92	4.323	3.6	3.548	12.9	44.35	46.19
Quartz	(5,3,2) Equiv. Refl.: (5,-8,-2)	10.454	74.07	4.264	3.6	3.102	11.08	38.78	40.33
Quartz	(3,-8,2)	10.454	74.07	4.263	3.6	3.102	11.08	38.78	40.33
Quartz	(3,5,-2) Equiv. Refl.: (-8,3,-2), (-8,5,2)	10.454	74.07	4.262	3.6	3.102	11.08	38.78	40.33
Quartz	(-4,1,-8) Equiv. Refl.: (-4,3,8)	10.573	76.56	4.25	3.8	2.597	9.74	32.46	33.89
Quartz	(3,1,8)	10.573	76.56	4.249	3.8	2.597	9.74	32.46	33.89
Quartz	(3,-4,-8)	10.573	76.56	4.247	3.7	2.597	9.74	32.46	33.89
Quartz	(1,3,-8) Equiv. Refl.: (1,-4,8)	10.573	76.56	4.246	3.7	2.597	9.73	32.46	33.89
Quartz	(-5,8,2) Equiv. Refl.: (-5,-3,-2)	10.454	74.07	4.244	3.6	3.102	11.08	38.78	40.33
Quartz	(8,-3,2) Equiv. Refl.: (8,-5,-2), (-3,8,-2), (-3,-5,2)	10.454	74.07	4.242	3.6	3.102	11.08	38.78	40.33
Quartz	(-5,7,5) Equiv. Refl.: (-5,-2,-5)	10.756	81.64	3.832	3.9	1.597	6.3	19.97	20.94
Quartz	(7,-2,5)	10.756	81.64	3.828	3.9	1.597	6.29	19.97	20.94
Quartz	(7,-5,-5)	10.756	81.64	3.827	3.9	1.597	6.29	19.97	20.94
Quartz	(-2,7,-5) Equiv. Refl.: (-2,-5,5)	10.756	81.64	3.826	3.9	1.597	6.29	19.97	20.93
Quartz	(8,-6,-1)	10.569	76.46	3.613	3.4	2.618	8.82	32.72	33.89
Quartz	(8,-2,1) Equiv. Refl.: (-2,8,-1), (-2,-6,1), (-6,8,1), (-6,-2,-1)	10.569	76.46	3.612	3.4	2.618	8.82	32.72	33.89
Quartz	(2,6,-2) Equiv. Refl.: (-8,2,-2), (-8,6,2)	10.754	81.59	3.572	3.2	1.608	5.11	20.1	20.74

Ei = Cryst	10.871 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(2,-8,2) Equiv. Refl.: (6,2,2), (6,-8,-2)	10.754	81.59	3.571	3.2	1.608	5.11	20.1	20.74
Quartz	(1,1,-9)	10.627	77.84	3.569	3.1	2.342	7.28	29.28	30.17
Quartz	(1,-2,9)	10.627	77.84	3.568	3.1	2.342	7.28	29.28	30.17
Quartz	(-2,1,-9)	10.627	77.84	3.559	3.1	2.342	7.26	29.28	30.16
Quartz	(-2,1,9)	10.627	77.84	3.558	3.1	2.342	7.26	29.28	30.16
Quartz	(1,1,9) Equiv. Refl.: (1,-2,-9)	10.627	77.84	3.556	3.1	2.342	7.26	29.28	30.16
Quartz	(6,-2,-6) Equiv. Refl.: (-2,6,6), (-2,-4,-6)	10.335	71.92	3.514	2.8	3.548	10.07	44.35	45.48
Quartz	(6,-4,6)	10.335	71.92	3.513	2.8	3.548	10.07	44.35	45.48
Quartz	(-4,6,-6)	10.335	71.92	3.511	2.8	3.548	10.07	44.35	45.48
Quartz	(-4,-2,6)	10.335	71.92	3.51	2.8	3.548	10.06	44.35	45.48
Quartz	(2,6,-1) Equiv. Refl.: (2,-8,1), (6,2,1), (6,-8,-1), (-8,2,-1), (-8,6,1)	10.569	76.46	3.509	3.4	2.618	8.82	32.72	33.89
Quartz	(-1,-1,9)	10.627	77.84	3.424	3.1	2.342	7.28	29.28	30.17
Quartz	(-1,2,-9)	10.627	77.84	3.423	3.1	2.342	7.28	29.28	30.17
Quartz	(2,-1,9)	10.627	77.84	3.414	3.1	2.342	7.26	29.28	30.16
Quartz	(2,-1,-9)	10.627	77.84	3.412	3.1	2.342	7.26	29.28	30.16
Sapph	(4,4,3) Equiv. Refl.: (4,4,-3), (4,-8,3), (4,-8,-3), (8,-4,3), (8,-4,-3), (-4,8,3), (-4,8,-3), (-4,-4,3), (-4,-4,-3), (-8,4,3), (-8,4,-3), (-1,2,9)	10.521	75.42	3.411	3.1	2.828	8.67	35.35	36.4
Quartz	(-1,-1,-9)	10.627	77.84	3.41	3.1	2.342	7.26	29.28	30.16
Quartz	(6,-5,-6)	10.638	78.12	3.357	3.2	2.287	7.38	28.59	29.52
Quartz	(6,-1,6) Equiv. Refl.: (-5,6,6), (-5,-1,-6)	10.638	78.12	3.356	3.2	2.287	7.38	28.59	29.52
Quartz	(-1,-5,6)	10.638	78.12	3.355	3.2	2.287	7.37	28.59	29.52
Quartz	(-1,6,-6)	10.638	78.12	3.354	3.2	2.287	7.37	28.59	29.52
Quartz	(0,2,9) Equiv. Refl.: (0,-2,-9)	10.727	80.65	3.35	3.3	1.79	5.94	22.38	23.15
Quartz	(2,-2,9)	10.727	80.65	3.349	3.3	1.79	5.94	22.38	23.15
Quartz	(2,0,9) Equiv. Refl.: (-2,2,-9)	10.727	80.65	3.348	3.3	1.79	5.94	22.38	23.15
Quartz	(-2,0,9)	10.727	80.65	3.347	3.3	1.79	5.94	22.38	23.15
Quartz	(2,4,6) Equiv. Refl.: (-6,2,6)	10.335	71.92	3.287	2.8	3.548	10.07	44.35	45.48
Quartz	(2,-6,-6) Equiv. Refl.: (-6,4,-6)	10.335	71.92	3.286	2.8	3.548	10.07	44.35	45.48
Quartz	(4,-6,6)	10.335	71.92	3.284	2.8	3.548	10.07	44.35	45.48
Quartz	(4,2,-6)	10.335	71.92	3.283	2.8	3.548	10.06	44.35	45.48
Quartz	(5,1,6) Equiv. Refl.: (-6,5,6)	10.638	78.12	3.259	3.2	2.287	7.38	28.59	29.52
Quartz	(1,5,-6) Equiv. Refl.: (5,-6,-6), (-6,1,-6)	10.638	78.12	3.258	3.2	2.287	7.37	28.59	29.52
Quartz	(1,-6,6)	10.638	78.12	3.257	3.2	2.287	7.37	28.59	29.52
Quartz	(0,1,9) Equiv. Refl.: (0,-1,-9)	10.425	73.54	3.148	2.6	3.212	8.51	40.15	41.04
Sapph	(3,5,-5) Equiv. Refl.: (3,-8,5), (5,3,5), (5,-8,-5), (8,-3,5), (8,-5,-5), (-3,8,-5), (-3,-5,5), (-5,8,5), (-5,-3,-5), (-8,3,-5), (-8,5,5)	10.798	83.35	3.147	3.7	1.267	4.7	15.83	16.51

Ei = Cryst	10.871 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(1,0,-9)	10.425	73.54	3.137	2.6	3.212	8.49	40.15	41.04
	Equiv. Refl.: (1,-1,9), (-1,0,9), (-1,1,-9)								
Quartz	(5,-1,-7)	10.443	73.86	3.128	2.6	3.146	8.24	39.33	40.18
	Equiv. Refl.: (5,-4,7)								
Quartz	(3,3,6)	10.231	70.25	3.127	2.9	3.904	11.24	48.8	50.08
	Equiv. Refl.: (3,-6,-6)								
Quartz	(3,3,-6)	10.231	70.25	3.126	2.9	3.904	11.24	48.8	50.08
	Equiv. Refl.: (3,-6,6), (-6,3,6), (-6,3,-6)								
Quartz	(6,-3,-6)	10.231	70.25	3.122	2.9	3.904	11.24	48.8	50.08
	Equiv. Refl.: (-3,6,6)								
Quartz	(6,-3,6)	10.231	70.25	3.121	2.9	3.904	11.24	48.8	50.08
	Equiv. Refl.: (-3,6,-6), (-3,-3,6), (-3,-3,-6)								
Quartz	(-4,5,-7)	10.443	73.86	3.12	2.6	3.146	8.22	39.33	40.18
	Equiv. Refl.: (-4,-1,7)								
Quartz	(-1,-4,-7)	10.443	73.86	3.119	2.6	3.146	8.22	39.33	40.18
Quartz	(-1,5,7)	10.443	73.86	3.118	2.6	3.146	8.22	39.33	40.18
LiNbO3	(1,5,17)	10.85	86.46	3.085	7.5	0.673	5.04	8.41	9.8
	Equiv. Refl.: (1,-6,-17), (5,1,-17), (5,-6,17), (6,-1,-17), (6,-5,17), (-1,6,17), (-1,-5,-17), (-5,6,-17), (-5,-1,17), (-6,1,17), (-6,5,-17)								
Quartz	(8,-2,2)	10.754	81.59	3.081	3.2	1.608	5.11	20.1	20.74
	Equiv. Refl.: (8,-6,-2), (-2,-6,2)								
Quartz	(-2,8,-2)	10.754	81.59	3.08	3.2	1.608	5.11	20.1	20.74
Quartz	(-6,8,2)	10.754	81.59	3.079	3.2	1.608	5.11	20.1	20.74
	Equiv. Refl.: (-6,-2,-2)								
Quartz	(-5,1,7)	10.443	73.86	3.052	2.6	3.146	8.24	39.33	40.18
	Equiv. Refl.: (-5,4,-7)								
Quartz	(4,1,-7)	10.443	73.86	3.044	2.6	3.146	8.22	39.33	40.18
	Equiv. Refl.: (4,-5,7)								
Quartz	(1,4,7)	10.443	73.86	3.042	2.6	3.146	8.22	39.33	40.18
	Equiv. Refl.: (1,-5,-7)								
Quartz	(-5,8,-2)	10.454	74.07	2.951	2.5	3.102	7.82	38.78	39.56
	Equiv. Refl.: (-5,-3,2)								
Quartz	(8,-3,-2)	10.454	74.07	2.949	2.5	3.102	7.82	38.78	39.56
	Equiv. Refl.: (8,-5,2), (-3,-5,-2)								
Quartz	(-3,8,2)	10.454	74.07	2.948	2.5	3.102	7.82	38.78	39.56
Quartz	(5,3,-2)	10.454	74.07	2.931	2.5	3.102	7.82	38.78	39.56
	Equiv. Refl.: (5,-8,2)								
Quartz	(3,5,2)	10.454	74.07	2.929	2.5	3.102	7.82	38.78	39.56
	Equiv. Refl.: (-8,3,2), (-8,5,-2)								
Quartz	(3,-8,-2)	10.454	74.07	2.928	2.5	3.102	7.82	38.78	39.56
Sapph	(1,5,-13)	10.424	73.51	2.656	2.7	3.217	8.57	40.22	41.12
	Equiv. Refl.: (1,-6,13), (5,1,13), (5,-6,-13), (6,-1,13), (6,-5,-13), (-1,6,-13), (-1,-5,13), (-5,6,13), (-5,-1,-13), (-6,1,-13), (-6,5,13)								
Sapph	(2,5,9)	10.331	71.86	2.558	2.5	3.562	9.06	44.53	45.44
	Equiv. Refl.: (2,5,-9), (2,-7,9), (2,-7,-9), (5,2,9), (5,2,-9), (5,-7,9), (5,-7,-9), (7,-2,9), (7,-2,-9), (7,-5,9), (7,-5,-9), (-2,7,9), (-2,7,-9), (-2,-5,9), (-2,-5,-9), (-5,7,9), (-5,7,-9), (-5,-2,9), (-5,-2,-9), (-7,2,9), (-7,2,-9), (-7,5,9), (-7,5,-9)								
Quartz	(0,7,3)	10.764	81.95	2.53	2.8	1.538	4.31	19.23	19.71
	Equiv. Refl.: (0,-7,-3), (-7,7,-3)								

Ei = Cryst	10.871 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(7,0,-3)	10.764	81.95	2.529	2.8	1.538	4.3	19.23	19.71
	Equiv. Refl.: (7,-7,3), (-7,0,3)								
LiNbO3	(1,6,-11)	10.36	72.37	2.273	3.5	3.455	12.05	43.19	44.84
	Equiv. Refl.: (1,-7,11), (6,1,11), (6,-7,-11), (7,-1,11), (7,-6,-11), (-1,7,-11), (-1,-6,11), (-6,7,11), (-6,-1,-11), (-7,1,-11), (-7,6,11)								
LiNbO3	(2,4,-17)	10.58	76.7	2.233	3.7	2.569	9.6	32.11	33.52
	Equiv. Refl.: (2,-6,17), (4,2,17), (4,-6,-17), (6,-2,17), (6,-4,-17), (-2,6,-17), (-2,-4,17), (-4,6,17), (-4,-2,-17), (-6,2,-17), (-6,4,17)								
Quartz	(-5,5,7)	10.841	85.77	2.098	3.1	0.803	2.46	10.04	10.34
Quartz	(5,-5,-7)	10.841	85.77	2.097	3.1	0.803	2.46	10.04	10.34
Quartz	(-5,0,-7)	10.841	85.77	2.096	3.1	0.803	2.46	10.04	10.34
Quartz	(5,0,7)	10.841	85.77	2.095	3.1	0.803	2.46	10.04	10.34
Quartz	(0,7,-3)	10.764	81.95	2.088	2.6	1.538	4.01	19.23	19.64
	Equiv. Refl.: (0,-7,3), (7,0,3), (7,-7,-3), (-7,0,-3), (-7,7,3)								
Quartz	(0,5,-7)	10.841	85.77	2.074	3	0.803	2.44	10.04	10.33
	Equiv. Refl.: (0,-5,7)								
LiNbO3	(2,2,21)	10.554	76.13	2.013	3.4	2.684	9.25	33.55	34.81
	Equiv. Refl.: (2,-2,-21), (2,-4,21), (2,-4,-21), (4,-2,21), (4,-2,-21), (-2,4,21), (-2,4,-21), (-2,-2,21), (-2,-2,-21), (-4,2,21), (-4,2,-21)								
Quartz	(7,0,2)	10.454	74.07	1.96	2.2	3.102	6.83	38.78	39.37
	Equiv. Refl.: (7,-7,-2), (-7,0,-2), (-7,7,2)								
Quartz	(0,7,-2)	10.454	74.07	1.959	2.2	3.102	6.83	38.78	39.37
	Equiv. Refl.: (0,-7,2)								
Quartz	(4,-1,-8)	10.573	76.56	1.913	2.2	2.597	5.69	32.46	32.96
	Equiv. Refl.: (4,-3,8), (-1,-3,-8)								
Quartz	(-1,4,8)	10.573	76.56	1.912	2.2	2.597	5.68	32.46	32.96
Quartz	(-3,-1,8)	10.573	76.56	1.91	2.2	2.597	5.68	32.46	32.96
Quartz	(-3,4,-8)	10.573	76.56	1.909	2.2	2.597	5.68	32.46	32.96
Quartz	(1,3,8)	10.573	76.56	1.865	2.2	2.597	5.69	32.46	32.96
	Equiv. Refl.: (-4,3,-8)								
Quartz	(1,-4,-8)	10.573	76.56	1.864	2.2	2.597	5.68	32.46	32.96
	Equiv. Refl.: (-4,1,8)								
Quartz	(2,6,0)	10.506	75.12	1.863	2	2.888	5.8	36.1	36.57
	Equiv. Refl.: (2,-8,0), (6,2,0), (6,-8,0), (-8,2,0), (-8,6,0)								
Quartz	(3,1,-8)	10.573	76.56	1.861	2.2	2.597	5.68	32.46	32.96
	Equiv. Refl.: (3,-4,8)								
Quartz	(5,-1,7)	10.443	73.86	1.807	2	3.146	6.3	39.33	39.83
	Equiv. Refl.: (5,-4,-7)								
Quartz	(-4,-1,-7)	10.443	73.86	1.806	2	3.146	6.3	39.33	39.83
Quartz	(-1,-4,7)	10.443	73.86	1.805	2	3.146	6.29	39.33	39.83
	Equiv. Refl.: (-4,5,7)								
Quartz	(-1,5,-7)	10.443	73.86	1.804	2	3.146	6.29	39.33	39.83
Quartz	(-5,1,-7)	10.443	73.86	1.702	2	3.146	6.3	39.33	39.83
	Equiv. Refl.: (-5,4,7)								
Quartz	(4,1,7)	10.443	73.86	1.701	2	3.146	6.3	39.33	39.83
Quartz	(1,4,-7)	10.443	73.86	1.7	2	3.146	6.29	39.33	39.83
	Equiv. Refl.: (1,-5,7), (4,-5,-7)								
Quartz	(8,-2,0)	10.506	75.12	1.611	2	2.888	5.8	36.1	36.57
	Equiv. Refl.: (8,-6,0), (-2,8,0), (-2,-6,0), (-6,8,0), (-6,-2,0)								
Quartz	(3,4,-5)	10.556	76.18	1.561	1.8	2.674	4.72	33.43	33.76
	Equiv. Refl.: (3,-7,5), (-7,3,-5)								

Ei = Cryst	10.871 Refl (h,k,l)	keV EB [keV]	ΘB $[\circ]$	$\int IR d\Theta$ [μrad]	Width [μrad]	Ei cot Θ [meV/ μrad]	ΔE [meV]	ΔE_g 2m, 50 μm [meV]	ΔE_t 2m, 50 μm [meV]
Quartz	(4,3,5)	10.556	76.18	1.56	1.8	2.674	4.72	33.43	33.76
	Equiv. Refl.: (4,-7,-5), (-7,4,5)								
Quartz	(-2,4,-8)	10.473	74.44	1.558	1.8	3.027	5.31	37.84	38.21
	Equiv. Refl.: (-2,-2,8)								
Quartz	(4,-2,-8)	10.473	74.44	1.557	1.8	3.027	5.31	37.84	38.21
Quartz	(4,-2,8)	10.473	74.44	1.556	1.8	3.027	5.31	37.84	38.21
Quartz	(-2,4,8)	10.473	74.44	1.553	1.8	3.027	5.3	37.84	38.21
	Equiv. Refl.: (-2,-2,-8)								
Sapph	(3,5,1)	10.542	75.86	1.467	1.9	2.738	5.12	34.23	34.61
	Equiv. Refl.: (3,-8,-1), (5,3,-1), (5,-8,1), (8,-3,-1), (8,-5,1), (-3,8,1), (-3,-5,-1), (-5,8,-1), (-5,-3,1), (-8,3,1), (-8,5,-1)								
Quartz	(2,-4,8)	10.473	74.44	1.415	1.8	3.027	5.31	37.84	38.21
Quartz	(2,2,-8)	10.473	74.44	1.414	1.8	3.027	5.31	37.84	38.21
Quartz	(-4,2,8)	10.473	74.44	1.413	1.8	3.027	5.31	37.84	38.21
Quartz	(-4,2,-8)	10.473	74.44	1.412	1.8	3.027	5.31	37.84	38.21
Quartz	(2,2,8)	10.473	74.44	1.409	1.8	3.027	5.3	37.84	38.21
	Equiv. Refl.: (2,-4,-8)								
Quartz	(7,-3,5)	10.556	76.18	1.363	1.8	2.674	4.72	33.43	33.76
Quartz	(7,-4,-5)	10.556	76.18	1.362	1.8	2.674	4.72	33.43	33.76
	Equiv. Refl.: (-3,7,-5), (-3,-4,5)								
Quartz	(-4,7,5)	10.556	76.18	1.361	1.8	2.674	4.72	33.43	33.76
	Equiv. Refl.: (-4,-3,-5)								
Quartz	(-7,1,4)	10.599	77.15	1.349	1.7	2.48	4.14	31	31.28
	Equiv. Refl.: (-7,6,-4)								
Quartz	(6,1,-4)	10.599	77.15	1.348	1.7	2.48	4.14	31	31.28
	Equiv. Refl.: (6,-7,4)								
Quartz	(1,6,4)	10.599	77.15	1.347	1.7	2.48	4.13	31	31.28
	Equiv. Refl.: (1,-7,-4)								
Quartz	(7,-1,-4)	10.599	77.15	1.326	1.7	2.48	4.14	31	31.28
	Equiv. Refl.: (7,-6,4)								
Quartz	(-6,7,-4)	10.599	77.15	1.325	1.7	2.48	4.13	31	31.28
	Equiv. Refl.: (-6,-1,4)								
Quartz	(-1,7,4)	10.599	77.15	1.324	1.7	2.48	4.13	31	31.28
	Equiv. Refl.: (-1,-6,-4)								
Sapph	(2,3,17)	10.433	73.67	1.232	1.6	3.185	5.05	39.81	40.13
	Equiv. Refl.: (2,-5,-17), (3,2,-17), (3,-5,17), (5,-2,-17), (5,-3,17), (-2,5,17), (-2,-3,-17), (-3,5,-17), (-3,-2,17), (-5,2,17), (-5,3,-17)								
Quartz	(-2,7,5)	10.756	81.64	1.137	1.6	1.597	2.5	19.97	20.12
	Equiv. Refl.: (-2,-5,-5)								
Quartz	(-5,-2,5)	10.756	81.64	1.134	1.6	1.597	2.49	19.97	20.12
Quartz	(7,-2,-5)	10.756	81.64	1.133	1.6	1.597	2.49	19.97	20.12
	Equiv. Refl.: (-5,7,-5)								
Quartz	(7,-5,5)	10.756	81.64	1.132	1.6	1.597	2.49	19.97	20.12
Sapph	(0,7,-4)	10.703	79.9	1.12	1.6	1.936	3.18	24.2	24.41
	Equiv. Refl.: (0,-7,4), (7,0,4), (7,-7,-4), (-7,0,-4), (-7,7,4)								
Quartz	(6,0,5)	10.455	74.1	1.08	1.4	3.096	4.19	38.7	38.93
	Equiv. Refl.: (6,-6,-5), (-6,0,-5), (-6,6,5)								
Quartz	(0,6,-5)	10.455	74.1	1.077	1.4	3.096	4.18	38.7	38.93
	Equiv. Refl.: (0,-6,5)								

Ei =	10.871	keV						ΔE_g	ΔE_t
Cryst	Ref	EB	Θ_B	$\int IR d\Theta$	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(5,-2,-7)	10.237	70.34	1.035	1.2	3.884	4.7	48.55	48.78
	Equiv. Refl.: (-2,-3,-7)								
Quartz	(5,-3,7)	10.237	70.34	1.034	1.2	3.884	4.7	48.55	48.78
	Equiv. Refl.: (-2,5,7)								
Quartz	(-3,5,-7)	10.237	70.34	1.033	1.2	3.884	4.69	48.55	48.78
	Equiv. Refl.: (-3,-2,7)								
Quartz	(2,5,5)	10.756	81.64	1.009	1.6	1.597	2.5	19.97	20.12
	Equiv. Refl.: (2,-7,-5)								
Quartz	(5,2,-5)	10.756	81.64	1.005	1.6	1.597	2.49	19.97	20.12
	Equiv. Refl.: (5,-7,5), (-7,2,5)								
Quartz	(-7,5,-5)	10.756	81.64	1.004	1.6	1.597	2.49	19.97	20.12
LiNbO3	(3,4,-13)	10.263	70.75	1.002	2	3.796	7.55	47.46	48.05
	Equiv. Refl.: (3,-7,13), (4,3,13), (4,-7,-13), (7,-3,13), (7,-4,-13), (-3,7,-13), (-3,-4,13), (-4,7,13), (-4,-3,-13), (-7,3,-13), (-7,4,13)								
Quartz	(7,0,1)	10.263	70.75	0.998	1.2	3.796	4.66	47.45	47.68
	Equiv. Refl.: (7,-7,-1), (-7,0,-1), (-7,7,1)								
Quartz	(0,7,-1)	10.263	70.75	0.997	1.2	3.796	4.66	47.45	47.68
	Equiv. Refl.: (0,-7,1)								
Quartz	(2,3,7)	10.237	70.34	0.944	1.2	3.884	4.7	48.55	48.78
	Equiv. Refl.: (2,-5,-7), (-5,2,7), (-5,3,-7)								
Quartz	(3,2,-7)	10.237	70.34	0.943	1.2	3.884	4.69	48.55	48.78
	Equiv. Refl.: (3,-5,7)								
Sapph	(1,6,7)	10.416	73.36	0.817	1.2	3.25	3.77	40.62	40.8
	Equiv. Refl.: (1,-7,-7), (6,1,-7), (6,-7,7), (7,-1,-7), (7,-6,7), (-1,7,7), (-1,-6,-7), (-6,7,-7), (-6,-1,7), (-7,1,7), (-7,6,-7)								
Quartz	(1,0,9)	10.425	73.54	0.805	1.1	3.212	3.44	40.15	40.3
	Equiv. Refl.: (1,-1,-9), (-1,0,-9), (-1,1,9)								
Quartz	(0,1,-9)	10.425	73.54	0.802	1.1	3.212	3.43	40.15	40.3
	Equiv. Refl.: (0,-1,9)								
Sapph	(1,3,19)	10.567	76.42	0.653	1	2.626	2.75	32.83	32.95
	Equiv. Refl.: (1,-4,-19), (3,1,-19), (3,-4,19), (4,-1,-19), (4,-3,19), (-1,4,19), (-1,-3,-19), (-3,4,-19), (-3,-1,19), (-4,1,19), (-4,3,-19)								
Quartz	(3,2,7)	10.237	70.34	0.618	0.8	3.884	3.11	48.55	48.65
	Equiv. Refl.: (3,-5,-7)								
Quartz	(-5,2,-7)	10.237	70.34	0.617	0.8	3.884	3.11	48.55	48.65
	Equiv. Refl.: (-5,3,7)								
Quartz	(2,3,-7)	10.237	70.34	0.616	0.8	3.884	3.1	48.55	48.65
	Equiv. Refl.: (2,-5,7)								
Quartz	(0,7,2)	10.454	74.07	0.543	0.8	3.102	2.52	38.78	38.86
	Equiv. Refl.: (0,-7,-2), (7,0,-2), (7,-7,2), (-7,0,2), (-7,7,-2)								
Quartz	(5,-2,7)	10.237	70.34	0.532	0.8	3.884	3.11	48.55	48.65
	Equiv. Refl.: (-3,5,7), (-3,-2,-7)								
Quartz	(5,-3,-7)	10.237	70.34	0.531	0.8	3.884	3.11	48.55	48.65
	Equiv. Refl.: (-2,5,-7)								
Quartz	(-2,-3,7)	10.237	70.34	0.53	0.8	3.884	3.1	48.55	48.65
LiNbO3	(2,6,-7)	10.504	75.07	0.445	1.4	2.898	3.98	36.22	36.44
	Equiv. Refl.: (2,-8,7), (6,2,7), (6,-8,-7), (8,-2,7), (8,-6,-7), (-2,8,-7), (-2,-6,7), (-6,8,7), (-6,-2,-7), (-8,2,-7), (-8,6,7)								
Quartz	(3,5,1)	10.263	70.75	0.441	0.6	3.796	2.41	47.45	47.51
	Equiv. Refl.: (3,-8,-1), (5,3,-1), (5,-8,1)								
Quartz	(-8,3,1)	10.263	70.75	0.44	0.6	3.796	2.4	47.45	47.51
	Equiv. Refl.: (-8,5,-1)								

Ei =	10.871	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(8,-3,-1)	10.263	70.75	0.383	0.6	3.796	2.4	47.45	47.51
	Equiv. Refl.: (8,-5,1), (-3,8,1), (-3,-5,-1), (-5,8,-1), (-5,-3,1)								
LiNbO3	(2,6,5)	10.273	70.91	0.378	1.1	3.762	4.28	47.03	47.22
	Equiv. Refl.: (2,-8,-5), (6,2,-5), (6,-8,5), (8,-2,-5), (8,-6,5), (-2,8,5), (-2,-6,-5), (-6,8,-5), (-6,-2,5), (-8,2,5), (-8,6,-5)								
Sapph	(0,1,-22)	10.608	77.36	0.341	0.7	2.437	1.73	30.47	30.52
	Equiv. Refl.: (0,-1,22), (1,0,22), (1,-1,-22), (-1,0,-22), (-1,1,22)								
LiNbO3	(1,7,3)	10.583	76.79	0.322	1.2	2.552	3.12	31.9	32.05
	Equiv. Refl.: (1,7,-3), (1,-8,3), (1,-8,-3), (7,1,3), (7,1,-3), (7,-8,3), (7,-8,-3), (8,-1,3), (8,-1,-3), (8,-7,3), (8,-7,-3), (-1,8,3), (-1,8,-3), (-1,-7,3), (-1,-7,-3), (-7,8,3), (-7,8,-3), (-7,-1,3), (-7,-1,-3), (-8,1,3), (-8,1,-3), (-8,7,3), (-8,7,-3)								
LiNbO3	(2,3,-19)	10.437	73.75	0.264	1	3.169	3.19	39.61	39.74
	Equiv. Refl.: (2,-5,19), (3,2,19), (3,-5,-19), (5,-2,19), (5,-3,-19), (-2,5,-19), (-2,-3,19), (-3,5,19), (-3,-2,-19), (-5,2,-19), (-5,3,19)								
Sapph	(3,4,11)	10.55	76.05	0.234	0.5	2.701	1.47	33.77	33.8
	Equiv. Refl.: (3,-7,-11), (4,3,-11), (4,-7,11), (7,-3,-11), (7,-4,11), (-3,7,11), (-3,-4,-11), (-4,7,-11), (-4,-3,11), (-7,3,11), (-7,4,-11)								
Quartz	(8,-3,1)	10.263	70.75	0.232	0.4	3.796	1.53	47.45	47.48
	Equiv. Refl.: (8,-5,-1), (-3,8,-1), (-3,-5,1)								
Quartz	(-5,8,1)	10.263	70.75	0.231	0.4	3.796	1.53	47.45	47.48
	Equiv. Refl.: (-5,-3,-1)								
LiNbO3	(3,5,7)	10.224	70.14	0.2	0.8	3.927	3.15	49.09	49.19
	Equiv. Refl.: (3,-8,-7), (5,3,-7), (5,-8,7), (8,-3,-7), (8,-5,7), (-3,8,7), (-3,-5,-7), (-5,8,-7), (-5,-3,7), (-8,3,7), (-8,5,-7)								
Quartz	(3,5,-1)	10.263	70.75	0.185	0.4	3.796	1.53	47.45	47.48
	Equiv. Refl.: (3,-8,1), (-8,3,-1), (-8,5,1)								
Quartz	(5,3,1)	10.263	70.75	0.184	0.4	3.796	1.53	47.45	47.48
	Equiv. Refl.: (5,-8,-1)								
Sapph	(3,3,15)	10.6	77.19	0.052	0.3	2.473	0.63	30.91	30.92
	Equiv. Refl.: (3,3,-15), (3,-6,15), (3,-6,-15), (6,-3,15), (6,-3,-15), (-3,6,15), (-3,6,-15), (-3,-3,15), (-3,-3,-15), (-6,3,15), (-6,3,-15)								
LiNbO3	(4,4,9)	10.44	73.82	0.018	0.3	3.154	0.92	39.43	39.44
	Equiv. Refl.: (4,4,-9), (4,-8,9), (4,-8,-9), (8,-4,9), (8,-4,-9), (-4,8,9), (-4,8,-9), (-4,-4,9), (-4,-4,-9), (-8,4,9), (-8,4,-9)								

Ei =	13.419	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Si	(0,6,10)	13.311	82.74	5.595	4.7	1.71	8.1	21.37	22.85
	Equiv. Refl.: (6,6,8)								
Ge	(0,0,12)	13.149	78.49	3.011	6.5	2.731	17.8	34.14	38.5
	Equiv. Refl.: (4,4,8)								
Si	(0,8,8)	12.914	74.23	2.648	2.4	3.789	9.27	47.37	48.27
Ge	(0,6,10)	12.779	72.23	2.239	4.7	4.3	20.11	53.75	57.39
	Equiv. Refl.: (6,6,8)								
Ge	(7,7,7)	13.286	81.92	2.183	6.3	1.906	12.04	23.83	26.7
	Equiv. Refl.: (1,5,11)								
Si	(1,3,11)	13.064	76.8	1.786	2	3.148	6.23	39.34	39.83
	Equiv. Refl.: (1,7,9), (5,5,9)								
Si	(1,1,11)	12.659	70.63	1.386	1.5	4.718	7.16	58.98	59.41
	Equiv. Refl.: (5,7,7)								
Ge	(3,3,11)	12.919	74.31	1.305	3.6	3.769	13.57	47.11	49.03
	Equiv. Refl.: (3,7,9)								
LiNbO3	(1,-7,-22)	13.414	88.36	49.9	46.4	0.384	17.81	4.79	18.45
	Equiv. Refl.: (6,1,-22), (7,-1,-22), (-1,-6,-22), (-6,7,-22), (-7,6,-22)								
LiNbO3	(1,6,22)	13.414	88.36	47.8	46.4	0.384	17.81	4.79	18.45
	Equiv. Refl.: (6,-7,22), (7,-6,22), (-1,7,22), (-6,-1,22), (-7,1,22)								
LiNbO3	(4,-11,0)	13.409	87.83	40.1	37.4	0.508	19.01	6.36	20.04
	Equiv. Refl.: (7,4,0), (11,-4,0), (-4,-7,0), (-7,11,0), (-11,7,0)								
LiNbO3	(4,7,0)	13.409	87.83	39.4	37.4	0.508	19.01	6.36	20.04
	Equiv. Refl.: (7,-11,0), (11,-7,0), (-4,11,0), (-7,-4,0), (-11,4,0)								
LiNbO3	(5,6,-4)	13.384	85.89	27.2	24.4	0.965	23.5	12.06	26.41
	Equiv. Refl.: (6,-11,-4), (11,-6,-4), (-5,11,-4), (-6,-5,-4), (-11,5,-4)								
LiNbO3	(5,-11,4)	13.384	85.89	26.4	24.4	0.965	23.5	12.06	26.41
	Equiv. Refl.: (6,5,4), (11,-5,4), (-5,-6,4), (-6,11,4), (-11,6,4)								
LiNbO3	(1,9,4)	13.384	85.89	19.9	18.6	0.965	17.95	12.06	21.62
	Equiv. Refl.: (9,-10,4), (10,-9,4), (-1,10,4), (-9,-1,4), (-10,1,4)								
LiNbO3	(1,-10,-4)	13.384	85.89	19.3	18.6	0.965	17.95	12.06	21.62
	Equiv. Refl.: (9,1,-4), (10,-1,-4), (-1,-9,-4), (-9,10,-4), (-10,9,-4)								
Quartz	(3,7,3)	13.399	86.9	18.2	14.9	0.727	10.85	9.09	14.15
	Equiv. Refl.: (3,-10,-3), (7,3,-3), (7,-10,3), (-10,3,3), (-10,7,-3)								
Quartz	(10,-3,-3)	13.399	86.9	18.1	14.9	0.727	10.86	9.09	14.16
	Equiv. Refl.: (10,-7,3), (-3,10,3), (-3,-7,-3), (-7,10,-3), (-7,-3,3)								
Sapph	(3,7,2)	13.406	87.44	17.3	14.9	0.6	8.95	7.5	11.68
	Equiv. Refl.: (3,-10,-2), (7,3,-2), (7,-10,2), (10,-3,-2), (10,-7,2), (-3,10,2), (-3,-7,-2), (-7,10,-2), (-7,-3,2), (-10,3,2), (-10,7,-2)								
Quartz	(10,-2,1)	13.403	87.17	16.7	13.9	0.663	9.18	8.28	12.36
	Equiv. Refl.: (10,-8,-1), (-2,10,-1), (-2,-8,1), (-8,10,1), (-8,-2,-1)								
Quartz	(2,8,-1)	13.403	87.17	16.4	13.9	0.663	9.18	8.28	12.36
	Equiv. Refl.: (2,-10,1), (8,2,1), (8,-10,-1), (-10,2,-1), (-10,8,1)								
LiNbO3	(1,9,-2)	13.295	82.19	14.3	12.9	1.841	23.77	23.01	33.08
	Equiv. Refl.: (9,-10,-2), (10,-9,-2), (-1,10,-2), (-9,-1,-2), (-10,1,-2)								
LiNbO3	(1,-10,2)	13.295	82.19	14.1	12.9	1.841	23.77	23.01	33.08
	Equiv. Refl.: (9,1,2), (10,-1,2), (-1,-9,2), (-9,10,2), (-10,9,2)								

Ei =	13.419	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[°]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Sapph	(1,4,24)	13.37	85.08	12	10.1	1.155	11.68	14.43	18.57
	Equiv. Refl.: (1,4,-24), (1,-5,24), (1,-5,-24), (4,1,24), (4,1,-24), (4,-5,24), (4,-5,-24), (5,-1,24), (5,-1,-24), (5,-4,24), (5,-4,-24), (-1,5,24), (-1,5,-24), (-1,-4,24), (-1,-4,-24), (-4,5,24), (-4,5,-24), (-4,-1,24), (-4,-1,-24), (-5,1,24), (-5,1,-24), (-5,4,24), (-5,4,-24)								
LiNbO3	(0,-7,-20)	13.218	80.08	11.2	10.1	2.347	23.65	29.33	37.68
	Equiv. Refl.: (7,0,-20), (-7,7,-20)								
LiNbO3	(0,7,20)	13.218	80.08	11	10.1	2.347	23.65	29.33	37.68
	Equiv. Refl.: (7,-7,20), (-7,0,20)								
LiNbO3	(1,-8,-18)	13.229	80.34	10.8	9.9	2.285	22.53	28.56	36.38
	Equiv. Refl.: (7,1,-18), (8,-1,-18), (-1,-7,-18), (-7,8,-18), (-8,7,-18)								
LiNbO3	(1,7,18)	13.229	80.34	10.7	9.9	2.285	22.53	28.56	36.38
	Equiv. Refl.: (7,-8,18), (8,-7,18), (-1,8,18), (-7,-1,18), (-8,1,18)								
LiNbO3	(0,-8,-16)	13.226	80.28	10.2	8.7	2.299	20	28.74	35.02
	Equiv. Refl.: (8,0,-16), (-8,8,-16)								
LiNbO3	(1,-8,18)	13.229	80.34	10	9	2.285	20.66	28.56	35.25
	Equiv. Refl.: (5,5,-12), (5,-10,-12), (7,1,18), (8,-1,18), (10,-5,-12), (-1,-7,18), (-5,10,-12), (-5,-5,-12), (-7,8,18), (-8,7,18), (-10,5,-12)								
LiNbO3	(1,7,-18)	13.229	80.34	9.9	9	2.285	20.66	28.56	35.25
	Equiv. Refl.: (2,3,26), (2,-5,-26), (3,2,-26), (3,-5,26), (5,-2,-26), (5,-3,26), (5,-11,-2), (6,5,-2), (7,-8,-18), (8,-7,-18), (11,-5,-2), (-1,8,-18), (-2,5,26), (-2,-3,-26), (-3,5,-26), (-3,-2,26), (-5,2,26), (-5,3,-26), (-5,-6,-2), (-6,11,-2), (-7,-1,-18), (-8,1,-18), (-11,6,-2)								
LiNbO3	(3,-10,10)	13.143	78.36	9.8	8.6	2.764	23.91	34.55	42.02
	Equiv. Refl.: (5,6,2), (7,3,10), (10,-3,10), (-3,-7,10), (-6,-5,2), (-7,10,10), (-10,7,10)								
LiNbO3	(3,7,-10)	13.143	78.36	9.7	8.6	2.764	23.91	34.55	42.02
	Equiv. Refl.: (6,-11,2), (7,-10,-10), (10,-7,-10), (11,-6,2), (-3,10,-10), (-5,11,2), (-7,-3,-10), (-10,3,-10), (-11,5,2)								
LiNbO3	(5,5,12)	13.183	79.25	9.5	8.7	2.548	22.24	31.85	38.84
	Equiv. Refl.: (5,-10,12), (10,-5,12), (-5,10,12), (-5,-5,12), (-10,5,12)								
Quartz	(10,-3,3)	13.399	86.9	9	7.4	0.727	5.37	9.09	10.55
	Equiv. Refl.: (10,-7,-3), (-3,10,-3), (-3,-7,3), (-7,10,3), (-7,-3,-3)								
LiNbO3	(0,8,16)	13.226	80.28	8.8	8.7	2.299	20	28.74	35.02
	Equiv. Refl.: (8,-8,16), (-8,0,16)								
LiNbO3	(3,5,-20)	13.218	80.08	8.5	7.5	2.347	17.49	29.33	34.15
	Equiv. Refl.: (4,-9,16), (5,4,16), (5,-8,-20), (8,-5,-20), (9,-4,16), (-3,8,-20), (-4,-5,16), (-5,9,16), (-5,-3,-20), (-8,3,-20), (-9,5,16)								
LiNbO3	(2,7,-14)	12.99	75.47	8.3	7.1	3.478	24.73	43.47	50.02
	Equiv. Refl.: (4,5,-16), (5,-9,-16), (7,-9,-14), (9,-5,-16), (9,-7,-14), (-2,9,-14), (-4,9,-16), (-5,-4,-16), (-7,-2,-14), (-9,2,-14), (-9,4,-16)								
Quartz	(7,3,3)	13.399	86.9	8.1	7.4	0.727	5.37	9.09	10.55
	Equiv. Refl.: (7,-10,-3), (-10,3,-3), (-10,7,3)								
LiNbO3	(1,2,-28)	13.05	76.54	8	7.1	3.213	22.95	40.16	46.25
	Equiv. Refl.: (2,-3,-28), (3,-2,-28), (4,-10,-10), (6,4,-10), (10,-4,-10), (-1,3,-28), (-2,-1,-28), (-3,1,-28), (-4,-6,-10), (-6,10,-10), (-10,6,-10), (3,7,-3), (3,-10,3)								
LiNbO3	(1,-3,28)	13.05	76.54	7.9	7.1	3.213	22.95	40.16	46.25
	Equiv. Refl.: (2,1,28), (3,-1,28), (-1,-2,28), (-2,3,28), (-3,2,28), (5,5,6), (5,5,-6), (5,-10,6), (5,-10,-6), (10,-5,6), (10,-5,-6), (-5,10,6), (-5,10,-6), (-5,-5,6), (-5,-5,-6), (-10,5,6), (-10,5,-6)								
LiNbO3	(2,-9,14)	12.99	75.47	7.8	7.1	3.478	24.73	43.47	50.02
	Equiv. Refl.: (4,6,10), (6,-10,10), (7,2,14), (9,-2,14), (10,-6,10), (-2,-7,14), (-4,10,10), (-6,-4,10), (-7,9,14), (-9,7,14), (-10,4,10)								
LiNbO3	(0,9,-6)	12.799	72.51	7.5	6.5	4.228	27.62	52.85	59.63
	Equiv. Refl.: (0,-9,6), (9,0,6), (9,-9,-6), (-9,0,-6), (-9,9,6)								

Ei =	13.419	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(0,-8,14)	12.765	72.03	7.4	6.2	4.352	26.81	54.4	60.64
	Equiv. Refl.: (2,-10,0), (3,-8,20), (5,3,20), (8,0,14), (8,2,0), (8,-3,20), (10,-2,0), (-2,-8,0), (-3,-5,20), (-5,8,20), (-8,5,20), (-8,8,14), (-8,10,0), (-10,8,0)								
LiNbO3	(1,-7,20)	12.772	72.14	7.3	6.3	4.325	27.26	54.06	60.54
	Equiv. Refl.: (2,8,0), (3,7,8), (6,1,20), (7,-1,20), (7,-10,8), (8,-10,0), (10,-7,8), (10,-8,0), (-1,-6,20), (-2,10,0), (-3,10,8), (-6,7,20), (-7,6,20), (-7,-3,8), (-8,-2,0), (-10,2,0), (-10,3,8), (3,4,20), (3,-7,-20), (4,3,-20), (4,-7,20), (7,-3,-20), (7,-4,20), (-3,7,20), (-3,-4,-20), (-4,7,-20), (-4,-3,20), (-7,3,20), (-7,4,-20)								
LiNbO3	(1,6,-20)	12.772	72.14	7.1	6.3	4.325	27.26	54.06	60.54
	Equiv. Refl.: (3,-10,-8), (6,-7,-20), (7,3,-8), (7,-6,-20), (10,-3,-8), (-1,7,-20), (-3,-7,-8), (-6,-1,-20), (-7,1,-20), (-7,10,-8), (-10,7,-8)								
LiNbO3	(2,8,6)	13.023	76.05	7	6.3	3.333	20.94	41.66	46.62
	Equiv. Refl.: (8,-10,6), (10,-8,6), (-2,10,6), (-8,-2,6), (-10,2,6)								
LiNbO3	(3,4,-22)	12.974	75.2	6.9	6.1	3.545	21.7	44.31	49.34
	Equiv. Refl.: (4,-7,-22), (7,-4,-22), (-3,7,-22), (-4,-3,-22), (-7,3,-22)								
LiNbO3	(0,8,-14)	12.765	72.03	6.7	6.2	4.352	26.81	54.4	60.64
	Equiv. Refl.: (2,-10,-6), (8,2,-6), (8,-8,-14), (10,-2,-6), (-2,-8,-6), (-8,0,-14), (-8,10,-6), (-10,8,-6)								
LiNbO3	(3,-7,22)	12.974	75.2	6.6	6.1	3.545	21.7	44.31	49.34
	Equiv. Refl.: (4,3,22), (7,-3,22), (-3,-4,22), (-4,7,22), (-7,4,22)								
LiNbO3	(0,-9,-6)	12.799	72.51	6.4	5.6	4.228	23.58	52.85	57.87
	Equiv. Refl.: (9,0,-6), (-9,9,-6)								
LiNbO3	(2,8,-6)	13.023	76.05	6.2	5.7	3.333	19.14	41.66	45.84
	Equiv. Refl.: (2,-10,6), (8,2,6), (8,-10,-6), (10,-2,6), (10,-8,-6), (-2,10,-6), (-2,-8,6), (-8,10,6), (-8,-2,-6), (-10,2,-6), (-10,8,6)								
LiNbO3	(0,9,6)	12.799	72.51	6	5.6	4.228	23.58	52.85	57.87
	Equiv. Refl.: (4,-10,8), (6,4,8), (9,-9,6), (10,-4,8), (-4,-6,8), (-6,10,8), (-9,0,6), (-10,6,8)								
LiNbO3	(1,8,-10)	12.694	71.08	5.9	5.2	4.599	23.87	57.49	62.25
	Equiv. Refl.: (3,3,-24), (3,-6,-24), (6,-3,-24), (8,-9,-10), (9,-8,-10), (-1,9,-10), (-3,6,-24), (-3,-3,-24), (-6,3,-24), (-8,-1,-10), (-9,1,-10)								
LiNbO3	(0,-4,-26)	12.888	73.84	5.7	5.1	3.89	19.71	48.62	52.46
	Equiv. Refl.: (1,-9,10), (3,3,24), (3,-6,24), (4,0,-26), (4,6,-8), (6,-3,24), (6,-10,-8), (8,1,10), (9,-1,10), (10,-6,-8), (-1,-8,10), (-3,6,24), (-3,-3,24), (-4,4,-26), (-4,10,-8), (-6,3,24), (-6,-4,-8), (-8,9,10), (-9,8,10), (-10,4,-8)								
LiNbO3	(0,4,26)	12.888	73.84	5.6	5.1	3.89	19.71	48.62	52.46
	Equiv. Refl.: (0,-2,-28), (2,0,-28), (4,-4,26), (-2,2,-28), (-4,0,26), (0,3,11), (0,-3,-11), (3,0,-11), (3,-3,11), (-3,0,11), (-3,3,-11)								
LiNbO3	(0,2,28)	12.826	72.9	5.5	5.1	4.127	21	51.59	55.7
	Equiv. Refl.: (2,-2,28), (-2,0,28)								
Sapph	(2,6,-16)	13.267	81.36	5.4	4.6	2.038	9.35	25.48	27.14
	Equiv. Refl.: (2,-8,16), (6,2,16), (6,-8,-16), (8,-2,16), (8,-6,-16), (-2,8,-16), (-2,-6,16), (-6,8,16), (-6,-2,-16), (-8,2,-16), (-8,6,16)								
LiNbO3	(1,-4,26)	12.661	70.66	5.2	4.4	4.711	20.9	58.89	62.48
	Equiv. Refl.: (3,1,26), (4,-1,26), (-1,-3,26), (-3,4,26), (-4,3,26), (1,4,-10), (1,-5,10), (4,1,10), (4,-5,-10), (-5,1,-10), (-5,4,10)								
LiNbO3	(1,3,-26)	12.661	70.66	5.1	4.4	4.711	20.9	58.89	62.48
	Equiv. Refl.: (3,-4,-26), (4,-3,-26), (-1,4,-26), (-3,-1,-26), (-4,1,-26), (5,-1,10), (5,-4,-10), (-1,5,-10), (-1,-4,10), (-4,5,10), (-4,-1,-10)								
Quartz	(0,3,-11)	13.353	84.31	5	4.1	1.337	5.52	16.71	17.6
	Equiv. Refl.: (0,-3,11), (3,0,11), (3,-3,-11), (-3,0,-11), (-3,3,11)								

Ei =	13.419	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(2,7,10)	13.207	79.8	4.6	3.7	2.415	8.94	30.19	31.48
	Equiv. Refl.: (2,-9,-10), (7,2,-10), (7,-9,10), (9,-2,-10), (9,-7,10), (-2,9,10), (-2,-7,-10), (-7,9,-10), (-7,-2,10), (-9,2,10), (-9,7,-10), (0,8,5), (0,-8,-5), (5,5,0), (5,-10,0), (8,0,-5), (8,-8,5), (10,-5,0), (-5,10,0), (-5,-5,0), (-8,0,5), (-8,8,-5), (-10,5,0)								
Sapph	(1,8,-4)	12.995	75.55	4.5	3.5	3.457	12.08	43.21	44.87
	Equiv. Refl.: (1,-9,4), (8,1,4), (8,-9,-4), (9,-1,4), (9,-8,-4), (-1,9,-4), (-1,-8,4), (-8,9,4), (-8,-1,-4), (-9,1,-4), (-9,8,4), (5,-2,-10), (5,-3,10), (-2,5,10), (-2,-3,-10), (-3,5,-10), (-3,-2,10)								
Quartz	(2,3,10)	13.111	77.7	4.4	3.4	2.926	9.9	36.57	37.89
	Equiv. Refl.: (2,5,-8), (2,-5,-10), (2,-7,8), (3,2,-10), (3,-5,10), (5,2,8), (5,-7,-8), (7,-2,8), (7,-5,-8), (-2,7,-8), (-2,-5,8), (-5,2,10), (-5,3,-10), (-5,7,8), (-5,-2,-8), (-7,2,-8), (-7,5,8)								
Quartz	(0,9,-2)	13.312	82.76	4.1	3.3	1.705	5.69	21.31	22.06
	Equiv. Refl.: (0,-9,2), (2,7,-5), (2,-9,5), (7,2,5), (7,-9,-5), (9,0,2), (9,-2,5), (9,-7,-5), (9,-9,-2), (-2,9,-5), (-2,-7,5), (-7,9,5), (-7,-2,-5), (-9,0,-2), (-9,2,-5), (-9,7,5), (-9,9,2)								
Sapph	(2,6,14)	12.741	71.71	4	3	4.435	13.49	55.43	57.05
	Equiv. Refl.: (2,-8,-14), (6,2,-14), (6,-8,14), (8,-2,-14), (8,-6,14), (-2,8,14), (-2,-6,-14), (-6,8,-14), (-6,-2,14), (-8,2,14), (-8,6,-14)								
LiNbO3	(2,4,25)	13.383	85.83	3.8	5.7	0.979	5.61	12.24	13.46
	Equiv. Refl.: (2,-6,-25), (4,2,-25), (4,-6,25), (6,-2,-25), (6,-4,25), (-2,6,25), (-2,-4,-25), (-4,6,-25), (-4,-2,25), (-6,2,25), (-6,4,-25)								
Sapph	(1,8,-7)	13.281	81.77	3.7	3.2	1.94	6.22	24.25	25.04
	Equiv. Refl.: (1,-9,7), (8,1,7), (8,-9,-7), (9,-1,7), (9,-8,-7), (-1,9,-7), (-1,-8,7), (-8,9,7), (-8,-1,-7), (-9,1,-7), (-9,8,7)								
Sapph	(3,5,16)	13.008	75.79	3.5	2.8	3.398	9.67	42.47	43.56
	Equiv. Refl.: (3,-8,-16), (5,3,-16), (5,-8,16), (8,-3,-16), (8,-5,16), (-3,8,16), (-3,-5,-16), (-5,8,-16), (-5,-3,16), (-8,3,16), (-8,5,-16), (2,4,9), (2,8,0), (2,-6,-9), (2,-10,0), (4,2,-9), (4,-6,9), (8,2,0), (8,-10,0), (-6,2,9), (-6,4,-9), (-10,2,0), (-10,8,0)								
Quartz	(4,5,5)	12.743	71.74	3.4	2.6	4.429	11.53	55.36	56.55
	Equiv. Refl.: (4,-9,-5), (5,4,-5), (5,-9,5), (9,-4,-5), (9,-5,5), (10,-2,0), (10,-8,0), (-2,10,0), (-2,-8,0), (-4,9,5), (-4,-5,-5), (-5,9,-5), (-5,-4,5), (-8,10,0), (-8,-2,0), (-9,4,5), (-9,5,-5)								
Sapph	(1,1,27)	13.148	78.46	3.3	2.6	2.74	7.25	34.25	35.01
	Equiv. Refl.: (1,1,-27), (1,-2,27), (1,-2,-27), (2,7,-11), (2,-1,27), (2,-1,-27), (2,-9,11), (4,6,-2), (4,-10,2), (6,4,2), (6,-10,-2), (7,2,11), (7,-9,-11), (9,-2,11), (9,-7,-11), (10,-4,2), (10,-6,-2), (-1,2,27), (-1,2,-27), (-1,-1,27), (-1,-1,-27), (-2,1,27), (-2,1,-27), (-2,9,-11), (-2,-7,11), (-4,10,-2), (-4,-6,2), (-6,10,2), (-6,-4,-2), (-7,9,11), (-7,-2,-11), (-9,2,-11), (-9,7,11), (-10,4,-2), (-10,6,2), (3,-1,-11), (3,-2,11), (4,6,-1), (4,-10,1), (6,4,1), (6,-2,-9), (6,4,9), (6,-10,-1), (8,-2,7), (8,-6,-7), (-1,3,11), (-1,-2,-11), (-2,3,-11), (-2,6,9), (-2,8,-7), (-2,-1,11), (-2,-4,-9), (-2,-6,7), (-4,6,-9), (-4,-2,9), (-6,8,7), (-6,-2,-7), (-10,4,-1), (-10,6,1)								
Quartz	(1,2,11)	13.193	79.47	3.2	2.9	2.495	7.24	31.19	32.01
	Equiv. Refl.: (1,8,-4), (1,-3,-11), (1,-9,4), (2,1,-11), (2,6,-7), (2,-3,11), (2,-8,7), (6,2,7), (6,-8,-7), (8,1,4), (8,-9,-4), (10,-4,1), (10,-6,-1), (-3,1,11), (-3,2,-11), (-4,10,-1), (-4,-6,1), (-6,10,1), (-6,-4,-1), (-8,2,-7), (-8,6,7), (-9,1,-4), (-9,8,4)								
Quartz	(1,1,11)	12.867	73.51	3.1	2.3	3.972	9.19	49.65	50.5
	Equiv. Refl.: (1,1,-11), (1,-2,11), (1,-2,-11), (-2,1,11), (-2,1,-11)								
Sapph	(4,5,-13)	13.288	81.97	3	2.6	1.892	4.95	23.65	24.16
	Equiv. Refl.: (4,-9,13), (5,4,13), (5,-9,-13), (9,-4,13), (9,-5,-13), (-4,9,-13), (-4,-5,13), (-5,9,13), (-5,-4,-13), (-9,4,-13), (-9,5,-13), (1,8,4), (1,-9,-4), (2,-1,11), (2,-1,-11), (8,1,-4), (8,-9,4), (9,-1,4), (9,-1,-4), (9,-8,4), (9,-8,-4), (-1,2,11), (-1,2,-11), (-1,9,4), (-1,9,-4), (-1,-1,11), (-1,-1,-11), (-1,-8,4), (-1,-8,-4), (-8,9,4), (-8,9,-4), (-8,-1,4), (-8,-1,-4), (-9,1,4), (-9,8,-4)								
Quartz	(0,2,11)	12.949	74.8	2.9	2.2	3.647	7.88	45.59	46.26
	Equiv. Refl.: (0,-2,-11)								

Ei =	13.419	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Quartz	(0,8,-5)	12.99	75.48	2.8	2.1	3.475	7.44	43.44	44.07
	Equiv. Refl.: (0,-8,5), (2,0,-11), (2,-2,11), (3,7,-2), (3,-10,2), (7,3,2), (7,-10,-2), (8,0,5), (8,-8,-5) (9,-3,-5), (9,-6,5), (10,-3,2), (10,-7,-2), (-2,0,11), (-2,2,-11), (-3,9,5), (-3,10,-2), (-3,-6,-5) (-3,-7,2), (-6,9,-5), (-6,-3,5), (-7,10,2), (-7,-3,-2), (-8,0,-5), (-8,8,5), (-10,3,-2), (-10,7,2)								
Quartz	(2,4,-9)	12.884	73.77	2.7	2.1	3.906	8.01	48.82	49.47
	Equiv. Refl.: (2,-6,9), (3,4,-8), (3,5,7), (3,6,5), (3,-7,8), (3,-8,-7), (3,-9,-5), (4,2,9), (4,3,8) (4,-6,-9), (4,-7,-8), (5,3,-7), (5,-8,7), (6,3,-5), (6,-2,9), (6,-4,-9), (6,-9,5), (7,-3,8) (7,-4,-8), (-2,6,-9), (-2,-4,9), (-3,7,-8), (-3,-4,8), (-4,6,9), (-4,7,8), (-4,-2,-9), (-4,-3,-8) (-6,2,-9), (-6,4,9), (-7,3,-8), (-7,4,8), (-8,3,7), (-8,5,-7), (-9,3,5), (-9,6,-5)								
Sapph	(3,6,12)	13.244	80.72	2.6	2.5	2.192	5.38	27.4	27.92
	Equiv. Refl.: (3,6,-12), (3,-9,12), (3,-9,-12), (6,3,12), (6,3,-12), (6,-9,12), (6,-9,-12), (9,-3,12), (9,-3,-12) (9,-6,12), (9,-6,-12), (-3,9,12), (-3,9,-12), (-3,-6,12), (-3,-6,-12), (-6,9,12), (-6,9,-12), (-6,-3,12) (-6,-3,-12), (-9,3,12), (-9,3,-12), (-9,6,12), (-9,6,-12)								
Quartz	(0,9,1)	13.163	78.79	2.4	2.2	2.66	5.82	33.25	33.75
	Equiv. Refl.: (0,-9,-1), (8,-1,6), (8,-3,-7), (8,-5,7), (8,-7,-6), (9,0,-1), (9,-9,1), (-1,8,-6), (-1,-7,6) (-3,8,7), (-3,-5,-7), (-5,8,-7), (-5,-3,7), (-7,8,6), (-7,-1,-6), (-9,0,1), (-9,9,-1)								
Sapph	(1,8,5)	13.073	76.97	2.3	2.1	3.106	6.58	38.82	39.37
	Equiv. Refl.: (1,-9,-5), (8,1,-5), (8,-9,5), (9,-1,-5), (9,-8,5), (-1,9,5), (-1,-8,-5), (-8,9,-5), (-8,-1,5) (-9,1,5), (-9,8,-5), (1,7,-6), (1,-8,6), (2,7,4), (2,-9,-4), (7,1,6), (7,2,-4), (7,-8,-6) (7,-9,4), (9,-2,-4), (9,-7,4), (-2,9,4), (-2,-7,-4), (-7,9,-4), (-7,-2,4), (-8,1,-6), (-8,7,6) (-9,2,4), (-9,7,-4)								
LiNbO3	(1,9,1)	13.272	81.51	1.9	3	2.003	6	25.04	25.75
	Equiv. Refl.: (1,-10,-1), (9,1,-1), (9,-10,1), (10,-1,-1), (10,-9,1), (-1,10,1), (-1,-9,-1), (-9,10,-1), (-9,-1,1) (-10,1,1), (-10,9,-1), (0,8,10), (0,-8,-10), (1,6,19), (1,-7,-19), (5,5,0), (5,-10,0), (6,1,-19) (6,-7,19), (7,-1,-19), (7,-6,19), (8,0,-10), (8,-8,10), (10,-5,0), (-1,7,19), (-1,-6,-19), (-5,10,0) (-5,-5,0), (-6,7,-19), (-6,-1,19), (-7,1,19), (-7,6,-19), (-8,0,10), (-8,8,-10), (-10,5,0)								
Quartz	(0,4,-10)	12.866	73.49	1.8	1.8	3.977	7.22	49.71	50.23
	Equiv. Refl.: (0,-4,10), (1,7,6), (1,8,-2), (1,-8,-6), (1,-9,2), (2,6,7), (2,-8,-7), (3,7,0), (3,-10,0) (4,0,10), (4,-4,-10), (6,2,-7), (6,-8,7), (7,1,-6), (7,3,0), (7,-8,6), (7,-10,0), (8,1,2) (8,-9,-2), (9,-1,2), (9,-8,-2), (-1,9,-2), (-1,-8,2), (-4,0,-10), (-4,4,10), (-8,1,6), (-8,2,7) (-8,6,-7), (-8,7,-6), (-8,9,2), (-8,-1,-2), (-9,1,-2), (-9,8,2), (-10,3,0), (-10,7,0)								
Sapph	(1,2,26)	13.032	76.21	1.7	1.8	3.293	6.09	41.16	41.61
	Equiv. Refl.: (1,-3,-26), (2,1,-26), (2,-3,26), (3,-1,-26), (3,-2,26), (4,5,-10), (4,-9,10), (5,4,10), (5,-9,-10) (9,-4,10), (9,-5,-10), (-1,3,26), (-1,-2,-26), (-2,3,-26), (-2,-1,26), (-3,1,26), (-3,2,-26), (-4,9,-10) (-4,-5,10), (-5,9,10), (-5,-4,-10), (-9,4,-10), (-9,5,10), (3,3,9), (3,3,-9), (3,-6,9), (3,-6,-9) (4,5,-6), (4,-9,6), (5,4,6), (5,-9,-6), (6,-3,9), (6,-3,-9), (7,-1,-8), (7,-6,8), (8,-1,-6) (8,-2,-7), (8,-6,7), (8,-7,6), (10,-3,0), (10,-7,0), (-1,7,8), (-1,8,6), (-1,-6,-8), (-1,-7,-6) (-2,8,7), (-2,-6,-7), (-3,6,9), (-3,6,-9), (-3,10,0), (-3,-3,9), (-3,-3,-9), (-3,-7,0), (-6,3,9) (-6,3,-9), (-6,7,-8), (-6,8,-7), (-6,-1,8), (-6,-2,7), (-7,8,-6), (-7,10,0), (-7,-1,6), (-7,-3,0) (-9,4,-6), (-9,5,6)								
Sapph	(0,2,-26)	12.769	72.1	1.6	1.7	4.335	7.48	54.19	54.71
	Equiv. Refl.: (0,-2,26), (1,5,20), (1,8,-1), (1,-6,-20), (1,-9,1), (2,0,26), (2,-2,-26), (5,1,-20), (5,-6,20) (6,-1,-20), (6,-5,20), (8,1,1), (8,-9,-1), (9,-1,1), (9,-8,-1), (-1,6,20), (-1,9,-1), (-1,-5,-20) (-1,-8,1), (-2,0,-26), (-2,2,26), (-5,6,-20), (-5,-1,20), (-6,1,20), (-6,5,-20), (-8,9,1), (-8,-1,-1) (-9,1,-1), (-9,8,1), (1,6,-8), (1,-7,8), (3,4,8), (3,-7,-8), (4,3,-8), (4,4,7), (4,4,-7) (4,-1,-10), (4,-3,10), (4,-7,8), (4,-8,7), (4,-8,-7), (6,1,8), (6,-7,-8), (7,-1,8), (7,-3,-8) (7,-4,8), (7,-6,-8), (8,-4,7), (8,-4,-7), (9,-4,6), (9,-5,-6), (10,-4,-2), (10,-6,2), (-1,4,10) (-1,7,-8), (-1,-3,-10), (-1,-6,8), (-3,4,-10), (-3,7,8), (-3,-1,10), (-3,-4,-8), (-4,7,-8), (-4,8,7) (-4,8,-7), (-4,9,-6), (-4,10,2), (-4,-3,8), (-4,-4,7), (-4,-4,-7), (-4,-5,6), (-4,-6,-2), (-5,9,6) (-5,-4,-6), (-6,7,8), (-6,10,-2), (-6,-1,-8), (-6,-4,2), (-7,1,-8), (-7,3,8), (-7,4,-8), (-7,6,8) (-8,4,7), (-8,4,-7)								

Ei =	13.419	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(1,3,10)	12.616	70.08	1.5	1.6	4.864	7.83	60.79	61.3
Equiv. Refl.: (1,5,-9), (1,6,8), (1,-4,-10), (1,-6,9), (1,-7,-8), (3,1,-10), (3,-4,10), (5,1,9), (5,-6,-9) (6,1,-8), (6,-7,8), (-4,1,10), (-4,3,-10), (-6,1,-9), (-6,5,9), (-7,1,8), (-7,6,-8)									
Quartz	(0,6,8)	12.674	70.81	1.4	1.5	4.669	6.88	58.36	58.77
Equiv. Refl.: (0,-6,-8), (4,6,2), (4,6,-3), (4,-10,3), (4,-10,-2), (6,0,-8), (6,4,3), (6,4,-2), (6,-1,9) (6,-5,-9), (6,-6,8), (6,-10,2), (6,-10,-3), (10,-4,3), (10,-6,-3), (-1,6,-9), (-1,-5,9), (-4,10,-3) (-4,-6,3), (-5,6,9), (-5,-1,-9), (-6,0,8), (-6,6,-8), (-6,10,3), (-6,-4,-3), (-10,4,2), (-10,4,-3) (-10,6,3), (-10,6,-2)									
LiNbO3	(3,4,23)	13.316	82.9	1.3	2.4	1.671	4.05	20.89	21.28
Equiv. Refl.: (3,-7,-23), (4,3,-23), (4,-7,23), (7,-3,-23), (7,-4,23), (-3,7,23), (-3,-4,-23), (-4,7,-23), (-4,-3,23) (-7,3,23), (-7,4,-23), (4,5,11), (4,6,4), (4,-9,-11), (4,-10,-4), (5,4,-11), (5,-9,11), (6,4,-4) (6,-10,4), (9,-4,-11), (9,-5,11), (10,-4,-4), (10,-6,4), (-4,9,11), (-4,10,4), (-4,-5,-11), (-4,-6,-4) (-5,9,-11), (-5,-4,11), (-6,10,-4), (-6,-4,4), (-9,4,11), (-9,5,-11), (-10,4,4), (-10,6,-4), (0,9,-1) (0,-9,1), (4,6,1), (4,-10,-1), (6,4,-1), (6,-10,1), (9,0,1), (9,-9,-1), (10,-4,-1), (10,-6,1) (-4,10,1), (-4,-6,-1), (-6,10,-1), (-6,-4,1), (-9,0,-1), (-9,9,1), (-10,4,1), (-10,6,-1)									
LiNbO3	(4,6,-11)	13.082	77.13	1.2	1.9	3.065	5.77	38.32	38.75
Equiv. Refl.: (4,-10,11), (6,4,11), (6,-10,-11), (10,-4,11), (10,-6,-11), (-4,10,-11), (-4,-6,11), (-6,10,11), (-6,-4,-11) (-10,4,-11), (-10,6,11), (3,5,-17), (3,-8,17), (5,3,17), (5,-8,-17), (8,-3,17), (8,-5,-17), (-3,8,-17) (-3,-5,17), (-5,8,17), (-5,-3,-17), (-8,3,-17), (-8,5,17), (1,8,2), (1,-9,-2), (3,6,-5), (3,-9,5) (6,3,5), (6,-9,-5), (8,1,-2), (8,-9,2), (9,-3,5), (9,-4,5), (9,-4,-6), (9,-5,6), (9,-5,-5) (9,-6,-5), (10,-2,-1), (10,-8,1), (-2,10,1), (-2,-8,-1), (-3,9,-5), (-3,-6,5), (-4,9,6), (-4,9,-5) (-4,-5,5), (-4,-5,-6), (-5,9,5), (-5,9,-6), (-5,-4,6), (-5,-4,-5), (-6,9,5), (-6,-3,-5), (-8,10,-1) (-8,-2,1), (-9,1,2), (-9,3,-5), (-9,6,5), (-9,8,-2)									
LiNbO3	(2,2,27)	12.999	75.63	1.1	1.7	3.438	5.86	42.98	43.37
Equiv. Refl.: (2,2,-27), (2,7,13), (2,-4,27), (2,-4,-27), (2,-9,-13), (4,-2,27), (4,-2,-27), (7,2,-13), (7,-9,13) (9,-2,-13), (9,-7,13), (-2,4,27), (-2,4,-27), (-2,9,13), (-2,-2,27), (-2,-2,-27), (-2,-7,-13), (-4,2,27) (-4,2,-27), (-7,9,-13), (-7,-2,13), (-9,2,13), (-9,7,-13), (1,8,3), (1,-9,-3), (4,5,6), (4,5,-5) (4,-9,5), (4,-9,-6), (5,4,5), (5,4,-6), (5,-9,6), (5,-9,-5), (8,1,-3), (8,-9,3), (9,-1,-2) (9,-8,2), (-1,9,2), (-1,-8,-2), (-8,9,-2), (-8,-1,2), (-9,1,3), (-9,4,6), (-9,4,-5), (-9,5,5) (-9,5,-6), (-9,8,-3)									
Sapph	(4,4,15)	12.645	70.44	1	1.2	4.767	5.5	59.58	59.84
Equiv. Refl.: (4,4,-15), (4,-8,15), (4,-8,-15), (8,-4,15), (8,-4,-15), (-4,8,15), (-4,8,-15), (-4,-4,15), (-4,-4,-15) (-8,4,15), (-8,4,-15), (1,2,-11), (1,8,-3), (1,-3,11), (1,-9,3), (2,1,11), (2,8,1), (2,-3,-11) (2,-10,-1), (8,1,3), (8,2,-1), (8,-9,-3), (8,-10,1), (9,-1,3), (9,-1,-3), (9,-8,3), (9,-8,-3) (-1,9,3), (-1,9,-3), (-1,-8,3), (-1,-8,-3), (-3,1,-11), (-3,2,11), (-8,9,3), (-8,9,-3), (-8,-1,3) (-8,-1,-3), (-9,1,-3), (-9,8,3), (-10,2,1), (-10,8,-1)									
LiNbO3	(2,4,-23)	12.646	70.46	0.9	1.4	4.763	6.67	59.54	59.91
Equiv. Refl.: (2,-6,23), (4,2,23), (4,5,17), (4,-6,-23), (4,-9,-17), (5,4,-17), (5,-9,17), (6,-2,23), (6,-4,-23) (9,-4,-17), (9,-5,17), (-2,6,-23), (-2,-4,23), (-4,6,23), (-4,9,17), (-4,-2,-23), (-4,-5,-17), (-5,9,-17) (-5,-4,17), (-6,2,-23), (-6,4,23), (-9,4,17), (-9,5,-17), (2,7,-8), (2,-9,8), (7,2,8), (7,-9,-8) (9,-2,8), (9,-7,-8), (-2,9,-8), (-2,-7,8), (-7,9,8), (-7,-2,-8), (-9,2,-8), (-9,7,8), (0,6,-8) (0,7,7), (0,-6,8), (0,-7,-7), (1,5,9), (1,-6,-9), (3,7,2), (3,-1,11), (3,-2,-11), (3,-10,-2) (5,1,-9), (5,5,3), (5,5,-3), (5,-6,9), (5,-10,3), (5,-10,-3), (6,0,8), (6,-6,-8), (7,0,-7) (7,3,-2), (7,-7,7), (7,-10,2), (9,-2,-5), (9,-7,5), (10,-3,-2), (10,-5,3), (10,-5,-3), (10,-7,2) (-1,3,-11), (-1,-2,11), (-2,3,11), (-2,9,5), (-2,-1,-11), (-2,-7,-5), (-3,10,2), (-3,-7,-2), (-5,10,3) (-5,10,-3), (-5,-5,3), (-5,-5,-3), (-6,0,-8), (-6,1,9), (-6,5,-9), (-6,6,8), (-7,0,7), (-7,7,-7) (-7,9,-5), (-7,10,-2), (-7,-2,5), (-7,-3,2), (-10,3,2), (-10,5,3), (-10,5,-3), (-10,7,-2)									

Ei =	13.419	keV					ΔEg	ΔEt	
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(2,8,9)	13.364	84.83	0.8	2	1.214	2.48	15.18	15.38
Equiv. Refl.: (2,8,-9), (2,-10,9), (2,-10,-9), (3,7,11), (3,-10,-11), (7,3,-11), (7,-10,11), (8,2,9), (8,2,-9), (8,-10,9), (8,-10,-9), (10,-2,9), (10,-2,-9), (10,-3,-11), (10,-7,11), (10,-8,9), (10,-8,-9), (-2,10,9), (-2,10,-9), (-2,-8,9), (-2,-8,-9), (-3,10,11), (-3,-7,-11), (-7,10,-11), (-7,-3,11), (-8,10,9), (-8,10,-9), (-8,-2,9), (-8,-2,-9), (-10,2,9), (-10,2,-9), (-10,3,11), (-10,7,-11), (-10,8,9), (-10,8,-9), (0,1,-11), (0,-1,11), (1,0,11), (1,4,10), (1,-1,-11), (1,-5,-10), (2,5,8), (2,7,5), (2,-7,-8), (2,-9,-5), (3,5,-7), (3,-8,7), (4,1,-10), (4,6,0), (4,-5,10), (4,-10,0), (5,2,-8), (5,3,7), (5,-7,8), (5,-8,-7), (6,4,0), (6,-1,-9), (6,-5,9), (6,-10,0), (7,2,-5), (7,-2,-8), (7,-5,8), (7,-9,5), (8,-3,7), (8,-5,-7), (10,-3,-1), (10,-4,0), (10,-6,0), (10,-7,1), (-1,0,-11), (-1,1,11), (-1,6,9), (-1,-5,-9), (-2,7,8), (-2,-5,-8), (-3,8,-7), (-3,10,1), (-3,-5,7), (-3,-7,-1), (-4,10,0), (-4,-6,0), (-5,1,10), (-5,4,-10), (-5,6,-9), (-5,7,-8), (-5,8,7), (-5,-1,9), (-5,-2,8), (-5,-3,-7), (-6,10,0), (-6,-4,0), (-7,2,8), (-7,5,-8), (-7,10,-1), (-7,-3,1), (-8,3,-7), (-8,5,7), (-9,2,5), (-9,7,-5), (-10,4,0), (-10,6,0)									
Sapph	(2,7,7)	12.759	71.96	0.7	0.8	4.37	3.63	54.63	54.75
Equiv. Refl.: (2,-9,-7), (7,2,-7), (7,-9,7), (9,-2,-7), (9,-7,7), (-2,9,7), (-2,-7,-7), (-7,9,-7), (-7,-2,7), (-9,2,7), (-9,7,-7), (0,4,10), (0,-4,-10), (3,7,1), (3,-10,-1), (4,0,-10), (4,6,3), (4,-4,10), (4,-10,-3), (5,-1,-10), (5,-4,10), (6,4,-3), (6,-10,3), (7,3,-1), (7,-10,1), (10,-5,1), (10,-5,-1), (-1,5,10), (-1,-4,-10), (-4,0,10), (-4,4,-10), (-4,5,-10), (-4,-1,10), (-5,10,1), (-5,10,-1), (-5,-5,1), (-5,-5,-1), (-10,3,1), (-10,4,3), (-10,6,-3), (-10,7,-1)									
LiNbO3	(5,6,-1)	13.272	81.51	0.6	1.5	2.003	2.92	25.04	25.21
Equiv. Refl.: (5,-11,1), (6,5,1), (6,-11,-1), (11,-5,1), (11,-6,-1), (-5,11,-1), (-5,-6,1), (-6,11,1), (-6,-5,-1), (-11,5,-1), (-11,6,1), (0,5,22), (0,-5,-22), (2,3,23), (2,-5,-23), (3,2,-23), (3,-5,23), (5,0,-22), (5,5,3), (5,5,-3), (5,-2,-23), (5,-3,23), (5,-5,22), (5,-10,3), (5,-10,-3), (10,-5,3), (10,-5,-3), (-2,5,23), (-2,-3,-23), (-3,5,-23), (-3,-2,23), (-5,0,22), (-5,2,23), (-5,3,-23), (-5,5,-22), (-5,10,3), (-5,10,-3), (-5,-5,3), (-5,-5,-3), (-10,5,3), (-10,5,-3), (1,3,-10), (1,-4,10), (2,7,-4), (2,-9,4), (3,1,10), (3,-4,-10), (5,5,1), (5,5,-1), (5,-10,1), (5,-10,-1), (7,2,4), (7,-9,-4), (9,-2,4), (9,-7,-4), (10,-4,-3), (10,-6,3), (-2,9,-4), (-2,-7,4), (-4,1,-10), (-4,3,10), (-4,10,3), (-4,-6,-3), (-6,10,-3), (-6,-4,3), (-7,9,4), (-7,-2,-4), (-9,2,-4), (-9,7,4), (-10,5,1), (-10,5,-1)									
Quartz	(3,7,-1)	13.001	75.66	0.5	0.6	3.431	2.23	42.89	42.95
Equiv. Refl.: (3,-10,1), (4,-1,10), (4,-3,-10), (7,3,1), (7,-10,-1), (10,-3,1), (10,-7,-1), (-1,4,-10), (-1,-3,10), (-3,4,10), (-3,10,-1), (-3,-1,-10), (-3,-7,1), (-7,10,1), (-7,-3,-1), (-10,3,-1), (-10,7,1)									
LiNbO3	(1,5,23)	12.873	73.6	0.4	0.9	3.949	3.6	49.36	49.49
Equiv. Refl.: (1,-6,-23), (3,7,-7), (3,-10,7), (5,1,-23), (5,-6,23), (6,-1,-23), (6,-5,23), (7,3,7), (7,-10,-7), (10,-3,7), (10,-7,-7), (-1,6,23), (-1,-5,-23), (-3,10,-7), (-3,-7,7), (-5,6,-23), (-5,-1,23), (-6,1,23), (-6,5,-23), (-7,10,7), (-7,-3,-7), (-10,3,-7), (-10,7,7), (1,6,-17), (1,-7,17), (6,1,17), (6,-7,-17), (7,-1,17), (7,-6,-17), (-1,7,-17), (-1,-6,17), (-6,7,17), (-6,-1,-17), (-7,1,-17), (-7,6,17), (0,2,-11), (0,-2,11), (2,0,11), (2,-2,-11), (-2,0,-11), (-2,2,11)									
LiNbO3	(2,6,-19)	13.143	78.35	0.3	0.9	2.767	2.4	34.58	34.67
Equiv. Refl.: (2,8,3), (2,8,-3), (2,-8,19), (2,-10,3), (2,-10,-3), (3,6,15), (3,6,-15), (3,-9,15), (3,-9,-15), (6,2,19), (6,3,15), (6,3,-15), (6,-8,-19), (6,-9,15), (6,-9,-15), (8,2,3), (8,2,-3), (8,-2,19), (8,-6,-19), (8,-10,3), (8,-10,-3), (9,-3,15), (9,-3,-15), (9,-6,15), (9,-6,-15), (10,-2,3), (10,-2,-3), (10,-8,3), (10,-8,-3), (-2,8,-19), (-2,10,3), (-2,10,-3), (-2,-6,19), (-2,-8,3), (-2,-8,-3), (-3,9,15), (-3,9,-15), (-3,-6,15), (-3,-6,-15), (-6,8,19), (-6,9,15), (-6,9,-15), (-6,-2,-19), (-6,-3,15), (-6,-3,-15), (-8,2,-19), (-8,6,19), (-8,10,3), (-8,10,-3), (-8,-2,3), (-8,-2,-3), (-9,3,15), (-9,3,-15), (-9,6,15), (-9,6,-15), (-10,2,3), (-10,2,-3), (-10,8,3), (-10,8,-3), (1,3,25), (1,-4,-25), (2,5,18), (2,5,-18), (2,-7,18), (2,-7,-18), (3,1,-25), (3,-4,25), (4,-1,-25), (4,-3,25), (5,2,18), (5,2,-18), (5,-7,18), (5,-7,-18), (7,-2,18), (7,-2,-18), (7,-5,18), (7,-5,-18), (-1,4,25), (-1,-3,-25), (-2,7,18), (-2,7,-18), (-2,-5,18), (-2,-5,-18), (-3,4,-25), (-3,-1,25), (-4,1,25), (-4,3,-25), (-5,7,18), (-5,7,-18), (-5,-2,18), (-5,-2,-18), (-7,2,18), (-7,2,-18), (-7,5,18), (-7,5,-18), (0,7,-7), (0,-7,7), (2,3,-10), (2,-5,10), (3,2,10), (3,-5,-10), (5,-2,10), (5,-3,-10), (7,0,7), (7,-7,-7), (-2,5,-10), (-2,-3,10), (-3,5,10), (-3,-2,-10), (-5,2,-10), (-5,3,10), (-7,0,-7), (-7,7,7)									
LiNbO3	(1,8,-13)	13.226	80.28	0.2	0.7	2.299	1.51	28.73	28.77

	Equiv. Refl.: (1,-9,13), (2,5,21), (2,5,-21), (2,-7,21), (2,-7,-21), (5,2,21), (5,2,-21), (5,-7,21), (5,-7,-21), (7,-2,21), (7,-2,-21), (7,-5,21), (7,-5,-21), (8,1,13), (8,-9,-13), (9,-1,13), (9,-8,-13), (-1,9,-13), (-1,-8,13), (-2,7,21), (-2,7,-21), (-2,-5,21), (-2,-5,-21), (-5,7,21), (-5,7,-21), (-5,-2,21), (-5,-2,-21), (-7,2,21), (-7,2,-21), (-7,5,21), (-7,5,-21), (-8,9,13), (-8,-1,-13), (-9,1,-13), (-9,8,13), (0,8,-8), (0,-8,8), (4,6,-5), (4,-10,5), (6,4,5), (6,-10,-5), (8,0,8), (8,-8,-8), (10,-4,5), (10,-6,-5), (-4,10,-5), (-4,-6,5), (-6,10,5), (-6,-4,-5), (-8,0,-8), (-8,8,8), (-10,4,-5), (-10,6,5)								
LiNbO3	(1,8,11)	12.858	73.38	0.1	0.4	4.005	1.65	50.07	50.1
	Equiv. Refl.: (1,-9,-11), (2,3,-25), (2,-5,25), (3,2,25), (3,5,19), (3,-5,-25), (3,-8,-19), (5,3,-19), (5,-2,25), (5,-3,-25), (5,-8,19), (8,1,-11), (8,-3,-19), (8,-5,19), (8,-9,11), (9,-1,-11), (9,-8,11), (-1,9,11), (-1,-8,-11), (-2,5,-25), (-2,-3,25), (-3,5,25), (-3,8,19), (-3,-2,-25), (-3,-5,-19), (-5,2,-25), (-5,3,25), (-5,8,-19), (-5,-3,19), (-8,3,19), (-8,5,-19), (-8,9,-11), (-8,-1,11), (-9,1,11), (-9,8,-11), (1,8,2), (1,-9,-2), (3,4,-19), (3,6,9), (3,6,-9), (3,-7,19), (3,-9,9), (3,-9,-9), (4,3,19), (4,6,1), (4,-7,-19), (4,-10,-1), (6,3,9), (6,3,-9), (6,4,-1), (6,-9,9), (6,-9,-9), (6,-10,1), (7,-3,19), (7,-4,-19), (8,1,-2), (8,-9,2), (9,-1,-2), (9,-3,9), (9,-3,-9), (9,-6,9), (9,-6,-9), (9,-8,2), (10,-4,-1), (10,-6,1), (-1,9,2), (-1,-8,-2), (-3,7,-19), (-3,9,9), (-3,9,-9), (-3,-4,19), (-3,-6,9), (-3,-6,-9), (-4,7,19), (-4,10,1), (-4,-3,-19), (-4,-6,-1), (-6,9,9), (-6,9,-9), (-6,10,-1), (-6,-3,9), (-6,-3,-9), (-6,-4,1), (-7,3,-19), (-7,4,19), (-8,9,-2), (-8,-1,2), (-9,1,2), (-9,3,9), (-9,3,-9), (-9,6,9), (-9,6,-9), (-9,8,-2), (-10,4,1), (-10,6,-1), (0,5,9), (0,-5,-9), (5,0,-9), (5,-5,9), (-5,0,9), (-5,5,-9)								
LiNbO3	(5,5,9)	12.697	71.12	0	0.1	4.59	0.5	57.38	57.38
	Equiv. Refl.: (5,5,-9), (5,-10,9), (5,-10,-9), (10,-5,9), (10,-5,-9), (-5,10,9), (-5,10,-9), (-5,-5,9), (-5,-5,-9), (-10,5,9), (-10,5,-9), (1,7,12), (1,7,-12), (1,-8,12), (1,-8,-12), (7,1,12), (7,1,-12), (7,-8,12), (7,-8,-12), (8,-1,12), (8,-1,-12), (8,-7,12), (8,-7,-12), (-1,8,12), (-1,8,-12), (-1,-7,12), (-1,-7,-12), (-7,8,12), (-7,8,-12), (-7,-1,12), (-7,-1,-12), (-8,1,12), (-8,1,-12), (-8,7,12), (-8,7,-12)								

Ei =	12.824	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Ge	(0,6,10)	12.779	85.19	7.834	17	1.079	18.39	13.48	22.8
	Equiv. Refl.: (6,6,8)								
Si	(2,4,10)	12.504	77.17	4.203	3.5	2.92	10.25	36.5	37.91
Si	(1,1,11)	12.659	80.81	3.634	3.3	2.076	6.86	25.95	26.84
	Equiv. Refl.: (5,7,7)								
Ge	(0,8,8)	12.397	75.18	2.937	6.2	3.393	20.94	42.42	47.3
Ge	(1,3,11)	12.542	77.96	1.843	5.2	2.736	14.09	34.2	36.99
	Equiv. Refl.: (1,7,9), (5,5,9)								
Si	(3,5,9)	12.241	72.65	1.811	2	4.006	7.95	50.08	50.7
Ge	(1,1,11)	12.153	71.38	1.401	3.7	4.321	16.12	54.01	56.36
	Equiv. Refl.: (5,7,7)								
LiNbO3	(0,-9,6)	12.799	86.41	36.4	33	0.805	26.6	10.07	28.45
	Equiv. Refl.: (9,0,6), (-9,9,6)								
LiNbO3	(0,9,-6)	12.799	86.41	36.2	33	0.805	26.6	10.07	28.45
	Equiv. Refl.: (9,-9,-6), (-9,0,-6)								
LiNbO3	(0,-9,-6)	12.799	86.41	31.4	28.2	0.805	22.73	10.07	24.86
	Equiv. Refl.: (9,0,-6), (-9,9,-6)								
LiNbO3	(0,9,6)	12.799	86.41	29.2	28.2	0.805	22.73	10.07	24.86
	Equiv. Refl.: (9,-9,6), (-9,0,6)								
LiNbO3	(1,-7,20)	12.772	84.84	25.2	22.7	1.158	26.26	14.47	29.98
	Equiv. Refl.: (6,1,20), (7,-1,20), (-1,-6,20), (-6,7,20), (-7,6,20)								
LiNbO3	(1,6,-20)	12.772	84.84	24.6	22.7	1.158	26.26	14.47	29.98
	Equiv. Refl.: (6,-7,-20), (7,-6,-20), (-1,7,-20), (-6,-1,-20), (-7,1,-20)								
LiNbO3	(0,-8,14)	12.765	84.48	24	20.8	1.239	25.82	15.48	30.11
	Equiv. Refl.: (8,0,14), (-8,8,14)								
LiNbO3	(0,8,-14)	12.765	84.48	21.6	20.8	1.239	25.82	15.48	30.11
	Equiv. Refl.: (8,-8,-14), (-8,0,-14)								
LiNbO3	(2,-10,0)	12.744	83.6	21.1	19	1.439	27.34	17.99	32.73
	Equiv. Refl.: (8,2,0), (10,-2,0), (-2,-8,0), (-8,10,0), (-10,8,0)								
LiNbO3	(2,8,0)	12.744	83.6	20.8	19	1.439	27.34	17.99	32.73
	Equiv. Refl.: (8,-10,0), (10,-8,0), (-2,10,0), (-8,-2,0), (-10,2,0)								
LiNbO3	(1,8,-10)	12.694	81.84	13.7	12.5	1.84	23.02	23	32.54
	Equiv. Refl.: (8,-9,-10), (9,-8,-10), (-1,9,-10), (-8,-1,-10), (-9,1,-10)								
LiNbO3	(1,-9,10)	12.694	81.84	13.2	12.5	1.84	23.02	23	32.54
	Equiv. Refl.: (8,1,10), (9,-1,10), (-1,-8,10), (-8,9,10), (-9,8,10)								
LiNbO3	(4,-10,8)	12.639	80.25	12.1	10.9	2.203	24.07	27.54	36.57
	Equiv. Refl.: (6,4,8), (10,-4,8), (-4,-6,8), (-6,10,8), (-10,6,8)								
LiNbO3	(0,1,-28)	12.598	79.23	11.8	10.8	2.44	26.33	30.51	40.3
	Equiv. Refl.: (0,-1,28), (1,0,28), (1,-1,-28), (-1,0,-28), (-1,1,28)								
LiNbO3	(4,6,-8)	12.639	80.25	11.5	10.9	2.203	24.07	27.54	36.57
	Equiv. Refl.: (6,-10,-8), (10,-6,-8), (-4,10,-8), (-6,-4,-8), (-10,4,-8)								
Quartz	(6,-3,9)	12.802	86.62	11.4	9.6	0.757	7.26	9.47	11.93
	Equiv. Refl.: (6,-3,-9), (-3,6,9), (-3,6,-9), (-3,-3,9), (-3,-3,-9)								
LiNbO3	(4,-9,-14)	12.535	77.82	11.3	10.1	2.768	27.92	34.6	44.46
	Equiv. Refl.: (5,4,-14), (9,-4,-14), (-4,-5,-14), (-5,9,-14), (-9,5,-14), (3,3,9), (3,3,-9), (3,-6,9), (3,-6,-9), (-6,3,9), (-6,3,-9)								
LiNbO3	(4,5,14)	12.535	77.82	10.9	10.1	2.768	27.92	34.6	44.46
	Equiv. Refl.: (5,-9,14), (9,-5,14), (-4,9,14), (-5,-4,14), (-9,4,14)								

Ei =	12.824	keV					ΔEg	ΔEt	
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(2,6,14)	12.741	83.49	10.8	8.8	1.463	12.92	18.29	22.4
	Equiv. Refl.: (2,-8,-14), (6,2,-14), (6,-8,14), (8,-2,-14), (8,-6,14), (-2,8,14), (-2,-6,-14), (-6,8,-14), (-6,-2,14), (-8,2,14), (-8,6,-14)								
LiNbO3	(1,-4,26)	12.661	80.87	10.6	9.8	2.061	20.18	25.77	32.73
	Equiv. Refl.: (3,1,26), (4,-1,26), (-1,-3,26), (-3,4,26), (-4,3,26)								
LiNbO3	(1,3,-26)	12.661	80.87	10.4	9.8	2.061	20.18	25.77	32.73
	Equiv. Refl.: (3,-4,-26), (4,-3,-26), (-1,4,-26), (-3,-1,-26), (-4,1,-26)								
LiNbO3	(1,4,-24)	12.481	76.72	10.3	9.3	3.026	28.16	37.82	47.15
	Equiv. Refl.: (4,-5,-24), (5,-4,-24), (-1,5,-24), (-4,-1,-24), (-5,1,-24)								
LiNbO3	(1,4,24)	12.481	76.72	10.2	9.2	3.026	27.97	37.82	47.04
	Equiv. Refl.: (1,-5,24), (4,1,24), (4,-5,24), (5,-1,24), (5,-4,24), (-1,5,24), (-1,-4,24), (-4,5,24), (-4,-1,24), (-5,1,24), (-5,4,24)								
LiNbO3	(1,-5,-24)	12.481	76.72	10.1	9.2	3.026	27.97	37.82	47.04
	Equiv. Refl.: (4,1,-24), (5,-1,-24), (-1,-4,-24), (-4,5,-24), (-5,4,-24)								
LiNbO3	(4,4,-18)	12.554	78.22	9.9	8.9	2.676	23.84	33.44	41.07
	Equiv. Refl.: (4,-8,-18), (8,-4,-18), (-4,8,-18), (-4,-4,-18), (-8,4,-18)								
LiNbO3	(4,4,18)	12.554	78.22	9.7	8.9	2.676	23.84	33.44	41.07
	Equiv. Refl.: (4,-8,18), (8,-4,18), (-4,8,18), (-4,-4,18), (-8,4,18)								
Quartz	(4,6,-1)	12.753	83.98	9.6	7.7	1.351	10.37	16.89	19.82
	Equiv. Refl.: (4,-10,1), (6,4,1), (6,-10,-1), (-10,4,-1), (-10,6,1)								
LiNbO3	(1,-6,22)	12.519	77.48	9.5	8.5	2.849	24.15	35.61	43.03
	Equiv. Refl.: (5,1,22), (6,-1,22), (-1,-5,22), (-5,6,22), (-6,5,22)								
Quartz	(4,5,5)	12.743	83.55	9.4	7.6	1.449	11.04	18.11	21.21
	Equiv. Refl.: (4,-9,-5), (5,4,-5), (5,-9,5), (9,-4,-5), (9,-5,5), (-4,9,5), (-4,-5,-5), (-5,9,-5), (-5,-4,5), (-9,4,5), (-9,5,-5)								
LiNbO3	(0,9,0)	12.514	77.38	9.3	8.2	2.87	23.56	35.88	42.92
	Equiv. Refl.: (3,7,-4), (7,-10,-4), (9,-9,0), (10,-7,-4), (-3,10,-4), (-7,-3,-4), (-9,0,0), (-10,3,-4), (10,-4,1), (10,-6,-1), (-4,10,-1), (-4,-6,1), (-6,10,1), (-6,-4,-1)								
LiNbO3	(1,5,-22)	12.519	77.48	9.2	8.5	2.849	24.15	35.61	43.03
	Equiv. Refl.: (5,-6,-22), (6,-5,-22), (-1,6,-22), (-5,-1,-22), (-6,1,-22)								
LiNbO3	(3,-10,4)	12.488	76.85	9.1	8.3	2.996	24.82	37.45	44.93
	Equiv. Refl.: (7,3,4), (10,-3,4), (-3,-7,4), (-7,10,4), (-10,7,4), (9,-2,-4), (9,-7,4), (-2,9,4), (-2,-7,-4), (-7,9,-4), (-7,-2,4)								
LiNbO3	(3,4,20)	12.31	73.72	9	7.9	3.746	29.59	46.83	55.39
	Equiv. Refl.: (3,-7,-20), (4,3,-20), (4,-7,20), (7,-3,-20), (7,-4,20), (-3,7,20), (-3,-4,-20), (-4,7,-20), (-4,-3,20), (-7,3,20), (-7,4,-20)								
LiNbO3	(0,-9,0)	12.514	77.38	8.8	8.2	2.87	23.56	35.88	42.92
	Equiv. Refl.: (9,0,0), (-9,9,0)								
Quartz	(2,7,4)	12.778	85.15	8.7	7.4	1.089	8.05	13.61	15.81
	Equiv. Refl.: (2,-9,-4), (7,2,-4), (7,-9,4), (-9,2,4), (-9,7,-4)								
Quartz	(5,5,0)	12.618	79.71	8.5	6.9	2.327	16.06	29.09	33.23
	Equiv. Refl.: (5,-10,0), (10,-5,0), (-5,10,0), (-5,-5,0), (-10,5,0)								
LiNbO3	(2,-9,-10)	12.229	72.47	8.1	7	4.05	28.21	50.63	57.96
	Equiv. Refl.: (7,2,-10), (9,-2,-10), (-2,-7,-10), (-7,9,-10), (-9,7,-10)								
LiNbO3	(3,6,12)	12.272	73.13	7.9	7	3.889	27.26	48.62	55.74
	Equiv. Refl.: (3,-10,-2), (6,-9,12), (7,3,-2), (9,-6,12), (10,-3,-2), (-3,9,12), (-3,-7,-2), (-6,-3,12), (-7,10,-2), (-9,3,12), (-10,7,-2)								
LiNbO3	(3,-9,-12)	12.272	73.13	7.8	7	3.889	27.26	48.62	55.74
	Equiv. Refl.: (6,3,-12), (9,-3,-12), (-3,-6,-12), (-6,9,-12), (-9,6,-12), (7,-3,8), (7,-4,-8), (-3,7,-8), (-3,-4,8), (-4,7,8), (-4,-3,-8)								

Ei = Cryst	12.824 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
LiNbO3	(4,6,-2)	12.155	71.41	7.7	6.7	4.313	28.94	53.91	61.19
Equiv. Refl.: (6,-10,-2), (10,-6,-2), (-4,10,-2), (-6,-4,-2), (-10,4,-2), (3,4,-8), (3,-7,8), (4,3,8), (4,-7,-8), (-7,3,-8), (-7,4,8)									
LiNbO3	(2,6,-16)	12.318	73.85	7.6	6.7	3.714	24.92	46.42	52.69
Equiv. Refl.: (2,7,10), (3,7,2), (6,-8,-16), (7,-9,10), (7,-10,2), (8,-6,-16), (9,-7,10), (10,-7,2), (-2,8,-16), (-2,9,10), (-3,10,2), (-6,-2,-16), (-7,-2,10), (-7,-3,2), (-8,2,-16), (-9,2,10), (-10,3,2)									
LiNbO3	(1,8,8)	12.407	75.35	7.5	6.9	3.352	23.08	41.89	47.83
Equiv. Refl.: (1,-9,-8), (4,-10,2), (6,4,2), (8,1,-8), (8,-9,8), (9,-1,-8), (9,-8,8), (10,-4,2), (-1,9,8), (-1,-8,-8), (-4,-6,2), (-6,10,2), (-8,9,-8), (-8,-1,8), (-9,1,8), (-9,8,-8), (-10,6,2)									
LiNbO3	(2,-8,16)	12.318	73.85	7.2	6.7	3.714	24.92	46.42	52.69
Equiv. Refl.: (6,2,16), (8,-2,16), (-2,-6,16), (-6,8,16), (-8,6,16), (2,2,24), (2,2,-24), (2,-4,24), (2,-4,-24), (4,-2,24), (4,-2,-24), (-2,4,24), (-2,4,-24), (-2,-2,24), (-2,-2,-24), (-4,2,24), (-4,2,-24)									
LiNbO3	(1,2,26)	12.195	71.98	7.1	6.3	4.173	26.49	52.16	58.5
Equiv. Refl.: (2,-3,26), (3,-2,26), (-1,3,26), (-2,-1,26), (-3,1,26)									
LiNbO3	(1,-3,-26)	12.195	71.98	7	6.3	4.173	26.49	52.16	58.5
Equiv. Refl.: (2,1,-26), (3,-1,-26), (-1,-2,-26), (-2,3,-26), (-3,2,-26)									
LiNbO3	(3,-9,12)	12.272	73.13	6.8	6.2	3.889	24.07	48.62	54.25
Equiv. Refl.: (6,3,12), (9,-3,12), (-3,-6,12), (-6,9,12), (-9,6,12)									
LiNbO3	(3,6,-12)	12.272	73.13	6.7	6.2	3.889	24.07	48.62	54.25
Equiv. Refl.: (5,5,6), (5,-10,6), (6,-9,-12), (9,-6,-12), (10,-5,6), (-3,9,-12), (-5,10,6), (-5,-5,6), (-6,-3,-12), (-9,3,-12), (-10,5,6), (0,2,-26), (0,-2,26), (2,0,26), (2,-2,-26), (-2,0,-26), (-2,2,26)									
LiNbO3	(4,6,4)	12.253	72.84	6.6	6	3.959	23.77	49.49	54.9
Equiv. Refl.: (6,-10,4), (10,-6,4), (-4,10,4), (-6,-4,4), (-10,4,4)									
LiNbO3	(2,-6,-22)	12.285	73.33	6.5	6	3.84	22.91	48	53.19
Equiv. Refl.: (3,-8,-16), (4,2,-22), (4,-10,-4), (5,3,-16), (6,4,-4), (6,-2,-22), (8,-3,-16), (10,-4,-4), (-2,-4,-22), (-3,-5,-16), (-4,6,-22), (-4,-6,-4), (-5,8,-16), (-6,4,-22), (-6,10,-4), (-8,5,-16), (-10,6,-4)									
LiNbO3	(2,4,22)	12.285	73.33	6.4	6	3.84	22.91	48	53.19
Equiv. Refl.: (4,-6,22), (5,5,-6), (5,-10,-6), (6,-4,22), (10,-5,-6), (-2,6,22), (-4,-2,22), (-5,10,-6), (-5,-5,-6), (-6,2,22), (-10,5,-6), (7,-3,-8), (7,-4,8), (-3,7,8), (-3,-4,-8), (-4,7,-8), (-4,-3,8)									
Quartz	(3,4,8)	12.757	84.15	6.3	5.4	1.314	7.07	16.43	17.88
Equiv. Refl.: (3,-7,-8), (4,3,-8), (4,-7,8), (-7,3,8), (-7,4,-8)									
LiNbO3	(0,-7,16)	12.08	70.39	6	5.4	4.569	24.63	57.11	62.2
Equiv. Refl.: (7,0,16), (-7,7,16)									
LiNbO3	(0,7,-16)	12.08	70.39	5.8	5.4	4.569	24.63	57.11	62.2
Equiv. Refl.: (3,5,16), (5,-8,16), (7,-7,-16), (8,-5,16), (-3,8,16), (-5,-3,16), (-7,0,-16), (-8,3,16)									
Sapph	(3,5,-14)	12.472	76.54	5.4	4.4	3.068	13.56	38.35	40.68
Equiv. Refl.: (3,-8,14), (5,3,14), (5,-8,-14), (8,-3,14), (8,-5,-14), (-3,8,-14), (-3,-5,14), (-5,8,14), (-5,-3,-14), (-8,3,-14), (-8,5,14)									
Sapph	(0,6,18)	12.461	76.34	5.2	4.1	3.116	12.74	38.95	40.98
Equiv. Refl.: (0,6,-18), (0,-6,18), (0,-6,-18), (6,0,18), (6,0,-18), (6,-6,18), (6,-6,-18), (-6,0,18), (-6,0,-18), (-6,6,18), (-6,6,-18), (10,-4,-1), (10,-6,1), (-4,10,1), (-4,-6,-1), (-6,10,-1), (-6,-4,1)									
Quartz	(0,8,-4)	12.526	77.63	5.1	4.1	2.812	11.46	35.15	36.97
Equiv. Refl.: (0,-8,4), (1,8,-2), (1,-9,2), (4,6,1), (4,-10,-1), (6,4,-1), (6,-10,1), (8,0,4), (8,1,2), (8,-8,-4), (8,-9,-2), (9,-1,2), (9,-8,-2), (-1,9,-2), (-1,-8,2), (-8,0,-4), (-8,8,4), (-8,9,2), (-8,-1,-2), (-9,1,-2), (-9,8,2), (-10,4,1), (-10,6,-1)									
Sapph	(1,5,20)	12.7	82.02	4.9	4.1	1.798	7.46	22.47	23.68
Equiv. Refl.: (1,-6,-20), (4,5,-10), (4,-9,10), (5,1,-20), (5,4,10), (5,-6,20), (5,-9,-10), (6,-1,-20), (6,-5,20), (9,-4,10), (9,-5,-10), (-1,6,20), (-1,-5,-20), (-4,9,-10), (-4,-5,10), (-5,6,-20), (-5,9,10), (-5,-1,20), (-5,-4,-10), (-6,1,20), (-6,5,-20), (-9,4,-10), (-9,5,10), (3,5,6), (3,-8,-6), (5,3,-6), (5,-8,6), (8,-3,-6), (8,-5,6), (-3,8,6), (-3,-5,-6), (-5,8,-6), (-5,-3,6), (-8,3,6), (-8,5,-6)									

Ei =	12.824	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(7,-1,7)	12.48	76.7	4.6	3.5	3.032	10.64	37.9	39.37
	Equiv. Refl.: (7,-6,-7), (-1,7,-7), (-1,-6,7), (-6,7,7), (-6,-1,-7)								
LiNbO3	(2,7,13)	12.78	85.27	4.5	6.3	1.061	6.72	13.27	14.87
	Equiv. Refl.: (2,-9,-13), (7,2,-13), (7,-9,13), (9,-2,-13), (9,-7,13), (-2,9,13), (-2,-7,-13), (-7,9,-13), (-7,-2,13), (-9,2,13), (-9,7,-13)								
Quartz	(1,6,-7)	12.48	76.7	4.4	3.5	3.032	10.63	37.9	39.37
	Equiv. Refl.: (1,-7,7), (6,1,7), (6,-7,-7), (-7,1,-7), (-7,6,7)								
Quartz	(9,-4,5)	12.743	83.55	4.2	3.6	1.449	5.19	18.11	18.84
	Equiv. Refl.: (9,-5,-5), (-4,9,-5), (-4,-5,5), (-5,9,5), (-5,-4,-5)								
Sapph	(0,8,4)	12.186	71.85	4.1	3.2	4.204	13.41	52.55	54.24
	Equiv. Refl.: (0,-8,-4), (8,0,-4), (8,-8,4), (-8,0,4), (-8,8,-4), (4,5,-5), (4,-9,5), (5,4,5), (5,-9,-5), (-9,4,-5), (-9,5,5)								
Sapph	(2,4,-20)	12.43	75.75	4	3.2	3.256	10.52	40.7	42.04
	Equiv. Refl.: (2,-6,20), (4,2,20), (4,-6,-20), (6,-2,20), (6,-4,-20), (-2,6,-20), (-2,-4,20), (-4,6,20), (-4,-2,-20), (-6,2,-20), (-6,4,20), (0,6,8), (0,8,4), (0,-6,-8), (0,-8,-4), (4,-1,-10), (4,-3,10), (6,0,-8), (6,-6,8), (8,0,-4), (8,-8,4), (9,-3,4), (9,-6,-4), (-1,4,10), (-1,-3,-10), (-3,4,-10), (-3,9,-4), (-3,-1,10), (-3,-6,4), (-6,0,8), (-6,6,-8), (-6,9,4), (-6,-3,-4), (-8,0,4), (-8,8,-4)								
Quartz	(1,5,8)	12.248	72.76	3.9	3	3.98	11.94	49.75	51.16
	Equiv. Refl.: (1,-6,-8), (5,1,-8), (5,-6,8), (6,-1,-8), (6,-5,8), (9,-1,1), (9,-8,-1), (-1,6,8), (-1,9,-1), (-1,-5,-8), (-1,-8,1), (-5,6,-8), (-5,-1,8), (-6,1,8), (-6,5,-8), (-8,9,1), (-8,-1,-1)								
Sapph	(2,7,4)	12.461	76.34	3.8	3.1	3.116	9.67	38.95	40.14
	Equiv. Refl.: (2,-9,-4), (7,2,-4), (7,-9,4), (9,-2,-4), (9,-7,4), (-2,9,4), (-2,-7,-4), (-7,9,-4), (-7,-2,4), (-9,2,4), (-9,7,-4), (1,3,10), (1,-4,-10), (3,1,-10), (3,6,-4), (3,-4,10), (3,-9,4), (6,3,4), (6,-9,-4), (7,-2,-7), (7,-5,7), (-2,7,7), (-2,-5,-7), (-4,1,10), (-4,3,-10), (-5,7,-7), (-5,-2,7), (-9,3,-4), (-9,6,4)								
Quartz	(2,5,7)	12.135	71.13	3.7	2.8	4.383	12.46	54.78	56.18
	Equiv. Refl.: (2,-7,-7), (5,2,-7), (5,-7,7), (-7,2,7), (-7,5,-7)								
Quartz	(1,8,-1)	12.501	77.12	3.6	3	2.933	8.8	36.66	37.7
	Equiv. Refl.: (1,-9,1), (2,6,6), (2,-8,-6), (6,2,-6), (6,-8,6), (8,1,1), (8,-9,-1), (-8,2,6), (-8,6,-6), (-9,1,-1), (-9,8,1)								
Quartz	(8,-2,-6)	12.56	78.35	3.5	2.9	2.644	7.71	33.05	33.94
	Equiv. Refl.: (8,-6,6), (9,-1,0), (9,-8,0), (-1,9,0), (-1,-8,0), (-2,8,6), (-2,-6,-6), (-6,8,-6), (-6,-2,6), (-8,9,0), (-8,-1,0)								
Quartz	(1,8,0)	12.448	76.1	3.4	2.7	3.174	8.64	39.67	40.6
	Equiv. Refl.: (1,8,2), (1,-9,0), (1,-9,-2), (2,7,3), (2,-9,-3), (7,2,-3), (7,-9,3), (8,1,0), (8,1,-2), (8,-9,0), (8,-9,2), (9,-2,-3), (9,-7,3), (-2,9,3), (-2,-7,-3), (-7,9,-3), (-7,-2,3), (-9,1,0), (-9,1,2), (-9,2,3), (-9,7,-3), (-9,8,0), (-9,8,-2)								
Quartz	(4,5,-4)	12.27	73.09	3.3	2.6	3.899	10.07	48.73	49.76
	Equiv. Refl.: (4,-9,4), (5,4,4), (5,-9,-4), (9,-4,4), (9,-5,-4), (-4,9,-4), (-4,-5,4), (-5,9,4), (-5,-4,-4), (-9,4,-4), (-9,5,4)								
Quartz	(1,7,5)	12.405	75.32	3.2	2.4	3.36	8.16	42	42.78
	Equiv. Refl.: (1,-8,-5), (7,1,-5), (7,-8,5), (-8,1,5), (-8,7,-5)								
Quartz	(0,3,10)	12.275	73.17	3.1	2.7	3.879	10.31	48.49	49.57
	Equiv. Refl.: (0,-3,-10), (1,7,-5), (1,-8,5), (2,2,10), (2,2,-10), (2,-4,10), (2,-4,-10), (3,0,-10), (3,-3,10), (4,-2,10), (4,-2,-10), (7,1,5), (7,-8,-5), (8,-1,-5), (8,-7,5), (9,-1,-2), (9,-8,2), (-1,8,5), (-1,9,2), (-1,-7,-5), (-1,-8,-2), (-2,4,10), (-2,4,-10), (-2,-2,10), (-2,-2,-10), (-3,0,10), (-3,3,-10), (-4,2,10), (-4,2,-10), (-7,8,-5), (-7,-1,5), (-8,1,-5), (-8,7,5), (-8,9,-2), (-8,-1,2)								
Quartz	(3,6,4)	12.441	75.97	3	2.3	3.205	7.47	40.06	40.75
	Equiv. Refl.: (3,-9,-4), (6,3,-4), (6,-9,4), (8,-1,5), (8,-7,-5), (9,-3,-4), (9,-6,4), (-1,8,-5), (-1,-7,5), (-3,9,4), (-3,-6,-4), (-6,9,-4), (-6,-3,4), (-7,8,5), (-7,-1,-5), (-9,3,4), (-9,6,-4)								

Ei =	12.824	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(9,-2,4)	12.778	85.15	2.6	2.6	1.089	2.85	13.61	13.9
	Equiv. Refl.: (9,-7,-4), (-2,9,-4), (-2,-7,4), (-7,9,4), (-7,-2,-4)								
Sapph	(4,4,15)	12.645	80.41	2.5	2.4	2.166	5.26	27.07	27.58
	Equiv. Refl.: (4,4,-15), (4,-8,15), (4,-8,-15), (8,-4,15), (8,-4,-15), (-4,8,15), (-4,8,-15), (-4,-4,15), (-4,-4,-15), (-8,4,15), (-8,4,-15)								
Sapph	(2,7,7)	12.759	84.25	2.4	2.7	1.292	3.47	16.15	16.52
	Equiv. Refl.: (2,-9,-7), (7,2,-7), (7,-9,7), (9,-2,-7), (9,-7,7), (-2,9,7), (-2,-7,-7), (-7,9,-7), (-7,-2,7), (-9,2,7), (-9,7,-7), (0,6,-8), (0,-6,8), (6,0,8), (6,-6,-8), (-6,0,-8), (-6,6,8)								
Sapph	(2,3,23)	12.787	85.66	2.3	2.9	0.974	2.86	12.17	12.5
	Equiv. Refl.: (2,-5,-23), (3,2,-23), (3,-5,23), (5,-2,-23), (5,-3,23), (-2,5,23), (-2,-3,-23), (-3,5,-23), (-3,-2,23), (-5,2,23), (-5,3,-23), (9,-2,2), (9,-7,-2), (-2,9,-2), (-2,-7,2), (-7,9,2), (-7,-2,-2)								
Quartz	(2,7,-4)	12.778	85.15	2.1	2.6	1.089	2.85	13.61	13.9
	Equiv. Refl.: (2,-9,4), (7,2,4), (7,-9,-4), (-9,2,-4), (-9,7,4)								
LiNbO3	(2,8,3)	12.814	87.79	2	5.5	0.495	2.7	6.19	6.76
	Equiv. Refl.: (2,8,-3), (2,-10,3), (2,-10,-3), (8,2,3), (8,2,-3), (8,-10,3), (8,-10,-3), (10,-2,3), (10,-2,-3), (10,-8,3), (10,-8,-3), (-2,10,3), (-2,10,-3), (-2,-8,3), (-2,-8,-3), (-8,10,3), (-8,10,-3), (-8,-2,3), (-8,-2,-3), (-10,2,3), (-10,2,-3), (-10,8,3), (-10,8,-3), (0,1,-11), (0,-1,11), (1,0,11), (1,-1,-11), (-1,0,-11), (-1,1,11)								
Quartz	(2,7,-2)	12.145	71.27	1.9	2	4.349	8.54	54.36	55.03
	Equiv. Refl.: (2,-9,2), (7,2,2), (7,-9,-2), (-9,2,-2), (-9,7,2)								
LiNbO3	(2,4,-23)	12.646	80.44	1.8	3	2.16	6.38	27	27.74
	Equiv. Refl.: (2,-6,23), (4,2,23), (4,-6,-23), (6,-2,23), (6,-4,-23), (-2,6,-23), (-2,-4,23), (-4,6,23), (-4,-2,-23), (-6,2,-23), (-6,4,23), (0,5,-20), (0,-5,20), (2,6,-13), (2,-8,13), (5,0,20), (5,-5,-20), (6,2,13), (6,-8,-13), (8,-2,13), (8,-6,-13), (-2,8,-13), (-2,-6,13), (-5,0,-20), (-5,5,20), (-6,8,13), (-6,-2,-13), (-8,2,-13), (-8,6,13), (2,3,9), (2,-5,-9), (3,2,-9), (3,-5,9), (4,6,0), (4,-10,0), (5,-2,-9), (5,-3,9), (6,4,0), (6,-10,0), (10,-4,0), (10,-6,0), (-2,5,9), (-2,-3,-9), (-3,5,-9), (-3,-2,9), (-4,10,0), (-4,-6,0), (-5,2,9), (-5,3,-9), (-6,10,0), (-6,-4,0), (-10,4,0), (-10,6,0)								
LiNbO3	(1,6,19)	12.463	76.37	1.7	2.5	3.109	7.82	38.86	39.64
	Equiv. Refl.: (1,-7,-19), (6,1,-19), (6,-7,19), (7,-1,-19), (7,-6,19), (-1,7,19), (-1,-6,-19), (-6,7,-19), (-6,-1,19), (-7,1,19), (-7,6,-19), (1,4,21), (1,4,-21), (1,-5,21), (1,-5,-21), (4,1,21), (4,1,-21), (4,-5,21), (4,-5,-21), (5,-1,21), (5,-1,-21), (5,-4,21), (5,-4,-21), (-1,5,21), (-1,5,-21), (-1,-4,21), (-1,-4,-21), (-4,5,21), (-4,5,-21), (-4,-1,21), (-4,-1,-21), (-5,1,21), (-5,1,-21), (-5,4,21), (-5,4,-21), (2,3,-9), (2,-5,9), (3,2,9), (3,-5,-9), (5,-2,9), (5,-3,-9), (-2,5,-9), (-2,-3,9), (-3,5,9), (-3,-2,-9), (-5,2,-9), (-5,3,9)								
Quartz	(3,-1,-10)	12.101	70.66	1.6	1.6	4.5	7.29	56.25	56.72
	Equiv. Refl.: (3,-2,10), (8,-2,6), (8,-6,-6), (-1,3,10), (-1,-2,-10), (-2,3,-10), (-2,8,-6), (-2,-1,10), (-2,-6,6), (-6,8,6), (-6,-2,-6)								
LiNbO3	(1,1,27)	12.312	73.75	1.5	2.2	3.738	8.31	46.73	47.46
	Equiv. Refl.: (1,1,-27), (1,-2,27), (1,-2,-27), (2,-1,27), (2,-1,-27), (-1,2,27), (-1,2,-27), (-1,-1,27), (-1,-1,-27), (-2,1,27), (-2,1,-27), (0,1,26), (0,-1,-26), (1,0,-26), (1,-1,26), (-1,0,26), (-1,1,-26), (1,2,10), (1,2,-10), (1,-3,10), (1,-3,-10), (2,1,10), (2,1,-10), (2,-3,10), (2,-3,-10), (3,-1,10), (3,-2,-10), (-1,3,-10), (-1,-2,10), (-2,3,10), (-2,-1,-10), (-3,1,10), (-3,1,-10), (-3,2,10), (-3,2,-10)								

Ei =	12.824	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(2,7,-11)	12.399	75.21	1.4	2.2	3.386	7.39	42.32	42.96
Equiv. Refl.: (2,-9,11), (4,6,7), (4,-10,-7), (6,4,-7), (6,-10,7), (7,2,11), (7,-9,-11), (9,-2,11), (9,-7,-11) (10,-4,-7), (10,-6,7), (-2,9,-11), (-2,-7,11), (-4,10,7), (-4,-6,-7), (-6,10,-7), (-6,-4,7), (-7,9,11) (-7,-2,-11), (-9,2,-11), (-9,7,11), (-10,4,7), (-10,6,-7), (1,5,-19), (1,-6,19), (4,5,-7), (4,-9,7) (5,1,19), (5,4,7), (5,-6,-19), (5,-9,-7), (6,-1,19), (6,-5,-19), (9,-4,7), (9,-5,-7), (-1,6,-19) (-1,-5,19), (-4,9,-7), (-4,-5,7), (-5,6,19), (-5,9,7), (-5,-1,-19), (-5,-4,-7), (-6,1,-19), (-6,5,19) (-9,4,-7), (-9,5,7), (2,6,-6), (2,-8,6), (4,5,4), (4,-9,-4), (5,4,-4), (5,5,1), (5,5,-1) (5,-9,4), (5,-10,1), (5,-10,-1), (6,2,6), (6,-8,-6), (9,-3,3), (9,-6,-3), (10,-5,1), (10,-5,-1) (-3,9,-3), (-3,-6,3), (-5,10,1), (-5,10,-1), (-5,-5,1), (-5,-5,-1), (-6,9,3), (-6,-3,-3), (-8,2,-6) (-8,6,6), (-9,4,4), (-9,5,-4), (-10,5,1), (-10,5,-1)									
Sapph	(1,6,16)	12.476	76.61	1.3	1.5	3.052	4.67	38.15	38.43
Equiv. Refl.: (1,6,-17), (1,-7,17), (1,-7,-16), (2,6,11), (2,-8,-11), (6,1,17), (6,1,-16), (6,2,-11), (6,-7,16) (6,-7,-17), (6,-8,11), (7,-1,17), (7,-1,-16), (7,-6,16), (7,-6,-17), (8,-2,-11), (8,-6,11), (-1,7,16) (-1,7,-17), (-1,-6,17), (-1,-6,-16), (-2,8,11), (-2,-6,-11), (-6,7,17), (-6,7,-16), (-6,8,-11), (-6,-1,16) (-6,-1,-17), (-6,-2,11), (-7,1,16), (-7,1,-17), (-7,6,17), (-7,6,-16), (-8,2,11), (-8,6,-11), (2,5,-7) (2,-7,7), (3,6,-3), (3,-9,3), (4,4,6), (4,4,-6), (4,-8,6), (4,-8,-6), (5,2,7), (5,-7,-7) (6,3,3), (6,-9,-3), (7,-2,7), (7,-5,-7), (9,-3,-3), (9,-4,-4), (9,-5,4), (9,-6,3), (-2,7,-7) (-2,-5,7), (-3,9,3), (-3,-6,-3), (-4,9,4), (-4,-5,-4), (-5,7,7), (-5,9,-4), (-5,-2,-7), (-5,-4,4) (-6,9,-3), (-6,-3,3), (-7,2,-7), (-7,5,7), (-8,4,6), (-8,4,-6), (-9,3,-3), (-9,6,3)									
Quartz	(1,3,-10)	12.616	79.66	1.2	1.3	2.339	3	29.23	29.39
Equiv. Refl.: (1,-4,10), (3,1,10), (3,6,3), (3,-4,-10), (3,-9,-3), (6,3,-3), (6,-9,3), (8,-4,6), (8,-4,-6) (-4,1,-10), (-4,3,10), (-4,8,6), (-4,8,-6), (-4,4,6), (-4,-4,-6), (-9,3,3), (-9,6,-3)									
LiNbO3	(3,7,-7)	12.749	83.81	1.1	2.4	1.391	3.4	17.39	17.72
Equiv. Refl.: (3,-10,7), (4,6,-5), (4,-10,5), (6,4,5), (6,-10,-5), (7,3,7), (7,-10,-7), (10,-3,7), (10,-4,5) (10,-6,-5), (10,-7,-7), (-3,10,-7), (-3,-7,7), (-4,10,-5), (-4,-6,5), (-6,10,5), (-6,-4,-5), (-7,10,7) (-7,-3,-7), (-10,3,-7), (-10,4,-5), (-10,6,5), (-10,7,7), (2,7,-5), (2,-9,5), (7,2,5), (7,-9,-5) (9,-2,5), (9,-7,-5), (-2,9,-5), (-2,-7,5), (-7,9,5), (-7,-2,-5), (-9,2,-5), (-9,7,5), (1,6,7) (1,-7,-7), (6,1,-7), (6,-7,7), (7,-1,-7), (7,-6,7), (-1,7,7), (-1,-6,-7), (-6,7,-7), (-6,-1,7) (-7,1,7), (-7,6,-7)									
LiNbO3	(2,5,21)	12.79	85.84	1	2.8	0.932	2.57	11.65	11.93
Equiv. Refl.: (2,5,-21), (2,-7,21), (2,-7,-21), (4,6,1), (4,-10,-1), (5,2,21), (5,2,-21), (5,-7,21), (5,-7,-21) (6,4,-1), (6,-10,1), (7,-2,21), (7,-2,-21), (7,-5,21), (7,-5,-21), (10,-4,-1), (10,-6,1), (-2,7,21) (-2,7,-21), (-2,-5,21), (-2,-5,-21), (-4,10,1), (-4,-6,-1), (-5,7,21), (-5,7,-21), (-5,-2,21), (-5,-2,-21) (-6,10,-1), (-6,-4,1), (-7,2,21), (-7,2,-21), (-7,5,21), (-7,5,-21), (-10,4,1), (-10,6,-1), (0,4,-22) (0,-4,22), (1,7,9), (1,7,-9), (1,-8,9), (1,-8,-9), (4,0,22), (4,-4,-22), (7,1,9), (7,1,-9) (7,-8,9), (7,-8,-9), (8,-1,9), (8,-1,-9), (8,-7,9), (8,-7,-9), (-1,8,9), (-1,8,-9), (-1,-7,9) (-1,-7,-9), (-4,0,-22), (-4,4,22), (-7,8,9), (-7,8,-9), (-7,-1,9), (-7,-1,-9), (-8,1,9), (-8,1,-9) (-8,7,9), (-8,7,-9), (1,4,9), (1,-5,-9), (3,5,-6), (3,-8,6), (4,1,-9), (4,-1,10), (4,-3,-10) (4,-5,9), (5,3,6), (5,-8,-6), (-1,4,-10), (-1,-3,10), (-3,4,10), (-3,-1,-10), (-5,1,9), (-5,4,-9) (-8,3,-6), (-8,5,6)									
Sapph	(2,5,18)	12.731	83.09	0.9	1.3	1.553	2.01	19.41	19.52
Equiv. Refl.: (2,5,-18), (2,7,1), (2,-7,18), (2,-7,-18), (2,-9,-1), (5,2,18), (5,2,-18), (5,-7,18), (5,-7,-18) (7,2,-1), (7,-2,18), (7,-2,-18), (7,-5,18), (7,-5,-18), (7,-9,1), (9,-2,-1), (9,-7,1), (-2,7,18) (-2,7,-18), (-2,9,1), (-2,-5,18), (-2,-5,-18), (-2,-7,-1), (-5,7,18), (-5,7,-18), (-5,-2,18), (-5,-2,-18) (-7,2,18), (-7,2,-18), (-7,5,18), (-7,5,-18), (-7,9,-1), (-7,-2,1), (-9,2,1), (-9,7,-1), (5,-1,-9) (5,-4,9), (8,-3,6), (8,-5,-6), (-1,5,9), (-1,-4,-9), (-3,8,-6), (-3,-5,6), (-4,5,-9), (-4,-1,9) (-5,8,6), (-5,-3,-6)									
Sapph	(2,4,19)	12.067	70.21	0.8	1	4.613	4.44	57.67	57.84
Equiv. Refl.: (2,-6,-19), (3,6,6), (3,6,-6), (3,-9,6), (3,-9,-6), (4,2,-19), (4,-6,19), (6,3,6), (6,3,-6) (6,-2,-19), (6,-4,19), (6,-9,6), (6,-9,-6), (9,-3,6), (9,-3,-6), (9,-6,6), (9,-6,-6), (-2,6,19) (-2,-4,-19), (-3,9,6), (-3,9,-6), (-3,-6,6), (-3,-6,-6), (-4,6,-19), (-4,-2,19), (-6,2,19), (-6,4,-19) (-6,9,6), (-6,9,-6), (-6,-3,6), (-6,-3,-6), (-9,3,6), (-9,3,-6), (-9,6,6), (-9,6,-6), (2,7,2)									

$(2,-9,-2), (7,2,-2), (7,-9,2), (9,-2,-2), (9,-7,2), (-2,9,2), (-2,-7,-2), (-7,9,-2), (-7,-2,2)$
 $(-9,2,2), (-9,7,-2)$

Ei =	12.824	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,3,25)	12.252	72.82	0.7	1.3	3.964	5.1	49.55	49.81
Equiv. Refl.: (1,-4,-25), (3,1,-25), (3,-4,25), (4,-1,-25), (4,-3,25), (-1,4,25), (-1,-3,-25), (-3,4,-25), (-3,-1,25), (-4,1,25), (-4,3,-25), (1,2,-25), (1,-3,25), (2,1,25), (2,-3,-25), (3,5,13), (3,-1,25), (3,-2,-25), (3,-8,-13), (5,3,-13), (5,-8,13), (8,-3,-13), (8,-5,13), (-1,3,-25), (-1,-2,25), (-2,3,25), (-2,-1,-25), (-3,1,-25), (-3,2,25), (-3,8,13), (-3,-5,-13), (-5,8,-13), (-5,-3,13), (-8,3,13), (-8,5,-13), (0,8,-3), (0,-8,3), (8,0,3), (8,-8,-3), (-8,0,-3), (-8,8,3)									
LiNbO3	(3,7,5)	12.56	78.34	0.6	1.3	2.645	3.56	33.07	33.26
Equiv. Refl.: (3,-10,-5), (4,5,-13), (4,-9,13), (5,4,13), (5,-9,-13), (7,3,-5), (7,-10,5), (9,-4,13), (9,-5,-13), (10,-3,-5), (10,-7,5), (-3,10,5), (-3,-7,-5), (-4,9,-13), (-4,-5,13), (-5,9,13), (-5,-4,-13), (-7,10,-5), (-7,-3,5), (-9,4,-13), (-9,5,13), (-10,3,5), (-10,7,-5), (0,7,14), (0,-7,-14), (2,3,-22), (2,7,-2), (2,-5,22), (2,-9,2), (3,2,22), (3,-5,-22), (5,-2,22), (5,-3,-22), (7,0,-14), (7,2,2), (7,-7,14), (7,-9,-2), (9,-2,2), (9,-7,-2), (-2,5,-22), (-2,9,-2), (-2,-3,22), (-2,-7,2), (-3,5,22), (-3,-2,-22), (-5,2,-22), (-5,3,22), (-7,0,14), (-7,7,-14), (-7,9,2), (-7,-2,-2), (-9,2,-2), (-9,7,2)									
LiNbO3	(3,7,-1)	12.367	74.66	0.5	1.1	3.518	3.74	43.98	44.14
Equiv. Refl.: (3,-10,1), (7,3,1), (7,-10,-1), (10,-3,1), (10,-7,-1), (-3,10,-1), (-3,-7,1), (-7,10,1), (-7,-3,-1), (-10,3,-1), (-10,7,1), (0,3,-10), (0,-3,10), (1,8,1), (1,-9,-1), (3,0,10), (3,-3,-10), (8,1,-1), (8,-9,1), (-3,0,-10), (-3,3,10), (-9,1,1), (-9,8,-1)									
LiNbO3	(2,6,17)	12.583	78.87	0.4	1	2.522	2.63	31.53	31.64
Equiv. Refl.: (2,-8,-17), (6,2,-17), (6,-8,17), (8,-2,-17), (8,-6,17), (-2,8,17), (-2,-6,-17), (-6,8,-17), (-6,-2,17), (-8,2,17), (-8,6,-17), (0,8,-8), (0,-8,8), (4,5,8), (4,-9,-8), (5,4,-8), (5,-9,8), (8,0,8), (8,-8,-8), (9,-4,-8), (9,-5,8), (-4,9,8), (-4,-5,-8), (-5,9,-8), (-5,-4,8), (-8,0,-8), (-8,8,8), (-9,4,8), (-9,5,-8), (1,4,-9), (1,-5,9), (4,1,9), (4,-5,-9), (5,-1,9), (5,-4,-9), (6,-1,8), (6,-5,-8), (-1,5,-9), (-1,6,-8), (-1,-4,9), (-1,-5,8), (-4,5,9), (-4,-1,-9), (-5,1,-9), (-5,4,9), (-5,6,8), (-5,-1,-8)									
LiNbO3	(2,3,-25)	12.717	82.58	0.3	1.2	1.669	2	20.87	20.96
Equiv. Refl.: (2,-5,25), (3,2,25), (3,-5,-25), (5,-2,25), (5,-3,-25), (-2,5,-25), (-2,-3,25), (-3,5,25), (-3,-2,-25), (-5,2,-25), (-5,3,25), (0,3,24), (0,3,-24), (0,-3,24), (0,-3,-24), (1,3,-23), (1,-4,23), (3,0,24), (3,0,-24), (3,1,23), (3,6,9), (3,6,-9), (3,-3,24), (3,-3,-24), (3,-4,-23), (3,-9,9), (3,-9,-9), (4,-1,23), (4,-3,-23), (6,3,9), (6,3,-9), (6,-9,9), (6,-9,-9), (9,-3,9), (9,-3,-9), (9,-6,9), (9,-6,-9), (-1,4,-23), (-1,-3,23), (-3,0,24), (-3,0,-24), (-3,3,24), (-3,3,-24), (-3,4,23), (-3,9,9), (-3,9,-9), (-3,-1,-23), (-3,-6,9), (-3,-6,-9), (-4,1,-23), (-4,3,23), (-6,9,9), (-6,9,-9), (-6,-3,9), (-6,-3,-9), (-9,3,9), (-9,3,-9), (-9,6,9), (-9,6,-9), (0,5,9), (0,-5,-9), (1,5,-8), (1,-6,8), (2,7,-3), (2,-9,3), (5,0,-9), (5,1,8), (5,-5,9), (5,-6,-8), (7,2,3), (7,-9,-3), (9,-1,-1), (9,-2,3), (9,-7,-3), (9,-8,1), (-1,9,1), (-1,-8,-1), (-2,9,-3), (-2,-7,3), (-5,0,9), (-5,5,-9), (-6,1,-8), (-6,5,8), (-7,9,3), (-7,-2,-3), (-8,9,-1), (-8,-1,1), (-9,2,-3), (-9,7,3)									
LiNbO3	(1,7,15)	12.458	76.28	0.2	0.7	3.132	2.18	39.15	39.21
Equiv. Refl.: (1,7,-15), (1,-8,15), (1,-8,-15), (7,1,15), (7,1,-15), (7,-8,15), (7,-8,-15), (8,-1,15), (8,-1,-15), (8,-7,15), (8,-7,-15), (-1,8,15), (-1,8,-15), (-1,-7,15), (-1,-7,-15), (-7,8,15), (-7,8,-15), (-7,-1,15), (-7,-1,-15), (-8,1,15), (-8,1,-15), (-8,7,15), (-8,7,-15)									
LiNbO3	(1,8,5)	12.089	70.51	0.1	0.4	4.54	1.91	56.75	56.78
Equiv. Refl.: (1,8,-7), (1,-9,7), (1,-9,-5), (3,5,-17), (3,-8,17), (5,3,17), (5,-8,-17), (8,1,7), (8,1,-5), (8,-3,17), (8,-5,-17), (8,-9,5), (8,-9,-7), (9,-1,7), (9,-1,-5), (9,-8,5), (9,-8,-7), (-1,9,5), (-1,9,-7), (-1,-8,7), (-1,-8,-5), (-3,8,-17), (-3,-5,17), (-5,8,17), (-5,-3,-17), (-8,3,-17), (-8,5,17), (-8,9,7), (-8,9,-5), (-8,-1,5), (-8,-1,-7), (-9,1,5), (-9,1,-7), (-9,8,7), (-9,8,-5), (1,7,12), (1,7,-12), (1,-8,12), (1,-8,-12), (3,4,17), (3,-7,-17), (4,3,-17), (4,-7,17), (7,1,12), (7,1,-12), (7,-3,-17), (7,-4,17), (7,-8,12), (7,-8,-12), (8,-1,12), (8,-1,-12), (8,-7,12), (8,-7,-12), (-1,8,12), (-1,8,-12), (-1,-7,12), (-1,-7,-12), (-3,7,17), (-3,-4,-17), (-4,7,-17), (-4,-3,17), (-7,3,17), (-7,4,-17), (-7,8,12), (-7,8,-12), (-7,-1,12), (-7,-1,-12), (-8,1,12), (-8,1,-12), (-8,7,12), (-8,7,-12)									
LiNbO3	(5,5,3)	12.116	70.88	0	0.1	4.446	0.55	55.58	55.58
Equiv. Refl.: (5,5,9), (5,5,-3), (5,5,-9), (5,-10,3), (5,-10,9), (5,-10,-3), (5,-10,-9), (10,-5,3), (10,-5,9), (10,-5,-3), (10,-5,-9), (-5,10,3), (-5,10,9), (-5,10,-3), (-5,10,-9), (-5,-5,3), (-5,-5,9), (-5,-5,-3), (-5,-5,-9), (-10,5,3), (-10,5,9), (-10,5,-3), (-10,5,-9)									

Ei =	11.215	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Si	(4,4,8)	11.184	85.73	19.513	17.4	0.838	14.57	10.47	17.95
Si	(4,6,6)	10.708	72.7	5.858	5	3.493	17.43	43.66	47.01
Si	(1,3,9)	10.889	76.14	4.672	4.2	2.766	11.51	34.58	36.44
Ge	(0,2,10)	11.175	85.15	4.134	9.9	0.952	9.43	11.9	15.19
	Equiv. Refl.: (2,6,8)								
Ge	(4,4,8)	10.736	73.2	1.589	3.6	3.386	12.18	42.32	44.04
Ge	(1,7,7)	10.903	76.45	0.83	2.9	2.703	7.82	33.78	34.68
	Equiv. Refl.: (3,3,9), (5,5,7)								
Sapph	(0,7,8)	11.202	87.22	33.1	28.6	0.545	15.58	6.81	17
	Equiv. Refl.: (0,-7,-8), (7,0,-8), (7,-7,8), (-7,0,8), (-7,7,-8)								
Quartz	(3,0,9)	11.21	88.36	23.6	21.9	0.321	7.04	4.02	8.1
	Equiv. Refl.: (3,-3,-9), (-3,0,-9), (-3,3,9)								
Quartz	(0,3,-9)	11.21	88.36	23.5	21.8	0.321	7.02	4.02	8.09
	Equiv. Refl.: (0,-3,9)								
Quartz	(0,7,4)	11.183	85.7	20.1	17	0.844	14.31	10.55	17.78
	Equiv. Refl.: (0,-7,-4), (7,0,-4), (7,-7,4), (-7,0,4), (-7,7,-4)								
LiNbO3	(1,1,24)	10.999	78.74	19.3	17.5	2.233	39.14	27.91	48.07
	Equiv. Refl.: (1,6,-14), (1,-2,24), (2,-1,24), (6,-7,-14), (7,-6,-14), (-1,2,24), (-1,7,-14), (-1,-1,24), (-2,1,24), (-6,-1,-14), (-7,1,-14)								
LiNbO3	(1,1,-24)	10.999	78.74	19.2	17.5	2.233	39.14	27.91	48.07
	Equiv. Refl.: (1,-2,-24), (2,-1,-24), (-1,2,-24), (-1,-1,-24), (-2,1,-24)								
LiNbO3	(3,-7,16)	11.078	81.05	18.6	17.2	1.767	30.33	22.09	37.52
	Equiv. Refl.: (4,3,16), (7,-3,16), (-3,-4,16), (-4,7,16), (-7,4,16)								
LiNbO3	(1,-7,14)	11.06	80.48	18.1	17.5	1.882	32.91	23.52	40.45
	Equiv. Refl.: (6,1,14), (7,-1,14), (-1,-6,14), (-6,7,14), (-7,6,14)								
LiNbO3	(0,-8,2)	11.16	84.31	17.6	17.6	1.117	19.66	13.96	24.11
	Equiv. Refl.: (3,4,-16), (4,-7,-16), (7,-4,-16), (8,0,2), (-3,7,-16), (-4,-3,-16), (-7,3,-16), (-8,8,2)								
LiNbO3	(3,6,0)	11.037	79.77	17.5	16.2	2.024	32.77	25.3	41.41
	Equiv. Refl.: (6,-9,0), (9,-6,0), (-3,9,0), (-6,-3,0), (-9,3,0)								
LiNbO3	(3,-9,0)	11.037	79.77	17.1	16.2	2.024	32.77	25.3	41.41
	Equiv. Refl.: (6,3,0), (9,-3,0), (-3,-6,0), (-6,9,0), (-9,6,0)								
LiNbO3	(0,8,-2)	11.16	84.31	16.7	17.6	1.117	19.66	13.96	24.11
	Equiv. Refl.: (8,-8,-2), (-8,0,-2)								
LiNbO3	(4,4,12)	11.027	79.5	16.6	15.2	2.078	31.67	25.98	40.96
	Equiv. Refl.: (4,-8,12), (8,-4,12), (-4,8,12), (-4,-4,12), (-8,4,12)								
LiNbO3	(4,-9,4)	11.006	78.93	16	14.6	2.194	31.96	27.42	42.11
	Equiv. Refl.: (5,4,4), (9,-4,4), (-4,-5,4), (-5,9,4), (-9,5,4)								
LiNbO3	(1,-4,-22)	11.042	79.91	15.9	14.9	1.995	29.76	24.94	38.82
	Equiv. Refl.: (3,1,-22), (4,-1,-22), (-1,-3,-22), (-3,4,-22), (-4,3,-22)								
LiNbO3	(4,4,-12)	11.027	79.5	15.7	15.2	2.078	31.67	25.98	40.96
	Equiv. Refl.: (4,-8,-12), (8,-4,-12), (-4,8,-12), (-4,-4,-12), (-8,4,-12)								
LiNbO3	(1,3,22)	11.042	79.91	15.4	14.9	1.995	29.76	24.94	38.82
	Equiv. Refl.: (3,-4,22), (4,5,2), (4,-3,22), (5,-9,2), (9,-5,2), (-1,4,22), (-3,-1,22), (-4,1,22), (-4,9,2), (-5,-4,2), (-9,4,2)								
LiNbO3	(4,-9,-2)	10.897	76.32	15.1	14	2.73	38.19	34.12	51.22
	Equiv. Refl.: (5,4,-2), (9,-4,-2), (-4,-5,-2), (-5,9,-2), (-9,5,-2)								
LiNbO3	(4,5,-4)	11.006	78.93	14.9	14.6	2.194	31.96	27.42	42.11
	Equiv. Refl.: (5,-9,-4), (9,-5,-4), (-4,9,-4), (-5,-4,-4), (-9,4,-4)								

Ei =	11.215	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(2,-8,10)	10.979	78.22	14.7	13.6	2.338	31.86	29.23	43.24
	Equiv. Refl.: (6,2,10), (8,-2,10), (-2,-6,10), (-6,8,10), (-8,6,10)								
LiNbO3	(2,6,-10)	10.979	78.22	14.2	13.6	2.338	31.86	29.23	43.24
	Equiv. Refl.: (3,3,18), (3,-6,18), (6,-3,18), (6,-8,-10), (8,-6,-10), (-2,8,-10), (-3,6,18), (-3,-3,18), (-6,3,18), (-6,-2,-10), (-8,2,-10)								
LiNbO3	(3,3,-18)	10.816	74.68	13.5	12.7	3.073	39.02	38.41	54.76
	Equiv. Refl.: (3,-6,-18), (6,-3,-18), (-3,6,-18), (-3,-3,-18), (-6,3,-18)								
LiNbO3	(1,-8,-6)	10.835	75.05	13.1	12.1	2.995	36.24	37.43	52.1
	Equiv. Refl.: (7,1,-6), (8,-1,-6), (-1,-7,-6), (-7,8,-6), (-8,7,-6)								
LiNbO3	(1,7,6)	10.835	75.05	13	12.1	2.995	36.24	37.43	52.1
	Equiv. Refl.: (7,-8,6), (8,-7,6), (-1,8,6), (-7,-1,6), (-8,1,6)								
LiNbO3	(0,7,-10)	10.711	72.77	12.8	11.7	3.479	40.58	43.49	59.48
	Equiv. Refl.: (7,-7,-10), (-7,0,-10)								
LiNbO3	(0,-7,10)	10.711	72.77	12.7	11.7	3.479	40.58	43.49	59.48
	Equiv. Refl.: (7,0,10), (-7,7,10)								
LiNbO3	(1,7,-6)	10.835	75.05	12.4	11.4	2.995	34.19	37.43	50.69
	Equiv. Refl.: (7,-8,-6), (8,-7,-6), (-1,8,-6), (-7,-1,-6), (-8,1,-6)								
LiNbO3	(1,-8,6)	10.835	75.05	12	11.4	2.995	34.19	37.43	50.69
	Equiv. Refl.: (7,1,6), (8,-1,6), (-1,-7,6), (-7,8,6), (-8,7,6)								
Quartz	(0,6,-6)	11.126	82.77	11.5	9.5	1.423	13.5	17.78	22.33
	Equiv. Refl.: (0,-6,6), (6,0,6), (6,-6,-6), (-6,0,-6), (-6,6,6)								
LiNbO3	(2,-8,-8)	10.646	71.67	11.4	10.4	3.715	38.78	46.44	60.5
	Equiv. Refl.: (6,2,-8), (8,-2,-8), (-2,-6,-8), (-6,8,-8), (-8,6,-8)								
LiNbO3	(2,6,8)	10.646	71.67	11.2	10.4	3.715	38.78	46.44	60.5
	Equiv. Refl.: (6,-8,8), (8,-6,8), (-2,8,8), (-6,-2,8), (-8,2,8)								
LiNbO3	(3,5,10)	10.711	72.77	11	9.7	3.479	33.61	43.49	54.96
	Equiv. Refl.: (5,-8,10), (8,-5,10), (-3,8,10), (-5,-3,10), (-8,3,10)								
LiNbO3	(1,5,-16)	10.542	70.05	10.5	9.4	4.072	38.46	50.9	63.79
	Equiv. Refl.: (5,-6,-16), (6,-5,-16), (-1,6,-16), (-5,-1,-16), (-6,1,-16), (2,6,-4), (2,-8,4), (6,2,4), (6,-8,-4), (8,-2,4), (8,-6,-4), (-2,8,-4), (-2,-6,4), (-6,8,4), (-6,-2,-4), (-8,2,-4), (-8,6,4)								
LiNbO3	(1,-6,16)	10.542	70.05	10.4	9.4	4.072	38.46	50.9	63.79
	Equiv. Refl.: (2,-5,-20), (3,2,-20), (5,1,16), (5,-2,-20), (6,-1,16), (-1,-5,16), (-2,-3,-20), (-3,5,-20), (-5,3,-20), (-5,6,16), (-6,5,16)								
LiNbO3	(3,-8,-10)	10.711	72.77	9.9	9.7	3.479	33.61	43.49	54.96
	Equiv. Refl.: (5,3,-10), (8,-3,-10), (-3,-5,-10), (-5,8,-10), (-8,5,-10)								
Sapph	(1,6,10)	10.959	77.74	9.8	7.9	2.438	19.37	30.47	36.11
	Equiv. Refl.: (1,-7,-10), (6,1,-10), (6,-7,10), (7,-1,-10), (7,-6,10), (-1,7,10), (-1,-6,-10), (-6,7,-10), (-6,-1,10), (-7,1,10), (-7,6,-10)								
LiNbO3	(2,3,20)	10.804	74.44	9.6	9.4	3.123	29.49	39.04	48.93
	Equiv. Refl.: (3,-5,20), (5,-3,20), (-2,5,20), (-3,-2,20), (-5,2,20)								
Sapph	(1,3,-20)	10.979	78.23	9.5	7.8	2.336	18.27	29.2	34.45
	Equiv. Refl.: (1,-4,20), (3,1,20), (3,-4,-20), (4,-1,20), (4,-3,-20), (-1,4,-20), (-1,-3,20), (-3,4,20), (-3,-1,-20), (-4,1,-20), (-4,3,20)								
Quartz	(3,5,-4)	11.183	85.7	9.4	8.6	0.844	7.24	10.55	12.79
	Equiv. Refl.: (3,-8,4), (5,3,4), (5,-8,-4), (-8,3,-4), (-8,5,4)								
Quartz	(2,4,-7)	11.131	83	9.2	7.7	1.378	10.67	17.23	20.26
	Equiv. Refl.: (2,-6,7), (4,-6,-7), (8,-3,4), (8,-5,-4), (-3,8,-4), (-3,-5,4), (-5,8,4), (-5,-3,-4), (-6,2,-7), (-6,4,7)								
Quartz	(4,2,7)	11.131	83	9.1	7.7	1.378	10.66	17.23	20.26

Ei =	11.215	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(5,-2,8)	11.16	84.3	9	7.6	1.12	8.53	14	16.39
	Equiv. Refl.: (5,-3,-8), (-2,5,-8), (-2,-3,8), (-3,5,8), (-3,-2,-8)								
Quartz	(6,-2,7)	11.131	83	8.9	7.7	1.378	10.67	17.23	20.26
	Equiv. Refl.: (6,-4,-7), (-2,6,-7), (-2,-4,7), (-4,6,7), (-4,-2,-7)								
Quartz	(2,3,-8)	11.16	84.3	8.5	7.6	1.12	8.53	14	16.39
	Equiv. Refl.: (2,-5,8), (3,2,8), (3,-5,-8), (-5,2,-8), (-5,3,8)								
Quartz	(1,6,5)	11.143	83.52	8.2	6.9	1.275	8.75	15.93	18.18
	Equiv. Refl.: (1,-7,-5), (6,1,-5), (6,-7,5), (-7,1,5), (-7,6,-5)								
Quartz	(0,5,7)	10.841	75.17	8.1	6.3	2.969	18.74	37.12	41.58
	Equiv. Refl.: (0,-5,-7), (5,0,-7), (5,-5,7), (-5,0,7), (-5,5,-7)								
Quartz	(0,4,8)	10.87	75.76	7.6	6.1	2.846	17.42	35.57	39.61
	Equiv. Refl.: (0,-4,-8), (4,0,-8), (4,-4,8), (-4,0,8), (-4,4,-8)								
Quartz	(3,5,-3)	10.764	73.69	7.5	5.9	3.281	19.39	41.02	45.37
	Equiv. Refl.: (3,-8,3), (5,3,3), (5,-8,-3), (8,-3,3), (8,-5,-3), (-3,8,-3), (-3,-5,3), (-5,8,3), (-5,-3,-3), (-8,3,-3), (-8,5,3)								
LiNbO3	(0,0,-24)	10.732	73.13	7.3	6.8	3.401	23.2	42.52	48.44
	Equiv. Refl.: (7,-1,-5), (7,-6,5), (-1,7,5), (-1,-6,-5), (-6,7,-5), (-6,-1,5)								
Sapph	(1,5,14)	10.715	72.83	6.9	5.7	3.466	19.65	43.32	47.57
	Equiv. Refl.: (1,-6,-14), (3,5,4), (3,-8,-4), (5,1,-14), (5,3,-4), (5,-6,14), (5,-8,4), (6,-1,-14), (6,-5,14), (8,-3,-4), (8,-5,4), (-1,6,14), (-1,-5,-14), (-3,8,4), (-3,-5,-4), (-5,6,-14), (-5,8,-4), (-5,-1,14), (-5,-3,4), (-6,1,14), (-6,5,-14), (-8,3,4), (-8,5,-4)								
LiNbO3	(0,0,24)	10.732	73.13	6.4	6.8	3.401	23.2	42.52	48.44
	Equiv. Refl.: (8,-1,0), (8,-7,0), (-1,8,0), (-1,-7,0), (-7,8,0), (-7,-1,0)								
Quartz	(4,4,4)	11.088	81.37	6.3	5.5	1.702	9.28	21.27	23.21
	Equiv. Refl.: (4,4,-4), (4,-8,4), (4,-8,-4), (-8,4,4), (-8,4,-4)								
Quartz	(1,7,0)	11	78.76	6.2	5.3	2.228	11.76	27.85	30.23
	Equiv. Refl.: (1,-8,0), (2,6,-3), (2,-8,3), (6,2,3), (6,-8,-3), (7,1,0), (7,-8,0), (8,-2,3), (8,-4,4), (8,-4,-4), (8,-6,-3), (-2,8,-3), (-2,-6,3), (-4,8,4), (-4,8,-4), (-4,-4,4), (-4,-4,-4), (-6,8,3), (-6,-2,-3), (-8,1,0), (-8,2,-3), (-8,6,3), (-8,7,0)								
Sapph	(4,4,6)	10.809	74.54	6	5.1	3.102	15.74	38.77	41.85
	Equiv. Refl.: (4,4,-6), (4,-8,6), (4,-8,-6), (8,-4,6), (8,-4,-6), (-4,8,6), (-4,8,-6), (-4,-4,6), (-4,-4,-6), (-8,4,6), (-8,4,-6)								
Sapph	(2,4,16)	11.031	79.62	5.9	5.1	2.055	10.58	25.69	27.78
	Equiv. Refl.: (2,-6,-16), (4,2,-16), (4,-6,16), (6,-2,-16), (6,-4,16), (-2,6,16), (-2,-4,-16), (-4,6,-16), (-4,-2,16), (-6,2,16), (-6,4,-16)								
Sapph	(0,5,16)	10.719	72.9	5.5	4.7	3.45	16.17	43.13	46.06
	Equiv. Refl.: (0,-5,-16), (2,6,5), (2,-8,-5), (5,0,-16), (5,-5,16), (6,2,-5), (6,-8,5), (8,-2,-5), (8,-6,5), (-2,8,5), (-2,-6,-5), (-5,0,16), (-5,5,-16), (-6,8,-5), (-6,-2,5), (-8,2,5), (-8,6,-5)								
Quartz	(8,-1,-1)	11.06	80.45	5.3	4.5	1.886	8.49	23.58	25.06
	Equiv. Refl.: (8,-7,1), (-1,8,1), (-1,-7,-1), (-7,8,-1), (-7,-1,1)								
Sapph	(0,7,2)	10.574	70.54	5.2	4.3	3.963	16.88	49.54	52.34
	Equiv. Refl.: (0,-7,-2), (7,0,-2), (7,-7,2), (-7,0,2), (-7,7,-2), (1,7,1), (1,-8,-1), (7,1,-1), (7,-8,1), (-8,1,1), (-8,7,-1)								
Quartz	(1,5,6)	10.638	71.54	5	3.9	3.743	14.61	46.79	49.02
	Equiv. Refl.: (1,-6,-6), (5,1,-6), (5,-6,6), (6,-1,-6), (6,-5,6), (-1,6,6), (-1,-5,-6), (-5,6,-6), (-5,-1,6), (-6,1,6), (-6,5,-6)								
Sapph	(2,3,-19)	11.191	86.26	4.9	5.5	0.733	4.04	9.17	10.02
	Equiv. Refl.: (2,-5,19), (3,2,19), (3,-5,-19), (5,-2,19), (5,-3,-19), (-2,5,-19), (-2,-3,19), (-3,5,19), (-3,-2,-19), (-5,2,-19), (-5,3,19)								
Quartz	(8,-2,-3)	11.056	80.33	4.6	3.9	1.911	7.43	23.89	25.02
	Equiv. Refl.: (8,-6,3), (-2,8,3), (-2,-6,-3), (-6,8,-3), (-6,-2,3)								

Ei =	11.215	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(0,2,-9)	10.727	73.03	4.5	3.6	3.423	12.31	42.78	44.52
	Equiv. Refl.: (0,-2,9), (2,0,9), (2,-2,-9), (8,-2,-1), (8,-6,1), (-2,0,-9), (-2,2,9), (-2,8,1), (-2,-6,-1), (-6,8,-1), (-6,-2,1)								
Quartz	(2,6,1)	10.569	70.46	4.4	3.5	3.981	14.11	49.76	51.72
	Equiv. Refl.: (2,-8,-1), (6,2,-1), (6,-8,1), (8,-2,-2), (8,-6,2), (-2,8,2), (-2,-6,-2), (-6,8,-2), (-6,-2,2), (-8,2,1), (-8,6,-1)								
Sapph	(0,6,12)	10.69	72.4	4.3	3.6	3.557	12.92	44.46	46.3
	Equiv. Refl.: (0,6,-12), (0,-6,12), (0,-6,-12), (6,0,12), (6,0,-12), (6,-6,12), (6,-6,-12), (-6,0,12), (-6,0,-12), (-6,6,12), (-6,6,-12), (2,6,2), (2,-8,-2), (6,2,-2), (6,-8,2), (-8,2,2), (-8,6,-2)								
Quartz	(0,3,9)	11.21	88.36	4.2	5.9	0.321	1.91	4.02	4.45
	Equiv. Refl.: (0,-3,-9), (2,6,3), (2,-8,-3), (3,0,-9), (3,-3,9), (6,2,-3), (6,-8,3), (8,-1,1), (8,-7,-1), (-1,8,-1), (-1,-7,1), (-3,0,9), (-3,3,-9), (-7,8,1), (-7,-1,-1), (-8,2,3), (-8,6,-3)								
Quartz	(1,7,-1)	11.06	80.45	3.9	3.6	1.886	6.83	23.58	24.55
	Equiv. Refl.: (1,-8,1), (7,1,1), (7,-8,-1), (-8,1,-1), (-8,7,1)								
Quartz	(1,6,-4)	10.599	70.92	3.6	2.9	3.88	11.14	48.5	49.76
	Equiv. Refl.: (1,-7,4), (4,4,3), (4,4,-3), (4,-8,3), (4,-8,-3), (6,1,4), (6,-7,-4), (-7,1,-4), (-7,6,4), (-8,4,3), (-8,4,-3)								
Sapph	(1,6,-8)	10.578	70.6	3.4	2.9	3.949	11.62	49.36	50.71
	Equiv. Refl.: (1,-7,8), (2,6,-1), (2,-8,1), (6,1,8), (6,2,1), (6,-7,-8), (6,-8,-1), (7,-1,8), (7,-6,-8), (8,-2,1), (8,-6,-1), (-1,7,-8), (-1,-6,8), (-2,8,-1), (-2,-6,1), (-6,7,8), (-6,8,1), (-6,-1,-8), (-6,-2,-1), (-7,1,-8), (-7,6,8), (-8,2,-1), (-8,6,1), (7,-1,4), (7,-6,-4), (8,-4,3), (8,-4,-3), (-1,7,-4), (-1,-6,4), (-4,8,3), (-4,8,-3), (-4,-4,3), (-4,-4,-3), (-6,7,4), (-6,-1,-4)								
Quartz	(7,-1,5)	11.143	83.52	3.3	3.2	1.275	4.07	15.93	16.45
	Equiv. Refl.: (7,-6,-5), (-1,7,-5), (-1,-6,5), (-6,7,5), (-6,-1,-5)								
Quartz	(1,6,-5)	11.143	83.52	3.2	3.2	1.275	4.08	15.93	16.45
	Equiv. Refl.: (1,-7,5), (4,-1,8), (4,-3,-8), (6,1,5), (6,-7,-5), (-1,4,-8), (-1,-3,8), (-3,4,8), (-3,-1,-8), (-7,1,-5), (-7,6,5)								
Quartz	(0,7,-4)	11.183	85.7	3.1	3.6	0.844	3.08	10.55	10.99
	Equiv. Refl.: (0,-7,4), (1,3,-8), (1,-4,8), (3,1,8), (3,-4,-8), (7,0,4), (7,-7,-4), (-4,1,-8), (-4,3,8), (-7,0,-4), (-7,7,4)								
Quartz	(7,-3,-5)	10.556	70.27	3	2.7	4.023	10.9	50.29	51.46
	Equiv. Refl.: (7,-4,5), (-3,7,5), (-3,-4,-5), (-4,7,-5), (-4,-3,5)								
Quartz	(3,4,5)	10.556	70.27	2.9	2.7	4.023	10.9	50.29	51.46
	Equiv. Refl.: (3,-7,-5), (4,3,-5), (4,-7,5), (8,-3,-4), (8,-5,4), (-3,8,4), (-3,-5,-4), (-5,8,-4), (-5,-3,4), (-7,3,5), (-7,4,-5)								
Quartz	(3,5,3)	10.764	73.69	2.8	2.5	3.281	8.21	41.02	41.83
	Equiv. Refl.: (3,-8,-3), (5,3,-3), (5,-8,3), (-8,3,3), (-8,5,-3)								
Quartz	(6,-2,-7)	11.131	83	2.7	2.8	1.378	3.89	17.23	17.66
	Equiv. Refl.: (6,-4,7), (-2,6,7), (-2,-4,-7), (-4,6,-7), (-4,-2,7)								
Quartz	(8,-3,-3)	10.764	73.69	2.6	2.5	3.281	8.21	41.02	41.83
	Equiv. Refl.: (8,-5,3), (-3,8,3), (-3,-5,-3), (-5,8,-3), (-5,-3,3)								
Quartz	(2,4,7)	11.131	83	2.5	2.8	1.378	3.89	17.23	17.66
	Equiv. Refl.: (2,-6,-7), (4,2,-7), (4,-6,7), (8,-2,1), (8,-6,-1), (-2,8,-1), (-2,-6,1), (-6,2,7), (-6,4,-7), (-6,8,1), (-6,-2,-1)								
Quartz	(2,6,-1)	10.569	70.46	2.4	2.3	3.981	9.08	49.76	50.58
	Equiv. Refl.: (2,-8,1), (3,5,4), (3,-8,-4), (5,3,-4), (5,-8,4), (6,2,1), (6,-8,-1), (-8,2,-1), (-8,3,4), (-8,5,-4), (-8,6,1)								
LiNbO3	(1,6,13)	10.814	74.62	2.3	3.5	3.084	10.79	38.55	40.03
	Equiv. Refl.: (1,-7,-13), (6,1,-13), (6,-7,13), (7,-1,-13), (7,-6,13), (-1,7,13), (-1,-6,-13), (-6,7,-13), (-6,-1,13), (-7,1,13), (-7,6,-13)								

Ei =	11.215	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(1,6,-11)	11.175	85.17	2.2	3.2	0.947	3.02	11.84	12.22
	Equiv. Refl.: (1,-7,11), (6,1,11), (6,-7,-11), (7,-1,11), (7,-6,-11), (-1,7,-11), (-1,-6,11), (-6,7,11), (-6,-1,-11), (-7,1,-11), (-7,6,11)								
Quartz	(1,1,9)	10.627	71.37	1.9	2	3.782	7.48	47.27	47.86
	Equiv. Refl.: (1,1,-9), (1,-2,9), (1,-2,-9), (6,-1,6), (6,-5,-6), (-1,6,-6), (-1,-5,6), (-2,1,9), (-2,1,-9), (-5,6,6), (-5,-1,-6)								
Sapph	(3,5,7)	11.048	80.11	1.8	2.3	1.956	4.46	24.45	24.85
	Equiv. Refl.: (3,-8,-7), (5,3,-7), (5,-8,7), (8,-3,-7), (8,-5,7), (-3,8,7), (-3,-5,-7), (-5,8,-7), (-5,-3,7), (-8,3,7), (-8,5,-7), (1,5,-6), (1,-6,6), (2,5,-5), (2,-7,5), (5,1,6), (5,2,5), (5,-6,-6), (5,-7,-5), (-6,1,-6), (-6,5,6), (-7,2,-5), (-7,5,5)								
Quartz	(1,2,-9)	11.019	79.28	1.7	1.9	2.122	4.03	26.53	26.83
	Equiv. Refl.: (1,-3,9), (2,1,9), (2,-1,9), (2,-1,-9), (2,-3,-9), (7,-2,5), (7,-5,-5), (-1,2,9), (-1,2,-9), (-1,-1,9), (-1,-1,-9), (-2,7,-5), (-2,-5,5), (-3,1,-9), (-3,2,9), (-5,7,5), (-5,-2,-5)								
Quartz	(0,2,9)	10.727	73.03	1.6	1.8	3.423	6.11	42.78	43.22
	Equiv. Refl.: (0,-2,-9), (2,0,-9), (2,-2,9), (-2,0,9), (-2,2,-9)								
LiNbO3	(2,4,-17)	10.58	70.62	1.5	2.5	3.945	9.9	49.31	50.3
	Equiv. Refl.: (2,-6,17), (4,2,17), (4,5,5), (4,-6,-17), (4,-9,-5), (5,4,-5), (5,-9,5), (6,-2,17), (6,-4,-17), (9,-4,-5), (9,-5,5), (-2,6,-17), (-2,-4,17), (-4,6,17), (-4,9,5), (-4,-2,-17), (-4,-5,-5), (-5,9,-5), (-5,-4,5), (-6,2,-17), (-6,4,17), (-9,4,5), (-9,5,-5), (2,6,-2), (2,-8,2), (6,2,2), (6,-8,-2), (-8,2,-2), (-8,6,2)								
LiNbO3	(2,2,21)	10.554	70.23	1.4	2.4	4.031	9.53	50.39	51.28
	Equiv. Refl.: (2,2,-21), (2,-4,21), (2,-4,-21), (4,-2,21), (4,-2,-21), (-2,4,21), (-2,4,-21), (-2,-2,21), (-2,-2,-21), (-4,2,21), (-4,2,-21), (3,-1,9), (3,-2,-9), (-1,3,-9), (-1,-2,9), (-2,3,9), (-2,-1,-9)								
Sapph	(3,5,-8)	11.202	87.22	1.3	2.7	0.545	1.49	6.81	6.97
	Equiv. Refl.: (3,-8,8), (5,3,8), (5,-8,-8), (8,-3,8), (8,-5,-8), (-3,8,-8), (-3,-5,8), (-5,8,8), (-5,-3,-8), (-8,3,-8), (-8,5,8), (0,6,6), (0,-6,-6), (1,3,8), (1,-4,-8), (3,1,-8), (3,-4,8), (4,-1,-8), (4,-3,8), (6,0,-6), (6,-6,6), (8,-2,2), (8,-6,-2), (-1,4,8), (-1,-3,-8), (-2,8,-2), (-2,-6,2), (-3,4,-8), (-3,-1,8), (-4,1,8), (-4,3,-8), (-6,0,6), (-6,6,-6), (-6,8,2), (-6,-2,-2)								
Sapph	(3,5,-5)	10.798	74.33	1.2	1.5	3.147	4.84	39.34	39.63
	Equiv. Refl.: (3,-8,5), (5,3,5), (5,-8,-5), (8,-3,5), (8,-5,-5), (-3,8,-5), (-3,-5,5), (-5,8,5), (-5,-3,-5), (-8,3,-5), (-8,5,5)								
Quartz	(0,7,3)	10.764	73.69	1.1	1.4	3.281	4.44	41.02	41.26
	Equiv. Refl.: (0,-7,-3), (2,3,8), (2,-5,-8), (3,2,-8), (3,4,-5), (3,-5,8), (3,-7,5), (4,3,5), (4,-7,-5), (7,0,-3), (7,-7,3), (-5,2,8), (-5,3,-8), (-7,0,3), (-7,3,-5), (-7,4,5), (-7,7,-3)								
LiNbO3	(2,6,11)	11.169	84.78	1	3.3	1.024	3.36	12.8	13.24
	Equiv. Refl.: (2,-8,-11), (4,5,-1), (4,-9,1), (5,4,1), (5,-9,-1), (6,2,-11), (6,-8,11), (8,-2,-11), (8,-6,11), (9,-4,1), (9,-5,-1), (-2,8,11), (-2,-6,-11), (-4,9,-1), (-4,-5,1), (-5,9,1), (-5,-4,-1), (-6,8,-11), (-6,-2,11), (-8,2,11), (-8,6,-11), (-9,4,-1), (-9,5,1), (3,5,1), (3,-8,-1), (5,3,-1), (5,-8,1), (8,-3,-1), (8,-5,1), (-3,8,1), (-3,-5,-1), (-5,8,-1), (-5,-3,1), (-8,3,1), (-8,5,-1), (0,7,-3), (0,-7,3), (5,-2,-8), (5,-3,8), (7,0,3), (7,-3,5), (7,-4,-5), (7,-7,-3), (-2,5,8), (-2,-3,-8), (-3,5,-8), (-3,7,-5), (-3,-2,8), (-3,-4,5), (-4,7,5), (-4,-3,-5), (-7,0,-3), (-7,7,3)								
LiNbO3	(3,6,3)	11.118	82.45	0.9	2.6	1.486	3.87	18.57	18.97
	Equiv. Refl.: (3,6,-3), (3,-9,3), (3,-9,-3), (6,3,3), (6,3,-3), (6,-9,3), (6,-9,-3), (9,-3,3), (9,-3,-3), (9,-6,3), (9,-6,-3), (-3,9,3), (-3,9,-3), (-3,-6,3), (-3,-6,-3), (-6,9,3), (-6,9,-3), (-6,-3,3), (-6,-3,-3), (-9,3,3), (-9,3,-3), (-9,6,3), (-9,6,-3), (1,4,18), (1,4,-18), (1,-5,18), (1,-5,-18), (4,1,18), (4,1,-18), (4,-5,18), (4,-5,-18), (5,-1,18), (5,-1,-18), (5,-4,18), (5,-4,-18), (-1,5,18), (-1,5,-18), (-1,-4,18), (-1,-4,-18), (-4,5,18), (-4,5,-18), (-4,-1,18), (-4,-1,-18), (-5,1,18), (-5,1,-18), (-5,4,18), (-5,4,-18), (1,2,9), (1,6,4), (1,-3,-9), (1,-7,-4), (2,1,-9), (2,-3,9), (3,-1,-9), (3,-2,9), (6,1,-4), (6,-7,4), (7,-1,-4), (7,-6,4), (-1,3,9), (-1,7,4), (-1,-2,-9), (-1,-6,-4), (-2,3,-9), (-2,-1,9), (-3,1,9), (-3,2,-9), (-6,7,-4), (-6,-1,4), (-7,1,4), (-7,6,-4)								

Ei =	11.215	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,2,23)	10.923	76.9	0.8	1.8	2.609	4.8	32.62	32.97
Equiv. Refl.: (1,5,17), (1,-3,-23), (1,-6,-17), (2,1,-23), (2,-3,23), (3,-1,-23), (3,-2,23), (5,1,-17), (5,-6,17) (6,-1,-17), (6,-5,17), (-1,3,23), (-1,6,17), (-1,-2,-23), (-1,-5,-17), (-2,3,-23), (-2,-1,23), (-3,1,23) (-3,2,-23), (-5,6,-17), (-5,-1,17), (-6,1,17), (-6,5,-17), (2,5,12), (2,5,-12), (2,-7,12), (2,-7,-12) (5,2,12), (5,2,-12), (5,-7,12), (5,-7,-12), (7,-2,12), (7,-2,-12), (7,-5,12), (7,-5,-12), (-2,7,12) (-2,7,-12), (-2,-5,12), (-2,-5,-12), (-5,7,12), (-5,7,-12), (-5,-2,12), (-5,-2,-12), (-7,2,12), (-7,2,-12) (-7,5,12), (-7,5,-12)									
Sapph	(0,7,-4)	10.703	72.61	0.6	0.9	3.512	3.26	43.9	44.02
Equiv. Refl.: (0,-7,4), (7,0,4), (7,-7,-4), (-7,0,-4), (-7,7,4), (0,4,-8), (0,5,-7), (0,-4,8), (0,-5,7) (4,0,8), (4,-4,-8), (5,0,7), (5,-5,-7), (7,-2,-5), (7,-5,5), (-2,7,5), (-2,-5,-5), (-4,0,-8) (-4,4,8), (-5,0,-7), (-5,5,7), (-5,7,-5), (-5,-2,5)									
LiNbO3	(2,5,15)	10.973	78.07	0.5	1.5	2.37	3.66	29.63	29.86
Equiv. Refl.: (2,5,-15), (2,-7,15), (2,-7,-15), (5,2,15), (5,2,-15), (5,-7,15), (5,-7,-15), (7,-2,15), (7,-2,-15) (7,-5,15), (7,-5,-15), (-2,7,15), (-2,7,-15), (-2,-5,15), (-2,-5,-15), (-5,7,15), (-5,7,-15), (-5,-2,15) (-5,-2,-15), (-7,2,15), (-7,2,-15), (-7,5,15), (-7,5,-15), (0,2,22), (0,-2,-22), (1,3,19), (1,-4,-19) (2,0,-22), (2,-2,22), (3,1,-19), (3,-4,19), (4,-1,-19), (4,-3,19), (-1,4,19), (-1,-3,-19), (-2,0,22) (-2,2,-22), (-3,4,-19), (-3,-1,19), (-4,1,19), (-4,3,-19), (2,5,5), (2,-7,-5), (3,3,7), (3,3,-7) (3,-6,7), (3,-6,-7), (5,2,-5), (5,-7,5), (-6,3,7), (-6,3,-7), (-7,2,5), (-7,5,-5)									
Sapph	(3,4,-13)	11.056	80.35	0.3	0.7	1.907	1.28	23.84	23.88
Equiv. Refl.: (3,-7,13), (4,3,13), (4,-7,-13), (7,-3,13), (7,-4,-13), (-3,7,-13), (-3,-4,13), (-4,7,13), (-4,-3,-13) (-7,3,-13), (-7,4,13), (6,-3,7), (6,-3,-7), (-3,6,7), (-3,6,-7), (-3,-3,7), (-3,-3,-7)									
LiNbO3	(1,7,3)	10.583	70.68	0.2	0.8	3.932	3.22	49.15	49.26
Equiv. Refl.: (1,7,-3), (1,-8,3), (1,-8,-3), (3,5,-11), (3,-8,11), (5,3,11), (5,-8,-11), (7,1,3), (7,1,-3) (7,-8,3), (7,-8,-3), (8,-1,3), (8,-1,-3), (8,-3,11), (8,-5,-11), (8,-7,3), (8,-7,-3), (-1,8,3) (-1,8,-3), (-1,-7,3), (-1,-7,-3), (-3,8,-11), (-3,-5,11), (-5,8,11), (-5,-3,-11), (-7,8,3), (-7,8,-3) (-7,-1,3), (-7,-1,-3), (-8,1,3), (-8,1,-3), (-8,3,-11), (-8,5,11), (-8,7,3), (-8,7,-3), (0,1,-22) (0,-1,22), (1,0,22), (1,-1,-22), (3,4,11), (3,-7,-11), (4,3,-11), (4,-7,11), (7,-3,-11), (7,-4,11) (-1,0,-22), (-1,1,22), (-3,7,11), (-3,-4,-11), (-4,7,-11), (-4,-3,11), (-7,3,11), (-7,4,-11)									
Sapph	(2,6,2)	10.89	76.18	0.1	0.4	2.758	1.04	34.48	34.49
Equiv. Refl.: (2,-8,-2), (6,2,-2), (6,-8,2), (8,-2,-2), (8,-6,2), (-2,8,2), (-2,-6,-2), (-6,8,-2), (-6,-2,2) (-8,2,2), (-8,6,-2)									
Sapph	(3,3,15)	10.6	70.94	0	0.2	3.874	0.65	48.43	48.44
Equiv. Refl.: (3,3,-15), (3,-6,15), (3,-6,-15), (6,-3,15), (6,-3,-15), (-3,6,15), (-3,6,-15), (-3,-3,15), (-3,-3,-15) (-6,3,15), (-6,3,-15)									

Ei =	13.88	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Ge	(0,4,12)	13.861	86.97	9.1178	20.49	0.7339	15.04	9.17	17.62
	Equiv. Refl.: (0,12,4), (4,0,12), (4,12,0), (12,0,4), (12,4,0)								
Si	(1,5,11)	13.839	85.61	5.0192	4.65	1.0655	4.96	13.32	14.21
	Equiv. Refl.: (1,11,5), (5,1,11), (5,11,1), (7,7,7), (11,1,5), (11,5,1)								
Si	(0,0,12)	13.697	80.69	3.806	3.23	2.2743	7.35	28.43	29.36
	Equiv. Refl.: (0,12,0), (4,8,8), (8,4,8), (8,8,4), (12,0,0)								
Ge	(2,2,12)	13.51	76.74	2.3667	5.14	3.2721	16.81	40.9	44.22
	Equiv. Refl.: (2,12,2), (4,6,10), (4,10,6), (6,4,10), (6,10,4), (10,4,6), (10,6,4), (12,2,2)								
Si	(0,6,10)	13.311	73.54	2.3307	2.04	4.0999	8.36	51.25	51.93
	Equiv. Refl.: (0,10,6), (6,0,10), (6,6,8), (6,8,6), (6,10,0), (8,6,6), (10,0,6), (10,6,0)								
Ge	(0,0,12)	13.149	71.33	1.9197	4.02	4.6909	18.88	58.64	61.6
	Equiv. Refl.: (0,12,0), (4,8,8), (8,4,8), (8,8,4), (12,0,0)								
Ge	(3,5,11)	13.642	79.38	1.5122	4.38	2.602	11.39	32.53	34.46
	Equiv. Refl.: (3,11,5), (5,3,11), (5,7,9), (5,9,7), (5,11,3), (7,5,9), (7,9,5), (9,5,7), (9,7,5), (11,3,5), (11,5,3)								
Si	(3,3,11)	13.457	75.83	1.447	1.6	3.5055	5.63	43.82	44.18
	Equiv. Refl.: (3,7,9), (3,9,7), (3,11,3), (7,3,9), (7,9,3), (9,3,7), (9,7,3), (11,3,3)								
Si	(1,3,11)	13.064	70.26	1.1763	1.29	4.9804	6.43	62.25	62.59
	Equiv. Refl.: (1,7,9), (1,9,7), (1,11,3), (3,1,11), (3,11,1), (5,5,9), (5,9,5), (7,1,9), (7,9,1), (9,1,7), (9,5,5), (9,7,1), (11,1,3), (11,3,1)								
Ge	(1,5,11)	13.286	73.17	1.0995	3.04	4.1981	12.77	52.48	54.01
	Equiv. Refl.: (1,11,5), (5,1,11), (5,11,1), (7,7,7), (11,1,5), (11,5,1)								
LiNbO3	(1,-9,16)	13.868	87.66	38.757	35.4	0.567	20.07	7.08	21.28
	Equiv. Refl.: (8,1,16), (9,-1,16), (-1,-8,16)								
LiNbO3	(-8,9,16)	13.868	87.66	38.756	35.4	0.567	20.07	7.08	21.28
	Equiv. Refl.: (-9,8,16)								
LiNbO3	(1,8,-16)	13.868	87.66	38.441	35.4	0.567	20.07	7.08	21.28
	Equiv. Refl.: (-1,9,-16), (-8,-1,-16), (-9,1,-16)								
LiNbO3	(8,-9,-16)	13.868	87.66	38.44	35.4	0.567	20.07	7.08	21.28
	Equiv. Refl.: (9,-8,-16)								
LiNbO3	(5,-8,22)	13.839	85.61	26.246	22.9	1.067	24.48	13.33	27.87
	Equiv. Refl.: (8,-5,22)								
LiNbO3	(3,5,22)	13.839	85.61	26.245	22.9	1.067	24.48	13.33	27.87
	Equiv. Refl.: (-3,8,22), (-5,-3,22), (-8,3,22)								
LiNbO3	(5,3,-22)	13.839	85.61	25.205	22.9	1.067	24.48	13.33	27.87
	Equiv. Refl.: (-3,-5,-22), (-5,8,-22), (-8,5,-22)								
LiNbO3	(3,-8,-22)	13.839	85.61	25.204	22.9	1.067	24.48	13.33	27.87
	Equiv. Refl.: (8,-3,-22)								
LiNbO3	(3,7,14)	13.854	86.5	22.328	20.9	0.849	17.7	10.61	20.64
	Equiv. Refl.: (7,-10,14), (10,-7,14), (-7,-3,14)								
LiNbO3	(-3,10,14)	13.854	86.5	22.327	20.9	0.849	17.7	10.61	20.64
	Equiv. Refl.: (-10,3,14)								
LiNbO3	(7,3,-14)	13.854	86.5	22.212	20.9	0.849	17.7	10.61	20.64
	Equiv. Refl.: (-3,-7,-14), (-7,10,-14), (-10,7,-14)								
LiNbO3	(3,-10,-14)	13.854	86.5	22.211	20.9	0.849	17.7	10.61	20.64
	Equiv. Refl.: (10,-3,-14)								
LiNbO3	(0,7,-22)	13.839	85.61	20.041	18.2	1.067	19.43	13.33	23.56
	Equiv. Refl.: (7,-7,-22), (-7,0,-22)								

Ei =	13.88	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(3,-11,-4)	13.811	84.29	19.668	17.4	1.389	24.11	17.36	29.71
	Equiv. Refl.: (8,3,-4), (11,-3,-4), (-3,-8,-4), (-8,11,-4), (-11,8,-4)								
LiNbO3	(0,-7,22)	13.839	85.61	19.44	18.2	1.067	19.43	13.33	23.56
	Equiv. Refl.: (7,0,22), (-7,7,22)								
LiNbO3	(3,8,4)	13.811	84.29	19.147	17.4	1.389	24.11	17.36	29.71
	Equiv. Refl.: (8,-11,4), (11,-8,4), (-3,11,4), (-8,-3,4), (-11,3,4)								
LiNbO3	(2,8,-12)	13.828	85.03	18.645	16.8	1.208	20.29	15.1	25.3
	Equiv. Refl.: (8,-10,-12), (10,-8,-12), (-2,10,-12), (-8,-2,-12), (-10,2,-12)								
LiNbO3	(2,-10,12)	13.828	85.03	18.001	16.8	1.208	20.29	15.1	25.3
	Equiv. Refl.: (8,2,12), (10,-2,12), (-2,-8,12)								
LiNbO3	(-8,10,12)	13.828	85.03	18	16.8	1.208	20.29	15.1	25.3
	Equiv. Refl.: (-10,8,12)								
LiNbO3	(8,2,-12)	13.828	85.03	16.533	15	1.208	18.17	15.1	23.63
	Equiv. Refl.: (-2,-8,-12), (-8,10,-12), (-10,8,-12)								
LiNbO3	(2,-10,-12)	13.828	85.03	16.532	15	1.208	18.17	15.1	23.63
	Equiv. Refl.: (10,-2,-12)								
LiNbO3	(2,8,12)	13.828	85.03	15.708	15	1.208	18.17	15.1	23.63
	Equiv. Refl.: (8,-10,12), (10,-8,12), (-2,10,12), (-8,-2,12), (-10,2,12)								
LiNbO3	(2,5,-24)	13.805	84.05	14.471	13.3	1.446	19.19	18.08	26.36
	Equiv. Refl.: (5,-7,-24), (7,-5,-24), (-2,7,-24), (-5,-2,-24), (-7,2,-24)								
LiNbO3	(2,-7,24)	13.805	84.05	14.213	13.3	1.446	19.19	18.08	26.36
	Equiv. Refl.: (5,2,24), (7,-2,24), (-2,-5,24), (-5,7,24), (-7,5,24)								
LiNbO3	(-5,7,-24)	13.805	84.05	14.119	13.1	1.446	18.9	18.08	26.15
	Equiv. Refl.: (-7,5,-24)								
LiNbO3	(2,-7,-24)	13.805	84.05	14.118	13.1	1.446	18.9	18.08	26.15
	Equiv. Refl.: (5,2,-24), (7,-2,-24), (-2,-5,-24)								
LiNbO3	(2,5,24)	13.805	84.05	14.061	13.1	1.446	18.9	18.08	26.15
	Equiv. Refl.: (5,-7,24), (7,-5,24), (-2,7,24), (-5,-2,24), (-7,2,24)								
LiNbO3	(5,-11,-8)	13.738	81.81	12.388	11.1	1.998	22.24	24.98	33.44
	Equiv. Refl.: (6,5,-8), (11,-5,-8), (-5,-6,-8), (-6,11,-8), (-11,6,-8)								
LiNbO3	(5,6,8)	13.738	81.81	12.18	11.1	1.998	22.24	24.98	33.44
	Equiv. Refl.: (6,-11,8), (11,-6,8), (-5,11,8), (-6,-5,8), (-11,5,8)								
LiNbO3	(0,-4,28)	13.701	80.78	11.395	10.2	2.253	23.04	28.16	36.38
	Equiv. Refl.: (4,0,28), (-4,4,28)								
LiNbO3	(0,4,-28)	13.701	80.78	11.272	10.2	2.253	23.04	28.16	36.38
	Equiv. Refl.: (4,-4,-28), (-4,0,-28)								
LiNbO3	(1,-10,8)	13.738	81.81	10.347	9.1	1.998	18.25	24.98	30.93
	Equiv. Refl.: (9,1,8), (10,-1,8), (-1,-9,8), (-9,10,8), (-10,9,8)								
LiNbO3	(4,7,6)	13.675	80.14	10.111	9	2.411	21.75	30.14	37.17
	Equiv. Refl.: (7,-11,6), (11,-7,6), (-4,11,6), (-7,-4,6), (-11,4,6)								
LiNbO3	(4,-11,-6)	13.675	80.14	9.995	9	2.411	21.75	30.14	37.17
	Equiv. Refl.: (7,4,-6), (11,-4,-6), (-4,-7,-6), (-7,11,-6), (-11,7,-6)								
LiNbO3	(4,7,-6)	13.675	80.14	9.817	8.6	2.411	20.71	30.14	36.57
	Equiv. Refl.: (7,-11,-6), (11,-7,-6), (-4,11,-6), (-7,-4,-6), (-11,4,-6)								
LiNbO3	(0,-5,26)	13.547	77.42	9.797	8.6	3.098	26.78	38.72	47.08
	Equiv. Refl.: (5,0,26)								
LiNbO3	(-5,5,26)	13.547	77.42	9.796	8.6	3.098	26.78	38.72	47.08
LiNbO3	(0,5,-26)	13.547	77.42	9.711	8.6	3.098	26.78	38.72	47.08
	Equiv. Refl.: (5,-5,-26), (-5,0,-26)								

Ei = Cryst	13.88 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μrad]	Width [μrad]	Ei cot Θ [meV/μrad]	Δ E [meV]	Δ Eg 2m, 50μm [meV]	Δ Et 2m, 50μm [meV]
LiNbO3	(1,9,-8)	13.738	81.81	9.67	9.1	1.998	18.25	24.98	30.93
	Equiv. Refl.: (9,-10,-8), (10,-9,-8), (-1,10,-8), (-9,-1,-8), (-10,1,-8)								
LiNbO3	(2,4,-26)	13.759	82.43	9.646	8.9	1.844	16.44	23.05	28.31
	Equiv. Refl.: (4,-6,-26), (6,-4,-26), (-2,6,-26), (-4,-2,-26), (-6,2,-26)								
LiNbO3	(2,-6,26)	13.759	82.43	9.503	8.9	1.844	16.44	23.05	28.31
	Equiv. Refl.: (4,2,26), (6,-2,26), (-2,-4,26), (-4,6,26), (-6,4,26)								
LiNbO3	(3,6,-18)	13.66	79.79	9.497	8.4	2.501	21.01	31.26	37.66
	Equiv. Refl.: (6,-9,-18), (9,-6,-18), (-3,9,-18), (-6,-3,-18), (-9,3,-18)								
LiNbO3	(4,-11,6)	13.675	80.14	9.429	8.6	2.411	20.71	30.14	36.57
	Equiv. Refl.: (7,4,6), (11,-4,6), (-4,-7,6)								
LiNbO3	(0,9,12)	13.616	78.81	9.428	8.2	2.745	22.4	34.31	40.97
	Equiv. Refl.: (9,-9,12), (-7,11,6), (-9,0,12), (-11,7,6)								
LiNbO3	(3,-9,18)	13.66	79.79	9.365	8.4	2.501	21.01	31.26	37.66
	Equiv. Refl.: (6,3,18), (9,-3,18), (-3,-6,18), (-6,9,18), (-9,6,18)								
LiNbO3	(0,-9,-12)	13.616	78.81	9.089	8.2	2.745	22.4	34.31	40.97
	Equiv. Refl.: (9,0,-12), (-9,9,-12)								
LiNbO3	(0,0,-30)	13.415	75.13	8.957	7.8	3.685	28.69	46.06	54.27
LiNbO3	(0,0,30)	13.415	75.13	8.723	7.8	3.685	28.69	46.06	54.27
LiNbO3	(3,6,18)	13.66	79.79	8.319	7.5	2.501	18.85	31.26	36.5
	Equiv. Refl.: (6,-9,18), (9,-6,18), (-6,-3,18)								
LiNbO3	(-3,9,18)	13.66	79.79	8.318	7.5	2.501	18.85	31.26	36.5
	Equiv. Refl.: (-9,3,18)								
LiNbO3	(3,-9,-18)	13.66	79.79	8.262	7.5	2.501	18.85	31.26	36.5
	Equiv. Refl.: (6,3,-18), (9,-3,-18), (-3,-6,-18), (-6,9,-18), (-9,6,-18)								
LiNbO3	(4,6,-14)	13.643	79.4	8.225	7.3	2.597	19.01	32.47	37.62
	Equiv. Refl.: (6,-10,-14), (10,-6,-14), (-4,10,-14), (-6,-4,-14), (-10,4,-14)								
LiNbO3	(1,-4,-28)	13.487	76.34	8.192	7.2	3.373	24.12	42.17	48.58
	Equiv. Refl.: (3,1,-28), (4,-1,-28), (-1,-3,-28), (-3,4,-28), (-4,3,-28)								
LiNbO3	(1,3,28)	13.487	76.34	8.187	7.2	3.373	24.12	42.17	48.58
	Equiv. Refl.: (3,-4,28), (4,-3,28), (-1,4,28), (-3,-1,28), (-4,1,28)								
LiNbO3	(4,-10,14)	13.643	79.4	7.893	7.3	2.597	19.01	32.47	37.62
	Equiv. Refl.: (6,4,14), (10,-4,14), (-4,-6,14), (-6,10,14), (-10,6,14)								
LiNbO3	(2,7,16)	13.444	75.6	7.402	6.4	3.565	22.79	44.56	50.05
	Equiv. Refl.: (7,-9,16), (9,-7,16), (-2,9,16), (-7,-2,16), (-9,2,16)								
LiNbO3	(0,-6,-24)	13.594	78.34	7.376	6.6	2.864	18.81	35.8	40.44
	Equiv. Refl.: (6,0,-24), (-6,6,-24)								
LiNbO3	(5,6,-4)	13.384	74.64	7.333	6.3	3.812	24.14	47.65	53.41
	Equiv. Refl.: (6,-11,-4), (11,-6,-4), (-5,11,-4), (-6,-5,-4), (-11,5,-4)								
LiNbO3	(1,-9,-14)	13.429	75.35	7.296	6.4	3.628	23.1	45.35	50.89
	Equiv. Refl.: (8,1,-14), (9,-1,-14), (-1,-8,-14), (-8,9,-14), (-9,8,-14)								
LiNbO3	(1,8,14)	13.429	75.35	7.159	6.4	3.628	23.1	45.35	50.89
	Equiv. Refl.: (8,-9,14), (9,-8,14), (-1,9,14), (-8,-1,14), (-9,1,14)								
LiNbO3	(5,-11,4)	13.384	74.64	7.141	6.3	3.812	24.14	47.65	53.41
	Equiv. Refl.: (6,5,4), (11,-5,4), (-5,-6,4), (-6,11,4), (-11,6,4)								
LiNbO3	(2,-9,-16)	13.444	75.6	7.085	6.4	3.565	22.79	44.56	50.05
	Equiv. Refl.: (7,2,-16), (9,-2,-16), (-2,-7,-16), (-7,9,-16), (-9,7,-16)								
LiNbO3	(0,6,24)	13.594	78.34	7.039	6.6	2.864	18.81	35.8	40.44
	Equiv. Refl.: (6,-6,24), (-6,0,24)								
LiNbO3	(3,-11,2)	13.724	81.4	6.804	6.5	2.099	13.7	26.24	29.6
	Equiv. Refl.: (8,3,2), (11,-3,2), (-3,-8,2), (-8,11,2), (-11,8,2)								

Ei =	13.88	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(0,6,-24)	13.594	78.34	6.782	6.2	2.864	17.86	35.8	40.01
	Equiv. Refl.: (6,-6,-24), (-6,0,-24)								
LiNbO3	(0,-6,24)	13.594	78.34	6.767	6.2	2.864	17.86	35.8	40.01
	Equiv. Refl.: (6,0,24), (-6,6,24)								
LiNbO3	(1,9,-2)	13.295	73.3	6.761	5.9	4.164	24.42	52.05	57.5
	Equiv. Refl.: (9,-10,-2), (10,-9,-2), (-1,10,-2), (-9,-1,-2), (-10,1,-2)								
LiNbO3	(3,8,-2)	13.724	81.4	6.655	6.5	2.099	13.7	26.24	29.6
	Equiv. Refl.: (8,-11,-2), (11,-8,-2), (-3,11,-2), (-8,-3,-2), (-11,3,-2)								
LiNbO3	(1,-10,2)	13.295	73.3	6.633	5.9	4.164	24.42	52.05	57.5
	Equiv. Refl.: (9,1,2), (10,-1,2), (-1,-9,2), (-9,10,2), (-10,9,2)								
Sapph	(0,8,-14)	13.766	82.65	6.624	5.4	1.791	9.74	22.38	24.41
	Equiv. Refl.: (0,-8,14), (8,0,14), (8,-8,-14), (-8,0,-14), (-8,8,14)								
LiNbO3	(0,-9,12)	13.616	78.81	6.541	6	2.745	16.44	34.31	38.04
	Equiv. Refl.: (9,0,12), (-9,9,12)								
LiNbO3	(1,1,30)	13.63	79.1	6.448	6	2.672	15.91	33.4	37
	Equiv. Refl.: (1,-2,30), (2,-1,30), (-1,2,30), (-1,-1,30), (-2,1,30)								
LiNbO3	(2,3,26)	13.112	70.85	6.423	5.6	4.821	26.76	60.26	65.94
	Equiv. Refl.: (3,-5,26), (5,-3,26), (-2,5,26), (-3,-2,26), (-5,2,26)								
LiNbO3	(2,-5,-26)	13.112	70.85	6.396	5.6	4.821	26.76	60.26	65.94
	Equiv. Refl.: (3,2,-26), (5,-2,-26), (-2,-3,-26), (-3,5,-26), (-5,3,-26)								
LiNbO3	(0,-7,-20)	13.218	72.24	6.278	5.5	4.446	24.29	55.58	60.65
	Equiv. Refl.: (7,0,-20), (-7,7,-20)								
LiNbO3	(0,9,-12)	13.616	78.81	6.267	6	2.745	16.44	34.31	38.04
	Equiv. Refl.: (9,-9,-12), (-9,0,-12)								
LiNbO3	(1,1,-30)	13.63	79.1	6.204	6	2.672	15.91	33.4	37
	Equiv. Refl.: (1,-2,-30), (2,-1,-30), (-1,2,-30), (-1,-1,-30), (-2,1,-30)								
LiNbO3	(0,7,20)	13.218	72.24	6.169	5.5	4.446	24.29	55.58	60.65
	Equiv. Refl.: (7,-7,20), (-7,0,20)								
LiNbO3	(1,-8,-18)	13.229	72.38	5.96	5.2	4.409	23.13	55.11	59.77
	Equiv. Refl.: (7,1,-18), (8,-1,-18), (-1,-7,-18), (-7,8,-18), (-8,7,-18)								
LiNbO3	(3,-10,10)	13.143	71.25	5.95	5.2	4.713	24.56	58.91	63.82
	Equiv. Refl.: (7,3,10), (10,-3,10), (-3,-7,10), (-7,10,10), (-10,7,10)								
LiNbO3	(3,7,-10)	13.143	71.25	5.916	5.2	4.713	24.56	58.91	63.82
	Equiv. Refl.: (7,-10,-10), (10,-7,-10), (-3,10,-10), (-7,-3,-10), (-10,3,-10)								
Sapph	(1,6,-20)	13.727	81.5	5.913	4.8	2.075	10.03	25.93	27.8
	Equiv. Refl.: (1,-7,20), (6,1,20), (6,-7,-20), (7,-1,20), (7,-6,-20), (-1,7,-20), (-1,-6,20), (-6,7,20), (-6,-1,-20), (-7,1,-20), (-7,6,20)								
LiNbO3	(1,7,18)	13.229	72.38	5.891	5.2	4.409	23.13	55.11	59.77
	Equiv. Refl.: (7,-8,18), (8,-7,18), (-1,8,18), (-7,-1,18), (-8,1,18)								
LiNbO3	(4,-11,0)	13.409	75.04	5.831	5.3	3.709	19.5	46.37	50.3
	Equiv. Refl.: (7,4,0), (11,-4,0), (-4,-7,0), (-7,11,0), (-11,7,0)								
LiNbO3	(0,-8,-16)	13.226	72.34	5.788	4.6	4.418	20.53	55.22	58.92
	Equiv. Refl.: (8,0,-16), (-8,8,-16)								
LiNbO3	(2,-8,-20)	13.436	75.47	5.787	5.2	3.598	18.66	44.97	48.69
	Equiv. Refl.: (6,2,-20), (8,-2,-20), (-2,-6,-20), (-6,8,-20), (-8,6,-20)								
LiNbO3	(5,5,-12)	13.183	71.77	5.771	5	4.571	22.83	57.14	61.53
	Equiv. Refl.: (5,-10,-12), (10,-5,-12), (-5,10,-12), (-5,-5,-12), (-10,5,-12)								
LiNbO3	(4,7,0)	13.409	75.04	5.729	5.3	3.709	19.5	46.37	50.3
	Equiv. Refl.: (7,-11,0), (11,-7,0), (-4,11,0), (-7,-4,0), (-11,4,0)								
LiNbO3	(1,6,22)	13.414	75.1	5.633	4.9	3.692	18.26	46.15	49.64
	Equiv. Refl.: (6,-7,22), (7,-6,22), (-1,7,22), (-6,-1,22), (-7,1,22)								

Ei =	13.88	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(2,6,20)	13.436	75.47	5.532	5.2	3.598	18.66	44.97	48.69
	Equiv. Refl.: (6,-8,20), (8,-6,20), (-2,8,20), (-6,-2,20), (-8,2,20)								
LiNbO3	(1,-10,-4)	13.384	74.64	5.527	4.8	3.812	18.4	47.65	51.08
	Equiv. Refl.: (9,1,-4), (10,-1,-4), (-1,-9,-4), (-9,10,-4), (-10,9,-4)								
LiNbO3	(1,-7,-22)	13.414	75.1	5.478	4.9	3.692	18.26	46.15	49.64
	Equiv. Refl.: (6,1,-22), (7,-1,-22), (-1,-6,-22), (-6,7,-22), (-7,6,-22)								
LiNbO3	(5,5,12)	13.183	71.77	5.471	5	4.571	22.83	57.14	61.53
	Equiv. Refl.: (5,-10,12), (10,-5,12), (-5,10,12), (-5,-5,12), (-10,5,12)								
LiNbO3	(1,-8,18)	13.229	72.38	5.357	4.8	4.409	21.21	55.11	59.05
	Equiv. Refl.: (7,1,18), (8,-1,18), (-1,-7,18), (-7,8,18), (-8,7,18)								
LiNbO3	(1,7,-18)	13.229	72.38	5.334	4.8	4.409	21.21	55.11	59.05
	Equiv. Refl.: (7,-8,-18), (8,-7,-18), (-1,8,-18), (-7,-1,-18), (-8,1,-18)								
LiNbO3	(1,9,4)	13.384	74.64	5.326	4.8	3.812	18.4	47.65	51.08
	Equiv. Refl.: (9,-10,4), (10,-9,4), (-1,10,4), (-9,-1,4), (-10,1,4)								
LiNbO3	(1,2,-28)	13.05	70.09	5.314	4.7	5.028	23.57	62.85	67.12
	Equiv. Refl.: (2,-3,-28), (3,-2,-28), (-1,3,-28), (-2,-1,-28), (-3,1,-28)								
LiNbO3	(1,-3,28)	13.05	70.09	5.257	4.7	5.028	23.57	62.85	67.12
	Equiv. Refl.: (2,1,28), (3,-1,28), (-1,-2,28), (-2,3,28), (-3,2,28)								
LiNbO3	(0,8,16)	13.226	72.34	5.045	4.6	4.418	20.53	55.22	58.92
	Equiv. Refl.: (8,-8,16), (-8,0,16)								
LiNbO3	(3,5,-20)	13.218	72.24	4.884	4	4.446	17.94	55.58	58.4
	Equiv. Refl.: (-3,8,-20), (-5,-3,-20), (-8,3,-20)								
LiNbO3	(5,-8,-20)	13.218	72.24	4.883	4	4.446	17.94	55.58	58.4
	Equiv. Refl.: (8,-5,-20)								
LiNbO3	(5,-11,-2)	13.295	73.3	4.866	4.2	4.164	17.49	52.05	54.91
	Equiv. Refl.: (6,5,-2), (11,-5,-2), (-5,-6,-2), (-6,11,-2), (-11,6,-2)								
Sapph	(0,9,0)	13.54	77.29	4.857	3.7	3.131	11.65	39.14	40.83
	Equiv. Refl.: (0,-9,0), (9,0,0), (9,-9,0), (-9,0,0), (-9,9,0), (-9,2,-6), (-9,7,6)								
Quartz	(2,7,-6)	13.769	82.76	4.855	3.8	1.764	6.78	22.05	23.07
	Equiv. Refl.: (2,-9,6), (7,-9,-6)								
Quartz	(7,2,6)	13.769	82.76	4.854	3.8	1.764	6.78	22.05	23.07
LiNbO3	(5,6,2)	13.295	73.3	4.784	4.2	4.164	17.49	52.05	54.91
	Equiv. Refl.: (6,-11,2), (11,-6,2), (-5,11,2), (-6,-5,2), (-11,5,2)								
Quartz	(9,-2,6)	13.769	82.76	4.781	3.8	1.764	6.78	22.05	23.07
	Equiv. Refl.: (9,-7,-6)								
Quartz	(-2,9,-6)	13.769	82.76	4.779	3.8	1.764	6.78	22.05	23.07
	Equiv. Refl.: (-2,-7,6), (-7,9,6)								
Quartz	(-7,-2,-6)	13.769	82.76	4.778	3.8	1.764	6.78	22.05	23.07
Sapph	(2,8,0)	13.788	83.41	4.612	3.9	1.604	6.21	20.05	20.99
	Equiv. Refl.: (2,-10,0), (8,2,0), (8,-10,0), (10,-2,0), (10,-8,0), (-2,10,0), (-2,-8,0), (-8,10,0), (-8,-2,0), (-10,2,0), (-10,8,0)								
Quartz	(0,9,-3)	13.557	77.61	4.553	3.4	3.049	10.51	38.11	39.53
	Equiv. Refl.: (0,-9,3), (9,0,3), (9,-9,-3), (-9,0,-3), (-9,9,3)								
Quartz	(-6,3,-10)	13.743	81.95	4.382	3.5	1.962	6.78	24.52	25.44
Quartz	(-6,3,10)	13.743	81.95	4.381	3.5	1.962	6.78	24.52	25.44
Quartz	(3,-6,-10)	13.743	81.95	4.378	3.5	1.962	6.78	24.52	25.44
Quartz	(3,3,10)	13.743	81.95	4.377	3.5	1.962	6.78	24.52	25.44
Quartz	(3,3,-10)	13.743	81.95	4.375	3.5	1.962	6.77	24.52	25.44
	Equiv. Refl.: (3,-6,10)								

Ei =	13.88	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
LiNbO3	(3,-8,20)	13.218	72.24	4.305	4	4.446	17.94	55.58	58.4
	Equiv. Refl.: (5,3,20), (8,-3,20), (-3,-5,20)								
LiNbO3	(-5,8,20)	13.218	72.24	4.304	4	4.446	17.94	55.58	58.4
	Equiv. Refl.: (-8,5,20)								
Quartz	(6,-3,10)	13.743	81.95	4.289	3.5	1.962	6.78	24.52	25.44
Quartz	(6,-3,-10)	13.743	81.95	4.288	3.5	1.962	6.78	24.52	25.44
Quartz	(-3,6,10)	13.743	81.95	4.285	3.5	1.962	6.78	24.52	25.44
Quartz	(-3,-3,-10)	13.743	81.95	4.284	3.5	1.962	6.78	24.52	25.44
Quartz	(-3,6,-10)	13.743	81.95	4.282	3.5	1.962	6.77	24.52	25.44
	Equiv. Refl.: (-3,-3,10)								
Sapph	(3,4,20)	13.224	72.31	4.191	3.2	4.427	13.99	55.34	57.08
	Equiv. Refl.: (3,-7,-20), (4,3,-20), (4,-7,20), (7,-3,-20), (7,-4,20), (-3,7,20), (-3,-4,-20), (-4,7,-20), (-4,-3,20), (-7,3,20), (-7,4,-20)								
Quartz	(-3,4,-11)	13.667	79.95	4.16	3.2	2.459	7.88	30.74	31.74
	Equiv. Refl.: (-3,-1,11)								
Quartz	(4,-1,-11)	13.667	79.95	4.159	3.2	2.459	7.88	30.74	31.74
	Equiv. Refl.: (4,-3,11)								
Quartz	(-1,-3,-11)	13.667	79.95	4.157	3.2	2.459	7.88	30.74	31.73
Quartz	(-1,4,11)	13.667	79.95	4.156	3.2	2.459	7.88	30.74	31.73
Quartz	(4,2,-10)	13.82	84.69	4.106	3.4	1.29	4.4	16.13	16.72
	Equiv. Refl.: (4,-6,10)								
Quartz	(2,-6,-10)	13.82	84.69	4.098	3.4	1.29	4.4	16.13	16.72
Quartz	(-6,2,10)	13.82	84.69	4.097	3.4	1.29	4.39	16.13	16.72
	Equiv. Refl.: (-6,4,-10)								
Quartz	(2,4,10)	13.82	84.69	4.095	3.4	1.29	4.39	16.13	16.72
Quartz	(3,1,-11)	13.667	79.95	4.07	3.2	2.459	7.88	30.74	31.74
	Equiv. Refl.: (3,-4,11)								
Quartz	(-4,1,11)	13.667	79.95	4.068	3.2	2.459	7.88	30.74	31.74
	Equiv. Refl.: (-4,3,-11)								
Sapph	(1,4,24)	13.37	74.41	4.066	3.1	3.872	12.06	48.4	49.88
	Equiv. Refl.: (1,4,-24), (1,-5,24), (1,-5,-24), (4,1,24), (4,1,-24), (4,-5,24), (4,-5,-24), (5,-1,24), (5,-1,-24), (5,-4,24), (5,-4,-24), (-1,5,24), (-1,5,-24), (-1,-4,24), (-1,-4,-24), (-4,5,24), (-4,5,-24), (-4,-1,24), (-4,-1,-24), (-5,1,24), (-5,1,-24), (-5,4,24), (-5,4,-24), (1,3,11)								
Quartz	(1,-4,-11)	13.667	79.95	4.065	3.2	2.459	7.88	30.74	31.73
Quartz	(7,3,-3)	13.399	74.88	4.041	3	3.751	11.21	46.89	48.21
	Equiv. Refl.: (7,-10,3), (-10,3,3), (-10,7,-3)								
Quartz	(3,7,3)	13.399	74.88	4.04	3	3.751	11.21	46.89	48.21
	Equiv. Refl.: (3,-10,-3)								
Quartz	(10,-3,-3)	13.399	74.88	4.024	3	3.751	11.21	46.89	48.21
	Equiv. Refl.: (10,-7,3), (-7,10,-3), (-7,-3,3)								
Quartz	(-3,10,3)	13.399	74.88	4.023	3	3.751	11.21	46.89	48.21
	Equiv. Refl.: (-3,-7,-3)								
Sapph	(4,5,14)	13.517	76.87	3.987	3.1	3.238	10.1	40.48	41.72
	Equiv. Refl.: (4,-9,-14), (5,4,-14), (5,-9,14), (9,-4,-14), (9,-5,14), (-4,9,14), (-4,-5,-14), (-5,9,-14), (-5,-4,14), (-9,4,14), (-9,5,-14)								
Quartz	(-4,6,-10)	13.82	84.69	3.846	3.4	1.29	4.4	16.13	16.72
	Equiv. Refl.: (-4,-2,10)								
Quartz	(-2,6,10)	13.82	84.69	3.838	3.4	1.29	4.4	16.13	16.72
Quartz	(6,-2,-10)	13.82	84.69	3.837	3.4	1.29	4.39	16.13	16.72
	Equiv. Refl.: (6,-4,10)								
Quartz	(-2,-4,-10)	13.82	84.69	3.835	3.4	1.29	4.39	16.13	16.72

Ei =	13.88	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(4,6,-8)	13.66	79.78	3.726	3.1	2.503	7.64	31.28	32.2
	Equiv. Refl.: (4,-10,8), (6,4,8), (6,-10,-8), (10,-4,8), (10,-6,-8), (-4,10,-8), (-4,-6,8), (-6,10,8), (-6,-4,-8), (-10,4,-8), (-10,6,8)								
Sapph	(0,9,6)	13.839	85.61	3.521	3.2	1.065	3.45	13.31	13.75
	Equiv. Refl.: (0,9,-6), (0,-9,6), (0,-9,-6), (9,0,6), (9,0,-6), (9,-9,6), (9,-9,-6), (-9,0,6), (-9,0,-6), (-9,9,6), (-9,9,-6)								
Quartz	(2,8,2)	13.549	77.46	3.268	2.8	3.086	8.55	38.58	39.51
	Equiv. Refl.: (2,-10,-2)								
Quartz	(8,2,-2)	13.549	77.46	3.267	2.8	3.086	8.55	38.58	39.51
	Equiv. Refl.: (8,-10,2), (-10,2,2), (-10,8,-2)								
Quartz	(7,0,8)	13.719	81.27	3.262	2.9	2.131	6.13	26.63	27.33
	Equiv. Refl.: (7,-7,-8), (-7,0,-8), (-7,7,8)								
Quartz	(0,7,-8)	13.719	81.27	3.258	2.9	2.131	6.13	26.63	27.33
	Equiv. Refl.: (0,-7,8)								
Sapph	(5,5,6)	13.34	73.96	3.156	2.5	3.99	9.94	49.88	50.86
	Equiv. Refl.: (5,5,-6), (5,-10,6), (5,-10,-6), (10,-5,6), (10,-5,-6), (-5,10,6), (-5,10,-6), (-5,-5,6), (-5,-5,-6), (-10,5,6), (-10,5,-6)								
Sapph	(3,3,24)	13.868	87.63	3.14	3.7	0.574	2.1	7.17	7.48
	Equiv. Refl.: (3,3,-24), (3,-6,24), (3,-6,-24), (6,-3,24), (6,-3,-24), (-3,6,24), (-3,6,-24), (-3,-3,24), (-3,-3,-24), (-6,3,24), (-6,3,-24), (-2,10,2), (-2,-8,-2)								
Quartz	(10,-2,-2)	13.549	77.46	3.139	2.8	3.086	8.55	38.58	39.51
	Equiv. Refl.: (10,-8,2), (-8,10,-2), (-8,-2,2)								
Sapph	(1,5,23)	13.808	84.18	3.131	2.8	1.415	3.97	17.69	18.13
	Equiv. Refl.: (1,-6,-23), (5,1,-23), (5,-6,23), (6,-1,-23), (6,-5,23), (-1,6,23), (-1,-5,-23), (-5,6,-23), (-5,-1,23), (-6,1,23), (-6,5,-23)								
Sapph	(3,7,2)	13.406	74.98	3.104	2.5	3.725	9.25	46.56	47.47
	Equiv. Refl.: (3,-10,-2), (7,3,-2), (7,-10,2), (10,-3,-2), (10,-7,2), (-3,10,2), (-3,-7,-2), (-7,10,-2), (-7,-3,2), (-10,3,2), (-10,7,-2)								
Sapph	(2,6,-16)	13.267	72.91	2.998	2.3	4.268	9.66	53.36	54.22
	Equiv. Refl.: (2,-8,16), (6,2,16), (6,-8,-16), (8,-2,16), (8,-6,-16), (-2,8,-16), (-2,-6,16), (-6,8,16), (-6,-2,-16), (-8,2,-16), (-8,6,16)								
Quartz	(10,-2,1)	13.403	74.93	2.983	2.5	3.737	9.48	46.72	47.67
	Equiv. Refl.: (10,-8,-1), (-2,10,-1), (-2,-8,1), (-8,10,1), (-8,-2,-1)								
Quartz	(-10,4,4)	13.505	76.65	2.967	2.2	3.294	7.31	41.17	41.82
	Equiv. Refl.: (-10,6,-4)								
Quartz	(6,4,-4)	13.505	76.65	2.966	2.2	3.294	7.31	41.17	41.82
	Equiv. Refl.: (6,-10,4)								
Quartz	(4,6,4)	13.505	76.65	2.965	2.2	3.294	7.31	41.17	41.82
	Equiv. Refl.: (4,-10,-4)								
Quartz	(2,8,-1)	13.403	74.93	2.943	2.5	3.737	9.48	46.72	47.67
	Equiv. Refl.: (2,-10,1), (-4,1,-11), (-10,8,1)								
Quartz	(8,2,1)	13.403	74.93	2.942	2.5	3.737	9.47	46.72	47.67
	Equiv. Refl.: (8,-10,-1), (-4,3,11), (-10,2,-1)								
Quartz	(3,-4,-11)	13.667	79.95	2.94	2.2	2.459	5.46	30.74	31.22
Quartz	(3,1,11)	13.667	79.95	2.939	2.2	2.459	5.46	30.74	31.22
Quartz	(10,-4,-4)	13.505	76.65	2.937	2.2	3.294	7.31	41.17	41.82
	Equiv. Refl.: (10,-6,4)								
Quartz	(-4,10,4)	13.505	76.65	2.936	2.2	3.294	7.31	41.17	41.82
	Equiv. Refl.: (-6,10,-4), (-6,-4,4)								

Ei =	13.88	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(1,3,-11)	13.667	79.95	2.935	2.2	2.459	5.46	30.74	31.22
	Equiv. Refl.: (1,-4,11), (-4,-6,-4)								
Quartz	(1,0,-12)	13.841	85.71	2.92	2.7	1.041	2.77	13.01	13.31
	Equiv. Refl.: (1,-1,12), (-1,0,12), (-1,1,-12)								
Quartz	(0,1,12)	13.841	85.71	2.913	2.7	1.041	2.77	13.01	13.31
	Equiv. Refl.: (0,-1,-12)								
Quartz	(4,1,10)	13.272	72.98	2.823	2.1	4.249	8.75	53.12	53.83
	Equiv. Refl.: (4,-5,-10)								
Quartz	(1,4,-10)	13.272	72.98	2.821	2.1	4.249	8.74	53.12	53.83
Quartz	(1,-5,10)	13.272	72.98	2.82	2.1	4.249	8.74	53.12	53.83
Quartz	(-5,1,-10)	13.272	72.98	2.818	2.1	4.249	8.73	53.12	53.83
	Equiv. Refl.: (-5,4,10)								
Quartz	(-4,5,10)	13.272	72.98	2.763	2.1	4.249	8.75	53.12	53.83
	Equiv. Refl.: (-4,-1,-10)								
Quartz	(-1,-4,10)	13.272	72.98	2.762	2.1	4.249	8.74	53.12	53.83
Quartz	(-1,5,-10)	13.272	72.98	2.761	2.1	4.249	8.74	53.12	53.83
Quartz	(5,-1,10)	13.272	72.98	2.759	2.1	4.249	8.73	53.12	53.83
	Equiv. Refl.: (5,-4,-10)								
Quartz	(-3,5,-10)	13.111	70.84	2.499	2.1	4.823	10.22	60.29	61.15
	Equiv. Refl.: (-3,-2,10)								
Quartz	(5,-2,-10)	13.111	70.84	2.498	2.1	4.823	10.22	60.29	61.15
	Equiv. Refl.: (5,-3,10), (-2,5,10), (-2,-3,-10)								
Quartz	(3,2,-10)	13.111	70.84	2.474	2.1	4.823	10.22	60.29	61.15
Quartz	(2,3,10)	13.111	70.84	2.473	2.1	4.823	10.22	60.29	61.15
	Equiv. Refl.: (3,-5,10), (-5,2,10), (-5,3,-10)								
Quartz	(2,-5,-10)	13.111	70.84	2.472	2.1	4.823	10.22	60.29	61.15
Sapph	(1,8,-10)	13.711	81.06	2.427	2.3	2.184	5.07	27.3	27.77
	Equiv. Refl.: (1,-9,10), (8,1,10), (8,-9,-10), (9,-1,10), (9,-8,-10), (-1,9,-10), (-1,-8,10), (-8,9,10), (-8,-1,-10), (-9,1,-10), (-9,8,10)								
Quartz	(4,-1,11)	13.667	79.95	2.422	2.2	2.459	5.47	30.74	31.22
Quartz	(4,-3,-11)	13.667	79.95	2.421	2.2	2.459	5.47	30.74	31.22
Quartz	(-3,4,11)	13.667	79.95	2.419	2.2	2.459	5.46	30.74	31.22
Quartz	(-3,-1,-11)	13.667	79.95	2.418	2.2	2.459	5.46	30.74	31.22
Quartz	(-1,4,-11)	13.667	79.95	2.415	2.2	2.459	5.46	30.74	31.22
	Equiv. Refl.: (-1,-3,11)								
Sapph	(2,7,10)	13.207	72.08	2.305	2.1	4.488	9.23	56.1	56.85
	Equiv. Refl.: (2,-9,-10), (7,2,-10), (7,-9,10), (9,-2,-10), (9,-7,10), (-2,9,10), (-2,-7,-10), (-7,9,-10), (-7,-2,10), (-9,2,10), (-9,7,-10)								
LiNbO3	(1,6,-23)	13.745	82	2.183	3.2	1.951	6.26	24.39	25.18
	Equiv. Refl.: (1,-7,23), (6,1,23), (6,-7,-23), (7,-1,23), (7,-6,-23), (-1,7,-23), (-1,-6,23), (-6,7,23), (-6,-1,-23), (-7,1,-23), (-7,6,23)								
Quartz	(1,8,5)	13.706	80.92	1.914	2	2.218	4.52	27.73	28.09
	Equiv. Refl.: (1,-9,-5), (-9,1,5), (-9,8,-5)								
Quartz	(8,1,-5)	13.706	80.92	1.912	2	2.218	4.51	27.73	28.09
	Equiv. Refl.: (8,-9,5)								
Quartz	(9,-1,-5)	13.706	80.92	1.902	2	2.218	4.52	27.73	28.09
	Equiv. Refl.: (9,-8,5), (-1,9,5), (-1,-8,-5)								
Quartz	(-8,9,-5)	13.706	80.92	1.901	2	2.218	4.51	27.73	28.09
Quartz	(-8,-1,5)	13.706	80.92	1.9	2	2.218	4.51	27.73	28.09

Ei = Cryst	13.88 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Sapph	(2,5,21)	13.738	81.8	1.84	2.1	2.001	4.13	25.02	25.36
Equiv. Refl.: (2,5,-21), (2,8,3), (2,8,-3), (2,-7,21), (2,-7,-21), (2,-10,3), (2,-10,-3), (5,2,21), (5,2,-21), (5,-7,21), (5,-7,-21), (7,-2,21), (7,-2,-21), (7,-5,21), (7,-5,-21), (8,2,3), (8,2,-3), (8,-10,3), (8,-10,-3), (10,-2,3), (10,-2,-3), (10,-8,3), (10,-8,-3), (-2,7,21), (-2,7,-21), (-2,10,3), (-2,10,-3), (-2,-5,21), (-2,-5,-21), (-2,-8,3), (-2,-8,-3), (-5,7,21), (-5,7,-21), (-5,-2,21), (-5,-2,-21), (-7,2,21), (-7,2,-21), (-7,5,21), (-7,5,-21), (-8,10,3), (-8,10,-3), (-8,-2,3), (-8,-2,-3), (-10,2,3), (-10,2,-3), (-10,8,3), (-10,8,-3)									
Quartz	(-8,10,-3)	13.79	83.46	1.823	2	1.591	3.16	19.88	20.13
Equiv. Refl.: (-8,-2,3)									
Quartz	(10,-2,-3)	13.79	83.46	1.822	2	1.591	3.16	19.88	20.13
Equiv. Refl.: (10,-8,3), (-2,10,3), (-2,-8,-3)									
Quartz	(-3,-7,-4)	13.739	81.82	1.787	1.9	1.996	3.84	24.95	25.24
Equiv. Refl.: (-7,10,-4), (-7,-3,4)									
Quartz	(10,-3,-4)	13.739	81.82	1.786	1.9	1.996	3.84	24.95	25.24
Equiv. Refl.: (10,-7,4), (-3,10,4)									
Sapph	(0,1,-28)	13.449	75.68	1.771	1.9	3.544	6.64	44.3	44.79
Equiv. Refl.: (0,-1,28), (1,0,28), (1,-1,-28), (-1,0,-28), (-1,1,28)									
Quartz	(3,7,4)	13.739	81.82	1.748	1.9	1.996	3.84	24.95	25.24
Equiv. Refl.: (7,3,-4), (7,-10,4), (-10,3,4), (-10,7,-4)									
Quartz	(3,-10,-4)	13.739	81.82	1.747	1.9	1.996	3.84	24.95	25.24
Quartz	(8,-10,3)	13.79	83.46	1.726	2	1.591	3.16	19.88	20.13
Quartz	(2,8,3)	13.79	83.46	1.725	2	1.591	3.16	19.88	20.13
Equiv. Refl.: (2,-10,-3), (8,2,-3), (-10,2,3), (-10,8,-3)									
Quartz	(-10,5,5)	13.86	86.93	1.709	2.2	0.744	1.64	9.3	9.45
Quartz	(5,-10,-5)	13.86	86.93	1.708	2.2	0.744	1.64	9.3	9.45
Equiv. Refl.: (-10,5,-5)									
Quartz	(5,5,5)	13.86	86.93	1.707	2.2	0.744	1.64	9.3	9.45
Quartz	(5,5,-5)	13.86	86.93	1.7	2.2	0.744	1.64	9.3	9.45
Equiv. Refl.: (5,-10,5)									
Quartz	(-2,10,-2)	13.549	77.46	1.696	1.8	3.086	5.46	38.58	38.96
Equiv. Refl.: (-2,-8,2)									
Quartz	(10,-2,2)	13.549	77.46	1.695	1.8	3.086	5.46	38.58	38.96
Equiv. Refl.: (10,-8,-2), (-8,10,2), (-8,-2,-2)									
Quartz	(9,-2,5)	13.233	72.44	1.689	1.7	4.392	7.54	54.9	55.42
Equiv. Refl.: (9,-7,-5)									
Quartz	(-2,9,-5)	13.233	72.44	1.688	1.7	4.392	7.53	54.9	55.42
Equiv. Refl.: (-2,-7,5), (-7,9,5), (-7,-2,-5)									
Quartz	(10,-5,-5)	13.86	86.93	1.687	2.2	0.744	1.64	9.3	9.45
Quartz	(10,-5,5)	13.86	86.93	1.686	2.2	0.744	1.64	9.3	9.45
Equiv. Refl.: (-5,10,5)									
Quartz	(-5,-5,-5)	13.86	86.93	1.685	2.2	0.744	1.64	9.3	9.45
Quartz	(2,8,-2)	13.549	77.46	1.683	1.8	3.086	5.46	38.58	38.96
Equiv. Refl.: (2,-10,2), (8,2,2), (8,-10,-2)									
Quartz	(-10,2,-2)	13.549	77.46	1.682	1.8	3.086	5.46	38.58	38.96
Equiv. Refl.: (-10,8,2)									
Quartz	(-5,10,-5)	13.86	86.93	1.678	2.2	0.744	1.64	9.3	9.45
Equiv. Refl.: (-5,-5,5)									
Quartz	(-9,2,-5)	13.233	72.44	1.67	1.7	4.392	7.54	54.9	55.42
Equiv. Refl.: (-9,7,5)									
Quartz	(2,-9,5)	13.233	72.44	1.669	1.7	4.392	7.53	54.9	55.42
Equiv. Refl.: (7,2,5), (7,-9,-5)									
Quartz	(2,7,-5)	13.233	72.44	1.668	1.7	4.392	7.53	54.9	55.42

Ei =	13.88	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(2,7,-17)	13.687	80.43	1.664	2.5	2.34	5.89	29.24	29.83
	Equiv. Refl.: (2,-9,17), (7,2,17), (7,-9,-17), (9,-2,17), (9,-7,-17), (-2,9,-17), (-2,-7,17), (-7,9,17), (-7,-2,-17), (-9,2,-17), (-9,7,17)								
Quartz	(3,0,-11)	13.353	74.16	1.624	1.7	3.938	6.6	49.23	49.67
	Equiv. Refl.: (3,-3,11), (-3,0,11), (-3,3,-11)								
Quartz	(3,-1,-11)	13.193	71.9	1.622	1.6	4.537	7.47	56.72	57.21
	Equiv. Refl.: (3,-2,11), (-1,3,11), (-1,-2,-11), (-2,3,-11), (-2,-1,11)								
Quartz	(0,3,11)	13.353	74.16	1.62	1.7	3.938	6.59	49.23	49.67
	Equiv. Refl.: (0,-3,-11)								
Sapph	(0,2,28)	13.699	80.73	1.598	1.8	2.266	4.08	28.32	28.61
	Equiv. Refl.: (0,-2,-28), (2,0,-28), (2,-2,28), (-2,0,28), (-2,-2,-28)								
Quartz	(1,2,11)	13.193	71.9	1.596	1.6	4.537	7.47	56.72	57.21
	Equiv. Refl.: (1,-3,-11), (-3,1,11), (-3,2,-11)								
Quartz	(2,1,-11)	13.193	71.9	1.595	1.6	4.537	7.47	56.72	57.21
	Equiv. Refl.: (2,-3,11)								
Quartz	(-2,8,-7)	13.223	72.3	1.542	1.6	4.429	6.93	55.36	55.79
	Equiv. Refl.: (-2,-6,7), (-6,8,7), (-6,-2,-7)								
Quartz	(8,-2,7)	13.223	72.3	1.541	1.6	4.429	6.92	55.36	55.79
	Equiv. Refl.: (8,-6,-7)								
Sapph	(4,6,-2)	13.15	71.33	1.527	1.6	4.689	7.51	58.61	59.09
	Equiv. Refl.: (4,-10,2), (6,4,2), (6,-10,-2), (10,-4,2), (10,-6,-2), (-4,10,-2), (-4,-6,2), (-6,10,2), (-6,-4,-2), (-10,4,-2), (-10,6,2)								
Sapph	(1,1,27)	13.148	71.31	1.52	1.6	4.697	7.49	58.71	59.19
	Equiv. Refl.: (1,1,-27), (1,-2,27), (1,-2,-27), (2,-1,27), (2,-1,-27), (-1,2,27), (-1,2,-27), (-1,-1,27), (-1,-1,-27), (-2,1,27), (-2,1,-27)								
Quartz	(2,6,-7)	13.223	72.3	1.497	1.6	4.429	6.92	55.36	55.79
	Equiv. Refl.: (2,-8,7), (6,2,7), (6,-8,-7)								
Quartz	(-8,2,-7)	13.223	72.3	1.496	1.6	4.429	6.92	55.36	55.79
	Equiv. Refl.: (-8,6,7)								
Quartz	(10,-3,3)	13.399	74.88	1.483	1.5	3.751	5.54	46.89	47.21
	Equiv. Refl.: (10,-7,-3), (-7,10,3), (-7,-3,-3)								
Quartz	(-3,10,-3)	13.399	74.88	1.482	1.5	3.751	5.53	46.89	47.21
	Equiv. Refl.: (-3,-7,3)								
Sapph	(2,7,13)	13.789	83.44	1.471	1.8	1.596	2.84	19.95	20.16
	Equiv. Refl.: (2,-9,-13), (7,2,-13), (7,-9,13), (9,-2,-13), (9,-7,13), (-2,9,13), (-2,-7,-13), (-7,9,-13), (-7,-2,13), (-9,2,13), (-9,7,-13)								
Sapph	(1,8,-7)	13.281	73.1	1.43	1.5	4.216	6.42	52.7	53.09
	Equiv. Refl.: (1,-9,7), (8,1,7), (8,-9,-7), (9,-1,7), (9,-8,-7), (-1,9,-7), (-1,-8,7), (-8,9,7), (-8,-1,-7), (-9,1,-7), (-9,8,7)								
Sapph	(2,6,17)	13.547	77.43	1.415	1.6	3.095	4.82	38.69	38.99
	Equiv. Refl.: (2,-8,-17), (6,2,-17), (6,-8,17), (8,-2,-17), (8,-6,17), (-2,8,17), (-2,-6,-17), (-6,8,-17), (-6,-2,17), (-8,2,17), (-8,6,-17)								
LiNbO3	(1,9,7)	13.629	79.08	1.389	2.1	2.677	5.72	33.47	33.95
	Equiv. Refl.: (1,-10,-7), (9,1,-7), (9,-10,7), (10,-1,-7), (10,-9,7), (-1,10,7), (-1,-9,-7), (-9,10,-7), (-9,-1,7), (-10,1,7), (-10,9,-7)								
Quartz	(0,3,-11)	13.353	74.16	1.383	1.4	3.938	5.7	49.23	49.56
	Equiv. Refl.: (0,-3,11), (3,0,11), (3,-3,-11), (-3,0,-11), (-3,3,11)								
Quartz	(9,0,2)	13.312	73.55	1.375	1.4	4.098	5.88	51.22	51.56
	Equiv. Refl.: (9,-9,-2), (-9,0,-2), (-9,9,2)								

Ei =	13.88	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(0,9,-2)	13.312	73.55	1.374	1.4	4.098	5.87	51.22	51.56
	Equiv. Refl.: (0,-9,2)								
Quartz	(3,7,-3)	13.399	74.88	1.337	1.5	3.751	5.53	46.89	47.21
	Equiv. Refl.: (3,-10,3), (7,3,3), (7,-10,-3), (-10,3,-3), (-10,7,3)								
Sapph	(1,8,5)	13.073	70.37	1.292	1.4	4.95	6.8	61.88	62.25
	Equiv. Refl.: (1,-9,-5), (8,1,-5), (8,-9,5), (9,-1,-5), (9,-8,5), (-1,9,5), (-1,-8,-5), (-8,9,-5), (-8,-1,5), (-9,1,5), (-9,8,-5)								
Quartz	(3,5,-8)	13.719	81.27	1.286	1.4	2.131	3.04	26.63	26.81
	Equiv. Refl.: (3,-8,8), (-8,3,-8), (-10,3,-2), (-10,7,2)								
Quartz	(3,7,-2)	13.152	71.36	1.285	1.3	4.683	6.21	58.54	58.87
	Equiv. Refl.: (3,-10,2), (5,3,8), (5,-8,-8), (7,3,2), (7,-10,-2), (-8,5,8)								
Quartz	(10,-3,2)	13.152	71.36	1.262	1.3	4.683	6.21	58.54	58.87
	Equiv. Refl.: (10,-7,-2), (-3,10,-2), (-3,-7,2)								
Quartz	(-7,10,2)	13.152	71.36	1.261	1.3	4.683	6.21	58.54	58.87
	Equiv. Refl.: (-7,-3,-2)								
Quartz	(3,6,6)	13.457	75.82	1.26	1.3	3.506	4.71	43.82	44.08
	Equiv. Refl.: (3,-9,-6)								
Quartz	(6,3,-6)	13.457	75.82	1.259	1.3	3.506	4.7	43.82	44.08
	Equiv. Refl.: (6,-9,6), (-9,3,6), (-9,6,-6)								
Quartz	(9,-3,-6)	13.457	75.82	1.258	1.3	3.506	4.71	43.82	44.08
	Equiv. Refl.: (9,-6,6), (-3,9,6), (-3,-6,-6)								
Quartz	(-6,9,-6)	13.457	75.82	1.257	1.3	3.506	4.7	43.82	44.08
	Equiv. Refl.: (-6,-3,6)								
Quartz	(8,-3,8)	13.719	81.27	1.243	1.4	2.131	3.04	26.63	26.81
	Equiv. Refl.: (8,-5,-8), (-3,8,-8), (-3,-5,8)								
Quartz	(-5,8,8)	13.719	81.27	1.242	1.4	2.131	3.04	26.63	26.81
	Equiv. Refl.: (-5,-3,-8)								
Quartz	(0,9,1)	13.163	71.5	1.24	1.3	4.643	6.01	58.04	58.35
	Equiv. Refl.: (0,-9,-1), (9,0,-1), (9,-9,1), (-9,0,1), (-9,9,-1)								
Quartz	(9,-1,5)	13.706	80.92	1.225	1.4	2.218	3.02	27.73	27.89
	Equiv. Refl.: (9,-8,-5)								
Quartz	(-1,9,-5)	13.706	80.92	1.224	1.4	2.218	3.01	27.73	27.89
	Equiv. Refl.: (-1,-8,5), (-8,9,5), (-8,-1,-5)								
Quartz	(1,8,-4)	13.267	72.91	1.187	1.2	4.268	5.2	53.34	53.6
	Equiv. Refl.: (8,1,4), (8,-9,-4), (-9,1,-4), (-9,8,4)								
Quartz	(1,-9,4)	13.267	72.91	1.186	1.2	4.268	5.2	53.34	53.6
Quartz	(-9,8,5)	13.706	80.92	1.18	1.4	2.218	3.02	27.73	27.89
Quartz	(1,8,-5)	13.706	80.92	1.179	1.4	2.218	3.02	27.73	27.89
	Equiv. Refl.: (1,-9,5), (8,1,5), (8,-9,-5), (-9,1,-5)								
Sapph	(3,6,12)	13.244	72.58	1.176	1.3	4.355	5.56	54.43	54.72
	Equiv. Refl.: (3,6,-12), (3,-9,12), (3,-9,-12), (6,3,12), (6,3,-12), (6,-9,12), (6,-9,-12), (9,-3,12), (9,-3,-12), (9,-6,12), (9,-6,-12), (-3,9,12), (-3,9,-12), (-3,-6,12), (-3,-6,-12), (-6,9,12), (-6,9,-12), (-6,-3,12), (-6,-3,-12), (-9,3,12), (-9,3,-12), (-9,6,12), (-9,6,-12)								
Quartz	(-4,7,9)	13.606	78.59	1.142	1.2	2.802	3.44	35.02	35.19
Quartz	(9,-1,-4)	13.267	72.91	1.141	1.2	4.268	5.1	53.34	53.59
	Equiv. Refl.: (9,-8,4), (-1,9,4), (-1,-8,-4), (-4,-3,-9), (-8,9,-4), (-8,-1,4)								
LiNbO3	(3,8,-5)	13.876	88.63	1.14	4.4	0.332	1.47	4.15	4.4
	Equiv. Refl.: (3,-11,5), (8,3,5), (8,-11,-5), (11,-3,5), (11,-8,-5), (-3,11,-5), (-3,-8,5), (-8,11,5), (-8,-3,-5), (-11,3,-5), (-11,8,5), (-3,7,-9), (-3,-4,9)								
Quartz	(7,-3,9)	13.606	78.59	1.139	1.2	2.802	3.43	35.02	35.19
	Equiv. Refl.: (7,-4,-9)								

$E_i =$ Cryst	13.88 Refl (h,k,l)	keV EB [keV]	Θ_B [°]	$\int IR d\Theta$ [μrad]	Width [μrad]	$E_i \cot\Theta$ [meV/μrad]	ΔE [meV]	ΔE_g 2m, 50μm [meV]	ΔE_t 2m, 50μm [meV]
Quartz	(-8,9,4)	13.267	72.91	1.121	1.2	4.268	5.21	53.34	53.6
	Equiv. Refl.: (-8,-1,-4)								
Quartz	(9,-1,4)	13.267	72.91	1.12	1.2	4.268	5.2	53.34	53.6
	Equiv. Refl.: (9,-8,-4), (-1,9,-4), (-1,-8,4)								
Quartz	(1,8,4)	13.267	72.91	1.114	1.2	4.268	5.1	53.34	53.59
	Equiv. Refl.: (1,-9,-4), (8,1,-4), (8,-9,4), (-9,1,4), (-9,8,-4)								
Sapph	(4,5,-13)	13.288	73.2	1.112	1.2	4.191	5.12	52.38	52.63
	Equiv. Refl.: (4,-9,13), (5,4,13), (5,-9,-13), (9,-4,13), (9,-5,-13), (-4,9,-13), (-4,-5,13), (-5,9,13), (-5,-4,-13), (-9,4,-13), (-9,5,13)								
LiNbO3	(1,9,-5)	13.452	75.73	1.103	1.7	3.531	5.95	44.14	44.54
	Equiv. Refl.: (1,-10,5), (9,1,5), (9,-10,-5), (10,-1,5), (10,-9,-5), (-1,10,-5), (-1,-9,5), (-9,10,5), (-9,-1,-5), (-10,1,-5), (-10,9,5)								
Quartz	(7,3,4)	13.739	81.82	1.096	1.2	1.996	2.46	24.95	25.07
	Equiv. Refl.: (7,-10,-4), (-10,3,-4), (-10,7,4)								
Quartz	(3,7,-4)	13.739	81.82	1.095	1.2	1.996	2.46	24.95	25.07
	Equiv. Refl.: (3,-10,4)								
Quartz	(0,8,6)	13.536	77.22	1.091	1.2	3.149	3.77	39.36	39.54
	Equiv. Refl.: (0,-8,-6)								
Quartz	(8,0,-6)	13.536	77.22	1.089	1.2	3.149	3.76	39.36	39.54
	Equiv. Refl.: (8,-8,6), (-8,0,6), (-8,8,-6)								
LiNbO3	(4,5,-19)	13.789	83.43	1.08	2.1	1.6	3.44	20	20.29
	Equiv. Refl.: (4,-9,19), (5,4,19), (5,-9,-19), (9,-4,19), (9,-5,-19), (-4,9,-19), (-4,-5,19), (-5,9,19), (-5,-4,-19), (-9,4,-19), (-9,5,19)								
Quartz	(4,3,9)	13.606	78.59	1.068	1.2	2.802	3.44	35.02	35.19
	Equiv. Refl.: (4,-7,-9)								
Quartz	(3,4,-9)	13.606	78.59	1.066	1.2	2.802	3.43	35.02	35.19
	Equiv. Refl.: (3,-7,9)								
Quartz	(-7,3,-9)	13.606	78.59	1.065	1.2	2.802	3.43	35.02	35.19
	Equiv. Refl.: (-7,4,9)								
Quartz	(-7,9,-6)	13.769	82.76	1.044	1.2	1.764	2.11	22.05	22.15
Quartz	(9,-2,-6)	13.769	82.76	1.043	1.2	1.764	2.11	22.05	22.15
	Equiv. Refl.: (9,-7,6), (-7,-2,6)								
Quartz	(-2,9,6)	13.769	82.76	1.041	1.2	1.764	2.1	22.05	22.15
	Equiv. Refl.: (-2,-7,-6)								
Quartz	(-10,2,-3)	13.79	83.46	1.011	1.2	1.591	1.91	19.88	19.98
Quartz	(-10,8,3)	13.79	83.46	1.01	1.2	1.591	1.91	19.88	19.98
Quartz	(2,8,-3)	13.79	83.46	1.009	1.2	1.591	1.9	19.88	19.98
	Equiv. Refl.: (2,-10,3)								
Quartz	(8,2,3)	13.79	83.46	1.008	1.2	1.591	1.9	19.88	19.97
	Equiv. Refl.: (8,-10,-3)								
Quartz	(10,-3,4)	13.739	81.82	1.004	1.2	1.996	2.46	24.95	25.07
	Equiv. Refl.: (10,-7,-4), (-7,10,4), (-7,-3,-4)								
Quartz	(-3,10,-4)	13.739	81.82	1.003	1.2	1.996	2.46	24.95	25.07
	Equiv. Refl.: (-3,-7,4)								
LiNbO3	(2,4,25)	13.383	74.63	0.977	1.5	3.816	5.79	47.7	48.05
	Equiv. Refl.: (2,-6,-25), (4,2,-25), (4,-6,25), (6,-2,-25), (6,-4,25), (-2,6,25), (-2,-4,-25), (-4,6,-25), (-4,-2,25), (-6,2,25), (-6,4,-25)								
LiNbO3	(4,6,13)	13.444	75.6	0.969	1.5	3.564	5.48	44.55	44.89
	Equiv. Refl.: (4,-10,-13), (6,4,-13), (6,-10,13), (10,-4,-13), (10,-6,13), (-4,10,13), (-4,-6,-13), (-6,10,-13), (-6,-4,13), (-10,4,13), (-10,6,-13)								

Ei =	13.88	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Quartz	(6,2,-7)	13.223	72.3	0.967	1	4.429	4.47	55.36	55.54
	Equiv. Refl.: (6,-8,7), (-8,2,7), (-8,6,-7)								
Quartz	(2,-8,-7)	13.223	72.3	0.966	1	4.429	4.46	55.36	55.54
Quartz	(2,6,7)	13.223	72.3	0.965	1	4.429	4.46	55.36	55.54
LiNbO3	(1,9,1)	13.272	72.98	0.96	1.5	4.249	6.2	53.12	53.48
	Equiv. Refl.: (1,-10,-1), (9,1,-1), (9,-10,1), (10,-1,-1), (10,-9,1), (-1,10,1), (-1,-9,-1), (-9,10,-1), (-9,-1,1), (-10,1,1), (-10,9,-1)								
Quartz	(2,8,0)	13.353	74.17	0.949	1	3.936	4.05	49.2	49.37
	Equiv. Refl.: (2,-10,0), (8,2,0), (8,-10,0), (-10,2,0), (-10,8,0)								
Quartz	(6,0,-9)	13.527	77.06	0.944	1.1	3.19	3.36	39.88	40.02
	Equiv. Refl.: (6,-6,9), (-6,6,-9)								
Quartz	(0,6,9)	13.527	77.06	0.943	1.1	3.19	3.36	39.88	40.02
	Equiv. Refl.: (0,-6,-9), (-6,0,9)								
Quartz	(10,-2,0)	13.353	74.17	0.94	1	3.936	4.05	49.2	49.37
	Equiv. Refl.: (10,-8,0), (-2,10,0), (-2,-8,0), (-8,10,0), (-8,-2,0)								
Quartz	(5,-6,-9)	13.129	71.07	0.938	1	4.761	4.62	59.51	59.69
	Equiv. Refl.: (-6,1,-9), (-6,5,9)								
Quartz	(1,5,-9)	13.129	71.07	0.937	1	4.761	4.61	59.51	59.69
	Equiv. Refl.: (1,-6,9), (5,1,9)								
Sapph	(1,7,15)	13.426	75.31	0.936	1.1	3.639	3.9	45.49	45.65
	Equiv. Refl.: (1,7,-15), (1,-8,15), (1,-8,-15), (7,1,15), (7,1,-15), (7,-8,15), (7,-8,-15), (8,-1,15), (8,-1,-15), (8,-7,15), (8,-7,-15), (-1,8,15), (-1,8,-15), (-1,-7,15), (-1,-7,-15), (-7,8,15), (-7,8,-15), (-7,-1,15), (-7,-1,-15), (-8,1,15), (-8,1,-15), (-8,7,15), (-8,7,-15)								
Quartz	(7,-9,6)	13.769	82.76	0.922	1.2	1.764	2.11	22.05	22.15
Quartz	(7,2,-6)	13.769	82.76	0.921	1.2	1.764	2.11	22.05	22.15
	Equiv. Refl.: (-9,2,6), (-9,7,-6)								
Quartz	(2,7,6)	13.769	82.76	0.919	1.2	1.764	2.1	22.05	22.15
	Equiv. Refl.: (2,-9,-6)								
Quartz	(10,-2,3)	13.79	83.46	0.91	1.2	1.591	1.91	19.88	19.98
Quartz	(10,-8,-3)	13.79	83.46	0.909	1.2	1.591	1.91	19.88	19.98
Quartz	(-2,10,-3)	13.79	83.46	0.908	1.2	1.591	1.9	19.88	19.98
	Equiv. Refl.: (-2,-8,3)								
Quartz	(-8,10,3)	13.79	83.46	0.907	1.2	1.591	1.9	19.88	19.97
	Equiv. Refl.: (-8,-2,-3)								
Quartz	(-7,8,-7)	13.619	78.86	0.906	1	2.732	2.75	34.15	34.27
	Equiv. Refl.: (-7,-1,7)								
Quartz	(8,-2,-7)	13.223	72.3	0.905	1	4.429	4.47	55.36	55.54
	Equiv. Refl.: (8,-6,7), (-6,8,-7)								
Quartz	(8,-1,-7)	13.619	78.86	0.904	1	2.732	2.74	34.15	34.26
	Equiv. Refl.: (8,-7,7), (-1,8,7), (-1,-7,-7), (-6,-2,7)								
Quartz	(-2,8,7)	13.223	72.3	0.903	1	4.429	4.46	55.36	55.54
	Equiv. Refl.: (-2,-6,-7)								
Sapph	(2,4,-23)	13.56	77.68	0.877	1	3.032	3.16	37.9	38.03
	Equiv. Refl.: (2,-6,23), (4,2,23), (4,-6,-23), (6,-2,23), (6,-4,-23), (-2,6,-23), (-2,-4,23), (-4,6,23), (-4,-2,-23), (-6,2,-23), (-6,4,23)								
Quartz	(10,-4,4)	13.505	76.65	0.872	0.9	3.294	3.11	41.17	41.29
	Equiv. Refl.: (10,-6,-4), (-4,10,-4), (-4,-6,4), (-6,10,4), (-6,-4,-4)								
Quartz	(6,-1,9)	13.129	71.07	0.867	1	4.761	4.62	59.51	59.69
	Equiv. Refl.: (6,-5,-9), (-5,6,9), (-5,-1,-9)								

Ei =	13.88	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	ΘB	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(-1,6,-9)	13.129	71.07	0.866	1	4.761	4.61	59.51	59.69
	Equiv. Refl.: (-1,-5,9)								
Quartz	(-1,7,8)	13.247	72.63	0.862	0.9	4.342	3.93	54.27	54.42
	Equiv. Refl.: (-1,-6,-8), (-6,7,-8)								
Quartz	(7,-1,-8)	13.247	72.63	0.861	0.9	4.342	3.93	54.27	54.42
	Equiv. Refl.: (7,-6,8), (-6,-1,8)								
Quartz	(10,-4,3)	13.16	71.46	0.854	0.9	4.655	4.23	58.19	58.34
	Equiv. Refl.: (10,-6,-3), (-4,10,-3), (-4,-6,3), (-6,10,3), (-6,-4,-3)								
Quartz	(7,-1,8)	13.247	72.63	0.844	0.9	4.342	3.95	54.27	54.42
	Equiv. Refl.: (7,-6,-8), (-1,7,-8), (-1,-6,8), (-6,7,8), (-6,-1,-8)								
Quartz	(7,1,-7)	13.619	78.86	0.834	1	2.732	2.74	34.15	34.26
	Equiv. Refl.: (7,-8,7)								
Quartz	(1,-8,-7)	13.619	78.86	0.833	1	2.732	2.74	34.15	34.26
Quartz	(1,7,7)	13.619	78.86	0.832	1	2.732	2.74	34.15	34.26
	Equiv. Refl.: (-8,1,7), (-8,7,-7)								
Quartz	(-3,9,-6)	13.457	75.82	0.83	0.9	3.506	3.12	43.82	43.93
Quartz	(9,-3,6)	13.457	75.82	0.829	0.9	3.506	3.12	43.82	43.93
	Equiv. Refl.: (9,-6,-6), (-3,-6,6), (-6,9,6), (-6,-3,-6)								
Quartz	(8,-4,8)	13.642	79.37	0.824	0.9	2.606	2.36	32.57	32.65
	Equiv. Refl.: (8,-4,-8)								
Quartz	(-4,8,8)	13.642	79.37	0.821	0.9	2.606	2.35	32.57	32.65
	Equiv. Refl.: (-4,8,-8), (-4,-4,8), (-4,-4,-8)								
Quartz	(4,6,-3)	13.16	71.46	0.819	0.9	4.655	4.23	58.19	58.34
	Equiv. Refl.: (4,-10,3), (-10,4,-3), (-10,6,3)								
Quartz	(1,6,-8)	13.247	72.63	0.818	0.9	4.342	3.95	54.27	54.42
	Equiv. Refl.: (1,-7,8), (6,1,8), (6,4,3), (6,-7,-8), (6,-10,-3), (-7,1,-8), (-7,6,8)								
Quartz	(9,0,1)	13.163	71.5	0.804	0.9	4.643	4.08	58.04	58.19
	Equiv. Refl.: (9,-9,-1), (-9,0,-1), (-9,9,1)								
Quartz	(0,9,-1)	13.163	71.5	0.803	0.9	4.643	4.08	58.04	58.19
	Equiv. Refl.: (0,-9,1)								
Sapph	(1,3,-26)	13.543	77.35	0.801	1	3.114	3	38.93	39.04
	Equiv. Refl.: (1,-4,26), (3,1,26), (3,-4,-26), (4,-1,26), (4,-3,-26), (-1,4,-26), (-1,-3,26), (-3,4,26), (-3,-1,-26), (-4,1,-26), (-4,3,26)								
Quartz	(6,4,4)	13.505	76.65	0.8	0.9	3.294	3.11	41.17	41.29
	Equiv. Refl.: (6,-10,-4)								
Quartz	(4,6,-4)	13.505	76.65	0.799	0.9	3.294	3.11	41.17	41.29
	Equiv. Refl.: (4,-10,4), (-10,4,-4), (-10,6,4)								
Quartz	(1,6,8)	13.247	72.63	0.791	0.9	4.342	3.93	54.27	54.42
	Equiv. Refl.: (1,-7,-8), (6,-7,8)								
Quartz	(6,1,-8)	13.247	72.63	0.79	0.9	4.342	3.93	54.27	54.42
	Equiv. Refl.: (-7,1,8), (-7,6,-8)								
LiNbO3	(4,6,-11)	13.082	70.48	0.773	1.2	4.921	5.96	61.52	61.81
	Equiv. Refl.: (4,-10,11), (6,4,11), (6,-10,-11), (10,-4,11), (10,-6,-11), (-4,10,-11), (-4,-6,11), (-6,10,11), (-6,-4,-11), (-10,4,-11), (-10,6,11), (4,5,-6), (4,-9,6), (-9,4,-6), (-9,5,6)								
Quartz	(5,4,6)	13.299	73.36	0.772	0.8	4.149	3.5	51.86	51.98
	Equiv. Refl.: (5,-9,-6)								
Sapph	(4,4,18)	13.507	76.69	0.757	0.9	3.283	3	41.04	41.15
	Equiv. Refl.: (4,4,-18), (4,-8,18), (4,-8,-18), (8,-4,18), (8,-4,-18), (-4,8,18), (-4,8,-18), (-4,-4,18), (-4,-4,-18), (-8,4,18), (-8,4,-18)								
Quartz	(3,6,-6)	13.457	75.82	0.745	0.9	3.506	3.12	43.82	43.93
	Equiv. Refl.: (3,-9,6), (-9,3,-6), (-9,6,6)								

Ei =	13.88	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(6,3,6)	13.457	75.82	0.744	0.9	3.506	3.12	43.82	43.93
	Equiv. Refl.: (6,-9,-6)								
Quartz	(9,-4,6)	13.299	73.36	0.743	0.8	4.149	3.51	51.86	51.98
	Equiv. Refl.: (9,-5,-6), (-4,9,-6), (-4,-5,6)								
Quartz	(-5,9,6)	13.299	73.36	0.742	0.8	4.149	3.5	51.86	51.98
	Equiv. Refl.: (-5,-4,-6)								
LiNbO3	(4,7,3)	13.476	76.15	0.728	1.3	3.423	4.41	42.78	43.01
	Equiv. Refl.: (4,7,-3), (4,-11,3), (4,-11,-3), (7,4,3), (7,4,-3), (7,-11,3), (7,-11,-3), (11,-4,3), (11,-4,-3), (11,-7,3), (11,-7,-3), (-4,11,3), (-4,11,-3), (-4,-7,3), (-4,-7,-3), (-7,11,3), (-7,11,-3), (-7,-4,3), (-7,-4,-3), (-11,4,3), (-11,4,-3), (-11,7,3), (-11,7,-3)								
Sapph	(2,3,-25)	13.615	78.8	0.71	0.9	2.749	2.47	34.36	34.45
	Equiv. Refl.: (2,-5,25), (3,2,25), (3,-5,-25), (5,-2,25), (5,-3,-25), (-2,5,-25), (-2,-3,25), (-3,5,25), (-3,-2,-25), (-5,2,-25), (-5,3,25)								
Quartz	(-8,4,8)	13.642	79.37	0.701	0.9	2.606	2.36	32.57	32.66
	Equiv. Refl.: (-8,4,-8)								
Quartz	(4,4,8)	13.642	79.37	0.698	0.9	2.606	2.35	32.57	32.65
	Equiv. Refl.: (4,4,-8), (4,-8,8), (4,-8,-8)								
LiNbO3	(1,4,27)	13.652	79.6	0.694	1.4	2.547	3.52	31.84	32.03
	Equiv. Refl.: (1,4,-27), (1,-5,27), (1,-5,-27), (4,1,27), (4,1,-27), (4,-5,27), (4,-5,-27), (5,-1,27), (5,-1,-27), (5,-4,27), (5,-4,-27), (-1,5,27), (-1,5,-27), (-1,-4,27), (-1,-4,-27), (-4,5,27), (-4,5,-27), (-4,-1,27), (-4,-1,-27), (-5,1,27), (-5,1,-27), (-5,4,27), (-5,4,-27), (2,7,-11), (2,-9,11), (7,2,11), (7,-9,-11), (9,-2,11), (9,-7,-11), (-2,9,-11), (-2,-7,11), (-7,9,11), (-7,-2,-11), (-9,2,-11), (-9,7,11)								
Sapph	(5,5,9)	13.719	81.25	0.688	0.9	2.136	1.98	26.7	26.77
	Equiv. Refl.: (5,5,-9), (5,-10,9), (5,-10,-9), (10,-5,9), (10,-5,-9), (-5,10,9), (-5,10,-9), (-5,-5,9), (-5,-5,-9), (-10,5,9), (-10,5,-9)								
Sapph	(4,6,4)	13.253	72.72	0.657	0.8	4.318	3.36	53.98	54.08
	Equiv. Refl.: (4,-10,-4), (6,4,-4), (6,-10,4), (10,-4,-4), (10,-6,4), (-4,10,4), (-4,-6,-4), (-6,10,-4), (-6,-4,4), (-10,4,4), (-10,6,-4)								
Quartz	(10,-5,3)	13.079	70.44	0.612	0.7	4.933	3.38	61.66	61.75
	Equiv. Refl.: (10,-5,-3), (-5,10,3), (-5,10,-3), (-5,-5,3), (-5,-5,-3)								
Quartz	(5,5,3)	13.079	70.44	0.606	0.7	4.933	3.38	61.66	61.75
	Equiv. Refl.: (5,-10,-3), (-10,5,3), (-10,5,-3)								
Quartz	(5,5,-3)	13.079	70.44	0.605	0.7	4.933	3.38	61.66	61.75
	Equiv. Refl.: (5,-10,3)								
Quartz	(-2,6,-10)	13.82	84.69	0.58	0.7	1.29	0.9	16.13	16.15
Quartz	(-2,-4,10)	13.82	84.69	0.579	0.7	1.29	0.9	16.13	16.15
Quartz	(1,5,9)	13.129	71.07	0.578	0.6	4.761	2.9	59.51	59.58
	Equiv. Refl.: (1,-6,-9)								
Quartz	(5,1,-9)	13.129	71.07	0.577	0.6	4.761	2.9	59.51	59.58
	Equiv. Refl.: (5,-6,9)								
Quartz	(-4,-2,-10)	13.82	84.69	0.575	0.7	1.29	0.9	16.13	16.15
	Equiv. Refl.: (-6,1,9), (-6,5,-9)								
Quartz	(2,1,11)	13.193	71.9	0.574	0.6	4.537	2.82	56.72	56.79
	Equiv. Refl.: (2,-3,-11), (6,-4,-10), (-4,6,10)								
Quartz	(6,-2,10)	13.82	84.69	0.573	0.7	1.29	0.89	16.13	16.15
Quartz	(1,2,-11)	13.193	71.9	0.572	0.6	4.537	2.81	56.72	56.79
	Equiv. Refl.: (1,-3,11), (-3,1,-11), (-3,2,11)								
Quartz	(10,-3,-2)	13.152	71.36	0.559	0.6	4.683	2.98	58.54	58.61
	Equiv. Refl.: (10,-7,2), (-7,10,-2), (-7,-3,2)								

Ei = Cryst	13.88 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(-3,10,2) Equiv. Refl.: (-3,-7,-2)	13.152	71.36	0.558	0.6	4.683	2.98	58.54	58.61
LiNbO3	(3,4,23) Equiv. Refl.: (3,-7,-23), (4,3,-23), (4,-7,23), (7,-3,-23), (7,-4,23), (-3,7,23), (-3,-4,-23), (-4,7,-23), (-4,-3,23), (-7,3,23), (-7,4,-23)	13.316	73.61	0.557	1	4.082	4.19	51.02	51.19
Sapph	(3,5,-17) Equiv. Refl.: (3,-8,17), (5,3,17), (5,-8,-17), (8,-3,17), (8,-5,-17), (-3,8,-17), (-3,-5,17), (-5,8,17), (-5,-3,-17), (-8,3,-17), (-8,5,17)	13.294	73.3	0.551	0.7	4.165	2.83	52.07	52.14
Quartz	(-10,3,2) Equiv. Refl.: (-10,7,-2)	13.152	71.36	0.546	0.6	4.683	2.98	58.54	58.61
Quartz	(3,7,2) Equiv. Refl.: (3,-10,-2), (7,3,-2), (7,-10,2), (-4,9,6), (-4,-5,-6)	13.152	71.36	0.545	0.6	4.683	2.98	58.54	58.61
Quartz	(9,-4,-6) Equiv. Refl.: (9,-5,6), (-5,9,-6)	13.299	73.36	0.543	0.6	4.149	2.56	51.86	51.92
Quartz	(-5,-4,6)	13.299	73.36	0.542	0.6	4.149	2.56	51.86	51.92
LiNbO3	(3,7,-13) Equiv. Refl.: (3,-10,13), (7,3,13), (7,-10,-13), (10,-3,13), (10,-7,-13), (-3,10,-13), (-3,-7,13), (-7,10,13), (-7,-3,-13), (-10,3,-13), (-10,7,13)	13.658	79.74	0.534	1.2	2.513	2.98	31.42	31.56
Quartz	(5,5,4) Equiv. Refl.: (5,-10,-4)	13.426	75.31	0.529	0.6	3.639	2.31	45.49	45.55
Quartz	(5,5,-4)	13.426	75.31	0.528	0.6	3.639	2.31	45.49	45.55
Quartz	(5,-10,4) Equiv. Refl.: (-10,5,4), (-10,5,-4)	13.426	75.31	0.527	0.6	3.639	2.31	45.49	45.55
Quartz	(-5,10,4) Equiv. Refl.: (-5,-5,-4)	13.426	75.31	0.525	0.6	3.639	2.31	45.49	45.55
Quartz	(10,-5,4) Equiv. Refl.: (10,-5,-4), (-5,10,-4), (-5,-5,4)	13.426	75.31	0.523	0.6	3.639	2.31	45.49	45.55
LiNbO3	(1,5,-25) Equiv. Refl.: (1,-6,25), (5,1,25), (5,-6,-25), (6,-1,25), (6,-5,-25), (-1,6,-25), (-1,-5,25), (-5,6,25), (-5,-1,-25), (-6,1,-25), (-6,5,25)	13.598	78.44	0.515	1.1	2.839	3.14	35.49	35.63
Quartz	(4,5,6) Equiv. Refl.: (4,-9,-6)	13.299	73.36	0.504	0.6	4.149	2.57	51.86	51.92
Quartz	(5,-9,6) Equiv. Refl.: (-9,4,6), (-9,5,-6)	13.299	73.36	0.502	0.6	4.149	2.56	51.86	51.92
Quartz	(5,4,-6)	13.299	73.36	0.501	0.6	4.149	2.56	51.86	51.92
Quartz	(-2,3,11) Equiv. Refl.: (-2,-1,-11)	13.193	71.9	0.497	0.6	4.537	2.82	56.72	56.79
Quartz	(3,-1,11)	13.193	71.9	0.496	0.6	4.537	2.81	56.72	56.79
Quartz	(3,-2,-11) Equiv. Refl.: (-1,3,-11), (-1,-2,11)	13.193	71.9	0.495	0.6	4.537	2.81	56.72	56.79
Sapph	(0,4,26) Equiv. Refl.: (0,-4,-26), (4,0,-26), (4,-4,26), (-4,0,26), (-4,4,-26)	13.792	83.53	0.483	0.8	1.573	1.22	19.67	19.71
Quartz	(-1,6,9) Equiv. Refl.: (-1,-5,-9)	13.129	71.07	0.481	0.6	4.761	2.91	59.51	59.58
Quartz	(-5,6,-9) Equiv. Refl.: (-5,-1,9)	13.129	71.07	0.48	0.6	4.761	2.9	59.51	59.58
Quartz	(6,-1,-9) Equiv. Refl.: (6,-5,9)	13.129	71.07	0.479	0.6	4.761	2.89	59.51	59.58
Quartz	(9,-2,-5) Equiv. Refl.: (9,-7,5), (-2,-7,-5), (-7,9,-5), (-7,-2,5)	13.233	72.44	0.478	0.5	4.392	2.38	54.9	54.95
Quartz	(-2,9,5)	13.233	72.44	0.477	0.5	4.392	2.37	54.9	54.95

Ei = Cryst	13.88 Refl (h,k,l)	keV EB [keV]	ΘB [°]	\int IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
LiNbO3	(4,5,17) Equiv. Refl.: (4,-9,-17), (5,4,-17), (5,-9,17), (9,-4,-17), (9,-5,17), (-4,9,17), (-4,-5,-17), (-5,9,-17), (-5,-4,17), (-9,4,17), (-9,5,-17)	13.256	72.76	0.464	0.9	4.307	3.88	53.84	53.98
Quartz	(2,5,-9) Equiv. Refl.: (2,-7,9), (-7,2,-9), (-7,5,9)	13.761	82.48	0.461	0.7	1.832	1.21	22.89	22.93
Quartz	(5,2,9) Equiv. Refl.: (5,-7,-9)	13.761	82.48	0.454	0.7	1.832	1.2	22.89	22.93
Quartz	(7,-2,9) Equiv. Refl.: (7,-5,-9), (-2,7,-9), (-2,-5,9)	13.761	82.48	0.452	0.7	1.832	1.21	22.89	22.93
LiNbO3	(5,6,-7) Equiv. Refl.: (5,-11,7), (6,5,7), (6,-11,-7), (11,-5,7), (11,-6,-7), (-5,11,-7), (-5,-6,7), (-6,11,7), (-6,-5,-7), (-11,5,-7), (-11,6,7)	13.629	79.08	0.446	1	2.677	2.78	33.47	33.58
Quartz	(-5,7,9) Equiv. Refl.: (-5,-2,-9)	13.761	82.48	0.445	0.7	1.832	1.2	22.89	22.93
Quartz	(-10,4,3) Equiv. Refl.: (-10,6,-3)	13.16	71.46	0.444	0.5	4.655	2.32	58.19	58.24
Quartz	(4,6,3) Equiv. Refl.: (4,-10,-3), (6,4,-3), (6,-10,3)	13.16	71.46	0.443	0.5	4.655	2.32	58.19	58.24
Quartz	(-2,7,9) Equiv. Refl.: (-2,-5,-9)	13.761	82.48	0.441	0.6	1.832	1.12	22.89	22.92
Sapph	(1,5,-22) Equiv. Refl.: (1,-6,22), (5,1,22), (5,-6,-22), (6,-1,22), (6,-5,-22), (-1,6,-22), (-1,-5,22), (-5,6,22), (-5,-1,-22), (-6,1,-22), (-6,5,22)	13.432	75.4	0.44	0.6	3.614	2.12	45.18	45.23
Quartz	(7,-2,-9) Equiv. Refl.: (7,-5,9), (-5,7,-9)	13.761	82.48	0.439	0.6	1.832	1.11	22.89	22.92
Quartz	(-5,-2,9)	13.761	82.48	0.438	0.6	1.832	1.11	22.89	22.92
Quartz	(8,-7,-7) Equiv. Refl.: (-7,8,7), (-7,-1,-7)	13.619	78.86	0.434	0.5	2.732	1.4	34.15	34.18
Quartz	(8,-1,7)	13.619	78.86	0.433	0.5	2.732	1.4	34.15	34.18
Quartz	(-1,8,-7) Equiv. Refl.: (-1,-7,7)	13.619	78.86	0.432	0.5	2.732	1.4	34.15	34.18
Quartz	(5,0,10) Equiv. Refl.: (-5,0,-10)	13.588	78.23	0.429	0.6	2.893	1.63	36.16	36.19
Quartz	(5,-5,-10) Equiv. Refl.: (-5,5,10)	13.588	78.23	0.428	0.6	2.893	1.63	36.16	36.19
Quartz	(0,5,-10) Equiv. Refl.: (0,-5,10)	13.588	78.23	0.426	0.6	2.893	1.62	36.16	36.19
Quartz	(2,7,5) Equiv. Refl.: (7,2,-5), (7,-9,5), (-9,2,5), (-9,7,-5)	13.233	72.44	0.421	0.5	4.392	2.38	54.9	54.95
Quartz	(2,-9,-5)	13.233	72.44	0.42	0.5	4.392	2.37	54.9	54.95
Quartz	(0,7,8) Equiv. Refl.: (0,-7,-8)	13.719	81.27	0.414	0.6	2.131	1.26	26.63	26.66
Quartz	(7,0,-8) Equiv. Refl.: (7,-7,8), (-7,0,8)	13.719	81.27	0.409	0.6	2.131	1.25	26.63	26.66
Quartz	(-7,7,-8)	13.719	81.27	0.408	0.6	2.131	1.25	26.63	26.66
LiNbO3	(1,2,29) Equiv. Refl.: (1,-3,-29), (2,1,-29), (2,-3,29), (3,-1,-29), (3,-2,29), (-1,3,29), (-1,-2,-29), (-2,3,-29), (-2,-1,29), (-3,1,29), (-3,2,-29)	13.48	76.21	0.403	0.9	3.407	3.05	42.59	42.7
Quartz	(1,4,10)	13.272	72.98	0.381	0.5	4.249	2	53.12	53.16

Ei = Cryst	13.88 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(1,-5,-10)	13.272	72.98	0.38	0.5	4.249	2	53.12	53.16
Equiv. Refl.: (4,1,-10), (4,-5,10), (10,-4,-3), (10,-6,3), (-4,10,3), (-4,-6,-3)									
Quartz	(-6,10,-3)	13.16	71.46	0.379	0.5	4.655	2.32	58.19	58.24
Equiv. Refl.: (-6,-4,3)									
Sapph	(1,6,19)	13.4	74.89	0.377	0.5	3.748	1.94	46.85	46.89
Equiv. Refl.: (1,-7,-19), (6,1,-19), (6,-7,19), (7,-1,-19), (7,-6,19), (-1,7,19), (-1,-6,-19), (-6,7,-19), (-6,-1,19), (-7,1,19), (-7,6,-19), (-5,1,10), (-5,4,-10)									
Quartz	(2,5,9)	13.761	82.48	0.376	0.6	1.832	1.12	22.89	22.92
Equiv. Refl.: (2,-7,-9)									
Quartz	(5,2,-9)	13.761	82.48	0.374	0.6	1.832	1.11	22.89	22.92
Equiv. Refl.: (5,-7,9), (-7,2,9), (-7,5,-9)									
Quartz	(-1,5,10)	13.272	72.98	0.37	0.5	4.249	2	53.12	53.16
Equiv. Refl.: (-1,-4,-10)									
Quartz	(-4,5,-10)	13.272	72.98	0.369	0.5	4.249	2	53.12	53.16
Equiv. Refl.: (-4,-1,10)									
Sapph	(5,5,3)	13.107	70.79	0.366	0.5	4.836	2.33	60.45	60.5
Equiv. Refl.: (5,5,-3), (5,-10,3), (5,-10,-3), (10,-5,3), (10,-5,-3), (-5,10,3), (-5,10,-3), (-5,-5,3), (-5,-5,-3), (-10,5,3), (-10,5,-3), (5,-1,-10), (5,-4,10)									
LiNbO3	(3,7,11)	13.302	73.4	0.358	0.8	4.137	3.23	51.71	51.81
Equiv. Refl.: (3,-10,-11), (7,3,-11), (7,-10,11), (10,-3,-11), (10,-7,11), (-3,10,11), (-3,-7,-11), (-7,10,-11), (-7,-3,11), (-10,3,11), (-10,7,-11)									
LiNbO3	(5,6,5)	13.452	75.73	0.355	0.8	3.531	2.9	44.14	44.23
Equiv. Refl.: (5,-11,-5), (6,5,-5), (6,-11,5), (11,-5,-5), (11,-6,5), (-5,11,5), (-5,-6,-5), (-6,11,-5), (-6,-5,5), (-11,5,5), (-11,6,-5)									
Quartz	(7,1,7)	13.619	78.86	0.316	0.5	2.732	1.4	34.15	34.18
Equiv. Refl.: (7,-8,-7), (-8,7,7)									
Quartz	(-8,1,-7)	13.619	78.86	0.315	0.5	2.732	1.4	34.15	34.18
Quartz	(1,7,-7)	13.619	78.86	0.314	0.5	2.732	1.39	34.15	34.18
Equiv. Refl.: (1,-8,7)									
Quartz	(2,-6,10)	13.82	84.69	0.312	0.7	1.29	0.9	16.13	16.15
LiNbO3	(5,6,-1)	13.272	72.98	0.311	0.7	4.249	3.02	53.12	53.2
Equiv. Refl.: (5,-11,1), (6,5,1), (6,-11,-1), (11,-5,1), (11,-6,-1), (-5,11,-1), (-5,-6,1), (-6,11,1), (-6,-5,-1), (-11,5,-1), (-11,6,1), (2,4,-10)									
Quartz	(-3,8,8)	13.719	81.27	0.309	0.4	2.131	0.95	26.63	26.65
Equiv. Refl.: (-3,-5,-8), (-5,8,-8), (-5,-3,8)									
Quartz	(4,2,10)	13.82	84.69	0.308	0.7	1.29	0.9	16.13	16.15
Equiv. Refl.: (8,-3,-8)									
Quartz	(4,-6,-10)	13.82	84.69	0.307	0.7	1.29	0.89	16.13	16.15
Equiv. Refl.: (8,-5,8), (-6,4,10)									
Quartz	(-6,2,-10)	13.82	84.69	0.306	0.7	1.29	0.89	16.13	16.15
LiNbO3	(2,8,9)	13.364	74.33	0.259	0.7	3.892	2.57	48.66	48.72
Equiv. Refl.: (2,8,-9), (2,-10,9), (2,-10,-9), (8,2,9), (8,2,-9), (8,-10,9), (8,-10,-9), (10,-2,9), (10,-2,-9), (10,-8,9), (10,-8,-9), (-2,10,9), (-2,10,-9), (-2,-8,9), (-2,-8,-9), (-8,10,9), (-8,10,-9), (-8,-2,9), (-8,-2,-9), (-10,2,9), (-10,2,-9), (-10,8,9), (-10,8,-9)									
Quartz	(5,3,-8)	13.719	81.27	0.245	0.4	2.131	0.95	26.63	26.65
Equiv. Refl.: (5,-8,8)									
Quartz	(3,5,8)	13.719	81.27	0.244	0.4	2.131	0.95	26.63	26.65
Equiv. Refl.: (3,-8,-8), (-8,3,8)									
Quartz	(-8,5,-8)	13.719	81.27	0.243	0.4	2.131	0.94	26.63	26.65
Quartz	(10,-2,-1)	13.403	74.93	0.228	0.3	3.737	1.16	46.72	46.73
Equiv. Refl.: (10,-8,1), (-2,10,1), (-2,-8,-1), (-8,10,-1), (-8,-2,1)									
Sapph	(1,3,25)	13.107	70.79	0.222	0.3	4.836	1.61	60.45	60.47

Equiv. Refl.: (1,-4,-25), (3,1,-25), (3,-4,25), (4,-1,-25), (4,-3,25), (-1,4,25), (-1,-3,-25), (-3,4,-25), (-3,-1,25)
(-4,1,25), (-4,3,-25)

Quartz	(-2,-3,10)	13.111	70.84	0.219	0.3	4.823	1.43	60.29	60.31
Equiv. Refl.: (-3,-2,-10)									
Quartz	(-2,5,-10)	13.111	70.84	0.218	0.3	4.823	1.43	60.29	60.31
Equiv. Refl.: (-3,5,10)									
Quartz	(5,-2,10)	13.111	70.84	0.216	0.3	4.823	1.42	60.29	60.31
Equiv. Refl.: (5,-3,-10)									
Quartz	(2,3,-10)	13.111	70.84	0.203	0.3	4.823	1.43	60.29	60.31
Equiv. Refl.: (2,-5,10), (3,2,10), (3,-5,-10)									
Quartz	(-5,3,10)	13.111	70.84	0.201	0.3	4.823	1.42	60.29	60.31
Quartz	(-5,2,-10)	13.111	70.84	0.2	0.3	4.823	1.42	60.29	60.31
LiNbO3	(2,6,-19)	13.143	71.24	0.196	0.5	4.714	2.48	58.93	58.98
Equiv. Refl.: (2,-8,19), (6,2,19), (6,-8,-19), (8,-2,19), (8,-6,-19), (-2,8,-19), (-2,-6,19), (-6,8,19), (-6,-2,-19) (-8,2,-19), (-8,6,19)									
Quartz	(2,8,1)	13.403	74.93	0.187	0.3	3.737	1.16	46.72	46.73
Equiv. Refl.: (2,-10,-1), (8,2,-1), (8,-10,1), (-10,2,1), (-10,8,-1)									
LiNbO3	(3,8,1)	13.702	80.81	0.177	0.7	2.244	1.52	28.06	28.1
Equiv. Refl.: (3,-11,-1), (8,3,-1), (8,-11,1), (11,-3,-1), (11,-8,1), (-3,11,1), (-3,-8,-1), (-8,11,-1), (-8,-3,1) (-11,3,1), (-11,8,-1)									
Sapph	(3,7,-4)	13.507	76.69	0.152	0.3	3.284	0.93	41.04	41.05
Equiv. Refl.: (3,-10,4), (7,3,4), (7,-10,-4), (10,-3,4), (10,-7,-4), (-3,10,-4), (-3,-7,4), (-7,10,4), (-7,-3,-4) (-10,3,-4), (-10,7,4)									
LiNbO3	(1,8,-13)	13.226	72.35	0.088	0.4	4.417	1.56	55.22	55.24
Equiv. Refl.: (1,-9,13), (8,1,13), (8,-9,-13), (9,-1,13), (9,-8,-13), (-1,9,-13), (-1,-8,13), (-8,9,13), (-8,-1,-13) (-9,1,-13), (-9,8,13)									
Sapph	(4,6,7)	13.534	77.18	0.087	0.2	3.158	0.66	39.48	39.48
Equiv. Refl.: (4,-10,-7), (6,4,-7), (6,-10,7), (10,-4,-7), (10,-6,7), (-4,10,7), (-4,-6,-7), (-6,10,-7), (-6,-4,7) (-10,4,7), (-10,6,-7)									
Sapph	(4,6,-5)	13.331	73.83	0.073	0.2	4.026	0.7	50.32	50.33
Equiv. Refl.: (4,-10,5), (6,4,5), (6,-10,-5), (10,-4,5), (10,-6,-5), (-4,10,-5), (-4,-6,5), (-6,10,5), (-6,-4,-5) (-10,4,-5), (-10,6,5)									
Sapph	(4,6,1)	13.124	71	0.067	0.2	4.779	0.74	59.74	59.74
Equiv. Refl.: (4,-10,-1), (6,4,-1), (6,-10,1), (10,-4,-1), (10,-6,1), (-4,10,1), (-4,-6,-1), (-6,10,-1), (-6,-4,1) (-10,4,1), (-10,6,-1)									
LiNbO3	(5,5,15)	13.784	83.26	0.014	0.2	1.64	0.4	20.5	20.5
Equiv. Refl.: (5,5,-15), (5,-10,15), (5,-10,-15), (10,-5,15), (10,-5,-15), (-5,10,15), (-5,10,-15), (-5,-5,15), (-5,-5,-15) (-10,5,15), (-10,5,-15)									
LiNbO3	(4,4,21)	13.453	75.76	0.011	0.1	3.523	0.52	44.04	44.05
Equiv. Refl.: (4,4,-21), (4,-8,21), (4,-8,-21), (8,-4,21), (8,-4,-21), (-4,8,21), (-4,8,-21), (-4,-4,21), (-4,-4,-21) (-8,4,21), (-8,4,-21)									

Ei = Cryst	13.273 Refl (h,k,l)	keV EB [keV]	Θ B [$^\circ$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Ge	(0,0,12)	13.149	82.17	4.3726	9.56	1.8245	17.43	22.81	28.71
	Equiv. Refl.: (0,12,0), (4,8,8), (8,4,8), (8,8,4), (12,0,0)								
Si	(0,8,8)	12.914	76.64	3.1436	2.91	3.1515	9.18	39.39	40.45
	Equiv. Refl.: (8,0,8), (8,8,0)								
Si	(1,3,11)	13.064	79.83	2.99	2.59	2.3812	6.16	29.76	30.4
	Equiv. Refl.: (1,7,9), (1,9,7), (1,11,3), (3,1,11), (3,11,1), (5,5,9), (5,9,5), (7,1,9), (7,9,1), (9,1,7), (9,5,5), (9,7,1), (11,1,3), (11,3,1)								
Ge	(0,6,10)	12.779	74.32	2.5064	5.29	3.7266	19.71	46.58	50.58
	Equiv. Refl.: (0,10,6), (6,0,10), (6,6,8), (6,8,6), (6,10,0), (8,6,6), (10,0,6), (10,6,0)								
Si	(2,4,10)	12.504	70.4	2.4441	2.24	4.7264	10.58	59.08	60.02
	Equiv. Refl.: (2,10,4), (4,2,10), (4,10,2), (10,2,4), (10,4,2)								
Si	(1,1,11)	12.659	72.51	1.5429	1.69	4.183	7.09	52.29	52.77
	Equiv. Refl.: (1,11,1), (5,7,7), (7,5,7), (7,7,5), (11,1,1)								
Ge	(3,3,11)	12.919	76.74	1.5183	4.25	3.1282	13.3	39.1	41.3
	Equiv. Refl.: (3,7,9), (3,9,7), (3,11,3), (7,3,9), (7,9,3), (9,3,7), (9,7,3), (11,3,3)								
Ge	(1,3,11)	12.542	70.89	1.2285	3.28	4.598	15.09	57.48	59.42
	Equiv. Refl.: (1,7,9), (1,9,7), (1,11,3), (3,1,11), (3,11,1), (5,5,9), (5,9,5), (7,1,9), (7,9,1), (9,1,7), (9,5,5), (9,7,1), (11,1,3), (11,3,1)								
Quartz	(4,1,10)	13.272	89.27	59.059	49.7	0.169	8.39	2.11	8.65
Quartz	(4,-5,-10)	13.272	89.27	59.055	49.7	0.169	8.38	2.11	8.65
Quartz	(1,4,-10)	13.272	89.27	59.014	49.7	0.169	8.38	2.11	8.64
Quartz	(1,-5,10)	13.272	89.27	59.001	49.7	0.169	8.38	2.11	8.64
Quartz	(-5,1,-10)	13.272	89.27	58.963	49.6	0.169	8.37	2.11	8.63
Quartz	(-5,4,10)	13.272	89.27	58.961	49.6	0.169	8.37	2.11	8.63
Quartz	(-4,-1,-10)	13.272	89.27	57.706	49.7	0.169	8.39	2.11	8.65
Quartz	(-4,5,10)	13.272	89.27	57.703	49.7	0.169	8.38	2.11	8.65
Quartz	(-1,-4,10)	13.272	89.27	57.675	49.7	0.169	8.38	2.11	8.64
Quartz	(-1,5,-10)	13.272	89.27	57.661	49.7	0.169	8.38	2.11	8.64
Quartz	(5,-1,10)	13.272	89.27	57.618	49.6	0.169	8.37	2.11	8.63
Quartz	(5,-4,-10)	13.272	89.27	57.615	49.6	0.169	8.37	2.11	8.63
Sapph	(2,6,-16)	13.267	88.26	26.494	22.9	0.404	9.26	5.05	10.55
	Equiv. Refl.: (2,-8,16), (6,2,16), (6,-8,-16), (8,-2,16), (8,-6,-16), (-2,-8,-16), (-2,-6,16), (-6,8,16), (-6,-2,-16), (-8,2,-16), (-8,6,16)								
LiNbO3	(1,9,1)	13.272	89.28	24.195	35.4	0.168	5.93	2.09	6.29
	Equiv. Refl.: (1,-10,-1), (9,1,-1), (9,-10,1), (10,-1,-1), (10,-9,1), (-1,10,1), (-1,-9,-1), (-9,10,-1), (-9,-1,1), (-10,1,1), (-10,9,-1)								
LiNbO3	(-7,8,-18)	13.229	85.31	22.429	20.5	1.088	22.33	13.6	26.15
	Equiv. Refl.: (-8,7,-18)								
LiNbO3	(1,-8,-18)	13.229	85.31	22.428	20.5	1.088	22.33	13.6	26.15
	Equiv. Refl.: (7,1,-18), (8,-1,-18), (-1,-7,-18)								
LiNbO3	(1,7,18)	13.229	85.31	22.152	20.5	1.088	22.33	13.6	26.15
	Equiv. Refl.: (7,-8,18), (8,-7,18), (-1,8,18), (-7,-1,18), (-8,1,18)								
LiNbO3	(0,-7,-20)	13.218	84.8	21.439	19.4	1.208	23.45	15.1	27.89
	Equiv. Refl.: (7,0,-20), (-7,7,-20)								
LiNbO3	(0,7,20)	13.218	84.8	21.045	19.4	1.208	23.45	15.1	27.89
	Equiv. Refl.: (7,-7,20), (-7,0,20)								
LiNbO3	(0,-8,-16)	13.226	85.19	20.264	17.7	1.117	19.83	13.97	24.25
	Equiv. Refl.: (8,0,-16), (-8,8,-16)								

Ei =	13.273	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,-8,18)	13.229	85.31	20.211	18.8	1.088	20.49	13.6	24.59
	Equiv. Refl.: (7,1,18), (8,-1,18), (-1,-7,18)								
LiNbO3	(-7,8,18)	13.229	85.31	20.21	18.8	1.088	20.49	13.6	24.59
	Equiv. Refl.: (-8,7,18)								
LiNbO3	(1,7,-18)	13.229	85.31	20.119	18.8	1.088	20.49	13.6	24.59
	Equiv. Refl.: (7,-8,-18), (8,-7,-18), (-1,8,-18), (-7,-1,-18), (-8,1,-18)								
LiNbO3	(0,8,16)	13.226	85.19	17.518	17.7	1.117	19.83	13.97	24.25
	Equiv. Refl.: (8,-8,16), (-8,0,16)								
LiNbO3	(3,5,-20)	13.218	84.8	15.928	14.4	1.208	17.35	15.1	23
	Equiv. Refl.: (5,-8,-20), (8,-5,-20), (-3,8,-20), (-5,-3,-20), (-8,3,-20)								
LiNbO3	(5,5,-12)	13.183	83.34	15.838	14.2	1.549	22.04	19.37	29.34
	Equiv. Refl.: (5,-10,-12), (10,-5,-12), (-5,10,-12), (-5,-5,-12), (-10,5,-12)								
LiNbO3	(5,5,12)	13.183	83.34	14.969	14.2	1.549	22.04	19.37	29.34
	Equiv. Refl.: (5,-10,12), (10,-5,12), (-5,10,12), (-5,-5,12), (-10,5,12)								
Quartz	(8,1,4)	13.267	88.29	14.516	12.6	0.397	4.99	4.96	7.04
	Equiv. Refl.: (8,-9,-4)								
Quartz	(-9,1,-4)	13.267	88.29	14.506	12.6	0.397	4.99	4.96	7.03
Quartz	(1,8,-4)	13.267	88.29	14.505	12.6	0.397	4.99	4.96	7.03
Quartz	(-9,8,4)	13.267	88.29	14.504	12.6	0.397	4.99	4.96	7.03
Quartz	(1,-9,4)	13.267	88.29	14.503	12.6	0.397	4.99	4.96	7.03
Sapph	(3,4,20)	13.224	85.06	14.062	11.7	1.148	13.41	14.35	19.64
	Equiv. Refl.: (3,-7,-20), (4,3,-20), (4,-7,20), (7,-3,-20), (7,-4,20), (-3,7,20), (-3,-4,-20), (-4,7,-20), (-4,-3,20), (-7,3,20), (-7,4,-20)								
Quartz	(-1,9,4)	13.267	88.29	13.968	12.3	0.397	4.89	4.96	6.96
Quartz	(-1,-8,-4)	13.267	88.29	13.967	12.3	0.397	4.89	4.96	6.96
Quartz	(-8,-1,4)	13.267	88.29	13.965	12.3	0.397	4.89	4.96	6.96
Quartz	(9,-1,-4)	13.267	88.29	13.964	12.3	0.397	4.89	4.96	6.96
	Equiv. Refl.: (-8,9,-4)								
Quartz	(9,-8,4)	13.267	88.29	13.961	12.3	0.397	4.89	4.96	6.96
LiNbO3	(3,-8,20)	13.218	84.8	13.942	14.4	1.208	17.35	15.1	23
	Equiv. Refl.: (5,3,20), (8,-3,20), (-3,-5,20), (-5,8,20), (-8,5,20)								
LiNbO3	(3,-10,10)	13.143	81.98	13.895	12.7	1.871	23.7	23.39	33.3
	Equiv. Refl.: (7,3,10), (10,-3,10), (-3,-7,10), (-7,10,10), (-10,7,10)								
LiNbO3	(3,7,-10)	13.143	81.98	13.813	12.7	1.871	23.7	23.39	33.3
	Equiv. Refl.: (-3,10,-10), (-7,-3,-10), (-10,3,-10)								
LiNbO3	(7,-10,-10)	13.143	81.98	13.812	12.7	1.871	23.7	23.39	33.3
	Equiv. Refl.: (10,-7,-10)								
LiNbO3	(2,3,26)	13.112	81.05	13.709	12.4	2.089	25.81	26.11	36.72
	Equiv. Refl.: (3,-5,26), (5,-3,26), (-2,5,26), (-3,-2,26), (-5,2,26)								
LiNbO3	(2,-5,-26)	13.112	81.05	13.648	12.4	2.089	25.81	26.11	36.72
	Equiv. Refl.: (3,2,-26), (5,-2,-26), (-2,-3,-26), (-3,5,-26), (-5,3,-26)								
Quartz	(-8,9,4)	13.267	88.29	13.633	12.6	0.397	4.99	4.96	7.04
	Equiv. Refl.: (-8,-1,-4)								
Quartz	(9,-1,4)	13.267	88.29	13.623	12.6	0.397	4.99	4.96	7.03
	Equiv. Refl.: (-1,-8,4)								
Quartz	(9,-8,-4)	13.267	88.29	13.622	12.6	0.397	4.99	4.96	7.03
Quartz	(-1,9,-4)	13.267	88.29	13.621	12.6	0.397	4.99	4.96	7.03
Quartz	(1,-9,-4)	13.267	88.29	13.606	12.3	0.397	4.89	4.96	6.96
Quartz	(1,8,4)	13.267	88.29	13.605	12.3	0.397	4.89	4.96	6.96
	Equiv. Refl.: (8,1,-4), (8,-9,4)								

Ei =	13.273	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(-9,1,4)	13.267	88.29	13.604	12.3	0.397	4.89	4.96	6.96
Quartz	(-9,8,-4)	13.267	88.29	13.601	12.3	0.397	4.89	4.96	6.96
LiNbO3	(1,2,-28)	13.05	79.49	10.343	9.2	2.463	22.75	30.79	38.28
	Equiv. Refl.: (2,-3,-28), (3,-2,-28), (-1,3,-28), (-2,-1,-28), (-3,1,-28)								
LiNbO3	(4,-9,16)	13.005	78.47	10.332	9.3	2.708	25.12	33.85	42.15
	Equiv. Refl.: (5,4,16), (9,-4,16), (-4,-5,16), (-5,9,16), (-9,5,16)								
Quartz	(1,4,10)	13.272	89.27	10.268	11.4	0.169	1.92	2.11	2.85
Quartz	(1,-5,-10)	13.272	89.27	10.264	11.4	0.169	1.92	2.11	2.85
Quartz	(4,1,-10)	13.272	89.27	10.254	11.4	0.169	1.92	2.11	2.85
Quartz	(4,-5,10)	13.272	89.27	10.253	11.4	0.169	1.92	2.11	2.85
LiNbO3	(1,-3,28)	13.05	79.49	10.225	9.2	2.463	22.75	30.79	38.28
	Equiv. Refl.: (2,1,28), (3,-1,28), (-1,-2,28), (-2,3,28), (-3,2,28)								
LiNbO3	(2,7,-14)	12.99	78.14	10.189	8.8	2.787	24.52	34.83	42.59
	Equiv. Refl.: (-2,9,-14), (-7,-2,-14), (-9,2,-14)								
LiNbO3	(7,-9,-14)	12.99	78.14	10.188	8.8	2.787	24.51	34.83	42.59
	Equiv. Refl.: (9,-7,-14)								
Quartz	(-5,4,-10)	13.272	89.27	10.171	11.3	0.169	1.91	2.11	2.84
Quartz	(-5,1,10)	13.272	89.27	10.164	11.3	0.169	1.91	2.11	2.84
LiNbO3	(4,5,-16)	13.005	78.47	10.076	9.3	2.708	25.12	33.85	42.15
	Equiv. Refl.: (5,-9,-16), (9,-5,-16), (-4,9,-16), (-5,-4,-16), (-9,4,-16)								
Quartz	(-1,-4,-10)	13.272	89.27	9.949	11.4	0.169	1.92	2.11	2.85
Quartz	(-1,5,10)	13.272	89.27	9.945	11.4	0.169	1.92	2.11	2.85
Quartz	(-4,-1,10)	13.272	89.27	9.937	11.4	0.169	1.92	2.11	2.85
Quartz	(-4,5,-10)	13.272	89.27	9.936	11.4	0.169	1.92	2.11	2.85
Quartz	(5,-4,10)	13.272	89.27	9.851	11.3	0.169	1.91	2.11	2.84
Quartz	(5,-1,-10)	13.272	89.27	9.845	11.3	0.169	1.91	2.11	2.84
LiNbO3	(2,-9,14)	12.99	78.14	9.637	8.8	2.787	24.52	34.83	42.59
	Equiv. Refl.: (7,2,14), (9,-2,14), (-2,-7,14)								
LiNbO3	(-7,9,14)	12.99	78.14	9.636	8.8	2.787	24.51	34.83	42.59
	Equiv. Refl.: (-9,7,14)								
LiNbO3	(4,-10,-10)	12.921	76.77	9.504	8.3	3.122	25.8	39.02	46.78
	Equiv. Refl.: (6,4,-10), (10,-4,-10), (-4,-6,-10), (-6,10,-10), (-10,6,-10)								
LiNbO3	(4,6,10)	12.921	76.77	9.256	8.3	3.122	25.8	39.02	46.78
	Equiv. Refl.: (6,-10,10), (10,-6,10), (-4,10,10), (-6,-4,10), (-10,4,10)								
LiNbO3	(2,8,6)	13.023	78.87	8.873	8	2.611	20.76	32.64	38.68
	Equiv. Refl.: (8,-10,6), (10,-8,6), (-2,10,6), (-8,-2,6), (-10,2,6)								
LiNbO3	(0,-9,6)	12.799	74.64	8.602	7.5	3.647	27.37	45.58	53.17
	Equiv. Refl.: (9,0,6), (-9,9,6)								
LiNbO3	(0,9,-6)	12.799	74.64	8.553	7.5	3.647	27.37	45.58	53.17
	Equiv. Refl.: (9,-9,-6), (-9,0,-6)								
Quartz	(9,-2,5)	13.233	85.57	8.527	7	1.029	7.23	12.87	14.76
Quartz	(9,-7,-5)	13.233	85.57	8.526	7	1.029	7.23	12.87	14.76
LiNbO3	(3,7,8)	12.866	75.78	8.523	7.5	3.364	25.15	42.05	48.99
	Equiv. Refl.: (7,-10,8), (10,-7,8), (-3,10,8), (-7,-3,8), (-10,3,8)								
Quartz	(-7,9,5)	13.233	85.57	8.52	7	1.029	7.23	12.87	14.76
	Equiv. Refl.: (-7,-2,-5)								
Quartz	(-2,9,-5)	13.233	85.57	8.519	7	1.029	7.23	12.87	14.76
	Equiv. Refl.: (-2,-7,5)								
LiNbO3	(2,-10,-6)	13.023	78.87	8.507	8	2.611	20.76	32.64	38.68
	Equiv. Refl.: (8,2,-6), (10,-2,-6), (-2,-8,-6), (-8,10,-6), (-10,8,-6)								

Ei =	13.273	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(3,4,-22)	12.974	77.81	8.421	7.5	2.867	21.52	35.83	41.79
	Equiv. Refl.: (4,-7,-22), (7,-4,-22), (-3,7,-22), (-4,-3,-22), (-7,3,-22)								
Quartz	(-9,2,-5)	13.233	85.57	8.42	7	1.029	7.23	12.87	14.76
	Equiv. Refl.: (-9,7,5)								
Quartz	(7,2,5)	13.233	85.57	8.415	7	1.029	7.23	12.87	14.76
Quartz	(2,-9,5)	13.233	85.57	8.414	7	1.029	7.23	12.87	14.76
	Equiv. Refl.: (7,-9,-5)								
Quartz	(2,7,-5)	13.233	85.57	8.413	7	1.029	7.23	12.87	14.76
LiNbO3	(2,-10,0)	12.744	73.77	8.405	7.3	3.864	28.13	48.3	55.89
	Equiv. Refl.: (8,2,0), (10,-2,0), (-2,-8,0), (-8,10,0), (-10,8,0)								
LiNbO3	(0,-8,14)	12.765	74.09	8.372	7	3.783	26.57	47.29	54.24
	Equiv. Refl.: (8,0,14), (-8,8,14)								
LiNbO3	(3,-10,-8)	12.866	75.78	8.346	7.5	3.364	25.15	42.05	48.99
	Equiv. Refl.: (7,3,-8), (10,-3,-8), (-3,-7,-8), (-7,10,-8), (-10,7,-8)								
LiNbO3	(1,-7,20)	12.772	74.21	8.292	7.2	3.754	27.01	46.92	54.14
	Equiv. Refl.: (6,1,20), (7,-1,20), (-1,-6,20)								
LiNbO3	(-6,7,20)	12.772	74.21	8.291	7.2	3.754	27.01	46.92	54.14
	Equiv. Refl.: (-7,6,20)								
LiNbO3	(2,8,0)	12.744	73.77	8.29	7.3	3.864	28.13	48.3	55.89
	Equiv. Refl.: (8,-10,0), (10,-8,0), (-2,10,0), (-8,-2,0), (-10,2,0)								
LiNbO3	(1,6,-20)	12.772	74.21	8.106	7.2	3.754	27.01	46.92	54.14
	Equiv. Refl.: (6,-7,-20), (7,-6,-20), (-1,7,-20), (-6,-1,-20), (-7,1,-20)								
LiNbO3	(3,-7,22)	12.974	77.81	8.076	7.5	2.867	21.52	35.83	41.79
	Equiv. Refl.: (4,3,22), (7,-3,22), (-3,-4,22), (-4,7,22), (-7,4,22)								
Sapph	(2,7,10)	13.207	84.28	7.894	6.7	1.33	8.85	16.63	18.84
	Equiv. Refl.: (2,-9,-10), (7,2,-10), (7,-9,10), (9,-2,-10), (9,-7,10), (-2,9,10), (-2,-7,-10), (-7,9,-10), (-7,-2,10), (-9,2,10), (-9,7,-10)								
LiNbO3	(2,-10,6)	13.023	78.87	7.839	7.3	2.611	18.98	32.64	37.76
	Equiv. Refl.: (8,2,6), (10,-2,6), (-2,-8,6), (-8,10,6), (-10,8,6)								
LiNbO3	(2,8,-6)	13.023	78.87	7.768	7.3	2.611	18.98	32.64	37.76
	Equiv. Refl.: (8,-10,-6), (10,-8,-6), (-2,10,-6), (-8,-2,-6), (-10,2,-6)								
LiNbO3	(0,8,-14)	12.765	74.09	7.59	7	3.783	26.57	47.29	54.24
	Equiv. Refl.: (8,-8,-14), (-8,0,-14)								
LiNbO3	(0,-9,-6)	12.799	74.64	7.365	6.4	3.647	23.37	45.58	51.22
	Equiv. Refl.: (9,0,-6), (-9,9,-6)								
LiNbO3	(4,-9,-14)	12.535	70.81	7.249	6.2	4.62	28.73	57.75	64.5
	Equiv. Refl.: (5,4,-14), (9,-4,-14), (-4,-5,-14), (-5,9,-14), (-9,5,-14)								
LiNbO3	(5,6,-1)	13.272	89.28	7.239	17.3	0.168	2.89	2.09	3.57
	Equiv. Refl.: (5,-11,1), (6,5,1), (6,-11,-1), (11,-5,1), (11,-6,-1), (-5,11,-1), (-5,-6,1), (-6,11,1), (-6,-5,-1), (-11,5,-1), (-11,6,1)								
LiNbO3	(3,3,-24)	12.938	77.09	7.067	6.4	3.041	19.58	38.02	42.76
	Equiv. Refl.: (3,-6,-24), (6,-3,-24), (-3,6,-24), (-3,-3,-24), (-6,3,-24)								
LiNbO3	(0,1,-28)	12.598	71.65	6.984	6.2	4.403	27.08	55.04	61.34
	Equiv. Refl.: (1,-1,-28), (-1,0,-28)								
LiNbO3	(4,5,14)	12.535	70.81	6.982	6.2	4.62	28.73	57.75	64.5
	Equiv. Refl.: (5,-9,14), (9,-5,14), (-4,9,14), (-5,-4,14), (-9,4,14)								
LiNbO3	(0,-1,28)	12.598	71.65	6.971	6.2	4.403	27.08	55.04	61.34
	Equiv. Refl.: (1,0,28), (-1,1,28)								
Quartz	(-6,8,7)	13.223	85.04	6.927	5.8	1.153	6.64	14.41	15.87
	Equiv. Refl.: (-6,-2,-7)								

Ei =	13.273	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	ΘB	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(-2,8,-7)	13.223	85.04	6.926	5.8	1.153	6.64	14.41	15.87
Quartz	(-2,-6,7)	13.223	85.04	6.925	5.8	1.153	6.64	14.41	15.87
Quartz	(8,-6,-7)	13.223	85.04	6.921	5.8	1.153	6.64	14.41	15.87
Quartz	(8,-2,7)	13.223	85.04	6.92	5.8	1.153	6.64	14.41	15.87
LiNbO3	(1,4,-24)	12.481	70.11	6.906	6	4.802	28.98	60.02	66.65
	Equiv. Refl.: (4,-5,-24), (5,-4,-24), (-1,5,-24), (-4,-1,-24), (-5,1,-24)								
LiNbO3	(1,-5,24)	12.481	70.11	6.901	6	4.802	28.98	60.02	66.65
	Equiv. Refl.: (4,1,24), (5,-1,24), (-1,-4,24), (-4,5,24), (-5,4,24)								
LiNbO3	(0,9,6)	12.799	74.64	6.875	6.4	3.647	23.37	45.58	51.22
	Equiv. Refl.: (9,-9,6), (-9,0,6)								
LiNbO3	(1,4,24)	12.481	70.11	6.865	6	4.802	28.77	60.02	66.56
	Equiv. Refl.: (4,-5,24), (5,-4,24), (-1,5,24), (-4,-1,24), (-5,1,24)								
LiNbO3	(1,-5,-24)	12.481	70.11	6.829	6	4.802	28.77	60.02	66.56
	Equiv. Refl.: (4,1,-24), (5,-1,-24), (-1,-4,-24), (-4,5,-24), (-5,4,-24)								
LiNbO3	(3,3,24)	12.938	77.09	6.801	6.4	3.041	19.58	38.02	42.76
	Equiv. Refl.: (3,-6,24), (6,-3,24), (-3,6,24), (-3,-3,24), (-6,3,24)								
Quartz	(2,-8,7)	13.223	85.04	6.709	5.8	1.153	6.64	14.41	15.87
	Equiv. Refl.: (6,2,7), (6,-8,-7)								
Quartz	(2,6,-7)	13.223	85.04	6.708	5.8	1.153	6.64	14.41	15.87
Quartz	(-8,6,7)	13.223	85.04	6.705	5.8	1.153	6.64	14.41	15.87
Quartz	(-8,2,-7)	13.223	85.04	6.704	5.8	1.153	6.64	14.41	15.87
LiNbO3	(4,-10,8)	12.639	72.22	6.664	5.8	4.257	24.75	53.21	58.69
	Equiv. Refl.: (6,4,8), (10,-4,8), (-4,-6,8), (-6,10,8), (-10,6,8)								
LiNbO3	(1,8,-10)	12.694	73.02	6.6	5.8	4.054	23.66	50.68	55.93
	Equiv. Refl.: (8,-9,-10), (9,-8,-10), (-1,9,-10), (-8,-1,-10), (-9,1,-10)								
LiNbO3	(0,4,26)	12.888	76.17	6.564	6	3.266	19.54	40.83	45.27
	Equiv. Refl.: (4,-4,26), (-4,0,26)								
LiNbO3	(0,-2,-28)	12.826	75.09	6.424	5.9	3.534	20.83	44.18	48.84
	Equiv. Refl.: (2,0,-28), (-2,2,-28)								
Sapph	(3,6,12)	13.244	86.18	6.404	6	0.886	5.32	11.08	12.29
	Equiv. Refl.: (3,6,-12), (3,-9,12), (3,-9,-12), (6,3,12), (6,3,-12), (6,-9,12), (6,-9,-12), (9,-3,12), (9,-3,-12), (9,-6,12), (9,-6,-12), (-3,9,12), (-3,9,-12), (-3,-6,12), (-3,-6,-12), (-6,9,12), (-6,9,-12), (-6,-3,12), (-6,-3,-12), (-9,3,12), (-9,3,-12), (-9,6,12), (-9,6,-12)								
LiNbO3	(2,-2,28)	12.826	75.09	6.386	5.9	3.534	20.83	44.18	48.84
LiNbO3	(0,2,28)	12.826	75.09	6.385	5.9	3.534	20.83	44.18	48.84
	Equiv. Refl.: (-2,0,28)								
LiNbO3	(1,-9,10)	12.694	73.02	6.356	5.8	4.054	23.66	50.68	55.93
	Equiv. Refl.: (8,1,10), (9,-1,10), (-1,-8,10), (-8,9,10), (-9,8,10)								
LiNbO3	(4,6,-8)	12.639	72.22	6.328	5.8	4.257	24.75	53.21	58.69
	Equiv. Refl.: (6,-10,-8), (10,-6,-8), (-4,10,-8), (-6,-4,-8), (-10,4,-8)								
LiNbO3	(0,-4,-26)	12.888	76.17	6.302	6	3.266	19.54	40.83	45.27
	Equiv. Refl.: (4,0,-26), (-4,4,-26)								
LiNbO3	(4,4,-18)	12.554	71.05	6.064	5.4	4.557	24.51	56.96	62.01
	Equiv. Refl.: (4,-8,-18), (8,-4,-18), (-4,8,-18), (-4,-4,-18), (-8,4,-18)								
LiNbO3	(3,7,-4)	12.488	70.19	6.033	5.3	4.781	25.53	59.76	64.98
	Equiv. Refl.: (7,-10,-4), (10,-7,-4), (-3,10,-4), (-7,-3,-4), (-10,3,-4)								
LiNbO3	(1,-6,22)	12.519	70.59	5.999	5.3	4.676	24.83	58.45	63.51
	Equiv. Refl.: (5,1,22), (6,-1,22), (-1,-5,22), (-5,6,22), (-6,5,22)								
Quartz	(3,-1,-11)	13.193	83.7	5.916	4.9	1.465	7.17	18.31	19.66
	Equiv. Refl.: (-1,3,11)								

Ei =	13.273	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Quartz	(3,-2,11)	13.193	83.7	5.915	4.9	1.465	7.16	18.31	19.66
	Equiv. Refl.: (-1,-2,-11), (-2,3,-11)								
Quartz	(-2,-1,11)	13.193	83.7	5.914	4.9	1.465	7.16	18.31	19.66
LiNbO3	(3,-10,4)	12.488	70.19	5.913	5.3	4.781	25.53	59.76	64.98
	Equiv. Refl.: (7,3,4), (10,-3,4), (-3,-7,4), (-7,10,4), (-10,7,4)								
LiNbO3	(4,4,18)	12.554	71.05	5.903	5.4	4.557	24.51	56.96	62.01
	Equiv. Refl.: (4,-8,18), (8,-4,18), (-4,8,18), (-4,-4,18), (-8,4,18)								
Quartz	(-3,5,-10)	13.111	81.04	5.901	4.7	2.093	9.8	26.16	27.94
	Equiv. Refl.: (-3,-2,10)								
Quartz	(5,-2,-10)	13.111	81.04	5.9	4.7	2.093	9.8	26.16	27.94
	Equiv. Refl.: (5,-3,10), (-2,-3,-10)								
Quartz	(-2,5,10)	13.111	81.04	5.899	4.7	2.093	9.79	26.16	27.94
LiNbO3	(0,9,0)	12.514	70.54	5.873	5.2	4.691	24.22	58.64	63.44
	Equiv. Refl.: (9,-9,0), (-9,0,0)								
Quartz	(3,2,-10)	13.111	81.04	5.837	4.7	2.093	9.8	26.16	27.94
Quartz	(3,-5,10)	13.111	81.04	5.836	4.7	2.093	9.8	26.16	27.94
Quartz	(-5,2,10)	13.111	81.04	5.835	4.7	2.093	9.8	26.16	27.94
	Equiv. Refl.: (-5,3,-10)								
LiNbO3	(1,5,-22)	12.519	70.59	5.834	5.3	4.676	24.83	58.45	63.51
	Equiv. Refl.: (5,-6,-22), (6,-5,-22), (-1,6,-22), (-5,-1,-22), (-6,1,-22), (2,3,10), (2,-5,-10)								
Quartz	(-3,1,11)	13.193	83.7	5.813	4.9	1.465	7.17	18.31	19.66
Quartz	(1,-3,-11)	13.193	83.7	5.812	4.9	1.465	7.16	18.31	19.66
	Equiv. Refl.: (-3,2,-11)								
Quartz	(1,2,11)	13.193	83.7	5.811	4.9	1.465	7.16	18.31	19.66
Quartz	(2,-3,11)	13.193	83.7	5.81	4.9	1.465	7.16	18.31	19.66
Quartz	(2,1,-11)	13.193	83.7	5.809	4.9	1.465	7.16	18.31	19.66
LiNbO3	(1,3,-26)	12.661	72.54	5.692	5	4.175	20.73	52.19	56.15
	Equiv. Refl.: (3,-4,-26), (4,-3,-26), (-1,4,-26), (-3,-1,-26), (-4,1,-26)								
LiNbO3	(0,-9,0)	12.514	70.54	5.573	5.2	4.691	24.22	58.64	63.44
	Equiv. Refl.: (9,0,0), (-9,9,0)								
LiNbO3	(1,-4,26)	12.661	72.54	5.414	5	4.175	20.73	52.19	56.15
	Equiv. Refl.: (3,1,26), (4,-1,26), (-1,-3,26), (-3,4,26), (-4,3,26)								
Quartz	(8,0,-5)	12.99	78.16	5.351	4.2	2.784	11.7	34.79	36.71
	Equiv. Refl.: (8,-8,5), (-8,0,5), (-8,8,-5)								
Quartz	(0,8,5)	12.99	78.16	5.349	4.2	2.784	11.7	34.79	36.71
	Equiv. Refl.: (0,-8,-5)								
Sapph	(1,8,-4)	12.995	78.25	5.298	4.3	2.761	11.96	34.52	36.53
	Equiv. Refl.: (1,-9,4), (8,1,4), (8,-9,-4), (9,-1,4), (9,-8,-4), (-1,9,-4), (-1,-8,4), (-8,9,4), (-8,-1,-4), (-9,1,-4), (-9,8,4)								
Quartz	(-1,7,8)	13.247	86.41	5.215	4.5	0.832	3.77	10.4	11.07
	Equiv. Refl.: (-1,-6,-8)								
Quartz	(-6,7,-8)	13.247	86.41	5.212	4.5	0.832	3.77	10.4	11.07
Quartz	(-6,-1,8)	13.247	86.41	5.208	4.5	0.832	3.77	10.4	11.07
Quartz	(7,-1,-8)	13.247	86.41	5.206	4.5	0.832	3.77	10.4	11.07
Quartz	(7,-6,8)	13.247	86.41	5.205	4.5	0.832	3.77	10.4	11.07
Quartz	(5,5,0)	12.618	71.92	5.072	3.8	4.332	16.59	54.15	56.64
	Equiv. Refl.: (5,-10,0), (7,-6,-8), (-10,5,0)								
Quartz	(-6,7,8)	13.247	86.41	5.071	4.6	0.832	3.79	10.4	11.07
	Equiv. Refl.: (-6,-1,-8)								

Ei =	13.273	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Quartz	(7,-1,8)	13.247	86.41	5.07	4.6	0.832	3.79	10.4	11.07
	Equiv. Refl.: (-1,-6,8)								
Quartz	(-1,7,-8)	13.247	86.41	5.069	4.6	0.832	3.79	10.4	11.07
Quartz	(10,-5,0)	12.618	71.92	5.068	3.8	4.332	16.59	54.15	56.64
	Equiv. Refl.: (-5,10,0), (-5,-5,0)								
Quartz	(2,5,-8)	12.923	76.8	5.028	3.9	3.112	12.19	38.9	40.77
	Equiv. Refl.: (2,-7,8)								
Quartz	(-7,2,-8)	12.923	76.8	5.027	3.9	3.112	12.19	38.9	40.77
	Equiv. Refl.: (-7,5,8)								
Quartz	(5,2,8)	12.923	76.8	5.025	3.9	3.112	12.19	38.9	40.77
	Equiv. Refl.: (5,-7,-8)								
Quartz	(-2,7,-8)	12.923	76.8	5.024	3.9	3.112	12.19	38.9	40.77
	Equiv. Refl.: (-2,-5,8)								
Quartz	(7,-2,8)	12.923	76.8	5.023	3.9	3.112	12.19	38.9	40.77
Quartz	(7,-5,-8)	12.923	76.8	5.022	3.9	3.112	12.19	38.9	40.77
Quartz	(-5,7,8)	12.923	76.8	5.021	3.9	3.112	12.19	38.9	40.77
	Equiv. Refl.: (-5,-2,-8)								
Quartz	(-7,6,8)	13.247	86.41	4.906	4.6	0.832	3.79	10.4	11.07
Quartz	(6,1,8)	13.247	86.41	4.905	4.6	0.832	3.79	10.4	11.07
	Equiv. Refl.: (6,-7,-8)								
Quartz	(-7,1,-8)	13.247	86.41	4.903	4.6	0.832	3.79	10.4	11.07
Quartz	(1,6,-8)	13.247	86.41	4.902	4.6	0.832	3.79	10.4	11.07
Quartz	(1,-7,8)	13.247	86.41	4.901	4.6	0.832	3.79	10.4	11.07
Quartz	(1,6,8)	13.247	86.41	4.751	4.5	0.832	3.77	10.4	11.07
	Equiv. Refl.: (1,-7,-8)								
Quartz	(6,-7,8)	13.247	86.41	4.749	4.5	0.832	3.77	10.4	11.07
Quartz	(6,1,-8)	13.247	86.41	4.745	4.5	0.832	3.77	10.4	11.07
Quartz	(-7,1,8)	13.247	86.41	4.742	4.5	0.832	3.77	10.4	11.07
Quartz	(-7,6,-8)	13.247	86.41	4.741	4.5	0.832	3.77	10.4	11.07
Sapph	(4,6,-2)	13.15	82.19	4.672	4	1.82	7.2	22.75	23.86
	Equiv. Refl.: (4,-10,2), (6,4,2), (6,-10,-2), (10,-4,2), (10,-6,-2), (-4,10,-2), (-4,-6,2), (-6,10,2), (-6,-4,-2), (-10,4,-2), (-10,6,2)								
Sapph	(1,1,27)	13.148	82.12	4.614	3.9	1.837	7.17	22.96	24.06
	Equiv. Refl.: (1,1,-27), (1,-2,27), (1,-2,-27), (2,-1,27), (2,-1,-27), (-1,2,27), (-1,2,-27), (-1,-1,27), (-1,-1,-27), (-2,1,27), (-2,1,-27)								
Sapph	(2,6,14)	12.741	73.73	4.473	3.4	3.874	13.35	48.43	50.23
	Equiv. Refl.: (2,-8,-14), (6,2,-14), (6,-8,14), (8,-2,-14), (8,-6,14), (-2,8,14), (-2,-6,-14), (-6,8,-14), (-6,-2,14), (-8,2,14), (-8,6,-14)								
Sapph	(2,2,24)	12.585	71.47	4.467	3.4	4.449	15.1	55.62	57.63
	Equiv. Refl.: (2,2,-24), (2,-4,24), (2,-4,-24), (4,-2,24), (4,-2,-24), (-2,4,24), (-2,4,-24), (-2,-2,24), (-2,-2,-24), (-4,2,24), (-4,2,-24)								
Sapph	(3,5,16)	13.008	78.54	4.412	3.6	2.691	9.57	33.63	34.97
	Equiv. Refl.: (3,-8,-16), (5,3,-16), (5,-8,16), (8,-3,-16), (8,-5,16), (-3,8,16), (-3,-5,-16), (-5,8,-16), (-5,-3,16), (-8,3,16), (-8,5,-16)								
Quartz	(6,2,-7)	13.223	85.04	4.331	3.7	1.153	4.28	14.41	15.04
	Equiv. Refl.: (6,-8,7), (-8,2,7), (-8,6,-7)								
Quartz	(2,-8,-7)	13.223	85.04	4.326	3.7	1.153	4.28	14.41	15.03
Quartz	(2,6,7)	13.223	85.04	4.324	3.7	1.153	4.27	14.41	15.03
Sapph	(4,6,4)	13.253	86.89	4.136	4.5	0.721	3.23	9.01	9.57
	Equiv. Refl.: (4,-10,-4), (6,4,-4), (6,-10,4), (10,-4,-4), (10,-6,4), (-4,10,4), (-4,-6,-4), (-6,10,-4), (-6,-4,4), (-10,4,4), (-10,6,-4)								

Ei =	13.273	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-6,4,-9)	12.884	76.1	4.057	3.1	3.285	10.1	41.06	42.28
Quartz	(2,-6,-9)	12.884	76.1	4.056	3.1	3.285	10.1	41.06	42.28
	Equiv. Refl.: (-6,2,9)								
Quartz	(2,4,9)	12.884	76.1	4.055	3.1	3.285	10.1	41.06	42.28
	Equiv. Refl.: (4,2,-9), (4,-6,9)								
Quartz	(9,0,-1)	13.163	82.62	4.051	3.4	1.72	5.77	21.5	22.26
	Equiv. Refl.: (9,-9,1), (-9,0,1), (-9,9,-1)								
Quartz	(0,9,1)	13.163	82.62	4.05	3.4	1.72	5.76	21.5	22.26
	Equiv. Refl.: (0,-9,-1)								
Quartz	(8,-2,-7)	13.223	85.04	4.029	3.7	1.153	4.28	14.41	15.04
	Equiv. Refl.: (8,-6,7)								
Quartz	(-6,-8,-7)	13.223	85.04	4.028	3.7	1.153	4.28	14.41	15.04
	Equiv. Refl.: (-6,-2,7)								
Quartz	(-2,8,7)	13.223	85.04	4.023	3.7	1.153	4.28	14.41	15.03
Quartz	(-2,-6,-7)	13.223	85.04	4.021	3.7	1.153	4.27	14.41	15.03
Quartz	(-10,3,-2)	13.152	82.24	3.986	3.3	1.808	5.95	22.6	23.37
	Equiv. Refl.: (-10,7,2)								
Quartz	(3,7,-2)	13.152	82.24	3.984	3.3	1.808	5.95	22.6	23.36
	Equiv. Refl.: (3,-10,2), (7,3,2), (7,-10,-2)								
Quartz	(6,-4,9)	12.884	76.1	3.93	3.1	3.285	10.1	41.06	42.28
Quartz	(6,-2,-9)	12.884	76.1	3.929	3.1	3.285	10.1	41.06	42.28
Quartz	(-2,6,9)	12.884	76.1	3.928	3.1	3.285	10.1	41.06	42.28
	Equiv. Refl.: (-2,-4,-9), (-4,6,-9), (-4,-2,9)								
Quartz	(10,-3,2)	13.152	82.24	3.906	3.3	1.808	5.95	22.6	23.37
	Equiv. Refl.: (10,-7,-2)								
Quartz	(-3,10,-2)	13.152	82.24	3.905	3.3	1.808	5.95	22.6	23.36
	Equiv. Refl.: (-3,-7,2)								
Quartz	(-7,10,2)	13.152	82.24	3.904	3.3	1.808	5.95	22.6	23.36
	Equiv. Refl.: (-7,-3,-2)								
Quartz	(9,-4,-5)	12.743	73.75	3.87	3	3.868	11.42	48.35	49.68
	Equiv. Refl.: (9,-5,5)								
Quartz	(-4,9,5)	12.743	73.75	3.869	3	3.868	11.41	48.35	49.68
	Equiv. Refl.: (-4,-5,-5), (-5,9,-5), (-5,-4,5)								
Quartz	(-9,4,5)	12.743	73.75	3.857	3	3.868	11.42	48.35	49.68
Quartz	(4,-9,-5)	12.743	73.75	3.856	3	3.868	11.41	48.35	49.68
	Equiv. Refl.: (5,4,-5), (5,-9,5), (-9,5,-5)								
Quartz	(4,5,5)	12.743	73.75	3.855	3	3.868	11.41	48.35	49.68
Quartz	(6,4,1)	12.753	73.92	3.716	2.8	3.827	10.71	47.84	49.03
	Equiv. Refl.: (6,-10,-1), (-10,4,-1), (-10,6,1)								
Quartz	(4,6,-1)	12.753	73.92	3.715	2.8	3.827	10.71	47.84	49.03
	Equiv. Refl.: (4,-10,1)								
Quartz	(10,-4,1)	12.753	73.92	3.6	2.8	3.827	10.71	47.84	49.03
	Equiv. Refl.: (10,-6,-1), (-6,10,1), (-6,-4,-1)								
Quartz	(-4,10,-1)	12.753	73.92	3.599	2.8	3.827	10.71	47.84	49.03
	Equiv. Refl.: (-4,-6,1)								
Quartz	(-1,-1,11)	12.867	75.79	3.48	2.7	3.36	9.09	42	42.97
Quartz	(-1,2,-11)	12.867	75.79	3.479	2.7	3.36	9.09	42	42.97
	Equiv. Refl.: (-1,-1,-11)								
Quartz	(-1,2,11)	12.867	75.79	3.478	2.7	3.36	9.09	42	42.97

Ei =	13.273	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Quartz	(2,-1,11)	12.867	75.79	3.477	2.7	3.36	9.09	42	42.97
	Equiv. Refl.: (2,-1,-11)								
Quartz	(1,1,-11)	12.867	75.79	3.447	2.7	3.36	9.09	42	42.97
Quartz	(1,1,11)	12.867	75.79	3.446	2.7	3.36	9.09	42	42.97
	Equiv. Refl.: (1,-2,11)								
Quartz	(1,-2,-11)	12.867	75.79	3.445	2.7	3.36	9.09	42	42.97
Quartz	(-2,1,11)	12.867	75.79	3.444	2.7	3.36	9.09	42	42.97
	Equiv. Refl.: (-2,1,-11)								
Sapph	(1,8,5)	13.073	80.05	3.397	2.8	2.328	6.51	29.1	29.82
	Equiv. Refl.: (1,-9,-5), (8,1,-5), (8,-9,5), (9,-1,-5), (9,-8,5), (-1,9,5), (-1,-8,-5), (-8,9,-5), (-8,-1,5), (-9,1,5), (-9,8,-5)								
Quartz	(8,0,5)	12.99	78.16	3.275	2.6	2.784	7.37	34.79	35.56
	Equiv. Refl.: (8,-8,-5), (-8,0,-5), (-8,8,5)								
Quartz	(0,8,-5)	12.99	78.16	3.274	2.6	2.784	7.36	34.79	35.56
	Equiv. Refl.: (0,-8,5)								
Quartz	(0,2,11)	12.949	77.32	3.257	2.6	2.986	7.8	37.33	38.13
	Equiv. Refl.: (0,-2,-11)								
Quartz	(2,0,-11)	12.949	77.32	3.252	2.6	2.986	7.79	37.33	38.13
	Equiv. Refl.: (-2,0,11)								
Quartz	(2,-2,11)	12.949	77.32	3.251	2.6	2.986	7.79	37.33	38.13
	Equiv. Refl.: (-2,2,-11)								
Quartz	(-8,5,-7)	12.98	77.94	3.18	2.6	2.835	7.27	35.44	36.18
Quartz	(-8,3,7)	12.98	77.94	3.179	2.6	2.835	7.27	35.44	36.18
Quartz	(3,5,7)	12.98	77.94	3.178	2.6	2.835	7.27	35.44	36.18
	Equiv. Refl.: (3,-8,-7)								
Quartz	(5,3,-7)	12.98	77.94	3.174	2.6	2.835	7.26	35.44	36.18
	Equiv. Refl.: (5,-8,7)								
Quartz	(3,6,5)	12.908	76.54	3.157	2.5	3.177	7.8	39.71	40.47
	Equiv. Refl.: (3,-9,-5), (6,3,-5), (6,-9,5), (8,-3,-7), (8,-5,7)								
Quartz	(-3,8,7)	12.98	77.94	3.155	2.6	2.835	7.27	35.44	36.18
	Equiv. Refl.: (-3,-5,-7), (-9,3,5)								
Quartz	(-9,6,-5)	12.908	76.54	3.154	2.5	3.177	7.79	39.71	40.46
Quartz	(-5,8,-7)	12.98	77.94	3.152	2.6	2.835	7.26	35.44	36.18
	Equiv. Refl.: (-5,-3,7)								
Quartz	(-3,9,5)	12.908	76.54	3.148	2.5	3.177	7.8	39.71	40.47
	Equiv. Refl.: (-3,-6,-5), (-6,9,-5), (-6,-3,5)								
Quartz	(9,-3,-5)	12.908	76.54	3.145	2.5	3.177	7.79	39.71	40.46
	Equiv. Refl.: (9,-6,5)								
Quartz	(7,-4,-8)	12.757	73.97	3.092	2.3	3.812	8.79	47.66	48.46
	Equiv. Refl.: (-4,7,8), (-4,-3,-8)								
Quartz	(7,-3,8)	12.757	73.97	3.091	2.3	3.812	8.79	47.66	48.46
	Equiv. Refl.: (-3,7,-8), (-3,-4,8)								
Quartz	(-7,6,7)	12.48	70.09	3.059	2.3	4.807	10.99	60.08	61.08
Quartz	(-7,1,-7)	12.48	70.09	3.058	2.3	4.807	10.99	60.08	61.08
Quartz	(1,6,-7)	12.48	70.09	3.057	2.3	4.807	10.99	60.08	61.08
	Equiv. Refl.: (1,-7,7), (4,-7,-8), (6,1,7)								
Quartz	(4,3,8)	12.757	73.97	3.056	2.3	3.812	8.79	47.66	48.46
	Equiv. Refl.: (6,-7,-7), (-7,4,8)								
Quartz	(3,4,-8)	12.757	73.97	3.055	2.3	3.812	8.79	47.66	48.46
	Equiv. Refl.: (3,-7,8), (-7,3,-8)								

Ei =	13.273	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Quartz	(2,4,-9)	12.884	76.1	3.04	2.4	3.285	7.93	41.06	41.82
	Equiv. Refl.: (2,-6,9)								
Quartz	(-6,2,-9)	12.884	76.1	3.037	2.4	3.285	7.92	41.06	41.82
Quartz	(4,2,9)	12.884	76.1	3.036	2.4	3.285	7.92	41.06	41.82
	Equiv. Refl.: (4,-6,-9), (-6,4,9)								
Quartz	(7,-1,7)	12.48	70.09	3.032	2.3	4.807	10.99	60.08	61.08
	Equiv. Refl.: (7,-6,-7)								
Quartz	(-2,6,-9)	12.884	76.1	3.031	2.4	3.285	7.93	41.06	41.82
	Equiv. Refl.: (-2,-4,9)								
Quartz	(-1,7,-7)	12.48	70.09	3.03	2.3	4.807	10.99	60.08	61.08
	Equiv. Refl.: (-1,-6,7), (-6,-1,-7)								
Quartz	(-6,7,7)	12.48	70.09	3.029	2.3	4.807	10.99	60.08	61.08
Quartz	(6,-2,9)	12.884	76.1	3.028	2.4	3.285	7.92	41.06	41.82
	Equiv. Refl.: (-4,-2,-9)								
Quartz	(6,-4,-9)	12.884	76.1	3.027	2.4	3.285	7.92	41.06	41.82
	Equiv. Refl.: (-4,6,9)								
Quartz	(1,-8,-6)	12.975	77.85	2.989	2.2	2.859	6.41	35.73	36.3
Quartz	(1,7,6)	12.975	77.85	2.988	2.2	2.859	6.41	35.73	36.3
	Equiv. Refl.: (-8,1,6), (-8,7,-6)								
Quartz	(7,1,-6)	12.975	77.85	2.987	2.2	2.859	6.41	35.73	36.3
Quartz	(7,-8,6)	12.975	77.85	2.986	2.2	2.859	6.41	35.73	36.3
Quartz	(0,8,-4)	12.526	70.69	2.98	2.5	4.65	11.83	58.13	59.32
	Equiv. Refl.: (0,-8,4)								
Quartz	(8,0,4)	12.526	70.69	2.979	2.5	4.65	11.83	58.13	59.32
	Equiv. Refl.: (8,-8,-4), (-8,0,-4), (-8,8,4)								
Quartz	(8,-1,6)	12.975	77.85	2.945	2.6	2.859	7.36	35.73	36.48
	Equiv. Refl.: (8,-7,-6)								
Quartz	(-7,8,6)	12.975	77.85	2.944	2.6	2.859	7.36	35.73	36.48
	Equiv. Refl.: (-7,-1,-6)								
Quartz	(-1,-7,6)	12.975	77.85	2.943	2.6	2.859	7.36	35.73	36.48
Quartz	(-1,8,-6)	12.975	77.85	2.942	2.6	2.859	7.36	35.73	36.48
Sapph	(1,2,26)	13.032	79.07	2.818	2.4	2.563	6.02	32.04	32.6
	Equiv. Refl.: (1,-3,-26), (2,1,-26), (2,-3,26), (3,-1,-26), (3,-2,26), (-1,3,26), (-1,-2,-26), (-2,3,-26), (-2,-1,26), (-3,1,26), (-3,2,-26)								
Quartz	(-6,1,-9)	13.129	81.56	2.817	2.2	1.97	4.43	24.63	25.02
	Equiv. Refl.: (-6,5,9)								
Quartz	(5,-6,-9)	13.129	81.56	2.814	2.2	1.97	4.43	24.63	25.02
Quartz	(5,1,9)	13.129	81.56	2.813	2.2	1.97	4.43	24.63	25.02
Quartz	(1,5,-9)	13.129	81.56	2.812	2.2	1.97	4.43	24.63	25.02
Quartz	(1,-6,9)	13.129	81.56	2.811	2.2	1.97	4.43	24.63	25.02
Quartz	(-8,1,-6)	12.975	77.85	2.809	2.6	2.859	7.36	35.73	36.48
	Equiv. Refl.: (-8,7,6)								
Quartz	(7,1,6)	12.975	77.85	2.808	2.6	2.859	7.36	35.73	36.48
	Equiv. Refl.: (7,-8,-6)								
Quartz	(1,7,-6)	12.975	77.85	2.807	2.6	2.859	7.36	35.73	36.48
	Equiv. Refl.: (1,-8,6)								
Quartz	(9,-1,2)	12.658	72.49	2.784	2.1	4.187	8.74	52.34	53.06
	Equiv. Refl.: (9,-8,-2), (-1,9,-2), (-1,-8,2), (-8,9,2), (-8,-1,-2)								
Quartz	(8,1,2)	12.658	72.49	2.774	2.1	4.187	8.74	52.34	53.06
	Equiv. Refl.: (8,-9,-2)								

Ei =	13.273	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(1,8,-2)	12.658	72.49	2.773	2.1	4.187	8.74	52.34	53.06
	Equiv. Refl.: (1,-9,2), (-9,1,-2), (-9,8,2)								
Quartz	(-1,8,6)	12.975	77.85	2.772	2.2	2.859	6.41	35.73	36.3
Quartz	(8,-1,-6)	12.975	77.85	2.771	2.2	2.859	6.41	35.73	36.3
	Equiv. Refl.: (8,-7,6), (-1,-7,-6)								
Quartz	(-7,8,-6)	12.975	77.85	2.77	2.2	2.859	6.41	35.73	36.3
	Equiv. Refl.: (-7,-1,6)								
Quartz	(4,-4,-10)	12.866	75.77	2.759	2.1	3.366	7.15	42.07	42.67
Quartz	(4,0,10)	12.866	75.77	2.758	2.1	3.366	7.15	42.07	42.67
	Equiv. Refl.: (-4,0,-10), (-4,4,10)								
Quartz	(0,4,-10)	12.866	75.77	2.757	2.1	3.366	7.15	42.07	42.67
	Equiv. Refl.: (0,-4,10)								
Sapph	(5,5,0)	13.029	78.99	2.755	2.6	2.583	6.66	32.28	32.96
	Equiv. Refl.: (5,-10,0), (10,-5,0), (-5,10,0), (-5,-5,0), (-10,5,0)								
LiNbO3	(4,5,17)	13.256	87.13	2.738	5.6	0.665	3.71	8.31	9.1
	Equiv. Refl.: (4,-9,-17), (5,4,-17), (5,-9,17), (9,-4,-17), (9,-5,17), (-4,9,17), (-4,-5,-17), (-5,9,-17), (-5,-4,17), (-9,4,17), (-9,5,-17)								
Quartz	(-2,9,4)	12.778	74.3	2.574	2.2	3.73	8.31	46.62	47.36
	Equiv. Refl.: (-2,-7,-4), (-7,9,-4), (-7,-2,4)								
Quartz	(9,-2,-4)	12.778	74.3	2.572	2.2	3.73	8.31	46.62	47.36
	Equiv. Refl.: (9,-7,4)								
Sapph	(0,8,10)	12.947	77.28	2.562	2.4	2.996	7.14	37.45	38.13
	Equiv. Refl.: (0,-8,-10), (8,0,-10), (8,-8,10), (-8,0,10), (-8,8,-10)								
Quartz	(10,-4,3)	13.16	82.5	2.523	2.3	1.746	4.06	21.83	22.2
	Equiv. Refl.: (10,-6,-3), (-4,10,-3), (-4,-6,3)								
Quartz	(-6,10,3)	13.16	82.5	2.522	2.3	1.746	4.06	21.83	22.2
	Equiv. Refl.: (-6,-4,-3)								
Quartz	(2,7,4)	12.778	74.3	2.487	2.2	3.73	8.31	46.62	47.36
	Equiv. Refl.: (2,-9,-4), (7,2,-4), (7,-9,4)								
Quartz	(-9,2,4)	12.778	74.3	2.485	2.2	3.73	8.31	46.62	47.36
	Equiv. Refl.: (-9,7,-4)								
Quartz	(3,7,0)	12.95	77.33	2.476	2.2	2.983	6.46	37.29	37.84
	Equiv. Refl.: (3,-10,0), (7,3,0), (7,-10,0), (-10,3,0), (-10,7,0)								
Quartz	(4,6,-3)	13.16	82.5	2.409	2.3	1.746	4.06	21.83	22.2
	Equiv. Refl.: (4,-10,3), (-10,6,3)								
Quartz	(6,4,3)	13.16	82.5	2.408	2.3	1.746	4.06	21.83	22.2
	Equiv. Refl.: (-10,4,-3)								
Quartz	(6,-10,-3)	13.16	82.5	2.407	2.3	1.746	4.06	21.83	22.2
Quartz	(0,9,-1)	13.163	82.62	2.39	2.3	1.72	3.91	21.5	21.85
	Equiv. Refl.: (0,-9,1), (9,0,1), (9,-9,-1), (-9,0,-1), (-9,9,1)								
Quartz	(6,-1,9)	13.129	81.56	2.375	2.2	1.97	4.43	24.63	25.02
	Equiv. Refl.: (6,-5,-9)								
Quartz	(-5,6,9)	13.129	81.56	2.374	2.2	1.97	4.43	24.63	25.02
Quartz	(-1,-5,9)	13.129	81.56	2.373	2.2	1.97	4.43	24.63	25.02
	Equiv. Refl.: (-5,-1,-9)								
Quartz	(-1,6,-9)	13.129	81.56	2.372	2.2	1.97	4.43	24.63	25.02
Quartz	(0,8,4)	12.526	70.69	2.343	2	4.65	9.27	58.13	58.87
	Equiv. Refl.: (0,-8,-4)								
Quartz	(8,0,-4)	12.526	70.69	2.342	2	4.65	9.26	58.13	58.86
	Equiv. Refl.: (8,-8,4), (-8,0,4), (-8,8,-4)								

Ei =	13.273	keV							
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	ΔEg	ΔEt
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	2m, 50μm	2m, 50μm
								[meV]	[meV]
Quartz	(10,-3,0)	12.95	77.33	2.331	2.2	2.983	6.46	37.29	37.84
	Equiv. Refl.: (10,-7,0), (-3,10,0), (-3,-7,0), (-7,10,0), (-7,-3,0)								
Quartz	(9,-1,1)	12.501	70.37	2.32	1.9	4.735	9.09	59.19	59.89
	Equiv. Refl.: (9,-8,-1), (-1,9,-1), (-1,-8,1), (-8,9,1), (-8,-1,-1)								
Quartz	(6,-3,-9)	12.802	74.69	2.309	2.1	3.635	7.5	45.43	46.05
	Equiv. Refl.: (-3,6,9), (-3,6,-9), (-3,-3,9), (-3,-3,-9)								
Quartz	(6,-3,9)	12.802	74.69	2.308	2.1	3.635	7.5	45.43	46.05
Quartz	(3,3,-9)	12.802	74.69	2.299	2.1	3.635	7.5	45.43	46.05
	Equiv. Refl.: (3,-6,9), (3,-6,-9), (-6,3,9), (-6,3,-9)								
Quartz	(3,3,9)	12.802	74.69	2.298	2.1	3.635	7.5	45.43	46.05
Quartz	(-7,9,-5)	13.233	85.57	1.92	2.2	1.029	2.27	12.87	13.07
	Equiv. Refl.: (-7,-2,5)								
Quartz	(9,-2,-5)	13.233	85.57	1.918	2.2	1.029	2.27	12.87	13.07
	Equiv. Refl.: (9,-7,5)								
Quartz	(-2,-7,-5)	13.233	85.57	1.917	2.2	1.029	2.27	12.87	13.07
Quartz	(-2,9,5)	13.233	85.57	1.915	2.2	1.029	2.27	12.87	13.06
Sapph	(1,8,-1)	12.863	75.72	1.906	2	3.379	6.9	42.24	42.8
	Equiv. Refl.: (1,-9,1), (8,1,1), (8,-9,-1), (9,-1,1), (9,-8,-1), (-1,9,-1), (-1,-8,1), (-8,9,1), (-8,-1,-1), (-9,1,-1), (-9,8,1)								
Sapph	(4,5,-10)	12.682	72.84	1.878	2	4.098	8.11	51.22	51.86
	Equiv. Refl.: (4,-9,10), (5,4,10), (5,-9,-10), (9,-4,10), (9,-5,-10), (-4,9,-10), (-4,-5,10), (-5,9,10), (-5,-4,-10), (-9,4,-10), (-9,5,10)								
Quartz	(4,-8,-7)	12.898	76.35	1.876	2	3.223	6.32	40.29	40.78
	Equiv. Refl.: (-8,4,7), (-8,4,-7)								
Quartz	(4,4,7)	12.898	76.35	1.875	2	3.223	6.32	40.29	40.78
	Equiv. Refl.: (4,4,-7), (4,-8,7)								
Quartz	(8,-4,7)	12.898	76.35	1.869	2	3.223	6.32	40.29	40.78
	Equiv. Refl.: (8,-4,-7), (-4,8,7), (-4,8,-7), (-4,-4,-7)								
Quartz	(-4,-4,7)	12.898	76.35	1.868	2	3.223	6.32	40.29	40.78
Quartz	(-3,7,8)	12.757	73.97	1.86	1.9	3.812	7.3	47.66	48.21
Quartz	(-3,-4,-8)	12.757	73.97	1.859	1.9	3.812	7.3	47.66	48.21
Quartz	(7,-4,8)	12.757	73.97	1.858	1.9	3.812	7.29	47.66	48.21
	Equiv. Refl.: (-4,7,-8), (-4,-3,8)								
Quartz	(7,-3,-8)	12.757	73.97	1.857	1.9	3.812	7.29	47.66	48.21
Quartz	(10,-4,-2)	12.907	76.52	1.851	1.9	3.182	5.93	39.78	40.22
	Equiv. Refl.: (10,-6,2), (-4,10,2), (-4,-6,-2), (-6,10,-2), (-6,-4,2)								
Sapph	(0,2,-26)	12.769	74.16	1.85	2	3.765	7.4	47.07	47.65
	Equiv. Refl.: (0,-2,26), (2,0,26), (2,-2,-26), (-2,0,-26), (-2,2,26)								
Quartz	(3,4,8)	12.757	73.97	1.84	1.9	3.812	7.3	47.66	48.21
	Equiv. Refl.: (3,-7,-8)								
Quartz	(4,3,-8)	12.757	73.97	1.838	1.9	3.812	7.29	47.66	48.21
	Equiv. Refl.: (4,-7,8), (-7,3,8), (-7,4,-8)								
Quartz	(1,8,-1)	12.501	70.37	1.832	1.9	4.735	9.09	59.19	59.89
	Equiv. Refl.: (1,-9,1), (8,1,1), (8,-9,-1), (-9,1,-1), (-9,8,1)								
Sapph	(1,5,20)	12.7	73.1	1.802	1.9	4.033	7.7	50.41	50.99
	Equiv. Refl.: (1,-6,-20), (5,1,-20), (5,-6,20), (6,-1,-20), (6,-5,20), (-1,6,20), (-1,-5,-20), (-5,6,-20), (-5,-1,20), (-6,1,20), (-6,5,-20)								
Quartz	(-1,4,10)	12.616	71.9	1.781	1.8	4.339	7.75	54.24	54.79
	Equiv. Refl.: (-1,-3,-10)								
Quartz	(-3,4,-10)	12.616	71.9	1.78	1.8	4.339	7.75	54.24	54.79
Quartz	(-3,-1,10)	12.616	71.9	1.779	1.8	4.339	7.74	54.24	54.79

Ei =	13.273	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(4,-1,-10)	12.616	71.9	1.778	1.8	4.339	7.74	54.24	54.79
	Equiv. Refl.: (4,-3,10)								
Quartz	(6,2,-6)	12.56	71.13	1.725	1.8	4.536	7.97	56.7	57.26
	Equiv. Refl.: (6,-8,6), (-8,6,-6)								
Quartz	(-8,2,6)	12.56	71.13	1.724	1.8	4.536	7.97	56.7	57.26
Quartz	(2,6,6)	12.56	71.13	1.723	1.8	4.536	7.96	56.7	57.26
	Equiv. Refl.: (2,-8,-6)								
Quartz	(4,6,2)	12.907	76.52	1.691	1.9	3.182	5.94	39.78	40.22
	Equiv. Refl.: (4,-10,-2), (6,4,-2), (6,-10,2), (-10,4,2), (-10,6,-2)								
Quartz	(8,-2,-6)	12.56	71.13	1.685	1.8	4.536	7.97	56.7	57.26
	Equiv. Refl.: (8,-6,6), (-6,8,-6), (-6,-2,6)								
Quartz	(-2,8,6)	12.56	71.13	1.684	1.8	4.536	7.96	56.7	57.26
	Equiv. Refl.: (-2,-6,-6)								
Quartz	(2,1,11)	13.193	83.7	1.683	1.8	1.465	2.7	18.31	18.51
	Equiv. Refl.: (2,-3,-11)								
Quartz	(1,3,10)	12.616	71.9	1.682	1.8	4.339	7.75	54.24	54.79
Quartz	(1,-4,-10)	12.616	71.9	1.681	1.8	4.339	7.75	54.24	54.79
	Equiv. Refl.: (3,-4,10)								
Quartz	(3,1,-10)	12.616	71.9	1.68	1.8	4.339	7.74	54.24	54.79
Quartz	(-3,1,-11)	13.193	83.7	1.679	1.8	1.465	2.7	18.31	18.5
	Equiv. Refl.: (-4,1,10), (-4,3,-10)								
Quartz	(1,2,-11)	13.193	83.7	1.677	1.8	1.465	2.69	18.31	18.5
	Equiv. Refl.: (1,-3,11)								
Quartz	(-3,2,11)	13.193	83.7	1.676	1.8	1.465	2.69	18.31	18.5
Quartz	(7,2,-5)	13.233	85.57	1.671	2.2	1.029	2.27	12.87	13.07
	Equiv. Refl.: (7,-9,5)								
Quartz	(-9,2,5)	13.233	85.57	1.67	2.2	1.029	2.27	12.87	13.07
	Equiv. Refl.: (-9,7,-5)								
Quartz	(2,7,5)	13.233	85.57	1.668	2.2	1.029	2.27	12.87	13.07
Quartz	(2,-9,-5)	13.233	85.57	1.667	2.2	1.029	2.27	12.87	13.06
Quartz	(0,6,8)	12.674	72.72	1.581	1.6	4.13	6.81	51.62	52.07
	Equiv. Refl.: (0,-6,-8), (6,0,-8), (6,-6,8), (-6,0,8), (-6,6,-8)								
LiNbO3	(4,6,-11)	13.082	80.27	1.542	2.5	2.276	5.7	28.45	29.02
	Equiv. Refl.: (4,-10,11), (6,4,11), (6,-10,-11), (10,-4,11), (10,-6,-11), (-4,10,-11), (-4,-6,11), (-6,10,11), (-6,-4,-11), (-10,4,-11), (-10,6,11)								
Quartz	(10,-4,-1)	12.753	73.92	1.519	1.6	3.827	6.07	47.84	48.22
	Equiv. Refl.: (10,-6,1), (-4,10,1), (-4,-6,-1), (-6,10,-1), (-6,-4,1)								
Quartz	(4,6,1)	12.753	73.92	1.49	1.6	3.827	6.07	47.84	48.22
	Equiv. Refl.: (4,-10,-1), (6,4,-1), (6,-10,1), (-10,4,1), (-10,6,-1)								
Sapph	(4,5,11)	12.87	75.84	1.484	1.6	3.35	5.49	41.87	42.23
	Equiv. Refl.: (4,-9,-11), (5,4,-11), (5,-9,11), (9,-4,-11), (9,-5,11), (-4,9,11), (-4,-5,-11), (-5,9,-11), (-5,-4,11), (-9,4,11), (-9,5,-11)								
Quartz	(4,-2,10)	12.532	70.76	1.479	1.5	4.633	7.13	57.91	58.35
	Equiv. Refl.: (4,-2,-10)								
Quartz	(-2,4,-10)	12.532	70.76	1.478	1.5	4.633	7.12	57.91	58.35
	Equiv. Refl.: (-2,-2,10)								
Quartz	(-2,4,10)	12.532	70.76	1.477	1.5	4.633	7.12	57.91	58.35
	Equiv. Refl.: (-2,-2,-10), (-4,2,10)								
Quartz	(-4,2,-10)	12.532	70.76	1.476	1.5	4.633	7.13	57.91	58.35

Ei = Cryst	13.273 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(2,2,-10) Equiv. Refl.: (2,-4,10)	12.532	70.76	1.475	1.5	4.633	7.12	57.91	58.35
Quartz	(2,2,10) Equiv. Refl.: (2,-4,-10)	12.532	70.76	1.474	1.5	4.633	7.12	57.91	58.35
Quartz	(6,3,5) Equiv. Refl.: (6,-9,-5)	12.908	76.54	1.473	1.6	3.177	5.01	39.71	40.02
Quartz	(3,6,-5) Equiv. Refl.: (3,-9,5), (-9,3,-5), (-9,6,5)	12.908	76.54	1.472	1.6	3.177	5.01	39.71	40.02
Quartz	(9,-3,5) Equiv. Refl.: (9,-6,-5), (-6,9,5), (-6,-3,-5)	12.908	76.54	1.461	1.6	3.177	5.01	39.71	40.02
Quartz	(-3,9,-5) Equiv. Refl.: (-3,-6,5)	12.908	76.54	1.46	1.6	3.177	5.01	39.71	40.02
Quartz	(-2,3,11) Equiv. Refl.: (-2,-1,-11)	13.193	83.7	1.439	1.8	1.465	2.7	18.31	18.51
Quartz	(3,-1,11)	13.193	83.7	1.435	1.8	1.465	2.7	18.31	18.5
Quartz	(3,-2,-11) Equiv. Refl.: (-1,3,-11), (-1,-2,11)	13.193	83.7	1.433	1.8	1.465	2.69	18.31	18.5
Quartz	(1,8,3) Equiv. Refl.: (1,-9,-3), (8,1,-3), (10,-3,-2), (10,-7,2), (-9,1,3), (-9,8,-3)	12.915	76.67	1.366	1.4	3.145	4.45	39.32	39.57
Quartz	(8,-9,3)	12.915	76.67	1.365	1.4	3.145	4.45	39.32	39.57
Quartz	(-3,10,2) Equiv. Refl.: (-3,-7,-2), (-7,10,-2), (-7,-3,2)	13.152	82.24	1.364	1.6	1.808	2.85	22.6	22.78
Quartz	(1,8,2) Equiv. Refl.: (1,-9,-2), (8,1,-2), (8,-9,2)	12.658	72.49	1.36	1.4	4.187	5.76	52.34	52.65
Quartz	(-9,1,2) Equiv. Refl.: (-9,8,-2)	12.658	72.49	1.359	1.4	4.187	5.76	52.34	52.65
Quartz	(-10,3,2) Equiv. Refl.: (-10,7,-2)	13.152	82.24	1.33	1.6	1.808	2.86	22.6	22.78
Quartz	(1,-6,-9) Equiv. Refl.: (3,7,2), (3,-10,-2), (7,3,-2), (7,-10,2)	13.129	81.56	1.328	1.4	1.97	2.79	24.63	24.78
Quartz	(1,5,9)	13.129	81.56	1.327	1.4	1.97	2.79	24.63	24.78
Quartz	(5,1,-9) Equiv. Refl.: (5,-6,9)	13.129	81.56	1.325	1.4	1.97	2.79	24.63	24.78
Quartz	(-6,5,-9)	13.129	81.56	1.322	1.4	1.97	2.78	24.63	24.78
Quartz	(-6,1,9)	13.129	81.56	1.321	1.4	1.97	2.78	24.63	24.78
LiNbO3	(2,2,27) Equiv. Refl.: (2,2,-27), (2,-4,27), (2,-4,-27), (4,-2,27), (4,-2,-27), (-2,4,27), (-2,4,-27), (-2,-2,27), (-2,-2,-27), (-4,2,27), (-4,2,-27)	12.999	78.34	1.304	2.1	2.739	5.79	34.24	34.72
Quartz	(9,-4,5) Equiv. Refl.: (9,-5,-5), (-4,9,-5), (-4,-5,5), (-5,9,5), (-5,-4,-5)	12.743	73.75	1.302	1.4	3.868	5.35	48.35	48.64
Quartz	(4,5,-5) Equiv. Refl.: (4,-9,5), (5,4,5), (5,-9,-5), (-9,4,-5), (-9,5,5)	12.743	73.75	1.285	1.4	3.868	5.35	48.35	48.64
Quartz	(-5,10,3) Equiv. Refl.: (-5,-5,-3)	13.079	80.18	1.247	1.4	2.297	3.25	28.71	28.89
Quartz	(10,-5,3) Equiv. Refl.: (10,-5,-3), (-5,10,-3), (-5,-5,3)	13.079	80.18	1.246	1.4	2.297	3.25	28.71	28.89
LiNbO3	(2,7,13) Equiv. Refl.: (2,-9,-13), (7,2,-13), (7,-9,13), (9,-2,-13), (9,-7,13), (-2,9,13), (-2,-7,-13), (-7,9,-13), (-7,-2,13), (-9,2,13), (-9,7,-13), (5,5,3), (5,-10,-3), (-8,9,-2), (-8,-1,2)	12.78	74.34	1.233	1.9	3.721	6.95	46.51	47.03
Quartz	(5,5,-3) Equiv. Refl.: (5,-10,3), (9,-1,-2), (9,-8,2), (-1,9,2), (-1,-8,-2), (-10,5,3), (-10,5,-3)	13.079	80.18	1.232	1.4	2.297	3.25	28.71	28.89

Ei =	13.273	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(9,-1,-3)	12.915	76.67	1.227	1.4	3.145	4.45	39.32	39.57
	Equiv. Refl.: (9,-8,3), (-1,9,3), (-1,-8,-3)								
Quartz	(-8,9,-3)	12.915	76.67	1.226	1.4	3.145	4.45	39.32	39.57
	Equiv. Refl.: (-8,-1,3)								
Quartz	(-1,9,-3)	12.915	76.67	1.203	1.3	3.145	4.14	39.32	39.53
	Equiv. Refl.: (-1,-8,3), (-8,9,3), (-8,-1,-3)								
Quartz	(9,-1,3)	12.915	76.67	1.202	1.3	3.145	4.14	39.32	39.53
	Equiv. Refl.: (9,-8,-3)								
Sapph	(2,6,-13)	12.498	70.32	1.185	1.3	4.748	6.16	59.34	59.66
	Equiv. Refl.: (2,-8,13), (6,2,13), (6,-8,-13), (8,-2,13), (8,-6,-13), (-2,8,-13), (-2,-6,13), (-6,8,13), (-6,-2,-13), (-8,2,-13), (-8,6,13)								
Quartz	(8,1,3)	12.915	76.67	1.184	1.3	3.145	4.14	39.32	39.53
	Equiv. Refl.: (8,-9,-3)								
Quartz	(1,8,-3)	12.915	76.67	1.183	1.3	3.145	4.14	39.32	39.53
	Equiv. Refl.: (1,-9,3), (-9,1,-3), (-9,8,3)								
Sapph	(4,4,15)	12.645	72.3	1.156	1.3	4.235	5.44	52.94	53.22
	Equiv. Refl.: (4,4,-15), (4,-8,15), (4,-8,-15), (8,-4,15), (8,-4,-15), (-4,8,15), (-4,8,-15), (-4,-4,15), (-4,-4,-15), (-8,4,15), (-8,4,-15)								
Quartz	(-10,6,-3)	13.16	82.5	1.116	1.3	1.746	2.23	21.83	21.94
Quartz	(4,6,3)	13.16	82.5	1.115	1.3	1.746	2.23	21.83	21.94
	Equiv. Refl.: (4,-10,-3), (-10,4,3)								
Quartz	(6,4,-3)	13.16	82.5	1.114	1.3	1.746	2.22	21.83	21.94
	Equiv. Refl.: (6,-10,3)								
Quartz	(-1,6,9)	13.129	81.56	1.089	1.4	1.97	2.79	24.63	24.78
Quartz	(-1,-5,-9)	13.129	81.56	1.087	1.4	1.97	2.79	24.63	24.78
	Equiv. Refl.: (-5,-1,9)								
Quartz	(-5,6,-9)	13.129	81.56	1.086	1.4	1.97	2.79	24.63	24.78
Quartz	(6,-5,9)	13.129	81.56	1.084	1.4	1.97	2.78	24.63	24.78
Quartz	(6,-1,-9)	13.129	81.56	1.083	1.4	1.97	2.78	24.63	24.78
Quartz	(0,7,7)	12.98	77.94	1.062	1.2	2.835	3.42	35.44	35.61
	Equiv. Refl.: (0,-7,-7)								
Quartz	(-7,7,-7)	12.98	77.94	1.06	1.2	2.835	3.41	35.44	35.6
Quartz	(7,0,-7)	12.98	77.94	1.059	1.2	2.835	3.41	35.44	35.6
	Equiv. Refl.: (7,-7,7), (-7,0,7)								
Quartz	(0,6,-8)	12.674	72.72	1.04	1.1	4.13	4.68	51.62	51.83
	Equiv. Refl.: (0,-6,8), (6,0,8), (6,-6,-8), (-6,0,-8), (-6,6,8)								
Sapph	(2,7,-8)	12.893	76.25	1.009	1.2	3.248	3.85	40.6	40.78
	Equiv. Refl.: (2,-9,8), (7,2,8), (7,-9,-8), (9,-2,8), (9,-7,-8), (-2,9,-8), (-2,-7,8), (-7,9,8), (-7,-2,-8), (-9,2,-8), (-9,7,8)								
Quartz	(8,-3,7)	12.98	77.94	0.998	1.1	2.835	3.22	35.44	35.59
Quartz	(8,-5,-7)	12.98	77.94	0.997	1.1	2.835	3.22	35.44	35.59
	Equiv. Refl.: (-3,8,-7), (-3,-5,7)								
LiNbO3	(2,4,-23)	12.646	72.32	0.996	1.6	4.231	6.6	52.89	53.3
	Equiv. Refl.: (2,-6,23), (4,2,23), (4,-6,-23), (6,-2,23), (6,-4,-23), (-2,6,-23), (-2,-4,23), (-4,6,23), (-4,-2,-23), (-6,2,-23), (-6,4,23)								
Quartz	(-5,8,7)	12.98	77.94	0.994	1.1	2.835	3.21	35.44	35.59
	Equiv. Refl.: (-5,-3,-7)								
Sapph	(0,1,26)	12.5	70.36	0.976	1.1	4.738	5.2	59.23	59.45
	Equiv. Refl.: (0,-1,-26), (1,0,-26), (1,-1,26), (-1,0,26), (-1,1,-26)								

Ei =	13.273	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(3,-8,7)	12.98	77.94	0.973	1.1	2.835	3.22	35.44	35.59
	Equiv. Refl.: (-8,3,-7), (-8,5,7)								
Quartz	(3,5,-7)	12.98	77.94	0.972	1.1	2.835	3.21	35.44	35.59
Quartz	(2,5,8)	12.923	76.8	0.969	1.1	3.112	3.38	38.9	39.05
	Equiv. Refl.: (2,-7,-8), (5,3,7), (5,-8,-7), (-7,5,-8)								
Quartz	(-7,2,8)	12.923	76.8	0.968	1.1	3.112	3.38	38.9	39.05
Quartz	(5,2,-8)	12.923	76.8	0.967	1.1	3.112	3.37	38.9	39.05
	Equiv. Refl.: (5,-7,8)								
Quartz	(-6,-2,-6)	12.56	71.13	0.947	1	4.536	4.46	56.7	56.87
Quartz	(8,-2,6)	12.56	71.13	0.946	1	4.536	4.45	56.7	56.87
	Equiv. Refl.: (8,-6,-6), (-6,8,6)								
Quartz	(-2,8,-6)	12.56	71.13	0.945	1	4.536	4.45	56.7	56.87
	Equiv. Refl.: (-2,-6,6)								
Quartz	(10,-6,3)	13.16	82.5	0.943	1.3	1.746	2.23	21.83	21.94
Quartz	(10,-4,-3)	13.16	82.5	0.942	1.3	1.746	2.23	21.83	21.94
	Equiv. Refl.: (-4,10,3), (-4,-6,-3)								
Quartz	(-6,10,-3)	13.16	82.5	0.941	1.3	1.746	2.22	21.83	21.94
	Equiv. Refl.: (-6,-4,3)								
Quartz	(10,-3,-1)	13.001	78.37	0.938	1.1	2.731	2.95	34.14	34.26
	Equiv. Refl.: (10,-7,1), (-3,10,1), (-3,-7,-1), (-7,10,-1), (-7,-3,1)								
Quartz	(0,1,-11)	12.701	73.12	0.935	1	4.028	4.17	50.35	50.52
	Equiv. Refl.: (0,-1,11)								
Quartz	(1,0,11)	12.701	73.12	0.934	1	4.028	4.17	50.35	50.52
	Equiv. Refl.: (1,-1,-11), (-1,1,11)								
Quartz	(-1,0,-11)	12.701	73.12	0.933	1	4.028	4.17	50.35	50.52
Quartz	(7,-5,8)	12.923	76.8	0.931	1.1	3.112	3.38	38.9	39.05
	Equiv. Refl.: (-2,7,8), (-2,-5,-8)								
Quartz	(7,-2,-8)	12.923	76.8	0.93	1.1	3.112	3.38	38.9	39.05
Quartz	(-5,7,-8)	12.923	76.8	0.929	1.1	3.112	3.37	38.9	39.05
	Equiv. Refl.: (-5,-2,8)								
Quartz	(3,7,1)	13.001	78.37	0.91	1.1	2.731	2.95	34.14	34.26
	Equiv. Refl.: (3,-10,-1), (7,3,-1), (7,-10,1), (-10,3,1), (-10,7,-1)								
LiNbO3	(4,6,7)	12.52	70.6	0.88	1.4	4.673	6.53	58.42	58.78
	Equiv. Refl.: (4,-10,-7), (6,4,-7), (6,-10,7), (10,-4,-7), (10,-6,7), (-4,10,7), (-4,-6,-7), (-6,10,-7), (-6,-4,7), (-10,4,7), (-10,6,-7)								
Sapph	(1,6,16)	12.476	70.04	0.878	1	4.821	4.82	60.26	60.45
	Equiv. Refl.: (1,-7,-16), (6,1,-16), (6,-7,16), (7,-1,-16), (7,-6,16), (-1,7,16), (-1,-6,-16), (-6,7,-16), (-6,-1,16), (-7,1,16), (-7,6,-16)								
Quartz	(10,-4,0)	12.702	73.13	0.852	1	4.025	3.85	50.32	50.46
	Equiv. Refl.: (10,-6,0), (-4,10,0), (-4,-6,0), (-6,10,0), (-6,-4,0)								
Quartz	(4,6,0)	12.702	73.13	0.848	1	4.025	3.85	50.32	50.46
	Equiv. Refl.: (4,-10,0), (6,4,0), (6,-10,0), (-10,4,0), (-10,6,0)								
Quartz	(0,4,10)	12.866	75.77	0.842	1	3.366	3.26	42.07	42.2
	Equiv. Refl.: (0,-4,-10)								
Quartz	(4,0,-10)	12.866	75.77	0.839	1	3.366	3.25	42.07	42.19
	Equiv. Refl.: (4,-4,10), (6,2,6), (6,-8,-6), (-4,0,10), (-4,4,-10), (-8,2,-6), (-8,6,6)								
Quartz	(2,6,-6)	12.56	71.13	0.838	1	4.536	4.45	56.7	56.87
	Equiv. Refl.: (2,-8,6)								
Sapph	(2,7,7)	12.759	74.01	0.786	0.9	3.804	3.59	47.55	47.68
	Equiv. Refl.: (2,-9,-7), (7,2,-7), (7,-9,7), (9,-2,-7), (9,-7,7), (-2,9,7), (-2,-7,-7), (-7,9,-7), (-7,-2,7), (-9,2,7), (-9,7,-7)								

Ei =	13.273	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(5,5,3)	13.107	80.93	0.778	1.1	2.118	2.23	26.48	26.57
	Equiv. Refl.: (5,5,-3), (5,-10,3), (5,-10,-3), (10,-5,3), (10,-5,-3), (-5,10,3), (-5,10,-3), (-5,-5,3), (-5,-5,-3), (-10,5,3), (-10,5,-3)								
Quartz	(6,1,-7)	12.48	70.09	0.739	0.8	4.807	3.9	60.08	60.21
	Equiv. Refl.: (6,-7,7)								
Quartz	(1,6,7)	12.48	70.09	0.737	0.8	4.807	3.89	60.08	60.21
	Equiv. Refl.: (1,-7,-7), (-7,1,7), (-7,6,-7)								
Quartz	(10,-5,1)	12.67	72.66	0.724	0.8	4.144	3.44	51.8	51.91
	Equiv. Refl.: (10,-5,-1), (-5,10,1), (-5,10,-1), (-5,-5,1), (-5,-5,-1)								
Quartz	(5,5,1)	12.67	72.66	0.722	0.8	4.144	3.44	51.8	51.91
	Equiv. Refl.: (5,-10,-1)								
Quartz	(5,5,-1)	12.67	72.66	0.721	0.8	4.144	3.44	51.8	51.91
	Equiv. Refl.: (5,-10,1), (-10,5,1), (-10,5,-1)								
Quartz	(-2,9,-4)	12.778	74.3	0.706	0.8	3.73	2.95	46.62	46.72
Quartz	(9,-2,4)	12.778	74.3	0.705	0.8	3.73	2.95	46.62	46.72
	Equiv. Refl.: (9,-7,-4), (-2,-7,4), (-7,9,4), (-7,-2,-4)								
Sapph	(0,5,22)	12.917	76.69	0.704	0.9	3.139	2.81	39.24	39.34
	Equiv. Refl.: (0,-5,-22), (5,0,-22), (5,-5,22), (-5,0,22), (-5,-5,-22)								
Quartz	(-6,7,-7)	12.48	70.09	0.699	0.8	4.807	3.9	60.08	60.21
	Equiv. Refl.: (-6,-1,7)								
Quartz	(7,-1,-7)	12.48	70.09	0.697	0.8	4.807	3.89	60.08	60.21
	Equiv. Refl.: (7,-6,7), (-1,7,7), (-1,-6,-7)								
Sapph	(2,7,-5)	12.543	70.91	0.696	0.8	4.593	3.81	57.41	57.54
	Equiv. Refl.: (2,-9,5), (7,2,5), (7,-9,-5), (9,-2,5), (9,-7,-5), (-2,9,-5), (-2,-7,5), (-7,9,5), (-7,-2,-5), (-9,2,-5), (-9,7,5)								
Quartz	(3,-4,-10)	12.616	71.9	0.676	0.7	4.339	3.1	54.24	54.33
Quartz	(3,1,10)	12.616	71.9	0.675	0.7	4.339	3.1	54.24	54.33
Quartz	(1,3,-10)	12.616	71.9	0.674	0.7	4.339	3.1	54.24	54.33
Quartz	(1,-4,10)	12.616	71.9	0.673	0.7	4.339	3.09	54.24	54.33
	Equiv. Refl.: (-4,1,-10), (-4,3,10)								
Quartz	(10,-3,1)	13.001	78.37	0.668	0.8	2.731	2.2	34.14	34.21
	Equiv. Refl.: (10,-7,-1), (-3,10,-1), (-3,-7,1), (-7,10,1), (-7,-3,-1)								
Quartz	(2,7,-4)	12.778	74.3	0.639	0.8	3.73	2.95	46.62	46.72
	Equiv. Refl.: (2,-9,4), (7,2,4), (7,-9,-4)								
Quartz	(-9,2,-4)	12.778	74.3	0.638	0.8	3.73	2.95	46.62	46.72
	Equiv. Refl.: (-9,7,4)								
Sapph	(2,3,23)	12.787	74.45	0.635	0.8	3.693	2.95	46.17	46.26
	Equiv. Refl.: (2,-5,-23), (3,2,-23), (3,-5,23), (5,-2,-23), (5,-3,23), (-2,5,23), (-2,-3,-23), (-3,5,-23), (-3,-2,23), (-5,2,23), (-5,3,-23)								
Quartz	(3,7,-1)	13.001	78.37	0.618	0.8	2.731	2.2	34.14	34.21
	Equiv. Refl.: (3,-10,1), (7,3,1), (7,-10,-1), (-10,3,-1), (-10,7,1)								
Quartz	(-3,4,10)	12.616	71.9	0.551	0.7	4.339	3.1	54.24	54.33
Quartz	(-3,-1,-10)	12.616	71.9	0.55	0.7	4.339	3.1	54.24	54.33
Quartz	(4,-1,10)	12.616	71.9	0.549	0.7	4.339	3.1	54.24	54.33
	Equiv. Refl.: (-1,-3,10)								
Quartz	(4,-3,-10)	12.616	71.9	0.548	0.7	4.339	3.09	54.24	54.33
	Equiv. Refl.: (-1,4,-10)								
LiNbO3	(1,5,23)	12.873	75.9	0.49	1.1	3.333	3.56	41.67	41.82
	Equiv. Refl.: (1,-6,-23), (5,1,-23), (5,-6,23), (6,-1,-23), (6,-5,23), (-1,6,23), (-1,-5,-23), (-5,6,-23), (-5,-1,23), (-6,1,23), (-6,5,-23)								

Ei =	13.273	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(0,2,-11)	12.949	77.32	0.481	0.6	2.986	1.89	37.33	37.37
	Equiv. Refl.: (0,-2,11)								
Quartz	(2,0,11)	12.949	77.32	0.475	0.6	2.986	1.87	37.33	37.37
	Equiv. Refl.: (2,-2,-11), (-2,0,-11), (-2,2,11)								
Quartz	(-2,-3,10)	13.111	81.04	0.469	0.7	2.093	1.38	26.16	26.2
	Equiv. Refl.: (-3,5,10), (-3,-2,-10)								
Quartz	(-2,5,-10)	13.111	81.04	0.468	0.7	2.093	1.37	26.16	26.2
Sapph	(1,3,25)	13.107	80.94	0.467	0.7	2.117	1.54	26.46	26.51
	Equiv. Refl.: (1,-4,-25), (3,1,-25), (3,-4,25), (4,-1,-25), (4,-3,25), (-1,4,25), (-1,-3,-25), (-3,4,-25), (-3,-1,25), (-4,1,25), (-4,3,-25)								
Quartz	(5,-3,-10)	13.111	81.04	0.464	0.7	2.093	1.36	26.16	26.2
Quartz	(5,-2,10)	13.111	81.04	0.463	0.7	2.093	1.36	26.16	26.2
LiNbO3	(2,6,-19)	13.143	81.96	0.442	1.3	1.874	2.38	23.43	23.55
	Equiv. Refl.: (2,-8,19), (6,2,19), (6,-8,-19), (8,-2,19), (8,-6,-19), (-2,8,-19), (-2,-6,19), (-6,8,19), (-6,-2,-19), (-8,2,-19), (-8,6,19)								
Sapph	(1,2,-25)	12.579	71.39	0.437	0.6	4.471	2.58	55.88	55.94
	Equiv. Refl.: (1,-3,25), (2,1,25), (2,-3,-25), (3,-1,25), (3,-2,-25), (-1,3,-25), (-1,-2,25), (-2,3,25), (-2,-1,-25), (-3,1,-25), (-3,2,25)								
Quartz	(2,3,-10)	13.111	81.04	0.433	0.7	2.093	1.38	26.16	26.2
	Equiv. Refl.: (3,2,10)								
Quartz	(2,-5,10)	13.111	81.04	0.432	0.7	2.093	1.37	26.16	26.2
	Equiv. Refl.: (3,-5,-10)								
Quartz	(-5,2,-10)	13.111	81.04	0.427	0.7	2.093	1.36	26.16	26.2
	Equiv. Refl.: (-5,3,10)								
Sapph	(1,6,-17)	12.773	74.23	0.426	0.6	3.749	2.2	46.86	46.91
	Equiv. Refl.: (1,-7,17), (6,1,17), (6,-7,-17), (7,-1,17), (7,-6,-17), (-1,7,-17), (-1,-6,17), (-6,7,17), (-6,-1,-17), (-7,1,-17), (-7,6,17)								
LiNbO3	(3,7,-7)	12.749	73.85	0.411	0.9	3.844	3.52	48.05	48.18
	Equiv. Refl.: (3,-10,7), (7,3,7), (7,-10,-7), (10,-3,7), (10,-7,-7), (-3,10,-7), (-3,-7,7), (-7,10,7), (-7,-3,-7), (-10,3,-7), (-10,7,7)								
Sapph	(2,5,18)	12.731	73.57	0.376	0.5	3.914	2.07	48.93	48.97
	Equiv. Refl.: (2,5,-18), (2,-7,18), (2,-7,-18), (5,2,18), (5,2,-18), (5,-7,18), (5,-7,-18), (7,-2,18), (7,-2,-18), (7,-5,18), (7,-5,-18), (-2,7,18), (-2,7,-18), (-2,-5,18), (-2,-5,-18), (-5,7,18), (-5,7,-18), (-5,-2,18), (-5,-2,-18), (-7,2,18), (-7,2,-18), (-7,5,18), (-7,5,-18)								
Quartz	(0,7,-7)	12.98	77.94	0.375	0.5	2.835	1.51	35.44	35.47
	Equiv. Refl.: (0,-7,7), (7,0,7), (7,-7,-7), (-7,0,-7), (-7,7,7)								
LiNbO3	(3,7,5)	12.56	71.13	0.369	0.8	4.537	3.69	56.71	56.83
	Equiv. Refl.: (3,-10,-5), (7,3,-5), (7,-10,5), (10,-3,-5), (10,-7,5), (-3,10,5), (-3,-7,-5), (-7,10,-5), (-7,-3,5), (-10,3,5), (-10,7,-5)								
LiNbO3	(3,6,15)	12.915	76.66	0.353	0.9	3.146	2.84	39.33	39.43
	Equiv. Refl.: (3,6,-15), (3,-9,15), (3,-9,-15), (6,3,15), (6,3,-15), (6,-9,15), (6,-9,-15), (9,-3,15), (9,-3,-15), (9,-6,15), (9,-6,-15), (-3,9,15), (-3,9,-15), (-3,-6,15), (-3,-6,-15), (-6,9,15), (-6,9,-15), (-6,-3,15), (-6,-3,-15), (-9,3,15), (-9,3,-15), (-9,6,15), (-9,6,-15)								
LiNbO3	(1,8,-13)	13.226	85.2	0.31	1.3	1.116	1.5	13.94	14.03
	Equiv. Refl.: (1,-9,13), (8,1,13), (8,-9,-13), (9,-1,13), (9,-8,-13), (-1,9,-13), (-1,-8,13), (-8,9,13), (-8,-1,-13), (-9,1,-13), (-9,8,13)								
Quartz	(1,8,1)	12.501	70.37	0.3	0.4	4.735	1.69	59.19	59.22
	Equiv. Refl.: (1,-9,-1), (8,1,-1), (8,-9,1), (-9,1,1), (-9,8,-1)								
LiNbO3	(2,8,3)	12.814	74.9	0.298	0.8	3.582	2.8	44.78	44.87
	Equiv. Refl.: (2,8,-3), (2,-10,3), (2,-10,-3), (8,2,3), (8,2,-3), (8,-10,3), (8,-10,-3), (10,-2,3), (10,-2,-3), (10,-8,3), (10,-8,-3), (-2,10,3), (-2,10,-3), (-2,-8,3), (-2,-8,-3), (-8,10,3), (-8,10,-3), (-8,-2,3), (-8,-2,-3), (-10,2,3), (-10,2,-3), (-10,8,3), (-10,8,-3)								

LiNbO3	(2,5,21)	12.79	74.5	0.264	0.7	3.681	2.66	46.01	46.09
Equiv. Refl.: (2,5,-21), (2,-7,21), (2,-7,-21), (5,2,21), (5,2,-21), (5,-7,21), (5,-7,-21), (7,-2,21), (7,-2,-21), (7,-5,21), (7,-5,-21), (-2,7,21), (-2,7,-21), (-2,-5,21), (-2,-5,-21), (-5,7,21), (-5,7,-21), (-5,-2,21), (-5,-2,-21), (-7,2,21), (-7,2,-21), (-7,5,21), (-7,5,-21)									
Sapph	(0,8,-8)	12.627	72.04	0.222	0.4	4.301	1.54	53.77	53.79
Equiv. Refl.: (0,-8,8), (8,0,8), (8,-8,-8), (-8,0,-8), (-8,8,8)									
LiNbO3	(2,6,17)	12.583	71.44	0.221	0.6	4.456	2.72	55.7	55.76
Equiv. Refl.: (2,-8,-17), (6,2,-17), (6,-8,17), (8,-2,-17), (8,-6,17), (-2,8,17), (-2,-6,-17), (-6,8,-17), (-6,-2,17), (-8,2,17), (-8,6,-17)									
Quartz	(-1,9,1)	12.501	70.37	0.217	0.4	4.735	1.69	59.19	59.22
Equiv. Refl.: (-1,-8,-1), (-8,9,-1), (-8,-1,1)									
Quartz	(9,-1,-1)	12.501	70.37	0.216	0.4	4.735	1.69	59.19	59.22
Equiv. Refl.: (9,-8,1)									
LiNbO3	(3,5,19)	12.92	76.76	0.155	0.6	3.124	1.81	39.05	39.09
Equiv. Refl.: (3,-8,-19), (5,3,-19), (5,-8,19), (8,-3,-19), (8,-5,19), (-3,8,19), (-3,-5,-19), (-5,8,-19), (-5,-3,19), (-8,3,19), (-8,5,-19), (0,5,9), (0,-5,-9)									
Quartz	(5,0,-9)	12.635	72.16	0.154	0.3	4.272	1.1	53.4	53.41
Equiv. Refl.: (-5,0,9)									
Quartz	(5,-5,9)	12.635	72.16	0.153	0.3	4.272	1.1	53.4	53.41
Equiv. Refl.: (-5,5,-9)									
LiNbO3	(2,3,-25)	12.717	73.35	0.152	0.5	3.969	2.06	49.61	49.65
Equiv. Refl.: (2,-5,25), (3,2,25), (3,-5,-25), (5,-2,25), (5,-3,-25), (-2,5,-25), (-2,-3,25), (-3,5,25), (-3,-2,-25), (-5,2,-25), (-5,3,25)									
Sapph	(1,8,2)	12.889	76.19	0.147	0.3	3.263	0.98	40.79	40.8
Equiv. Refl.: (1,-9,-2), (8,1,-2), (8,-9,2), (9,-1,-2), (9,-8,2), (-1,9,2), (-1,-8,-2), (-8,9,-2), (-8,-1,2), (-9,1,2), (-9,8,-2)									
Sapph	(4,6,1)	13.124	81.4	0.142	0.4	2.006	0.71	25.08	25.09
Equiv. Refl.: (4,-10,-1), (6,4,-1), (6,-10,1), (10,-4,-1), (10,-6,1), (-4,10,1), (-4,-6,-1), (-6,10,-1), (-6,-4,1), (-10,4,1), (-10,6,-1)									
Sapph	(3,6,9)	12.69	72.96	0.14	0.3	4.069	1.1	50.86	50.87
Equiv. Refl.: (3,6,-9), (3,-9,9), (3,-9,-9), (6,3,9), (6,3,-9), (6,-9,9), (6,-9,-9), (9,-3,9), (9,-3,-9), (9,-6,9), (9,-6,-9), (-3,9,9), (-3,9,-9), (-3,-6,9), (-3,-6,-9), (-6,9,9), (-6,9,-9), (-6,-3,9), (-6,-3,-9), (-9,3,9), (-9,3,-9), (-9,6,9), (-9,6,-9)									
Sapph	(3,4,-19)	12.883	76.08	0.121	0.3	3.289	0.87	41.11	41.12
Equiv. Refl.: (3,-7,19), (4,3,19), (4,-7,-19), (7,-3,19), (7,-4,-19), (-3,7,-19), (-3,-4,19), (-4,7,19), (-4,-3,-19), (-7,3,-19), (-7,4,19)									
LiNbO3	(1,8,11)	12.858	75.64	0.114	0.5	3.398	1.63	42.47	42.5
Equiv. Refl.: (1,-9,-11), (8,1,-11), (8,-9,11), (9,-1,-11), (9,-8,11), (-1,9,11), (-1,-8,-11), (-8,9,-11), (-8,-1,11), (-9,1,11), (-9,8,-11)									
Sapph	(1,7,12)	12.721	73.41	0.051	0.2	3.954	0.6	49.43	49.43
Equiv. Refl.: (1,7,-12), (1,-8,12), (1,-8,-12), (7,1,12), (7,1,-12), (7,-8,12), (7,-8,-12), (8,-1,12), (8,-1,-12), (8,-7,12), (8,-7,-12), (-1,8,12), (-1,8,-12), (-1,-7,12), (-1,-7,-12), (-7,8,12), (-7,8,-12), (-7,-1,12), (-7,-1,-12), (-8,1,12), (-8,1,-12), (-8,7,12), (-8,7,-12)									
LiNbO3	(5,5,9)	12.697	73.05	0.007	0.1	4.044	0.5	50.55	50.55
Equiv. Refl.: (5,5,-9), (5,-10,9), (5,-10,-9), (10,-5,9), (10,-5,-9), (-5,10,9), (-5,10,-9), (-5,-5,9), (-5,-5,-9), (-10,5,9), (-10,5,-9)									

Ei =	11.564	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Si	(4,4,8)	11.184	75.27	5.7508	4.93	3.0407	15	38.01	40.86
	Equiv. Refl.: (4,8,4), (8,4,4)								
Si	(1,7,7)	11.357	79.15	4.9981	4.49	2.2167	9.94	27.71	29.44
	Equiv. Refl.: (3,3,9), (3,9,3), (5,5,7), (5,7,5), (7,1,7), (7,5,5), (7,7,1), (9,3,3)								
Ge	(0,2,10)	11.175	75.09	3.7294	7.68	3.0785	23.65	38.48	45.17
	Equiv. Refl.: (0,10,2), (2,0,10), (2,6,8), (2,8,6), (2,10,0), (6,2,8), (6,8,2), (8,2,6), (8,6,2), (10,0,2), (10,2,0)								
Si	(1,3,9)	10.889	70.32	3.4379	2.86	4.1354	11.84	51.69	53.03
	Equiv. Refl.: (1,9,3), (3,1,9), (3,9,1), (9,1,3), (9,3,1)								
Ge	(1,5,9)	11.335	78.57	2.3733	6.72	2.3371	15.7	29.21	33.17
	Equiv. Refl.: (1,9,5), (3,7,7), (5,1,9), (5,9,1), (7,3,7), (7,7,3), (9,1,5), (9,5,1)								
Ge	(1,7,7)	10.903	70.53	1.7032	4.56	4.0877	18.64	51.1	54.39
	Equiv. Refl.: (3,3,9), (3,9,3), (5,5,7), (5,7,5), (7,1,7), (7,5,5), (7,7,1), (9,3,3)								
Sapph	(0,7,-10)	11.562	88.95	125.417	104.2	0.211	22.03	2.64	22.18
	Equiv. Refl.: (0,-7,10), (7,0,10), (7,-7,-10), (-7,0,-10), (-7,7,10)								
LiNbO3	(2,-5,22)	11.555	87.75	83.255	74.6	0.455	33.92	5.68	34.39
	Equiv. Refl.: (5,-2,22)								
LiNbO3	(3,2,22)	11.555	87.75	83.254	74.6	0.455	33.92	5.68	34.39
	Equiv. Refl.: (-2,-3,22), (-3,5,22), (-5,3,22)								
LiNbO3	(2,3,-22)	11.555	87.75	79.782	74.6	0.455	33.92	5.68	34.39
	Equiv. Refl.: (3,-5,-22), (5,-3,-22), (-2,5,-22), (-3,-2,-22), (-5,2,-22)								
Quartz	(0,1,-10)	11.562	89.03	66.739	57.6	0.195	11.26	2.44	11.52
	Equiv. Refl.: (0,-1,10)								
Quartz	(1,0,10)	11.562	89.03	66.698	57.6	0.195	11.26	2.44	11.52
Quartz	(-1,0,-10)	11.562	89.03	66.695	57.6	0.195	11.26	2.44	11.52
Quartz	(1,-1,-10)	11.562	89.03	66.684	57.6	0.195	11.25	2.44	11.52
Quartz	(-1,1,10)	11.562	89.03	66.683	57.6	0.195	11.25	2.44	11.52
Quartz	(0,1,10)	11.562	89.03	64.682	55.9	0.195	10.93	2.44	11.2
Quartz	(0,-1,-10)	11.562	89.03	64.681	55.9	0.195	10.93	2.44	11.2
Quartz	(1,0,-10)	11.562	89.03	64.64	55.9	0.195	10.92	2.44	11.19
Quartz	(-1,0,10)	11.562	89.03	64.631	55.9	0.195	10.92	2.44	11.19
Quartz	(1,-1,10)	11.562	89.03	64.629	55.9	0.195	10.92	2.44	11.19
Quartz	(-1,1,-10)	11.562	89.03	64.619	55.9	0.195	10.92	2.44	11.19
Sapph	(3,5,10)	11.562	88.95	46.663	42.9	0.211	9.06	2.64	9.44
	Equiv. Refl.: (3,-8,-10), (5,3,-10), (5,-8,10), (8,-3,-10), (8,-5,10), (-3,8,10), (-3,-5,-10), (-5,8,-10), (-5,-3,10), (-8,3,10), (-8,5,-10)								
LiNbO3	(2,7,4)	11.521	85.08	28.835	26.6	0.996	26.51	12.45	29.29
	Equiv. Refl.: (7,-9,4), (9,-7,4), (-2,9,4), (-7,-2,4), (-9,2,4)								
LiNbO3	(2,-9,-4)	11.521	85.08	26.932	26.6	0.996	26.51	12.45	29.29
	Equiv. Refl.: (7,2,-4), (9,-2,-4), (-2,-7,-4), (-7,9,-4), (-9,7,-4)								
LiNbO3	(-3,3,-24)	11.514	84.69	21.287	20.2	1.074	21.67	13.43	25.49
LiNbO3	(0,-3,-24)	11.514	84.69	21.286	20.2	1.074	21.67	13.43	25.49
	Equiv. Refl.: (3,0,-24)								
LiNbO3	(0,3,-24)	11.514	84.69	20.898	19.9	1.074	21.42	13.43	25.28
	Equiv. Refl.: (3,-3,-24), (-3,0,-24)								
LiNbO3	(2,7,-2)	11.417	80.85	20.59	18.8	1.863	35.04	23.29	42.08
	Equiv. Refl.: (7,-9,-2), (9,-7,-2), (-2,9,-2), (-7,-2,-2), (-9,2,-2)								

Ei =	11.564	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(2,-9,2)	11.417	80.85	20.565	18.8	1.863	35.04	23.29	42.08
	Equiv. Refl.: (7,2,2), (9,-2,2), (-2,-7,2), (-7,9,2), (-9,7,2)								
LiNbO3	(0,3,24)	11.514	84.69	19.358	20.2	1.074	21.67	13.43	25.49
	Equiv. Refl.: (3,-3,24), (-3,0,24)								
LiNbO3	(0,-3,24)	11.514	84.69	19.181	19.9	1.074	21.42	13.43	25.28
	Equiv. Refl.: (3,0,24), (-3,3,24)								
LiNbO3	(0,-8,-4)	11.267	76.98	18.159	16	2.674	42.71	33.42	54.23
	Equiv. Refl.: (8,0,-4), (-8,8,-4)								
LiNbO3	(0,8,4)	11.267	76.98	17.666	16	2.674	42.71	33.42	54.23
	Equiv. Refl.: (8,-8,4), (-8,0,4)								
LiNbO3	(3,6,-6)	11.358	79.17	15.872	14.7	2.212	32.47	27.65	42.65
	Equiv. Refl.: (6,-9,-6), (9,-6,-6), (-3,9,-6), (-6,-3,-6), (-9,3,-6)								
LiNbO3	(3,-9,6)	11.358	79.17	15.829	14.7	2.212	32.47	27.65	42.65
	Equiv. Refl.: (6,3,6), (9,-3,6), (-3,-6,6), (-6,9,6), (-9,6,6)								
LiNbO3	(4,5,8)	11.434	81.4	15.356	14.5	1.748	25.39	21.85	33.5
	Equiv. Refl.: (5,-9,8), (9,-5,8), (-4,9,8), (-5,-4,8), (-9,4,8)								
LiNbO3	(3,-9,-6)	11.358	79.17	14.852	13.7	2.212	30.22	27.65	40.96
	Equiv. Refl.: (6,3,-6), (9,-3,-6), (-3,-6,-6), (-6,9,-6), (-9,6,-6)								
LiNbO3	(4,-9,-8)	11.434	81.4	14.757	14.5	1.748	25.39	21.85	33.5
	Equiv. Refl.: (5,4,-8), (9,-4,-8), (-4,-5,-8), (-5,9,-8), (-9,5,-8)								
LiNbO3	(3,6,6)	11.358	79.17	14.304	13.7	2.212	30.22	27.65	40.96
	Equiv. Refl.: (6,-9,6), (9,-6,6), (-3,9,6), (-6,-3,6), (-9,3,6)								
LiNbO3	(0,4,-22)	11.301	77.76	12.641	11.7	2.508	29.32	31.35	42.93
	Equiv. Refl.: (4,-4,-22), (-4,0,-22)								
LiNbO3	(0,-4,22)	11.301	77.76	12.133	11.7	2.508	29.32	31.35	42.93
	Equiv. Refl.: (4,0,22), (-4,4,22)								
LiNbO3	(1,1,24)	10.999	72.02	11.871	10.7	3.753	40.21	46.92	61.79
	Equiv. Refl.: (1,-2,24), (2,-1,24), (-1,2,24), (-1,-1,24), (-2,1,24)								
LiNbO3	(1,1,-24)	10.999	72.02	11.796	10.7	3.753	40.21	46.92	61.79
	Equiv. Refl.: (1,-2,-24), (2,-1,-24), (-1,2,-24), (-1,-1,-24), (-2,1,-24)								
LiNbO3	(0,5,-20)	11.328	78.4	11.608	10.4	2.373	24.61	29.66	38.54
	Equiv. Refl.: (5,-5,-20), (-5,0,-20)								
LiNbO3	(1,6,-14)	11.06	73.03	10.91	9.6	3.529	33.8	44.11	55.57
	Equiv. Refl.: (6,-7,-14), (7,-6,-14), (-1,7,-14), (-6,-1,-14), (-7,1,-14)								
Quartz	(-1,8,3)	11.526	85.33	10.62	9	0.944	8.5	11.8	14.55
	Equiv. Refl.: (-1,-7,-3)								
Quartz	(-7,8,-3)	11.526	85.33	10.619	9	0.944	8.5	11.8	14.54
Quartz	(-7,-1,3)	11.526	85.33	10.618	9	0.944	8.5	11.8	14.54
Quartz	(8,-1,-3)	11.526	85.33	10.617	9	0.944	8.5	11.8	14.54
	Equiv. Refl.: (8,-7,3)								
LiNbO3	(4,5,2)	10.897	70.44	10.563	9.6	4.108	39.24	51.35	64.63
	Equiv. Refl.: (5,-9,2), (9,-5,2), (-4,9,2), (-5,-4,2), (-9,4,2)								
LiNbO3	(4,-9,-2)	10.897	70.44	10.401	9.6	4.108	39.24	51.35	64.63
	Equiv. Refl.: (5,4,-2), (9,-4,-2), (-4,-5,-2), (-5,9,-2), (-9,5,-2)								
LiNbO3	(3,6,0)	11.037	72.63	10.364	9.3	3.617	33.66	45.22	56.37
	Equiv. Refl.: (6,-9,0), (9,-6,0), (-3,9,0), (-6,-3,0), (-9,3,0)								
LiNbO3	(1,-7,14)	11.06	73.03	10.24	9.6	3.529	33.8	44.11	55.57
	Equiv. Refl.: (6,1,14), (7,-1,14), (-1,-6,14), (-6,7,14), (-7,6,14)								
Quartz	(1,7,3)	11.526	85.33	10.211	9	0.944	8.5	11.8	14.55
	Equiv. Refl.: (1,-8,-3), (7,1,-3), (7,-8,3)								
Quartz	(-8,1,3)	11.526	85.33	10.209	9	0.944	8.5	11.8	14.54

Ei =	11.564	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-8,7,-3)	11.526	85.33	10.208	9	0.944	8.5	11.8	14.54
LiNbO3	(3,-9,0)	11.037	72.63	10.147	9.3	3.617	33.66	45.22	56.37
	Equiv. Refl.: (6,3,0), (9,-3,0), (-3,-6,0), (-6,9,0), (-9,6,0)								
LiNbO3	(0,-5,20)	11.328	78.4	10.067	10.4	2.373	24.61	29.66	38.54
	Equiv. Refl.: (5,0,20), (-5,5,20)								
LiNbO3	(3,-7,16)	11.078	73.34	10.055	9	3.462	31.14	43.27	53.31
	Equiv. Refl.: (4,3,16), (7,-3,16), (-3,-4,16), (-4,7,16), (-7,4,16)								
Quartz	(-8,1,-3)	11.526	85.33	10.012	8.4	0.944	7.96	11.8	14.23
Quartz	(1,7,-3)	11.526	85.33	10.011	8.4	0.944	7.96	11.8	14.23
	Equiv. Refl.: (7,1,3), (7,-8,-3), (-8,7,3)								
Quartz	(1,-8,3)	11.526	85.33	10.009	8.4	0.944	7.95	11.8	14.23
LiNbO3	(4,4,12)	11.027	72.48	9.988	8.9	3.652	32.52	45.64	56.05
	Equiv. Refl.: (4,-8,12), (8,-4,12), (-4,8,12), (-4,-4,12), (-8,4,12)								
LiNbO3	(4,-9,4)	11.006	72.13	9.967	8.8	3.727	32.82	46.59	56.99
	Equiv. Refl.: (5,4,4), (9,-4,4), (-4,-5,4), (-5,9,4), (-9,5,4)								
LiNbO3	(4,4,-12)	11.027	72.48	9.512	8.9	3.652	32.52	45.64	56.05
	Equiv. Refl.: (-4,8,-12), (-4,-4,-12), (-8,4,-12)								
LiNbO3	(4,-8,-12)	11.027	72.48	9.511	8.9	3.652	32.52	45.64	56.05
	Equiv. Refl.: (8,-4,-12)								
LiNbO3	(3,4,-16)	11.078	73.34	9.507	9	3.462	31.14	43.27	53.31
	Equiv. Refl.: (4,-7,-16), (7,-4,-16), (-3,7,-16), (-4,-3,-16), (-7,3,-16)								
LiNbO3	(2,-8,10)	10.979	71.7	9.496	8.6	3.825	32.72	47.82	57.94
	Equiv. Refl.: (6,2,10), (8,-2,10), (-2,-6,10), (-6,8,10), (-8,6,10)								
Quartz	(4,-2,9)	11.491	83.56	9.492	7.8	1.306	10.21	16.33	19.26
Quartz	(4,-2,-9)	11.491	83.56	9.491	7.8	1.306	10.21	16.33	19.26
Quartz	(-2,4,-9)	11.491	83.56	9.488	7.8	1.306	10.21	16.33	19.26
Quartz	(-2,-2,9)	11.491	83.56	9.486	7.8	1.306	10.21	16.33	19.26
Quartz	(-2,-2,-9)	11.491	83.56	9.485	7.8	1.306	10.21	16.33	19.25
Quartz	(-2,4,9)	11.491	83.56	9.483	7.8	1.306	10.2	16.33	19.25
Sapph	(0,4,20)	11.284	77.37	9.444	7.6	2.591	19.7	32.38	37.9
	Equiv. Refl.: (0,-4,-20), (4,0,-20), (4,-4,20), (-4,0,20), (-4,4,-20)								
LiNbO3	(4,5,-4)	11.006	72.13	9.329	8.8	3.727	32.82	46.59	56.99
	Equiv. Refl.: (5,-9,-4), (9,-5,-4), (-4,9,-4), (-5,-4,-4), (-9,4,-4)								
LiNbO3	(1,-4,-22)	11.042	72.71	9.302	8.5	3.599	30.55	44.98	54.38
	Equiv. Refl.: (3,1,-22), (4,-1,-22), (-1,-3,-22), (-3,4,-22), (-4,3,-22)								
LiNbO3	(2,6,-10)	10.979	71.7	9.218	8.6	3.825	32.72	47.82	57.94
	Equiv. Refl.: (6,-8,-10), (8,-6,-10), (-2,8,-10), (-6,-2,-10), (-8,2,-10)								
Quartz	(8,-1,3)	11.526	85.33	9.19	8.4	0.944	7.96	11.8	14.23
	Equiv. Refl.: (8,-7,-3), (-1,-7,3), (-7,8,3), (-7,-1,-3)								
Quartz	(-1,8,-3)	11.526	85.33	9.189	8.4	0.944	7.95	11.8	14.23
Quartz	(-4,2,-9)	11.491	83.56	9.111	7.8	1.306	10.21	16.33	19.26
Quartz	(-4,2,9)	11.491	83.56	9.11	7.8	1.306	10.21	16.33	19.26
Quartz	(2,-4,9)	11.491	83.56	9.109	7.8	1.306	10.21	16.33	19.26
Quartz	(2,2,-9)	11.491	83.56	9.107	7.8	1.306	10.21	16.33	19.26
Quartz	(2,2,9)	11.491	83.56	9.104	7.8	1.306	10.21	16.33	19.25
Quartz	(2,-4,-9)	11.491	83.56	9.102	7.8	1.306	10.2	16.33	19.25
LiNbO3	(1,3,22)	11.042	72.71	9.058	8.5	3.599	30.55	44.98	54.38
	Equiv. Refl.: (3,-4,22), (4,-3,22), (-1,4,22), (-3,-1,22), (-4,1,22)								
Quartz	(-5,9,-1)	11.437	81.5	7.599	6.3	1.728	10.83	21.59	24.16
	Equiv. Refl.: (-5,-4,1)								

Ei =	11.564	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-4,-5,-1)	11.437	81.5	7.598	6.3	1.728	10.83	21.59	24.16
Quartz	(9,-4,-1)	11.437	81.5	7.597	6.3	1.728	10.83	21.59	24.16
	Equiv. Refl.: (9,-5,1), (-4,9,1)								
Quartz	(5,4,-1)	11.437	81.5	7.417	6.3	1.728	10.83	21.59	24.16
	Equiv. Refl.: (5,-9,1)								
Quartz	(4,5,1)	11.437	81.5	7.416	6.3	1.728	10.83	21.59	24.16
	Equiv. Refl.: (4,-9,-1), (-9,4,1), (-9,5,-1)								
Quartz	(6,-8,-4)	11.465	82.48	7.181	6	1.526	9.21	19.08	21.18
Quartz	(6,2,4)	11.465	82.48	7.18	6	1.526	9.21	19.08	21.18
	Equiv. Refl.: (-8,2,-4), (-8,6,4)								
Quartz	(2,6,-4)	11.465	82.48	7.177	6	1.526	9.2	19.08	21.18
	Equiv. Refl.: (2,-8,4)								
Quartz	(-6,8,4)	11.465	82.48	6.889	6	1.526	9.21	19.08	21.18
Quartz	(8,-2,4)	11.465	82.48	6.888	6	1.526	9.21	19.08	21.18
	Equiv. Refl.: (8,-6,-4), (-6,-2,-4)								
Quartz	(-2,8,-4)	11.465	82.48	6.885	6	1.526	9.2	19.08	21.18
	Equiv. Refl.: (-2,-6,4)								
LiNbO3	(0,-8,2)	11.16	74.81	6.553	6.4	3.14	20.15	39.26	44.12
	Equiv. Refl.: (8,0,2), (-8,8,2)								
Sapph	(0,7,8)	11.202	75.62	6.446	5.4	2.964	16.05	37.05	40.38
	Equiv. Refl.: (0,-7,-8), (7,0,-8), (7,-7,8), (-7,0,8), (-7,7,-8)								
Sapph	(1,5,-16)	11.335	78.58	6.418	5.5	2.337	12.89	29.21	31.93
	Equiv. Refl.: (1,-6,16), (5,1,16), (5,-6,-16), (6,-1,16), (6,-5,-16), (-1,6,-16), (-1,-5,16), (-5,6,16), (-5,-1,-16), (-6,1,-16), (-6,5,16)								
Sapph	(1,6,10)	10.959	71.39	6.329	5.1	3.895	19.94	48.69	52.61
	Equiv. Refl.: (1,-7,-10), (6,1,-10), (6,-7,10), (7,-1,-10), (7,-6,10), (-1,7,10), (-1,-6,-10), (-6,7,-10), (-6,-1,10), (-7,1,10), (-7,6,-10)								
Sapph	(2,6,-4)	11.015	72.28	6.294	5.1	3.695	19	46.19	49.95
	Equiv. Refl.: (2,-8,4), (6,2,4), (6,-8,-4), (8,-2,4), (8,-6,-4), (-2,8,-4), (-2,-6,4), (-6,8,4), (-6,-2,-4), (-8,2,-4), (-8,6,4)								
LiNbO3	(0,8,-2)	11.16	74.81	6.156	6.4	3.14	20.15	39.26	44.12
	Equiv. Refl.: (8,-8,-2), (-8,0,-2)								
Quartz	(7,0,-4)	11.183	75.26	6.06	4.8	3.043	14.74	38.03	40.79
	Equiv. Refl.: (7,-7,4)								
Quartz	(-7,0,4)	11.183	75.26	6.059	4.8	3.043	14.74	38.03	40.79
	Equiv. Refl.: (-7,7,-4)								
Quartz	(0,7,4)	11.183	75.26	6.056	4.8	3.043	14.73	38.03	40.79
	Equiv. Refl.: (0,-7,-4)								
Sapph	(1,3,-20)	10.979	71.7	6.034	4.9	3.824	18.81	47.8	51.37
	Equiv. Refl.: (1,-4,20), (3,1,20), (3,-4,-20), (4,-1,20), (4,-3,-20), (-1,4,-20), (-1,-3,20), (-3,4,20), (-3,-1,-20), (-4,1,-20), (-4,3,20)								
Sapph	(1,7,0)	11.358	79.17	5.971	5.2	2.212	11.43	27.65	29.91
	Equiv. Refl.: (1,-8,0), (7,1,0), (7,-8,0), (8,-1,0), (8,-7,0), (-1,8,0), (-1,-7,0), (-7,8,0), (-7,-1,0), (-8,1,0), (-8,7,0)								
Quartz	(-1,6,-7)	11.414	80.75	5.947	5.1	1.882	9.59	23.53	25.41
Quartz	(6,-1,7)	11.414	80.75	5.946	5.1	1.882	9.59	23.53	25.41
	Equiv. Refl.: (-1,-5,7)								
Quartz	(6,-5,-7)	11.414	80.75	5.945	5.1	1.882	9.59	23.53	25.41
Quartz	(-5,6,7)	11.414	80.75	5.94	5.1	1.882	9.58	23.53	25.41
	Equiv. Refl.: (-5,-1,-7)								

Ei =	11.564	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(1,-6,7)	11.414	80.75	5.912	5.1	1.882	9.59	23.53	25.41
Quartz	(1,5,-7)	11.414	80.75	5.911	5.1	1.882	9.59	23.53	25.41
	Equiv. Refl.: (-6,1,-7)								
Quartz	(-6,5,7)	11.414	80.75	5.91	5.1	1.882	9.59	23.53	25.41
Quartz	(5,1,7)	11.414	80.75	5.904	5.1	1.882	9.58	23.53	25.41
	Equiv. Refl.: (5,-6,-7)								
Quartz	(0,4,8)	10.87	70.06	5.315	4.3	4.196	17.93	52.45	55.43
	Equiv. Refl.: (0,-4,-8)								
Quartz	(4,0,-8)	10.87	70.06	5.313	4.3	4.196	17.93	52.45	55.43
	Equiv. Refl.: (-4,0,8)								
Quartz	(4,-4,8)	10.87	70.06	5.312	4.3	4.196	17.93	52.45	55.43
	Equiv. Refl.: (-4,4,-8)								
Quartz	(0,6,-6)	11.126	74.18	5.164	4.2	3.277	13.9	40.96	43.26
	Equiv. Refl.: (0,-6,6)								
Quartz	(6,0,6)	11.126	74.18	5.158	4.2	3.277	13.89	40.96	43.25
	Equiv. Refl.: (6,-6,-6), (-6,0,-6), (-6,6,6)								
Quartz	(-5,1,8)	11.348	78.91	5.141	4.2	2.266	9.42	28.33	29.85
	Equiv. Refl.: (-5,4,-8)								
Quartz	(1,-5,-8)	11.348	78.91	5.14	4.2	2.266	9.42	28.33	29.85
Quartz	(1,4,8)	11.348	78.91	5.139	4.2	2.266	9.42	28.33	29.85
Quartz	(4,1,-8)	11.348	78.91	5.134	4.2	2.266	9.41	28.33	29.85
	Equiv. Refl.: (4,-5,8)								
Quartz	(5,-1,-8)	11.348	78.91	4.974	4.2	2.266	9.42	28.33	29.85
	Equiv. Refl.: (5,-4,8)								
Quartz	(-1,5,8)	11.348	78.91	4.973	4.2	2.266	9.42	28.33	29.85
Quartz	(-1,-4,-8)	11.348	78.91	4.971	4.2	2.266	9.42	28.33	29.85
Quartz	(-4,5,-8)	11.348	78.91	4.968	4.2	2.266	9.41	28.33	29.85
	Equiv. Refl.: (-4,-1,8)								
Quartz	(4,5,-1)	11.437	81.5	4.796	4.2	1.728	7.18	21.59	22.76
	Equiv. Refl.: (4,-9,1), (5,4,1), (5,-9,-1), (-9,4,-1), (-9,5,1)								
Quartz	(9,-4,1)	11.437	81.5	4.747	4.2	1.728	7.18	21.59	22.76
	Equiv. Refl.: (9,-5,-1), (-4,9,-1), (-4,-5,1), (-5,9,1), (-5,-4,-1)								
Quartz	(-4,7,-6)	11.221	76.01	4.521	3.7	2.882	10.54	36.02	37.53
	Equiv. Refl.: (-4,-3,6)								
Quartz	(-3,-4,-6)	11.221	76.01	4.518	3.7	2.882	10.53	36.02	37.53
Quartz	(7,-3,-6)	11.221	76.01	4.517	3.7	2.882	10.53	36.02	37.53
	Equiv. Refl.: (7,-4,6), (-3,7,6)								
Sapph	(2,2,21)	11.297	77.66	4.445	3.9	2.529	9.77	31.61	33.09
	Equiv. Refl.: (2,2,-21), (2,-4,21), (2,-4,-21), (4,-2,21), (4,-2,-21), (-2,4,21), (-2,4,-21), (-2,-2,21), (-2,-2,-21), (-4,2,21), (-4,2,-21)								
Quartz	(4,3,-6)	11.221	76.01	4.437	3.7	2.882	10.54	36.02	37.53
Quartz	(4,-7,6)	11.221	76.01	4.436	3.7	2.882	10.54	36.02	37.53
Quartz	(3,4,6)	11.221	76.01	4.433	3.7	2.882	10.53	36.02	37.53
Quartz	(3,-7,-6)	11.221	76.01	4.432	3.7	2.882	10.53	36.02	37.53
	Equiv. Refl.: (-7,3,6), (-7,4,-6)								
Quartz	(2,-6,7)	11.131	74.28	4.21	3.4	3.256	10.98	40.69	42.15
Quartz	(2,4,-7)	11.131	74.28	4.209	3.4	3.256	10.98	40.69	42.15
Quartz	(4,-6,-7)	11.131	74.28	4.208	3.4	3.256	10.98	40.69	42.15
	Equiv. Refl.: (-6,2,-7), (-6,4,7)								
Quartz	(4,2,7)	11.131	74.28	4.207	3.4	3.256	10.98	40.69	42.15

Ei =	11.564	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-2,6,-7)	11.131	74.28	4.111	3.4	3.256	10.98	40.69	42.15
	Equiv. Refl.: (-2,-4,7)								
Quartz	(6,-2,7)	11.131	74.28	4.11	3.4	3.256	10.98	40.69	42.15
	Equiv. Refl.: (6,-4,-7), (-4,6,7)								
Quartz	(-4,-2,-7)	11.131	74.28	4.108	3.4	3.256	10.98	40.69	42.15
Quartz	(8,-1,0)	11	72.03	4.09	3.2	3.75	12.1	46.88	48.42
	Equiv. Refl.: (8,-7,0), (-1,8,0), (-1,-7,0), (-7,8,0), (-7,-1,0)								
Quartz	(1,7,0)	11	72.03	4.016	3.2	3.75	12.1	46.88	48.42
	Equiv. Refl.: (1,-8,0), (7,1,0), (7,-8,0), (-8,1,0), (-8,7,0)								
Sapph	(1,7,3)	11.448	81.88	3.688	3.5	1.65	5.77	20.63	21.42
	Equiv. Refl.: (1,7,-3), (1,-8,3), (1,-8,-3), (7,1,3), (7,1,-3), (7,-8,3), (7,-8,-3), (8,-1,3), (8,-1,-3), (8,-7,3), (8,-7,-3), (-1,8,3), (-1,8,-3), (-1,-7,3), (-1,-7,-3), (-7,8,3), (-7,8,-3), (-7,-1,3), (-7,-1,-3), (-8,1,3), (-8,1,-3), (-8,7,3), (-8,7,-3)								
Sapph	(2,6,-7)	11.351	79	3.679	3.4	2.249	7.6	28.11	29.12
	Equiv. Refl.: (2,-8,7), (6,2,7), (6,-8,-7), (8,-2,7), (8,-6,-7), (-2,8,-7), (-2,-6,7), (-6,8,7), (-6,-2,-7), (-8,2,-7), (-8,6,7)								
Quartz	(2,6,-3)	11.056	72.95	3.651	3	3.547	10.58	44.34	45.58
	Equiv. Refl.: (2,-8,3)								
Quartz	(-8,2,-3)	11.056	72.95	3.65	3	3.547	10.58	44.34	45.58
Quartz	(-8,6,3)	11.056	72.95	3.649	3	3.547	10.58	44.34	45.58
Quartz	(6,2,3)	11.056	72.95	3.648	3	3.547	10.57	44.34	45.58
	Equiv. Refl.: (6,-8,-3)								
Quartz	(-2,8,-3)	11.056	72.95	3.63	3	3.547	10.58	44.34	45.58
	Equiv. Refl.: (-2,-6,3)								
Quartz	(8,-2,3)	11.056	72.95	3.629	3	3.547	10.58	44.34	45.58
	Equiv. Refl.: (8,-6,-3)								
Quartz	(-6,8,3)	11.056	72.95	3.628	3	3.547	10.57	44.34	45.58
	Equiv. Refl.: (-6,-2,-3)								
Quartz	(1,-7,-5)	11.143	74.5	3.515	2.8	3.208	9.01	40.1	41.1
Quartz	(1,6,5)	11.143	74.5	3.514	2.8	3.208	9.01	40.1	41.1
Quartz	(-7,6,-5)	11.143	74.5	3.513	2.8	3.208	9.01	40.1	41.09
Quartz	(6,1,-5)	11.143	74.5	3.512	2.8	3.208	9	40.1	41.09
	Equiv. Refl.: (6,-7,5), (-7,1,5)								
Sapph	(2,4,16)	11.031	72.54	3.492	3	3.637	10.88	45.46	46.74
	Equiv. Refl.: (2,-6,-16), (4,2,-16), (4,-6,16), (6,-2,-16), (6,-4,16), (-2,6,16), (-2,-4,-16), (-4,6,-16), (-4,-2,16), (-6,2,16), (-6,4,-16)								
Quartz	(4,4,-4)	11.088	73.5	3.393	2.8	3.424	9.56	42.8	43.86
	Equiv. Refl.: (4,-8,4)								
Quartz	(-8,4,4)	11.088	73.5	3.392	2.8	3.424	9.56	42.8	43.86
	Equiv. Refl.: (-8,-4,-4)								
Quartz	(4,-8,-4)	11.088	73.5	3.391	2.8	3.424	9.55	42.8	43.86
Quartz	(4,4,4)	11.088	73.5	3.39	2.8	3.424	9.55	42.8	43.86
Quartz	(-4,8,-4)	11.088	73.5	3.323	2.8	3.424	9.56	42.8	43.86
	Equiv. Refl.: (-4,-4,4)								
Quartz	(8,-4,4)	11.088	73.5	3.322	2.8	3.424	9.56	42.8	43.86
	Equiv. Refl.: (8,-4,-4)								
Quartz	(-4,8,4)	11.088	73.5	3.321	2.8	3.424	9.55	42.8	43.86
Quartz	(-4,-4,-4)	11.088	73.5	3.32	2.8	3.424	9.55	42.8	43.86
Quartz	(-1,7,5)	11.143	74.5	3.173	2.8	3.208	9.01	40.1	41.1
Quartz	(-1,-6,-5)	11.143	74.5	3.172	2.8	3.208	9.01	40.1	41.1

Ei =	11.564	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(7,-1,-5)	11.143	74.5	3.171	2.8	3.208	9	40.1	41.09
	Equiv. Refl.: (7,-6,5), (-6,-1,5)								
Quartz	(-6,7,-5)	11.143	74.5	3.17	2.8	3.208	9	40.1	41.09
Quartz	(-3,5,8)	11.16	74.8	3.14	2.8	3.142	8.78	39.27	40.24
	Equiv. Refl.: (-3,-2,-8)								
Quartz	(5,-2,8)	11.16	74.8	3.138	2.8	3.142	8.77	39.27	40.24
	Equiv. Refl.: (5,-3,-8), (-2,5,-8)								
Quartz	(-2,-3,8)	11.16	74.8	3.137	2.8	3.142	8.77	39.27	40.24
Quartz	(8,-1,-1)	11.06	73.02	3.1	2.5	3.532	8.74	44.15	45.01
	Equiv. Refl.: (8,-7,1), (-1,8,1), (-1,-7,-1), (-7,8,-1), (-7,-1,1)								
Quartz	(5,2,-6)	11.408	80.59	3.075	2.7	1.916	5.23	23.95	24.51
	Equiv. Refl.: (5,-7,6)								
Quartz	(-7,2,6)	11.408	80.59	3.073	2.7	1.916	5.23	23.95	24.51
Quartz	(2,-7,-6)	11.408	80.59	3.072	2.7	1.916	5.22	23.95	24.51
	Equiv. Refl.: (-7,5,-6)								
Quartz	(2,5,6)	11.408	80.59	3.071	2.7	1.916	5.22	23.95	24.51
Quartz	(1,7,1)	11.06	73.02	3.049	2.5	3.532	8.74	44.15	45.01
	Equiv. Refl.: (1,-8,-1), (7,1,-1), (7,-8,1), (-8,1,1), (-8,7,-1)								
Sapph	(4,4,9)	11.273	77.13	3.034	2.7	2.642	7.18	33.03	33.8
	Equiv. Refl.: (4,4,-9), (4,-8,9), (4,-8,-9), (8,-4,9), (8,-4,-9), (-4,8,9), (-4,8,-9), (-4,-4,9), (-4,-4,-9), (-8,4,9), (-8,4,-9)								
Quartz	(-5,7,-6)	11.408	80.59	2.995	2.7	1.916	5.23	23.95	24.51
	Equiv. Refl.: (-5,-2,6)								
Quartz	(7,-2,-6)	11.408	80.59	2.993	2.7	1.916	5.23	23.95	24.51
Quartz	(7,-5,6)	11.408	80.59	2.992	2.7	1.916	5.23	23.95	24.51
Quartz	(-2,7,6)	11.408	80.59	2.991	2.7	1.916	5.22	23.95	24.51
Quartz	(-2,-5,-6)	11.408	80.59	2.99	2.7	1.916	5.22	23.95	24.51
Quartz	(3,5,-4)	11.183	75.26	2.976	2.4	3.043	7.45	38.03	38.76
	Equiv. Refl.: (3,-8,4), (5,3,4), (5,-8,-4), (-8,3,-4), (-8,5,4)								
Quartz	(3,2,8)	11.16	74.8	2.971	2.8	3.142	8.78	39.27	40.24
	Equiv. Refl.: (3,-5,-8)								
Quartz	(2,3,-8)	11.16	74.8	2.97	2.8	3.142	8.77	39.27	40.24
	Equiv. Refl.: (2,-5,8), (-5,3,8)								
Quartz	(-5,2,-8)	11.16	74.8	2.969	2.8	3.142	8.77	39.27	40.24
Quartz	(3,0,9)	11.21	75.79	2.967	2.5	2.927	7.24	36.59	37.3
	Equiv. Refl.: (3,-3,-9), (-3,0,-9), (-3,3,9)								
Quartz	(0,3,-9)	11.21	75.79	2.958	2.5	2.927	7.23	36.59	37.3
	Equiv. Refl.: (0,-3,9)								
Quartz	(-3,8,-4)	11.183	75.26	2.938	2.4	3.043	7.45	38.03	38.76
Quartz	(8,-3,4)	11.183	75.26	2.937	2.4	3.043	7.45	38.03	38.76
	Equiv. Refl.: (8,-5,-4), (-3,-5,4), (-5,8,4), (-5,-3,-4)								
LiNbO3	(2,7,1)	11.39	80.06	2.706	4.3	2.027	8.74	25.33	26.8
	Equiv. Refl.: (2,-9,-1), (7,2,-1), (7,-9,1), (9,-2,-1), (9,-7,1), (-2,9,1), (-2,-7,-1), (-7,9,-1), (-7,-2,1), (-9,2,1), (-9,7,-1)								
Quartz	(-1,5,-8)	11.348	78.91	2.578	2.5	2.266	5.57	28.33	28.87
	Equiv. Refl.: (-1,-4,8)								
Quartz	(5,-1,8)	11.348	78.91	2.577	2.5	2.266	5.57	28.33	28.87
	Equiv. Refl.: (5,-4,-8), (-4,5,8)								
Quartz	(-4,-1,-8)	11.348	78.91	2.576	2.5	2.266	5.57	28.33	28.87

Ei =	11.564	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	 IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(2,6,5)	11.108	73.85	2.532	2.5	3.348	8.22	41.85	42.65
	Equiv. Refl.: (2,-8,-5), (6,2,-5), (6,-8,5), (8,-2,-5), (8,-6,5), (-2,8,5), (-2,-6,-5), (-6,8,-5), (-6,-2,5), (-8,2,5), (-8,6,-5)								
Quartz	(1,4,-8)	11.348	78.91	2.517	2.5	2.266	5.57	28.33	28.87
	Equiv. Refl.: (1,-5,8)								
Quartz	(4,-5,-8)	11.348	78.91	2.516	2.5	2.266	5.57	28.33	28.87
	Equiv. Refl.: (-5,1,-8), (-5,4,8)								
Sapph	(3,4,14)	11.331	78.48	2.515	2.6	2.357	6.1	29.46	30.09
	Equiv. Refl.: (3,-7,-14), (4,3,-14), (4,-7,14), (7,-3,-14), (7,-4,14), (-3,7,14), (-3,-4,-14), (-4,7,-14), (-4,-3,14), (-7,3,14), (-7,4,-14), (4,1,8)								
Quartz	(-2,8,3)	11.056	72.95	2.459	2.2	3.547	7.66	44.34	44.99
	Equiv. Refl.: (-2,-6,-3), (-6,8,-3)								
Quartz	(8,-2,-3)	11.056	72.95	2.458	2.2	3.547	7.66	44.34	44.99
	Equiv. Refl.: (8,-6,3), (-6,-2,3)								
Quartz	(2,6,3)	11.056	72.95	1.912	2.2	3.547	7.66	44.34	44.99
	Equiv. Refl.: (2,-8,-3), (6,2,-3), (6,-8,3)								
Quartz	(-8,2,3)	11.056	72.95	1.911	2.2	3.547	7.66	44.34	44.99
	Equiv. Refl.: (-8,6,-3)								
Sapph	(2,4,-17)	11.367	79.41	1.895	2.3	2.162	4.98	27.03	27.48
	Equiv. Refl.: (2,-6,17), (4,2,17), (4,-6,-17), (6,-2,17), (6,-4,-17), (-2,6,-17), (-2,-4,17), (-4,6,17), (-4,-2,-17), (-6,2,-17), (-6,4,17)								
Quartz	(8,-1,1)	11.06	73.02	1.891	2	3.532	7.03	44.15	44.71
	Equiv. Refl.: (8,-7,-1), (-1,8,-1), (-1,-7,1), (-7,8,1), (-7,-1,-1)								
LiNbO3	(2,4,19)	11.239	76.39	1.818	3	2.799	8.38	34.99	35.98
	Equiv. Refl.: (2,-6,-19), (4,2,-19), (4,-6,19), (6,-2,-19), (6,-4,19), (-2,6,19), (-2,-4,-19), (-4,6,-19), (-4,-2,19), (-6,2,19), (-6,4,-19)								
Quartz	(1,7,-1)	11.06	73.02	1.758	2	3.532	7.03	44.15	44.71
	Equiv. Refl.: (1,-8,1), (7,1,1), (7,-8,-1), (-8,1,-1), (-8,7,1)								
LiNbO3	(1,3,-23)	11.442	81.67	1.695	3.4	1.694	5.73	21.17	21.93
	Equiv. Refl.: (1,-4,23), (3,1,23), (3,-4,-23), (4,-1,23), (4,-3,-23), (-1,4,-23), (-1,-3,23), (-3,4,23), (-3,-1,-23), (-4,1,-23), (-4,3,23)								
LiNbO3	(1,5,-19)	11.495	83.72	1.478	3.5	1.273	4.44	15.91	16.52
	Equiv. Refl.: (1,-6,19), (5,1,19), (5,-6,-19), (6,-1,19), (6,-5,-19), (-1,6,-19), (-1,-5,19), (-5,6,19), (-5,-1,-19), (-6,1,-19), (-6,5,19)								
LiNbO3	(3,4,17)	11.372	79.55	1.34	2.7	2.132	5.75	26.66	27.27
	Equiv. Refl.: (3,-7,-17), (4,3,-17), (4,-7,17), (7,-3,-17), (7,-4,17), (-3,7,17), (-3,-4,-17), (-4,7,-17), (-4,-3,17), (-7,3,17), (-7,4,-17)								
Quartz	(3,4,-6)	11.221	76.01	1.189	1.3	2.882	3.82	36.02	36.22
Quartz	(3,-7,6)	11.221	76.01	1.188	1.3	2.882	3.81	36.02	36.22
	Equiv. Refl.: (4,3,6), (4,-7,-6)								
Quartz	(-7,3,-6)	11.221	76.01	1.186	1.3	2.882	3.81	36.02	36.22
	Equiv. Refl.: (-7,4,6)								
Quartz	(-1,7,-5)	11.143	74.5	1.115	1.3	3.208	4.19	40.1	40.31
	Equiv. Refl.: (-1,-6,5), (-6,7,5), (-6,-1,-5)								
Quartz	(7,-1,5)	11.143	74.5	1.114	1.3	3.208	4.19	40.1	40.31
	Equiv. Refl.: (7,-6,-5)								
LiNbO3	(1,4,21)	11.348	78.92	1.08	2.3	2.264	5.24	28.3	28.79
	Equiv. Refl.: (1,4,-21), (1,-5,21), (1,-5,-21), (4,1,21), (4,1,-21), (4,-5,21), (4,-5,-21), (5,-1,21), (5,-1,-21), (5,-4,21), (5,-4,-21), (-1,5,21), (-1,5,-21), (-1,-4,21), (-1,-4,-21), (-4,5,21), (-4,5,-21), (-4,-1,21), (-4,-1,-21), (-5,1,21), (-5,1,-21), (-5,4,21), (-5,4,-21)								

Ei =	11.564	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Sapph	(2,3,-19)	11.191	75.41	1.078	1.4	3.01	4.16	37.63	37.86
	Equiv. Refl.: (2,-5,19), (3,2,19), (3,-5,-19), (5,-2,19), (5,-3,-19), (-2,5,-19), (-2,-3,19), (-3,5,19), (-3,-2,-19), (-5,2,-19), (-5,3,19), (8,-1,2), (8,-7,-2), (-1,8,-2), (-1,-7,2)								
Quartz	(-7,8,2)	11.237	76.34	1.077	1.3	2.812	3.62	35.14	35.33
	Equiv. Refl.: (-7,-1,-2)								
Quartz	(6,1,5)	11.143	74.5	1.074	1.3	3.208	4.19	40.1	40.31
	Equiv. Refl.: (6,-7,-5)								
Quartz	(1,6,-5)	11.143	74.5	1.073	1.3	3.208	4.19	40.1	40.31
	Equiv. Refl.: (1,-7,5)								
Quartz	(-7,1,-5)	11.143	74.5	1.072	1.3	3.208	4.19	40.1	40.31
	Equiv. Refl.: (-7,6,5)								
Quartz	(-4,6,-7)	11.131	74.28	1.055	1.2	3.256	4.01	40.69	40.89
	Equiv. Refl.: (-4,-2,7)								
Quartz	(6,-2,-7)	11.131	74.28	1.054	1.2	3.256	4.01	40.69	40.89
Quartz	(6,-4,7)	11.131	74.28	1.053	1.2	3.256	4	40.69	40.89
Quartz	(-2,6,7)	11.131	74.28	1.052	1.2	3.256	4	40.69	40.89
	Equiv. Refl.: (-2,-4,-7)								
Sapph	(3,5,7)	11.048	72.82	1.022	1.3	3.575	4.59	44.68	44.92
	Equiv. Refl.: (3,-8,-7), (5,3,-7), (5,-8,7), (8,-3,-7), (8,-5,7), (-3,8,7), (-3,-5,-7), (-5,8,-7), (-5,-3,7), (-8,3,7), (-8,5,-7)								
Quartz	(1,7,-2)	11.237	76.34	1.013	1.3	2.812	3.62	35.14	35.33
	Equiv. Refl.: (1,-8,2), (7,1,2), (7,-8,-2), (-8,1,-2), (-8,7,2)								
Quartz	(8,-2,-4)	11.465	82.48	1.008	1.3	1.526	1.99	19.08	19.18
	Equiv. Refl.: (8,-6,4)								
LiNbO3	(4,5,-7)	11.302	77.78	1.007	2.1	2.503	5.35	31.29	31.75
	Equiv. Refl.: (4,-9,7), (5,4,7), (5,-9,-7), (9,-4,7), (9,-5,-7), (-4,9,-7), (-4,-5,7), (-5,9,7), (-5,-4,-7), (-9,4,-7), (-9,5,7), (1,2,-9), (1,-3,9), (2,-3,-9), (-6,8,-4), (-6,-2,4)								
Quartz	(2,1,9)	11.019	72.35	1.006	1.1	3.68	4.14	46	46.19
Quartz	(-2,-6,-4)	11.465	82.48	1.005	1.3	1.526	1.99	19.08	19.18
Quartz	(-2,8,4)	11.465	82.48	1.004	1.3	1.526	1.99	19.08	19.18
	Equiv. Refl.: (-3,1,-9), (-3,2,9)								
Quartz	(-3,-4,6)	11.221	76.01	0.992	1.3	2.882	3.82	36.02	36.22
	Equiv. Refl.: (-4,7,6)								
Quartz	(-3,7,-6)	11.221	76.01	0.991	1.3	2.882	3.81	36.02	36.22
	Equiv. Refl.: (-4,-3,-6)								
Quartz	(7,-3,6)	11.221	76.01	0.989	1.3	2.882	3.81	36.02	36.22
	Equiv. Refl.: (7,-4,-6)								
Quartz	(4,-6,7)	11.131	74.28	0.985	1.2	3.256	4.01	40.69	40.89
Quartz	(4,2,-7)	11.131	74.28	0.984	1.2	3.256	4.01	40.69	40.89
	Equiv. Refl.: (-6,2,7), (-6,4,-7)								
Quartz	(2,4,7)	11.131	74.28	0.982	1.2	3.256	4	40.69	40.89
	Equiv. Refl.: (2,-6,-7)								
Quartz	(-1,3,-9)	11.019	72.35	0.868	1.1	3.68	4.15	46	46.19
	Equiv. Refl.: (-1,-2,9), (-2,3,9)								
Quartz	(-2,-1,-9)	11.019	72.35	0.866	1.1	3.68	4.14	46	46.19
Quartz	(3,-1,9)	11.019	72.35	0.865	1.1	3.68	4.14	46	46.19
	Equiv. Refl.: (3,-2,-9)								
Quartz	(0,7,-4)	11.183	75.26	0.812	1	3.043	3.17	38.03	38.16
	Equiv. Refl.: (0,-7,4)								
Quartz	(7,-7,-4)	11.183	75.26	0.81	1	3.043	3.16	38.03	38.16
	Equiv. Refl.: (-7,7,4)								

Ei =	11.564	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(7,0,4)	11.183	75.26	0.809	1	3.043	3.16	38.03	38.16
	Equiv. Refl.: (-7,0,-4)								
LiNbO3	(4,5,5)	11.088	73.5	0.795	1.7	3.425	5.69	42.82	43.19
	Equiv. Refl.: (4,-9,-5), (5,4,-5), (5,-9,5), (9,-4,-5), (9,-5,5), (-4,9,5), (-4,-5,-5), (-5,9,-5), (-5,-4,5), (-9,4,5), (-9,5,-5)								
Quartz	(8,-3,-4)	11.183	75.26	0.782	1	3.043	2.94	38.03	38.15
	Equiv. Refl.: (8,-5,4), (-3,8,4), (-3,-5,-4), (-5,8,-4)								
Quartz	(-5,-3,4)	11.183	75.26	0.781	1	3.043	2.94	38.03	38.15
Quartz	(-8,2,4)	11.465	82.48	0.769	1.3	1.526	1.99	19.08	19.18
	Equiv. Refl.: (-8,6,-4)								
Quartz	(6,2,-4)	11.465	82.48	0.768	1.3	1.526	1.99	19.08	19.18
	Equiv. Refl.: (6,-8,4)								
Quartz	(2,6,4)	11.465	82.48	0.766	1.3	1.526	1.99	19.08	19.18
Quartz	(2,-8,-4)	11.465	82.48	0.765	1.3	1.526	1.99	19.08	19.18
Quartz	(7,-2,6)	11.408	80.59	0.763	1.1	1.916	2.01	23.95	24.03
	Equiv. Refl.: (7,-5,-6)								
Quartz	(-2,7,-6)	11.408	80.59	0.761	1	1.916	2.01	23.95	24.03
	Equiv. Refl.: (-2,-5,6), (-5,-2,-6)								
Quartz	(-5,7,6)	11.408	80.59	0.76	1	1.916	2.01	23.95	24.03
Sapph	(1,6,-11)	11.175	75.1	0.715	1	3.077	3.11	38.46	38.58
	Equiv. Refl.: (1,-7,11), (6,1,11), (6,-7,-11), (7,-1,11), (7,-6,-11), (-1,7,-11), (-1,-6,11), (-6,7,11), (-6,-1,-11), (-7,1,-11), (-7,6,11)								
Quartz	(-1,6,7)	11.414	80.75	0.704	0.9	1.882	1.77	23.53	23.6
	Equiv. Refl.: (-1,-5,-7)								
LiNbO3	(4,5,-1)	10.869	70.04	0.703	1.4	4.2	6.07	52.5	52.85
	Equiv. Refl.: (4,-9,1), (5,4,1), (5,-9,-1), (9,-4,1), (9,-5,-1), (-4,9,-1), (-4,-5,1), (-5,9,1), (-5,-4,-1), (-9,4,-1), (-9,5,1), (-5,6,-7)								
Quartz	(-5,-1,7)	11.414	80.75	0.702	0.9	1.882	1.77	23.53	23.6
Quartz	(6,-1,-7)	11.414	80.75	0.701	0.9	1.882	1.77	23.53	23.6
	Equiv. Refl.: (6,-5,7)								
Quartz	(3,5,4)	11.183	75.26	0.692	1	3.043	2.94	38.03	38.15
	Equiv. Refl.: (3,-8,-4), (-8,3,4), (-8,5,-4)								
Quartz	(5,3,-4)	11.183	75.26	0.691	1	3.043	2.94	38.03	38.15
	Equiv. Refl.: (5,-8,4)								
Quartz	(-7,2,-6)	11.408	80.59	0.656	1.1	1.916	2.01	23.95	24.03
	Equiv. Refl.: (-7,5,6)								
Quartz	(5,2,6)	11.408	80.59	0.654	1	1.916	2.01	23.95	24.03
Quartz	(2,5,-6)	11.408	80.59	0.653	1	1.916	2.01	23.95	24.03
	Equiv. Refl.: (2,-7,6), (5,-7,-6)								
Quartz	(0,6,6)	11.126	74.18	0.585	0.8	3.277	2.61	40.96	41.05
	Equiv. Refl.: (0,-6,-6)								
Quartz	(6,0,-6)	11.126	74.18	0.582	0.8	3.277	2.6	40.96	41.05
	Equiv. Refl.: (6,-6,6), (-6,0,6), (-6,6,-6)								
Sapph	(1,4,18)	11.015	72.28	0.578	0.8	3.695	3.06	46.19	46.29
	Equiv. Refl.: (1,4,-18), (1,-5,18), (1,-5,-18), (4,1,18), (4,1,-18), (4,-5,18), (4,-5,-18), (5,-1,18), (5,-1,-18), (5,-4,18), (5,-4,-18), (-1,5,18), (-1,5,-18), (-1,-4,18), (-1,-4,-18), (-4,5,18), (-4,5,-18), (-4,-1,18), (-4,-1,-18), (-5,1,18), (-5,1,-18), (-5,4,18), (-5,4,-18)								
Quartz	(1,-3,-9)	11.019	72.35	0.545	0.7	3.68	2.69	46	46.08
Quartz	(1,2,9)	11.019	72.35	0.544	0.7	3.68	2.69	46	46.08

Ei = Cryst	11.564 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(-3,1,9) Equiv. Refl.: (-3,2,-9)	11.019	72.35	0.543	0.7	3.68	2.68	46	46.08
Quartz	(2,1,-9) Equiv. Refl.: (2,-3,9)	11.019	72.35	0.542	0.7	3.68	2.68	46	46.08
Quartz	(-1,3,9)	11.019	72.35	0.528	0.7	3.68	2.69	46	46.08
Sapph	(2,5,12) Equiv. Refl.: (2,5,-12), (2,-7,12), (2,-7,-12), (5,2,12), (5,2,-12), (5,-7,12), (5,-7,-12), (7,-2,12), (7,-2,-12), (7,-5,12), (7,-5,-12), (-2,7,12), (-2,7,-12), (-2,-5,12), (-2,-5,-12), (-5,7,12), (-5,7,-12), (-5,-2,12), (-5,-2,-12), (-7,2,12), (-7,2,-12), (-7,5,12), (-7,5,-12), (-1,-2,-9)	11.003	72.08	0.527	0.8	3.739	2.9	46.73	46.82
Quartz	(3,-1,-9) Equiv. Refl.: (3,-2,9), (-2,3,-9)	11.019	72.35	0.526	0.7	3.68	2.68	46	46.08
Quartz	(-2,-1,9)	11.019	72.35	0.525	0.7	3.68	2.68	46	46.08
LiNbO3	(1,2,23) Equiv. Refl.: (1,-3,-23), (2,1,-23), (2,-3,23), (3,-1,-23), (3,-2,23), (-1,3,23), (-1,-2,-23), (-2,3,-23), (-2,-1,23), (-3,1,23), (-3,2,-23)	10.923	70.84	0.523	1.2	4.019	4.94	50.23	50.48
Quartz	(4,5,0) Equiv. Refl.: (4,-9,0), (5,4,0), (5,-9,0), (-9,4,0), (-9,5,0)	11.379	79.75	0.519	0.8	2.091	1.7	26.14	26.2
Quartz	(1,5,7) Equiv. Refl.: (1,-6,-7)	11.414	80.75	0.513	0.9	1.882	1.77	23.53	23.6
Quartz	(5,-6,7)	11.414	80.75	0.512	0.9	1.882	1.77	23.53	23.6
Quartz	(5,1,-7)	11.414	80.75	0.511	0.9	1.882	1.77	23.53	23.6
Quartz	(-6,1,7) Equiv. Refl.: (-6,5,-7)	11.414	80.75	0.51	0.9	1.882	1.77	23.53	23.6
Quartz	(9,-4,0) Equiv. Refl.: (9,-5,0), (-4,9,0), (-4,-5,0), (-5,9,0), (-5,-4,0)	11.379	79.75	0.501	0.8	2.091	1.7	26.14	26.2
LiNbO3	(3,6,3) Equiv. Refl.: (3,6,-3), (3,-9,3), (3,-9,-3), (6,3,3), (6,3,-3), (6,-9,3), (6,-9,-3), (9,-3,3), (9,-3,-3), (9,-6,3), (9,-6,-3), (-3,9,3), (-3,9,-3), (-3,-6,3), (-3,-6,-3), (-6,9,3), (-6,9,-3), (-6,-3,3), (-6,-3,-3), (-9,3,3), (-9,3,-3), (-9,6,3), (-9,6,-3)	11.118	74.03	0.446	1.2	3.309	3.99	41.36	41.55
Quartz	(0,3,9) Equiv. Refl.: (0,-3,-9)	11.21	75.79	0.443	0.7	2.927	1.97	36.59	36.64
Quartz	(3,0,-9) Equiv. Refl.: (3,-3,9), (-3,3,-9)	11.21	75.79	0.44	0.7	2.927	1.96	36.59	36.64
Quartz	(-3,0,9)	11.21	75.79	0.439	0.7	2.927	1.96	36.59	36.64
Quartz	(3,2,-8) Equiv. Refl.: (3,-5,8)	11.16	74.8	0.429	0.6	3.142	1.94	39.27	39.32
Quartz	(2,3,8) Equiv. Refl.: (2,-5,-8)	11.16	74.8	0.428	0.6	3.142	1.94	39.27	39.32
Quartz	(-5,3,-8)	11.16	74.8	0.424	0.6	3.142	1.93	39.27	39.32
Quartz	(-5,2,8)	11.16	74.8	0.423	0.6	3.142	1.92	39.27	39.32
Quartz	(4,-4,-8) Equiv. Refl.: (-4,0,-8), (-4,4,8)	10.87	70.06	0.42	0.6	4.196	2.49	52.45	52.51
Quartz	(4,0,8)	10.87	70.06	0.419	0.6	4.196	2.49	52.45	52.51
Quartz	(0,4,-8) Equiv. Refl.: (0,-4,8)	10.87	70.06	0.415	0.6	4.196	2.47	52.45	52.51
Quartz	(1,7,2) Equiv. Refl.: (1,-8,-2)	11.237	76.34	0.388	0.6	2.812	1.71	35.14	35.19
Quartz	(7,1,-2) Equiv. Refl.: (7,-8,2), (-8,1,2), (-8,7,-2)	11.237	76.34	0.387	0.6	2.812	1.71	35.14	35.19
Quartz	(-3,5,-8) Equiv. Refl.: (-3,-2,8)	11.16	74.8	0.379	0.6	3.142	1.94	39.27	39.32

Ei = Cryst	11.564 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(-2,5,8)	11.16	74.8	0.378	0.6	3.142	1.94	39.27	39.32
	Equiv. Refl.: (-2,-3,-8)								
Quartz	(5,-3,8)	11.16	74.8	0.374	0.6	3.142	1.93	39.27	39.32
Quartz	(5,-2,-8)	11.16	74.8	0.373	0.6	3.142	1.92	39.27	39.32
	Equiv. Refl.: (-1,8,2), (-1,-7,-2)								
Quartz	(8,-1,-2)	11.237	76.34	0.372	0.6	2.812	1.71	35.14	35.19
	Equiv. Refl.: (8,-7,2), (-7,8,-2), (-7,-1,2)								
LiNbO3	(2,6,11)	11.169	74.97	0.371	1.1	3.105	3.46	38.81	38.96
	Equiv. Refl.: (2,-8,-11), (6,2,-11), (6,-8,11), (8,-2,-11), (8,-6,11), (-2,8,11), (-2,-6,-11), (-6,8,-11), (-6,-2,11), (-8,2,11), (-8,6,-11)								
Sapph	(0,2,22)	10.923	70.83	0.358	0.6	4.019	2.34	50.24	50.3
	Equiv. Refl.: (0,-2,-22), (2,0,-22), (2,-2,22), (-2,0,22), (-2,2,-22)								
LiNbO3	(2,5,15)	10.973	71.6	0.34	1	3.848	3.78	48.1	48.24
	Equiv. Refl.: (2,5,-15), (2,-7,15), (2,-7,-15), (5,2,15), (5,2,-15), (5,-7,15), (5,-7,-15), (7,-2,15), (7,-2,-15), (7,-5,15), (7,-5,-15), (-2,7,15), (-2,7,-15), (-2,-5,15), (-2,-5,-15), (-5,7,15), (-5,7,-15), (-5,-2,15), (-5,-2,-15), (-7,2,15), (-7,2,-15), (-7,5,15), (-7,5,-15)								
Sapph	(0,0,24)	11.455	82.13	0.297	0.6	1.599	1.03	19.99	20.02
	Equiv. Refl.: (0,0,-24)								
Quartz	(3,3,-7)	11.036	72.61	0.275	0.4	3.621	1.45	45.27	45.29
Quartz	(3,-6,7)	11.036	72.61	0.274	0.4	3.621	1.45	45.27	45.29
Quartz	(-6,3,7)	11.036	72.61	0.273	0.4	3.621	1.45	45.27	45.29
	Equiv. Refl.: (-6,3,-7)								
Quartz	(3,3,7)	11.036	72.61	0.272	0.4	3.621	1.44	45.27	45.29
	Equiv. Refl.: (3,-6,-7)								
LiNbO3	(1,7,9)	11.243	76.47	0.266	1	2.783	2.73	34.79	34.9
	Equiv. Refl.: (1,7,-9), (1,-8,9), (1,-8,-9), (7,1,9), (7,1,-9), (7,-8,9), (7,-8,-9), (8,-1,9), (8,-1,-9), (8,-7,9), (8,-7,-9), (-1,8,9), (-1,8,-9), (-1,-7,9), (-1,-7,-9), (-7,8,9), (-7,8,-9), (-7,-1,9), (-7,-1,-9), (-8,1,9), (-8,1,-9), (-8,7,9), (-8,7,-9)								
Sapph	(3,5,-8)	11.202	75.62	0.26	0.5	2.964	1.53	37.05	37.09
	Equiv. Refl.: (3,-8,8), (5,3,8), (5,-8,-8), (8,-3,8), (8,-5,-8), (-3,8,-8), (-3,-5,8), (-5,8,8), (-5,-3,-8), (-8,3,-8), (-8,5,8)								
LiNbO3	(3,5,13)	11.337	78.64	0.251	1	2.324	2.39	29.05	29.15
	Equiv. Refl.: (3,-8,-13), (5,3,-13), (5,-8,13), (8,-3,-13), (8,-5,13), (-3,8,13), (-3,-5,-13), (-5,8,-13), (-5,-3,13), (-8,3,13), (-8,5,-13)								
Sapph	(2,6,8)	11.501	84.01	0.248	0.7	1.213	0.85	15.17	15.19
	Equiv. Refl.: (2,-8,-8), (6,2,-8), (6,-8,8), (8,-2,-8), (8,-6,8), (-2,8,8), (-2,-6,-8), (-6,8,-8), (-6,-2,8), (-8,2,8), (-8,6,-8)								
Quartz	(-3,6,-7)	11.036	72.61	0.184	0.4	3.621	1.45	45.27	45.29
	Equiv. Refl.: (-3,-3,7)								
Quartz	(6,-3,7)	11.036	72.61	0.183	0.4	3.621	1.45	45.27	45.29
	Equiv. Refl.: (6,-3,-7)								
Quartz	(-3,6,7)	11.036	72.61	0.182	0.4	3.621	1.44	45.27	45.29
	Equiv. Refl.: (-3,-3,-7)								
LiNbO3	(3,5,-11)	10.906	70.57	0.17	0.7	4.078	2.71	50.98	51.05
	Equiv. Refl.: (3,-8,11), (5,3,11), (5,-8,-11), (8,-3,11), (8,-5,-11), (-3,8,-11), (-3,-5,11), (-5,8,11), (-5,-3,-11), (-8,3,-11), (-8,5,11)								
Sapph	(3,4,-13)	11.056	72.96	0.165	0.4	3.545	1.32	44.31	44.33
	Equiv. Refl.: (3,-7,13), (4,3,13), (4,-7,-13), (7,-3,13), (7,-4,-13), (-3,7,-13), (-3,-4,13), (-4,7,13), (-4,-3,-13), (-7,3,-13), (-7,4,13)								
Sapph	(1,2,-22)	11.229	76.19	0.1	0.3	2.843	0.87	35.54	35.55
	Equiv. Refl.: (1,-3,22), (2,1,22), (2,-3,-22), (3,-1,22), (3,-2,-22), (-1,3,-22), (-1,-2,22), (-2,3,22), (-2,-1,-22), (-3,1,-22), (-3,2,22)								

Sapph	(2,6,2)	10.89	70.35	0.098	0.3	4.13	1.08	51.62	51.63
Equiv. Refl.: (2,-8,-2), (6,2,-2), (6,-8,2), (8,-2,-2), (8,-6,2), (-2,8,2), (-2,-6,-2), (-6,8,-2), (-6,-2,2)									
(-8,2,2), (-8,6,-2)									

Ei = Cryst	14.353 Refl (h,k,l)	keV EB [keV]	Θ B [$^{\circ}$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Ge	(1,1,13)	14.329	86.7	3.8711	11.73	0.8279	9.71	10.35	14.19
Equiv. Refl.: (1,7,11), (1,11,7), (1,13,1), (3,9,9), (5,5,11), (5,11,5), (7,1,11), (7,11,1), (9,3,9), (9,9,3), (11,1,7), (11,5,5), (11,7,1), (13,1,1)									
Ge	(2,8,10)	14.203	81.71	3.0301	6.83	2.092	14.28	26.15	29.79
Equiv. Refl.: (2,10,8), (8,2,10), (8,10,2), (10,2,8), (10,8,2)									
Si	(2,2,12)	14.073	78.66	2.8876	2.33	2.8791	6.7	35.99	36.61
Equiv. Refl.: (2,12,2), (4,6,10), (4,10,6), (6,4,10), (6,10,4), (10,4,6), (10,6,4), (12,2,2)									
Si	(3,5,11)	14.211	81.93	1.9823	2.23	2.035	4.53	25.44	25.84
Equiv. Refl.: (3,11,5), (5,3,11), (5,7,9), (5,9,7), (5,11,3), (7,5,9), (7,9,5), (9,5,7), (9,7,5), (11,3,5), (11,5,3)									
Ge	(0,4,12)	13.861	74.95	1.891	4.11	3.8595	15.88	48.24	50.79
Equiv. Refl.: (0,12,4), (4,0,12), (4,12,0), (12,0,4), (12,4,0)									
Ge	(2,2,12)	13.51	70.26	1.6384	3.44	5.15	17.74	64.37	66.77
Equiv. Refl.: (2,12,2), (4,6,10), (4,10,6), (6,4,10), (6,10,4), (10,4,6), (10,6,4), (12,2,2)									
Si	(0,0,12)	13.697	72.62	1.5958	1.69	4.4938	7.58	56.17	56.68
Equiv. Refl.: (0,12,0), (4,8,8), (8,4,8), (8,8,4), (12,0,0)									
Si	(1,5,11)	13.839	74.62	1.1666	1.3	3.9469	5.11	49.34	49.6
Equiv. Refl.: (1,11,5), (5,1,11), (5,11,1), (7,7,7), (11,1,5), (11,5,1)									
Ge	(1,9,9)	13.99	77.09	1.1309	3.28	3.2909	10.78	41.14	42.53
Equiv. Refl.: (9,1,9), (9,9,1)									
Ge	(3,5,11)	13.642	71.89	0.9245	2.56	4.6927	12.03	58.66	59.88
Equiv. Refl.: (3,11,5), (5,3,11), (5,7,9), (5,9,7), (5,11,3), (7,5,9), (7,9,5), (9,5,7), (9,7,5), (11,3,5), (11,5,3)									
Sapph	(0,0,30)	14.319	86.04	16.669	13.6	0.993	13.48	12.42	18.33
Equiv. Refl.: (0,0,-30)									
LiNbO3	(0,5,28)	14.322	86.21	12.89	12.5	0.95	11.86	11.87	16.78
Equiv. Refl.: (5,-5,28), (-5,0,28)									
LiNbO3	(0,-5,-28)	14.322	86.21	12.686	12.5	0.95	11.86	11.87	16.78
Equiv. Refl.: (5,0,-28), (-5,5,-28)									
LiNbO3	(3,-10,16)	14.281	84.24	11.563	10.7	1.447	15.44	18.09	23.78
Equiv. Refl.: (7,3,16), (10,-3,16), (-3,-7,16)									
LiNbO3	(-7,10,16)	14.281	84.24	11.562	10.7	1.447	15.44	18.09	23.78
Equiv. Refl.: (-10,7,16)									
LiNbO3	(3,7,-16)	14.281	84.24	11.515	10.7	1.447	15.44	18.09	23.78
Equiv. Refl.: (-3,10,-16), (-7,-3,-16), (-10,3,-16)									
LiNbO3	(7,-10,-16)	14.281	84.24	11.514	10.7	1.447	15.44	18.09	23.78
Equiv. Refl.: (10,-7,-16)									
Quartz	(11,-3,0)	14.35	88.76	10.586	9.5	0.31	2.94	3.88	4.86
Equiv. Refl.: (11,-8,0), (-3,11,0), (-3,-8,0), (-8,11,0), (-8,-3,0)									
LiNbO3	(0,8,-20)	14.273	83.96	10.283	9	1.519	13.63	18.98	23.37
Equiv. Refl.: (8,-8,-20), (-8,0,-20)									
LiNbO3	(3,8,-8)	14.154	80.45	10.171	8.9	2.414	21.59	30.17	37.1
Equiv. Refl.: (8,-11,-8), (11,-8,-8), (-3,11,-8), (-8,-3,-8), (-11,3,-8)									
LiNbO3	(2,9,-4)	14.225	82.34	10.104	9.1	1.931	17.6	24.14	29.88
Equiv. Refl.: (9,-11,-4), (11,-9,-4), (-2,11,-4), (-9,-2,-4), (-11,2,-4)									
LiNbO3	(2,-11,4)	14.225	82.34	10.103	9.1	1.931	17.6	24.14	29.88
Equiv. Refl.: (9,2,4), (11,-2,4), (-2,-9,4), (-9,11,4), (-11,9,4)									

Ei =	14.353	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(3,-11,8)	14.154	80.45	9.729	8.9	2.414	21.59	30.17	37.1
	Equiv. Refl.: (8,3,8), (11,-3,8), (-3,-8,8), (-8,11,8), (-11,8,8)								
LiNbO3	(2,2,30)	14.254	83.26	9.607	8.8	1.696	14.98	21.2	25.96
	Equiv. Refl.: (2,-4,30), (4,-2,30), (-2,4,30), (-2,-2,30), (-4,2,30)								
LiNbO3	(2,2,-30)	14.254	83.26	9.377	8.8	1.696	14.98	21.2	25.96
	Equiv. Refl.: (2,-4,-30), (4,-2,-30), (-2,4,-30), (-2,-2,-30), (-4,2,-30)								
Quartz	(3,8,0)	14.35	88.76	9.25	9.5	0.31	2.94	3.88	4.86
	Equiv. Refl.: (3,-11,0), (8,3,0), (8,-11,0), (-11,3,0), (-11,8,0)								
LiNbO3	(0,3,30)	14.049	78.18	9.111	7.9	3.003	23.78	37.53	44.43
	Equiv. Refl.: (3,-3,30), (-3,0,30)								
LiNbO3	(0,-3,30)	14.049	78.18	9.052	7.9	3.003	23.68	37.53	44.38
	Equiv. Refl.: (3,0,30), (-3,3,30)								
LiNbO3	(0,-3,-30)	14.049	78.18	9.009	7.9	3.003	23.78	37.53	44.43
	Equiv. Refl.: (3,0,-30), (-3,3,-30)								
LiNbO3	(0,3,-30)	14.049	78.18	8.985	7.9	3.003	23.68	37.53	44.38
	Equiv. Refl.: (-3,0,-30)								
LiNbO3	(3,-3,-30)	14.049	78.18	8.984	7.9	3.003	23.68	37.53	44.38
Quartz	(-10,1,3)	14.318	86.02	8.764	7	0.998	7.03	12.48	14.32
	Equiv. Refl.: (-10,9,-3)								
Quartz	(1,9,3)	14.318	86.02	8.761	7	0.998	7.02	12.48	14.32
	Equiv. Refl.: (1,-10,-3), (9,-10,3)								
Quartz	(9,1,-3)	14.318	86.02	8.76	7	0.998	7.02	12.48	14.32
LiNbO3	(0,-8,20)	14.273	83.96	8.651	9	1.519	13.63	18.98	23.37
	Equiv. Refl.: (8,0,20)								
LiNbO3	(-8,8,20)	14.273	83.96	8.65	9	1.519	13.63	18.98	23.37
Quartz	(10,-1,-3)	14.318	86.02	8.57	7	0.998	7.03	12.48	14.32
	Equiv. Refl.: (10,-9,3)								
Quartz	(-1,10,3)	14.318	86.02	8.568	7	0.998	7.02	12.48	14.32
Quartz	(-1,-9,-3)	14.318	86.02	8.567	7	0.998	7.02	12.48	14.32
	Equiv. Refl.: (-9,10,-3), (-9,-1,3)								
LiNbO3	(2,-11,-2)	14.14	80.12	7.939	7.1	2.499	17.77	31.24	35.94
	Equiv. Refl.: (9,2,-2), (11,-2,-2), (-2,-9,-2)								
LiNbO3	(-9,11,-2)	14.14	80.12	7.938	7.1	2.499	17.77	31.24	35.94
	Equiv. Refl.: (-11,9,-2)								
LiNbO3	(2,-8,22)	14.047	78.15	7.88	6.8	3.011	20.58	37.64	42.9
	Equiv. Refl.: (6,2,22), (8,-2,22), (-2,-6,22)								
LiNbO3	(-6,8,22)	14.047	78.15	7.879	6.8	3.011	20.58	37.64	42.9
	Equiv. Refl.: (-8,6,22)								
Sapph	(3,7,-10)	14.198	81.57	7.859	6.2	2.127	13.11	26.59	29.65
	Equiv. Refl.: (3,-10,10), (7,3,10), (7,-10,-10), (10,-3,10), (10,-7,-10), (-3,10,-10), (-3,-7,10), (-7,10,10), (-7,-3,-10), (-10,3,-10), (-10,7,10)								
LiNbO3	(2,9,2)	14.14	80.12	7.818	7.1	2.499	17.77	31.24	35.94
	Equiv. Refl.: (9,-11,2), (11,-9,2), (-2,11,2), (-9,-2,2), (-11,2,2)								
Sapph	(0,7,20)	14.214	82.01	7.817	6.2	2.016	12.43	25.2	28.1
	Equiv. Refl.: (0,-7,-20), (7,0,-20), (7,-7,20), (-7,0,20), (-7,7,-20)								
LiNbO3	(2,6,-22)	14.047	78.15	7.644	6.8	3.011	20.58	37.64	42.9
	Equiv. Refl.: (6,-8,-22), (8,-6,-22), (-2,8,-22), (-6,-2,-22), (-8,2,-22)								
LiNbO3	(3,5,22)	13.839	74.62	7.583	6.4	3.947	25.14	49.34	55.37
	Equiv. Refl.: (5,-8,22), (8,-5,22), (-3,8,22), (-5,-3,22), (-8,3,22)								
LiNbO3	(0,10,-4)	14.019	77.62	7.57	6.6	3.149	20.68	39.37	44.47
	Equiv. Refl.: (10,-10,-4), (-10,0,-4)								

Ei =	14.353	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,-10,-10)	13.998	77.23	7.431	6.4	3.253	20.81	40.67	45.68
	Equiv. Refl.: (9,1,-10), (10,-1,-10), (-1,-9,-10), (-9,10,-10), (-10,9,-10)								
LiNbO3	(4,5,20)	14.069	78.58	7.371	6.4	2.9	18.68	36.25	40.78
	Equiv. Refl.: (5,-9,20), (9,-5,20), (-4,9,20), (-5,-4,20), (-9,4,20)								
LiNbO3	(0,-10,4)	14.019	77.62	7.342	6.6	3.149	20.68	39.37	44.47
	Equiv. Refl.: (10,0,4), (-10,10,4)								
Quartz	(0,9,-5)	14.312	85.68	7.305	6	1.085	6.48	13.56	15.03
	Equiv. Refl.: (0,-9,5)								
Quartz	(9,0,5)	14.312	85.68	7.303	6	1.085	6.47	13.56	15.02
	Equiv. Refl.: (-9,0,-5)								
Quartz	(9,-9,-5)	14.312	85.68	7.302	6	1.085	6.47	13.56	15.02
	Equiv. Refl.: (-9,9,5)								
LiNbO3	(3,-8,-22)	13.839	74.62	7.295	6.4	3.947	25.14	49.34	55.37
	Equiv. Refl.: (5,3,-22), (8,-3,-22), (-3,-5,-22), (-5,8,-22), (-8,5,-22)								
LiNbO3	(3,-11,-4)	13.811	74.2	7.19	6.1	4.06	24.75	50.75	56.47
	Equiv. Refl.: (8,3,-4), (11,-3,-4), (-3,-8,-4), (-8,11,-4), (-11,8,-4)								
LiNbO3	(1,9,10)	13.998	77.23	7.103	6.4	3.253	20.81	40.67	45.68
	Equiv. Refl.: (9,-10,10), (10,-9,10), (-1,10,10), (-9,-1,10), (-10,1,10)								
LiNbO3	(4,-9,-20)	14.069	78.58	7.012	6.4	2.9	18.68	36.25	40.78
	Equiv. Refl.: (5,4,-20), (9,-4,-20), (-4,-5,-20), (-5,9,-20), (-9,5,-20)								
LiNbO3	(3,8,4)	13.811	74.2	7.008	6.1	4.06	24.75	50.75	56.47
	Equiv. Refl.: (8,-11,4), (11,-8,4), (-3,11,4), (-8,-3,4), (-11,3,4)								
LiNbO3	(4,6,16)	14.076	78.73	6.849	6.1	2.861	17.39	35.77	39.77
	Equiv. Refl.: (6,-10,16), (10,-6,16), (-4,10,16), (-6,-4,16), (-10,4,16)								
LiNbO3	(5,-11,10)	13.998	77.23	6.701	5.9	3.253	19.04	40.67	44.9
	Equiv. Refl.: (6,5,10), (11,-5,10), (-5,-6,10), (-6,11,10), (-11,6,10)								
LiNbO3	(4,-10,-16)	14.076	78.73	6.539	6.1	2.861	17.39	35.77	39.77
	Equiv. Refl.: (6,4,-16), (10,-4,-16), (-4,-6,-16), (-6,10,-16), (-10,6,-16)								
LiNbO3	(0,-5,26)	13.547	70.7	6.469	5.5	5.025	27.51	62.81	68.57
	Equiv. Refl.: (5,0,26), (-5,5,26)								
Quartz	(9,1,3)	14.318	86.02	6.441	5.3	0.998	5.29	12.48	13.56
	Equiv. Refl.: (9,-10,-3)								
Quartz	(1,9,-3)	14.318	86.02	6.438	5.3	0.998	5.29	12.48	13.56
Quartz	(1,-10,3)	14.318	86.02	6.437	5.3	0.998	5.29	12.48	13.56
	Equiv. Refl.: (-10,1,-3), (-10,9,3)								
LiNbO3	(0,5,-26)	13.547	70.7	6.415	5.5	5.025	27.51	62.81	68.57
	Equiv. Refl.: (5,-5,-26), (-5,0,-26)								
LiNbO3	(5,6,-10)	13.998	77.23	6.384	5.9	3.253	19.04	40.67	44.9
	Equiv. Refl.: (6,-11,-10), (11,-6,-10), (-5,11,-10), (-6,-5,-10), (-11,5,-10)								
LiNbO3	(-5,6,-26)	13.968	76.71	6.164	5.5	3.391	18.65	42.39	46.32
	Equiv. Refl.: (-6,5,-26)								
LiNbO3	(1,-6,-26)	13.968	76.71	6.163	5.5	3.391	18.65	42.39	46.32
	Equiv. Refl.: (5,1,-26), (6,-1,-26), (-1,-5,-26)								
Quartz	(-9,10,3)	14.318	86.02	6.117	5.3	0.998	5.29	12.48	13.56
	Equiv. Refl.: (-9,-1,-3)								
Quartz	(-1,-9,3)	14.318	86.02	6.115	5.3	0.998	5.29	12.48	13.56
Quartz	(10,-1,3)	14.318	86.02	6.114	5.3	0.998	5.29	12.48	13.56
	Equiv. Refl.: (10,-9,-3), (-1,10,-3)								
LiNbO3	(0,-4,28)	13.701	72.66	6.112	5.3	4.481	23.64	56.02	60.8
	Equiv. Refl.: (4,0,28), (-4,4,28)								

Ei = Cryst	14.353 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
LiNbO3	(1,-9,16)	13.868	75.07	6.1	5.4	3.827	20.58	47.84	52.08
	Equiv. Refl.: (8,1,16), (9,-1,16), (-1,-8,16), (-8,9,16), (-9,8,16)								
LiNbO3	(5,-6,26)	13.968	76.71	6.081	5.5	3.391	18.65	42.39	46.32
	Equiv. Refl.: (6,-5,26)								
LiNbO3	(1,5,26)	13.968	76.71	6.08	5.5	3.391	18.65	42.39	46.32
	Equiv. Refl.: (-1,6,26), (-5,-1,26), (-6,1,26)								
LiNbO3	(5,-11,-8)	13.738	73.17	6.078	5.3	4.341	22.82	54.26	58.87
	Equiv. Refl.: (6,5,-8), (11,-5,-8), (-5,-6,-8), (-6,11,-8), (-11,6,-8)								
LiNbO3	(1,8,-16)	13.868	75.07	6.052	5.4	3.827	20.58	47.84	52.08
	Equiv. Refl.: (8,-9,-16), (9,-8,-16), (-1,9,-16), (-8,-1,-16), (-9,1,-16)								
LiNbO3	(0,4,-28)	13.701	72.66	6.049	5.3	4.481	23.64	56.02	60.8
	Equiv. Refl.: (4,-4,-28), (-4,0,-28)								
LiNbO3	(2,8,-12)	13.828	74.45	5.995	5.2	3.994	20.81	49.92	54.08
	Equiv. Refl.: (8,-10,-12), (10,-8,-12), (-2,10,-12), (-8,-2,-12), (-10,2,-12)								
LiNbO3	(5,6,8)	13.738	73.17	5.98	5.3	4.341	22.82	54.26	58.87
	Equiv. Refl.: (6,-11,8), (11,-6,8), (-5,11,8), (-6,-5,8), (-11,5,8)								
Quartz	(-2,3,12)	14.294	84.8	5.922	4.9	1.307	6.44	16.34	17.56
Quartz	(3,-1,12)	14.294	84.8	5.921	4.9	1.307	6.44	16.34	17.56
	Equiv. Refl.: (3,-2,-12), (-2,-1,-12)								
Quartz	(2,-3,-12)	14.294	84.8	5.917	4.9	1.307	6.44	16.34	17.56
Quartz	(2,1,12)	14.294	84.8	5.916	4.9	1.307	6.44	16.34	17.56
	Equiv. Refl.: (-1,3,-12), (-3,1,-12), (-3,2,12)								
Quartz	(-1,-2,12)	14.294	84.8	5.915	4.9	1.307	6.43	16.34	17.56
Quartz	(1,-3,12)	14.294	84.8	5.911	4.9	1.307	6.43	16.34	17.56
Quartz	(1,2,-12)	14.294	84.8	5.91	4.9	1.307	6.43	16.34	17.56
LiNbO3	(2,-10,12)	13.828	74.45	5.796	5.2	3.994	20.81	49.92	54.08
	Equiv. Refl.: (8,2,12), (10,-2,12), (-2,-8,12), (-8,10,12), (-10,8,12)								
LiNbO3	(0,7,-22)	13.839	74.62	5.748	5	3.947	19.92	49.34	53.21
	Equiv. Refl.: (7,-7,-22), (-7,0,-22)								
LiNbO3	(4,-11,-6)	13.675	72.32	5.609	4.9	4.575	22.31	57.18	61.38
	Equiv. Refl.: (7,4,-6), (11,-4,-6), (-4,-7,-6), (-7,11,-6), (-11,7,-6)								
LiNbO3	(0,9,12)	13.616	71.56	5.595	4.8	4.785	22.98	59.81	64.07
	Equiv. Refl.: (9,-9,12), (-9,0,12)								
LiNbO3	(0,-7,22)	13.839	74.62	5.583	5	3.947	19.92	49.34	53.21
	Equiv. Refl.: (7,0,22)								
LiNbO3	(-7,7,22)	13.839	74.62	5.582	5	3.947	19.92	49.34	53.21
LiNbO3	(4,7,6)	13.675	72.32	5.519	4.9	4.575	22.31	57.18	61.38
	Equiv. Refl.: (7,-11,6), (11,-7,6), (-4,11,6), (-7,-4,6), (-11,4,6)								
LiNbO3	(3,-10,-14)	13.854	74.85	5.51	4.7	3.886	18.14	48.58	51.85
	Equiv. Refl.: (7,3,-14), (10,-3,-14), (-3,-7,-14), (-7,10,-14), (-10,7,-14)								
LiNbO3	(2,5,-24)	13.805	74.12	5.438	4.8	4.083	19.67	51.04	54.7
	Equiv. Refl.: (5,-7,-24), (7,-5,-24), (-2,7,-24), (-5,-2,-24), (-7,2,-24)								
LiNbO3	(0,-9,-12)	13.616	71.56	5.402	4.8	4.785	22.98	59.81	64.07
	Equiv. Refl.: (9,0,-12), (-9,9,-12)								
LiNbO3	(2,8,12)	13.828	74.45	5.399	4.7	3.994	18.62	49.92	53.28
	Equiv. Refl.: (8,-10,12), (10,-8,12), (-2,10,12), (-8,-2,12), (-10,2,12)								
LiNbO3	(4,7,-6)	13.675	72.32	5.352	4.6	4.575	21.24	57.18	61
	Equiv. Refl.: (7,-11,-6), (11,-7,-6), (-4,11,-6), (-7,-4,-6), (-11,4,-6)								
LiNbO3	(2,-7,24)	13.805	74.12	5.345	4.8	4.083	19.67	51.04	54.7
	Equiv. Refl.: (5,2,24), (7,-2,24), (-2,-5,24), (-5,7,24), (-7,5,24)								

Ei =	14.353	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(3,6,-18)	13.66	72.12	5.309	4.7	4.629	21.54	57.87	61.75
	Equiv. Refl.: (6,-9,-18), (9,-6,-18), (-3,9,-18), (-6,-3,-18), (-9,3,-18)								
LiNbO3	(2,-7,-24)	13.805	74.12	5.304	4.7	4.083	19.37	51.04	54.59
	Equiv. Refl.: (5,2,-24), (7,-2,-24), (-2,-5,-24), (-5,7,-24), (-7,5,-24)								
LiNbO3	(2,-10,-12)	13.828	74.45	5.295	4.7	3.994	18.62	49.92	53.28
	Equiv. Refl.: (8,2,-12), (10,-2,-12), (-2,-8,-12), (-8,10,-12), (-10,8,-12)								
LiNbO3	(2,5,24)	13.805	74.12	5.283	4.7	4.083	19.37	51.04	54.59
	Equiv. Refl.: (5,-7,24), (7,-5,24), (-2,7,24), (-5,-2,24), (-7,2,24)								
LiNbO3	(1,-10,8)	13.738	73.17	5.258	4.3	4.341	18.7	54.26	57.4
	Equiv. Refl.: (9,1,8), (10,-1,8), (-1,-9,8), (-9,10,8), (-10,9,8)								
LiNbO3	(3,-9,18)	13.66	72.12	5.238	4.7	4.629	21.54	57.87	61.75
	Equiv. Refl.: (6,3,18), (9,-3,18), (-3,-6,18), (-6,9,18), (-9,6,18)								
Sapph	(2,4,25)	14.344	87.97	5.176	5.3	0.508	2.67	6.34	6.88
	Equiv. Refl.: (2,-6,-25), (4,2,-25), (4,-6,25), (6,-2,-25), (6,-4,25), (-2,6,25), (-2,-4,-25), (-4,6,-25), (-4,-2,25), (-6,2,25), (-6,4,-25)								
LiNbO3	(0,-10,-2)	13.934	76.12	5.167	4.4	3.548	15.7	44.35	47.05
	Equiv. Refl.: (10,0,-2), (-10,10,-2)								
LiNbO3	(3,7,14)	13.854	74.85	5.163	4.7	3.886	18.14	48.58	51.85
	Equiv. Refl.: (7,-10,14), (10,-7,14), (-3,10,14), (-7,-3,14), (-10,3,14)								
LiNbO3	(4,-11,6)	13.675	72.32	5.148	4.6	4.575	21.24	57.18	61
	Equiv. Refl.: (7,4,6), (11,-4,6), (-4,-7,6), (-7,11,6), (-11,7,6)								
Sapph	(0,8,16)	14.254	83.26	5.069	4.1	1.697	6.99	21.21	22.34
	Equiv. Refl.: (0,-8,-16), (8,0,-16), (8,-8,16), (-8,0,16), (-8,8,-16)								
LiNbO3	(4,6,-14)	13.643	71.91	5.043	4.2	4.69	19.48	58.62	61.77
	Equiv. Refl.: (6,-10,-14), (10,-6,-14), (-4,10,-14), (-6,-4,-14), (-10,4,-14)								
LiNbO3	(0,10,2)	13.934	76.12	5.026	4.4	3.548	15.7	44.35	47.05
	Equiv. Refl.: (10,-10,2), (-10,0,2)								
LiNbO3	(3,6,18)	13.66	72.12	4.987	4.2	4.629	19.31	57.87	61
	Equiv. Refl.: (6,-9,18), (9,-6,18), (-3,9,18), (-6,-3,18), (-9,3,18)								
LiNbO3	(2,3,-28)	13.911	75.74	4.973	4.3	3.648	15.72	45.6	48.23
	Equiv. Refl.: (3,-5,-28), (5,-3,-28), (-2,5,-28), (-3,-2,-28), (-5,2,-28)								
LiNbO3	(3,-9,-18)	13.66	72.12	4.954	4.2	4.629	19.31	57.87	61
	Equiv. Refl.: (6,3,-18), (9,-3,-18), (-3,-6,-18), (-6,9,-18), (-9,6,-18)								
LiNbO3	(2,-5,28)	13.911	75.74	4.944	4.3	3.648	15.72	45.6	48.23
	Equiv. Refl.: (5,-2,28)								
LiNbO3	(3,2,28)	13.911	75.74	4.943	4.3	3.648	15.72	45.6	48.23
	Equiv. Refl.: (-2,-3,28), (-3,5,28), (-5,3,28)								
LiNbO3	(1,9,-8)	13.738	73.17	4.927	4.3	4.341	18.7	54.26	57.4
	Equiv. Refl.: (9,-10,-8), (10,-9,-8), (-1,10,-8), (-9,-1,-8), (-10,1,-8)								
LiNbO3	(4,-10,14)	13.643	71.91	4.848	4.2	4.69	19.48	58.62	61.77
	Equiv. Refl.: (10,-4,14)								
LiNbO3	(6,4,14)	13.643	71.91	4.847	4.2	4.69	19.48	58.62	61.77
	Equiv. Refl.: (-4,-6,14), (-6,10,14), (-10,6,14)								
Quartz	(5,6,3)	14.318	86.02	4.845	4.1	0.998	4.09	12.48	13.13
	Equiv. Refl.: (5,-11,-3), (6,5,-3), (6,-11,3)								
Quartz	(-11,5,3)	14.318	86.02	4.844	4.1	0.998	4.09	12.48	13.13
	Equiv. Refl.: (-11,6,-3)								
LiNbO3	(0,-6,-24)	13.594	71.28	4.806	4	4.864	19.27	60.8	63.78
	Equiv. Refl.: (6,0,-24), (-6,6,-24)								

Ei =	14.353	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Quartz	(-5,11,3)	14.318	86.02	4.761	4.1	0.998	4.09	12.48	13.13
	Equiv. Refl.: (-5,-6,-3), (-6,11,-3), (-6,-5,3)								
Quartz	(11,-5,-3)	14.318	86.02	4.76	4.1	0.998	4.09	12.48	13.13
	Equiv. Refl.: (11,-6,3)								
LiNbO3	(2,4,-26)	13.759	73.46	4.624	3.9	4.262	16.83	53.28	55.87
	Equiv. Refl.: (4,-6,-26), (6,-4,-26), (-2,6,-26), (-4,-2,-26), (-6,2,-26)								
LiNbO3	(0,6,24)	13.594	71.28	4.595	4	4.864	19.27	60.8	63.78
	Equiv. Refl.: (6,-6,24), (-6,0,24)								
Sapph	(4,6,10)	13.957	76.51	4.594	3.5	3.445	11.95	43.06	44.69
	Equiv. Refl.: (4,-10,-10), (6,4,-10), (6,-10,10), (10,-4,-10), (10,-6,10), (-4,10,10), (-4,-6,-10), (-6,10,-10), (-6,-4,10), (-10,4,10), (-10,6,-10)								
LiNbO3	(2,-6,26)	13.759	73.46	4.558	3.9	4.262	16.83	53.28	55.87
	Equiv. Refl.: (4,2,26), (6,-2,26), (-2,-4,26), (-4,6,26), (-6,4,26)								
Quartz	(8,-1,-8)	14.325	86.41	4.521	3.8	0.9	3.42	11.25	11.76
Quartz	(8,-7,8)	14.325	86.41	4.52	3.8	0.9	3.42	11.25	11.76
Quartz	(-1,-7,-8)	14.325	86.41	4.516	3.8	0.9	3.42	11.25	11.76
Quartz	(-1,8,8)	14.325	86.41	4.514	3.8	0.9	3.42	11.25	11.76
Quartz	(-7,8,-8)	14.325	86.41	4.511	3.8	0.9	3.42	11.25	11.76
	Equiv. Refl.: (-7,-1,8)								
Quartz	(0,-2,12)	14.069	78.59	4.503	3.3	2.897	9.67	36.21	37.48
Quartz	(0,2,-12)	14.069	78.59	4.502	3.3	2.897	9.67	36.21	37.48
Quartz	(2,0,12)	14.069	78.59	4.501	3.3	2.897	9.67	36.21	37.48
	Equiv. Refl.: (2,-2,-12), (-2,0,-12), (-2,2,12)								
LiNbO3	(0,6,-24)	13.594	71.28	4.429	3.8	4.864	18.29	60.8	63.49
	Equiv. Refl.: (6,-6,-24), (-6,0,-24)								
LiNbO3	(0,-6,24)	13.594	71.28	4.419	3.8	4.864	18.29	60.8	63.49
	Equiv. Refl.: (6,0,24), (-6,6,24)								
Quartz	(11,-4,-2)	14.237	82.7	4.263	3.4	1.838	6.19	22.98	23.8
	Equiv. Refl.: (11,-7,2), (-4,11,2), (-4,-7,-2), (-7,11,-2), (-7,-4,2)								
Quartz	(4,7,2)	14.237	82.7	4.215	3.4	1.838	6.19	22.98	23.8
	Equiv. Refl.: (4,-11,-2), (7,4,-2), (7,-11,2), (-11,4,2), (-11,7,-2)								
LiNbO3	(0,-9,12)	13.616	71.56	4.149	3.5	4.785	16.83	59.81	62.13
	Equiv. Refl.: (9,0,12), (-9,9,12)								
Quartz	(-7,-1,-8)	14.325	86.41	4.141	3.6	0.9	3.25	11.25	11.71
Quartz	(-7,8,8)	14.325	86.41	4.14	3.6	0.9	3.25	11.25	11.71
Quartz	(-1,8,-8)	14.325	86.41	4.138	3.6	0.9	3.25	11.25	11.71
Quartz	(-1,-7,8)	14.325	86.41	4.137	3.6	0.9	3.25	11.25	11.71
Quartz	(8,-1,8)	14.325	86.41	4.127	3.6	0.9	3.24	11.25	11.71
	Equiv. Refl.: (8,-7,-8)								
Quartz	(-8,1,8)	14.325	86.41	4.078	3.8	0.9	3.42	11.25	11.76
Quartz	(-8,7,-8)	14.325	86.41	4.077	3.8	0.9	3.42	11.25	11.76
Quartz	(1,7,8)	14.325	86.41	4.073	3.8	0.9	3.42	11.25	11.76
Quartz	(1,-8,-8)	14.325	86.41	4.071	3.8	0.9	3.42	11.25	11.76
Quartz	(7,1,-8)	14.325	86.41	4.068	3.8	0.9	3.42	11.25	11.76
	Equiv. Refl.: (7,-8,8)								
LiNbO3	(1,1,30)	13.63	71.73	4.022	3.4	4.737	16.28	59.22	61.41
	Equiv. Refl.: (1,-2,30), (2,-1,30), (-1,2,30), (-1,-1,30), (-2,1,30)								
LiNbO3	(0,9,-12)	13.616	71.56	3.982	3.5	4.785	16.83	59.81	62.13
	Equiv. Refl.: (9,-9,-12), (-9,0,-12)								
Quartz	(7,1,8)	14.325	86.41	3.928	3.6	0.9	3.25	11.25	11.71
Quartz	(7,-8,-8)	14.325	86.41	3.927	3.6	0.9	3.25	11.25	11.71

Ei =	14.353	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(3,-1,-12)	14.294	84.8	3.926	3.3	1.307	4.26	16.34	16.89
	Equiv. Refl.: (3,-2,12)								
Quartz	(1,-8,8)	14.325	86.41	3.925	3.6	0.9	3.25	11.25	11.71
Quartz	(1,7,-8)	14.325	86.41	3.924	3.6	0.9	3.25	11.25	11.71
Quartz	(-1,-2,-12)	14.294	84.8	3.921	3.3	1.307	4.26	16.34	16.89
Quartz	(-1,3,12)	14.294	84.8	3.919	3.3	1.307	4.26	16.34	16.89
Quartz	(-2,3,-12)	14.294	84.8	3.914	3.3	1.307	4.25	16.34	16.89
	Equiv. Refl.: (-2,-1,12), (-8,1,-8), (-8,7,8)								
Sapph	(1,8,-13)	14.273	83.95	3.91	3.4	1.522	5.12	19.02	19.7
	Equiv. Refl.: (1,-9,13), (8,1,13), (8,-9,-13), (9,-1,13), (9,-8,-13), (-1,9,-13), (-1,-8,13), (-8,9,13), (-8,-1,-13), (-9,1,-13), (-9,8,13)								
LiNbO3	(1,1,-30)	13.63	71.73	3.875	3.4	4.737	16.28	59.22	61.41
	Equiv. Refl.: (1,-2,-30), (2,-1,-30), (-1,2,-30), (-1,-1,-30), (-2,1,-30)								
Quartz	(-3,1,12)	14.294	84.8	3.775	3.3	1.307	4.26	16.34	16.89
	Equiv. Refl.: (-3,2,-12)								
Quartz	(1,2,12)	14.294	84.8	3.77	3.3	1.307	4.26	16.34	16.89
Quartz	(1,-3,-12)	14.294	84.8	3.769	3.3	1.307	4.26	16.34	16.89
Quartz	(2,1,-12)	14.294	84.8	3.763	3.3	1.307	4.25	16.34	16.89
	Equiv. Refl.: (2,-3,12)								
Quartz	(11,-4,2)	14.237	82.7	3.744	3	1.838	5.5	22.98	23.63
	Equiv. Refl.: (11,-7,-2), (-4,11,-2), (-4,-7,2)								
Quartz	(-7,11,2)	14.237	82.7	3.742	3	1.838	5.49	22.98	23.63
	Equiv. Refl.: (-7,-4,-2)								
Quartz	(4,7,-2)	14.237	82.7	3.68	3	1.838	5.5	22.98	23.63
	Equiv. Refl.: (4,-11,2), (-11,4,-2), (-11,7,2)								
Quartz	(7,4,2)	14.237	82.7	3.679	3	1.838	5.49	22.98	23.63
	Equiv. Refl.: (7,-11,-2)								
Sapph	(2,8,6)	14.082	78.86	3.443	2.8	2.827	7.8	35.33	36.18
	Equiv. Refl.: (2,8,-6), (2,-10,6), (2,-10,-6), (8,2,6), (8,2,-6), (8,-10,6), (8,-10,-6), (10,-2,6), (10,-2,-6), (10,-8,6), (10,-8,-6), (-2,10,6), (-2,10,-6), (-2,-8,6), (-2,-8,-6), (-8,10,6), (-8,10,-6), (-8,-2,6), (-8,-2,-6), (-10,2,6), (-10,2,-6), (-10,8,6), (-10,8,-6)								
LiNbO3	(3,-11,2)	13.724	72.97	3.431	3.2	4.395	14	54.94	56.7
	Equiv. Refl.: (8,3,2), (11,-3,2), (-3,-8,2), (-8,11,2), (-11,8,2)								
Quartz	(11,-5,3)	14.318	86.02	3.42	2.9	0.998	2.94	12.48	12.82
	Equiv. Refl.: (11,-6,-3)								
Quartz	(-6,11,3)	14.318	86.02	3.418	2.9	0.998	2.93	12.48	12.82
	Equiv. Refl.: (-6,-5,-3)								
Quartz	(-5,11,-3)	14.318	86.02	3.415	2.9	0.998	2.93	12.48	12.82
Quartz	(-5,-6,3)	14.318	86.02	3.414	2.9	0.998	2.93	12.48	12.82
LiNbO3	(3,8,-2)	13.724	72.97	3.358	3.2	4.395	14	54.94	56.7
	Equiv. Refl.: (8,-11,-2), (11,-8,-2), (-3,11,-2), (-8,-3,-2), (-11,3,-2)								
Quartz	(7,-1,-9)	14.066	78.52	3.327	2.6	2.915	7.45	36.44	37.19
	Equiv. Refl.: (7,-6,9)								
Quartz	(-6,7,-9)	14.066	78.52	3.326	2.6	2.915	7.45	36.44	37.19
	Equiv. Refl.: (-6,-1,9)								
Quartz	(-1,7,9)	14.066	78.52	3.324	2.6	2.915	7.44	36.44	37.19
	Equiv. Refl.: (-1,-6,-9)								
Quartz	(-11,5,-3)	14.318	86.02	3.298	2.9	0.998	2.94	12.48	12.82
	Equiv. Refl.: (-11,6,3)								

Ei =	14.353	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(6,5,3)	14.318	86.02	3.296	2.9	0.998	2.94	12.48	12.82
	Equiv. Refl.: (6,-11,-3)								
Quartz	(5,6,-3)	14.318	86.02	3.293	2.9	0.998	2.93	12.48	12.82
	Equiv. Refl.: (5,-11,3)								
Sapph	(3,7,8)	13.906	75.66	3.27	2.6	3.668	9.42	45.85	46.81
	Equiv. Refl.: (3,-10,-8), (7,3,-8), (7,-10,8), (10,-3,-8), (10,-7,8), (-3,10,8), (-3,-7,-8), (-7,10,-8), (-7,-3,8), (-10,3,8), (-10,7,-8)								
Quartz	(6,1,-9)	14.066	78.52	3.258	2.6	2.915	7.45	36.44	37.19
	Equiv. Refl.: (6,-7,9), (-7,1,9), (-7,6,-9)								
Quartz	(1,6,9)	14.066	78.52	3.256	2.6	2.915	7.44	36.44	37.19
Quartz	(1,-7,-9)	14.066	78.52	3.255	2.6	2.915	7.44	36.44	37.19
Sapph	(4,5,17)	14.279	84.19	3.233	2.8	1.461	4.08	18.26	18.71
	Equiv. Refl.: (4,-9,-17), (5,4,-17), (5,-9,17), (9,-4,-17), (9,-5,17), (-4,9,17), (-4,-5,-17), (-5,9,-17), (-5,-4,17), (-9,4,17), (-9,5,-17)								
Sapph	(0,9,0)	13.54	70.62	3.132	2.4	5.049	12.02	63.11	64.24
	Equiv. Refl.: (0,-9,0), (9,0,0), (9,-9,0), (-9,0,0), (-9,9,0)								
Sapph	(0,8,-14)	13.766	73.56	3.058	2.4	4.236	10.05	52.95	53.9
	Equiv. Refl.: (0,-8,14), (8,0,14), (8,-8,-14), (-8,0,-14), (-8,8,14)								
Sapph	(1,6,-20)	13.727	73.02	3.056	2.4	4.382	10.35	54.77	55.74
	Equiv. Refl.: (1,-7,20), (6,1,20), (6,-7,-20), (7,-1,20), (7,-6,-20), (-1,7,-20), (-1,-6,20), (-6,7,20), (-6,-1,-20), (-7,1,-20), (-7,6,20)								
Quartz	(11,-5,-1)	13.946	76.32	3.055	2.2	3.493	7.78	43.66	44.35
	Equiv. Refl.: (11,-6,1)								
Quartz	(-5,11,1)	13.946	76.32	3.054	2.2	3.493	7.78	43.66	44.35
	Equiv. Refl.: (-5,-6,-1), (-6,11,-1), (-6,-5,1)								
Sapph	(2,7,-14)	14.01	77.46	3.05	2.3	3.194	7.46	39.92	40.61
	Equiv. Refl.: (2,-9,14), (7,2,14), (7,-9,-14), (9,-2,14), (9,-7,-14), (-2,9,-14), (-2,-7,14), (-7,9,14), (-7,-2,-14), (-9,2,-14), (-9,7,14)								
Quartz	(-7,1,-9)	14.066	78.52	3.017	2.4	2.915	6.87	36.44	37.08
	Equiv. Refl.: (-7,6,9)								
Quartz	(1,-7,9)	14.066	78.52	3.016	2.4	2.915	6.87	36.44	37.08
Quartz	(1,6,-9)	14.066	78.52	3.015	2.4	2.915	6.87	36.44	37.08
	Equiv. Refl.: (6,1,9), (6,-7,-9)								
Quartz	(5,6,1)	13.946	76.32	2.998	2.2	3.493	7.78	43.66	44.35
	Equiv. Refl.: (5,-11,-1), (6,5,-1), (6,-11,1), (-11,5,1), (-11,6,-1)								
Quartz	(7,-1,9)	14.066	78.52	2.997	2.4	2.915	6.87	36.44	37.08
Quartz	(7,-6,-9)	14.066	78.52	2.996	2.4	2.915	6.87	36.44	37.08
	Equiv. Refl.: (-1,7,-9)								
Quartz	(4,6,-5)	13.936	76.16	2.995	2.3	3.535	8.13	44.19	44.93
	Equiv. Refl.: (-1,-6,9), (-6,7,9)								
Quartz	(4,-10,5)	13.936	76.16	2.994	2.3	3.535	8.13	44.19	44.93
	Equiv. Refl.: (-6,-1,-9)								
Quartz	(6,4,5)	13.936	76.16	2.993	2.3	3.535	8.13	44.19	44.93
	Equiv. Refl.: (6,-10,-5)								
Quartz	(-10,4,-5)	13.936	76.16	2.992	2.3	3.535	8.13	44.19	44.93
	Equiv. Refl.: (-10,6,5)								
Quartz	(-4,10,-5)	13.936	76.16	2.98	2.3	3.535	8.13	44.19	44.93
	Equiv. Refl.: (-4,-6,5)								
Quartz	(-6,-4,-5)	13.936	76.16	2.979	2.3	3.535	8.13	44.19	44.93
Quartz	(-6,10,5)	13.936	76.16	2.978	2.3	3.535	8.13	44.19	44.93

Ei = Cryst	14.353 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(10,-4,5)	13.936	76.16	2.977	2.3	3.535	8.13	44.19	44.93
	Equiv. Refl.: (10,-6,-5)								
Sapph	(4,5,-16)	14.014	77.51	2.916	2.3	3.178	7.16	39.73	40.37
	Equiv. Refl.: (4,-9,16), (5,4,16), (5,-9,-16), (9,-4,16), (9,-5,-16), (-4,9,-16), (-4,-5,16), (-5,9,16), (-5,-4,-16), (-9,4,-16), (-9,5,16)								
Quartz	(0,9,-3)	13.557	70.83	2.892	2.2	4.991	10.85	62.38	63.32
	Equiv. Refl.: (0,-9,3), (9,0,3), (9,-9,-3), (-9,0,-3), (-9,9,3)								
Quartz	(10,-1,-1)	13.946	76.32	2.877	2.1	3.493	7.44	43.66	44.29
	Equiv. Refl.: (10,-9,1), (-1,10,1), (-1,-9,-1), (-9,10,-1), (-9,-1,1)								
Quartz	(1,9,1)	13.946	76.32	2.873	2.1	3.493	7.44	43.66	44.29
	Equiv. Refl.: (9,1,-1), (9,-10,1), (-10,1,1), (-10,9,-1)								
Quartz	(1,-10,-1)	13.946	76.32	2.872	2.1	3.493	7.44	43.66	44.29
Quartz	(-2,8,-8)	13.949	76.38	2.792	2.1	3.477	7.22	43.47	44.06
	Equiv. Refl.: (-2,-6,8), (-6,8,8), (-6,-2,-8)								
Quartz	(8,-2,8)	13.949	76.38	2.791	2.1	3.477	7.21	43.47	44.06
	Equiv. Refl.: (8,-6,-8)								
Quartz	(2,6,-8)	13.949	76.38	2.788	2.1	3.477	7.22	43.47	44.06
	Equiv. Refl.: (2,-8,8), (6,2,8), (6,-8,-8)								
Quartz	(-8,6,8)	13.949	76.38	2.787	2.1	3.477	7.21	43.47	44.06
Quartz	(-8,2,-8)	13.949	76.38	2.786	2.1	3.477	7.21	43.47	44.06
Sapph	(4,5,14)	13.517	70.35	2.751	2	5.125	10.43	64.07	64.91
	Equiv. Refl.: (4,-9,-14), (5,4,-14), (5,-9,14), (9,-4,-14), (9,-5,14), (-4,9,14), (-4,-5,-14), (-5,9,-14), (-5,-4,14), (-9,4,14), (-9,5,-14)								
Quartz	(9,-1,-6)	14.224	82.32	2.71	2.1	1.936	4.14	24.2	24.55
	Equiv. Refl.: (9,-8,6)								
Quartz	(-1,-8,-6)	14.224	82.32	2.706	2.1	1.936	4.13	24.2	24.55
	Equiv. Refl.: (-8,9,-6), (-8,-1,6)								
Quartz	(-1,9,6)	14.224	82.32	2.705	2.1	1.936	4.13	24.2	24.55
LiNbO3	(4,6,-17)	14.308	85.49	2.603	4.1	1.133	4.69	14.16	14.92
	Equiv. Refl.: (4,-10,17), (6,4,17), (6,-10,-17), (10,-4,17), (10,-6,-17), (-4,10,-17), (-4,-6,17), (-6,10,17), (-6,-4,-17), (-10,4,-17), (-10,6,17)								
Sapph	(3,5,-20)	14.214	82.01	2.501	2.4	2.016	4.8	25.2	25.65
	Equiv. Refl.: (3,-8,20), (5,3,20), (5,-8,-20), (8,-3,20), (8,-5,-20), (-3,8,-20), (-3,-5,20), (-5,8,20), (-5,-3,-20), (-8,3,-20), (-8,5,20)								
Quartz	(-1,5,11)	14.275	84.02	2.452	2.1	1.503	3.2	18.79	19.06
	Equiv. Refl.: (-1,-4,-11)								
Quartz	(-4,5,-11)	14.275	84.02	2.446	2.1	1.503	3.2	18.79	19.06
Quartz	(5,-1,-11)	14.275	84.02	2.444	2.1	1.503	3.19	18.79	19.06
	Equiv. Refl.: (-4,-1,11)								
Quartz	(5,-4,11)	14.275	84.02	2.443	2.1	1.503	3.19	18.79	19.06
Sapph	(2,3,26)	14.036	77.93	2.395	2.1	3.069	6.45	38.37	38.91
	Equiv. Refl.: (2,-5,-26), (3,2,-26), (3,-5,26), (5,-2,-26), (5,-3,26), (-2,5,26), (-2,-3,-26), (-3,5,-26), (-3,-2,26), (-5,2,26), (-5,3,-26)								
Quartz	(0,2,12)	14.069	78.59	2.387	2.1	2.897	6.07	36.21	36.72
	Equiv. Refl.: (0,-2,-12)								
Quartz	(2,-2,12)	14.069	78.59	2.386	2.1	2.897	6.07	36.21	36.72
	Equiv. Refl.: (-2,0,12), (-2,2,-12)								
Quartz	(2,0,-12)	14.069	78.59	2.385	2.1	2.897	6.07	36.21	36.72
Quartz	(-9,1,6)	14.224	82.32	2.362	2.1	1.936	4.14	24.2	24.55
	Equiv. Refl.: (-9,8,-6)								
Quartz	(1,8,6)	14.224	82.32	2.36	2.1	1.936	4.13	24.2	24.55

Ei = Cryst	14.353 Refl (h,k,l)	keV EB [keV]	Θ B [$^{\circ}$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(1,-9,-6) Equiv. Refl.: (8,1,-6), (8,-9,6)	14.224	82.32	2.359	2.1	1.936	4.13	24.2	24.55
Quartz	(1,5,-10) Equiv. Refl.: (1,-6,10)	14.049	78.19	2.332	2	3.002	5.95	37.53	38
Quartz	(-6,1,-10) Equiv. Refl.: (-6,5,10)	14.049	78.19	2.331	2	3.002	5.94	37.53	38
Quartz	(5,1,10) Equiv. Refl.: (5,-6,-10)	14.049	78.19	2.33	2	3.002	5.94	37.53	38
Quartz	(-1,6,-10)	14.049	78.19	2.316	2	3.002	5.95	37.53	38
Quartz	(0,9,4) Equiv. Refl.: (0,-9,-4), (9,0,-4), (9,-9,4), (-1,-5,10), (-9,0,4), (-9,9,-4)	13.892	75.45	2.315	1.9	3.727	7.17	46.58	47.13
Quartz	(6,-1,10) Equiv. Refl.: (6,-5,-10), (-5,6,10), (-5,-1,-10)	14.049	78.19	2.314	2	3.002	5.94	37.53	38
LiNbO3	(1,2,-31) Equiv. Refl.: (1,-3,31), (2,1,31), (2,-3,-31), (3,-1,31), (3,-2,-31), (-1,3,-31), (-1,-2,31), (-2,3,31), (-2,-1,-31), (-3,1,-31), (-3,2,31)	14.342	87.79	2.116	4.7	0.554	2.61	6.92	7.4
Quartz	(8,1,6) Equiv. Refl.: (8,-9,-6)	14.224	82.32	1.921	2	1.936	3.84	24.2	24.5
Quartz	(-9,1,-6)	14.224	82.32	1.92	2	1.936	3.84	24.2	24.5
Quartz	(1,8,-6) Equiv. Refl.: (1,-9,6), (-9,8,6)	14.224	82.32	1.919	2	1.936	3.84	24.2	24.5
Quartz	(1,4,11) Equiv. Refl.: (1,-5,-11)	14.275	84.02	1.834	2.1	1.503	3.2	18.79	19.06
Quartz	(4,-5,11)	14.275	84.02	1.83	2.1	1.503	3.2	18.79	19.06
Quartz	(4,1,-11)	14.275	84.02	1.829	2.1	1.503	3.19	18.79	19.06
Quartz	(-5,1,11)	14.275	84.02	1.828	2.1	1.503	3.19	18.79	19.06
Quartz	(-5,4,-11)	14.275	84.02	1.827	2.1	1.503	3.19	18.79	19.06
Quartz	(4,5,7) Equiv. Refl.: (4,-9,-7), (-9,4,7), (-9,5,-7)	13.927	76	1.81	1.8	3.578	6.56	44.72	45.2
Quartz	(5,4,-7) Equiv. Refl.: (5,-9,7)	13.927	76	1.809	1.8	3.578	6.56	44.72	45.2
Quartz	(2,8,2) Equiv. Refl.: (2,-10,-2)	13.549	70.73	1.784	1.8	5.017	8.83	62.71	63.33
Quartz	(8,2,-2) Equiv. Refl.: (8,-10,2), (-10,2,2), (-10,8,-2)	13.549	70.73	1.783	1.8	5.017	8.83	62.71	63.33
Quartz	(9,-5,7)	13.927	76	1.78	1.8	3.578	6.56	44.72	45.2
Quartz	(9,-4,-7) Equiv. Refl.: (-4,9,7), (-4,-5,-7), (-5,9,-7), (-5,-4,7)	13.927	76	1.779	1.8	3.578	6.56	44.72	45.2
Quartz	(-8,9,6) Equiv. Refl.: (-8,-1,-6)	14.224	82.32	1.778	2	1.936	3.84	24.2	24.5
Quartz	(9,-1,6) Equiv. Refl.: (9,-8,-6)	14.224	82.32	1.777	2	1.936	3.84	24.2	24.5
Quartz	(-1,9,-6) Equiv. Refl.: (-1,-8,6)	14.224	82.32	1.776	2	1.936	3.84	24.2	24.5
Quartz	(-3,-1,11)	13.667	72.22	1.77	1.8	4.604	8.14	57.55	58.12
Quartz	(4,-1,-11) Equiv. Refl.: (4,-3,11), (-3,4,-11)	13.667	72.22	1.769	1.8	4.604	8.14	57.55	58.12
Quartz	(-1,4,11) Equiv. Refl.: (-1,-3,-11)	13.667	72.22	1.768	1.8	4.604	8.13	57.55	58.12

Ei =	14.353	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
LiNbO3	(2,7,19)	14.203	81.71	1.737	2.6	2.09	5.44	26.13	26.69
	Equiv. Refl.: (2,-9,-19), (7,2,-19), (7,-9,19), (9,-2,-19), (9,-7,19), (-2,9,19), (-2,-7,-19), (-7,9,-19), (-7,-2,19), (-9,2,19), (-9,7,-19)								
Quartz	(3,1,-11)	13.667	72.22	1.733	1.8	4.604	8.14	57.55	58.12
	Equiv. Refl.: (3,-4,11), (-4,1,11), (-4,3,-11)								
Quartz	(1,3,11)	13.667	72.22	1.732	1.8	4.604	8.13	57.55	58.12
Quartz	(1,-4,-11)	13.667	72.22	1.731	1.8	4.604	8.13	57.55	58.12
Quartz	(10,-2,-2)	13.549	70.73	1.718	1.8	5.017	8.83	62.71	63.33
	Equiv. Refl.: (10,-8,2), (-2,10,2), (-2,-8,-2), (-8,-2,2)								
Quartz	(-8,10,-2)	13.549	70.73	1.717	1.8	5.017	8.83	62.71	63.33
Sapph	(4,6,-8)	13.66	72.12	1.648	1.7	4.63	7.89	57.88	58.41
	Equiv. Refl.: (4,-10,8), (6,4,8), (6,-10,-8), (10,-4,8), (10,-6,-8), (-4,10,-8), (-4,-6,8), (-6,10,8), (-6,-4,-8), (-10,4,-8), (-10,6,8)								
Quartz	(3,6,-7)	14.078	78.78	1.646	1.7	2.848	4.81	35.6	35.93
	Equiv. Refl.: (3,-9,7)								
Quartz	(6,3,7)	14.078	78.78	1.644	1.7	2.848	4.8	35.6	35.92
	Equiv. Refl.: (6,-9,-7), (-9,3,-7), (-9,6,7)								
Quartz	(-9,2,-6)	13.769	73.6	1.64	1.7	4.224	7.01	52.79	53.26
	Equiv. Refl.: (-9,7,6)								
Quartz	(2,7,-6)	13.769	73.6	1.639	1.7	4.224	7	52.79	53.26
	Equiv. Refl.: (2,-9,6), (7,2,6), (7,-9,-6)								
Quartz	(9,-2,6)	13.769	73.6	1.616	1.7	4.224	7.01	52.79	53.26
	Equiv. Refl.: (9,-7,-6)								
Quartz	(-2,9,-6)	13.769	73.6	1.615	1.7	4.224	7	52.79	53.26
	Equiv. Refl.: (-2,-7,6), (-7,9,6), (-7,-2,-6)								
Quartz	(-6,3,-10)	13.743	73.24	1.606	1.6	4.322	7	54.03	54.48
Quartz	(-6,3,10)	13.743	73.24	1.605	1.6	4.322	7	54.03	54.48
Quartz	(3,3,10)	13.743	73.24	1.604	1.6	4.322	7	54.03	54.48
	Equiv. Refl.: (3,-6,-10), (9,-3,-7), (-3,9,7), (-6,9,-7), (-6,-3,7)								
Quartz	(3,3,-10)	13.743	73.24	1.603	1.6	4.322	6.99	54.03	54.48
	Equiv. Refl.: (3,-6,10), (9,-6,7), (-3,-6,-7)								
Quartz	(3,6,7)	14.078	78.78	1.588	1.7	2.848	4.77	35.6	35.92
	Equiv. Refl.: (3,-9,-7), (6,3,-7), (6,-9,7), (-9,3,7), (-9,6,-7)								
Quartz	(5,6,-1)	13.946	76.32	1.583	1.6	3.493	5.69	43.66	44.03
	Equiv. Refl.: (5,-11,1), (6,5,1), (6,-11,-1), (-11,5,-1), (-11,6,1)								
Quartz	(6,-3,10)	13.743	73.24	1.574	1.6	4.322	7	54.03	54.48
Quartz	(6,-3,-10)	13.743	73.24	1.573	1.6	4.322	7	54.03	54.48
Quartz	(-3,6,10)	13.743	73.24	1.572	1.6	4.322	7	54.03	54.48
	Equiv. Refl.: (-3,-3,-10)								
Quartz	(-3,6,-10)	13.743	73.24	1.571	1.6	4.322	6.99	54.03	54.48
	Equiv. Refl.: (-3,9,-7), (-3,-3,10), (-3,-6,7)								
Quartz	(-6,-3,-7)	14.078	78.78	1.57	1.7	2.848	4.8	35.6	35.92
Quartz	(9,-3,7)	14.078	78.78	1.569	1.7	2.848	4.8	35.6	35.92
	Equiv. Refl.: (9,-6,-7), (11,-5,1), (11,-6,-1), (-5,11,-1), (-5,-6,1), (-6,9,7), (-6,-5,-1)								
Quartz	(-6,11,1)	13.946	76.32	1.568	1.6	3.493	5.69	43.66	44.03
Sapph	(2,6,-19)	14.14	80.11	1.55	1.7	2.503	4.27	31.29	31.58
	Equiv. Refl.: (2,-8,19), (6,2,19), (6,-8,-19), (8,-2,19), (8,-6,-19), (-2,8,-19), (-2,-6,19), (-6,8,19), (-6,-2,-19), (-8,2,-19), (-8,6,19)								
Sapph	(2,8,0)	13.788	73.87	1.468	1.5	4.15	6.41	51.87	52.27
	Equiv. Refl.: (2,-10,0), (8,2,0), (8,-10,0), (10,-2,0), (10,-8,0), (-2,10,0), (-2,-8,0), (-8,10,0), (-8,-2,0), (-10,2,0), (-10,8,0)								

Ei =	14.353	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(2,2,27)	13.901	75.58	1.463	1.6	3.691	5.74	46.14	46.49
	Equiv. Refl.: (2,2,-27), (2,-4,27), (2,-4,-27), (4,-2,27), (4,-2,-27), (-2,4,27), (-2,4,-27), (-2,-2,27), (-2,-2,-27), (-4,2,27), (-4,2,-27)								
Quartz	(6,-10,4)	13.505	70.21	1.444	1.5	5.166	7.54	64.57	65.01
	Equiv. Refl.: (-10,4,4), (-10,6,-4)								
Quartz	(4,6,4)	13.505	70.21	1.443	1.5	5.166	7.54	64.57	65.01
	Equiv. Refl.: (4,-10,-4), (6,4,-4), (-1,5,-11)								
Quartz	(-1,-4,11)	14.275	84.02	1.442	1.6	1.503	2.47	18.79	18.96
	Equiv. Refl.: (-4,5,11)								
Quartz	(-4,-1,-11)	14.275	84.02	1.441	1.6	1.503	2.47	18.79	18.96
Quartz	(5,-1,11)	14.275	84.02	1.434	1.6	1.503	2.46	18.79	18.95
	Equiv. Refl.: (5,-4,-11)								
Quartz	(10,-4,-4)	13.505	70.21	1.43	1.5	5.166	7.55	64.57	65.01
	Equiv. Refl.: (10,-6,4), (-4,10,4), (-6,10,-4), (-6,-4,4)								
Quartz	(-4,-6,-4)	13.505	70.21	1.429	1.5	5.166	7.54	64.57	65.01
Quartz	(1,-5,11)	14.275	84.02	1.421	1.6	1.503	2.47	18.79	18.96
	Equiv. Refl.: (11,-4,-1), (11,-7,1), (-4,11,1), (-4,-7,-1), (-7,11,-1), (-7,-4,1)								
Quartz	(1,4,-11)	14.275	84.02	1.42	1.6	1.503	2.47	18.79	18.96
	Equiv. Refl.: (4,-5,-11)								
Quartz	(4,1,11)	14.275	84.02	1.419	1.6	1.503	2.47	18.79	18.96
Sapph	(1,8,11)	13.885	75.32	1.413	1.5	3.759	5.66	46.99	47.33
	Equiv. Refl.: (1,-9,-11), (8,1,-11), (8,-9,11), (9,-1,-11), (9,-8,11), (-1,9,11), (-1,-8,-11), (-8,9,-11), (-8,-1,11), (-9,1,11), (-9,8,-11)								
Quartz	(-5,1,-11)	14.275	84.02	1.412	1.6	1.503	2.46	18.79	18.95
	Equiv. Refl.: (-5,4,11)								
LiNbO3	(1,9,-11)	14.147	80.28	1.409	2.1	2.458	5.28	30.72	31.17
	Equiv. Refl.: (1,-10,11), (9,1,11), (9,-10,-11), (10,-1,11), (10,-9,-11), (-1,10,-11), (-1,-9,11), (-9,10,11), (-9,-1,-11), (-10,1,-11), (-10,9,11)								
Quartz	(7,0,8)	13.719	72.91	1.396	1.4	4.413	6.33	55.16	55.52
	Equiv. Refl.: (7,-7,-8)								
Quartz	(-7,0,-8)	13.719	72.91	1.395	1.4	4.413	6.33	55.16	55.52
	Equiv. Refl.: (-7,7,8)								
Quartz	(0,7,-8)	13.719	72.91	1.394	1.4	4.413	6.32	55.16	55.52
	Equiv. Refl.: (0,-7,8)								
Quartz	(3,-5,-11)	14.125	79.78	1.377	1.4	2.587	3.75	32.34	32.55
Quartz	(3,2,11)	14.125	79.78	1.376	1.4	2.587	3.75	32.34	32.55
Quartz	(-5,2,-11)	14.125	79.78	1.375	1.4	2.587	3.74	32.34	32.55
	Equiv. Refl.: (-5,3,11)								
Quartz	(2,3,-11)	14.125	79.78	1.374	1.4	2.587	3.74	32.34	32.55
	Equiv. Refl.: (2,-5,11)								
Quartz	(5,6,-2)	14.087	78.95	1.346	1.4	2.803	3.92	35.04	35.26
	Equiv. Refl.: (5,-11,2), (6,5,2), (6,-11,-2), (-11,5,-2), (-11,6,2)								
Quartz	(-2,-6,-8)	13.949	76.38	1.325	1.4	3.477	4.74	43.47	43.72
Quartz	(8,-2,-8)	13.949	76.38	1.324	1.4	3.477	4.74	43.47	43.72
	Equiv. Refl.: (8,-6,8), (-2,8,8), (-6,8,-8), (-6,-2,8)								
Quartz	(10,-1,0)	13.899	75.55	1.318	1.3	3.699	4.87	46.24	46.5
	Equiv. Refl.: (10,-9,0), (-1,10,0), (-1,-9,0), (-9,10,0), (-9,-1,0)								
Quartz	(-1,2,-12)	13.994	77.15	1.315	1.4	3.274	4.43	40.92	41.16
	Equiv. Refl.: (-1,-1,12)								
Quartz	(2,-1,-12)	13.994	77.15	1.314	1.4	3.274	4.43	40.92	41.16

Ei = Cryst	14.353 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(2,-1,12) Equiv. Refl.: (-1,2,12)	13.994	77.15	1.313	1.4	3.274	4.42	40.92	41.16
Quartz	(-1,-1,-12)	13.994	77.15	1.312	1.4	3.274	4.42	40.92	41.16
Quartz	(-3,5,11)	14.125	79.78	1.31	1.4	2.587	3.75	32.34	32.55
Quartz	(-3,-2,-11)	14.125	79.78	1.309	1.4	2.587	3.75	32.34	32.55
Quartz	(5,-2,11) Equiv. Refl.: (5,-3,-11)	14.125	79.78	1.308	1.4	2.587	3.74	32.34	32.55
Quartz	(-2,5,-11) Equiv. Refl.: (-2,-3,11)	14.125	79.78	1.307	1.4	2.587	3.74	32.34	32.55
Quartz	(9,-10,-2) Equiv. Refl.: (-10,1,-2), (-10,9,2)	14.087	78.95	1.29	1.4	2.803	3.83	35.04	35.25
Quartz	(1,9,-2) Equiv. Refl.: (1,-10,2), (9,1,2)	14.087	78.95	1.289	1.4	2.803	3.83	35.04	35.25
Quartz	(2,6,8) Equiv. Refl.: (2,-8,-8), (6,2,-8), (-8,2,8)	13.949	76.38	1.265	1.4	3.477	4.74	43.47	43.72
Quartz	(6,-8,8) Equiv. Refl.: (-8,6,-8)	13.949	76.38	1.264	1.4	3.477	4.74	43.47	43.72
Quartz	(11,-5,2) Equiv. Refl.: (11,-6,-2), (-5,11,-2), (-5,-6,2), (-6,11,2), (-6,-5,-2)	14.087	78.95	1.26	1.4	2.803	3.92	35.04	35.26
Quartz	(5,6,0) Equiv. Refl.: (5,-11,0), (6,5,0), (6,-11,0), (-11,5,0), (-11,6,0)	13.899	75.55	1.251	1.3	3.699	4.86	46.24	46.5
Quartz	(11,-5,0) Equiv. Refl.: (11,-6,0), (-5,11,0), (-5,-6,0), (-6,11,0), (-6,-5,0)	13.899	75.55	1.25	1.3	3.699	4.86	46.24	46.5
Quartz	(10,-1,2) Equiv. Refl.: (10,-9,-2), (-1,10,-2), (-1,-9,2), (-9,10,2), (-9,-1,-2)	14.087	78.95	1.247	1.4	2.803	3.83	35.04	35.25
Quartz	(1,1,-12) Equiv. Refl.: (1,-2,12)	13.994	77.15	1.237	1.4	3.274	4.43	40.92	41.16
Quartz	(-2,1,12)	13.994	77.15	1.236	1.4	3.274	4.43	40.92	41.16
Quartz	(-2,1,-12)	13.994	77.15	1.235	1.4	3.274	4.42	40.92	41.16
Quartz	(1,1,12) Equiv. Refl.: (1,-2,-12)	13.994	77.15	1.234	1.4	3.274	4.42	40.92	41.16
Quartz	(-4,1,-11) Equiv. Refl.: (-4,3,11)	13.667	72.22	1.224	1.2	4.604	5.65	57.55	57.82
Quartz	(3,-4,-11)	13.667	72.22	1.223	1.2	4.604	5.64	57.55	57.82
Quartz	(3,1,11)	13.667	72.22	1.222	1.2	4.604	5.64	57.55	57.82
Quartz	(1,3,-11) Equiv. Refl.: (1,-4,11)	13.667	72.22	1.221	1.2	4.604	5.63	57.55	57.82
Quartz	(4,7,1) Equiv. Refl.: (4,-11,-1), (7,4,-1), (7,-11,1), (-11,4,1), (-11,7,-1)	14.097	79.17	1.22	1.4	2.746	3.89	34.32	34.54
Sapph	(1,2,-28) Equiv. Refl.: (1,-3,28), (2,1,28), (2,-3,-28), (3,-1,28), (3,-2,-28), (-1,3,-28), (-1,-2,28), (-2,3,28), (-2,-1,-28), (-3,1,-28), (-3,2,28)	13.944	76.29	1.215	1.3	3.5	4.64	43.75	44
Quartz	(1,9,0) Equiv. Refl.: (1,-10,0), (9,1,0), (9,-10,0), (-10,1,0), (-10,9,0)	13.899	75.55	1.193	1.3	3.699	4.87	46.24	46.5
Quartz	(4,-1,11)	13.667	72.22	1.139	1.2	4.604	5.65	57.55	57.82
Quartz	(4,-3,-11)	13.667	72.22	1.138	1.2	4.604	5.65	57.55	57.82
Quartz	(-3,4,11) Equiv. Refl.: (-3,-1,-11)	13.667	72.22	1.137	1.2	4.604	5.64	57.55	57.82
Quartz	(-1,-3,11)	13.667	72.22	1.136	1.2	4.604	5.63	57.55	57.82
Quartz	(-1,4,-11)	13.667	72.22	1.135	1.2	4.604	5.63	57.55	57.82

Ei =	14.353	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(0,9,5)	14.312	85.68	1.125	1.4	1.085	1.56	13.56	13.65
	Equiv. Refl.: (0,-9,-5)								
Quartz	(9,0,-5)	14.312	85.68	1.121	1.4	1.085	1.56	13.56	13.65
	Equiv. Refl.: (9,-9,5), (-9,0,5), (-9,9,-5)								
Sapph	(1,7,18)	14.241	82.85	1.102	1.3	1.801	2.43	22.51	22.64
	Equiv. Refl.: (1,7,-18), (1,-8,18), (1,-8,-18), (7,1,18), (7,1,-18), (7,-8,18), (7,-8,-18), (8,-1,18), (8,-1,-18), (8,-7,18), (8,-7,-18), (-1,8,18), (-1,8,-18), (-1,-7,18), (-1,-7,-18), (-7,8,18), (-7,8,-18), (-7,-1,18), (-7,-1,-18), (-8,1,18), (-8,1,-18), (-8,7,18), (-8,7,-18)								
Quartz	(4,2,-10)	13.82	74.34	1.099	1.1	4.023	4.55	50.29	50.49
	Equiv. Refl.: (4,-6,10)								
Quartz	(2,-6,-10)	13.82	74.34	1.097	1.1	4.023	4.54	50.29	50.49
	Equiv. Refl.: (-6,2,10), (-6,4,-10)								
Quartz	(2,4,10)	13.82	74.34	1.096	1.1	4.023	4.53	50.29	50.49
Sapph	(1,8,-10)	13.711	72.8	1.091	1.2	4.442	5.22	55.53	55.77
	Equiv. Refl.: (1,-9,10), (8,1,10), (8,-9,-10), (9,-1,10), (9,-8,-10), (-1,9,-10), (-1,-8,10), (-8,9,10), (-8,-1,-10), (-9,1,-10), (-9,8,10)								
Quartz	(10,-2,2)	13.549	70.73	1.084	1.1	5.017	5.64	62.71	62.97
	Equiv. Refl.: (10,-8,-2), (-2,10,-2), (-2,-8,2), (-8,10,2), (-8,-2,-2)								
Quartz	(2,8,-2)	13.549	70.73	1.076	1.1	5.017	5.64	62.71	62.97
	Equiv. Refl.: (2,-10,2), (8,2,2), (8,-10,-2), (-10,2,-2), (-10,8,2)								
LiNbO3	(2,9,5)	14.288	84.54	1.064	2.2	1.371	2.99	17.14	17.4
	Equiv. Refl.: (2,-11,-5), (9,2,-5), (9,-11,5), (11,-2,-5), (11,-9,5), (-2,11,5), (-2,-9,-5), (-9,11,-5), (-9,-2,5), (-11,2,5), (-11,9,-5)								
Sapph	(3,4,-22)	13.928	76.03	1.057	1.2	3.571	4.19	44.64	44.83
	Equiv. Refl.: (3,-7,22), (4,3,22), (4,-7,-22), (7,-3,22), (7,-4,-22), (-3,7,-22), (-3,-4,22), (-4,7,22), (-4,-3,-22), (-7,3,-22), (-7,4,22)								
LiNbO3	(1,6,-23)	13.745	73.26	1.044	1.5	4.317	6.46	53.96	54.34
	Equiv. Refl.: (1,-7,23), (6,1,23), (6,-7,-23), (7,-1,23), (7,-6,-23), (-1,7,-23), (-1,-6,23), (-6,7,23), (-6,-1,-23), (-7,1,-23), (-7,6,23)								
Quartz	(-4,6,-10)	13.82	74.34	1.033	1.1	4.023	4.55	50.29	50.49
	Equiv. Refl.: (-4,-2,10)								
Quartz	(6,-2,-10)	13.82	74.34	1.031	1.1	4.023	4.54	50.29	50.49
	Equiv. Refl.: (6,-4,10), (-2,6,10), (-2,-4,-10)								
Quartz	(-7,10,5)	14.163	80.67	0.998	1.1	2.358	2.6	29.48	29.59
	Equiv. Refl.: (-7,-3,-5)								
Quartz	(10,-3,5)	14.163	80.67	0.997	1.1	2.358	2.6	29.48	29.59
	Equiv. Refl.: (10,-7,-5), (-3,10,-5), (-3,-7,5)								
Quartz	(4,5,-7)	13.927	76	0.995	1.1	3.578	3.82	44.72	44.88
	Equiv. Refl.: (4,-9,7)								
Quartz	(5,4,7)	13.927	76	0.994	1.1	3.578	3.82	44.72	44.88
	Equiv. Refl.: (5,-9,-7), (-9,4,-7)								
Quartz	(-9,5,7)	13.927	76	0.993	1.1	3.578	3.82	44.72	44.88
Quartz	(1,8,5)	13.706	72.73	0.989	1	4.462	4.66	55.77	55.97
	Equiv. Refl.: (1,-9,-5), (-9,1,5), (-9,8,-5)								
Quartz	(8,1,-5)	13.706	72.73	0.988	1	4.462	4.66	55.77	55.96
	Equiv. Refl.: (8,-9,5)								
Quartz	(9,-8,5)	13.706	72.73	0.984	1	4.462	4.66	55.77	55.97
	Equiv. Refl.: (-1,9,5), (-1,-8,-5)								
Quartz	(9,-1,-5)	13.706	72.73	0.983	1	4.462	4.66	55.77	55.97
	Equiv. Refl.: (-8,9,-5), (-8,-1,5)								

Ei =	14.353	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(-4,9,-7)	13.927	76	0.981	1.1	3.578	3.82	44.72	44.88
	Equiv. Refl.: (-4,-5,7), (-5,9,7), (-5,-4,-7)								
Quartz	(9,-4,7)	13.927	76	0.98	1.1	3.578	3.82	44.72	44.88
	Equiv. Refl.: (9,-5,-7)								
Quartz	(4,6,5)	13.936	76.16	0.977	1	3.535	3.7	44.19	44.35
Quartz	(4,-10,-5)	13.936	76.16	0.976	1	3.535	3.7	44.19	44.35
	Equiv. Refl.: (6,4,-5), (6,-10,5), (-10,4,5), (-10,6,-5)								
Quartz	(-10,2,4)	14.12	79.66	0.97	1.1	2.62	2.79	32.75	32.87
	Equiv. Refl.: (-10,8,-4)								
Quartz	(2,8,4)	14.12	79.66	0.969	1.1	2.62	2.79	32.75	32.87
	Equiv. Refl.: (2,-10,-4), (8,-10,4)								
Quartz	(8,2,-4)	14.12	79.66	0.968	1.1	2.62	2.79	32.75	32.87
Quartz	(10,-4,-5)	13.936	76.16	0.951	1	3.535	3.69	44.19	44.35
	Equiv. Refl.: (10,-6,5), (-4,10,5), (-4,-6,-5)								
Quartz	(-6,10,-5)	13.936	76.16	0.95	1	3.535	3.69	44.19	44.35
	Equiv. Refl.: (-6,-4,5)								
Quartz	(7,3,5)	14.163	80.67	0.935	1.1	2.358	2.6	29.48	29.59
	Equiv. Refl.: (7,-10,-5), (-10,3,-5), (-10,7,5)								
Quartz	(3,7,-5)	14.163	80.67	0.934	1.1	2.358	2.6	29.48	29.59
	Equiv. Refl.: (3,-10,5)								
Quartz	(10,-2,-4)	14.12	79.66	0.917	1.1	2.62	2.79	32.75	32.87
	Equiv. Refl.: (10,-8,4)								
Quartz	(-2,10,4)	14.12	79.66	0.916	1.1	2.62	2.79	32.75	32.87
	Equiv. Refl.: (-2,-8,-4)								
Quartz	(-8,10,-4)	14.12	79.66	0.915	1.1	2.62	2.79	32.75	32.87
	Equiv. Refl.: (-8,-2,4)								
LiNbO3	(2,7,-17)	13.687	72.48	0.91	1.3	4.532	6.08	56.65	56.98
	Equiv. Refl.: (2,-9,17), (7,2,17), (7,-9,-17), (9,-2,17), (9,-7,-17), (-2,9,-17), (-2,-7,17), (-7,9,17), (-7,-2,-17), (-9,2,-17), (-9,7,17), (2,6,17), (2,-8,-17), (6,2,-17), (6,-8,17), (8,-2,-17), (8,-6,17), (-2,8,17), (-2,-6,-17), (-6,8,-17), (-6,-2,17), (-8,2,17), (-8,6,-17)								
Sapph	(1,5,23)	13.808	74.17	0.902	1	4.071	4.1	50.88	51.05
	Equiv. Refl.: (1,-6,-23), (5,1,-23), (5,-6,23), (6,-1,-23), (6,-5,23), (-1,6,23), (-1,-5,-23), (-5,6,-23), (-5,-1,23), (-6,1,23), (-6,5,-23)								
Sapph	(2,5,21)	13.738	73.17	0.886	1	4.343	4.27	54.28	54.45
	Equiv. Refl.: (2,5,-21), (2,-7,21), (2,-7,-21), (5,2,21), (5,2,-21), (5,-7,21), (5,-7,-21), (7,-2,21), (7,-2,-21), (7,-5,21), (7,-5,-21), (-2,7,21), (-2,7,-21), (-2,-5,21), (-2,-5,-21), (-5,7,21), (-5,7,-21), (-5,-2,21), (-5,-2,-21), (-7,2,21), (-7,2,-21), (-7,5,21), (-7,5,-21)								
Quartz	(10,-3,-4)	13.739	73.18	0.855	0.9	4.34	3.97	54.25	54.39
	Equiv. Refl.: (10,-7,4), (-3,10,4), (-3,-7,-4), (-7,10,-4), (-7,-3,4)								
Sapph	(0,2,28)	13.699	72.63	0.841	0.9	4.489	4.2	56.11	56.27
	Equiv. Refl.: (0,-2,-28), (2,0,-28), (2,-2,28), (-2,0,28), (-2,2,-28)								
Quartz	(3,7,4)	13.739	73.18	0.838	0.9	4.34	3.97	54.25	54.39
	Equiv. Refl.: (3,-10,-4), (7,3,-4), (7,-10,4), (-10,3,4), (-10,7,-4)								
LiNbO3	(1,9,7)	13.629	71.72	0.831	1.2	4.741	5.91	59.26	59.56
	Equiv. Refl.: (1,-10,-7), (9,1,-7), (9,-10,7), (10,-1,-7), (10,-9,7), (-1,10,7), (-1,-9,-7), (-9,10,-7), (-9,-1,7), (-10,1,7), (-10,9,-7)								
Quartz	(11,-4,0)	14.051	78.22	0.817	0.9	2.993	2.69	37.42	37.52
	Equiv. Refl.: (11,-7,0), (-4,11,0), (-4,-7,0), (-7,11,0), (-7,-4,0), (-8,10,4), (-8,-2,-4)								
Quartz	(10,-2,4)	14.12	79.66	0.816	0.9	2.62	2.23	32.75	32.82
	Equiv. Refl.: (10,-8,-4), (-2,10,-4)								

Ei =	14.353	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-2,-8,4)	14.12	79.66	0.815	0.9	2.62	2.23	32.75	32.82
Quartz	(3,7,5)	14.163	80.67	0.806	0.9	2.358	2.15	29.48	29.56
	Equiv. Refl.: (3,-10,-5), (-10,7,-5)								
Quartz	(7,3,-5)	14.163	80.67	0.805	0.9	2.358	2.15	29.48	29.56
	Equiv. Refl.: (7,-10,5), (-10,3,5)								
Sapph	(0,9,6)	13.839	74.62	0.788	0.9	3.947	3.55	49.33	49.46
	Equiv. Refl.: (0,9,-6), (0,-9,6), (0,-9,-6), (9,0,6), (9,0,-6), (9,-9,6), (9,-9,-6), (-9,0,6), (-9,0,-6), (-9,9,6), (-9,9,-6)								
Quartz	(4,7,0)	14.051	78.22	0.764	0.9	2.993	2.69	37.42	37.52
	Equiv. Refl.: (4,-11,0), (7,4,0), (7,-11,0), (-11,4,0), (-11,7,0)								
Quartz	(1,9,-1)	13.946	76.32	0.747	0.8	3.493	2.89	43.66	43.76
	Equiv. Refl.: (1,-10,1), (9,1,1), (9,-10,-1), (-10,1,-1), (-10,9,1)								
Quartz	(10,-3,-5)	14.163	80.67	0.733	0.9	2.358	2.15	29.48	29.56
	Equiv. Refl.: (10,-7,5), (-3,10,5), (-3,-7,-5), (-7,10,-5), (-7,-3,5)								
Quartz	(10,-2,-3)	13.79	73.9	0.729	0.8	4.144	3.27	51.8	51.9
	Equiv. Refl.: (10,-8,3), (-2,10,3), (-2,-8,-3), (-8,10,-3), (-8,-2,3)								
Quartz	(10,-1,1)	13.946	76.32	0.723	0.8	3.493	2.89	43.66	43.76
	Equiv. Refl.: (10,-9,-1)								
Quartz	(-1,10,-1)	13.946	76.32	0.722	0.8	3.493	2.89	43.66	43.76
	Equiv. Refl.: (-1,-9,1), (-9,10,1), (-9,-1,-1)								
LiNbO3	(4,7,9)	14	77.27	0.715	1.3	3.242	4.06	40.52	40.73
	Equiv. Refl.: (4,7,-9), (4,-11,9), (4,-11,-9), (7,4,9), (7,4,-9), (7,-11,9), (7,-11,-9), (11,-4,9), (11,-4,-9), (11,-7,9), (11,-7,-9), (-4,11,9), (-4,11,-9), (-4,-7,9), (-4,-7,-9), (-7,11,9), (-7,11,-9), (-7,-4,9), (-7,-4,-9), (-11,4,9), (-11,4,-9), (-11,7,9), (-11,7,-9)								
Quartz	(0,8,6)	13.536	70.58	0.707	0.8	5.062	3.89	63.27	63.39
	Equiv. Refl.: (0,-8,-6)								
Quartz	(8,0,-6)	13.536	70.58	0.706	0.8	5.062	3.88	63.27	63.39
	Equiv. Refl.: (8,-8,6), (-8,0,6), (-8,8,-6)								
Quartz	(2,8,3)	13.79	73.9	0.692	0.8	4.144	3.26	51.8	51.9
	Equiv. Refl.: (2,-10,-3), (8,2,-3), (8,-10,3), (-10,2,3), (-10,8,-3)								
Quartz	(-4,7,9)	13.606	71.43	0.69	0.7	4.822	3.55	60.28	60.38
	Equiv. Refl.: (-4,-3,-9)								
Quartz	(-3,7,-9)	13.606	71.43	0.689	0.7	4.822	3.54	60.28	60.38
	Equiv. Refl.: (-3,-4,9)								
Quartz	(7,-3,9)	13.606	71.43	0.688	0.7	4.822	3.54	60.28	60.38
	Equiv. Refl.: (7,-4,-9)								
Quartz	(3,-8,8)	13.719	72.91	0.648	0.7	4.413	3.14	55.16	55.25
	Equiv. Refl.: (4,3,9), (4,-7,-9)								
Quartz	(3,4,-9)	13.606	71.43	0.647	0.7	4.822	3.54	60.28	60.38
	Equiv. Refl.: (3,5,-8), (3,-7,9), (5,3,8), (5,-8,-8), (-8,3,-8), (-8,5,8)								
Quartz	(-7,3,-9)	13.606	71.43	0.646	0.7	4.822	3.54	60.28	60.38
	Equiv. Refl.: (-7,4,9)								
Quartz	(1,0,-12)	13.841	74.65	0.642	0.7	3.939	2.86	49.24	49.33
	Equiv. Refl.: (1,-1,12), (-1,0,12), (-1,1,-12)								
Quartz	(0,1,12)	13.841	74.65	0.641	0.7	3.939	2.86	49.24	49.33
	Equiv. Refl.: (0,-1,-12), (8,2,4), (8,-10,-4), (-10,2,-4), (-10,8,4)								
Quartz	(2,8,-4)	14.12	79.66	0.64	0.9	2.62	2.23	32.75	32.82
	Equiv. Refl.: (2,-10,4)								

Ei =	14.353	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(3,4,-25)	14.018	77.61	0.639	1.2	3.154	3.7	39.43	39.6
	Equiv. Refl.: (3,-7,25), (4,3,25), (4,-7,-25), (7,-3,25), (7,-4,-25), (-3,7,-25), (-3,-4,25), (-4,7,25), (-4,-3,-25), (-7,3,-25), (-7,4,25)								
Quartz	(9,-1,5)	13.706	72.73	0.634	0.7	4.462	3.11	55.77	55.86
	Equiv. Refl.: (9,-8,-5), (-1,9,-5), (-1,-8,5), (-8,9,5), (-8,-1,-5)								
Quartz	(8,-3,8)	13.719	72.91	0.627	0.7	4.413	3.14	55.16	55.25
	Equiv. Refl.: (8,-5,-8), (-3,8,-8), (-3,-5,8), (-5,8,8), (-5,-3,-8)								
Quartz	(0,6,9)	13.527	70.47	0.616	0.7	5.091	3.46	63.63	63.73
	Equiv. Refl.: (0,-6,-9), (6,0,-9), (6,-6,9), (-6,0,9), (-6,6,-9)								
Quartz	(1,8,-5)	13.706	72.73	0.612	0.7	4.462	3.11	55.77	55.86
	Equiv. Refl.: (1,-9,5), (8,1,5), (8,-9,-5), (-9,1,-5), (-9,8,5)								
Quartz	(1,9,2)	14.087	78.95	0.601	0.7	2.803	1.96	35.04	35.1
	Equiv. Refl.: (1,-10,-2), (9,1,-2), (9,-10,2), (-10,1,2), (-10,9,-2)								
Sapph	(2,7,13)	13.789	73.89	0.594	0.7	4.147	2.93	51.83	51.91
	Equiv. Refl.: (2,-9,-13), (7,2,-13), (7,-9,13), (9,-2,-13), (9,-7,13), (-2,9,13), (-2,-7,-13), (-7,9,-13), (-7,-2,13), (-9,2,13), (-9,7,-13)								
LiNbO3	(2,9,-1)	14.119	79.64	0.581	1.2	2.624	3.1	32.8	32.95
	Equiv. Refl.: (2,-11,1), (9,2,1), (9,-11,-1), (11,-2,1), (11,-9,-1), (-2,11,-1), (-2,-9,1), (-9,11,1), (-9,-2,-1), (-11,2,-1), (-11,9,1)								
LiNbO3	(1,3,-29)	13.903	75.62	0.58	1	3.679	3.86	45.99	46.15
	Equiv. Refl.: (1,-4,29), (3,1,29), (3,-4,-29), (4,-1,29), (4,-3,-29), (-1,4,-29), (-1,-3,29), (-3,4,29), (-3,-1,-29), (-4,1,-29), (-4,3,29)								
Quartz	(10,-4,4)	13.505	70.21	0.578	0.6	5.166	3.2	64.57	64.65
	Equiv. Refl.: (10,-6,-4), (-4,10,-4), (-4,-6,4), (-6,10,4), (-6,-4,-4)								
Quartz	(2,3,11)	14.125	79.78	0.564	0.7	2.587	1.78	32.34	32.39
	Equiv. Refl.: (2,-5,-11)								
Quartz	(3,2,-11)	14.125	79.78	0.562	0.7	2.587	1.78	32.34	32.39
	Equiv. Refl.: (3,-5,11)								
Sapph	(2,4,-23)	13.56	70.87	0.56	0.7	4.979	3.27	62.24	62.32
	Equiv. Refl.: (2,-6,23), (4,2,23), (4,-6,-23), (6,-2,23), (6,-4,-23), (-2,6,-23), (-2,-4,23), (-4,6,23), (-4,-2,-23), (-6,2,-23), (-6,4,23), (-5,3,-11)								
Quartz	(-5,2,11)	14.125	79.78	0.559	0.7	2.587	1.77	32.34	32.38
Quartz	(10,-1,-2)	14.087	78.95	0.548	0.7	2.803	1.96	35.04	35.1
	Equiv. Refl.: (10,-9,2), (-1,10,2), (-1,-9,-2), (-9,10,-2), (-9,-1,2)								
Sapph	(3,5,19)	13.897	75.53	0.545	0.7	3.705	2.49	46.31	46.38
	Equiv. Refl.: (3,-8,-19), (5,3,-19), (5,-8,19), (8,-3,-19), (8,-5,19), (-3,8,19), (-3,-5,-19), (-5,8,-19), (-5,-3,19), (-8,3,19), (-8,5,-19)								
Quartz	(-2,5,11)	14.125	79.78	0.544	0.7	2.587	1.78	32.34	32.39
	Equiv. Refl.: (-2,-3,-11)								
Quartz	(-3,5,-11)	14.125	79.78	0.543	0.7	2.587	1.78	32.34	32.39
Quartz	(-3,-2,11)	14.125	79.78	0.542	0.7	2.587	1.78	32.34	32.39
	Equiv. Refl.: (-7,8,-7)								
Quartz	(-1,8,7)	13.619	71.59	0.541	0.6	4.777	2.83	59.71	59.78
	Equiv. Refl.: (-1,-7,-7), (-7,-1,7)								
Quartz	(5,-3,11)	14.125	79.78	0.54	0.7	2.587	1.77	32.34	32.38
	Equiv. Refl.: (8,-1,-7), (8,-7,7)								
Quartz	(5,-2,-11)	14.125	79.78	0.539	0.7	2.587	1.77	32.34	32.38
Quartz	(6,4,4)	13.505	70.21	0.533	0.6	5.166	3.21	64.57	64.65
	Equiv. Refl.: (6,-10,-4)								
Quartz	(4,6,-4)	13.505	70.21	0.532	0.6	5.166	3.2	64.57	64.65
	Equiv. Refl.: (4,-10,4), (-10,4,-4), (-10,6,4)								

Ei =	14.353	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(7,3,4)	13.739	73.18	0.527	0.6	4.34	2.55	54.25	54.31
	Equiv. Refl.: (7,-10,-4)								
Quartz	(3,7,-4)	13.739	73.18	0.526	0.6	4.34	2.54	54.25	54.31
	Equiv. Refl.: (3,-10,4), (-10,3,-4), (-10,7,4)								
Sapph	(1,3,-26)	13.543	70.66	0.518	0.6	5.037	3.09	62.96	63.04
	Equiv. Refl.: (1,-4,26), (3,1,26), (3,-4,-26), (4,-1,26), (4,-3,-26), (-1,4,-26), (-1,-3,26), (-3,4,26), (-3,-1,-26), (-4,1,-26), (-4,3,26)								
Sapph	(4,4,18)	13.507	70.23	0.504	0.6	5.158	3.09	64.47	64.55
	Equiv. Refl.: (4,4,-18), (4,-8,18), (4,-8,-18), (8,-4,18), (8,-4,-18), (-4,8,18), (-4,8,-18), (-4,-4,18), (-4,-4,-18), (-8,4,18), (-8,4,-18)								
Quartz	(7,1,-7)	13.619	71.59	0.501	0.6	4.777	2.84	59.71	59.78
	Equiv. Refl.: (7,-8,7)								
Quartz	(1,7,7)	13.619	71.59	0.5	0.6	4.777	2.83	59.71	59.78
	Equiv. Refl.: (1,-8,-7), (-8,1,7), (-8,7,-7)								
Quartz	(8,-8,-7)	14.154	80.44	0.494	0.6	2.417	1.53	30.22	30.25
Quartz	(8,0,7)	14.154	80.44	0.493	0.6	2.417	1.53	30.22	30.25
	Equiv. Refl.: (-8,0,-7), (-8,8,7)								
Quartz	(0,8,-7)	14.154	80.44	0.492	0.6	2.417	1.53	30.22	30.25
	Equiv. Refl.: (0,-8,7)								
Quartz	(10,-3,4)	13.739	73.18	0.485	0.6	4.34	2.55	54.25	54.31
	Equiv. Refl.: (10,-7,-4), (-7,10,4), (-7,-3,-4)								
Quartz	(-3,10,-4)	13.739	73.18	0.484	0.6	4.34	2.54	54.25	54.31
	Equiv. Refl.: (-3,-7,4)								
Quartz	(8,-4,8)	13.642	71.89	0.476	0.5	4.695	2.43	58.69	58.74
	Equiv. Refl.: (8,-4,-8)								
Quartz	(-4,8,8)	13.642	71.89	0.474	0.5	4.695	2.42	58.69	58.74
	Equiv. Refl.: (-4,8,-8), (-4,-4,8), (-4,-4,-8)								
Quartz	(9,-2,-6)	13.769	73.6	0.456	0.5	4.224	2.18	52.79	52.84
	Equiv. Refl.: (9,-7,6), (-7,9,-6), (-7,-2,6)								
LiNbO3	(5,6,11)	14.147	80.28	0.455	1	2.458	2.57	30.72	30.83
	Equiv. Refl.: (5,-11,-11), (6,5,-11), (6,-11,11), (11,-5,-11), (11,-6,11), (-5,11,11), (-5,-6,-11), (-6,11,-11), (-6,-5,11), (-11,5,11), (-11,6,-11), (-2,9,6), (-2,-7,-6)								
Sapph	(5,5,12)	14.232	82.56	0.451	0.7	1.875	1.29	23.44	23.48
	Equiv. Refl.: (5,5,-12), (5,-10,12), (5,-10,-12), (10,-5,12), (10,-5,-12), (-5,10,12), (-5,10,-12), (-5,-5,12), (-5,-5,-12), (-10,5,12), (-10,5,-12)								
LiNbO3	(4,5,-19)	13.789	73.88	0.446	0.9	4.148	3.55	51.85	51.97
	Equiv. Refl.: (4,-9,19), (5,4,19), (5,-9,-19), (9,-4,19), (9,-5,-19), (-4,9,-19), (-4,-5,19), (-5,9,19), (-5,-4,-19), (-9,4,-19), (-9,5,19)								
Sapph	(3,3,24)	13.868	75.07	0.442	0.6	3.828	2.16	47.85	47.9
	Equiv. Refl.: (3,3,-24), (3,-6,24), (3,-6,-24), (6,-3,24), (6,-3,-24), (-3,6,24), (-3,6,-24), (-3,-3,24), (-3,-3,-24), (-6,3,24), (-6,3,-24)								
LiNbO3	(2,3,29)	14.315	85.81	0.436	1.5	1.052	1.55	13.15	13.24
	Equiv. Refl.: (2,-5,-29), (3,2,-29), (3,-5,29), (5,-2,-29), (5,-3,29), (-2,5,29), (-2,-3,-29), (-3,5,-29), (-3,-2,29), (-5,2,29), (-5,3,-29)								
Sapph	(2,3,-25)	13.615	71.55	0.429	0.5	4.788	2.55	59.85	59.9
	Equiv. Refl.: (2,-5,25), (3,2,25), (3,-5,-25), (5,-2,25), (5,-3,-25), (-2,5,-25), (-2,-3,25), (-3,5,25), (-3,-2,-25), (-5,2,-25), (-5,3,25)								
Quartz	(-8,4,8)	13.642	71.89	0.409	0.5	4.695	2.43	58.69	58.74
	Equiv. Refl.: (-8,4,-8)								

Ei = Cryst	14.353 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
LiNbO3	(1,4,27)	13.652	72.02	0.407	0.8	4.658	3.63	58.23	58.34
Equiv. Refl.: (1,4,-27), (1,-5,27), (1,-5,-27), (4,1,27), (4,1,-27), (4,-5,27), (4,-5,-27), (5,-1,27), (5,-1,-27), (5,-4,27), (5,-4,-27), (-1,5,27), (-1,5,-27), (-1,-4,27), (-1,-4,-27), (-4,5,27), (-4,5,-27), (-4,-1,27), (-4,-1,-27), (-5,1,27), (-5,1,-27), (-5,4,27), (-5,4,-27), (4,4,8), (4,4,-8), (4,-8,8), (4,-8,-8), (-10,2,-3), (-10,8,3)									
Quartz	(2,8,-3)	13.79	73.9	0.406	0.5	4.144	1.97	51.8	51.84
Equiv. Refl.: (2,-10,3), (7,2,-6), (7,-9,6), (8,2,3), (8,-10,-3), (-9,2,6), (-9,7,-6)									
Quartz	(2,7,6)	13.769	73.6	0.405	0.5	4.224	2.18	52.79	52.84
Equiv. Refl.: (2,-9,-6)									
Quartz	(10,-2,3)	13.79	73.9	0.369	0.5	4.144	1.97	51.8	51.84
Equiv. Refl.: (10,-8,-3)									
Quartz	(-2,10,-3)	13.79	73.9	0.368	0.5	4.144	1.97	51.8	51.84
Equiv. Refl.: (-2,-8,3), (-8,10,3), (-8,-2,-3)									
Sapph	(2,8,3)	13.862	74.98	0.354	0.5	3.852	1.84	48.15	48.19
Equiv. Refl.: (2,8,-3), (2,-10,3), (2,-10,-3), (8,2,3), (8,2,-3), (8,-10,3), (8,-10,-3), (10,-2,3), (10,-2,-3), (10,-8,3), (10,-8,-3), (-2,10,3), (-2,10,-3), (-2,-8,3), (-2,-8,-3), (-8,10,3), (-8,10,-3), (-8,-2,3), (-8,-2,-3), (-10,2,3), (-10,2,-3), (-10,8,3), (-10,8,-3)									
Sapph	(5,5,9)	13.719	72.9	0.352	0.5	4.415	2.04	55.19	55.23
Equiv. Refl.: (5,5,-9), (5,-10,9), (5,-10,-9), (10,-5,9), (10,-5,-9), (-5,10,9), (-5,10,-9), (-5,-5,9), (-5,-5,-9), (-10,5,9), (-10,5,-9)									
Quartz	(5,5,5)	13.86	74.94	0.347	0.4	3.862	1.7	48.27	48.3
Equiv. Refl.: (5,-10,-5), (-10,5,5), (-10,5,-5)									
Quartz	(5,5,-5)	13.86	74.94	0.345	0.4	3.862	1.69	48.27	48.3
Equiv. Refl.: (5,-10,5)									
Quartz	(10,-5,5)	13.86	74.94	0.343	0.4	3.862	1.7	48.27	48.3
Equiv. Refl.: (10,-5,-5), (-5,10,5), (-5,-5,-5)									
Quartz	(-5,10,-5)	13.86	74.94	0.341	0.4	3.862	1.69	48.27	48.3
Equiv. Refl.: (-5,-5,5)									
LiNbO3	(1,5,-25)	13.598	71.34	0.324	0.7	4.847	3.25	60.59	60.68
Equiv. Refl.: (1,-6,25), (5,1,25), (5,-6,-25), (6,-1,25), (6,-5,-25), (-1,6,-25), (-1,-5,25), (-5,6,25), (-5,-1,-25), (-6,1,-25), (-6,5,25)									
Quartz	(-5,11,2)	14.087	78.95	0.317	0.4	2.803	1.11	35.04	35.06
Equiv. Refl.: (-5,-6,-2)									
Quartz	(11,-5,-2)	14.087	78.95	0.316	0.4	2.803	1.11	35.04	35.06
Equiv. Refl.: (11,-6,2), (-6,11,-2), (-6,-5,2)									
LiNbO3	(3,7,-13)	13.658	72.1	0.311	0.7	4.637	3.08	57.96	58.05
Equiv. Refl.: (3,-10,13), (7,3,13), (7,-10,-13), (10,-3,13), (10,-7,-13), (-3,10,-13), (-3,-7,13), (-7,10,13), (-7,-3,-13), (-10,3,-13), (-10,7,13)									
Quartz	(0,8,7)	14.154	80.44	0.301	0.4	2.417	1.07	30.22	30.23
Equiv. Refl.: (0,-8,-7), (8,0,-7), (8,-8,7), (-8,0,7), (-8,8,-7)									
Quartz	(5,1,-10)	14.049	78.19	0.294	0.4	3.002	1.22	37.53	37.55
Equiv. Refl.: (5,-6,10)									
Quartz	(1,5,10)	14.049	78.19	0.291	0.4	3.002	1.21	37.53	37.55
Equiv. Refl.: (1,-6,-10), (-6,1,10), (-6,5,-10)									
Quartz	(-5,6,-10)	14.049	78.19	0.287	0.4	3.002	1.22	37.53	37.55
Equiv. Refl.: (-5,-1,10)									
Quartz	(6,-1,-10)	14.049	78.19	0.285	0.4	3.002	1.21	37.53	37.55
Equiv. Refl.: (6,-5,10), (-1,6,10), (-1,-5,-10)									
Quartz	(0,4,-11)	13.898	75.54	0.274	0.4	3.702	1.38	46.27	46.3
Equiv. Refl.: (0,-4,11)									
Quartz	(4,0,11)	13.898	75.54	0.272	0.4	3.702	1.37	46.27	46.3
Equiv. Refl.: (4,-4,-11), (-4,0,-11), (-4,4,11)									

Ei =	14.353	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(5,6,-7)	13.629	71.72	0.271	0.6	4.741	2.88	59.26	59.33
	Equiv. Refl.: (5,-11,7), (6,5,7), (6,-11,-7), (11,-5,7), (11,-6,-7), (-5,11,-7), (-5,-6,7), (-6,11,7), (-6,-5,-7), (-11,5,-7), (-11,6,7)								
Quartz	(5,0,10)	13.588	71.21	0.268	0.3	4.883	1.69	61.04	61.07
	Equiv. Refl.: (5,-5,-10), (-5,0,-10)								
Quartz	(-5,5,10)	13.588	71.21	0.267	0.3	4.883	1.69	61.04	61.07
Quartz	(0,5,-10)	13.588	71.21	0.266	0.3	4.883	1.68	61.04	61.07
	Equiv. Refl.: (0,-5,10)								
Quartz	(8,-1,7)	13.619	71.59	0.26	0.3	4.777	1.45	59.71	59.73
	Equiv. Refl.: (8,-7,-7), (-7,8,7), (-7,-1,-7)								
Quartz	(-1,8,-7)	13.619	71.59	0.259	0.3	4.777	1.44	59.71	59.73
	Equiv. Refl.: (-1,-7,7)								
Quartz	(11,-4,1)	14.097	79.17	0.254	0.3	2.746	0.9	34.32	34.33
	Equiv. Refl.: (11,-7,-1), (-4,11,-1), (-4,-7,1), (-7,11,1), (-7,-4,-1)								
Quartz	(5,6,2)	14.087	78.95	0.235	0.4	2.803	1.11	35.04	35.06
	Equiv. Refl.: (5,-11,-2), (-11,5,2), (-11,6,-2)								
Quartz	(6,5,-2)	14.087	78.95	0.234	0.4	2.803	1.1	35.04	35.06
	Equiv. Refl.: (6,-11,2)								
Sapph	(3,4,23)	14.292	84.7	0.221	0.5	1.331	0.65	16.64	16.65
	Equiv. Refl.: (3,-7,-23), (4,3,-23), (4,-7,23), (7,-3,-23), (7,-4,23), (-3,7,23), (-3,-4,-23), (-4,7,-23), (-4,-3,23), (-7,3,23), (-7,4,-23)								
Quartz	(0,7,8)	13.719	72.91	0.212	0.3	4.413	1.3	55.16	55.17
	Equiv. Refl.: (0,-7,-8)								
Quartz	(2,5,-9)	13.761	73.48	0.21	0.3	4.256	1.25	53.2	53.22
	Equiv. Refl.: (2,-7,9), (-7,2,-9), (-7,5,9)								
Quartz	(7,0,-8)	13.719	72.91	0.209	0.3	4.413	1.29	55.16	55.17
	Equiv. Refl.: (7,-7,8), (-7,0,8), (-7,7,-8)								
Quartz	(5,2,9)	13.761	73.48	0.207	0.3	4.256	1.24	53.2	53.22
	Equiv. Refl.: (5,-7,-9)								
Quartz	(7,-2,9)	13.761	73.48	0.206	0.3	4.256	1.25	53.2	53.22
	Equiv. Refl.: (7,-5,-9), (-2,7,-9), (-2,-5,9)								
Quartz	(-5,7,9)	13.761	73.48	0.203	0.3	4.256	1.24	53.2	53.22
	Equiv. Refl.: (-5,-2,-9)								
Quartz	(7,-2,-9)	13.761	73.48	0.2	0.3	4.256	1.15	53.2	53.22
	Equiv. Refl.: (7,-5,9), (-2,7,9), (-2,-5,-9), (-5,7,-9)								
Quartz	(-5,-2,9)	13.761	73.48	0.199	0.3	4.256	1.15	53.2	53.22
Quartz	(-2,6,-10)	13.82	74.34	0.195	0.2	4.023	0.93	50.29	50.29
	Equiv. Refl.: (-2,-4,10)								
Sapph	(0,4,26)	13.792	73.92	0.194	0.3	4.137	1.26	51.71	51.72
	Equiv. Refl.: (0,-4,-26), (4,0,-26), (4,-4,26), (-4,0,26), (-4,4,-26)								
Quartz	(6,-4,-10)	13.82	74.34	0.193	0.2	4.023	0.92	50.29	50.29
	Equiv. Refl.: (7,1,7), (7,-8,-7), (9,0,4), (9,-9,-4), (-4,6,10), (-4,-2,-10), (-8,7,7), (-9,0,-4), (-9,9,4)								
Quartz	(0,9,-4)	13.892	75.45	0.192	0.3	3.727	1.07	46.58	46.6
	Equiv. Refl.: (0,-9,4), (1,7,-7), (1,-8,7), (6,-2,10), (-8,1,-7)								
LiNbO3	(1,7,21)	14.085	78.91	0.181	0.6	2.812	1.67	35.15	35.19
	Equiv. Refl.: (1,7,-21), (1,-8,21), (1,-8,-21), (7,1,21), (7,1,-21), (7,-8,21), (7,-8,-21), (8,-1,21), (8,-1,-21), (8,-7,21), (8,-7,-21), (-1,8,21), (-1,8,-21), (-1,-7,21), (-1,-7,-21), (-7,8,21), (-7,8,-21), (-7,-1,21), (-7,-1,-21), (-8,1,21), (-8,1,-21), (-8,7,21), (-8,7,-21)								
LiNbO3	(3,5,-23)	14.161	80.61	0.173	0.6	2.374	1.48	29.68	29.71
	Equiv. Refl.: (3,-8,23), (5,3,23), (5,-8,-23), (8,-3,23), (8,-5,-23), (-3,8,-23), (-3,-5,23), (-5,8,23), (-5,-3,-23), (-8,3,-23), (-8,5,23), (2,5,9), (2,-7,-9)								
Quartz	(5,2,-9)	13.761	73.48	0.172	0.3	4.256	1.15	53.2	53.22

		Equiv. Refl.: (5,-7,9), (-7,2,9), (-7,5,-9)							
Quartz	(4,7,-1)	14.097	79.17	0.17	0.3	2.746	0.9	34.32	34.33
		Equiv. Refl.: (4,-11,1), (7,4,1), (7,-11,-1), (-11,4,-1), (-11,7,1)							
Quartz	(-3,8,8)	13.719	72.91	0.159	0.2	4.413	0.98	55.16	55.17
		Equiv. Refl.: (-3,-5,-8), (-5,8,-8), (-5,-3,8)							
Quartz	(8,-3,-8)	13.719	72.91	0.158	0.2	4.413	0.98	55.16	55.17
		Equiv. Refl.: (8,-5,8)							
LiNbO3	(3,8,7)	14.048	78.17	0.131	0.5	3.008	1.46	37.59	37.62
		Equiv. Refl.: (3,-11,-7), (8,3,-7), (8,-11,7), (11,-3,-7), (11,-8,7), (-3,11,7), (-3,-8,-7), (-8,11,-7), (-8,-3,7), (-11,3,7), (-11,8,-7)							
Quartz	(5,3,-8)	13.719	72.91	0.128	0.2	4.413	0.98	55.16	55.17
		Equiv. Refl.: (5,-8,8)							
Quartz	(3,5,8)	13.719	72.91	0.127	0.2	4.413	0.98	55.16	55.17
		Equiv. Refl.: (3,-8,-8), (-8,3,8), (-8,5,-8)							
Sapph	(3,6,15)	13.923	75.94	0.123	0.2	3.596	0.85	44.95	44.95
		Equiv. Refl.: (3,6,-15), (3,-9,15), (3,-9,-15), (6,3,15), (6,3,-15), (6,-9,15), (6,-9,-15), (9,-3,15), (9,-3,-15), (9,-6,15), (9,-6,-15), (-3,9,15), (-3,9,-15), (-3,-6,15), (-3,-6,-15), (-6,9,15), (-6,9,-15), (-6,-3,15), (-6,-3,-15), (-9,3,15), (-9,3,-15), (-9,6,15), (-9,6,-15)							
LiNbO3	(1,8,17)	14.104	79.32	0.122	0.5	2.707	1.33	33.84	33.86
		Equiv. Refl.: (1,-9,-17), (8,1,-17), (8,-9,17), (9,-1,-17), (9,-8,17), (-1,9,17), (-1,-8,-17), (-8,9,-17), (-8,-1,17), (-9,1,17), (-9,8,-17)							
LiNbO3	(3,8,-5)	13.876	75.19	0.109	0.4	3.795	1.52	47.44	47.47
		Equiv. Refl.: (3,-11,5), (8,3,5), (8,-11,-5), (11,-3,5), (11,-8,-5), (-3,11,-5), (-3,-8,5), (-8,11,5), (-8,-3,-5), (-11,3,-5), (-11,8,5), (2,-6,10)							
Quartz	(2,4,-10)	13.82	74.34	0.108	0.2	4.023	0.93	50.29	50.29
Quartz	(4,2,10)	13.82	74.34	0.107	0.2	4.023	0.93	50.29	50.29
		Equiv. Refl.: (4,-6,-10), (-6,2,-10), (-6,4,10)							
Sapph	(3,7,-4)	13.507	70.23	0.102	0.2	5.158	0.95	64.48	64.49
		Equiv. Refl.: (3,-10,4), (7,3,4), (7,-10,-4), (10,-3,4), (10,-7,-4), (-3,10,-4), (-3,-7,4), (-7,10,4), (-7,-3,-4), (-10,3,-4), (-10,7,4)							
LiNbO3	(3,8,1)	13.702	72.68	0.097	0.4	4.477	1.58	55.96	55.98
		Equiv. Refl.: (3,-11,-1), (8,3,-1), (8,-11,1), (11,-3,-1), (11,-8,1), (-3,11,1), (-3,-8,-1), (-8,11,-1), (-8,-3,1), (-11,3,1), (-11,8,-1)							
Sapph	(4,6,-11)	14.127	79.82	0.094	0.2	2.577	0.59	32.22	32.22
		Equiv. Refl.: (4,-10,11), (6,4,11), (6,-10,-11), (10,-4,11), (10,-6,-11), (-4,10,-11), (-4,-6,11), (-6,10,11), (-6,-4,-11), (-10,4,-11), (-10,6,11)							
LiNbO3	(3,3,27)	14.071	78.61	0.065	0.4	2.891	1.01	36.13	36.15
		Equiv. Refl.: (3,3,-27), (3,-6,27), (3,-6,-27), (6,-3,27), (6,-3,-27), (-3,6,27), (-3,6,-27), (-3,-3,27), (-3,-3,-27), (-6,3,27), (-6,3,-27)							
Sapph	(4,6,7)	13.534	70.55	0.059	0.1	5.068	0.69	63.35	63.35
		Equiv. Refl.: (4,-10,-7), (6,4,-7), (6,-10,7), (10,-4,-7), (10,-6,7), (-4,10,7), (-4,-6,-7), (-6,10,-7), (-6,-4,7), (-10,4,7), (-10,6,-7)							
LiNbO3	(5,5,15)	13.784	73.81	0.006	0.1	4.166	0.42	52.07	52.08
		Equiv. Refl.: (5,5,-15), (5,-10,15), (5,-10,-15), (10,-5,15), (10,-5,-15), (-5,10,15), (-5,10,-15), (-5,-5,15), (-5,-5,-15), (-10,5,15), (-10,5,-15)							

Ei =	13.734	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Si	(0,0,12)	13.697	85.81	8.1691	7.23	1.0056	7.27	12.57	14.52
	Equiv. Refl.: (0,12,0), (4,8,8), (8,4,8), (8,8,4), (12,0,0)								
Ge	(2,2,12)	13.51	79.63	2.9956	6.57	2.5132	16.51	31.41	35.49
	Equiv. Refl.: (2,12,2), (4,6,10), (4,10,6), (6,4,10), (6,10,4), (10,4,6), (10,6,4), (12,2,2)								
Si	(0,6,10)	13.311	75.75	2.9781	2.37	3.488	8.27	43.6	44.38
	Equiv. Refl.: (0,10,6), (6,0,10), (6,6,8), (6,8,6), (6,10,0), (8,6,6), (10,0,6), (10,6,0)								
Ge	(3,5,11)	13.642	83.38	2.3888	7.02	1.5947	11.19	19.93	22.86
	Equiv. Refl.: (3,11,5), (5,3,11), (5,7,9), (5,9,7), (5,11,3), (7,5,9), (7,9,5), (9,5,7), (9,7,5), (11,3,5), (11,5,3)								
Ge	(0,0,12)	13.149	73.22	2.1149	4.48	4.1408	18.54	51.76	54.98
	Equiv. Refl.: (0,12,0), (4,8,8), (8,4,8), (8,8,4), (12,0,0)								
Si	(0,8,8)	12.914	70.1	1.8159	1.91	4.9715	9.47	62.14	62.86
	Equiv. Refl.: (8,0,8), (8,8,0)								
Si	(3,3,11)	13.457	78.48	1.789	1.99	2.7987	5.57	34.98	35.42
	Equiv. Refl.: (3,7,9), (3,9,7), (3,11,3), (7,3,9), (7,9,3), (9,3,7), (9,7,3), (11,3,3)								
Si	(1,3,11)	13.064	72.04	1.2988	1.43	4.4531	6.36	55.66	56.03
	Equiv. Refl.: (1,7,9), (1,9,7), (1,11,3), (3,1,11), (3,11,1), (5,5,9), (5,9,5), (7,1,9), (7,9,1), (9,1,7), (9,5,5), (9,7,1), (11,1,3), (11,3,1)								
Ge	(1,5,11)	13.286	75.32	1.2427	3.49	3.5981	12.54	44.98	46.69
	Equiv. Refl.: (1,11,5), (5,1,11), (5,11,1), (7,7,7), (11,1,5), (11,5,1)								
Ge	(3,3,11)	12.919	70.16	1.0647	2.85	4.9546	14.14	61.93	63.53
	Equiv. Refl.: (3,7,9), (3,9,7), (3,11,3), (7,3,9), (7,9,3), (9,3,7), (9,7,3), (11,3,3)								
Sapph	(1,6,-20)	13.727	88.24	27.709	23.5	0.423	9.93	5.29	11.25
	Equiv. Refl.: (1,-7,20), (6,1,20), (6,-7,-20), (7,-1,20), (7,-6,-20), (-1,7,-20), (-1,-6,20), (-6,7,20), (-6,-1,-20), (-7,1,-20), (-7,6,20)								
LiNbO3	(0,-4,28)	13.701	86.01	26.512	23.8	0.958	22.84	11.98	25.79
	Equiv. Refl.: (4,0,28), (-4,4,28)								
LiNbO3	(3,-11,2)	13.724	87.8	26.411	25.8	0.527	13.6	6.59	15.12
	Equiv. Refl.: (8,3,2), (11,-3,2), (-3,-8,2), (-8,11,2), (-11,8,2)								
LiNbO3	(0,4,-28)	13.701	86.01	26.222	23.8	0.958	22.84	11.98	25.79
	Equiv. Refl.: (-4,0,-28)								
LiNbO3	(4,-4,-28)	13.701	86.01	26.221	23.8	0.958	22.84	11.98	25.79
LiNbO3	(3,8,-2)	13.724	87.8	25.826	25.8	0.527	13.6	6.59	15.12
	Equiv. Refl.: (8,-11,-2), (11,-8,-2), (-3,11,-2), (-8,-3,-2), (-11,3,-2)								
LiNbO3	(4,-11,-6)	13.675	84.69	18.699	16.9	1.275	21.57	15.94	26.82
	Equiv. Refl.: (7,4,-6), (11,-4,-6), (-4,-7,-6), (-7,11,-6), (-11,7,-6)								
LiNbO3	(4,7,6)	13.675	84.69	18.38	16.9	1.275	21.57	15.94	26.82
	Equiv. Refl.: (7,-11,6), (11,-7,6), (-4,11,6), (-7,-4,6), (-11,4,6)								
LiNbO3	(4,7,-6)	13.675	84.69	17.878	16.1	1.275	20.54	15.94	26
	Equiv. Refl.: (7,-11,-6), (11,-7,-6), (-4,11,-6), (-7,-4,-6), (-11,4,-6)								
LiNbO3	(4,-11,6)	13.675	84.69	17.161	16.1	1.275	20.54	15.94	26
	Equiv. Refl.: (7,4,6), (11,-4,6), (-4,-7,6), (-7,11,6), (-11,7,6)								
LiNbO3	(-3,9,-18)	13.66	84.05	15.979	14.6	1.431	20.84	17.89	27.46
	Equiv. Refl.: (-9,3,-18)								
LiNbO3	(3,6,-18)	13.66	84.05	15.978	14.6	1.431	20.84	17.89	27.46
	Equiv. Refl.: (6,-9,-18), (9,-6,-18), (-6,-3,-18)								
LiNbO3	(3,-9,18)	13.66	84.05	15.754	14.6	1.431	20.84	17.89	27.46
	Equiv. Refl.: (6,3,18), (9,-3,18), (-3,-6,18)								

Ei =	13.734	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(-6,9,18)	13.66	84.05	15.753	14.6	1.431	20.84	17.89	27.46
	Equiv. Refl.: (-9,6,18)								
LiNbO3	(3,6,18)	13.66	84.05	14.041	13.1	1.431	18.7	17.89	25.88
	Equiv. Refl.: (6,-9,18), (9,-6,18), (-3,9,18), (-6,-3,18), (-9,3,18)								
LiNbO3	(3,-9,-18)	13.66	84.05	13.944	13.1	1.431	18.7	17.89	25.88
	Equiv. Refl.: (6,3,-18), (9,-3,-18), (-3,-6,-18), (-6,9,-18), (-9,6,-18)								
LiNbO3	(0,9,12)	13.616	82.5	13.747	12.3	1.809	22.21	22.62	31.7
	Equiv. Refl.: (9,-9,12), (-9,0,12)								
LiNbO3	(0,-9,-12)	13.616	82.5	13.245	12.3	1.809	22.21	22.62	31.7
	Equiv. Refl.: (9,0,-12), (-9,9,-12)								
LiNbO3	(0,-5,26)	13.547	80.53	13.102	11.6	2.291	26.55	28.64	39.06
	Equiv. Refl.: (5,0,26), (-5,5,26)								
LiNbO3	(4,6,-14)	13.643	83.41	12.998	11.9	1.587	18.85	19.84	27.37
	Equiv. Refl.: (6,-10,-14), (10,-6,-14), (-4,10,-14), (-6,-4,-14), (-10,4,-14)								
LiNbO3	(0,5,-26)	13.547	80.53	12.986	11.6	2.291	26.55	28.64	39.06
	Equiv. Refl.: (5,-5,-26), (-5,0,-26)								
LiNbO3	(4,-10,14)	13.643	83.41	12.467	11.9	1.587	18.85	19.84	27.37
	Equiv. Refl.: (6,4,14), (10,-4,14), (-4,-6,14)								
LiNbO3	(-6,10,14)	13.643	83.41	12.466	11.9	1.587	18.85	19.84	27.37
	Equiv. Refl.: (-10,6,14)								
Quartz	(7,0,8)	13.719	87.35	11.487	9.6	0.636	6.07	7.95	10
Quartz	(7,-7,-8)	13.719	87.35	11.486	9.6	0.636	6.07	7.95	10
Quartz	(-7,0,-8)	13.719	87.35	11.485	9.6	0.636	6.07	7.95	10
Quartz	(-7,7,8)	13.719	87.35	11.484	9.6	0.636	6.07	7.95	10
Quartz	(0,7,-8)	13.719	87.35	11.472	9.5	0.636	6.07	7.95	10
	Equiv. Refl.: (0,-7,8)								
LiNbO3	(0,0,-30)	13.415	77.63	10.844	9.4	3.011	28.44	37.64	47.18
LiNbO3	(0,-6,-24)	13.594	81.8	10.561	9.4	1.979	18.66	24.74	30.99
	Equiv. Refl.: (6,0,-24), (-6,6,-24)								
LiNbO3	(0,0,30)	13.415	77.63	10.557	9.4	3.011	28.44	37.64	47.18
LiNbO3	(0,6,24)	13.594	81.8	10.072	9.4	1.979	18.66	24.74	30.99
	Equiv. Refl.: (6,-6,24), (-6,0,24)								
LiNbO3	(1,-4,-28)	13.487	79.13	10.049	9.1	2.638	23.92	32.98	40.74
	Equiv. Refl.: (3,1,-28), (4,-1,-28), (-1,-3,-28), (-3,4,-28), (-4,3,-28)								
LiNbO3	(1,3,28)	13.487	79.13	10.042	9.1	2.638	23.92	32.98	40.74
	Equiv. Refl.: (3,-4,28), (4,-3,28), (-1,4,28), (-3,-1,28), (-4,1,28)								
LiNbO3	(1,1,30)	13.63	82.94	10.018	9.3	1.702	15.79	21.27	26.49
	Equiv. Refl.: (1,-2,30), (2,-1,30), (-1,2,30), (-1,-1,30), (-2,1,30)								
LiNbO3	(0,-9,12)	13.616	82.5	9.818	9	1.809	16.32	22.62	27.89
	Equiv. Refl.: (9,0,12), (-9,9,12)								
LiNbO3	(0,6,-24)	13.594	81.8	9.708	9	1.979	17.72	24.74	30.43
	Equiv. Refl.: (6,-6,-24), (-6,0,-24)								
LiNbO3	(0,-6,24)	13.594	81.8	9.687	9	1.979	17.72	24.74	30.43
	Equiv. Refl.: (6,0,24)								
LiNbO3	(-6,6,24)	13.594	81.8	9.686	9	1.979	17.72	24.74	30.43
LiNbO3	(1,1,-30)	13.63	82.94	9.634	9.3	1.702	15.79	21.27	26.49
	Equiv. Refl.: (1,-2,-30), (2,-1,-30), (-1,2,-30), (-1,-1,-30), (-2,1,-30)								
LiNbO3	(0,9,-12)	13.616	82.5	9.402	9	1.809	16.32	22.62	27.89
	Equiv. Refl.: (9,-9,-12), (-9,0,-12)								

Ei = Cryst	13.734 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
LiNbO3	(2,7,16)	13.444	78.2	9.095	7.9	2.87	22.6	35.87	42.4
	Equiv. Refl.: (7,-9,16), (9,-7,16), (-2,9,16), (-7,-2,16), (-9,2,16)								
LiNbO3	(1,-9,-14)	13.429	77.9	8.89	7.8	2.944	22.91	36.8	43.35
	Equiv. Refl.: (8,1,-14), (9,-1,-14), (-1,-8,-14), (-8,9,-14), (-9,8,-14)								
LiNbO3	(5,6,-4)	13.384	77.05	8.75	7.6	3.159	23.94	39.49	46.18
	Equiv. Refl.: (6,-11,-4), (11,-6,-4), (-5,11,-4), (-6,-5,-4), (-11,5,-4)								
LiNbO3	(1,8,14)	13.429	77.9	8.721	7.8	2.944	22.91	36.8	43.35
	Equiv. Refl.: (8,-9,14), (9,-8,14), (-1,9,14), (-8,-1,14), (-9,1,14)								
LiNbO3	(2,-9,-16)	13.444	78.2	8.701	7.9	2.87	22.6	35.87	42.4
	Equiv. Refl.: (7,2,-16), (9,-2,-16), (-2,-7,-16), (-7,9,-16), (-9,7,-16)								
LiNbO3	(5,-11,4)	13.384	77.05	8.518	7.6	3.159	23.94	39.49	46.18
	Equiv. Refl.: (6,5,4), (11,-5,4), (-5,-6,4)								
LiNbO3	(-6,11,4)	13.384	77.05	8.517	7.6	3.159	23.94	39.49	46.18
	Equiv. Refl.: (-11,6,4)								
LiNbO3	(1,9,-2)	13.295	75.47	7.821	6.8	3.56	24.21	44.51	50.67
	Equiv. Refl.: (9,-10,-2), (10,-9,-2), (-1,10,-2), (-9,-1,-2), (-10,1,-2)								
LiNbO3	(1,-10,2)	13.295	75.47	7.67	6.8	3.56	24.21	44.51	50.67
	Equiv. Refl.: (9,1,2), (10,-1,2), (-1,-9,2), (-9,10,2), (-10,9,2)								
LiNbO3	(2,3,26)	13.112	72.68	7.151	6.2	4.282	26.54	53.52	59.74
	Equiv. Refl.: (3,-5,26), (5,-3,26), (-2,5,26), (-3,-2,26), (-5,2,26)								
LiNbO3	(0,-7,-20)	13.218	74.25	7.126	6.2	3.873	24.09	48.42	54.08
	Equiv. Refl.: (7,0,-20), (-7,7,-20)								
LiNbO3	(2,-5,-26)	13.112	72.68	7.121	6.2	4.282	26.54	53.52	59.74
	Equiv. Refl.: (3,2,-26), (5,-2,-26), (-2,-3,-26), (-3,5,-26), (-5,3,-26)								
LiNbO3	(-6,8,-20)	13.436	78.04	7.082	6.4	2.909	18.52	36.36	40.8
	Equiv. Refl.: (-8,6,-20)								
LiNbO3	(2,-8,-20)	13.436	78.04	7.081	6.4	2.909	18.52	36.36	40.8
	Equiv. Refl.: (6,2,-20), (8,-2,-20), (-2,-6,-20)								
Quartz	(-3,4,-11)	13.667	84.34	7.074	5.7	1.36	7.81	17	18.71
	Equiv. Refl.: (-3,-1,11)								
Quartz	(4,-3,11)	13.667	84.34	7.072	5.7	1.36	7.8	17	18.71
Quartz	(4,-1,-11)	13.667	84.34	7.071	5.7	1.36	7.8	17	18.71
Quartz	(-1,-3,-11)	13.667	84.34	7.068	5.7	1.36	7.8	17	18.71
Quartz	(-1,4,11)	13.667	84.34	7.066	5.7	1.36	7.8	17	18.71
LiNbO3	(4,-11,0)	13.409	77.52	7.037	6.4	3.04	19.35	38	42.64
	Equiv. Refl.: (7,4,0), (11,-4,0), (-4,-7,0), (-7,11,0), (-11,7,0)								
LiNbO3	(0,7,20)	13.218	74.25	7.001	6.2	3.873	24.09	48.42	54.08
	Equiv. Refl.: (7,-7,20), (-7,0,20)								
Sapph	(1,8,-10)	13.711	86.71	6.976	6.4	0.79	5.02	9.88	11.08
	Equiv. Refl.: (1,-9,10), (8,1,10), (8,-9,-10), (9,-1,10), (9,-8,-10), (-1,9,-10), (-1,-8,10), (-8,9,10), (-8,-1,-10), (-9,1,-10), (-9,8,10)								
Quartz	(3,1,-11)	13.667	84.34	6.917	5.7	1.36	7.81	17	18.71
	Equiv. Refl.: (3,-4,11)								
Quartz	(-4,1,11)	13.667	84.34	6.914	5.7	1.36	7.8	17	18.71
	Equiv. Refl.: (-4,3,-11)								
LiNbO3	(4,7,0)	13.409	77.52	6.912	6.4	3.04	19.35	38	42.64
	Equiv. Refl.: (7,-11,0), (11,-7,0), (-4,11,0), (-7,-4,0), (-11,4,0)								
Quartz	(1,3,11)	13.667	84.34	6.911	5.7	1.36	7.8	17	18.71
Quartz	(1,-4,-11)	13.667	84.34	6.909	5.7	1.36	7.8	17	18.71
LiNbO3	(1,-8,-18)	13.229	74.41	6.781	6	3.832	22.94	47.91	53.12
	Equiv. Refl.: (7,1,-18), (8,-1,-18), (-1,-7,-18), (-7,8,-18), (-8,7,-18)								

Ei =	13.734	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(2,6,20)	13.436	78.04	6.766	6.4	2.909	18.52	36.36	40.8
	Equiv. Refl.: (6,-8,20), (8,-6,20), (-2,8,20), (-6,-2,20), (-8,2,20)								
LiNbO3	(1,7,18)	13.229	74.41	6.701	6	3.832	22.94	47.91	53.12
	Equiv. Refl.: (7,-8,18), (8,-7,18), (-1,8,18), (-7,-1,18), (-8,1,18)								
LiNbO3	(3,-10,10)	13.143	73.13	6.658	5.8	4.165	24.35	52.06	57.47
	Equiv. Refl.: (7,3,10), (10,-3,10), (-3,-7,10), (-7,10,10), (-10,7,10)								
LiNbO3	(-6,7,-22)	13.414	77.6	6.626	6	3.02	18.12	37.75	41.88
	Equiv. Refl.: (-7,6,-22)								
LiNbO3	(1,-7,-22)	13.414	77.6	6.625	6	3.02	18.12	37.75	41.88
	Equiv. Refl.: (6,1,-22), (7,-1,-22), (-1,-6,-22)								
LiNbO3	(3,7,-10)	13.143	73.13	6.62	5.8	4.165	24.35	52.06	57.47
	Equiv. Refl.: (7,-10,-10), (10,-7,-10), (-3,10,-10), (-7,-3,-10), (-10,3,-10)								
LiNbO3	(5,5,-12)	13.183	73.72	6.507	5.6	4.01	22.64	50.13	55
	Equiv. Refl.: (5,-10,-12), (10,-5,-12), (-5,10,-12), (-5,-5,-12), (-10,5,-12)								
LiNbO3	(4,-9,16)	13.005	71.25	6.405	5.5	4.662	25.82	58.28	63.74
	Equiv. Refl.: (5,4,16), (9,-4,16), (-4,-5,16)								
LiNbO3	(-5,9,16)	13.005	71.25	6.404	5.5	4.662	25.82	58.28	63.74
	Equiv. Refl.: (-9,5,16)								
LiNbO3	(1,6,22)	13.414	77.6	6.361	6	3.02	18.12	37.75	41.88
	Equiv. Refl.: (6,-7,22), (7,-6,22), (-1,7,22), (-6,-1,22), (-7,1,22)								
LiNbO3	(1,9,4)	13.384	77.05	6.357	5.8	3.159	18.26	39.49	43.51
	Equiv. Refl.: (9,-10,4), (10,-9,4), (-1,10,4), (-9,-1,4), (-10,1,4)								
LiNbO3	(4,5,-16)	13.005	71.25	6.253	5.5	4.662	25.82	58.28	63.74
	Equiv. Refl.: (5,-9,-16), (9,-5,-16), (-4,9,-16), (-5,-4,-16), (-9,4,-16)								
LiNbO3	(0,-8,-16)	13.226	74.37	6.247	5.3	3.842	20.37	48.03	52.17
	Equiv. Refl.: (8,0,-16), (-8,8,-16)								
LiNbO3	(2,7,-14)	12.99	71.05	6.241	5.3	4.715	25.2	58.94	64.1
	Equiv. Refl.: (7,-9,-14), (9,-7,-14), (-2,9,-14), (-7,-2,-14), (-9,2,-14)								
LiNbO3	(4,-10,-10)	12.921	70.18	6.216	5.4	4.95	26.52	61.87	67.32
	Equiv. Refl.: (6,4,-10), (10,-4,-10), (-4,-6,-10), (-6,10,-10), (-10,6,-10)								
LiNbO3	(5,5,12)	13.183	73.72	6.165	5.6	4.01	22.64	50.13	55
	Equiv. Refl.: (5,-10,12), (10,-5,12), (-5,10,12), (-5,-5,12), (-10,5,12)								
LiNbO3	(1,-10,-4)	13.384	77.05	6.158	5.8	3.159	18.26	39.49	43.51
	Equiv. Refl.: (9,1,-4), (10,-1,-4), (-1,-9,-4), (-9,10,-4), (-10,9,-4)								
Sapph	(0,9,0)	13.54	80.35	6.127	4.9	2.335	11.53	29.18	31.38
	Equiv. Refl.: (0,-9,0), (9,0,0), (9,-9,0), (-9,0,0), (-9,9,0)								
Sapph	(4,6,-8)	13.66	84.04	6.114	5.3	1.434	7.56	17.92	19.45
	Equiv. Refl.: (4,-10,8), (6,4,8), (6,-10,-8), (10,-4,8), (10,-6,-8), (-4,10,-8), (-4,-6,8), (-6,10,8), (-6,-4,-8), (-10,4,-8), (-10,6,8)								
LiNbO3	(1,-8,18)	13.229	74.41	6.095	5.5	3.832	21.04	47.91	52.32
	Equiv. Refl.: (7,1,18), (8,-1,18), (-1,-7,18), (-7,8,18), (-8,7,18)								
LiNbO3	(1,7,-18)	13.229	74.41	6.068	5.5	3.832	21.04	47.91	52.32
	Equiv. Refl.: (7,-8,-18), (8,-7,-18), (-1,8,-18), (-7,-1,-18), (-8,1,-18)								
LiNbO3	(4,6,10)	12.921	70.18	6.061	5.4	4.95	26.52	61.87	67.32
	Equiv. Refl.: (6,-10,10), (10,-6,10), (-6,-4,10)								
LiNbO3	(-4,10,10)	12.921	70.18	6.06	5.4	4.95	26.52	61.87	67.32
	Equiv. Refl.: (-10,4,10)								
Quartz	(1,-9,-5)	13.706	86.35	5.955	5.1	0.877	4.47	10.97	11.84
Quartz	(1,8,5)	13.706	86.35	5.954	5.1	0.877	4.47	10.97	11.84
	Equiv. Refl.: (-9,1,5), (-9,8,-5)								

Ei =	13.734	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(8,-9,5)	13.706	86.35	5.949	5.1	0.877	4.47	10.97	11.84
Quartz	(8,1,-5)	13.706	86.35	5.948	5.1	0.877	4.47	10.97	11.84
LiNbO3	(2,-9,14)	12.99	71.05	5.918	5.3	4.715	25.2	58.94	64.1
	Equiv. Refl.: (7,2,14), (9,-2,14), (-2,-7,14), (-7,9,14), (-9,7,14), (-1,9,5), (-1,-8,-5)								
Quartz	(9,-1,-5)	13.706	86.35	5.917	5.1	0.877	4.47	10.97	11.84
	Equiv. Refl.: (9,-8,5)								
Quartz	(-8,9,-5)	13.706	86.35	5.913	5.1	0.877	4.47	10.97	11.84
Quartz	(-8,-1,5)	13.706	86.35	5.912	5.1	0.877	4.47	10.97	11.84
LiNbO3	(1,2,-28)	13.05	71.84	5.867	5.2	4.504	23.38	56.3	60.96
	Equiv. Refl.: (2,-3,-28), (3,-2,-28), (-1,3,-28), (-2,-1,-28), (-3,1,-28)								
Quartz	(-9,9,3)	13.557	80.79	5.84	4.7	2.227	10.4	27.84	29.72
Quartz	(0,9,-3)	13.557	80.79	5.839	4.7	2.227	10.4	27.84	29.72
	Equiv. Refl.: (0,-9,3), (9,0,3), (9,-9,-3), (-9,0,-3)								
LiNbO3	(1,-3,28)	13.05	71.84	5.803	5.2	4.504	23.38	56.3	60.96
	Equiv. Refl.: (2,1,28), (3,-1,28), (-1,-2,28), (-2,3,28), (-3,2,28)								
LiNbO3	(0,8,16)	13.226	74.37	5.73	5.3	3.842	20.37	48.03	52.17
	Equiv. Refl.: (8,-8,16), (-8,0,16)								
LiNbO3	(5,-11,-2)	13.295	75.47	5.631	4.9	3.56	17.36	44.51	47.77
	Equiv. Refl.: (6,5,-2), (11,-5,-2), (-5,-6,-2), (-6,11,-2), (-11,6,-2)								
LiNbO3	(3,5,-20)	13.218	74.25	5.549	4.6	3.873	17.8	48.42	51.58
	Equiv. Refl.: (5,-8,-20), (8,-5,-20), (-3,8,-20), (-5,-3,-20), (-8,3,-20)								
LiNbO3	(5,6,2)	13.295	75.47	5.535	4.9	3.56	17.36	44.51	47.77
	Equiv. Refl.: (6,-11,2), (11,-6,2), (-5,11,2), (-6,-5,2), (-11,5,2)								
LiNbO3	(3,-7,22)	12.974	70.85	5.397	4.6	4.77	22.09	59.62	63.58
	Equiv. Refl.: (4,3,22), (7,-3,22), (-3,-4,22), (-4,7,22), (-7,4,22)								
LiNbO3	(2,-10,-6)	13.023	71.49	5.371	4.6	4.598	21.31	57.48	61.3
	Equiv. Refl.: (8,2,-6), (10,-2,-6), (-2,-8,-6), (-8,10,-6), (-10,8,-6)								
LiNbO3	(3,4,-22)	12.974	70.85	5.245	4.6	4.77	22.09	59.62	63.58
	Equiv. Refl.: (4,-7,-22), (7,-4,-22), (-3,7,-22), (-4,-3,-22), (-7,3,-22)								
LiNbO3	(2,8,6)	13.023	71.49	5.222	4.6	4.598	21.31	57.48	61.3
	Equiv. Refl.: (8,-10,6), (10,-8,6), (-2,10,6), (-8,-2,6), (-10,2,6)								
Sapph	(4,5,14)	13.517	79.8	5.159	4	2.471	10	30.88	32.46
	Equiv. Refl.: (4,-9,-14), (5,4,-14), (5,-9,14), (9,-4,-14), (9,-5,14), (-4,9,14), (-4,-5,-14), (-5,9,-14), (-5,-4,14), (-9,4,14), (-9,5,-14)								
Quartz	(3,-8,8)	13.719	87.35	5.111	4.7	0.636	3.01	7.95	8.5
Quartz	(3,5,-8)	13.719	87.35	5.11	4.7	0.636	3.01	7.95	8.5
Quartz	(-8,3,-8)	13.719	87.35	5.109	4.7	0.636	3.01	7.95	8.5
Quartz	(-8,5,8)	13.719	87.35	5.108	4.7	0.636	3.01	7.95	8.5
Quartz	(5,-8,-8)	13.719	87.35	5.106	4.7	0.636	3.01	7.95	8.5
Quartz	(5,3,8)	13.719	87.35	5.105	4.7	0.636	3.01	7.95	8.5
Quartz	(-4,1,-11)	13.667	84.34	4.98	4	1.36	5.41	17	17.84
Quartz	(-4,3,11)	13.667	84.34	4.978	4	1.36	5.41	17	17.84
Quartz	(3,-4,-11)	13.667	84.34	4.974	4	1.36	5.41	17	17.84
Quartz	(3,1,11)	13.667	84.34	4.972	4	1.36	5.41	17	17.84
Quartz	(1,3,-11)	13.667	84.34	4.967	4	1.36	5.4	17	17.84
Quartz	(1,-4,11)	13.667	84.34	4.965	4	1.36	5.4	17	17.84
LiNbO3	(2,-10,6)	13.023	71.49	4.945	4.2	4.598	19.48	57.48	60.69
	Equiv. Refl.: (8,2,6), (10,-2,6), (-2,-8,6), (-8,10,6), (-10,8,6)								
Quartz	(2,8,2)	13.549	80.59	4.939	3.7	2.277	8.47	28.46	29.69
	Equiv. Refl.: (2,-10,-2), (-3,8,-8)								

Ei =	13.734	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(8,2,-2)	13.549	80.59	4.938	3.7	2.277	8.47	28.46	29.69
	Equiv. Refl.: (-3,-5,8), (-10,2,2), (-10,8,-2)								
Quartz	(8,-10,2)	13.549	80.59	4.937	3.7	2.277	8.47	28.46	29.69
Quartz	(8,-3,8)	13.719	87.35	4.936	4.7	0.636	3.01	7.95	8.5
Quartz	(8,-5,-8)	13.719	87.35	4.935	4.7	0.636	3.01	7.95	8.5
Quartz	(-5,8,8)	13.719	87.35	4.933	4.7	0.636	3.01	7.95	8.5
Quartz	(-5,-3,-8)	13.719	87.35	4.932	4.7	0.636	3.01	7.95	8.5
LiNbO3	(2,8,-6)	13.023	71.49	4.902	4.2	4.598	19.48	57.48	60.69
	Equiv. Refl.: (8,-10,-6), (10,-8,-6), (-2,10,-6), (-8,-2,-6), (-10,2,-6)								
LiNbO3	(3,-8,20)	13.218	74.25	4.883	4.6	3.873	17.8	48.42	51.58
	Equiv. Refl.: (5,3,20), (8,-3,20), (-3,-5,20), (-5,8,20), (-8,5,20)								
LiNbO3	(3,3,-24)	12.938	70.39	4.872	4.1	4.892	20.09	61.15	64.37
	Equiv. Refl.: (3,-6,-24), (6,-3,-24), (-3,6,-24), (-3,-3,-24), (-6,3,-24)								
Sapph	(1,4,24)	13.37	76.77	4.816	3.7	3.228	11.94	40.36	42.08
	Equiv. Refl.: (1,4,-24), (1,-5,24), (1,-5,-24), (4,1,24), (4,1,-24), (4,-5,24), (4,-5,-24), (5,-1,24), (5,-1,-24), (5,-4,24), (5,-4,-24), (-1,5,24), (-1,5,-24), (-1,-4,24), (-1,-4,-24), (-4,5,24), (-4,5,-24), (-4,-1,24), (-4,-1,-24), (-5,1,24), (-5,1,-24), (-5,4,24), (-5,4,-24)								
Sapph	(3,4,20)	13.224	74.33	4.757	3.6	3.852	13.85	48.16	50.11
	Equiv. Refl.: (3,-7,-20), (4,3,-20), (4,-7,20), (7,-3,-20), (7,-4,20), (-3,7,20), (-3,-4,-20), (-4,7,-20), (-4,-3,20), (-7,3,20), (-7,4,-20)								
Quartz	(10,-2,-2)	13.549	80.59	4.741	3.7	2.277	8.47	28.46	29.69
	Equiv. Refl.: (10,-8,2), (-2,10,2), (-2,-8,-2)								
Quartz	(-8,10,-2)	13.549	80.59	4.74	3.7	2.277	8.47	28.46	29.69
	Equiv. Refl.: (-8,-2,2)								
LiNbO3	(3,3,24)	12.938	70.39	4.696	4.1	4.892	20.09	61.15	64.37
	Equiv. Refl.: (3,-6,24), (6,-3,24), (-3,6,24), (-3,-3,24), (-6,3,24)								
Quartz	(7,3,-3)	13.399	77.33	4.616	3.6	3.089	11.1	38.61	40.17
	Equiv. Refl.: (7,-10,3), (-10,3,3), (-10,7,-3)								
Quartz	(3,7,3)	13.399	77.33	4.615	3.6	3.089	11.09	38.61	40.17
	Equiv. Refl.: (3,-10,-3)								
Quartz	(4,-1,11)	13.667	84.34	4.603	4	1.36	5.41	17	17.84
Quartz	(4,-3,-11)	13.667	84.34	4.602	4	1.36	5.41	17	17.84
Quartz	(-3,4,11)	13.667	84.34	4.598	4	1.36	5.41	17	17.84
Quartz	(10,-3,-3)	13.399	77.33	4.596	3.6	3.089	11.1	38.61	40.17
	Equiv. Refl.: (10,-7,3), (-3,-1,-11), (-7,10,-3), (-7,-3,3)								
Quartz	(-3,10,3)	13.399	77.33	4.595	3.6	3.089	11.09	38.61	40.17
	Equiv. Refl.: (-3,-7,-3)								
Quartz	(-1,-3,11)	13.667	84.34	4.59	4	1.36	5.4	17	17.84
Quartz	(-1,4,-11)	13.667	84.34	4.589	4	1.36	5.4	17	17.84
Sapph	(0,2,28)	13.699	85.89	4.369	4.1	0.987	4.04	12.34	12.98
	Equiv. Refl.: (0,-2,-28), (2,0,-28), (2,-2,28), (-2,0,28), (-2,2,-28)								
Quartz	(10,-2,1)	13.403	77.39	4.051	3.1	3.073	9.38	38.41	39.54
	Equiv. Refl.: (10,-8,-1), (-2,10,-1), (-2,-8,1), (-8,10,1), (-8,-2,-1)								
Quartz	(2,8,-1)	13.403	77.39	3.995	3.1	3.073	9.38	38.41	39.54
	Equiv. Refl.: (2,-10,1), (8,2,1), (8,-10,-1), (-10,2,-1), (-10,8,1)								
Quartz	(-9,8,5)	13.706	86.35	3.735	3.4	0.877	2.99	10.97	11.37
Quartz	(-9,1,-5)	13.706	86.35	3.733	3.4	0.877	2.99	10.97	11.37
Quartz	(1,8,-5)	13.706	86.35	3.731	3.4	0.877	2.99	10.97	11.37
	Equiv. Refl.: (8,-9,-5)								

Ei =	13.734	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(3,7,2)	13.406	77.45	3.73	3	3.058	9.16	38.23	39.31
	Equiv. Refl.: (3,-10,-2), (7,3,-2), (7,-10,2), (10,-3,-2), (10,-7,2), (-3,10,2), (-3,-7,-2), (-7,10,-2), (-7,-3,2), (-10,3,2), (-10,7,-2), (1,-9,5), (8,1,5)								
Sapph	(5,5,6)	13.34	76.24	3.695	2.9	3.364	9.84	42.05	43.19
	Equiv. Refl.: (5,5,-6), (5,-10,6), (5,-10,-6), (10,-5,6), (10,-5,-6), (-5,10,6), (-5,10,-6), (-5,-5,6), (-5,-5,-6), (-10,5,6), (-10,5,-6)								
Quartz	(9,-8,-5)	13.706	86.35	3.684	3.4	0.877	2.99	10.97	11.37
Quartz	(9,-1,5)	13.706	86.35	3.683	3.4	0.877	2.99	10.97	11.37
Quartz	(-8,9,5)	13.706	86.35	3.681	3.4	0.877	2.99	10.97	11.37
	Equiv. Refl.: (-8,-1,-5)								
Quartz	(-1,9,-5)	13.706	86.35	3.679	3.4	0.877	2.99	10.97	11.37
	Equiv. Refl.: (-1,-8,5)								
Quartz	(-10,4,4)	13.505	79.52	3.608	2.8	2.54	7.24	31.75	32.57
	Equiv. Refl.: (-10,6,-4)								
Quartz	(6,4,-4)	13.505	79.52	3.606	2.8	2.54	7.23	31.75	32.57
	Equiv. Refl.: (6,-10,4)								
Quartz	(4,6,4)	13.505	79.52	3.605	2.8	2.54	7.23	31.75	32.57
	Equiv. Refl.: (4,-10,-4)								
Quartz	(10,-4,-4)	13.505	79.52	3.571	2.8	2.54	7.24	31.75	32.57
	Equiv. Refl.: (10,-6,4)								
Quartz	(-6,10,-4)	13.505	79.52	3.569	2.8	2.54	7.23	31.75	32.57
	Equiv. Refl.: (-6,-4,4)								
Quartz	(-4,10,4)	13.505	79.52	3.568	2.8	2.54	7.23	31.75	32.57
	Equiv. Refl.: (-4,-6,-4)								
LiNbO3	(2,7,-17)	13.687	85.25	3.548	5.1	1.14	5.83	14.25	15.4
	Equiv. Refl.: (2,-9,17), (7,2,17), (7,-9,-17), (9,-2,17), (9,-7,-17), (-2,9,-17), (-2,-7,17), (-7,9,17), (-7,-2,-17), (-9,2,-17), (-9,7,17)								
Sapph	(1,8,-4)	12.995	71.12	3.406	2.6	4.698	12.35	58.72	60.01
	Equiv. Refl.: (1,-9,4), (8,1,4), (8,-9,-4), (9,-1,4), (9,-8,-4), (-1,9,-4), (-1,-8,4), (-8,9,4), (-8,-1,-4), (-9,1,-4), (-9,8,4)								
Sapph	(2,6,-16)	13.267	75.01	3.261	2.6	3.677	9.56	45.96	46.94
	Equiv. Refl.: (2,-8,16), (6,2,16), (6,-8,-16), (8,-2,16), (8,-6,-16), (-2,8,-16), (-2,-6,16), (-6,8,16), (-6,-2,-16), (-8,2,-16), (-8,6,16)								
Quartz	(4,1,10)	13.272	75.1	3.096	2.4	3.656	8.66	45.69	46.51
	Equiv. Refl.: (4,-5,-10)								
Quartz	(1,4,-10)	13.272	75.1	3.094	2.4	3.656	8.65	45.69	46.51
Quartz	(1,-5,10)	13.272	75.1	3.093	2.4	3.656	8.65	45.69	46.51
Quartz	(-5,1,-10)	13.272	75.1	3.091	2.4	3.656	8.65	45.69	46.5
	Equiv. Refl.: (-5,4,10)								
Quartz	(2,-7,8)	12.923	70.21	3.041	2.5	4.943	12.59	61.79	63.06
Quartz	(2,5,-8)	12.923	70.21	3.04	2.5	4.943	12.59	61.79	63.06
	Equiv. Refl.: (-7,2,-8), (-7,5,8)								
Quartz	(5,2,8)	12.923	70.21	3.039	2.5	4.943	12.59	61.79	63.06
	Equiv. Refl.: (5,-7,-8)								
Quartz	(-2,7,-8)	12.923	70.21	3.038	2.5	4.943	12.59	61.79	63.06
	Equiv. Refl.: (-2,-5,8)								
Quartz	(7,-2,8)	12.923	70.21	3.037	2.5	4.943	12.59	61.79	63.06
	Equiv. Refl.: (7,-5,-8)								
Quartz	(-5,7,8)	12.923	70.21	3.036	2.5	4.943	12.59	61.79	63.06
	Equiv. Refl.: (-5,-2,-8)								

Ei = Cryst	13.734 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(8,0,-5)	12.99	71.06	3.035	2.6	4.713	12.09	58.91	60.14
	Equiv. Refl.: (8,-8,5), (-8,0,5)								
Quartz	(0,8,5)	12.99	71.06	3.034	2.6	4.713	12.08	58.91	60.14
	Equiv. Refl.: (0,-8,-5), (-8,8,-5)								
Quartz	(-4,-1,-10)	13.272	75.1	3.03	2.4	3.656	8.66	45.69	46.51
Quartz	(-4,5,10)	13.272	75.1	3.029	2.4	3.656	8.66	45.69	46.51
Quartz	(-1,-4,10)	13.272	75.1	3.028	2.4	3.656	8.65	45.69	46.51
Quartz	(-1,5,-10)	13.272	75.1	3.027	2.4	3.656	8.65	45.69	46.51
Quartz	(5,-1,10)	13.272	75.1	3.025	2.4	3.656	8.65	45.69	46.5
	Equiv. Refl.: (5,-4,-10)								
Quartz	(-2,-8,2)	13.549	80.59	3.018	2.4	2.277	5.41	28.46	28.97
Quartz	(-2,10,-2)	13.549	80.59	3.017	2.4	2.277	5.41	28.46	28.97
	Equiv. Refl.: (-8,10,2), (-8,-2,-2)								
Quartz	(10,-2,2)	13.549	80.59	3.016	2.4	2.277	5.41	28.46	28.97
	Equiv. Refl.: (10,-8,-2)								
Quartz	(2,8,-2)	13.549	80.59	2.995	2.4	2.277	5.41	28.46	28.97
	Equiv. Refl.: (2,-10,2)								
Quartz	(8,2,2)	13.549	80.59	2.994	2.4	2.277	5.41	28.46	28.97
	Equiv. Refl.: (8,-10,-2)								
Quartz	(-10,2,-2)	13.549	80.59	2.993	2.4	2.277	5.41	28.46	28.97
	Equiv. Refl.: (-10,8,2)								
Sapph	(0,1,-28)	13.449	78.3	2.882	2.3	2.845	6.57	35.56	36.16
	Equiv. Refl.: (0,-1,28), (1,0,28), (1,-1,-28), (-1,0,-28), (-1,1,28)								
Sapph	(3,5,16)	13.008	71.29	2.806	2.1	4.651	9.89	58.13	58.97
	Equiv. Refl.: (3,-8,-16), (5,3,-16), (5,-8,16), (8,-3,-16), (8,-5,16), (-3,8,16), (-3,-5,-16), (-5,8,-16), (-5,-3,16), (-8,3,16), (-8,5,-16)								
Quartz	(-3,5,-10)	13.111	72.68	2.782	2.4	4.284	10.12	53.55	54.5
	Equiv. Refl.: (-3,-2,10)								
Quartz	(5,-2,-10)	13.111	72.68	2.781	2.4	4.284	10.12	53.55	54.5
	Equiv. Refl.: (5,-3,10), (-2,5,10), (-2,-3,-10)								
Quartz	(3,2,-10)	13.111	72.68	2.753	2.4	4.284	10.12	53.55	54.5
	Equiv. Refl.: (3,-5,10), (-5,2,10)								
Quartz	(2,3,10)	13.111	72.68	2.752	2.4	4.284	10.12	53.55	54.5
	Equiv. Refl.: (2,-5,-10), (-5,3,-10)								
Sapph	(2,7,10)	13.207	74.07	2.608	2.3	3.919	9.14	48.99	49.83
	Equiv. Refl.: (2,-9,-10), (7,2,-10), (7,-9,10), (9,-2,-10), (9,-7,10), (-2,9,10), (-2,-7,-10), (-7,9,-10), (-7,-2,10), (-9,2,10), (-9,7,-10)								
Quartz	(-9,2,-5)	13.233	74.48	2.325	2	3.814	7.46	47.67	48.25
	Equiv. Refl.: (-9,7,5)								
Quartz	(2,-9,5)	13.233	74.48	2.324	2	3.814	7.46	47.67	48.25
	Equiv. Refl.: (7,2,5), (7,-9,-5)								
Quartz	(2,7,-5)	13.233	74.48	2.323	2	3.814	7.46	47.67	48.25
Quartz	(3,0,-11)	13.353	76.47	2.281	2	3.305	6.53	41.31	41.82
	Equiv. Refl.: (3,-3,11), (-3,0,11), (-3,3,-11)								
Quartz	(0,3,11)	13.353	76.47	2.275	2	3.305	6.52	41.31	41.82
	Equiv. Refl.: (0,-3,-11)								
Quartz	(9,-2,5)	13.233	74.48	2.239	2	3.814	7.46	47.67	48.25
Quartz	(9,-7,-5)	13.233	74.48	2.238	2	3.814	7.46	47.67	48.25
Quartz	(-2,9,-5)	13.233	74.48	2.237	2	3.814	7.46	47.67	48.25
	Equiv. Refl.: (-2,-7,5), (-7,9,5), (-7,-2,-5)								

Ei =	13.734	keV						ΔEg	ΔEt
Cryst	Ref	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(5,5,9)	13.719	87.28	2.215	3	0.652	1.96	8.15	8.38
	Equiv. Refl.: (5,5,-9), (5,-10,9), (5,-10,-9), (10,-5,9), (10,-5,-9), (-5,10,9), (-5,10,-9), (-5,-5,9), (-5,-5,-9), (-10,5,9), (-10,5,-9)								
LiNbO3	(1,9,7)	13.629	82.9	2.135	3.3	1.71	5.66	21.38	22.11
	Equiv. Refl.: (1,-10,-7), (9,1,-7), (9,-10,7), (10,-1,-7), (10,-9,7), (-1,10,7), (-1,-9,-7), (-9,10,-7), (-9,-1,7), (-10,1,7), (-10,9,-7)								
Sapph	(2,6,17)	13.547	80.54	1.888	2.1	2.289	4.77	28.61	29
	Equiv. Refl.: (2,-8,-17), (6,2,-17), (6,-8,17), (8,-2,-17), (8,-6,17), (-2,8,17), (-2,-6,-17), (-6,8,-17), (-6,-2,17), (-8,2,17), (-8,6,-17)								
Quartz	(3,-1,-11)	13.193	73.86	1.832	1.9	3.974	7.4	49.67	50.22
Quartz	(3,-2,11)	13.193	73.86	1.831	1.9	3.974	7.4	49.67	50.22
	Equiv. Refl.: (-1,3,11), (-1,-2,-11), (-2,3,-11), (-2,-1,11)								
Quartz	(1,2,11)	13.193	73.86	1.801	1.9	3.974	7.4	49.67	50.22
	Equiv. Refl.: (1,-3,-11), (2,-3,11), (-3,1,11), (-3,2,-11)								
Quartz	(2,1,-11)	13.193	73.86	1.8	1.9	3.974	7.39	49.67	50.22
Quartz	(10,-3,3)	13.399	77.33	1.781	1.8	3.089	5.48	38.61	38.99
	Equiv. Refl.: (10,-7,-3), (-7,10,3), (-7,-3,-3)								
Quartz	(-3,10,-3)	13.399	77.33	1.78	1.8	3.089	5.48	38.61	38.99
	Equiv. Refl.: (-3,-7,3)								
Quartz	(-2,8,-7)	13.223	74.32	1.752	1.8	3.854	6.86	48.18	48.66
	Equiv. Refl.: (-6,8,7), (-6,-2,-7)								
Quartz	(8,-6,-7)	13.223	74.32	1.751	1.8	3.854	6.85	48.18	48.66
	Equiv. Refl.: (-2,-6,7)								
Quartz	(8,-2,7)	13.223	74.32	1.75	1.8	3.854	6.85	48.18	48.66
Sapph	(4,6,-2)	13.15	73.23	1.709	1.8	4.139	7.44	51.73	52.26
	Equiv. Refl.: (4,-10,2), (6,4,2), (6,-10,-2), (10,-4,2), (10,-6,-2), (-4,10,-2), (-4,-6,2), (-6,10,2), (-6,-4,-2), (-10,4,-2), (-10,6,2)								
Sapph	(1,1,27)	13.148	73.2	1.7	1.8	4.147	7.42	51.84	52.37
	Equiv. Refl.: (1,1,-27), (1,-2,27), (1,-2,-27), (2,-1,27), (2,-1,-27), (-1,2,27), (-1,2,-27), (-1,-1,27), (-1,-1,-27), (-2,1,27), (-2,1,-27), (2,6,-7), (2,-8,7), (6,2,7), (6,-8,-7)								
Quartz	(-8,2,-7)	13.223	74.32	1.699	1.8	3.854	6.85	48.18	48.66
	Equiv. Refl.: (-8,6,7)								
Quartz	(-4,7,9)	13.606	82.16	1.67	1.8	1.891	3.4	23.64	23.89
Quartz	(-4,-3,-9)	13.606	82.16	1.669	1.8	1.891	3.4	23.64	23.89
Quartz	(-3,7,-9)	13.606	82.16	1.668	1.8	1.891	3.4	23.64	23.89
Quartz	(-3,-4,9)	13.606	82.16	1.667	1.8	1.891	3.4	23.64	23.89
Quartz	(7,-3,9)	13.606	82.16	1.665	1.8	1.891	3.39	23.64	23.89
	Equiv. Refl.: (7,-4,-9)								
Sapph	(1,8,-7)	13.281	75.24	1.645	1.8	3.618	6.36	45.23	45.67
	Equiv. Refl.: (1,-9,7), (8,1,7), (8,-9,-7), (9,-1,7), (9,-8,-7), (-1,9,-7), (-1,-8,7), (-8,9,7), (-8,-1,-7), (-9,1,-7), (-9,8,7)								
Quartz	(0,3,-11)	13.353	76.47	1.629	1.7	3.305	5.64	41.31	41.69
	Equiv. Refl.: (0,-3,11), (3,0,11), (3,-3,-11), (-3,0,-11), (-3,3,11)								
Quartz	(0,2,11)	12.949	70.54	1.626	1.7	4.853	8.06	60.66	61.2
	Equiv. Refl.: (0,-2,-11)								
Quartz	(2,0,-11)	12.949	70.54	1.623	1.7	4.853	8.05	60.66	61.19
	Equiv. Refl.: (2,-2,11), (-2,0,11), (-2,2,-11)								
Quartz	(-3,9,5)	12.908	70.03	1.615	1.6	4.99	8.05	62.37	62.89
	Equiv. Refl.: (-3,-6,-5), (-6,9,-5), (-6,-3,5)								
Quartz	(9,-3,-5)	12.908	70.03	1.614	1.6	4.99	8.04	62.37	62.89
	Equiv. Refl.: (9,-6,5)								

Ei =	13.734	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(7,3,3)	13.399	77.33	1.603	1.8	3.089	5.48	38.61	38.99
	Equiv. Refl.: (7,-10,-3), (-10,3,-3), (-10,7,3)								
Quartz	(3,7,-3)	13.399	77.33	1.602	1.8	3.089	5.48	38.61	38.99
	Equiv. Refl.: (3,-10,3)								
Quartz	(9,0,2)	13.312	75.76	1.598	1.7	3.485	5.82	43.57	43.95
Quartz	(0,9,-2)	13.312	75.76	1.597	1.7	3.485	5.82	43.57	43.95
	Equiv. Refl.: (0,-9,2), (9,-9,-2), (-9,0,-2), (-9,9,2)								
Quartz	(8,-1,6)	12.975	70.87	1.591	1.6	4.764	7.6	59.55	60.04
	Equiv. Refl.: (8,-7,-6), (-7,-1,-6)								
Quartz	(-1,8,-6)	12.975	70.87	1.59	1.6	4.764	7.6	59.55	60.03
	Equiv. Refl.: (-1,-7,6), (-7,8,6)								
Quartz	(8,0,5)	12.99	71.06	1.575	1.6	4.713	7.61	58.91	59.4
	Equiv. Refl.: (8,-8,-5), (-8,0,-5), (-8,8,5)								
Quartz	(0,8,-5)	12.99	71.06	1.574	1.6	4.713	7.61	58.91	59.4
	Equiv. Refl.: (0,-8,5)								
Quartz	(4,-7,-9)	13.606	82.16	1.56	1.8	1.891	3.4	23.64	23.89
Quartz	(3,6,6)	13.457	78.48	1.559	1.7	2.799	4.66	34.99	35.3
	Equiv. Refl.: (4,3,9)								
Quartz	(3,-7,9)	13.606	82.16	1.558	1.8	1.891	3.4	23.64	23.89
	Equiv. Refl.: (3,-9,-6), (-9,3,6), (-9,6,-6)								
Quartz	(6,3,-6)	13.457	78.48	1.557	1.7	2.799	4.66	34.99	35.3
	Equiv. Refl.: (6,-9,6), (-3,-6,-6)								
Quartz	(3,4,-9)	13.606	82.16	1.556	1.8	1.891	3.4	23.64	23.89
	Equiv. Refl.: (9,-3,-6), (9,-6,6), (-3,9,6)								
Quartz	(-6,9,-6)	13.457	78.48	1.555	1.7	2.799	4.66	34.99	35.3
	Equiv. Refl.: (-6,-3,6), (-7,3,-9), (-7,4,9)								
Quartz	(-8,3,7)	12.98	70.93	1.547	1.6	4.748	7.52	59.35	59.83
	Equiv. Refl.: (-8,5,-7)								
Quartz	(3,5,7)	12.98	70.93	1.546	1.6	4.748	7.51	59.35	59.83
	Equiv. Refl.: (3,-8,-7)								
Quartz	(5,3,-7)	12.98	70.93	1.545	1.6	4.748	7.51	59.35	59.83
	Equiv. Refl.: (5,-8,7)								
Quartz	(3,6,5)	12.908	70.03	1.544	1.6	4.99	8.05	62.37	62.89
	Equiv. Refl.: (3,-9,-5), (6,-9,5)								
Quartz	(6,3,-5)	12.908	70.03	1.543	1.6	4.99	8.05	62.37	62.89
Quartz	(-9,3,5)	12.908	70.03	1.542	1.6	4.99	8.04	62.37	62.89
	Equiv. Refl.: (-9,6,-5)								
Quartz	(8,-3,-7)	12.98	70.93	1.537	1.6	4.748	7.52	59.35	59.83
	Equiv. Refl.: (8,-5,7)								
Quartz	(-3,8,7)	12.98	70.93	1.536	1.6	4.748	7.51	59.35	59.83
	Equiv. Refl.: (-3,-5,-7)								
Quartz	(-5,8,-7)	12.98	70.93	1.534	1.6	4.748	7.51	59.35	59.83
	Equiv. Refl.: (-5,-3,7)								
Quartz	(-8,1,-6)	12.975	70.87	1.522	1.6	4.764	7.6	59.55	60.04
	Equiv. Refl.: (-8,7,6)								
Quartz	(1,7,-6)	12.975	70.87	1.521	1.6	4.764	7.6	59.55	60.03
	Equiv. Refl.: (1,-8,6), (7,1,6), (7,-8,-6)								
Quartz	(-10,3,-2)	13.152	73.25	1.44	1.5	4.132	6.15	51.65	52.02
	Equiv. Refl.: (-10,7,2)								

Ei =	13.734	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(3,7,-2)	13.152	73.25	1.439	1.5	4.132	6.14	51.65	52.02
	Equiv. Refl.: (3,-10,2), (7,3,2), (7,-10,-2)								
Quartz	(0,8,6)	13.536	80.26	1.438	1.6	2.358	3.73	29.47	29.71
	Equiv. Refl.: (0,-8,-6)								
Quartz	(8,0,-6)	13.536	80.26	1.436	1.6	2.358	3.73	29.47	29.71
	Equiv. Refl.: (8,-8,6), (-8,0,6), (-8,8,-6)								
Sapph	(0,8,10)	12.947	70.51	1.435	1.5	4.86	7.36	60.75	61.2
	Equiv. Refl.: (0,-8,-10), (8,0,-10), (8,-8,10), (-8,0,10), (-8,8,-10)								
Sapph	(1,8,5)	13.073	72.16	1.429	1.5	4.421	6.73	55.26	55.67
	Equiv. Refl.: (1,-9,-5), (8,1,-5), (8,-9,5), (9,-1,-5), (9,-8,5), (-1,9,5), (-1,-8,-5), (-8,9,-5), (-8,-1,5), (-9,1,5), (-9,8,-5)								
Sapph	(5,5,0)	13.029	71.56	1.413	1.5	4.58	6.87	57.25	57.66
	Equiv. Refl.: (5,-10,0), (10,-5,0), (-5,10,0), (-5,-5,0), (-10,5,0), (10,-3,2), (10,-7,-2)								
Quartz	(-3,10,-2)	13.152	73.25	1.412	1.5	4.132	6.14	51.65	52.02
	Equiv. Refl.: (-3,-7,2), (-7,10,2), (-7,-3,-2)								
Quartz	(9,0,-1)	13.163	73.42	1.392	1.5	4.089	5.95	51.11	51.46
	Equiv. Refl.: (9,-9,1), (-9,0,1), (-9,9,-1)								
Quartz	(0,9,1)	13.163	73.42	1.391	1.5	4.089	5.95	51.11	51.46
	Equiv. Refl.: (0,-9,-1)								
Quartz	(1,-8,-6)	12.975	70.87	1.388	1.4	4.764	6.62	59.55	59.92
Quartz	(1,7,6)	12.975	70.87	1.387	1.4	4.764	6.62	59.55	59.92
	Equiv. Refl.: (7,1,-6), (7,-8,6), (-8,1,6), (-8,7,-6)								
Quartz	(0,7,8)	13.719	87.35	1.364	2	0.636	1.25	7.95	8.05
	Equiv. Refl.: (0,-7,-8)								
Quartz	(3,7,0)	12.95	70.55	1.363	1.4	4.851	6.67	60.64	61
	Equiv. Refl.: (3,-10,0), (7,3,0), (7,-10,0), (-7,8,-7), (-10,3,0), (-10,7,0)								
Quartz	(1,8,-4)	13.267	75.02	1.362	1.4	3.676	5.15	45.95	46.23
	Equiv. Refl.: (8,1,4), (8,-9,-4), (-7,-1,7), (-9,1,-4)								
Quartz	(1,-9,4)	13.267	75.02	1.361	1.4	3.676	5.15	45.95	46.23
	Equiv. Refl.: (-9,8,4)								
Quartz	(8,-1,-7)	13.619	82.57	1.36	1.5	1.792	2.71	22.39	22.56
	Equiv. Refl.: (8,-7,7), (-1,8,7), (-1,-7,-7)								
LiNbO3	(1,9,-5)	13.452	78.36	1.351	2.1	2.829	5.89	35.37	35.85
	Equiv. Refl.: (1,-10,5), (9,1,5), (9,-10,-5), (10,-1,5), (10,-9,-5), (-1,10,-5), (-1,-9,5), (-9,10,5), (-9,-1,-5), (-10,1,-5), (-10,9,5)								
Quartz	(7,0,-8)	13.719	87.35	1.346	1.9	0.636	1.24	7.95	8.04
Quartz	(7,-7,8)	13.719	87.35	1.345	1.9	0.636	1.24	7.95	8.04
	Equiv. Refl.: (-7,0,8)								
Quartz	(-7,7,-8)	13.719	87.35	1.344	1.9	0.636	1.24	7.95	8.04
Sapph	(3,6,12)	13.244	74.64	1.339	1.5	3.772	5.5	47.15	47.47
	Equiv. Refl.: (3,6,-12), (3,-9,12), (3,-9,-12), (6,3,12), (6,3,-12), (6,-9,12), (6,-9,-12), (9,-3,12), (9,-3,-12), (9,-6,12), (9,-6,-12), (-3,9,12), (-3,9,-12), (-3,-6,12), (-3,-6,-12), (-6,9,12), (-6,9,-12), (-6,-3,12), (-6,-3,-12), (-9,3,12), (-9,3,-12), (-9,6,12), (-9,6,-12)								
Quartz	(8,-4,-8)	13.642	83.35	1.326	1.5	1.6	2.34	20	20.14
Quartz	(8,-4,8)	13.642	83.35	1.325	1.5	1.6	2.33	20	20.14
Quartz	(-4,8,-8)	13.642	83.35	1.32	1.5	1.6	2.33	20	20.14
	Equiv. Refl.: (-4,-4,8), (-4,-4,-8)								
Quartz	(-4,8,8)	13.642	83.35	1.319	1.5	1.6	2.33	20	20.14
Quartz	(9,-1,-4)	13.267	75.02	1.309	1.4	3.676	5.05	45.95	46.22
	Equiv. Refl.: (9,-8,4), (-1,9,4), (-1,-8,-4), (-8,9,-4), (-8,-1,4)								

Ei = Cryst	13.734 Refl (h,k,l)	keV EB [keV]	Θ B [$^\circ$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(8,-1,-6)	12.975	70.87	1.293	1.4	4.764	6.62	59.55	59.92
	Equiv. Refl.: (8,-7,6), (-1,8,6), (-1,-7,-6)								
Quartz	(-7,8,-6)	12.975	70.87	1.292	1.4	4.764	6.62	59.55	59.92
	Equiv. Refl.: (-7,-1,6)								
Quartz	(10,-3,0)	12.95	70.55	1.287	1.4	4.851	6.67	60.64	61
	Equiv. Refl.: (10,-7,0), (-3,10,0), (-3,-7,0), (-7,10,0), (-7,-3,0)								
Quartz	(-8,9,4)	13.267	75.02	1.285	1.4	3.676	5.16	45.95	46.23
	Equiv. Refl.: (-8,-1,-4)								
Quartz	(9,-1,4)	13.267	75.02	1.284	1.4	3.676	5.15	45.95	46.23
	Equiv. Refl.: (9,-8,-4), (-1,-8,4)								
Quartz	(-1,9,-4)	13.267	75.02	1.283	1.4	3.676	5.15	45.95	46.23
Sapph	(4,5,-13)	13.288	75.35	1.281	1.4	3.59	5.06	44.87	45.16
	Equiv. Refl.: (4,-9,13), (5,4,13), (5,-9,-13), (9,-4,13), (9,-5,-13), (-4,9,-13), (-4,-5,13), (-5,9,13), (-5,-4,-13), (-9,4,-13), (-9,5,13)								
Quartz	(1,8,4)	13.267	75.02	1.277	1.4	3.676	5.05	45.95	46.22
	Equiv. Refl.: (1,-9,-4), (8,1,-4), (8,-9,4), (-9,1,4), (-9,8,-4)								
Sapph	(1,2,26)	13.032	71.61	1.266	1.4	4.567	6.22	57.09	57.43
	Equiv. Refl.: (1,-3,-26), (2,1,-26), (2,-3,26), (3,-1,-26), (3,-2,26), (-1,3,26), (-1,-2,-26), (-2,3,-26), (-2,-1,26), (-3,1,26), (-3,2,-26)								
Quartz	(7,-8,7)	13.619	82.57	1.253	1.5	1.792	2.72	22.39	22.56
Quartz	(7,1,-7)	13.619	82.57	1.252	1.5	1.792	2.71	22.39	22.56
Quartz	(1,7,7)	13.619	82.57	1.25	1.5	1.792	2.71	22.39	22.56
	Equiv. Refl.: (1,-8,-7), (-8,1,7), (-8,7,-7)								
Quartz	(6,0,-9)	13.527	80.05	1.233	1.4	2.41	3.33	30.12	30.31
	Equiv. Refl.: (6,-6,9), (-6,0,9), (-6,6,-9)								
Quartz	(0,6,9)	13.527	80.05	1.232	1.4	2.41	3.33	30.12	30.31
	Equiv. Refl.: (0,-6,-9)								
Quartz	(10,-4,-2)	12.907	70.02	1.223	1.2	4.994	6.13	62.42	62.72
	Equiv. Refl.: (10,-6,2), (-4,10,2), (-4,-6,-2), (-6,10,-2), (-6,-4,2)								
Sapph	(2,4,-23)	13.56	80.88	1.187	1.4	2.205	3.13	27.57	27.74
	Equiv. Refl.: (2,-6,23), (4,2,23), (4,-6,-23), (6,-2,23), (6,-4,-23), (-2,6,-23), (-2,-4,23), (-4,6,23), (-4,-2,-23), (-6,2,-23), (-6,4,23)								
LiNbO3	(4,6,13)	13.444	78.2	1.181	1.9	2.869	5.42	35.86	36.27
	Equiv. Refl.: (4,-10,-13), (6,4,-13), (6,-10,13), (10,-4,-13), (10,-6,13), (-4,10,13), (-4,-6,-13), (-6,10,-13), (-6,-4,13), (-10,4,13), (-10,6,-13)								
LiNbO3	(2,4,25)	13.383	77.03	1.157	1.8	3.164	5.73	39.55	39.96
	Equiv. Refl.: (2,-6,-25), (4,2,-25), (4,-6,25), (6,-2,-25), (6,-4,25), (-2,6,25), (-2,-4,-25), (-4,6,-25), (-4,-2,25), (-6,2,25), (-6,4,-25)								
LiNbO3	(1,4,27)	13.652	83.74	1.148	2.3	1.507	3.48	18.84	19.16
	Equiv. Refl.: (1,4,-27), (1,-5,27), (1,-5,-27), (4,1,27), (4,1,-27), (4,-5,27), (4,-5,-27), (5,-1,27), (5,-1,-27), (5,-4,27), (5,-4,-27), (-1,5,27), (-1,5,-27), (-1,-4,27), (-1,-4,-27), (-4,5,27), (-4,5,-27), (-4,-1,27), (-4,-1,-27), (-5,1,27), (-5,1,-27), (-5,4,27), (-5,4,-27)								
Sapph	(1,7,15)	13.426	77.85	1.135	1.3	2.957	3.86	36.97	37.17
	Equiv. Refl.: (1,7,-15), (1,-8,15), (1,-8,-15), (7,1,15), (7,1,-15), (7,-8,15), (7,-8,-15), (8,-1,15), (8,-1,-15), (8,-7,15), (8,-7,-15), (-1,8,15), (-1,8,-15), (-1,-7,15), (-1,-7,-15), (-7,8,15), (-7,8,-15), (-7,-1,15), (-7,-1,-15), (-8,1,15), (-8,1,-15), (-8,7,15), (-8,7,-15)								
Quartz	(-8,4,8)	13.642	83.35	1.124	1.5	1.6	2.34	20	20.14
Quartz	(4,6,2)	12.907	70.02	1.123	1.2	4.994	6.13	62.42	62.72
	Equiv. Refl.: (4,-10,-2), (6,4,-2), (6,-10,2), (-8,4,-8), (-10,4,2), (-10,6,-2)								
Quartz	(4,4,8)	13.642	83.35	1.119	1.5	1.6	2.33	20	20.14
	Equiv. Refl.: (4,4,-8), (4,-8,8), (4,-8,-8)								

Ei =	13.734	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(2,8,0)	13.353	76.48	1.117	1.2	3.302	4.01	41.27	41.47
	Equiv. Refl.: (2,-10,0), (8,2,0), (8,-10,0), (10,-4,4), (10,-6,-4), (-4,10,-4), (-6,10,4), (-6,-4,-4), (-10,2,0), (-10,8,0)								
Quartz	(-4,-6,4)	13.505	79.52	1.116	1.2	2.54	3.08	31.75	31.9
Quartz	(10,-2,0)	13.353	76.48	1.106	1.2	3.302	4.01	41.27	41.47
	Equiv. Refl.: (10,-8,0), (-2,10,0), (-2,-8,0), (-8,10,0), (-8,-2,0)								
Quartz	(6,2,-7)	13.223	74.32	1.098	1.1	3.854	4.42	48.18	48.38
	Equiv. Refl.: (6,-8,7), (-8,2,7), (-8,6,-7)								
LiNbO3	(1,9,1)	13.272	75.1	1.096	1.7	3.655	6.13	45.69	46.1
	Equiv. Refl.: (1,-10,-1), (9,1,-1), (9,-10,1), (10,-1,-1), (10,-9,1), (-1,10,1), (-1,-9,-1), (-9,10,-1), (-9,-1,1), (-10,1,1), (-10,9,-1), (2,6,7), (2,-8,-7)								
Sapph	(1,3,-26)	13.543	80.44	1.062	1.3	2.313	2.97	28.91	29.06
	Equiv. Refl.: (1,-4,26), (3,1,26), (3,-4,-26), (4,-1,26), (4,-3,-26), (-1,4,-26), (-1,-3,26), (-3,4,26), (-3,-1,-26), (-4,1,-26), (-4,3,26)								
Sapph	(2,3,-25)	13.615	82.47	1.058	1.3	1.816	2.44	22.7	22.83
	Equiv. Refl.: (2,-5,25), (3,2,25), (3,-5,-25), (5,-2,25), (5,-3,-25), (-2,5,-25), (-2,-3,25), (-3,5,25), (-3,-2,-25), (-5,2,-25), (-5,3,25)								
Quartz	(-6,1,-9)	13.129	72.93	1.047	1.1	4.217	4.57	52.71	52.91
	Equiv. Refl.: (-6,5,9)								
Quartz	(1,5,-9)	13.129	72.93	1.046	1.1	4.217	4.57	52.71	52.9
	Equiv. Refl.: (5,1,9), (5,-6,-9)								
Quartz	(1,-6,9)	13.129	72.93	1.045	1.1	4.217	4.57	52.71	52.9
Quartz	(8,-2,-7)	13.223	74.32	1.026	1.1	3.854	4.42	48.18	48.38
	Equiv. Refl.: (8,-6,7), (9,-3,6), (9,-6,-6), (-3,9,-6), (-3,-6,6)								
Quartz	(-6,8,-7)	13.223	74.32	1.025	1.1	3.854	4.42	48.18	48.38
	Equiv. Refl.: (-6,9,6), (-6,-2,7), (-6,-3,-6)								
Quartz	(-2,8,7)	13.223	74.32	1.024	1.1	3.854	4.42	48.18	48.38
	Equiv. Refl.: (-2,-6,-7)								
Quartz	(6,4,4)	13.505	79.52	1.023	1.2	2.54	3.08	31.75	31.9
	Equiv. Refl.: (6,-10,-4)								
Quartz	(4,6,-4)	13.505	79.52	1.022	1.2	2.54	3.08	31.75	31.9
	Equiv. Refl.: (4,-10,4), (-10,4,-4), (-10,6,4)								
Quartz	(-3,8,8)	13.719	87.35	1.016	1.5	0.636	0.94	7.95	8
	Equiv. Refl.: (-3,-5,-8), (-5,8,-8), (-5,-3,8)								
Quartz	(8,-3,-8)	13.719	87.35	1.012	1.5	0.636	0.93	7.95	8
Quartz	(8,-5,8)	13.719	87.35	1.009	1.5	0.636	0.93	7.95	8
Quartz	(-1,7,8)	13.247	74.7	0.984	1	3.758	3.89	46.98	47.14
	Equiv. Refl.: (-1,-6,-8), (-6,7,-8)								
Quartz	(7,-1,-8)	13.247	74.7	0.983	1	3.758	3.89	46.98	47.14
	Equiv. Refl.: (-6,-1,8)								
Quartz	(7,-6,8)	13.247	74.7	0.982	1	3.758	3.89	46.98	47.14
Quartz	(6,3,5)	12.908	70.03	0.976	1	4.99	5.17	62.37	62.59
	Equiv. Refl.: (6,-9,-5)								
Quartz	(3,6,-5)	12.908	70.03	0.975	1	4.99	5.17	62.37	62.59
	Equiv. Refl.: (3,-9,5), (-9,3,-5), (-9,6,5)								
Sapph	(4,4,18)	13.507	79.58	0.97	1.2	2.527	2.97	31.59	31.72
	Equiv. Refl.: (4,4,-18), (4,-8,18), (4,-8,-18), (8,-4,18), (8,-4,-18), (-4,8,18), (-4,8,-18), (-4,-4,18), (-4,-4,-18), (-8,4,18), (-8,4,-18)								
Quartz	(-6,9,5)	12.908	70.03	0.969	1	4.99	5.17	62.37	62.59
	Equiv. Refl.: (-6,-3,-5)								

Ei =	13.734	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(9,-3,5)	12.908	70.03	0.968	1	4.99	5.17	62.37	62.59
	Equiv. Refl.: (9,-6,-5), (-3,9,-5), (-3,-6,5)								
Quartz	(6,-1,9)	13.129	72.93	0.966	1.1	4.217	4.57	52.71	52.91
	Equiv. Refl.: (6,-5,-9), (-1,-5,9), (-5,6,9), (-5,-1,-9)								
Quartz	(-1,6,-9)	13.129	72.93	0.965	1.1	4.217	4.57	52.71	52.9
Quartz	(7,-6,-8)	13.247	74.7	0.963	1	3.758	3.92	46.98	47.14
	Equiv. Refl.: (-6,7,8), (-6,-1,-8)								
Quartz	(7,-1,8)	13.247	74.7	0.962	1	3.758	3.91	46.98	47.14
	Equiv. Refl.: (-1,7,-8), (-1,-6,8)								
Quartz	(10,-6,-3)	13.16	73.37	0.958	1	4.102	4.19	51.28	51.45
	Equiv. Refl.: (-4,10,-3)								
Quartz	(10,-4,3)	13.16	73.37	0.957	1	4.102	4.19	51.28	51.45
	Equiv. Refl.: (-4,-6,3), (-6,10,3), (-6,-4,-3)								
Quartz	(6,1,8)	13.247	74.7	0.933	1	3.758	3.92	46.98	47.14
	Equiv. Refl.: (6,-7,-8), (-7,1,-8), (-7,6,8)								
Quartz	(1,6,-8)	13.247	74.7	0.932	1	3.758	3.91	46.98	47.14
	Equiv. Refl.: (1,-7,8)								
Quartz	(3,-9,6)	13.457	78.48	0.92	1.1	2.799	3.09	34.99	35.12
Quartz	(3,6,-6)	13.457	78.48	0.919	1.1	2.799	3.09	34.99	35.12
	Equiv. Refl.: (6,3,6), (6,-9,-6), (-9,3,-6), (-9,6,6)								
Quartz	(4,6,-3)	13.16	73.37	0.917	1	4.102	4.19	51.28	51.45
	Equiv. Refl.: (4,-10,3), (-10,4,-3), (-10,6,3)								
Quartz	(6,4,3)	13.16	73.37	0.916	1	4.102	4.19	51.28	51.45
	Equiv. Refl.: (6,-10,-3)								
LiNbO3	(4,7,3)	13.476	78.88	0.905	1.6	2.699	4.36	33.73	34.01
	Equiv. Refl.: (4,7,-3), (4,-11,3), (4,-11,-3), (7,4,3), (7,4,-3), (7,-11,3), (7,-11,-3), (11,-4,3), (11,-4,-3), (11,-7,3), (11,-7,-3), (-4,11,3), (-4,11,-3), (-4,-7,3), (-4,-7,-3), (-7,11,3), (-7,11,-3), (-7,-4,3), (-7,-4,-3), (-11,4,3), (-11,4,-3), (-11,7,3), (-11,7,-3)								
LiNbO3	(3,7,-13)	13.658	83.96	0.903	2	1.452	2.95	18.15	18.39
	Equiv. Refl.: (3,-10,13), (7,3,13), (7,-10,-13), (10,-3,13), (10,-7,-13), (-3,10,-13), (-3,-7,13), (-7,10,13), (-7,-3,-13), (-10,3,-13), (-10,7,13)								
Quartz	(1,6,8)	13.247	74.7	0.902	1	3.758	3.89	46.98	47.14
	Equiv. Refl.: (1,-7,-8)								
Quartz	(6,1,-8)	13.247	74.7	0.901	1	3.758	3.89	46.98	47.14
	Equiv. Refl.: (6,-7,8), (9,0,1), (9,-9,-1), (-9,0,-1), (-9,9,1)								
Quartz	(0,9,-1)	13.163	73.42	0.9	1	4.089	4.04	51.11	51.27
	Equiv. Refl.: (0,-9,1), (-7,1,8), (-7,6,-8)								
Quartz	(1,8,3)	12.915	70.12	0.899	0.9	4.967	4.59	62.09	62.26
	Equiv. Refl.: (1,-9,-3), (-9,1,3), (-9,8,-3)								
Quartz	(8,1,-3)	12.915	70.12	0.898	0.9	4.967	4.59	62.09	62.26
	Equiv. Refl.: (8,-9,3)								
Quartz	(4,5,-6)	13.299	75.54	0.894	1	3.543	3.47	44.28	44.42
	Equiv. Refl.: (4,-9,6), (-9,4,-6), (-9,5,6)								
Quartz	(5,4,6)	13.299	75.54	0.893	1	3.543	3.47	44.28	44.42
	Equiv. Refl.: (5,-9,-6)								
Quartz	(9,-4,6)	13.299	75.54	0.858	1	3.543	3.47	44.28	44.42
	Equiv. Refl.: (9,-5,-6), (-4,9,-6), (-4,-5,6)								
Quartz	(-5,9,6)	13.299	75.54	0.857	1	3.543	3.47	44.28	44.42
	Equiv. Refl.: (-5,-4,-6)								

Ei =	13.734	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(4,6,-11)	13.082	72.27	0.851	1.3	4.39	5.9	54.87	55.19
	Equiv. Refl.: (4,-10,11), (6,4,11), (6,-10,-11), (10,-4,11), (10,-6,-11), (-4,10,-11), (-4,-6,11), (-6,10,11), (-6,-4,-11), (-10,4,-11), (-10,6,11)								
Sapph	(2,7,-11)	13.387	77.09	0.826	1	3.149	3.13	39.36	39.48
	Equiv. Refl.: (2,-9,11), (7,2,11), (7,-9,-11), (9,-2,11), (9,-7,-11), (-2,9,-11), (-2,-7,11), (-7,9,11), (-7,-2,-11), (-9,2,-11), (-9,7,11)								
Quartz	(9,-1,-3)	12.915	70.12	0.812	0.9	4.967	4.59	62.09	62.26
	Equiv. Refl.: (9,-8,3), (-1,9,3), (-1,-8,-3), (-8,9,-3), (-8,-1,3)								
LiNbO3	(2,2,27)	12.999	71.17	0.811	1.3	4.683	5.99	58.54	58.84
	Equiv. Refl.: (2,2,-27), (2,-4,27), (2,-4,-27), (4,-2,27), (4,-2,-27), (-2,4,27), (-2,4,-27), (-2,-2,27), (-2,-2,-27), (-4,2,27), (-4,2,-27)								
Quartz	(5,3,-8)	13.719	87.35	0.801	1.5	0.636	0.94	7.95	8
	Equiv. Refl.: (5,-8,8)								
Quartz	(3,5,8)	13.719	87.35	0.799	1.5	0.636	0.94	7.95	8
	Equiv. Refl.: (3,-8,-8)								
Quartz	(-8,3,8)	13.719	87.35	0.797	1.5	0.636	0.93	7.95	8
Quartz	(-8,5,-8)	13.719	87.35	0.795	1.5	0.636	0.93	7.95	8
Quartz	(9,-1,3)	12.915	70.12	0.793	0.9	4.967	4.27	62.09	62.23
	Equiv. Refl.: (9,-8,-3), (-1,9,-3), (-1,-8,3), (-8,9,3), (-8,-1,-3)								
Quartz	(1,8,-3)	12.915	70.12	0.781	0.9	4.967	4.27	62.09	62.23
	Equiv. Refl.: (1,-9,3), (8,1,3), (8,-9,-3), (-9,1,-3), (-9,8,3)								
Sapph	(4,6,4)	13.253	74.8	0.75	0.9	3.732	3.33	46.65	46.77
	Equiv. Refl.: (4,-10,-4), (6,4,-4), (6,-10,4), (10,-4,-4), (10,-6,4), (-4,10,4), (-4,-6,-4), (-6,10,-4), (-6,-4,4), (-10,4,4), (-10,6,-4)								
LiNbO3	(1,5,-25)	13.598	81.94	0.735	1.6	1.944	3.11	24.3	24.5
	Equiv. Refl.: (1,-6,25), (5,1,25), (5,-6,-25), (6,-1,25), (6,-5,-25), (-1,6,-25), (-1,-5,25), (-5,6,25), (-5,-1,-25), (-6,1,-25), (-6,5,25)								
LiNbO3	(5,6,-7)	13.629	82.9	0.682	1.6	1.71	2.76	21.38	21.55
	Equiv. Refl.: (5,-11,7), (6,5,7), (6,-11,-7), (11,-5,7), (11,-6,-7), (-5,11,-7), (-5,-6,7), (-6,11,7), (-6,-5,-7), (-11,5,-7), (-11,6,7)								
Quartz	(-5,10,3)	13.079	72.23	0.678	0.8	4.402	3.35	55.02	55.13
	Equiv. Refl.: (-5,-5,-3)								
Quartz	(10,-5,3)	13.079	72.23	0.677	0.8	4.402	3.35	55.02	55.12
	Equiv. Refl.: (10,-5,-3), (-5,10,-3), (-5,-5,3)								
Quartz	(5,5,3)	13.079	72.23	0.67	0.8	4.402	3.35	55.02	55.13
	Equiv. Refl.: (5,5,-3), (5,-10,3), (5,-10,-3), (-10,5,3), (-10,5,-3)								
Quartz	(0,7,7)	12.98	70.93	0.661	0.7	4.748	3.52	59.35	59.46
	Equiv. Refl.: (0,-7,-7)								
Quartz	(7,0,-7)	12.98	70.93	0.659	0.7	4.748	3.51	59.35	59.46
	Equiv. Refl.: (7,-7,7), (-7,0,7), (-7,7,-7)								
Quartz	(8,-1,7)	13.619	82.57	0.652	0.8	1.792	1.39	22.39	22.44
	Equiv. Refl.: (8,-7,-7), (-7,8,7), (-7,-1,-7)								
Quartz	(-1,8,-7)	13.619	82.57	0.65	0.8	1.792	1.38	22.39	22.44
Quartz	(-1,-7,7)	13.619	82.57	0.649	0.8	1.792	1.38	22.39	22.44
Quartz	(2,1,11)	13.193	73.86	0.647	0.7	3.974	2.79	49.67	49.75
	Equiv. Refl.: (2,-3,-11)								
Quartz	(1,2,-11)	13.193	73.86	0.645	0.7	3.974	2.78	49.67	49.75
	Equiv. Refl.: (1,5,9), (1,-6,-9), (-3,1,-11)								
Quartz	(1,-3,11)	13.193	73.86	0.644	0.7	3.974	2.78	49.67	49.75
	Equiv. Refl.: (5,1,-9), (-3,2,11)								
Quartz	(5,-6,9)	13.129	72.93	0.643	0.7	4.217	2.87	52.71	52.79

Ei =	13.734	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(3,4,23)	13.316	75.83	0.642	1.2	3.467	4.15	43.34	43.54
	Equiv. Refl.: (3,-7,-23), (4,3,-23), (4,-7,23), (7,-3,-23), (7,-4,23), (-3,7,23), (-3,-4,-23), (-4,7,-23), (-4,-3,23), (-7,3,23), (-7,4,-23), (-6,1,9), (-6,5,-9)								
Quartz	(5,5,4)	13.426	77.85	0.641	0.8	2.958	2.29	36.97	37.05
	Equiv. Refl.: (5,-10,-4)								
Quartz	(5,5,-4)	13.426	77.85	0.639	0.8	2.958	2.28	36.97	37.05
	Equiv. Refl.: (5,-10,4), (-10,5,4), (-10,5,-4)								
Quartz	(2,5,8)	12.923	70.21	0.638	0.7	4.943	3.5	61.79	61.89
	Equiv. Refl.: (2,-7,-8), (-7,2,8), (-7,5,-8)								
Quartz	(5,2,-8)	12.923	70.21	0.637	0.7	4.943	3.49	61.79	61.89
	Equiv. Refl.: (5,-7,8)								
Quartz	(-5,10,4)	13.426	77.85	0.636	0.8	2.958	2.29	36.97	37.05
Quartz	(-5,-5,-4)	13.426	77.85	0.635	0.8	2.958	2.29	36.97	37.05
Sapph	(3,5,-17)	13.294	75.46	0.634	0.8	3.562	2.8	44.52	44.61
	Equiv. Refl.: (3,-8,17), (5,3,17), (5,-8,-17), (8,-3,17), (8,-5,-17), (-3,8,-17), (-3,-5,17), (-5,8,17), (-5,-3,-17), (-8,3,-17), (-8,5,17), (-5,-5,4)								
Quartz	(10,-5,4)	13.426	77.85	0.633	0.8	2.958	2.28	36.97	37.05
	Equiv. Refl.: (10,-5,-4), (-5,10,-4)								
Quartz	(-4,9,6)	13.299	75.54	0.63	0.7	3.543	2.55	44.28	44.36
	Equiv. Refl.: (-4,-5,-6)								
Quartz	(9,-4,-6)	13.299	75.54	0.627	0.7	3.543	2.54	44.28	44.36
	Equiv. Refl.: (9,-5,6), (-5,9,-6)								
Quartz	(-5,-4,6)	13.299	75.54	0.626	0.7	3.543	2.53	44.28	44.36
Quartz	(10,-3,-2)	13.152	73.25	0.625	0.7	4.132	2.95	51.65	51.74
	Equiv. Refl.: (10,-7,2)								
Quartz	(-3,10,2)	13.152	73.25	0.624	0.7	4.132	2.95	51.65	51.74
	Equiv. Refl.: (-3,-7,-2), (-7,10,-2), (-7,-3,2)								
Quartz	(8,-3,7)	12.98	70.93	0.622	0.7	4.748	3.32	59.35	59.45
	Equiv. Refl.: (8,-5,-7), (-3,8,-7), (-3,-5,7)								
Quartz	(-5,8,7)	12.98	70.93	0.62	0.7	4.748	3.31	59.35	59.44
	Equiv. Refl.: (-5,-3,-7)								
Quartz	(7,-5,8)	12.923	70.21	0.615	0.7	4.943	3.5	61.79	61.89
	Equiv. Refl.: (-2,7,8), (-2,-5,-8)								
Quartz	(7,-2,-8)	12.923	70.21	0.614	0.7	4.943	3.49	61.79	61.89
Quartz	(-5,7,-8)	12.923	70.21	0.613	0.7	4.943	3.49	61.79	61.89
	Equiv. Refl.: (-5,-2,8)								
Quartz	(-10,3,2)	13.152	73.25	0.61	0.7	4.132	2.95	51.65	51.74
	Equiv. Refl.: (-10,7,-2)								
Quartz	(3,7,2)	13.152	73.25	0.609	0.7	4.132	2.95	51.65	51.74
	Equiv. Refl.: (3,-10,-2), (7,3,-2), (7,-10,2)								
Quartz	(3,-8,7)	12.98	70.93	0.608	0.7	4.748	3.32	59.35	59.45
	Equiv. Refl.: (-8,3,-7), (-8,5,7)								
Quartz	(3,5,-7)	12.98	70.93	0.607	0.7	4.748	3.32	59.35	59.45
Quartz	(5,3,7)	12.98	70.93	0.605	0.7	4.748	3.31	59.35	59.44
	Equiv. Refl.: (5,-8,-7)								
Quartz	(5,0,10)	13.588	81.64	0.604	0.8	2.018	1.62	25.23	25.28
	Equiv. Refl.: (5,-5,-10), (-5,0,-10), (-5,5,10)								
Quartz	(0,5,-10)	13.588	81.64	0.6	0.8	2.018	1.61	25.23	25.28
	Equiv. Refl.: (0,-5,10)								

Ei =	13.734	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(4,5,6)	13.299	75.54	0.581	0.7	3.543	2.55	44.28	44.36
	Equiv. Refl.: (4,-9,-6)								
Quartz	(-9,4,6)	13.299	75.54	0.579	0.7	3.543	2.54	44.28	44.36
	Equiv. Refl.: (-9,5,-6)								
Quartz	(5,4,-6)	13.299	75.54	0.578	0.7	3.543	2.53	44.28	44.36
	Equiv. Refl.: (5,-9,6)								
Quartz	(10,-3,-1)	13.001	71.19	0.574	0.7	4.678	3.06	58.47	58.55
	Equiv. Refl.: (10,-7,1), (-3,10,1), (-3,-7,-1), (-7,10,-1), (-7,-3,1)								
Quartz	(-2,3,11)	13.193	73.86	0.559	0.7	3.974	2.79	49.67	49.75
	Equiv. Refl.: (-2,-1,-11)								
Quartz	(3,7,1)	13.001	71.19	0.558	0.7	4.678	3.06	58.47	58.55
	Equiv. Refl.: (3,-10,-1), (7,3,-1), (7,-10,1), (-10,3,1), (-10,7,-1)								
Quartz	(3,-1,11)	13.193	73.86	0.557	0.7	3.974	2.79	49.67	49.75
Quartz	(3,-2,-11)	13.193	73.86	0.556	0.7	3.974	2.78	49.67	49.75
	Equiv. Refl.: (-1,3,-11), (-1,-2,11)								
Quartz	(9,-2,-5)	13.233	74.48	0.543	0.6	3.814	2.35	47.67	47.73
	Equiv. Refl.: (9,-7,5), (-7,9,-5), (-7,-2,5)								
Quartz	(-2,9,5)	13.233	74.48	0.542	0.6	3.814	2.35	47.67	47.73
	Equiv. Refl.: (-2,-7,-5)								
Quartz	(-1,6,9)	13.129	72.93	0.535	0.7	4.217	2.88	52.71	52.79
Quartz	(-1,-5,-9)	13.129	72.93	0.534	0.7	4.217	2.88	52.71	52.79
	Equiv. Refl.: (-5,6,-9), (-5,-1,9)								
Sapph	(1,5,-22)	13.432	77.96	0.533	0.7	2.928	2.1	36.6	36.66
	Equiv. Refl.: (1,-6,22), (5,1,22), (5,-6,-22), (6,-1,22), (6,-5,-22), (-1,6,-22), (-1,-5,22), (-5,6,22), (-5,-1,-22), (-6,1,-22), (-6,5,22)								
Quartz	(6,-1,-9)	13.129	72.93	0.532	0.7	4.217	2.87	52.71	52.79
	Equiv. Refl.: (6,-5,9)								
LiNbO3	(4,5,17)	13.256	74.85	0.526	1	3.72	3.84	46.5	46.66
	Equiv. Refl.: (5,4,-17), (5,-9,17), (9,-5,17), (-4,-5,-17), (-5,9,-17), (-5,-4,17), (-9,5,-17)								
LiNbO3	(4,-9,-17)	13.256	74.85	0.525	1	3.72	3.84	46.5	46.66
	Equiv. Refl.: (9,-4,-17), (-4,9,17), (-9,4,17)								
LiNbO3	(1,2,29)	13.48	78.96	0.5	1.1	2.679	3.02	33.49	33.63
	Equiv. Refl.: (1,-3,-29), (2,1,-29), (2,-3,29), (3,-1,-29), (3,-2,29), (-1,3,29), (-1,-2,-29), (-2,3,-29), (-2,-1,29), (-3,1,29), (-3,2,-29)								
Quartz	(-10,6,-3)	13.16	73.37	0.497	0.6	4.102	2.3	51.28	51.33
Quartz	(4,6,3)	13.16	73.37	0.496	0.6	4.102	2.3	51.28	51.33
	Equiv. Refl.: (4,-10,-3), (6,4,-3), (6,-10,3), (-10,4,3)								
Quartz	(7,2,-5)	13.233	74.48	0.477	0.6	3.814	2.35	47.67	47.73
	Equiv. Refl.: (7,-9,5), (-9,2,5), (-9,7,-5)								
Quartz	(2,7,5)	13.233	74.48	0.476	0.6	3.814	2.35	47.67	47.73
	Equiv. Refl.: (2,-9,-5)								
Quartz	(7,1,7)	13.619	82.57	0.472	0.8	1.792	1.39	22.39	22.44
	Equiv. Refl.: (-8,7,7)								
Quartz	(7,-8,-7)	13.619	82.57	0.471	0.8	1.792	1.39	22.39	22.44
	Equiv. Refl.: (-8,1,-7)								
Sapph	(0,5,22)	12.917	70.13	0.469	0.6	4.962	2.9	62.03	62.1
	Equiv. Refl.: (0,-5,-22), (5,0,-22), (5,-5,22), (-5,0,22), (-5,5,-22), (1,7,-7), (1,-8,7)								
Sapph	(1,6,19)	13.4	77.34	0.449	0.6	3.086	1.92	38.57	38.62
	Equiv. Refl.: (1,-7,-19), (6,1,-19), (6,-7,19), (7,-1,-19), (7,-6,19), (-1,7,19), (-1,-6,-19), (-6,7,-19), (-6,-1,19), (-7,1,19), (-7,6,-19)								

Ei =	13.734	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(1,4,10)	13.272	75.1	0.436	0.5	3.656	1.98	45.69	45.74
	Equiv. Refl.: (1,-5,-10)								
Quartz	(4,1,-10)	13.272	75.1	0.435	0.5	3.656	1.98	45.69	45.74
	Equiv. Refl.: (4,-5,10)								
LiNbO3	(5,6,5)	13.452	78.36	0.433	1	2.829	2.87	35.37	35.48
	Equiv. Refl.: (5,-11,-5), (6,5,-5), (6,-11,5), (11,-5,-5), (11,-6,5), (-5,11,5), (-5,-6,-5), (-6,11,-5), (-6,-5,5), (-11,5,5), (-11,6,-5)								
Quartz	(-5,1,10)	13.272	75.1	0.432	0.5	3.656	1.97	45.69	45.74
	Equiv. Refl.: (-5,4,-10)								
Quartz	(10,-4,-3)	13.16	73.37	0.424	0.6	4.102	2.3	51.28	51.33
	Equiv. Refl.: (10,-6,3), (-4,10,3), (-4,-6,-3)								
Quartz	(-1,5,10)	13.272	75.1	0.423	0.5	3.656	1.98	45.69	45.74
	Equiv. Refl.: (-1,-4,-10), (-4,5,-10), (-4,-1,10), (-6,10,-3), (-6,-4,3)								
Quartz	(5,-1,-10)	13.272	75.1	0.419	0.5	3.656	1.97	45.69	45.74
	Equiv. Refl.: (5,-4,10)								
LiNbO3	(3,8,1)	13.702	86.09	0.412	1.6	0.939	1.51	11.74	11.83
	Equiv. Refl.: (3,-11,-1), (8,3,-1), (8,-11,1), (11,-3,-1), (11,-8,1), (-3,11,1), (-3,-8,-1), (-8,11,-1), (-8,-3,1), (-11,3,1), (-11,8,-1)								
LiNbO3	(3,7,11)	13.302	75.59	0.411	0.9	3.529	3.19	44.11	44.23
	Equiv. Refl.: (3,-10,-11), (7,3,-11), (7,-10,11), (10,-3,-11), (10,-7,11), (-3,10,11), (-3,-7,-11), (-7,10,-11), (-7,-3,11), (-10,3,11), (-10,7,-11)								
Quartz	(10,-3,1)	13.001	71.19	0.409	0.5	4.678	2.28	58.47	58.51
	Equiv. Refl.: (10,-7,-1), (-3,10,-1), (-3,-7,1), (-7,10,1), (-7,-3,-1)								
Sapph	(5,5,3)	13.107	72.62	0.405	0.5	4.298	2.3	53.73	53.78
	Equiv. Refl.: (5,5,-3), (5,-10,3), (5,-10,-3), (10,-5,3), (10,-5,-3), (-5,10,3), (-5,10,-3), (-5,-5,3), (-5,-5,-3), (-10,5,3), (-10,5,-3)								
Quartz	(3,7,-1)	13.001	71.19	0.38	0.5	4.678	2.28	58.47	58.51
	Equiv. Refl.: (3,-10,1), (7,3,1), (7,-10,-1), (-10,3,-1), (-10,7,1)								
LiNbO3	(5,6,-1)	13.272	75.1	0.353	0.8	3.655	2.99	45.69	45.79
	Equiv. Refl.: (5,-11,1), (6,5,1), (6,-11,-1), (11,-5,1), (11,-6,-1), (-5,11,-1), (-5,-6,1), (-6,11,1), (-6,-5,-1), (-11,5,-1), (-11,6,1)								
Quartz	(0,2,-11)	12.949	70.54	0.312	0.4	4.853	1.95	60.66	60.69
	Equiv. Refl.: (0,-2,11)								
Quartz	(2,0,11)	12.949	70.54	0.308	0.4	4.853	1.93	60.66	60.69
	Equiv. Refl.: (2,-2,-11), (-2,0,-11), (-2,2,11)								
LiNbO3	(2,8,9)	13.364	76.68	0.302	0.8	3.252	2.54	40.65	40.73
	Equiv. Refl.: (2,8,-9), (2,-10,9), (2,-10,-9), (8,2,9), (8,2,-9), (8,-10,9), (8,-10,-9), (10,-2,9), (10,-2,-9), (10,-8,9), (10,-8,-9), (-2,10,9), (-2,10,-9), (-2,-8,9), (-2,-8,-9), (-8,10,9), (-8,10,-9), (-8,-2,9), (-8,-2,-9), (-10,2,9), (-10,2,-9), (-10,8,9), (-10,8,-9)								
Quartz	(10,-2,-1)	13.403	77.39	0.272	0.4	3.073	1.15	38.41	38.43
	Equiv. Refl.: (10,-8,1), (-2,10,1), (-2,-8,-1), (-8,10,-1), (-8,-2,1)								
Sapph	(1,3,25)	13.107	72.63	0.245	0.4	4.297	1.6	53.72	53.74
	Equiv. Refl.: (1,-4,-25), (3,1,-25), (3,-4,25), (4,-1,-25), (4,-3,25), (-1,4,25), (-1,-3,-25), (-3,4,-25), (-3,-1,25), (-4,1,25), (-4,3,-25)								
LiNbO3	(3,6,15)	12.915	70.11	0.242	0.6	4.968	2.94	62.1	62.17
	Equiv. Refl.: (3,6,-15), (3,-9,15), (3,-9,-15), (6,3,15), (6,3,-15), (6,-9,15), (6,-9,-15), (9,-3,15), (9,-3,-15), (9,-6,15), (9,-6,-15), (-3,9,15), (-3,9,-15), (-3,-6,15), (-3,-6,-15), (-6,9,15), (-6,9,-15), (-6,-3,15), (-6,-3,-15), (-9,3,15), (-9,3,-15), (-9,6,15), (-9,6,-15), (-2,5,-10), (-2,-3,10), (-3,5,10), (-3,-2,-10)								
Quartz	(5,-2,10)	13.111	72.68	0.239	0.3	4.284	1.41	53.55	53.57
	Equiv. Refl.: (5,-3,-10)								
Quartz	(0,7,-7)	12.98	70.93	0.238	0.3	4.748	1.56	59.35	59.37
	Equiv. Refl.: (0,-7,7), (7,0,7), (7,-7,-7), (-7,0,-7), (-7,7,7)								

Quartz	(2,3,-10)	13.111	72.68	0.224	0.3	4.284	1.42	53.55	53.57
Equiv. Refl.: (2,-5,10), (3,2,10), (3,-5,-10)									
Quartz	(2,8,1)	13.403	77.39	0.222	0.4	3.073	1.15	38.41	38.43
Equiv. Refl.: (2,-10,-1), (8,2,-1), (8,-10,1), (-5,2,-10), (-5,3,10), (-10,2,1), (-10,8,-1)									
LiNbO3	(2,6,-19)	13.143	73.12	0.216	0.6	4.166	2.46	52.08	52.14
Equiv. Refl.: (2,-8,19), (6,2,19), (6,-8,-19), (8,-2,19), (8,-6,-19), (-2,8,-19), (-2,-6,19), (-6,8,19), (-6,-2,-19), (-8,2,-19), (-8,6,19)									
Sapph	(3,7,-4)	13.507	79.57	0.195	0.4	2.527	0.92	31.59	31.61
Equiv. Refl.: (3,-10,4), (7,3,4), (7,-10,-4), (10,-3,4), (10,-7,-4), (-3,10,-4), (-3,-7,4), (-7,10,4), (-7,-3,-4), (-10,3,-4), (-10,7,4)									
Sapph	(4,6,7)	13.534	80.21	0.113	0.3	2.369	0.66	29.61	29.62
Equiv. Refl.: (4,-10,-7), (6,4,-7), (6,-10,7), (10,-4,-7), (10,-6,7), (-4,10,7), (-4,-6,-7), (-6,10,-7), (-6,-4,7), (-10,4,7), (-10,6,-7)									
LiNbO3	(3,5,19)	12.92	70.18	0.107	0.4	4.951	1.88	61.89	61.92
Equiv. Refl.: (3,-8,-19), (5,3,-19), (5,-8,19), (8,-3,-19), (8,-5,19), (-3,8,19), (-3,-5,-19), (-5,8,-19), (-5,-3,19), (-8,3,19), (-8,5,-19)									
LiNbO3	(1,8,-13)	13.226	74.37	0.099	0.4	3.841	1.55	48.02	48.04
Equiv. Refl.: (1,-9,13), (8,1,13), (8,-9,-13), (9,-1,13), (9,-8,-13), (-1,9,-13), (-1,-8,13), (-8,9,13), (-8,-1,-13), (-9,1,-13), (-9,8,13)									
Sapph	(4,6,-5)	13.331	76.08	0.085	0.2	3.404	0.69	42.55	42.56
Equiv. Refl.: (4,-10,5), (6,4,5), (6,-10,-5), (10,-4,5), (10,-6,-5), (-4,10,-5), (-4,-6,5), (-6,10,5), (-6,-4,-5), (-10,4,-5), (-10,6,5)									
Sapph	(4,6,1)	13.124	72.86	0.073	0.2	4.236	0.73	52.95	52.96
Equiv. Refl.: (4,-10,-1), (6,4,-1), (6,-10,1), (10,-4,-1), (10,-6,1), (-4,10,1), (-4,-6,-1), (-6,10,-1), (-6,-4,1), (-10,4,1), (-10,6,-1)									
LiNbO3	(4,4,21)	13.453	78.4	0.013	0.2	2.82	0.52	35.25	35.26
Equiv. Refl.: (4,4,-21), (4,-8,21), (4,-8,-21), (8,-4,21), (8,-4,-21), (-4,8,21), (-4,8,-21), (-4,-4,21), (-4,-4,-21), (-8,4,21), (-8,4,-21)									

Ei = Cryst	11.919 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Si	(1,5,9)	11.807	82.15	5.837	5.28	1.6441	8.68	20.55	22.31
	Equiv. Refl.: (1,9,5), (3,7,7), (5,1,9), (5,9,1), (7,3,7), (7,7,3), (9,1,5), (9,5,1)								
Si	(0,2,10)	11.64	77.59	5.7601	4.97	2.6228	13.04	32.79	35.28
	Equiv. Refl.: (0,10,2), (2,0,10), (2,6,8), (2,8,6), (2,10,0), (6,2,8), (6,8,2), (8,2,6), (8,6,2), (10,0,2), (10,2,0)								
Si	(1,7,7)	11.357	72.34	3.2102	2.7	3.7949	10.23	47.44	48.53
	Equiv. Refl.: (3,3,9), (3,9,3), (5,5,7), (5,7,5), (7,1,7), (7,5,5), (7,7,1), (9,3,3)								
Ge	(3,5,9)	11.751	80.37	2.6875	7.57	2.0231	15.32	25.29	29.57
	Equiv. Refl.: (3,9,5), (5,3,9), (5,9,3), (9,3,5), (9,5,3)								
Ge	(1,5,9)	11.335	71.99	1.7282	4.62	3.8756	17.9	48.45	51.65
	Equiv. Refl.: (1,9,5), (3,7,7), (5,1,9), (5,9,1), (7,3,7), (7,7,3), (9,1,5), (9,5,1)								
LiNbO3	(1,8,2)	11.914	88.33	88.939	81.9	0.347	28.44	4.34	28.77
	Equiv. Refl.: (8,-9,2), (9,-8,2), (-1,9,2), (-8,-1,2), (-9,1,2)								
Quartz	(-8,1,-4)	11.918	89.47	88.675	76.9	0.11	8.45	1.37	8.56
Quartz	(1,-8,4)	11.918	89.47	88.667	76.9	0.11	8.45	1.37	8.56
Quartz	(1,7,-4)	11.918	89.47	88.664	76.9	0.11	8.45	1.37	8.56
Quartz	(-8,7,4)	11.918	89.47	88.66	76.9	0.11	8.45	1.37	8.56
Quartz	(7,1,4)	11.918	89.47	88.654	76.9	0.11	8.45	1.37	8.56
	Equiv. Refl.: (7,-8,-4)								
LiNbO3	(1,-9,-2)	11.914	88.33	87.586	81.9	0.347	28.44	4.34	28.77
	Equiv. Refl.: (8,1,-2), (9,-1,-2), (-1,-8,-2), (-8,9,-2), (-9,8,-2)								
Quartz	(8,-1,4)	11.918	89.47	85.073	76.9	0.11	8.45	1.37	8.56
Quartz	(-1,8,-4)	11.918	89.47	85.065	76.9	0.11	8.45	1.37	8.56
Quartz	(-1,-7,4)	11.918	89.47	85.062	76.9	0.11	8.45	1.37	8.56
Quartz	(8,-7,-4)	11.918	89.47	85.058	76.9	0.11	8.45	1.37	8.56
Quartz	(-7,8,4)	11.918	89.47	85.05	76.9	0.11	8.45	1.37	8.56
Quartz	(-7,-1,-4)	11.918	89.47	85.049	76.9	0.11	8.45	1.37	8.56
Quartz	(7,1,-4)	11.918	89.47	63.39	57.5	0.11	6.32	1.37	6.46
Quartz	(7,-8,4)	11.918	89.47	63.376	57.5	0.11	6.32	1.37	6.46
Quartz	(1,7,4)	11.918	89.47	63.352	57.5	0.11	6.31	1.37	6.46
Quartz	(1,-8,-4)	11.918	89.47	63.348	57.4	0.11	6.31	1.37	6.46
Quartz	(-8,1,4)	11.918	89.47	63.335	57.4	0.11	6.31	1.37	6.46
	Equiv. Refl.: (-8,7,-4)								
Quartz	(-7,-1,4)	11.918	89.47	60.797	57.5	0.11	6.32	1.37	6.46
Quartz	(-7,8,-4)	11.918	89.47	60.782	57.5	0.11	6.32	1.37	6.46
Quartz	(-1,-7,-4)	11.918	89.47	60.759	57.5	0.11	6.31	1.37	6.46
Quartz	(-1,8,4)	11.918	89.47	60.755	57.4	0.11	6.31	1.37	6.46
Quartz	(8,-1,-4)	11.918	89.47	60.739	57.4	0.11	6.31	1.37	6.46
	Equiv. Refl.: (8,-7,4)								
Sapph	(3,4,-16)	11.919	89.76	29.976	41.9	0.051	2.12	0.63	2.21
	Equiv. Refl.: (3,-7,16), (4,3,16), (4,-7,-16), (7,-3,16), (7,-4,-16), (-3,7,-16), (-3,-4,16), (-4,7,16), (-4,-3,-16), (-7,3,-16), (-7,4,16)								
Sapph	(1,6,-14)	11.915	88.55	29.618	27.3	0.302	8.24	3.78	9.07
	Equiv. Refl.: (1,-7,14), (6,1,14), (6,-7,-14), (7,-1,14), (7,-6,-14), (-1,7,-14), (-1,-6,14), (-6,7,14), (-6,-1,-14), (-7,1,-14), (-7,6,14)								
Sapph	(4,5,-4)	11.904	87.12	25.637	22.1	0.599	13.21	7.48	15.19
	Equiv. Refl.: (4,-9,4), (5,4,4), (5,-9,-4), (9,-4,4), (9,-5,-4), (-4,9,-4), (-4,-5,4), (-5,9,4), (-5,-4,-4), (-9,4,-4), (-9,5,4)								

Ei =	11.919	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(5,-7,18)	11.84	83.41	22.948	21.2	1.376	29.17	17.2	33.86
	Equiv. Refl.: (7,-5,18)								
LiNbO3	(2,5,18)	11.84	83.41	22.947	21.2	1.376	29.17	17.2	33.86
	Equiv. Refl.: (-2,7,18), (-5,-2,18), (-7,2,18)								
LiNbO3	(2,-7,-18)	11.84	83.41	22.813	21.2	1.376	29.17	17.2	33.86
	Equiv. Refl.: (5,2,-18), (7,-2,-18), (-2,-5,-18), (-5,7,-18), (-7,5,-18)								
LiNbO3	(2,-7,18)	11.84	83.41	22.151	20.5	1.376	28.2	17.2	33.03
	Equiv. Refl.: (5,2,18), (7,-2,18), (-2,-5,18)								
LiNbO3	(-5,7,18)	11.84	83.41	22.15	20.5	1.376	28.2	17.2	33.03
	Equiv. Refl.: (-7,5,18)								
LiNbO3	(2,5,-18)	11.84	83.41	21.851	20.5	1.376	28.2	17.2	33.03
	Equiv. Refl.: (5,-7,-18), (7,-5,-18), (-2,7,-18), (-5,-2,-18), (-7,2,-18)								
LiNbO3	(6,-8,14)	11.821	82.64	21.147	19.2	1.539	29.56	19.24	35.27
	Equiv. Refl.: (8,-6,14)								
LiNbO3	(2,6,14)	11.821	82.64	21.146	19.2	1.539	29.56	19.24	35.27
	Equiv. Refl.: (-2,8,14), (-6,-2,14), (-8,2,14)								
LiNbO3	(6,2,-14)	11.821	82.64	20.384	19.2	1.539	29.56	19.24	35.27
	Equiv. Refl.: (-2,-6,-14), (-6,8,-14), (-8,6,-14)								
LiNbO3	(2,-8,-14)	11.821	82.64	20.383	19.2	1.539	29.56	19.24	35.27
	Equiv. Refl.: (8,-2,-14)								
LiNbO3	(1,5,20)	11.829	82.95	18.958	17.8	1.474	26.27	18.42	32.08
	Equiv. Refl.: (5,-6,20), (6,-5,20), (-1,6,20), (-5,-1,20), (-6,1,20)								
LiNbO3	(1,-6,-20)	11.829	82.95	18.852	17.8	1.474	26.27	18.42	32.08
	Equiv. Refl.: (5,1,-20), (6,-1,-20), (-1,-5,-20), (-5,6,-20), (-6,5,-20)								
LiNbO3	(2,2,24)	11.764	80.74	17.981	16.4	1.944	31.95	24.3	40.14
	Equiv. Refl.: (2,-4,24), (4,-2,24), (-2,4,24), (-2,-2,24), (-4,2,24)								
LiNbO3	(2,2,-24)	11.764	80.74	17.94	16.4	1.944	31.95	24.3	40.14
	Equiv. Refl.: (2,-4,-24), (4,-2,-24), (-2,4,-24), (-2,-2,-24), (-4,2,-24)								
LiNbO3	(1,-8,12)	11.79	81.56	17.662	16.2	1.769	28.74	22.11	36.26
	Equiv. Refl.: (7,1,12), (8,-1,12), (-1,-7,12), (-7,8,12), (-8,7,12)								
LiNbO3	(1,7,-12)	11.79	81.56	17.288	16.2	1.769	28.74	22.11	36.26
	Equiv. Refl.: (7,-8,-12), (8,-7,-12), (-1,8,-12), (-7,-1,-12), (-8,1,-12)								
LiNbO3	(0,8,-8)	11.685	78.63	17.152	15	2.397	35.98	29.97	46.83
	Equiv. Refl.: (8,-8,-8), (-8,0,-8)								
LiNbO3	(0,-8,8)	11.685	78.63	16.162	15	2.397	35.98	29.97	46.83
	Equiv. Refl.: (8,0,8), (-8,8,8)								
LiNbO3	(1,7,12)	11.79	81.56	15.701	14.7	1.769	26.01	22.11	34.14
	Equiv. Refl.: (7,-8,12), (8,-7,12), (-1,8,12), (-7,-1,12), (-8,1,12)								
LiNbO3	(1,-8,-12)	11.79	81.56	15.402	14.7	1.769	26.01	22.11	34.14
	Equiv. Refl.: (7,1,-12), (8,-1,-12), (-1,-7,-12), (-7,8,-12), (-8,7,-12)								
LiNbO3	(4,5,-10)	11.745	80.19	15.136	13.7	2.061	28.18	25.76	38.18
	Equiv. Refl.: (5,-9,-10), (9,-5,-10), (-4,9,-10), (-5,-4,-10), (-9,4,-10)								
LiNbO3	(4,-9,10)	11.745	80.19	14.125	13.7	2.061	28.18	25.76	38.18
	Equiv. Refl.: (5,4,10), (9,-4,10), (-4,-5,10)								
LiNbO3	(-5,9,10)	11.745	80.19	14.124	13.7	2.061	28.18	25.76	38.18
	Equiv. Refl.: (-9,5,10)								
LiNbO3	(0,-6,18)	11.593	76.57	13.055	11.8	2.847	33.56	35.59	48.92
	Equiv. Refl.: (6,0,18), (-6,6,18)								
LiNbO3	(2,-5,22)	11.555	75.8	12.976	11.6	3.015	34.82	37.69	51.31
	Equiv. Refl.: (3,2,22), (5,-2,22), (-2,-3,22), (-3,5,22), (-5,3,22)								

Ei =	11.919	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(0,6,-18)	11.593	76.57	12.783	11.8	2.847	33.56	35.59	48.92
	Equiv. Refl.: (6,-6,-18), (-6,0,-18)								
LiNbO3	(3,-8,14)	11.573	76.16	12.532	11	2.937	32.37	36.71	48.94
	Equiv. Refl.: (5,3,14), (8,-3,14), (-3,-5,14), (-5,8,14), (-8,5,14)								
LiNbO3	(0,1,26)	11.709	79.24	12.518	11.7	2.265	26.57	28.31	38.83
	Equiv. Refl.: (1,-1,26), (-1,0,26)								
LiNbO3	(2,3,-22)	11.555	75.8	12.458	11.6	3.015	34.82	37.69	51.31
	Equiv. Refl.: (-2,5,-22), (-3,-2,-22), (-5,2,-22)								
LiNbO3	(3,-5,-22)	11.555	75.8	12.457	11.6	3.015	34.82	37.69	51.31
	Equiv. Refl.: (5,-3,-22)								
LiNbO3	(0,-1,-26)	11.709	79.24	12.327	11.7	2.265	26.57	28.31	38.83
	Equiv. Refl.: (1,0,-26), (-1,1,-26)								
LiNbO3	(0,-8,-4)	11.267	70.96	12.196	10.7	4.114	43.87	51.42	67.59
	Equiv. Refl.: (8,0,-4), (-8,8,-4)								
LiNbO3	(0,6,18)	11.593	76.57	11.945	10.8	2.847	30.77	35.59	47.05
	Equiv. Refl.: (6,-6,18), (-6,0,18)								
LiNbO3	(2,-6,20)	11.581	76.33	11.891	10.8	2.9	31.34	36.25	47.92
	Equiv. Refl.: (4,2,20), (6,-2,20), (-2,-4,20), (-4,6,20), (-6,4,20)								
LiNbO3	(0,8,4)	11.267	70.96	11.879	10.7	4.114	43.87	51.42	67.59
	Equiv. Refl.: (8,-8,4), (-8,0,4)								
LiNbO3	(1,6,16)	11.59	76.51	11.679	10.5	2.86	30.11	35.75	46.74
	Equiv. Refl.: (6,-7,16), (7,-6,16), (-1,7,16), (-6,-1,16), (-7,1,16)								
LiNbO3	(2,4,-20)	11.581	76.33	11.541	10.8	2.9	31.34	36.25	47.92
	Equiv. Refl.: (4,-6,-20), (6,-4,-20), (-2,6,-20), (-4,-2,-20), (-6,2,-20)								
LiNbO3	(3,5,-14)	11.573	76.16	11.477	11	2.937	32.37	36.71	48.94
	Equiv. Refl.: (5,-8,-14), (8,-5,-14), (-3,8,-14), (-5,-3,-14), (-8,3,-14)								
LiNbO3	(0,-6,-18)	11.593	76.57	11.424	10.8	2.847	30.77	35.59	47.05
	Equiv. Refl.: (6,0,-18), (-6,6,-18)								
LiNbO3	(2,7,-2)	11.417	73.31	11.102	10.1	3.574	35.98	44.68	57.36
	Equiv. Refl.: (7,-9,-2), (9,-7,-2), (-2,9,-2), (-7,-2,-2), (-9,2,-2)								
LiNbO3	(2,-9,2)	11.417	73.31	11.089	10.1	3.574	35.98	44.68	57.36
	Equiv. Refl.: (7,2,2), (9,-2,2), (-2,-7,2), (-7,9,2), (-9,7,2)								
LiNbO3	(1,-7,-16)	11.59	76.51	11.011	10.5	2.86	30.11	35.75	46.74
	Equiv. Refl.: (6,1,-16), (7,-1,-16), (-1,-6,-16), (-6,7,-16), (-7,6,-16)								
Sapph	(1,1,24)	11.748	80.27	10.919	8.8	2.043	17.94	25.54	31.21
	Equiv. Refl.: (1,1,-24), (1,-2,24), (1,-2,-24), (2,-1,24), (2,-1,-24), (-1,2,24), (-1,2,-24), (-1,-1,24), (-1,-1,-24), (-2,1,24), (-2,1,-24)								
Quartz	(0,6,7)	11.87	84.78	10.847	9.2	1.088	9.99	13.6	16.88
	Equiv. Refl.: (0,-6,-7)								
Quartz	(6,0,-7)	11.87	84.78	10.832	9.2	1.088	9.98	13.6	16.87
	Equiv. Refl.: (6,-6,7), (-6,0,7), (-6,6,-7)								
Quartz	(3,-6,-8)	11.896	86.45	10.617	9.2	0.74	6.83	9.25	11.5
Quartz	(3,3,8)	11.896	86.45	10.616	9.2	0.74	6.83	9.25	11.5
Quartz	(-6,3,-8)	11.896	86.45	10.61	9.2	0.74	6.83	9.25	11.5
Quartz	(-6,3,8)	11.896	86.45	10.608	9.2	0.74	6.83	9.25	11.49
Quartz	(3,3,-8)	11.896	86.45	10.602	9.2	0.74	6.82	9.25	11.49
Quartz	(3,-6,8)	11.896	86.45	10.601	9.2	0.74	6.82	9.25	11.49
LiNbO3	(0,-7,-14)	11.573	76.16	10.291	9.4	2.937	27.57	36.71	45.91
	Equiv. Refl.: (7,0,-14), (-7,7,-14)								

Ei =	11.919	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(0,7,14)	11.573	76.16	10.081	9.4	2.937	27.57	36.71	45.91
	Equiv. Refl.: (7,-7,14), (-7,0,14)								
Quartz	(-3,6,8)	11.896	86.45	9.938	9.2	0.74	6.83	9.25	11.5
Quartz	(-3,-3,-8)	11.896	86.45	9.937	9.2	0.74	6.83	9.25	11.5
Quartz	(6,-3,8)	11.896	86.45	9.931	9.2	0.74	6.83	9.25	11.5
Quartz	(6,-3,-8)	11.896	86.45	9.928	9.2	0.74	6.83	9.25	11.49
Quartz	(-3,-3,8)	11.896	86.45	9.923	9.2	0.74	6.82	9.25	11.49
Quartz	(-3,6,-8)	11.896	86.45	9.922	9.2	0.74	6.82	9.25	11.49
LiNbO3	(3,6,-6)	11.358	72.35	9.834	8.8	3.792	33.33	47.4	57.94
	Equiv. Refl.: (6,-9,-6), (9,-6,-6), (-3,9,-6), (-6,-3,-6), (-9,3,-6)								
LiNbO3	(3,-9,6)	11.358	72.35	9.809	8.8	3.792	33.33	47.4	57.94
	Equiv. Refl.: (6,3,6), (9,-3,6), (-3,-6,6), (-6,9,6), (-9,6,6)								
Sapph	(0,7,-10)	11.562	75.94	9.674	7.6	2.984	22.67	37.3	43.65
	Equiv. Refl.: (0,-7,10), (7,0,10), (7,-7,-10), (-7,0,-10), (-7,7,10)								
LiNbO3	(2,7,4)	11.521	75.16	9.604	8.6	3.159	27.2	39.48	47.94
	Equiv. Refl.: (7,-9,4), (9,-7,4), (-2,9,4), (-7,-2,4), (-9,2,4)								
LiNbO3	(3,-9,-6)	11.358	72.35	9.178	8.2	3.792	31.02	47.4	56.64
	Equiv. Refl.: (6,3,-6), (9,-3,-6), (-3,-6,-6), (-6,9,-6), (-9,6,-6)								
LiNbO3	(2,-9,-4)	11.521	75.16	8.996	8.6	3.159	27.2	39.48	47.94
	Equiv. Refl.: (7,2,-4), (9,-2,-4), (-2,-7,-4), (-7,9,-4), (-9,7,-4)								
LiNbO3	(3,6,6)	11.358	72.35	8.854	8.2	3.792	31.02	47.4	56.64
	Equiv. Refl.: (6,-9,6), (9,-6,6), (-6,-3,6)								
LiNbO3	(-3,9,6)	11.358	72.35	8.853	8.2	3.792	31.02	47.4	56.64
	Equiv. Refl.: (-9,3,6)								
LiNbO3	(0,4,-22)	11.301	71.47	8.399	7.5	3.994	30.09	49.93	58.29
	Equiv. Refl.: (4,-4,-22), (-4,0,-22)								
LiNbO3	(0,-4,22)	11.301	71.47	8.075	7.5	3.994	30.09	49.93	58.29
	Equiv. Refl.: (4,0,22), (-4,4,22)								
LiNbO3	(4,5,8)	11.434	73.6	8.07	7.4	3.508	26.04	43.85	51
	Equiv. Refl.: (5,-9,8), (9,-5,8), (-4,9,8), (-5,-4,8), (-9,4,8)								
Quartz	(0,7,-5)	11.701	79.02	8.005	6.3	2.313	14.6	28.91	32.38
	Equiv. Refl.: (0,-7,5)								
Quartz	(7,0,5)	11.701	79.02	8.001	6.3	2.313	14.59	28.91	32.38
	Equiv. Refl.: (-7,0,-5), (-7,7,5)								
Quartz	(7,-7,-5)	11.701	79.02	8	6.3	2.313	14.59	28.91	32.38
LiNbO3	(4,-9,-8)	11.434	73.6	7.768	7.4	3.508	26.04	43.85	51
	Equiv. Refl.: (5,4,-8), (9,-4,-8), (-4,-5,-8), (-5,9,-8), (-9,5,-8)								
LiNbO3	(0,-3,-24)	11.514	75.03	7.532	7	3.187	22.21	39.84	45.61
	Equiv. Refl.: (3,0,-24), (-3,3,-24)								
LiNbO3	(0,3,-24)	11.514	75.03	7.393	6.9	3.187	21.95	39.84	45.49
	Equiv. Refl.: (3,-3,-24), (-3,0,-24)								
LiNbO3	(0,5,-20)	11.328	71.88	7.301	6.5	3.9	25.24	48.75	54.9
	Equiv. Refl.: (5,-5,-20), (-5,0,-20)								
Sapph	(3,3,18)	11.615	77.04	7.176	5.9	2.743	16.24	34.28	37.94
	Equiv. Refl.: (3,3,-18), (3,-6,18), (3,-6,-18), (6,-3,18), (6,-3,-18), (-3,6,18), (-3,6,-18), (-3,-3,18), (-3,-3,-18), (-6,3,18), (-6,3,-18)								
Sapph	(2,6,-10)	11.852	83.92	6.981	6.3	1.269	8	15.86	17.76
	Equiv. Refl.: (2,-8,10), (6,2,10), (6,-8,-10), (8,-2,10), (8,-6,-10), (-2,8,-10), (-2,-6,10), (-6,8,10), (-6,-2,-10), (-8,2,-10), (-8,6,10)								
LiNbO3	(0,3,24)	11.514	75.03	6.875	7	3.187	22.21	39.84	45.61
	Equiv. Refl.: (3,-3,24), (-3,0,24)								

Ei = Cryst	11.919 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
LiNbO3	(0,-3,24)	11.514	75.03	6.808	6.9	3.187	21.95	39.84	45.49
	Equiv. Refl.: (3,0,24), (-3,3,24)								
Quartz	(4,0,9)	11.855	84.04	6.777	5.9	1.244	7.35	15.55	17.2
Quartz	(4,-4,-9)	11.855	84.04	6.776	5.9	1.244	7.35	15.55	17.2
Quartz	(-4,0,-9)	11.855	84.04	6.775	5.9	1.244	7.35	15.55	17.2
Quartz	(-4,4,9)	11.855	84.04	6.774	5.9	1.244	7.35	15.55	17.2
Quartz	(0,4,-9)	11.855	84.04	6.765	5.9	1.244	7.34	15.55	17.19
	Equiv. Refl.: (0,-4,9)								
Sapph	(1,7,6)	11.714	79.35	6.59	5.6	2.242	12.54	28.02	30.7
	Equiv. Refl.: (1,7,-6), (1,-8,6), (1,-8,-6), (7,1,6), (7,1,-6), (7,-8,6), (7,-8,-6), (8,-1,6), (8,-1,-6), (8,-7,6), (8,-7,-6), (-1,8,6), (-1,8,-6), (-1,-7,6), (-1,-7,-6), (-7,8,6), (-7,8,-6), (-7,-1,6), (-7,-1,-6), (-8,1,6), (-8,1,-6), (-8,7,6), (-8,7,-6)								
LiNbO3	(0,-5,20)	11.328	71.88	6.368	6.5	3.9	25.24	48.75	54.9
	Equiv. Refl.: (5,0,20), (-5,5,20)								
Sapph	(0,4,20)	11.284	71.22	6.249	5	4.053	20.27	50.67	54.57
	Equiv. Refl.: (0,-4,-20), (4,0,-20), (4,-4,20), (-4,0,20), (-4,4,-20)								
Quartz	(9,-6,-2)	11.79	81.56	6.14	5.2	1.769	9.23	22.12	23.97
	Equiv. Refl.: (-3,9,-2), (-3,-6,2), (-6,9,2)								
Quartz	(9,-3,2)	11.79	81.56	6.139	5.2	1.769	9.23	22.12	23.97
	Equiv. Refl.: (-6,-3,-2)								
Quartz	(3,6,-2)	11.79	81.56	6.093	5.2	1.769	9.23	22.12	23.97
	Equiv. Refl.: (3,-9,2), (6,3,2), (6,-9,-2), (-9,3,-2), (-9,6,2)								
Quartz	(5,4,-3)	11.888	85.89	5.833	5.4	0.857	4.64	10.71	11.67
Quartz	(5,-9,3)	11.888	85.89	5.832	5.4	0.857	4.64	10.71	11.67
	Equiv. Refl.: (-9,4,3)								
Quartz	(4,-9,-3)	11.888	85.89	5.831	5.4	0.857	4.64	10.71	11.67
	Equiv. Refl.: (-9,5,-3)								
Quartz	(4,5,3)	11.888	85.89	5.83	5.4	0.857	4.64	10.71	11.67
Quartz	(3,6,2)	11.79	81.56	5.765	4.8	1.769	8.41	22.12	23.66
	Equiv. Refl.: (3,-9,-2)								
Quartz	(9,-6,2)	11.79	81.56	5.751	4.8	1.769	8.41	22.12	23.66
Quartz	(9,-3,-2)	11.79	81.56	5.75	4.8	1.769	8.41	22.12	23.66
	Equiv. Refl.: (-6,9,-2), (-6,-3,2)								
Quartz	(-3,9,2)	11.79	81.56	5.748	4.8	1.769	8.41	22.12	23.66
	Equiv. Refl.: (-3,-6,-2)								
LiNbO3	(1,6,-17)	11.871	84.88	5.727	7.9	1.069	8.49	13.36	15.83
	Equiv. Refl.: (1,-7,17), (6,1,17), (7,-1,17), (-1,7,-17), (-1,-6,17), (-6,-1,-17), (-7,1,-17)								
LiNbO3	(6,-7,-17)	11.871	84.88	5.726	7.9	1.069	8.49	13.36	15.83
	Equiv. Refl.: (7,-6,-17), (-6,7,17), (-7,6,17)								
Quartz	(-5,-4,3)	11.888	85.89	5.657	5.4	0.857	4.64	10.71	11.67
Quartz	(9,-4,-3)	11.888	85.89	5.656	5.4	0.857	4.64	10.71	11.67
	Equiv. Refl.: (9,-5,3), (-5,9,-3)								
Quartz	(-4,9,3)	11.888	85.89	5.655	5.4	0.857	4.64	10.71	11.67
Quartz	(-4,-5,-3)	11.888	85.89	5.654	5.4	0.857	4.64	10.71	11.67
Quartz	(6,3,-2)	11.79	81.56	5.531	4.8	1.769	8.41	22.12	23.66
	Equiv. Refl.: (6,-9,2), (-9,3,2), (-9,6,-2)								
Quartz	(0,8,-1)	11.712	79.31	5.379	4.5	2.25	10.06	28.12	29.87
	Equiv. Refl.: (0,-8,1), (8,0,1), (8,-8,-1), (-8,0,-1), (-8,8,1)								
Quartz	(4,-1,-9)	11.583	76.36	5.15	4	2.892	11.67	36.15	37.99
Quartz	(4,-3,9)	11.583	76.36	5.148	4	2.892	11.67	36.15	37.99

Ei = Cryst	11.919 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(-1,4,9)	11.583	76.36	5.147	4	2.892	11.67	36.15	37.99
	Equiv. Refl.: (-1,-3,-9), (-3,4,-9), (-3,-1,9)								
Quartz	(-4,1,9)	11.583	76.36	5.07	4	2.892	11.67	36.15	37.99
Quartz	(1,-4,-9)	11.583	76.36	5.068	4	2.892	11.67	36.15	37.99
	Equiv. Refl.: (-4,3,-9)								
Quartz	(1,3,9)	11.583	76.36	5.067	4	2.892	11.67	36.15	37.98
	Equiv. Refl.: (3,1,-9), (3,-4,9)								
Quartz	(0,1,-10)	11.562	75.95	4.908	3.9	2.983	11.59	37.29	39.05
	Equiv. Refl.: (0,-1,10)								
Quartz	(1,0,10)	11.562	75.95	4.905	3.9	2.983	11.58	37.29	39.05
	Equiv. Refl.: (-1,0,-10)								
Quartz	(1,-1,-10)	11.562	75.95	4.904	3.9	2.983	11.58	37.29	39.05
	Equiv. Refl.: (-1,1,10)								
Sapph	(0,7,8)	11.202	70.02	4.813	3.8	4.333	16.52	54.16	56.62
	Equiv. Refl.: (0,-7,-8), (7,0,-8), (7,-7,8), (-7,0,8), (-7,7,-8)								
Quartz	(0,4,9)	11.855	84.04	4.787	4.3	1.244	5.35	15.55	16.44
	Equiv. Refl.: (0,-4,-9)								
Quartz	(-4,4,-9)	11.855	84.04	4.776	4.3	1.244	5.34	15.55	16.44
Quartz	(4,-4,9)	11.855	84.04	4.774	4.3	1.244	5.34	15.55	16.44
	Equiv. Refl.: (-4,0,9)								
Quartz	(4,0,-9)	11.855	84.04	4.772	4.3	1.244	5.34	15.55	16.44
Quartz	(0,1,10)	11.562	75.95	4.769	3.8	2.983	11.25	37.29	38.95
	Equiv. Refl.: (0,-1,-10)								
Quartz	(1,0,-10)	11.562	75.95	4.766	3.8	2.983	11.24	37.29	38.95
Quartz	(1,-1,10)	11.562	75.95	4.765	3.8	2.983	11.24	37.29	38.95
	Equiv. Refl.: (-1,0,10), (-1,1,-10)								
Quartz	(-3,4,9)	11.583	76.36	4.651	3.7	2.892	10.72	36.15	37.71
	Equiv. Refl.: (-3,-1,-9)								
Quartz	(4,-3,-9)	11.583	76.36	4.649	3.7	2.892	10.72	36.15	37.7
	Equiv. Refl.: (-1,-3,9)								
Quartz	(4,-1,9)	11.583	76.36	4.648	3.7	2.892	10.71	36.15	37.7
	Equiv. Refl.: (-1,4,-9)								
Quartz	(3,1,9)	11.583	76.36	4.62	3.7	2.892	10.72	36.15	37.71
	Equiv. Refl.: (3,-4,-9)								
Quartz	(1,3,-9)	11.583	76.36	4.618	3.7	2.892	10.72	36.15	37.7
	Equiv. Refl.: (-4,3,9)								
Quartz	(1,-4,9)	11.583	76.36	4.617	3.7	2.892	10.71	36.15	37.7
Quartz	(-4,1,-9)	11.583	76.36	4.616	3.7	2.892	10.71	36.15	37.7
Quartz	(-6,7,6)	11.775	81.08	4.492	3.7	1.872	6.95	23.39	24.4
	Equiv. Refl.: (-6,-1,-6)								
Quartz	(-1,7,-6)	11.775	81.08	4.491	3.7	1.872	6.95	23.39	24.4
Quartz	(-1,-6,6)	11.775	81.08	4.489	3.7	1.872	6.94	23.39	24.4
Quartz	(7,-1,6)	11.775	81.08	4.486	3.7	1.872	6.94	23.39	24.4
	Equiv. Refl.: (7,-6,-6)								
Quartz	(-5,-4,-3)	11.888	85.89	4.381	4.3	0.857	3.68	10.71	11.33
Quartz	(-5,9,3)	11.888	85.89	4.38	4.3	0.857	3.68	10.71	11.33
Quartz	(9,-4,3)	11.888	85.89	4.375	4.3	0.857	3.68	10.71	11.32
	Equiv. Refl.: (9,-5,-3)								
Quartz	(-4,9,-3)	11.888	85.89	4.369	4.3	0.857	3.68	10.71	11.32
	Equiv. Refl.: (-4,-5,3)								

Ei =	11.919	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(5,4,2)	11.608	76.89	4.219	3.4	2.776	9.36	34.7	35.94
	Equiv. Refl.: (5,-9,-2)								
Quartz	(4,5,-2)	11.608	76.89	4.218	3.4	2.776	9.36	34.7	35.94
	Equiv. Refl.: (4,-9,2), (-9,4,-2), (-9,5,2)								
Sapph	(1,5,-16)	11.335	71.99	4.205	3.4	3.875	13.26	48.44	50.22
	Equiv. Refl.: (1,-6,16), (5,1,16), (5,-6,-16), (6,-1,16), (6,-5,-16), (-1,6,-16), (-1,-5,16), (-5,6,16), (-5,-1,-16), (-6,1,-16), (-6,5,16)								
Quartz	(1,-7,6)	11.775	81.08	4.147	3.7	1.872	6.95	23.39	24.4
	Equiv. Refl.: (6,1,6), (6,-7,-6)								
Quartz	(1,6,-6)	11.775	81.08	4.145	3.7	1.872	6.94	23.39	24.4
Quartz	(-7,1,-6)	11.775	81.08	4.142	3.7	1.872	6.94	23.39	24.4
	Equiv. Refl.: (-7,6,6)								
Quartz	(5,4,3)	11.888	85.89	4.141	4.3	0.857	3.68	10.71	11.33
Quartz	(5,-9,-3)	11.888	85.89	4.14	4.3	0.857	3.68	10.71	11.33
Quartz	(1,6,6)	11.775	81.08	4.139	3.4	1.872	6.43	23.39	24.26
	Equiv. Refl.: (1,-7,-6), (-7,1,6), (-7,6,-6)								
Quartz	(-9,4,-3)	11.888	85.89	4.135	4.3	0.857	3.68	10.71	11.32
	Equiv. Refl.: (-9,5,3)								
Quartz	(6,1,-6)	11.775	81.08	4.134	3.4	1.872	6.42	23.39	24.26
Quartz	(6,-7,6)	11.775	81.08	4.133	3.4	1.872	6.42	23.39	24.26
Quartz	(4,5,-3)	11.888	85.89	4.13	4.3	0.857	3.68	10.71	11.32
	Equiv. Refl.: (4,-9,3)								
Quartz	(-5,9,2)	11.608	76.89	4.096	3.4	2.776	9.36	34.7	35.94
	Equiv. Refl.: (-5,-4,-2)								
Quartz	(9,-4,2)	11.608	76.89	4.095	3.4	2.776	9.36	34.7	35.94
	Equiv. Refl.: (-4,9,-2), (-4,-5,2)								
Quartz	(9,-5,-2)	11.608	76.89	4.094	3.4	2.776	9.36	34.7	35.94
Quartz	(4,-2,9)	11.491	74.6	4.084	3.2	3.284	10.51	41.04	42.37
	Equiv. Refl.: (4,-2,-9)								
Quartz	(-2,4,-9)	11.491	74.6	4.083	3.2	3.284	10.5	41.04	42.37
Quartz	(-2,-2,9)	11.491	74.6	4.082	3.2	3.284	10.5	41.04	42.37
Quartz	(-2,4,9)	11.491	74.6	4.081	3.2	3.284	10.5	41.04	42.37
	Equiv. Refl.: (-2,-2,-9)								
Quartz	(-4,-5,-1)	11.437	73.65	4.066	3.2	3.496	11.14	43.7	45.1
	Equiv. Refl.: (-5,9,-1), (-5,-4,1)								
Quartz	(9,-4,-1)	11.437	73.65	4.065	3.2	3.496	11.14	43.7	45.1
	Equiv. Refl.: (9,-5,1), (-4,9,1)								
Sapph	(2,5,15)	11.812	82.32	4.031	3.8	1.608	6.12	20.09	21.01
	Equiv. Refl.: (2,5,-15), (2,-7,15), (2,-7,-15), (5,2,15), (5,2,-15), (5,-7,15), (5,-7,-15), (7,-2,15), (7,-2,-15), (7,-5,15), (7,-5,-15), (-2,7,15), (-2,7,-15), (-2,-5,15), (-2,-5,-15), (-5,7,15), (-5,7,-15), (-5,-2,15), (-5,-2,-15), (-7,2,15), (-7,2,-15), (-7,5,15), (-7,5,-15)								
Quartz	(4,5,1)	11.437	73.65	3.974	3.2	3.496	11.14	43.7	45.1
	Equiv. Refl.: (5,4,-1), (5,-9,1)								
Quartz	(4,-9,-1)	11.437	73.65	3.973	3.2	3.496	11.14	43.7	45.1
	Equiv. Refl.: (-9,4,1), (-9,5,-1)								
Quartz	(-4,2,9)	11.491	74.6	3.929	3.2	3.284	10.51	41.04	42.37
	Equiv. Refl.: (-4,2,-9)								
Quartz	(2,-4,9)	11.491	74.6	3.928	3.2	3.284	10.5	41.04	42.37
Quartz	(2,2,-9)	11.491	74.6	3.927	3.2	3.284	10.5	41.04	42.37
Quartz	(2,2,9)	11.491	74.6	3.926	3.2	3.284	10.5	41.04	42.37

Ei =	11.919	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(2,-4,-9)	11.491	74.6	3.925	3.2	3.284	10.5	41.04	42.37
Sapph	(4,5,-1)	11.76	80.62	3.768	3.5	1.969	6.83	24.61	25.54
	Equiv. Refl.: (4,-9,1), (5,4,1), (5,-9,-1), (9,-4,1), (9,-5,-1), (-4,9,-1), (-4,-5,1), (-5,9,1), (-5,-4,-1), (-9,4,-1), (-9,5,1)								
Quartz	(7,-6,6)	11.775	81.08	3.725	3.4	1.872	6.43	23.39	24.26
	Equiv. Refl.: (-1,7,6), (-1,-6,-6)								
Quartz	(7,-1,-6)	11.775	81.08	3.724	3.4	1.872	6.43	23.39	24.26
Quartz	(-6,-1,6)	11.775	81.08	3.721	3.4	1.872	6.42	23.39	24.26
Quartz	(-6,7,-6)	11.775	81.08	3.719	3.4	1.872	6.42	23.39	24.26
Quartz	(2,0,10)	11.835	83.18	3.679	3.3	1.427	4.72	17.83	18.45
	Equiv. Refl.: (-2,0,-10)								
Quartz	(2,-2,-10)	11.835	83.18	3.677	3.3	1.427	4.72	17.83	18.45
Quartz	(-2,2,10)	11.835	83.18	3.676	3.3	1.427	4.72	17.83	18.45
Quartz	(0,2,-10)	11.835	83.18	3.666	3.3	1.427	4.71	17.83	18.44
	Equiv. Refl.: (0,-2,10)								
Sapph	(2,3,20)	11.581	76.33	3.563	3.3	2.899	9.64	36.24	37.5
	Equiv. Refl.: (2,-5,-20), (3,2,-20), (3,-5,20), (5,-2,-20), (5,-3,20), (-2,5,20), (-2,-3,-20), (-3,5,-20), (-3,-2,20), (-5,2,20), (-5,3,-20)								
Quartz	(0,8,2)	11.879	85.33	3.468	3.6	0.973	3.53	12.16	12.66
	Equiv. Refl.: (0,-8,-2)								
Quartz	(8,0,-2)	11.879	85.33	3.467	3.6	0.973	3.53	12.16	12.66
	Equiv. Refl.: (8,-8,2), (-8,0,2), (-8,8,-2)								
Sapph	(1,7,0)	11.358	72.35	3.401	3.1	3.792	11.75	47.4	48.83
	Equiv. Refl.: (1,-8,0), (7,1,0), (7,-8,0), (8,-1,0), (8,-7,0), (-1,8,0), (-1,-7,0), (-7,8,0), (-7,-1,0), (-8,1,0), (-8,7,0)								
Quartz	(6,-1,7)	11.414	73.26	3.39	2.8	3.585	9.87	44.82	45.89
	Equiv. Refl.: (-1,6,-7), (-1,-5,7)								
Quartz	(6,-5,7)	11.414	73.26	3.389	2.8	3.585	9.87	44.82	45.89
Quartz	(-5,6,7)	11.414	73.26	3.386	2.8	3.585	9.86	44.82	45.89
	Equiv. Refl.: (-5,-1,-7)								
Quartz	(1,5,-7)	11.414	73.26	3.371	2.8	3.585	9.87	44.82	45.89
	Equiv. Refl.: (1,-6,7), (-6,1,-7)								
Quartz	(-6,5,7)	11.414	73.26	3.37	2.8	3.585	9.87	44.82	45.89
Quartz	(5,1,7)	11.414	73.26	3.367	2.8	3.585	9.86	44.82	45.89
	Equiv. Refl.: (5,-6,-7)								
Sapph	(3,5,10)	11.562	75.94	3.334	3.1	2.984	9.32	37.3	38.45
	Equiv. Refl.: (3,-8,-10), (5,3,-10), (5,-8,10), (8,-3,-10), (8,-5,10), (-3,8,10), (-3,-5,-10), (-5,8,-10), (-5,-3,10), (-8,3,10), (-8,5,-10)								
Quartz	(3,6,0)	11.564	75.99	3.311	2.6	2.974	7.64	37.17	37.95
	Equiv. Refl.: (3,-9,0), (6,3,0), (6,-9,0), (-9,3,0), (-9,6,0)								
Quartz	(0,8,0)	11.656	77.94	3.29	2.7	2.547	6.89	31.83	32.57
	Equiv. Refl.: (0,-8,0), (8,0,0), (8,-8,0), (-8,0,0), (-8,8,0)								
LiNbO3	(2,7,7)	11.804	82.04	3.2	4.8	1.666	8.03	20.83	22.32
	Equiv. Refl.: (2,-9,-7), (7,2,-7), (7,-9,7), (9,-2,-7), (9,-7,7), (-2,9,7), (-2,-7,-7), (-7,9,-7), (-7,-2,7), (-9,2,7), (-9,7,-7)								
Quartz	(-4,7,-6)	11.221	70.29	3.169	2.5	4.269	10.85	53.37	54.46
	Equiv. Refl.: (-4,-3,6)								
Quartz	(-3,-4,-6)	11.221	70.29	3.167	2.5	4.269	10.84	53.37	54.46
Quartz	(7,-3,-6)	11.221	70.29	3.166	2.5	4.269	10.84	53.37	54.46
	Equiv. Refl.: (7,-4,6), (-3,7,6)								

Ei = Cryst	11.919 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(6,-8,-4)	11.465	74.13	3.143	2.8	3.389	9.47	42.36	43.41
Quartz	(6,2,4) Equiv. Refl.: (-8,2,-4), (-8,6,4)	11.465	74.13	3.142	2.8	3.389	9.47	42.36	43.41
Quartz	(2,6,-4) Equiv. Refl.: (2,-8,4)	11.465	74.13	3.141	2.8	3.389	9.47	42.36	43.41
Quartz	(4,3,-6) Equiv. Refl.: (4,-7,6)	11.221	70.29	3.113	2.5	4.269	10.85	53.37	54.46
Quartz	(-1,8,3) Equiv. Refl.: (-1,-7,-3), (-7,8,-3), (-7,-1,3)	11.526	75.24	3.112	2.8	3.14	8.75	39.25	40.22
Quartz	(3,4,6) Equiv. Refl.: (8,-1,-3), (8,-7,3)	11.221	70.29	3.111	2.5	4.269	10.84	53.37	54.46
Quartz	(3,-7,-6) Equiv. Refl.: (-7,3,6), (-7,4,-6)	11.221	70.29	3.11	2.5	4.269	10.84	53.37	54.46
Sapph	(2,2,21) Equiv. Refl.: (2,2,-21), (2,-4,21), (2,-4,-21), (4,-2,21), (4,-2,-21), (-2,4,21), (-2,4,-21), (-2,-2,21), (-2,-2,-21), (-4,2,21), (-4,2,-21)	11.297	71.41	3.073	2.5	4.009	10.07	50.12	51.12
Quartz	(9,-3,0) Equiv. Refl.: (9,-6,0), (-3,9,0), (-3,-6,0), (-6,9,0), (-6,-3,0)	11.564	75.99	3.055	2.6	2.974	7.64	37.17	37.95
Quartz	(-6,8,4)	11.465	74.13	3.022	2.8	3.389	9.47	42.36	43.41
Quartz	(8,-2,4) Equiv. Refl.: (8,-6,-4), (-6,-2,-4)	11.465	74.13	3.021	2.8	3.389	9.47	42.36	43.41
Quartz	(-2,8,-4) Equiv. Refl.: (-2,-6,4)	11.465	74.13	3.02	2.8	3.389	9.47	42.36	43.41
Quartz	(1,7,3) Equiv. Refl.: (1,-8,-3), (7,1,-3), (7,-8,3), (-8,1,3), (-8,7,-3)	11.526	75.24	2.998	2.8	3.14	8.75	39.25	40.22
Quartz	(1,7,-3) Equiv. Refl.: (1,-8,3), (7,1,3), (7,-8,-3), (-8,1,-3), (-8,7,3)	11.526	75.24	2.932	2.6	3.14	8.18	39.25	40.1
Quartz	(4,4,-5)	11.61	76.92	2.892	2.4	2.769	6.57	34.62	35.24
Quartz	(4,-8,5)	11.61	76.92	2.891	2.4	2.769	6.57	34.62	35.24
Quartz	(-8,4,5) Equiv. Refl.: (-8,4,-5)	11.61	76.92	2.89	2.4	2.769	6.57	34.62	35.23
Quartz	(4,4,5) Equiv. Refl.: (4,-8,-5)	11.61	76.92	2.889	2.4	2.769	6.57	34.62	35.23
Quartz	(-4,-4,5)	11.61	76.92	2.843	2.4	2.769	6.57	34.62	35.24
Quartz	(-4,8,-5)	11.61	76.92	2.842	2.4	2.769	6.57	34.62	35.24
Quartz	(8,-4,5) Equiv. Refl.: (8,-4,-5), (-4,-4,-5)	11.61	76.92	2.841	2.4	2.769	6.57	34.62	35.23
Quartz	(1,-5,-8) Equiv. Refl.: (-4,8,5), (-5,1,8), (-5,4,-8)	11.348	72.2	2.84	2.5	3.828	9.69	47.85	48.82
Quartz	(1,4,8)	11.348	72.2	2.839	2.5	3.828	9.69	47.85	48.82
Quartz	(4,-5,8)	11.348	72.2	2.837	2.5	3.828	9.68	47.85	48.82
Quartz	(4,1,-8)	11.348	72.2	2.836	2.5	3.828	9.68	47.85	48.82
Quartz	(5,-1,-8) Equiv. Refl.: (5,-4,8)	11.348	72.2	2.753	2.5	3.828	9.69	47.85	48.82
Quartz	(-1,5,8)	11.348	72.2	2.752	2.5	3.828	9.69	47.85	48.82
Quartz	(-1,-4,-8)	11.348	72.2	2.751	2.5	3.828	9.69	47.85	48.82
Quartz	(-4,5,-8)	11.348	72.2	2.75	2.5	3.828	9.68	47.85	48.82
Quartz	(-4,-1,8)	11.348	72.2	2.749	2.5	3.828	9.68	47.85	48.82
Quartz	(8,-1,3) Equiv. Refl.: (8,-7,-3), (-1,8,-3), (-1,-7,3), (-7,8,3), (-7,-1,-3)	11.526	75.24	2.704	2.6	3.14	8.18	39.25	40.1

Ei =	11.919	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(1,5,17)	11.662	78.08	2.482	2.5	2.517	6.26	31.46	32.08
	Equiv. Refl.: (1,-6,-17), (5,1,-17), (5,-6,17), (6,-1,-17), (6,-5,17), (-1,6,17), (-1,-5,-17), (-5,6,-17), (-5,-1,17), (-6,1,17), (-6,5,-17)								
Quartz	(-9,3,-1)	11.621	77.17	2.409	2.1	2.715	5.7	33.94	34.42
Quartz	(3,6,-1)	11.621	77.17	2.408	2.1	2.715	5.69	33.94	34.42
	Equiv. Refl.: (3,-9,1), (6,3,1), (6,-9,-1), (-9,6,1)								
Quartz	(4,5,-1)	11.437	73.65	2.357	2.1	3.496	7.39	43.7	44.32
	Equiv. Refl.: (4,-9,1), (5,4,1), (5,-9,-1), (-9,4,-1), (-9,5,1)								
Quartz	(9,-5,-1)	11.437	73.65	2.335	2.1	3.496	7.39	43.7	44.32
	Equiv. Refl.: (-4,9,-1), (-4,-5,1), (-5,9,1), (-5,-4,-1)								
Quartz	(9,-4,1)	11.437	73.65	2.334	2.1	3.496	7.39	43.7	44.32
Quartz	(6,-6,-7)	11.87	84.78	1.941	2.5	1.088	2.7	13.6	13.87
Quartz	(6,0,7)	11.87	84.78	1.939	2.5	1.088	2.7	13.6	13.87
	Equiv. Refl.: (-6,0,-7), (-6,6,7)								
Quartz	(0,6,-7)	11.87	84.78	1.938	2.5	1.088	2.7	13.6	13.87
	Equiv. Refl.: (0,-6,7)								
Quartz	(3,5,5)	11.701	79.02	1.933	2.2	2.313	4.98	28.91	29.33
	Equiv. Refl.: (3,-8,-5), (-8,5,-5)								
Quartz	(-8,3,5)	11.701	79.02	1.932	2.2	2.313	4.98	28.91	29.33
Quartz	(5,3,-5)	11.701	79.02	1.931	2.2	2.313	4.97	28.91	29.33
	Equiv. Refl.: (5,-8,5)								
LiNbO3	(2,7,-5)	11.599	76.7	1.918	3	2.818	8.49	35.23	36.24
	Equiv. Refl.: (2,-9,5), (7,2,5), (7,-9,-5), (9,-2,5), (9,-7,-5), (-2,9,-5), (-2,-7,5), (-7,9,5), (-7,-2,-5), (-9,2,-5), (-9,7,5)								
Quartz	(8,-5,5)	11.701	79.02	1.89	2.2	2.313	4.98	28.91	29.33
Quartz	(8,-3,-5)	11.701	79.02	1.889	2.2	2.313	4.98	28.91	29.33
	Equiv. Refl.: (-3,8,5), (-3,-5,-5)								
Quartz	(-5,8,-5)	11.701	79.02	1.887	2.2	2.313	4.97	28.91	29.33
	Equiv. Refl.: (-5,-3,5)								
Sapph	(2,6,-7)	11.351	72.25	1.856	2.1	3.816	7.83	47.7	48.34
	Equiv. Refl.: (2,-8,7), (6,2,7), (6,-8,-7), (8,-2,7), (8,-6,-7), (-2,8,-7), (-2,-6,7), (-6,8,7), (-6,-2,-7), (-8,2,-7), (-8,6,7)								
Quartz	(9,-3,1)	11.621	77.17	1.767	2.1	2.715	5.7	33.94	34.42
	Equiv. Refl.: (9,-6,-1), (-6,9,1), (-6,-3,-1)								
Quartz	(-3,9,-1)	11.621	77.17	1.766	2.1	2.715	5.69	33.94	34.42
	Equiv. Refl.: (-3,-6,1)								
Sapph	(4,4,9)	11.273	71.06	1.617	1.8	4.091	7.39	51.14	51.67
	Equiv. Refl.: (4,4,-9), (4,-8,9), (4,-8,-9), (8,-4,9), (8,-4,-9), (-4,8,9), (-4,8,-9), (-4,-4,9), (-4,-4,-9), (-8,4,9), (-8,4,-9)								
Quartz	(3,0,9)	11.21	70.14	1.612	1.7	4.304	7.46	53.8	54.32
	Equiv. Refl.: (-3,0,-9)								
Quartz	(3,-3,-9)	11.21	70.14	1.611	1.7	4.304	7.46	53.8	54.32
	Equiv. Refl.: (-3,3,9)								
Quartz	(0,3,-9)	11.21	70.14	1.607	1.7	4.304	7.44	53.8	54.32
	Equiv. Refl.: (0,-3,9)								
LiNbO3	(2,7,1)	11.39	72.87	1.575	2.4	3.673	9	45.91	46.79
	Equiv. Refl.: (2,-9,-1), (7,2,-1), (7,-9,1), (9,-2,-1), (9,-7,1), (-2,9,1), (-2,-7,-1), (-7,9,-1), (-7,-2,1), (-9,2,1), (-9,7,-1)								

Ei =	11.919	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(3,5,-11)	11.767	80.84	1.545	2	1.921	3.77	24.01	24.31
	Equiv. Refl.: (3,-8,11), (5,3,11), (5,-8,-11), (8,-3,11), (8,-5,-11), (-3,8,-11), (-3,-5,11), (-5,8,11), (-5,-3,-11), (-8,3,-11), (-8,5,11)								
Quartz	(7,0,-5)	11.701	79.02	1.5	1.8	2.313	4.06	28.91	29.19
	Equiv. Refl.: (-7,0,5)								
Quartz	(7,-7,5)	11.701	79.02	1.499	1.8	2.313	4.06	28.91	29.19
	Equiv. Refl.: (-7,7,-5)								
Quartz	(0,7,5)	11.701	79.02	1.497	1.8	2.313	4.06	28.91	29.19
	Equiv. Refl.: (0,-7,-5)								
Sapph	(1,7,3)	11.448	73.84	1.488	1.7	3.454	5.94	43.17	43.58
	Equiv. Refl.: (1,7,-3), (1,-8,3), (1,-8,-3), (7,1,3), (7,1,-3), (7,-8,3), (7,-8,-3), (8,-1,3), (8,-1,-3), (8,-7,3), (8,-7,-3), (-1,8,3), (-1,8,-3), (-1,-7,3), (-1,-7,-3), (-7,8,3), (-7,8,-3), (-7,-1,3), (-7,-1,-3), (-8,1,3), (-8,1,-3), (-8,7,3), (-8,7,-3)								
Quartz	(-5,-3,-5)	11.701	79.02	1.448	1.7	2.313	3.86	28.91	29.16
Quartz	(-5,8,5)	11.701	79.02	1.447	1.7	2.313	3.86	28.91	29.16
Quartz	(-3,8,-5)	11.701	79.02	1.446	1.7	2.313	3.85	28.91	29.16
	Equiv. Refl.: (-3,-5,5)								
Quartz	(8,-3,5)	11.701	79.02	1.445	1.7	2.313	3.85	28.91	29.16
	Equiv. Refl.: (8,-5,-5)								
Sapph	(3,4,14)	11.331	71.93	1.405	1.6	3.889	6.27	48.62	49.02
	Equiv. Refl.: (3,-7,-14), (4,3,-14), (4,-7,14), (7,-3,-14), (7,-4,14), (-3,7,14), (-3,-4,-14), (-4,7,-14), (-4,-3,14), (-7,3,14), (-7,4,-14)								
Quartz	(5,3,5)	11.701	79.02	1.37	1.7	2.313	3.86	28.91	29.16
	Equiv. Refl.: (5,-8,-5)								
Quartz	(3,5,-5)	11.701	79.02	1.368	1.7	2.313	3.85	28.91	29.16
	Equiv. Refl.: (3,-8,5)								
Quartz	(-8,3,-5)	11.701	79.02	1.367	1.7	2.313	3.85	28.91	29.16
	Equiv. Refl.: (-8,5,5)								
Quartz	(5,-1,8)	11.348	72.2	1.363	1.5	3.828	5.73	47.85	48.19
	Equiv. Refl.: (5,-4,-8), (-1,5,-8), (-1,-4,8), (-4,5,8)								
Quartz	(-4,-1,-8)	11.348	72.2	1.362	1.5	3.828	5.73	47.85	48.19
Quartz	(5,2,-6)	11.408	73.17	1.348	1.5	3.605	5.38	45.07	45.39
	Equiv. Refl.: (5,-7,6)								
Quartz	(-7,2,6)	11.408	73.17	1.347	1.5	3.605	5.38	45.07	45.39
	Equiv. Refl.: (-7,5,-6)								
Quartz	(2,5,6)	11.408	73.17	1.346	1.5	3.605	5.38	45.07	45.39
	Equiv. Refl.: (2,-7,-6)								
Quartz	(1,4,-8)	11.348	72.2	1.333	1.5	3.828	5.74	47.85	48.19
	Equiv. Refl.: (1,-5,8)								
Quartz	(4,1,8)	11.348	72.2	1.332	1.5	3.828	5.73	47.85	48.19
	Equiv. Refl.: (4,-5,-8), (-5,1,-8), (-5,4,8)								
Quartz	(4,5,2)	11.608	76.89	1.32	1.5	2.776	4.24	34.7	34.96
	Equiv. Refl.: (4,-9,-2), (5,4,-2), (5,-9,2), (-9,4,2), (-9,5,-2)								
Quartz	(-5,7,-6)	11.408	73.17	1.314	1.5	3.605	5.38	45.07	45.39
	Equiv. Refl.: (-5,-2,6)								
Quartz	(7,-2,-6)	11.408	73.17	1.313	1.5	3.605	5.38	45.07	45.39
	Equiv. Refl.: (7,-5,6), (-2,7,6)								
Quartz	(-2,-5,-6)	11.408	73.17	1.312	1.5	3.605	5.38	45.07	45.39
Quartz	(9,-4,-2)	11.608	76.89	1.307	1.5	2.776	4.25	34.7	34.96
	Equiv. Refl.: (9,-5,2), (-4,9,2), (-4,-5,-2), (-5,9,-2), (-5,-4,2)								

Ei =	11.919	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(2,4,19)	11.239	70.56	1.278	2.1	4.207	8.63	52.59	53.29
	Equiv. Refl.: (2,-6,-19), (4,2,-19), (4,-6,19), (6,-2,-19), (6,-4,19), (-2,6,19), (-2,-4,-19), (-4,6,-19), (-4,-2,19), (-6,2,19), (-6,4,-19)								
Sapph	(1,3,22)	11.819	82.56	1.216	1.7	1.556	2.68	19.45	19.64
	Equiv. Refl.: (1,-4,-22), (3,1,-22), (3,-4,22), (4,-1,-22), (4,-3,22), (-1,4,22), (-1,-3,-22), (-3,4,-22), (-3,-1,22), (-4,1,22), (-4,3,-22)								
Sapph	(2,4,-17)	11.367	72.49	1.139	1.4	3.759	5.12	46.99	47.27
	Equiv. Refl.: (2,-6,17), (4,2,17), (4,-6,-17), (6,-2,17), (6,-4,-17), (-2,6,-17), (-2,-4,17), (-4,6,17), (-4,-2,-17), (-6,2,-17), (-6,4,17)								
Quartz	(8,0,2)	11.879	85.33	1.122	1.7	0.973	1.67	12.16	12.27
	Equiv. Refl.: (8,-8,-2), (-8,0,-2), (-8,8,2)								
Quartz	(0,8,-2)	11.879	85.33	1.121	1.7	0.973	1.67	12.16	12.27
	Equiv. Refl.: (0,-8,2)								
Quartz	(0,8,1)	11.712	79.31	0.998	1.3	2.25	2.86	28.12	28.27
	Equiv. Refl.: (0,-8,-1), (8,0,-1), (8,-8,1), (-8,0,1), (-8,8,-1)								
Quartz	(5,0,8)	11.716	79.42	0.937	1.2	2.227	2.68	27.83	27.96
	Equiv. Refl.: (5,-5,-8), (-5,0,-8), (-5,5,8)								
Quartz	(1,1,-10)	11.745	80.18	0.936	1.1	2.062	2.3	25.78	25.88
	Equiv. Refl.: (1,-2,10), (1,-2,-10)								
Quartz	(0,5,-8)	11.716	79.42	0.935	1.2	2.227	2.68	27.83	27.96
	Equiv. Refl.: (0,-5,8), (1,1,10)								
Quartz	(-2,1,-10)	11.745	80.18	0.932	1.1	2.062	2.3	25.78	25.88
Quartz	(-2,1,10)	11.745	80.18	0.931	1.1	2.062	2.29	25.78	25.88
Sapph	(1,2,23)	11.677	78.44	0.91	1.2	2.439	3.04	30.49	30.64
	Equiv. Refl.: (1,-3,-23), (2,1,-23), (2,-3,23), (3,-1,-23), (3,-2,23), (-1,3,23), (-1,-2,-23), (-2,3,-23), (-2,-1,23), (-3,1,23), (-3,2,-23)								
LiNbO3	(1,3,-23)	11.442	73.73	0.878	1.7	3.478	5.9	43.47	43.87
	Equiv. Refl.: (1,-4,23), (3,1,23), (3,-4,-23), (4,-1,23), (4,-3,-23), (-1,4,-23), (-1,-3,23), (-3,4,23), (-3,-1,-23), (-4,1,-23), (-4,3,23)								
LiNbO3	(1,2,-25)	11.769	80.91	0.869	2.1	1.908	4.01	23.85	24.18
	Equiv. Refl.: (1,-3,25), (2,1,25), (2,-3,-25), (3,-1,25), (3,-2,-25), (-1,3,-25), (-1,-2,25), (-2,3,25), (-2,-1,-25), (-3,1,-25), (-3,2,25)								
Quartz	(3,4,-6)	11.221	70.29	0.834	0.9	4.269	3.93	53.37	53.51
	Equiv. Refl.: (4,-7,-6)								
Quartz	(3,-7,6)	11.221	70.29	0.833	0.9	4.269	3.93	53.37	53.51
	Equiv. Refl.: (4,3,6)								
Quartz	(-7,3,-6)	11.221	70.29	0.832	0.9	4.269	3.92	53.37	53.51
	Equiv. Refl.: (-7,4,6)								
LiNbO3	(3,4,17)	11.372	72.58	0.813	1.6	3.74	5.92	46.75	47.12
	Equiv. Refl.: (3,-7,-17), (4,3,-17), (4,-7,17), (7,-3,-17), (7,-4,17), (-3,7,17), (-3,-4,-17), (-4,7,-17), (-4,-3,17), (-7,3,17), (-7,4,-17)								
Sapph	(1,6,13)	11.654	77.9	0.76	1.1	2.555	2.76	31.94	32.06
	Equiv. Refl.: (1,-7,-13), (6,1,-13), (6,-7,13), (7,-1,-13), (7,-6,13), (-1,7,13), (-1,-6,-13), (-6,7,-13), (-6,-1,13), (-7,1,13), (-7,6,-13)								
Quartz	(8,-1,2)	11.237	70.52	0.751	0.9	4.216	3.74	52.7	52.84
	Equiv. Refl.: (8,-7,-2), (-1,8,-2), (-1,-7,2), (-7,8,2), (-7,-1,-2)								
Quartz	(-1,2,10)	11.745	80.18	0.723	1.1	2.062	2.3	25.78	25.88
	Equiv. Refl.: (-1,2,-10), (-1,-1,10)								
Quartz	(-1,-1,-10)	11.745	80.18	0.722	1.1	2.062	2.3	25.78	25.88
Quartz	(2,-1,10)	11.745	80.18	0.72	1.1	2.062	2.3	25.78	25.88
Quartz	(2,-1,-10)	11.745	80.18	0.719	1.1	2.062	2.29	25.78	25.88

Ei =	11.919	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(0,2,10)	11.835	83.18	0.715	1.1	1.427	1.6	17.83	17.9
	Equiv. Refl.: (0,-2,-10)								
Quartz	(1,7,-2)	11.237	70.52	0.709	0.9	4.216	3.74	52.7	52.84
Quartz	(1,-8,2)	11.237	70.52	0.708	0.9	4.216	3.74	52.7	52.84
	Equiv. Refl.: (7,1,2), (7,-8,-2), (-8,1,-2), (-8,7,2)								
Quartz	(-3,-4,6)	11.221	70.29	0.703	0.9	4.269	3.93	53.37	53.51
	Equiv. Refl.: (-4,7,6)								
Quartz	(2,0,-10)	11.835	83.18	0.702	1.1	1.427	1.58	17.83	17.9
	Equiv. Refl.: (-2,0,10), (-2,2,-10), (-3,7,-6), (-4,-3,-6)								
Quartz	(2,-2,10)	11.835	83.18	0.701	1.1	1.427	1.58	17.83	17.9
	Equiv. Refl.: (7,-3,6), (7,-4,-6)								
LiNbO3	(1,4,21)	11.348	72.2	0.682	1.4	3.827	5.39	47.83	48.14
	Equiv. Refl.: (1,4,-21), (1,-5,21), (1,-5,-21), (4,1,21), (4,1,-21), (4,-5,21), (4,-5,-21), (5,-1,21), (5,-1,-21), (5,-4,21), (5,-4,-21), (-1,5,21), (-1,5,-21), (-1,-4,21), (-1,-4,-21), (-4,5,21), (-4,5,-21), (-4,-1,21), (-4,-1,-21), (-5,1,21), (-5,1,-21), (-5,4,21), (-5,4,-21)								
LiNbO3	(4,5,-7)	11.302	71.49	0.673	1.4	3.991	5.51	49.89	50.19
	Equiv. Refl.: (4,-9,7), (5,4,7), (5,-9,-7), (9,-4,7), (9,-5,-7), (-4,9,-7), (-4,-5,7), (-5,9,7), (-5,-4,-7), (-9,4,-7), (-9,5,7)								
LiNbO3	(3,6,9)	11.748	80.27	0.617	1.7	2.044	3.44	25.55	25.78
	Equiv. Refl.: (3,6,-9), (3,-9,9), (3,-9,-9), (6,3,9), (6,3,-9), (6,-9,9), (6,-9,-9), (9,-3,9), (9,-3,-9), (9,-6,9), (9,-6,-9), (-3,9,9), (-3,9,-9), (-3,-6,9), (-3,-6,-9), (-6,9,9), (-6,9,-9), (-6,-3,9), (-6,-3,-9), (-9,3,9), (-9,3,-9), (-9,6,9), (-9,6,-9)								
LiNbO3	(1,5,-19)	11.495	74.66	0.616	1.4	3.269	4.57	40.86	41.11
	Equiv. Refl.: (1,-6,19), (5,1,19), (5,-6,-19), (6,-1,19), (6,-5,-19), (-1,6,-19), (-1,-5,19), (-5,6,19), (-5,-1,-19), (-6,1,-19), (-6,5,19)								
Quartz	(8,-2,-4)	11.465	74.13	0.476	0.6	3.389	2.05	42.36	42.41
	Equiv. Refl.: (8,-6,4), (-6,8,-4), (-6,-2,4)								
Quartz	(-2,-6,-4)	11.465	74.13	0.475	0.6	3.389	2.05	42.36	42.41
LiNbO3	(1,8,-1)	11.889	85.92	0.474	2.2	0.851	1.88	10.64	10.8
	Equiv. Refl.: (1,-9,1), (8,1,1), (8,-9,-1), (9,-1,1), (9,-8,-1), (-1,9,-1), (-1,-8,1), (-8,9,1), (-8,-1,-1), (-9,1,-1), (-9,8,1), (-2,8,4)								
Quartz	(7,-2,6)	11.408	73.17	0.426	0.6	3.605	2.07	45.07	45.12
	Equiv. Refl.: (7,-5,-6)								
Quartz	(-2,7,-6)	11.408	73.17	0.425	0.6	3.605	2.07	45.07	45.12
	Equiv. Refl.: (-2,-5,6), (-5,7,6), (-5,-2,-6)								
Quartz	(-1,6,7)	11.414	73.26	0.387	0.5	3.585	1.82	44.82	44.86
	Equiv. Refl.: (-1,-5,-7), (-5,6,-7)								
Quartz	(6,-1,-7)	11.414	73.26	0.386	0.5	3.585	1.82	44.82	44.85
	Equiv. Refl.: (6,-5,7), (-5,-1,7)								
LiNbO3	(2,6,-13)	11.59	76.51	0.371	1.1	2.859	3.17	35.74	35.88
	Equiv. Refl.: (2,-8,13), (6,2,13), (6,-8,-13), (8,-2,13), (8,-6,-13), (-2,8,-13), (-2,-6,13), (-6,8,13), (-6,-2,-13), (-8,2,-13), (-8,6,13)								
Quartz	(6,2,-4)	11.465	74.13	0.369	0.6	3.389	2.05	42.36	42.41
	Equiv. Refl.: (6,-8,4), (-7,2,-6), (-7,5,6), (-8,2,4), (-8,6,-4)								
Quartz	(2,5,-6)	11.408	73.17	0.368	0.6	3.605	2.07	45.07	45.12
	Equiv. Refl.: (2,6,4), (2,-7,6), (5,2,6), (5,-7,-6)								
Quartz	(2,-8,-4)	11.465	74.13	0.367	0.6	3.389	2.05	42.36	42.41
Quartz	(0,3,9)	11.21	70.14	0.317	0.5	4.304	2.02	53.8	53.84
	Equiv. Refl.: (0,-3,-9)								
Quartz	(3,0,-9)	11.21	70.14	0.315	0.5	4.304	2.01	53.8	53.84
	Equiv. Refl.: (3,-3,9), (-3,0,9), (-3,3,-9)								
Quartz	(4,5,0)	11.379	72.69	0.308	0.5	3.714	1.75	46.42	46.45

Ei =	14.839	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Si	(2,8,10)	14.795	85.58	5.5405	4.78	1.1477	5.48	14.35	15.36
	Equiv. Refl.: (2,10,8), (8,2,10), (8,10,2), (10,2,8), (10,8,2)								
Ge	(4,4,12)	14.537	78.42	1.9779	4.46	3.0396	13.56	37.99	40.34
	Equiv. Refl.: (4,12,4), (12,4,4)								
Si	(0,4,12)	14.438	76.65	1.6372	1.74	3.5204	6.14	44	44.43
	Equiv. Refl.: (0,12,4), (4,0,12), (4,12,0), (12,0,4), (12,4,0)								
Ge	(2,8,10)	14.203	73.16	1.5344	3.34	4.4905	15.02	56.13	58.1
	Equiv. Refl.: (2,10,8), (8,2,10), (8,10,2), (10,2,8), (10,8,2)								
Si	(2,2,12)	14.073	71.51	1.3166	1.39	4.9633	6.91	62.04	62.42
	Equiv. Refl.: (2,12,2), (4,6,10), (4,10,6), (6,4,10), (6,10,4), (10,4,6), (10,6,4), (12,2,2)								
Ge	(1,3,13)	14.661	81.1	1.3135	3.98	2.3224	9.24	29.03	30.46
	Equiv. Refl.: (1,13,3), (3,1,13), (3,7,11), (3,11,7), (3,13,1), (7,3,11), (7,7,9), (7,9,7), (7,11,3), (9,7,7), (11,3,7), (11,7,3), (13,1,3), (13,3,1)								
Si	(1,9,9)	14.573	79.13	1.3002	1.46	2.8482	4.16	35.6	35.84
	Equiv. Refl.: (9,1,9), (9,9,1)								
Si	(3,5,11)	14.211	73.27	0.9425	1.05	4.4605	4.67	55.76	55.95
	Equiv. Refl.: (3,11,5), (5,3,11), (5,7,9), (5,9,7), (5,11,3), (7,5,9), (7,9,5), (9,5,7), (9,7,5), (11,3,5), (11,5,3)								
Ge	(1,1,13)	14.329	74.94	0.8825	2.56	3.9934	10.21	49.92	50.95
	Equiv. Refl.: (1,7,11), (1,11,7), (1,13,1), (3,9,9), (5,5,11), (5,11,5), (7,1,11), (7,11,1), (9,3,9), (9,9,3), (11,1,7), (11,5,5), (11,7,1), (13,1,1)								
Ge	(1,9,9)	13.99	70.52	0.7785	2.16	5.2476	11.34	65.6	66.57
	Equiv. Refl.: (9,1,9), (9,9,1)								
LiNbO3	(4,-12,4)	14.824	87.41	26.079	23.3	0.671	15.63	8.39	17.74
	Equiv. Refl.: (8,4,4), (12,-4,4), (-4,-8,4)								
LiNbO3	(-8,12,4)	14.824	87.41	26.078	23.3	0.671	15.63	8.39	17.74
	Equiv. Refl.: (-12,8,4)								
LiNbO3	(4,8,-4)	14.824	87.41	24.185	23.3	0.671	15.63	8.39	17.74
	Equiv. Refl.: (8,-12,-4), (12,-8,-4), (-4,12,-4), (-8,-4,-4), (-12,4,-4)								
LiNbO3	(2,9,-10)	14.803	86.03	17.58	16.1	1.029	16.55	12.86	20.96
	Equiv. Refl.: (9,-11,-10), (11,-9,-10), (-2,11,-10), (-9,-2,-10), (-11,2,-10)								
LiNbO3	(2,-11,10)	14.803	86.03	17.448	16.1	1.029	16.55	12.86	20.96
	Equiv. Refl.: (9,2,10), (11,-2,10), (-2,-9,10)								
LiNbO3	(-9,11,10)	14.803	86.03	17.447	16.1	1.029	16.55	12.86	20.96
	Equiv. Refl.: (-11,9,10)								
LiNbO3	(1,2,32)	14.775	84.68	13.051	11.9	1.383	16.52	17.28	23.91
	Equiv. Refl.: (2,-3,32), (3,-2,32), (-2,-1,32)								
LiNbO3	(-1,3,32)	14.775	84.68	13.05	11.9	1.383	16.52	17.28	23.91
	Equiv. Refl.: (-3,1,32)								
LiNbO3	(1,-3,-32)	14.775	84.68	12.937	11.9	1.383	16.52	17.28	23.91
	Equiv. Refl.: (2,1,-32), (3,-1,-32), (-1,-2,-32), (-2,3,-32), (-3,2,-32)								
Quartz	(0,8,8)	14.834	88.58	12.506	10.8	0.367	3.95	4.59	6.05
	Equiv. Refl.: (0,-8,-8)								
Quartz	(-8,0,8)	14.834	88.58	12.495	10.8	0.367	3.95	4.59	6.05
Quartz	(-8,8,-8)	14.834	88.58	12.493	10.8	0.367	3.95	4.59	6.05
Quartz	(8,0,-8)	14.834	88.58	12.492	10.8	0.367	3.95	4.59	6.05
Quartz	(8,-8,8)	14.834	88.58	12.49	10.8	0.367	3.95	4.59	6.05

Ei =	14.839	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(2,5,24)	14.815	86.74	12.263	10.3	0.845	8.68	10.56	13.67
	Equiv. Refl.: (2,5,-24), (2,-7,24), (2,-7,-24), (5,2,24), (5,2,-24), (5,-7,24), (5,-7,-24), (7,-2,24), (7,-2,-24), (7,-5,24), (7,-5,-24), (-2,7,24), (-2,7,-24), (-2,-5,24), (-2,-5,-24), (-5,7,24), (-5,7,-24), (-5,-2,24), (-5,-2,-24), (-7,2,24), (-7,2,-24), (-7,5,24), (-7,5,-24)								
LiNbO3	(4,8,2)	14.743	83.47	12.092	10.8	1.699	18.35	21.24	28.07
	Equiv. Refl.: (8,-12,2), (12,-8,2), (-4,12,2), (-8,-4,2), (-12,4,2)								
LiNbO3	(4,-12,-2)	14.743	83.47	11.758	10.8	1.699	18.35	21.24	28.07
	Equiv. Refl.: (8,4,-2), (12,-4,-2), (-4,-8,-2), (-8,12,-2), (-12,8,-2)								
Quartz	(9,0,-6)	14.809	86.37	11.071	8.8	0.943	8.32	11.78	14.42
	Equiv. Refl.: (-9,0,6)								
Quartz	(0,9,6)	14.809	86.37	11.07	8.8	0.943	8.32	11.78	14.42
	Equiv. Refl.: (0,-9,-6), (9,-9,6), (-9,9,-6)								
LiNbO3	(6,6,-6)	14.697	82.08	9.869	8.8	2.065	18.18	25.81	31.57
	Equiv. Refl.: (6,-12,-6), (12,-6,-6), (-6,12,-6), (-6,-6,-6), (-12,6,-6)								
LiNbO3	(1,5,-28)	14.721	82.77	9.843	8.7	1.882	16.42	23.52	28.69
	Equiv. Refl.: (5,-6,-28), (6,-5,-28), (-1,6,-28), (-5,-1,-28), (-6,1,-28)								
LiNbO3	(6,6,6)	14.697	82.08	9.807	8.8	2.065	18.18	25.81	31.57
	Equiv. Refl.: (6,-12,6), (12,-6,6), (-6,12,6), (-6,-6,6), (-12,6,6)								
LiNbO3	(1,-7,26)	14.776	84.7	9.74	9.1	1.377	12.58	17.21	21.32
	Equiv. Refl.: (6,1,26), (7,-1,26), (-1,-6,26), (-6,7,26), (-7,6,26)								
LiNbO3	(1,-6,28)	14.721	82.77	9.596	8.7	1.882	16.42	23.52	28.69
	Equiv. Refl.: (5,1,28), (6,-1,28), (-1,-5,28)								
LiNbO3	(-5,6,28)	14.721	82.77	9.595	8.7	1.882	16.42	23.52	28.69
	Equiv. Refl.: (-6,5,28)								
LiNbO3	(1,6,-26)	14.776	84.7	9.587	9.1	1.377	12.58	17.21	21.32
	Equiv. Refl.: (6,-7,-26), (7,-6,-26), (-1,7,-26), (-6,-1,-26), (-7,1,-26)								
Quartz	(8,-8,-8)	14.834	88.58	8.545	8	0.367	2.93	4.59	5.44
	Equiv. Refl.: (-8,8,8)								
Quartz	(8,0,8)	14.834	88.58	8.544	8	0.367	2.93	4.59	5.44
Quartz	(-8,0,-8)	14.834	88.58	8.543	8	0.367	2.93	4.59	5.44
Quartz	(0,8,-8)	14.834	88.58	8.522	8	0.367	2.93	4.59	5.44
Quartz	(0,-8,8)	14.834	88.58	8.521	8	0.367	2.93	4.59	5.44
LiNbO3	(1,-11,0)	14.65	80.84	8.238	7.2	2.393	17.29	29.92	34.55
	Equiv. Refl.: (10,1,0), (11,-1,0), (-1,-10,0), (-10,11,0), (-11,10,0)								
LiNbO3	(1,9,-14)	14.668	81.28	8.233	7.2	2.275	16.37	28.44	32.81
	Equiv. Refl.: (9,-10,-14), (10,-9,-14), (-1,10,-14), (-9,-1,-14), (-10,1,-14)								
LiNbO3	(5,6,14)	14.668	81.28	8.084	7.1	2.275	16.12	28.44	32.69
	Equiv. Refl.: (6,-11,14), (11,-6,14), (-5,11,14), (-6,-5,14), (-11,5,14)								
LiNbO3	(1,10,0)	14.65	80.84	7.978	7.2	2.393	17.29	29.92	34.55
	Equiv. Refl.: (10,-11,0), (11,-10,0), (-1,11,0), (-10,-1,0), (-11,1,0)								
Quartz	(10,0,-2)	14.749	83.7	7.899	6	1.639	9.9	20.48	22.75
	Equiv. Refl.: (10,-10,2), (-10,0,2), (-10,10,-2)								
Quartz	(0,10,2)	14.749	83.7	7.898	6	1.639	9.89	20.48	22.75
	Equiv. Refl.: (0,-10,-2)								
LiNbO3	(1,-10,14)	14.668	81.28	7.762	7.2	2.275	16.37	28.44	32.81
	Equiv. Refl.: (9,1,14), (10,-1,14), (-1,-9,14), (-9,10,14), (-10,9,14)								
LiNbO3	(6,5,-14)	14.668	81.28	7.629	7.1	2.275	16.12	28.44	32.69
	Equiv. Refl.: (-5,-6,-14), (-6,11,-14), (-11,6,-14)								
LiNbO3	(5,-11,-14)	14.668	81.28	7.628	7.1	2.275	16.12	28.44	32.69
	Equiv. Refl.: (11,-5,-14)								

Ei =	14.839	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(4,7,4)	14.781	84.92	7.615	6	1.318	7.85	16.48	18.25
	Equiv. Refl.: (4,-11,-4), (-11,7,-4)								
Quartz	(-11,4,4)	14.781	84.92	7.614	6	1.318	7.84	16.48	18.25
Quartz	(7,4,-4)	14.781	84.92	7.613	6	1.318	7.84	16.48	18.25
	Equiv. Refl.: (7,-11,4)								
Quartz	(-2,11,1)	14.831	88.14	7.525	6.6	0.481	3.19	6.01	6.8
	Equiv. Refl.: (-2,-9,-1)								
Quartz	(11,-2,-1)	14.831	88.14	7.523	6.6	0.481	3.19	6.01	6.8
	Equiv. Refl.: (11,-9,1), (-9,11,-1), (-9,-2,1)								
LiNbO3	(0,-10,10)	14.606	79.84	7.435	6.5	2.66	17.27	33.25	37.46
	Equiv. Refl.: (10,0,10), (-10,10,10)								
LiNbO3	(5,-12,2)	14.545	78.57	7.366	6.4	3	19.17	37.51	42.12
	Equiv. Refl.: (7,5,2), (12,-5,2), (-5,-7,2), (-7,12,2), (-12,7,2)								
LiNbO3	(-4,6,-28)	14.523	78.15	7.29	6.3	3.113	19.65	38.92	43.6
	Equiv. Refl.: (-6,4,-28)								
LiNbO3	(2,-6,-28)	14.523	78.15	7.289	6.3	3.113	19.65	38.92	43.6
	Equiv. Refl.: (4,2,-28), (6,-2,-28), (-2,-4,-28), (-4,11,4), (-4,-7,-4)								
Quartz	(11,-4,-4)	14.781	84.92	7.288	6	1.318	7.84	16.48	18.25
	Equiv. Refl.: (11,-7,4)								
Quartz	(-7,11,-4)	14.781	84.92	7.287	6	1.318	7.84	16.48	18.25
	Equiv. Refl.: (-7,-4,4)								
LiNbO3	(5,7,4)	14.627	80.3	7.272	6.3	2.536	16.09	31.7	35.55
	Equiv. Refl.: (7,-12,4), (12,-7,4), (-5,12,4), (-7,-5,4), (-12,5,4)								
LiNbO3	(5,7,-2)	14.545	78.57	7.206	6.4	3	19.17	37.51	42.12
	Equiv. Refl.: (7,-12,-2), (12,-7,-2), (-5,12,-2), (-7,-5,-2), (-12,5,-2)								
LiNbO3	(2,4,28)	14.523	78.15	7.155	6.3	3.113	19.65	38.92	43.6
	Equiv. Refl.: (4,-6,28), (6,-4,28), (-2,6,28), (-4,-2,28), (-6,2,28)								
Quartz	(2,9,1)	14.831	88.14	7.147	6.6	0.481	3.19	6.01	6.8
	Equiv. Refl.: (2,-11,-1)								
Quartz	(9,2,-1)	14.831	88.14	7.145	6.6	0.481	3.19	6.01	6.8
	Equiv. Refl.: (9,-11,1), (-11,2,1), (-11,9,-1)								
LiNbO3	(0,10,-10)	14.606	79.84	7.12	6.5	2.66	17.27	33.25	37.46
	Equiv. Refl.: (10,-10,-10), (-10,0,-10)								
LiNbO3	(5,5,18)	14.484	77.45	6.885	5.9	3.303	19.45	41.29	45.64
	Equiv. Refl.: (5,-10,18), (10,-5,18), (-5,10,18), (-5,-5,18), (-10,5,18)								
Quartz	(-9,1,7)	14.813	86.62	6.874	5.8	0.876	5.07	10.95	12.06
Quartz	(-9,8,-7)	14.813	86.62	6.873	5.8	0.876	5.07	10.95	12.06
Quartz	(1,8,7)	14.813	86.62	6.871	5.8	0.876	5.07	10.95	12.06
	Equiv. Refl.: (1,-9,-7)								
Quartz	(8,1,-7)	14.813	86.62	6.867	5.8	0.876	5.07	10.95	12.06
Quartz	(8,-9,7)	14.813	86.62	6.866	5.8	0.876	5.07	10.95	12.06
Quartz	(9,-1,-7)	14.813	86.62	6.861	5.8	0.876	5.07	10.95	12.06
Quartz	(9,-8,7)	14.813	86.62	6.86	5.8	0.876	5.07	10.95	12.06
Quartz	(-1,9,7)	14.813	86.62	6.858	5.8	0.876	5.07	10.95	12.06
Quartz	(-1,-8,-7)	14.813	86.62	6.857	5.8	0.876	5.07	10.95	12.06
Quartz	(-8,-1,7)	14.813	86.62	6.855	5.8	0.876	5.07	10.95	12.06
Quartz	(-8,9,-7)	14.813	86.62	6.854	5.8	0.876	5.07	10.95	12.06
LiNbO3	(7,5,-4)	14.627	80.3	6.778	6.3	2.536	16.09	31.7	35.55
	Equiv. Refl.: (-5,-7,-4)								
LiNbO3	(5,-12,-4)	14.627	80.3	6.777	6.3	2.536	16.09	31.7	35.55
	Equiv. Refl.: (12,-5,-4), (-7,12,-4), (-12,7,-4)								

Ei =	14.839	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(2,9,-1)	14.831	88.14	6.754	6.1	0.481	2.93	6.01	6.69
	Equiv. Refl.: (2,-11,1)								
Quartz	(-11,2,-1)	14.831	88.14	6.753	6.1	0.481	2.93	6.01	6.69
	Equiv. Refl.: (-11,9,1)								
Quartz	(9,2,1)	14.831	88.14	6.751	6.1	0.481	2.93	6.01	6.69
	Equiv. Refl.: (9,-11,-1)								
Quartz	(-2,11,-1)	14.831	88.14	6.573	6.1	0.481	2.93	6.01	6.69
	Equiv. Refl.: (-2,-9,1)								
Quartz	(11,-2,1)	14.831	88.14	6.572	6.1	0.481	2.93	6.01	6.69
	Equiv. Refl.: (11,-9,-1)								
Quartz	(-9,11,1)	14.831	88.14	6.57	6.1	0.481	2.93	6.01	6.69
	Equiv. Refl.: (-9,-2,-1)								
LiNbO3	(2,9,8)	14.558	78.84	6.558	5.8	2.928	17.04	36.6	40.37
	Equiv. Refl.: (9,-11,8), (11,-9,8), (-2,11,8), (-9,-2,8), (-11,2,8)								
LiNbO3	(5,5,-18)	14.484	77.45	6.556	5.9	3.303	19.45	41.29	45.64
	Equiv. Refl.: (5,-10,-18), (10,-5,-18), (-5,10,-18), (-5,-5,-18), (-10,5,-18)								
LiNbO3	(2,-9,20)	14.475	77.28	6.446	5.6	3.348	18.64	41.85	45.82
	Equiv. Refl.: (7,2,20), (9,-2,20), (-2,-7,20), (-7,9,20), (-9,7,20)								
Quartz	(4,2,-11)	14.786	85.17	6.442	5.2	1.255	6.56	15.69	17
Quartz	(2,4,11)	14.786	85.17	6.44	5.2	1.255	6.56	15.69	17
	Equiv. Refl.: (4,-6,11)								
Quartz	(2,-6,-11)	14.786	85.17	6.439	5.2	1.255	6.56	15.69	17
	Equiv. Refl.: (-6,2,11)								
LiNbO3	(2,-11,-8)	14.558	78.84	6.438	5.8	2.928	17.04	36.6	40.37
	Equiv. Refl.: (9,2,-8), (11,-2,-8), (-2,-9,-8), (-9,11,-8), (-11,9,-8), (-6,4,-11)								
Quartz	(-4,-2,11)	14.786	85.17	6.384	5.2	1.255	6.56	15.69	17
Quartz	(-4,6,-11)	14.786	85.17	6.383	5.2	1.255	6.56	15.69	17
Quartz	(-2,6,11)	14.786	85.17	6.382	5.2	1.255	6.56	15.69	17
	Equiv. Refl.: (-2,-4,-11)								
Quartz	(6,-2,-11)	14.786	85.17	6.381	5.2	1.255	6.56	15.69	17
Quartz	(6,-4,11)	14.786	85.17	6.38	5.2	1.255	6.56	15.69	17
LiNbO3	(4,-9,22)	14.653	80.93	6.185	5.7	2.369	13.54	29.61	32.56
	Equiv. Refl.: (5,4,22), (9,-4,22), (-4,-5,22), (-5,9,22), (-9,5,22)								
LiNbO3	(2,7,-20)	14.475	77.28	6.17	5.6	3.348	18.64	41.85	45.82
	Equiv. Refl.: (7,-9,-20), (9,-7,-20), (-2,9,-20), (-7,-2,-20), (-9,2,-20)								
LiNbO3	(4,4,24)	14.422	76.38	6.139	5.4	3.595	19.35	44.94	48.93
	Equiv. Refl.: (4,-8,24), (8,-4,24), (-4,8,24), (-4,-4,24), (-8,4,24)								
LiNbO3	(4,4,-24)	14.422	76.38	6.12	5.4	3.595	19.35	44.94	48.93
	Equiv. Refl.: (4,-8,-24), (8,-4,-24), (-4,8,-24), (-4,-4,-24), (-8,4,-24)								
LiNbO3	(0,-2,32)	14.577	79.23	6.084	5.4	2.824	15.35	35.3	38.49
	Equiv. Refl.: (2,0,32), (-2,2,32)								
LiNbO3	(4,5,-22)	14.653	80.93	6.047	5.7	2.369	13.54	29.61	32.56
	Equiv. Refl.: (5,-9,-22), (9,-5,-22), (-4,9,-22), (-5,-4,-22), (-9,4,-22)								
LiNbO3	(0,-10,-8)	14.358	75.37	5.985	5.2	3.874	20.16	48.43	52.46
	Equiv. Refl.: (10,0,-8), (-10,10,-8)								
LiNbO3	(0,10,8)	14.358	75.37	5.929	5.2	3.874	20.16	48.43	52.46
	Equiv. Refl.: (10,-10,8), (-10,0,8)								
Quartz	(2,9,0)	14.787	85.19	5.928	4.9	1.248	6.1	15.6	16.75
	Equiv. Refl.: (2,-11,0), (9,2,0), (9,-11,0), (-11,2,0), (-11,9,0)								

Ei =	14.839	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(11,-2,0)	14.787	85.19	5.925	4.9	1.248	6.1	15.6	16.75
	Equiv. Refl.: (11,-9,0), (-2,11,0), (-2,-9,0), (-9,11,0), (-9,-2,0)								
LiNbO3	(0,2,-32)	14.577	79.23	5.821	5.4	2.824	15.35	35.3	38.49
	Equiv. Refl.: (2,-2,-32), (-2,0,-32)								
LiNbO3	(0,-3,-30)	14.049	71.22	5.728	4.8	5.046	24.39	63.08	67.63
	Equiv. Refl.: (3,0,-30), (-3,3,-30)								
LiNbO3	(4,-11,12)	14.443	76.74	5.726	5	3.498	17.52	43.72	47.1
	Equiv. Refl.: (7,4,12), (11,-4,12), (-4,-7,12)								
LiNbO3	(-7,11,12)	14.443	76.74	5.725	5	3.498	17.52	43.72	47.1
	Equiv. Refl.: (-11,7,12)								
LiNbO3	(0,3,-30)	14.049	71.22	5.712	4.8	5.046	24.29	63.08	67.59
	Equiv. Refl.: (3,-3,-30), (-3,0,-30)								
Quartz	(0,5,-11)	14.569	79.06	5.703	4.3	2.869	12.23	35.86	37.88
	Equiv. Refl.: (0,-5,11)								
Quartz	(5,0,11)	14.569	79.06	5.7	4.3	2.869	12.22	35.86	37.88
	Equiv. Refl.: (5,-5,-11), (-5,0,-11), (-5,5,11)								
LiNbO3	(0,3,30)	14.049	71.22	5.608	4.8	5.046	24.39	63.08	67.63
	Equiv. Refl.: (3,-3,30), (-3,0,30)								
LiNbO3	(3,8,-8)	14.154	72.53	5.601	4.7	4.671	22.13	58.39	62.44
	Equiv. Refl.: (8,-11,-8), (11,-8,-8), (-3,11,-8), (-8,-3,-8), (-11,3,-8)								
LiNbO3	(0,-1,-32)	14.377	75.67	5.593	4.9	3.792	18.66	47.4	50.94
	Equiv. Refl.: (1,0,-32), (-1,1,-32)								
LiNbO3	(3,8,10)	14.406	76.13	5.574	4.5	3.664	16.58	45.8	48.71
	Equiv. Refl.: (8,-11,10), (11,-8,10), (-3,11,10), (-8,-3,10), (-11,3,10)								
LiNbO3	(0,-3,30)	14.049	71.22	5.572	4.8	5.046	24.29	63.08	67.59
	Equiv. Refl.: (3,0,30), (-3,3,30)								
LiNbO3	(0,1,32)	14.377	75.67	5.528	4.9	3.792	18.66	47.4	50.94
	Equiv. Refl.: (1,-1,32), (-1,0,32)								
LiNbO3	(4,7,-12)	14.443	76.74	5.486	5	3.498	17.52	43.72	47.1
	Equiv. Refl.: (7,-11,-12), (11,-7,-12), (-4,11,-12), (-7,-4,-12), (-11,4,-12)								
LiNbO3	(4,7,12)	14.443	76.74	5.47	4.5	3.498	15.89	43.72	46.52
	Equiv. Refl.: (7,-11,12), (11,-7,12), (-4,11,12), (-7,-4,12), (-11,4,12)								
LiNbO3	(3,-11,8)	14.154	72.53	5.367	4.7	4.671	22.13	58.39	62.44
	Equiv. Refl.: (8,3,8), (11,-3,8), (-3,-8,8), (-8,11,8), (-11,8,8)								
LiNbO3	(4,-11,-12)	14.443	76.74	5.226	4.5	3.498	15.89	43.72	46.52
	Equiv. Refl.: (7,4,-12), (11,-4,-12), (-4,-7,-12), (-7,11,-12), (-11,7,-12)								
Quartz	(3,7,-6)	14.665	81.22	5.225	4	2.292	9.22	28.65	30.1
	Equiv. Refl.: (3,-10,6)								
Quartz	(7,3,6)	14.665	81.22	5.224	4	2.292	9.22	28.65	30.1
	Equiv. Refl.: (7,-10,-6)								
Quartz	(-10,3,-6)	14.665	81.22	5.223	4	2.292	9.22	28.65	30.1
	Equiv. Refl.: (-10,7,6)								
Quartz	(-3,-7,6)	14.665	81.22	5.155	4	2.292	9.22	28.65	30.1
Quartz	(-3,10,-6)	14.665	81.22	5.154	4	2.292	9.22	28.65	30.1
Quartz	(-7,10,6)	14.665	81.22	5.153	4	2.292	9.22	28.65	30.1
	Equiv. Refl.: (-7,-3,-6)								
Quartz	(10,-3,6)	14.665	81.22	5.152	4	2.292	9.22	28.65	30.1
	Equiv. Refl.: (10,-7,-6)								
LiNbO3	(0,10,-4)	14.019	70.87	5.135	4.1	5.148	21.19	64.34	67.74
	Equiv. Refl.: (10,-10,-4), (-10,0,-4)								

Ei =	14.839	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,-10,-10)	13.998	70.62	5.125	4.1	5.221	21.32	65.26	68.65
	Equiv. Refl.: (9,1,-10), (10,-1,-10), (-1,-9,-10), (-9,10,-10), (-10,9,-10)								
LiNbO3	(3,-11,-10)	14.406	76.13	5.089	4.5	3.664	16.58	45.8	48.71
	Equiv. Refl.: (8,3,-10), (11,-3,-10), (-3,-8,-10), (-8,11,-10), (-11,8,-10)								
LiNbO3	(2,6,-22)	14.047	71.2	5.059	4.2	5.052	21.09	63.15	66.58
	Equiv. Refl.: (6,-8,-22), (8,-6,-22), (-2,8,-22), (-6,-2,-22), (-8,2,-22)								
LiNbO3	(6,6,0)	14.45	76.86	5.014	4.3	3.465	14.93	43.31	45.81
	Equiv. Refl.: (6,-12,0), (12,-6,0), (-6,12,0), (-6,-6,0), (-12,6,0)								
LiNbO3	(0,-10,4)	14.019	70.87	4.986	4.1	5.148	21.19	64.34	67.74
	Equiv. Refl.: (10,0,4), (-10,10,4)								
LiNbO3	(1,9,10)	13.998	70.62	4.908	4.1	5.221	21.32	65.26	68.65
	Equiv. Refl.: (2,9,-4), (2,-11,4), (9,2,4), (9,-10,10), (9,-11,-4), (10,-9,10), (11,-2,4), (11,-9,-4), (-1,10,10), (-2,11,-4), (-2,-9,4), (-9,11,4), (-9,-1,10), (-9,-2,-4), (-10,1,10), (-11,2,-4), (-11,9,4)								
LiNbO3	(2,-8,22)	14.047	71.2	4.851	4.2	5.052	21.09	63.15	66.58
	Equiv. Refl.: (6,2,22), (8,-2,22), (-2,-6,22)								
LiNbO3	(-6,8,22)	14.047	71.2	4.85	4.2	5.052	21.09	63.15	66.58
	Equiv. Refl.: (-8,6,22)								
LiNbO3	(4,5,20)	14.069	71.46	4.748	3.8	4.977	19.12	62.22	65.09
	Equiv. Refl.: (5,-9,20), (9,-5,20), (-4,9,20), (-5,-4,20), (-9,4,20)								
Sapph	(4,7,6)	14.788	85.25	4.664	4	1.233	4.88	15.41	16.17
	Equiv. Refl.: (4,7,-6), (4,-11,6), (4,-11,-6), (7,4,6), (7,4,-6), (7,-11,6), (7,-11,-6), (11,-4,6), (11,-4,-6), (11,-7,6), (11,-7,-6), (-4,11,6), (-4,11,-6), (-4,-7,6), (-4,-7,-6), (-7,11,6), (-7,11,-6), (-7,-4,6), (-7,-4,-6), (-11,4,6), (-11,4,-6), (-11,7,6), (-11,7,-6)								
LiNbO3	(2,-11,-2)	14.14	72.35	4.658	3.9	4.722	18.18	59.03	61.77
	Equiv. Refl.: (9,2,-2), (11,-2,-2), (-2,-9,-2), (-9,11,-2), (-11,9,-2)								
LiNbO3	(3,4,26)	14.378	75.67	4.625	3.9	3.789	14.8	47.37	49.62
	Equiv. Refl.: (4,-7,26), (7,-4,26), (-3,7,26), (-4,-3,26), (-7,3,26)								
Quartz	(8,3,-3)	14.756	83.95	4.62	3.6	1.572	5.73	19.65	20.46
	Equiv. Refl.: (8,-11,3)								
Quartz	(3,8,3)	14.756	83.95	4.618	3.6	1.572	5.73	19.65	20.46
	Equiv. Refl.: (3,-11,-3), (-11,3,3), (-11,8,-3)								
LiNbO3	(5,-11,10)	13.998	70.62	4.615	3.7	5.221	19.49	65.26	68.11
	Equiv. Refl.: (6,5,10), (11,-5,10), (-5,-6,10), (-6,11,10), (-11,6,10)								
LiNbO3	(2,9,2)	14.14	72.35	4.59	3.9	4.722	18.18	59.03	61.77
	Equiv. Refl.: (9,-11,2), (11,-9,2), (-2,11,2), (-9,-2,2), (-11,2,2)								
Quartz	(-8,11,-3)	14.756	83.95	4.586	3.6	1.572	5.73	19.65	20.46
	Equiv. Refl.: (-8,-3,3)								
Quartz	(11,-8,3)	14.756	83.95	4.585	3.6	1.572	5.73	19.65	20.46
	Equiv. Refl.: (-3,-8,-3)								
Quartz	(11,-3,-3)	14.756	83.95	4.584	3.6	1.572	5.73	19.65	20.46
	Equiv. Refl.: (-3,11,3)								
LiNbO3	(4,-9,-20)	14.069	71.46	4.525	3.8	4.977	19.12	62.22	65.09
	Equiv. Refl.: (5,4,-20), (9,-4,-20), (-4,-5,-20), (-5,9,-20), (-9,5,-20)								
Sapph	(0,0,30)	14.319	74.78	4.43	3.4	4.036	13.91	50.45	52.34
	Equiv. Refl.: (0,0,-30)								
LiNbO3	(3,-10,16)	14.281	74.23	4.422	3.8	4.19	15.77	52.38	54.7
	Equiv. Refl.: (7,3,16), (10,-3,16), (-3,-7,16), (-7,10,16), (-10,7,16)								
LiNbO3	(3,-7,-26)	14.378	75.67	4.419	3.9	3.789	14.8	47.37	49.62
	Equiv. Refl.: (4,3,-26), (7,-3,-26), (-3,-4,-26), (-4,7,-26), (-7,4,-26)								

Ei =	14.839	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(3,7,-16)	14.281	74.23	4.404	3.8	4.19	15.77	52.38	54.7
	Equiv. Refl.: (5,6,-10), (6,-11,-10), (7,-10,-16), (10,-7,-16), (11,-6,-10), (-3,10,-16), (-5,11,-10), (-6,-5,-10), (-7,-3,-16), (-10,3,-16), (-11,5,-10)								
LiNbO3	(4,6,16)	14.076	71.55	4.375	3.6	4.952	17.79	61.89	64.4
	Equiv. Refl.: (6,-10,16), (10,-6,16), (-4,10,16), (-6,-4,16), (-10,4,16)								
LiNbO3	(1,-6,-26)	13.968	70.28	4.356	3.6	5.32	19.09	66.5	69.19
	Equiv. Refl.: (5,1,-26), (6,-1,-26), (-1,-5,-26), (-5,6,-26), (-6,5,-26)								
LiNbO3	(1,5,26)	13.968	70.28	4.3	3.6	5.32	19.09	66.5	69.19
	Equiv. Refl.: (5,-6,26), (6,-5,26), (-1,6,26), (-5,-1,26), (-6,1,26)								
Sapph	(3,6,18)	14.71	82.45	4.211	3.4	1.966	6.69	24.58	25.47
	Equiv. Refl.: (3,6,-18), (3,-9,18), (3,-9,-18), (6,3,18), (6,3,-18), (6,-9,18), (6,-9,-18), (9,-3,18), (9,-3,-18), (9,-6,18), (9,-6,-18), (-3,9,18), (-3,9,-18), (-3,-6,18), (-3,-6,-18), (-6,9,18), (-6,9,-18), (-6,-3,18), (-6,-3,-18), (-9,3,18), (-9,3,-18), (-9,6,18), (-9,6,-18)								
LiNbO3	(2,2,30)	14.254	73.86	4.194	3.6	4.295	15.3	53.69	55.83
	Equiv. Refl.: (2,-4,30), (4,-2,30), (-2,4,30), (-2,-2,30), (-4,2,30)								
LiNbO3	(4,-10,-16)	14.076	71.55	4.184	3.6	4.952	17.79	61.89	64.4
	Equiv. Refl.: (6,4,-16), (10,-4,-16), (-4,-6,-16), (-6,10,-16), (-10,6,-16)								
Quartz	(4,7,-4)	14.781	84.92	4.124	3.3	1.318	4.4	16.48	17.06
Quartz	(4,-11,4)	14.781	84.92	4.123	3.3	1.318	4.4	16.48	17.06
Quartz	(-11,7,4)	14.781	84.92	4.122	3.3	1.318	4.4	16.48	17.06
Quartz	(-11,4,-4)	14.781	84.92	4.121	3.3	1.318	4.4	16.48	17.06
Quartz	(7,4,4)	14.781	84.92	4.12	3.3	1.318	4.4	16.48	17.06
	Equiv. Refl.: (7,-11,-4)								
LiNbO3	(2,2,-30)	14.254	73.86	4.097	3.6	4.295	15.3	53.69	55.83
	Equiv. Refl.: (2,-4,-30), (4,-2,-30), (-2,4,-30), (-2,-2,-30), (-4,2,-30)								
Sapph	(3,7,-10)	14.198	73.1	4.053	3	4.509	13.53	56.37	57.97
	Equiv. Refl.: (3,-10,10), (7,3,10), (7,-10,-10), (10,-3,10), (10,-7,-10), (-3,10,-10), (-3,-7,10), (-7,10,10), (-7,-3,-10), (-10,3,-10), (-10,7,10)								
LiNbO3	(0,8,-20)	14.273	74.13	4.01	3.3	4.219	13.93	52.74	54.54
	Equiv. Refl.: (8,-8,-20), (-8,0,-20)								
Quartz	(-4,-7,4)	14.781	84.92	3.98	3.3	1.318	4.4	16.48	17.06
Quartz	(-4,11,-4)	14.781	84.92	3.979	3.3	1.318	4.4	16.48	17.06
Quartz	(11,-7,-4)	14.781	84.92	3.978	3.3	1.318	4.4	16.48	17.06
Quartz	(11,-4,4)	14.781	84.92	3.977	3.3	1.318	4.4	16.48	17.06
Quartz	(-7,11,4)	14.781	84.92	3.976	3.3	1.318	4.4	16.48	17.06
	Equiv. Refl.: (-7,-4,-4)								
Sapph	(0,4,-28)	14.657	81.01	3.889	3.1	2.349	7.28	29.36	30.25
	Equiv. Refl.: (0,-4,28), (4,0,28), (4,-4,-28), (-4,0,-28), (-4,4,28)								
Sapph	(0,7,20)	14.214	73.31	3.871	2.9	4.45	12.83	55.63	57.09
	Equiv. Refl.: (0,-7,-20), (7,0,-20), (7,-7,20), (-7,0,20), (-7,7,-20)								
Quartz	(2,5,10)	14.641	80.63	3.726	2.8	2.45	6.9	30.62	31.39
	Equiv. Refl.: (2,-7,-10), (-7,2,10), (-7,5,-10)								
Quartz	(5,2,-10)	14.641	80.63	3.725	2.8	2.45	6.9	30.62	31.39
	Equiv. Refl.: (5,-7,10)								
Sapph	(1,8,14)	14.487	77.49	3.701	2.8	3.292	9.37	41.14	42.2
	Equiv. Refl.: (1,-9,-14), (8,1,-14), (8,-9,14), (9,-1,-14), (9,-8,14), (-1,9,14), (-1,-8,-14), (-8,9,-14), (-8,-1,14), (-9,1,14), (-9,8,-14)								
Quartz	(-9,1,-7)	14.813	86.62	3.537	2.9	0.876	2.56	10.95	11.24
Quartz	(-9,8,7)	14.813	86.62	3.536	2.9	0.876	2.56	10.95	11.24
Quartz	(1,8,-7)	14.813	86.62	3.534	2.9	0.876	2.56	10.95	11.24
Quartz	(1,-9,7)	14.813	86.62	3.533	2.9	0.876	2.56	10.95	11.24
Quartz	(8,-9,-7)	14.813	86.62	3.528	2.9	0.876	2.56	10.95	11.24

Ei =	14.839	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(8,1,7)	14.813	86.62	3.527	2.9	0.876	2.56	10.95	11.24
Quartz	(8,3,3)	14.756	83.95	3.451	2.8	1.572	4.37	19.65	20.13
	Equiv. Refl.: (8,-11,-3), (-11,3,-3)								
Quartz	(3,8,-3)	14.756	83.95	3.45	2.8	1.572	4.37	19.65	20.13
	Equiv. Refl.: (3,-11,3), (-11,8,3)								
Sapph	(5,6,-4)	14.478	77.33	3.328	2.6	3.336	8.64	41.7	42.58
	Equiv. Refl.: (5,-11,4), (6,5,4), (6,-11,-4), (11,-5,4), (11,-6,-4), (-5,11,-4), (-5,-6,4), (-6,11,4), (-6,-5,-4), (-11,5,-4), (-11,6,4)								
Quartz	(6,-4,-11)	14.786	85.17	3.3	2.6	1.255	3.3	15.69	16.03
Quartz	(6,-2,11)	14.786	85.17	3.299	2.6	1.255	3.3	15.69	16.03
Quartz	(-2,6,-11)	14.786	85.17	3.295	2.6	1.255	3.29	15.69	16.03
Quartz	(-2,-4,11)	14.786	85.17	3.294	2.6	1.255	3.29	15.69	16.03
Quartz	(-4,6,11)	14.786	85.17	3.284	2.6	1.255	3.28	15.69	16.03
	Equiv. Refl.: (-4,-2,-11)								
Quartz	(-8,11,3)	14.756	83.95	3.272	2.8	1.572	4.37	19.65	20.13
	Equiv. Refl.: (-8,-3,-3)								
Quartz	(11,-3,3)	14.756	83.95	3.271	2.8	1.572	4.37	19.65	20.13
	Equiv. Refl.: (11,-8,-3), (-3,11,-3), (-3,-8,3)								
Quartz	(7,-2,-10)	14.641	80.63	3.252	2.8	2.45	6.9	30.62	31.39
	Equiv. Refl.: (7,-5,10)								
Quartz	(-2,7,10)	14.641	80.63	3.251	2.8	2.45	6.9	30.62	31.39
	Equiv. Refl.: (-2,-5,-10), (-5,7,-10), (-5,-2,10)								
LiNbO3	(0,-8,20)	14.273	74.13	3.211	3.3	4.219	13.93	52.74	54.54
	Equiv. Refl.: (8,0,20), (-8,8,20)								
Quartz	(3,-9,-8)	14.763	84.19	3.209	2.4	1.51	3.67	18.88	19.23
Quartz	(3,6,8)	14.763	84.19	3.207	2.4	1.51	3.67	18.88	19.23
Quartz	(6,3,-8)	14.763	84.19	3.206	2.4	1.51	3.67	18.88	19.23
LiNbO3	(0,5,28)	14.322	74.83	3.205	3	4.024	12.09	50.3	51.74
	Equiv. Refl.: (5,-5,28), (-5,0,28), (6,-9,8)								
Quartz	(-9,6,-8)	14.763	84.19	3.203	2.4	1.51	3.67	18.88	19.23
Quartz	(-9,3,8)	14.763	84.19	3.202	2.4	1.51	3.67	18.88	19.23
LiNbO3	(0,-5,-28)	14.322	74.83	3.156	3	4.024	12.09	50.3	51.74
	Equiv. Refl.: (5,0,-28), (-5,5,-28)								
Quartz	(9,-1,7)	14.813	86.62	3.124	2.9	0.876	2.56	10.95	11.24
Quartz	(9,-8,-7)	14.813	86.62	3.123	2.9	0.876	2.56	10.95	11.24
Quartz	(-1,-8,7)	14.813	86.62	3.122	2.9	0.876	2.56	10.95	11.24
Quartz	(-1,9,-7)	14.813	86.62	3.12	2.9	0.876	2.56	10.95	11.24
Quartz	(-8,9,7)	14.813	86.62	3.115	2.9	0.876	2.56	10.95	11.24
Quartz	(-8,-1,-7)	14.813	86.62	3.114	2.9	0.876	2.56	10.95	11.24
Sapph	(4,7,0)	14.508	77.88	3.08	2.3	3.187	7.41	39.84	40.52
	Equiv. Refl.: (4,-11,0), (7,4,0), (7,-11,0), (11,-4,0), (11,-7,0), (-4,11,0), (-4,-7,0), (-7,11,0), (-7,-4,0), (-11,4,0), (-11,7,0)								
Sapph	(4,6,10)	13.957	70.14	3.069	2.3	5.359	12.34	66.99	68.11
	Equiv. Refl.: (4,-10,-10), (6,4,-10), (6,-10,10), (10,-4,-10), (10,-6,10), (-4,10,10), (-4,-6,-10), (-6,10,-10), (-6,-4,10), (-10,4,10), (-10,6,-10)								
Quartz	(-6,4,11)	14.786	85.17	3.039	2.6	1.255	3.3	15.69	16.03
Quartz	(-6,2,-11)	14.786	85.17	3.038	2.6	1.255	3.3	15.69	16.03
Quartz	(2,-6,11)	14.786	85.17	3.033	2.6	1.255	3.29	15.69	16.03
Quartz	(2,4,-11)	14.786	85.17	3.032	2.6	1.255	3.29	15.69	16.03

Ei =	14.839	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(4,2,11)	14.786	85.17	3.023	2.6	1.255	3.28	15.69	16.03
	Equiv. Refl.: (4,-6,-11)								
Quartz	(9,-4,8)	14.618	80.1	2.806	2.4	2.589	6.3	32.36	32.97
	Equiv. Refl.: (9,-5,-8), (-3,9,8)								
Quartz	(-3,-6,-8)	14.763	84.19	2.805	2.4	1.51	3.67	18.88	19.23
	Equiv. Refl.: (-4,9,-8), (-4,-5,8)								
Quartz	(-6,-3,8)	14.763	84.19	2.804	2.4	1.51	3.67	18.88	19.23
Quartz	(-6,9,-8)	14.763	84.19	2.803	2.4	1.51	3.67	18.88	19.23
Quartz	(-5,9,8)	14.618	80.1	2.802	2.4	2.589	6.29	32.36	32.96
	Equiv. Refl.: (-5,-4,-8)								
Quartz	(9,-6,8)	14.763	84.19	2.801	2.4	1.51	3.67	18.88	19.23
Quartz	(9,-3,-8)	14.763	84.19	2.8	2.4	1.51	3.67	18.88	19.23
Quartz	(4,5,-8)	14.618	80.1	2.764	2.4	2.589	6.3	32.36	32.97
	Equiv. Refl.: (4,-9,8), (-9,4,-8), (-9,5,8)								
Quartz	(5,4,8)	14.618	80.1	2.76	2.4	2.589	6.29	32.36	32.96
	Equiv. Refl.: (5,-9,-8)								
LiNbO3	(4,6,19)	14.803	86.01	2.689	4.2	1.035	4.37	12.93	13.65
	Equiv. Refl.: (4,-10,-19), (6,4,-19), (6,-10,19), (10,-4,-19), (10,-6,19), (-4,10,19), (-4,-6,-19), (-6,10,-19), (-6,-4,19), (-10,4,19), (-10,6,-19), (5,6,-4), (5,-11,4)								
Quartz	(-5,11,-4)	14.636	80.52	2.688	2.1	2.477	5.1	30.96	31.38
	Equiv. Refl.: (-5,-6,4)								
Quartz	(6,5,4)	14.636	80.52	2.687	2.1	2.477	5.09	30.96	31.38
	Equiv. Refl.: (-11,5,-4), (-11,6,4)								
Quartz	(6,-11,-4)	14.636	80.52	2.686	2.1	2.477	5.09	30.96	31.38
	Equiv. Refl.: (11,-5,4), (11,-6,-4), (-6,-5,-4)								
Quartz	(-6,11,4)	14.636	80.52	2.685	2.1	2.477	5.09	30.96	31.38
Quartz	(0,6,-10)	14.422	76.38	2.68	2	3.595	7.08	44.94	45.5
	Equiv. Refl.: (0,-6,10), (6,0,10), (6,-6,-10), (-6,0,-10), (-6,6,10)								
Sapph	(2,4,-26)	14.743	83.49	2.477	2.3	1.692	3.9	21.15	21.51
	Equiv. Refl.: (2,-6,26), (4,2,26), (4,-6,-26), (6,-2,26), (6,-4,-26), (-2,6,-26), (-2,-4,26), (-4,6,26), (-4,-2,-26), (-6,2,-26), (-6,4,26)								
Quartz	(2,2,12)	14.66	81.1	2.43	2.1	2.323	4.94	29.04	29.46
	Equiv. Refl.: (2,-4,-12)								
Quartz	(-4,2,-12)	14.66	81.1	2.428	2.1	2.323	4.93	29.04	29.46
Quartz	(-4,2,12)	14.66	81.1	2.427	2.1	2.323	4.93	29.04	29.46
Quartz	(2,2,-12)	14.66	81.1	2.425	2.1	2.323	4.93	29.04	29.46
	Equiv. Refl.: (2,-4,12)								
Quartz	(0,2,-12)	14.069	71.46	2.392	2	4.975	9.98	62.19	62.99
	Equiv. Refl.: (0,-2,12), (2,0,12), (2,-2,-12), (-2,0,-12), (-2,2,12)								
Quartz	(6,2,9)	14.729	83.03	2.384	2.1	1.814	3.74	22.68	22.98
	Equiv. Refl.: (6,-8,-9)								
Quartz	(-8,2,-9)	14.729	83.03	2.383	2.1	1.814	3.74	22.68	22.98
Quartz	(2,6,-9)	14.729	83.03	2.382	2.1	1.814	3.74	22.68	22.98
	Equiv. Refl.: (2,-8,9)								
Quartz	(-8,6,9)	14.729	83.03	2.381	2.1	1.814	3.74	22.68	22.98
Quartz	(-2,4,12)	14.66	81.1	2.308	2.1	2.323	4.94	29.04	29.46
	Equiv. Refl.: (-2,-2,-12)								
Quartz	(4,-2,12)	14.66	81.1	2.307	2.1	2.323	4.93	29.04	29.46
Quartz	(4,-2,-12)	14.66	81.1	2.306	2.1	2.323	4.93	29.04	29.46
Quartz	(-2,4,-12)	14.66	81.1	2.304	2.1	2.323	4.93	29.04	29.46
	Equiv. Refl.: (-2,-2,12)								

Ei =	14.839	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(3,8,1)	14.825	87.47	2.245	2.9	0.656	1.88	8.2	8.42
	Equiv. Refl.: (3,-11,-1), (8,3,-1), (8,-11,1), (11,-3,-1), (11,-8,1), (-3,11,1), (-3,-8,-1), (-8,11,-1), (-8,-3,1), (-11,3,1), (-11,8,-1)								
Quartz	(7,-7,-9)	14.512	77.94	2.239	1.9	3.17	6.06	39.63	40.09
	Equiv. Refl.: (-7,7,9)								
Quartz	(7,0,9)	14.512	77.94	2.238	1.9	3.17	6.06	39.63	40.09
	Equiv. Refl.: (-7,0,-9)								
Quartz	(0,7,-9)	14.512	77.94	2.237	1.9	3.17	6.06	39.63	40.09
	Equiv. Refl.: (0,-7,9)								
Sapph	(5,6,-7)	14.735	83.21	1.92	2.1	1.766	3.74	22.07	22.39
	Equiv. Refl.: (5,-11,7), (6,5,7), (6,-11,-7), (11,-5,7), (11,-6,-7), (-5,11,-7), (-5,-6,7), (-6,11,7), (-6,-5,-7), (-11,5,-7), (-11,6,7)								
Quartz	(0,9,-6)	14.809	86.37	1.898	2.2	0.943	2.08	11.78	11.97
	Equiv. Refl.: (0,-9,6), (9,0,6)								
Quartz	(9,-9,-6)	14.809	86.37	1.897	2.2	0.943	2.08	11.78	11.97
	Equiv. Refl.: (-9,0,-6), (-9,9,6)								
Quartz	(-6,8,9)	14.729	83.03	1.857	2.1	1.814	3.74	22.68	22.98
	Equiv. Refl.: (-6,-2,-9)								
Quartz	(8,-2,9)	14.729	83.03	1.856	2.1	1.814	3.74	22.68	22.98
Quartz	(8,-6,-9)	14.729	83.03	1.855	2.1	1.814	3.74	22.68	22.98
	Equiv. Refl.: (-2,8,-9), (-2,-6,9)								
Quartz	(0,7,9)	14.512	77.94	1.848	1.9	3.17	5.98	39.63	40.07
	Equiv. Refl.: (0,-7,-9), (7,0,-9), (-7,0,9)								
Quartz	(7,-7,9)	14.512	77.94	1.847	1.9	3.17	5.98	39.63	40.07
	Equiv. Refl.: (-7,7,-9)								
Sapph	(0,5,-26)	14.511	77.94	1.843	1.9	3.171	6.1	39.64	40.1
	Equiv. Refl.: (0,-5,26), (5,0,26), (5,-5,-26), (-5,0,-26), (-5,5,26)								
Quartz	(8,-5,-9)	14.512	77.94	1.825	1.8	3.17	5.82	39.63	40.05
Quartz	(8,-3,9)	14.512	77.94	1.824	1.8	3.17	5.82	39.63	40.05
Quartz	(-3,8,-9)	14.512	77.94	1.823	1.8	3.17	5.82	39.63	40.05
	Equiv. Refl.: (-3,-5,9), (-5,8,9), (-5,-3,-9)								
Quartz	(1,-10,-3)	14.318	74.78	1.799	1.8	4.038	7.25	50.47	50.99
	Equiv. Refl.: (-10,1,3), (-10,9,-3)								
Quartz	(1,9,3)	14.318	74.78	1.798	1.8	4.038	7.25	50.47	50.99
	Equiv. Refl.: (9,1,-3), (9,-10,3)								
Quartz	(-8,5,9)	14.512	77.94	1.771	1.8	3.17	5.82	39.63	40.05
Quartz	(-8,3,-9)	14.512	77.94	1.77	1.8	3.17	5.82	39.63	40.05
Quartz	(3,5,-9)	14.512	77.94	1.769	1.8	3.17	5.82	39.63	40.05
	Equiv. Refl.: (3,-8,9), (5,3,9), (5,-8,-9)								
Quartz	(10,-1,-3)	14.318	74.78	1.762	1.8	4.038	7.25	50.47	50.99
	Equiv. Refl.: (10,-9,3)								
Quartz	(-1,10,3)	14.318	74.78	1.761	1.8	4.038	7.25	50.47	50.99
	Equiv. Refl.: (-1,-9,-3), (-9,10,-3), (-9,-1,3)								
Sapph	(1,3,28)	14.423	76.4	1.686	1.8	3.59	6.3	44.87	45.31
	Equiv. Refl.: (1,-4,-28), (3,1,-28), (3,-4,28), (4,-1,-28), (4,-3,28), (-1,4,28), (-1,-3,-28), (-3,4,-28), (-3,-1,28), (-4,1,28), (-4,3,-28)								
Quartz	(11,-3,2)	14.532	78.32	1.676	1.7	3.067	5.2	38.34	38.69
	Equiv. Refl.: (11,-8,-2), (-8,11,2), (-8,-3,-2)								
Quartz	(-3,11,-2)	14.532	78.32	1.675	1.7	3.067	5.2	38.34	38.69
	Equiv. Refl.: (-3,-8,2)								

Ei =	14.839	keV						ΔEg	ΔEt
Cryst	Ref	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(3,8,-1)	14.395	75.96	1.665	1.7	3.712	6.22	46.4	46.82
	Equiv. Refl.: (3,-11,1), (8,3,1), (8,-11,-1), (-11,3,-1), (-11,8,1)								
Sapph	(1,4,27)	14.615	80.03	1.638	1.8	2.608	4.59	32.59	32.92
	Equiv. Refl.: (1,4,-27), (1,-5,27), (1,-5,-27), (4,1,27), (4,1,-27), (4,-5,27), (4,-5,-27), (5,-1,27), (5,-1,-27), (5,-4,27), (5,-4,-27), (-1,5,27), (-1,5,-27), (-1,-4,27), (-1,-4,-27), (-4,5,27), (-4,5,-27), (-4,-1,27), (-4,-1,-27), (-5,1,27), (-5,1,-27), (-5,4,27), (-5,4,-27)								
Sapph	(0,8,16)	14.254	73.85	1.631	1.7	4.296	7.22	53.7	54.18
	Equiv. Refl.: (0,-8,-16), (8,0,-16), (8,-8,16), (-8,0,16), (-8,8,-16)								
Quartz	(11,-3,1)	14.395	75.96	1.623	1.7	3.712	6.22	46.4	46.82
	Equiv. Refl.: (11,-8,-1), (-3,11,-1), (-3,-8,1), (-8,11,1), (-8,-3,-1)								
Quartz	(0,9,-5)	14.312	74.69	1.621	1.6	4.063	6.68	50.79	51.23
	Equiv. Refl.: (0,-9,5), (9,0,5), (9,-9,-5), (-9,0,-5), (-9,9,5)								
Quartz	(3,8,-2)	14.532	78.32	1.614	1.7	3.067	5.2	38.34	38.69
	Equiv. Refl.: (3,-11,2), (8,3,2), (8,-11,-2), (-11,3,-2), (-11,8,2)								
Sapph	(2,8,6)	14.082	71.63	1.596	1.6	4.929	8.05	61.61	62.13
	Equiv. Refl.: (2,8,-6), (2,-10,6), (2,-10,-6), (8,2,6), (8,2,-6), (8,-10,6), (8,-10,-6), (10,-2,6), (10,-2,-6), (10,-8,6), (10,-8,-6), (-2,10,6), (-2,10,-6), (-2,-8,6), (-2,-8,-6), (-8,10,6), (-8,10,-6), (-8,-2,6), (-8,-2,-6), (-10,2,6), (-10,2,-6), (-10,8,6), (-10,8,-6)								
Quartz	(3,-1,12)	14.294	74.42	1.583	1.6	4.137	6.65	51.72	52.14
	Equiv. Refl.: (3,-2,-12), (-2,3,12), (-2,-1,-12)								
Quartz	(2,1,12)	14.294	74.42	1.582	1.6	4.137	6.64	51.72	52.14
	Equiv. Refl.: (2,-3,-12), (-1,3,-12), (-1,-2,12), (-3,1,-12), (-3,2,12)								
Quartz	(1,-3,12)	14.294	74.42	1.581	1.6	4.137	6.64	51.72	52.14
Quartz	(1,2,-12)	14.294	74.42	1.58	1.6	4.137	6.64	51.72	52.14
Quartz	(7,-3,10)	14.495	77.64	1.547	1.6	3.251	5.04	40.64	40.95
	Equiv. Refl.: (7,-4,-10)								
Quartz	(-4,-3,-10)	14.495	77.64	1.546	1.6	3.251	5.04	40.64	40.95
Quartz	(7,-1,-9)	14.066	71.42	1.545	1.5	4.987	7.69	62.34	62.81
	Equiv. Refl.: (7,-6,9), (-4,7,10), (-6,7,-9), (-6,-1,9)								
Quartz	(-1,7,9)	14.066	71.42	1.544	1.5	4.987	7.68	62.34	62.81
	Equiv. Refl.: (-1,-6,-9), (-3,7,-10), (-3,-4,10)								
Quartz	(1,6,9)	14.066	71.42	1.515	1.5	4.987	7.68	62.34	62.81
	Equiv. Refl.: (6,1,-9), (6,-7,9), (-7,1,9), (-7,6,-9)								
Quartz	(1,-7,-9)	14.066	71.42	1.514	1.5	4.987	7.68	62.34	62.81
Quartz	(-4,-4,-9)	14.438	76.65	1.496	1.5	3.52	5.23	44.01	44.32
Quartz	(-4,8,9)	14.438	76.65	1.495	1.5	3.52	5.23	44.01	44.32
Quartz	(8,-4,9)	14.438	76.65	1.494	1.5	3.52	5.22	44.01	44.31
	Equiv. Refl.: (8,-4,-9), (-4,8,-9), (-4,-4,9)								
Quartz	(11,-5,-1)	13.946	70.02	1.493	1.5	5.395	8.03	67.43	67.91
	Equiv. Refl.: (11,-6,1), (-5,11,1), (-5,-6,-1), (-6,11,-1), (-6,-5,1)								
Quartz	(5,6,1)	13.946	70.02	1.467	1.5	5.395	8.03	67.43	67.91
	Equiv. Refl.: (5,-11,-1), (6,5,-1), (6,-11,1), (-11,5,1), (-11,6,-1)								
Quartz	(-7,3,-10)	14.495	77.64	1.453	1.6	3.251	5.04	40.64	40.95
	Equiv. Refl.: (-7,4,10)								
Quartz	(4,3,10)	14.495	77.64	1.451	1.6	3.251	5.04	40.64	40.95
	Equiv. Refl.: (4,-7,-10)								
Quartz	(3,4,-10)	14.495	77.64	1.45	1.5	3.251	5.04	40.64	40.95
	Equiv. Refl.: (3,-7,10)								

Ei =	14.839	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(2,7,-14)	14.01	70.76	1.446	1.5	5.179	7.7	64.73	65.19
	Equiv. Refl.: (2,-9,14), (7,2,14), (7,-9,-14), (9,-2,14), (9,-7,-14), (-2,9,-14), (-2,-7,14), (-7,9,14), (-7,-2,-14), (-9,2,-14), (-9,7,14), (11,-4,-2), (11,-7,2), (-4,11,2), (-4,-7,-2), (-7,11,-2), (-7,-4,2)								
Quartz	(-3,-7,-6)	14.665	81.22	1.444	1.4	2.292	3.3	28.65	28.84
Quartz	(-3,10,6)	14.665	81.22	1.443	1.4	2.292	3.3	28.65	28.84
Quartz	(10,-3,-6)	14.665	81.22	1.442	1.4	2.292	3.29	28.65	28.84
	Equiv. Refl.: (10,-7,6), (-7,10,-6)								
Quartz	(-7,-3,6)	14.665	81.22	1.441	1.4	2.292	3.29	28.65	28.84
Sapph	(0,9,12)	14.701	82.19	1.44	1.6	2.035	3.3	25.44	25.65
	Equiv. Refl.: (0,9,-12), (0,-9,12), (0,-9,-12), (9,0,12), (9,0,-12), (9,-9,12), (9,-9,-12), (-9,0,12), (-9,0,-12), (-9,9,12), (-9,9,-12)								
Sapph	(2,7,16)	14.49	77.55	1.433	1.5	3.277	5	40.96	41.26
	Equiv. Refl.: (2,-9,-16), (7,2,-16), (7,-9,16), (9,-2,-16), (9,-7,16), (-2,9,16), (-2,-7,-16), (-7,9,-16), (-7,-2,16), (-9,2,16), (-9,7,-16)								
Quartz	(4,7,2)	14.237	73.62	1.43	1.5	4.362	6.39	54.52	54.9
	Equiv. Refl.: (4,-11,-2), (7,4,-2), (7,-11,2), (-11,4,2), (-11,7,-2)								
Quartz	(10,-1,-1)	13.946	70.02	1.413	1.4	5.395	7.68	67.43	67.87
	Equiv. Refl.: (10,-9,1), (-1,-9,-1), (-9,10,-1), (-9,-1,1)								
Quartz	(-1,10,1)	13.946	70.02	1.412	1.4	5.395	7.68	67.43	67.87
Quartz	(1,9,1)	13.946	70.02	1.411	1.4	5.395	7.68	67.43	67.87
	Equiv. Refl.: (1,-10,-1), (9,1,-1), (9,-10,1), (-10,1,1), (-10,9,-1)								
Quartz	(1,-7,9)	14.066	71.42	1.409	1.4	4.987	7.09	62.34	62.74
	Equiv. Refl.: (-7,1,-9), (-7,6,9)								
Quartz	(1,6,-9)	14.066	71.42	1.408	1.4	4.987	7.09	62.34	62.74
	Equiv. Refl.: (6,1,9), (6,-7,-9)								
Quartz	(7,-1,9)	14.066	71.42	1.4	1.4	4.987	7.09	62.34	62.74
	Equiv. Refl.: (7,-6,-9), (-1,7,-9), (-1,-6,9)								
Quartz	(-6,7,9)	14.066	71.42	1.399	1.4	4.987	7.09	62.34	62.74
	Equiv. Refl.: (-6,-1,-9)								
Quartz	(5,2,10)	14.641	80.63	1.389	1.5	2.45	3.62	30.62	30.83
	Equiv. Refl.: (5,-7,-10)								
Quartz	(2,5,-10)	14.641	80.63	1.388	1.5	2.45	3.62	30.62	30.83
	Equiv. Refl.: (2,-7,10)								
Quartz	(-7,2,-10)	14.641	80.63	1.387	1.5	2.45	3.61	30.62	30.83
Sapph	(4,5,-16)	14.014	70.8	1.386	1.4	5.168	7.39	64.6	65.02
	Equiv. Refl.: (4,-9,16), (5,4,16), (5,-9,-16), (9,-4,16), (9,-5,-16), (-4,9,-16), (-4,-5,16), (-5,9,16), (-5,-4,-16), (-9,4,-16), (-9,5,16), (-7,5,10)								
Quartz	(4,4,9)	14.438	76.65	1.383	1.5	3.52	5.23	44.01	44.32
	Equiv. Refl.: (4,-8,-9)								
Quartz	(4,4,-9)	14.438	76.65	1.381	1.5	3.52	5.22	44.01	44.31
	Equiv. Refl.: (4,-8,9), (-8,4,9), (-8,4,-9)								
Quartz	(-5,7,10)	14.641	80.63	1.373	1.5	2.45	3.62	30.62	30.83
	Equiv. Refl.: (-5,-2,-10)								
Quartz	(-2,7,-10)	14.641	80.63	1.372	1.5	2.45	3.62	30.62	30.83
	Equiv. Refl.: (-2,-5,10)								
Quartz	(7,-2,10)	14.641	80.63	1.371	1.5	2.45	3.61	30.62	30.83
	Equiv. Refl.: (-2,8,-8), (-2,-6,8), (-6,8,8), (-6,-2,-8)								
Quartz	(7,-5,-10)	14.641	80.63	1.37	1.5	2.45	3.61	30.62	30.83
	Equiv. Refl.: (8,-2,8), (8,-6,-8)								
Quartz	(2,6,-8)	13.949	70.06	1.369	1.4	5.383	7.45	67.29	67.7
	Equiv. Refl.: (2,-8,8), (6,2,8), (6,-8,-8)								

Ei =	14.839	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-8,2,-8)	13.949	70.06	1.368	1.4	5.383	7.45	67.29	67.7
	Equiv. Refl.: (-8,6,8)								
Quartz	(9,1,3)	14.318	74.78	1.345	1.4	4.038	5.46	50.47	50.77
	Equiv. Refl.: (9,-10,-3)								
Quartz	(1,9,-3)	14.318	74.78	1.344	1.4	4.038	5.46	50.47	50.77
	Equiv. Refl.: (1,-10,3), (-10,1,-3), (-10,9,3)								
Quartz	(9,-2,-7)	14.377	75.66	1.319	1.3	3.792	5.12	47.41	47.68
	Equiv. Refl.: (9,-7,7)								
Quartz	(-7,9,-7)	14.377	75.66	1.318	1.3	3.792	5.11	47.41	47.68
Sapph	(1,9,4)	14.478	77.33	1.317	1.4	3.336	4.71	41.7	41.96
	Equiv. Refl.: (1,-10,-4), (9,1,-4), (9,-10,4), (10,-1,-4), (10,-9,4), (-1,10,4), (-1,-9,-4), (-9,10,-4), (-9,-1,4), (-10,1,4), (-10,9,-4), (-2,9,7), (-2,-7,-7), (-7,-2,7)								
Quartz	(-9,2,7)	14.377	75.66	1.288	1.3	3.792	5.12	47.41	47.68
	Equiv. Refl.: (-9,7,-7)								
Quartz	(7,2,-7)	14.377	75.66	1.287	1.3	3.792	5.11	47.41	47.68
	Equiv. Refl.: (7,-9,7)								
Quartz	(2,7,7)	14.377	75.66	1.286	1.3	3.792	5.11	47.41	47.68
	Equiv. Refl.: (2,-9,-7)								
Quartz	(-9,10,3)	14.318	74.78	1.281	1.4	4.038	5.46	50.47	50.77
	Equiv. Refl.: (-9,-1,-3)								
Quartz	(10,-1,3)	14.318	74.78	1.28	1.4	4.038	5.46	50.47	50.77
	Equiv. Refl.: (10,-9,-3), (-1,10,-3), (-1,-9,3)								
Sapph	(4,6,-14)	14.719	82.72	1.279	1.5	1.896	2.81	23.7	23.86
	Equiv. Refl.: (4,-10,14), (6,4,14), (6,-10,-14), (10,-4,14), (10,-6,-14), (-4,10,-14), (-4,-6,14), (-6,10,14), (-6,-4,-14), (-10,4,-14), (-10,6,14)								
Quartz	(-3,-8,-2)	14.532	78.32	1.276	1.3	3.067	3.96	38.34	38.54
	Equiv. Refl.: (-8,11,-2), (-8,-3,2)								
Quartz	(11,-3,-2)	14.532	78.32	1.275	1.3	3.067	3.96	38.34	38.54
	Equiv. Refl.: (11,-4,2), (11,-7,-2), (11,-8,2), (-3,11,2), (-4,11,-2), (-4,-7,2), (-7,11,2), (-7,-4,-2)								
Quartz	(-7,3,10)	14.495	77.64	1.26	1.3	3.251	4.31	40.64	40.87
Quartz	(4,3,-10)	14.495	77.64	1.259	1.3	3.251	4.3	40.64	40.87
	Equiv. Refl.: (7,-3,-10), (7,-4,10), (-7,4,-10)								
Quartz	(3,4,10)	14.495	77.64	1.258	1.3	3.251	4.3	40.64	40.87
	Equiv. Refl.: (3,-7,-10), (4,-7,10), (-3,7,10), (-3,-4,-10), (-4,7,-10), (-4,-3,10)								
Sapph	(2,3,26)	14.036	71.06	1.257	1.3	5.092	6.66	63.65	64
	Equiv. Refl.: (2,-5,-26), (3,2,-26), (3,-5,26), (5,-2,-26), (5,-3,26), (-2,5,26), (-2,-3,-26), (-3,5,-26), (-3,-2,26), (-5,2,26), (-5,3,-26)								
Quartz	(4,7,-2)	14.237	73.62	1.255	1.3	4.362	5.67	54.52	54.82
	Equiv. Refl.: (4,-11,2), (-11,4,-2), (-11,7,2)								
Quartz	(7,4,2)	14.237	73.62	1.254	1.3	4.362	5.67	54.52	54.82
	Equiv. Refl.: (7,-11,-2)								
Quartz	(0,2,12)	14.069	71.46	1.232	1.3	4.975	6.26	62.19	62.5
	Equiv. Refl.: (0,-2,-12)								
Quartz	(2,0,-12)	14.069	71.46	1.231	1.3	4.975	6.26	62.19	62.5
	Equiv. Refl.: (2,-2,12), (-2,0,12), (-2,2,-12)								
Quartz	(3,7,6)	14.665	81.22	1.225	1.4	2.292	3.3	28.65	28.84
	Equiv. Refl.: (3,-10,-6)								
Quartz	(-10,3,6)	14.665	81.22	1.224	1.4	2.292	3.29	28.65	28.84
Quartz	(7,3,-6)	14.665	81.22	1.223	1.4	2.292	3.29	28.65	28.84
	Equiv. Refl.: (7,-10,6), (-10,7,-6)								

Ei =	14.839	keV						ΔEg	ΔEt
Cryst	Ref	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(10,-5,6)	14.373	75.6	1.205	1.3	3.811	4.78	47.63	47.87
	Equiv. Refl.: (10,-5,-6), (-5,10,6), (-5,10,-6), (-5,-5,6), (-5,-5,-6)								
Quartz	(5,5,6)	14.373	75.6	1.204	1.3	3.811	4.78	47.63	47.87
	Equiv. Refl.: (5,-10,-6)								
Quartz	(5,5,-6)	14.373	75.6	1.203	1.3	3.811	4.78	47.63	47.87
	Equiv. Refl.: (5,-10,6), (-10,5,6), (-10,5,-6)								
Sapph	(5,6,5)	14.548	78.64	1.195	1.3	2.981	3.92	37.26	37.47
	Equiv. Refl.: (5,-11,-5), (6,5,-5), (6,-11,5), (11,-5,-5), (11,-6,5), (-5,11,5), (-5,-6,-5), (-6,11,-5), (-6,-5,5), (-11,5,5), (-11,6,-5)								
Sapph	(2,7,-17)	14.747	83.62	1.192	1.4	1.659	2.38	20.74	20.88
	Equiv. Refl.: (2,-9,17), (7,2,17), (7,-9,-17), (9,-2,17), (9,-7,-17), (-2,9,-17), (-2,-7,17), (-7,9,17), (-7,-2,-17), (-9,2,-17), (-9,7,17), (1,5,-10), (1,-6,10), (-6,1,-10)								
Quartz	(5,1,10)	14.049	71.22	1.191	1.2	5.046	6.13	63.08	63.37
	Equiv. Refl.: (5,-6,-10), (-6,5,10)								
Quartz	(-1,6,-10)	14.049	71.22	1.184	1.2	5.046	6.14	63.08	63.37
	Equiv. Refl.: (-1,-5,10)								
Quartz	(6,-1,10)	14.049	71.22	1.183	1.2	5.046	6.13	63.08	63.37
	Equiv. Refl.: (6,-5,-10), (-5,6,10), (-5,-1,-10)								
Sapph	(1,8,-13)	14.273	74.12	1.18	1.3	4.22	5.29	52.75	53.02
	Equiv. Refl.: (1,-9,13), (8,1,13), (8,-9,-13), (9,-1,13), (9,-8,-13), (-1,9,-13), (-1,-8,13), (-8,9,13), (-8,-1,-13), (-9,1,-13), (-9,8,13)								
Quartz	(3,8,2)	14.532	78.32	1.163	1.3	3.067	3.96	38.34	38.54
	Equiv. Refl.: (3,-11,-2), (8,3,-2), (8,-11,2), (-11,3,2), (-11,8,-2)								
Sapph	(2,6,20)	14.45	76.86	1.158	1.3	3.465	4.35	43.31	43.52
	Equiv. Refl.: (2,-8,-20), (6,2,-20), (6,-8,20), (8,-2,-20), (8,-6,20), (-2,8,20), (-2,-6,-20), (-6,8,-20), (-6,-2,20), (-8,2,20), (-8,6,-20)								
LiNbO3	(1,6,25)	14.426	76.46	1.129	1.6	3.575	5.77	44.68	45.06
	Equiv. Refl.: (1,-7,-25), (6,1,-25), (6,-7,25), (7,-1,-25), (7,-6,25), (-1,7,25), (-1,-6,-25), (-6,7,-25), (-6,-1,25), (-7,1,25), (-7,6,-25)								
LiNbO3	(1,10,3)	14.711	82.47	1.118	1.9	1.962	3.74	24.52	24.81
	Equiv. Refl.: (1,10,-3), (1,-11,3), (1,-11,-3), (10,1,3), (10,1,-3), (10,-11,3), (10,-11,-3), (11,-1,3), (11,-1,-3), (11,-10,3), (11,-10,-3), (-1,11,3), (-1,11,-3), (-1,-10,3), (-1,-10,-3), (-10,11,3), (-10,11,-3), (-10,-1,3), (-10,-1,-3), (-11,1,3), (-11,1,-3), (-11,10,3), (-11,10,-3)								
Quartz	(3,8,1)	14.395	75.96	1.116	1.2	3.712	4.28	46.4	46.6
	Equiv. Refl.: (3,-11,-1), (8,3,-1), (8,-11,1), (-11,3,1), (-11,8,-1)								
Quartz	(-6,10,-6)	14.446	76.79	1.114	1.2	3.483	4.04	43.54	43.73
	Equiv. Refl.: (-6,-4,6)								
Quartz	(-4,10,6)	14.446	76.79	1.113	1.2	3.483	4.03	43.54	43.73
	Equiv. Refl.: (-4,-6,-6)								
Quartz	(10,-4,-6)	14.446	76.79	1.112	1.2	3.483	4.03	43.54	43.73
	Equiv. Refl.: (10,-6,6)								
Sapph	(1,5,-25)	14.579	79.25	1.104	1.2	2.816	3.48	35.2	35.37
	Equiv. Refl.: (1,-6,25), (5,1,25), (5,-6,-25), (6,-1,25), (6,-5,-25), (-1,6,-25), (-1,-5,25), (-5,6,25), (-5,-1,-25), (-6,1,-25), (-6,5,25)								
LiNbO3	(1,3,31)	14.741	83.42	1.079	2	1.712	3.35	21.4	21.66
	Equiv. Refl.: (1,-4,-31), (3,1,-31), (3,-4,31), (4,-1,-31), (4,-3,31), (-1,4,31), (-1,-3,-31), (-3,4,-31), (-3,-1,31), (-4,1,31), (-4,3,-31)								
Quartz	(2,7,-7)	14.377	75.66	1.074	1.1	3.792	4.25	47.41	47.6
	Equiv. Refl.: (2,-9,7), (7,2,7), (7,-9,-7), (11,-3,-1), (11,-8,1), (-3,11,1), (-3,-8,-1), (-9,2,-7), (-9,7,7)								
Quartz	(6,-10,6)	14.446	76.79	1.073	1.2	3.483	4.04	43.54	43.73
	Equiv. Refl.: (-8,11,-1), (-8,-3,1)								

Ei =	14.839	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(6,4,-6)	14.446	76.79	1.072	1.2	3.483	4.03	43.54	43.73
Quartz	(4,6,6)	14.446	76.79	1.071	1.2	3.483	4.03	43.54	43.73
	Equiv. Refl.: (4,-10,-6), (-10,4,6), (-10,6,-6)								
Quartz	(5,6,-1)	13.946	70.02	1.064	1.1	5.395	5.87	67.43	67.69
	Equiv. Refl.: (5,-11,1), (6,5,1), (-11,5,-1), (-11,6,1)								
Quartz	(6,-11,-1)	13.946	70.02	1.063	1.1	5.395	5.87	67.43	67.69
Quartz	(11,-5,1)	13.946	70.02	1.054	1.1	5.395	5.87	67.43	67.69
	Equiv. Refl.: (11,-6,-1), (-5,11,-1), (-5,-6,1), (-6,11,1), (-6,-5,-1)								
Quartz	(9,-2,7)	14.377	75.66	1.052	1.1	3.792	4.25	47.41	47.6
	Equiv. Refl.: (9,-7,-7), (-2,9,-7), (-2,-7,7), (-7,9,7), (-7,-2,-7)								
Quartz	(-1,10,-4)	14.636	80.52	1.046	1.1	2.477	2.77	30.96	31.09
	Equiv. Refl.: (-1,-9,4)								
Quartz	(-9,10,4)	14.636	80.52	1.045	1.1	2.477	2.77	30.96	31.09
	Equiv. Refl.: (-9,-1,-4)								
Quartz	(10,-1,4)	14.636	80.52	1.044	1.1	2.477	2.77	30.96	31.09
	Equiv. Refl.: (10,-9,-4)								
Sapph	(3,5,-20)	14.214	73.31	1.036	1.1	4.45	4.94	55.63	55.85
	Equiv. Refl.: (3,-8,20), (5,3,20), (5,-8,-20), (8,-3,20), (8,-5,-20), (-3,8,-20), (-3,-5,20), (-5,8,20), (-5,-3,-20), (-8,3,-20), (-8,5,20)								
Quartz	(3,-1,-12)	14.294	74.42	1.029	1.1	4.137	4.4	51.72	51.9
	Equiv. Refl.: (3,-2,12)								
Quartz	(-1,3,12)	14.294	74.42	1.028	1.1	4.137	4.39	51.72	51.9
	Equiv. Refl.: (-1,-2,-12)								
Quartz	(-2,3,-12)	14.294	74.42	1.026	1.1	4.137	4.39	51.72	51.9
	Equiv. Refl.: (-2,-1,12)								
LiNbO3	(1,9,13)	14.482	77.41	1.022	1.5	3.313	5.08	41.42	41.73
	Equiv. Refl.: (1,-10,-13), (9,1,-13), (9,-10,13), (10,-1,-13), (10,-9,13), (-1,10,13), (-1,-9,-13), (-9,10,-13), (-9,-1,13), (-10,1,13), (-10,9,-13)								
Sapph	(1,1,30)	14.554	78.75	0.998	1.1	2.951	3.32	36.89	37.04
	Equiv. Refl.: (1,1,-30), (1,-2,30), (1,-2,-30), (2,-1,30), (2,-1,-30), (-1,2,30), (-1,2,-30), (-1,-1,30), (-1,-1,-30), (-2,1,30), (-2,1,-30), (5,6,3), (5,-11,-3), (6,5,-3), (6,-11,3), (-11,5,3), (-11,6,-3)								
Quartz	(-3,1,12)	14.294	74.42	0.992	1.1	4.137	4.4	51.72	51.9
	Equiv. Refl.: (-3,2,-12)								
Quartz	(1,2,12)	14.294	74.42	0.991	1.1	4.137	4.39	51.72	51.9
	Equiv. Refl.: (1,-3,-12)								
Sapph	(4,4,21)	14.46	77.03	0.989	1.1	3.418	3.75	42.73	42.89
	Equiv. Refl.: (4,4,-21), (4,-8,21), (4,-8,-21), (8,-4,21), (8,-4,-21), (-4,8,21), (-4,8,-21), (-4,-4,21), (-4,-4,-21), (-8,4,21), (-8,4,-21), (2,1,-12), (2,-3,12)								
Quartz	(3,6,-7)	14.078	71.58	0.983	1	4.943	4.96	61.79	61.98
	Equiv. Refl.: (3,-9,7), (-9,3,-7)								
Quartz	(6,3,7)	14.078	71.58	0.982	1	4.943	4.95	61.79	61.98
	Equiv. Refl.: (6,-9,-7), (-5,11,3), (-5,-6,-3), (-6,11,-3), (-6,-5,3), (-9,6,7)								
Quartz	(11,-5,-3)	14.318	74.78	0.981	1	4.038	4.22	50.47	50.65
	Equiv. Refl.: (11,-6,3)								
Quartz	(1,9,-4)	14.636	80.52	0.971	1.1	2.477	2.77	30.96	31.09
	Equiv. Refl.: (1,-10,4), (9,1,4), (9,-10,-4)								
Quartz	(-10,1,-4)	14.636	80.52	0.97	1.1	2.477	2.77	30.96	31.09
	Equiv. Refl.: (-10,9,4)								

Ei =	14.839	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(5,6,-1)	14.359	75.39	0.969	1.1	3.868	4.11	48.35	48.52
	Equiv. Refl.: (5,-11,1), (6,5,1), (6,-11,-1), (11,-5,1), (11,-6,-1), (-5,11,-1), (-5,-6,1), (-6,11,1), (-6,-5,-1), (-11,5,-1), (-11,6,1)								
Quartz	(9,-3,-7)	14.078	71.58	0.96	1	4.943	4.92	61.79	61.98
	Equiv. Refl.: (-6,-3,7)								
Quartz	(9,-6,7)	14.078	71.58	0.959	1	4.943	4.92	61.79	61.98
	Equiv. Refl.: (-3,9,7), (-3,-6,-7), (-6,9,-7)								
Quartz	(3,-9,-7)	14.078	71.58	0.951	1	4.943	4.92	61.79	61.98
	Equiv. Refl.: (6,3,-7), (6,-9,7), (-9,3,7)								
Quartz	(3,6,7)	14.078	71.58	0.95	1	4.943	4.92	61.79	61.98
	Equiv. Refl.: (-9,6,-7)								
Quartz	(-2,10,5)	14.533	78.34	0.941	0.9	3.061	2.87	38.27	38.37
	Equiv. Refl.: (-2,-8,-5), (-3,9,-7), (-3,-6,7)								
Quartz	(9,-3,7)	14.078	71.58	0.94	1	4.943	4.95	61.79	61.98
	Equiv. Refl.: (9,-6,-7), (10,-2,-5), (10,-8,5), (-6,9,7), (-6,-3,-7)								
Quartz	(-8,10,-5)	14.533	78.34	0.939	0.9	3.061	2.86	38.27	38.37
	Equiv. Refl.: (-8,-2,5)								
Quartz	(9,-1,-6)	14.224	73.45	0.934	1	4.41	4.27	55.12	55.29
	Equiv. Refl.: (9,-8,6)								
Quartz	(-1,9,6)	14.224	73.45	0.933	1	4.41	4.26	55.12	55.29
	Equiv. Refl.: (-1,-8,-6), (-3,-3,-11), (-8,9,-6), (-8,-1,6)								
Quartz	(-3,6,11)	14.714	82.57	0.932	1	1.936	1.95	24.2	24.28
Quartz	(6,-3,-11)	14.714	82.57	0.929	1	1.936	1.95	24.2	24.28
Quartz	(6,-3,11)	14.714	82.57	0.928	1	1.936	1.95	24.2	24.28
	Equiv. Refl.: (-3,6,-11), (-3,-3,11)								
Sapph	(4,5,17)	14.279	74.21	0.918	1	4.196	4.22	52.44	52.61
	Equiv. Refl.: (4,-9,-17), (5,4,-17), (5,-9,17), (9,-4,-17), (9,-5,17), (-4,9,17), (-4,-5,-17), (-5,9,-17), (-5,-4,17), (-9,4,17), (-9,5,-17)								
Quartz	(-9,1,6)	14.224	73.45	0.898	1	4.41	4.27	55.12	55.29
	Equiv. Refl.: (-9,8,-6)								
Quartz	(1,8,6)	14.224	73.45	0.897	1	4.41	4.26	55.12	55.29
	Equiv. Refl.: (1,-9,-6), (8,1,-6), (8,-9,6)								
Quartz	(-9,10,-4)	14.636	80.52	0.893	1	2.477	2.44	30.96	31.06
	Equiv. Refl.: (-9,-1,4)								
Quartz	(10,-1,-4)	14.636	80.52	0.892	1	2.477	2.44	30.96	31.06
	Equiv. Refl.: (10,-9,4), (-1,10,4), (-1,-9,-4)								
Quartz	(8,-2,-8)	13.949	70.06	0.887	0.9	5.383	4.89	67.29	67.47
	Equiv. Refl.: (8,-6,8), (-2,8,8), (-2,-6,-8), (-6,8,-8), (-6,-2,8)								
Quartz	(8,1,6)	14.224	73.45	0.875	0.9	4.41	3.96	55.12	55.26
	Equiv. Refl.: (8,-9,-6)								
Quartz	(1,8,-6)	14.224	73.45	0.874	0.9	4.41	3.96	55.12	55.26
	Equiv. Refl.: (1,-9,6), (-9,1,-6), (-9,8,6)								
Sapph	(2,6,-19)	14.14	72.34	0.857	0.9	4.725	4.41	59.06	59.22
	Equiv. Refl.: (2,-8,19), (6,2,19), (6,-8,-19), (8,-2,19), (8,-6,-19), (-2,8,-19), (-2,-6,19), (-6,8,19), (-6,-2,-19), (-8,2,-19), (-8,6,19), (8,-1,-8)								
LiNbO3	(2,7,19)	14.203	73.17	0.856	1.3	4.49	5.62	56.12	56.4
	Equiv. Refl.: (2,-9,-19), (7,2,-19), (7,-9,19), (9,-2,-19), (9,-7,19), (-2,9,19), (-2,-7,-19), (-7,9,-19), (-7,-2,19), (-9,2,19), (-9,7,-19), (8,-7,8), (-1,-7,-8)								
Quartz	(-1,8,8)	14.325	74.87	0.855	0.9	4.011	3.53	50.14	50.26
	Equiv. Refl.: (-7,8,-8), (-7,-1,8)								
Quartz	(-1,2,-12)	13.994	70.57	0.854	0.9	5.235	4.57	65.44	65.6
	Equiv. Refl.: (-1,-1,12)								

Ei =	14.839	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(2,-1,-12)	13.994	70.57	0.853	0.9	5.235	4.57	65.44	65.6
Quartz	(2,-1,12)	13.994	70.57	0.852	0.9	5.235	4.56	65.44	65.6
	Equiv. Refl.: (-1,2,12), (-1,-1,-12)								
Quartz	(2,6,8)	13.949	70.06	0.849	0.9	5.383	4.89	67.29	67.47
	Equiv. Refl.: (2,-8,-8), (6,2,-8), (6,-8,8), (-8,2,8), (-8,6,-8)								
Quartz	(11,-4,-3)	14.466	77.12	0.847	0.9	3.392	3.13	42.4	42.51
	Equiv. Refl.: (11,-7,3), (-4,11,3), (-4,-7,-3), (-7,11,-3), (-7,-4,3)								
Quartz	(9,1,-4)	14.636	80.52	0.845	1	2.477	2.44	30.96	31.06
	Equiv. Refl.: (9,-10,4)								
Quartz	(1,9,4)	14.636	80.52	0.844	1	2.477	2.44	30.96	31.06
	Equiv. Refl.: (1,-10,-4), (-10,1,4), (-10,9,-4)								
Quartz	(4,7,3)	14.466	77.12	0.842	0.9	3.392	3.13	42.4	42.51
	Equiv. Refl.: (4,-11,-3), (7,4,-3), (7,-11,3), (-11,4,3), (-11,7,-3)								
Sapph	(1,9,-2)	14.383	75.76	0.832	0.9	3.766	3.52	47.08	47.21
	Equiv. Refl.: (1,-10,2), (9,1,2), (9,-10,-2), (10,-1,2), (10,-9,-2), (-1,10,-2), (-1,-9,2), (-9,10,2), (-9,-1,-2), (-10,1,-2), (-10,9,2)								
Quartz	(11,-4,-1)	14.097	71.81	0.829	0.8	4.876	4.01	60.95	61.08
	Equiv. Refl.: (11,-7,1), (-4,11,1), (-4,-7,-1), (-7,11,-1)								
Quartz	(-7,-4,1)	14.097	71.81	0.828	0.8	4.876	4.01	60.95	61.08
LiNbO3	(6,6,3)	14.513	77.96	0.822	1.3	3.165	4.23	39.57	39.79
	Equiv. Refl.: (6,6,-3), (6,-12,3), (6,-12,-3), (12,-6,3), (12,-6,-3), (-6,12,3), (-6,12,-3), (-6,-6,3), (-6,-6,-3), (-12,6,3), (-12,6,-3)								
Sapph	(1,2,-28)	13.944	70	0.82	0.9	5.4	4.79	67.5	67.67
	Equiv. Refl.: (1,-3,28), (2,1,28), (2,-3,-28), (3,-1,28), (3,-2,-28), (-1,3,-28), (-1,-2,28), (-2,3,28), (-2,-1,-28), (-3,1,-28), (-3,2,28)								
Quartz	(9,-1,6)	14.224	73.45	0.813	0.9	4.41	3.96	55.12	55.26
	Equiv. Refl.: (9,-8,-6), (-1,9,-6), (-1,-8,6), (-8,9,6), (-8,-1,-6)								
Quartz	(1,1,-12)	13.994	70.57	0.806	0.9	5.235	4.57	65.44	65.6
	Equiv. Refl.: (1,-2,12)								
Quartz	(-2,1,12)	13.994	70.57	0.805	0.9	5.235	4.57	65.44	65.6
	Equiv. Refl.: (-2,-1,-12)								
Quartz	(1,1,12)	13.994	70.57	0.804	0.9	5.235	4.56	65.44	65.6
	Equiv. Refl.: (1,-2,-12)								
Quartz	(5,6,-2)	14.087	71.68	0.797	0.8	4.914	4.04	61.42	61.55
	Equiv. Refl.: (5,-11,2), (6,5,2), (6,-11,-2), (-11,5,-2), (-11,6,2)								
Quartz	(-1,8,-8)	14.325	74.87	0.789	0.8	4.011	3.35	50.14	50.25
	Equiv. Refl.: (-1,-7,8), (-7,8,8), (-7,-1,-8)								
Quartz	(8,-1,8)	14.325	74.87	0.787	0.8	4.011	3.35	50.14	50.25
	Equiv. Refl.: (8,-7,-8)								
LiNbO3	(1,9,-11)	14.147	72.43	0.781	1.2	4.697	5.45	58.72	58.97
	Equiv. Refl.: (1,-10,11), (9,1,11), (9,-10,-11), (10,-1,11), (10,-9,-11), (-1,10,-11), (-1,-9,11), (-9,10,11), (-9,-1,-11), (-10,1,-11), (-10,9,11), (3,3,11)								
Quartz	(3,-6,-11)	14.714	82.57	0.78	1	1.936	1.95	24.2	24.28
Quartz	(1,7,8)	14.325	74.87	0.777	0.9	4.011	3.53	50.14	50.26
	Equiv. Refl.: (-6,3,11), (-6,3,-11), (-8,1,8), (-8,7,-8)								
Quartz	(1,-8,-8)	14.325	74.87	0.776	0.9	4.011	3.53	50.14	50.26
	Equiv. Refl.: (3,3,-11), (3,-6,11), (7,1,-8), (7,-8,8)								
Quartz	(3,-5,-11)	14.125	72.16	0.774	0.8	4.776	3.86	59.7	59.82
Quartz	(3,2,11)	14.125	72.16	0.773	0.8	4.776	3.86	59.7	59.82
	Equiv. Refl.: (-5,2,-11), (-5,3,11)								

Ei =	14.839	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(2,3,-11)	14.125	72.16	0.772	0.8	4.776	3.85	59.7	59.82
	Equiv. Refl.: (2,-5,11)								
LiNbO3	(4,6,-17)	14.308	74.63	0.767	1.2	4.078	4.84	50.98	51.21
	Equiv. Refl.: (4,-10,17), (6,4,17), (6,-10,-17), (10,-4,17), (10,-6,-17), (-4,10,-17), (-4,-6,17), (-6,10,17), (-6,-4,-17), (-10,4,-17), (-10,6,17)								
Quartz	(9,-10,-2)	14.087	71.68	0.765	0.8	4.914	3.95	61.42	61.55
	Equiv. Refl.: (-10,1,-2), (-10,9,2)								
Quartz	(1,9,-2)	14.087	71.68	0.764	0.8	4.914	3.95	61.42	61.55
	Equiv. Refl.: (1,-10,2), (9,1,2)								
Quartz	(2,8,5)	14.533	78.34	0.761	0.9	3.061	2.87	38.27	38.37
	Equiv. Refl.: (2,-10,-5)								
Quartz	(8,-10,5)	14.533	78.34	0.76	0.9	3.061	2.86	38.27	38.37
	Equiv. Refl.: (-10,2,5), (-10,8,-5)								
Quartz	(8,2,-5)	14.533	78.34	0.759	0.9	3.061	2.86	38.27	38.37
Quartz	(-1,-4,-11)	14.275	74.15	0.758	0.8	4.213	3.3	52.66	52.76
Quartz	(-1,5,11)	14.275	74.15	0.757	0.8	4.213	3.3	52.66	52.76
Quartz	(-4,5,-11)	14.275	74.15	0.756	0.8	4.213	3.29	52.66	52.76
Quartz	(5,-1,-11)	14.275	74.15	0.755	0.8	4.213	3.29	52.66	52.76
	Equiv. Refl.: (5,-4,11), (-4,-1,11)								
Quartz	(1,-8,8)	14.325	74.87	0.751	0.8	4.011	3.35	50.14	50.25
	Equiv. Refl.: (7,1,8), (7,-8,-8)								
Quartz	(1,7,-8)	14.325	74.87	0.75	0.8	4.011	3.35	50.14	50.25
	Equiv. Refl.: (11,-3,0), (11,-8,0), (-3,11,0), (-3,-8,0), (-8,11,0), (-8,-3,0)								
Quartz	(11,-5,2)	14.087	71.68	0.749	0.8	4.914	4.04	61.42	61.55
	Equiv. Refl.: (11,-6,-2), (-6,11,2), (-6,-5,-2), (-8,1,-8), (-8,7,8)								
Quartz	(-5,11,-2)	14.087	71.68	0.748	0.8	4.914	4.04	61.42	61.55
	Equiv. Refl.: (-5,-6,2)								
Quartz	(10,-1,2)	14.087	71.68	0.741	0.8	4.914	3.95	61.42	61.55
	Equiv. Refl.: (10,-9,-2), (-1,10,-2), (-1,-9,2), (-9,10,2), (-9,-1,-2)								
Quartz	(-3,5,11)	14.125	72.16	0.738	0.8	4.776	3.86	59.7	59.82
	Equiv. Refl.: (-3,-2,-11)								
Quartz	(5,-2,11)	14.125	72.16	0.737	0.8	4.776	3.86	59.7	59.82
	Equiv. Refl.: (5,-3,-11), (-2,5,-11), (-2,-3,11)								
Quartz	(4,7,1)	14.097	71.81	0.718	0.8	4.876	4.01	60.95	61.08
	Equiv. Refl.: (4,-11,-1), (7,4,-1), (7,-11,1), (-11,4,1), (-11,7,-1)								
Quartz	(1,3,-12)	14.733	83.14	0.714	0.8	1.786	1.39	22.33	22.37
Quartz	(1,-4,12)	14.733	83.14	0.713	0.8	1.786	1.39	22.33	22.37
Quartz	(-4,1,-12)	14.733	83.14	0.711	0.8	1.786	1.38	22.33	22.37
Quartz	(-4,3,12)	14.733	83.14	0.71	0.8	1.786	1.38	22.33	22.37
Quartz	(3,1,12)	14.733	83.14	0.706	0.8	1.786	1.38	22.33	22.37
	Equiv. Refl.: (3,-4,-12)								
Quartz	(-3,8,9)	14.512	77.94	0.704	0.8	3.17	2.47	39.63	39.7
	Equiv. Refl.: (-3,-5,-9)								
Quartz	(8,-3,-9)	14.512	77.94	0.703	0.8	3.17	2.46	39.63	39.7
	Equiv. Refl.: (8,-5,9), (-5,8,-9), (-5,-3,9)								
Quartz	(11,-6,-3)	14.318	74.78	0.694	0.8	4.038	3.04	50.47	50.56
Quartz	(11,-5,3)	14.318	74.78	0.693	0.8	4.038	3.04	50.47	50.56
	Equiv. Refl.: (-5,11,-3), (-5,-6,3), (-6,11,3), (-6,-5,-3)								

Ei =	14.839	keV						ΔEg	ΔEt
Cryst	Ref	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(1,6,-23)	14.759	84.05	0.683	0.9	1.546	1.46	19.33	19.38
	Equiv. Refl.: (1,-7,23), (6,1,23), (6,-7,-23), (7,-1,23), (7,-6,-23), (-1,7,-23), (-1,-6,23), (-6,7,23), (-6,-1,-23), (-7,1,-23), (-7,6,23), (1,4,11), (1,-5,-11)								
Quartz	(4,-5,11)	14.275	74.15	0.682	0.8	4.213	3.29	52.66	52.76
Quartz	(4,1,-11)	14.275	74.15	0.681	0.8	4.213	3.29	52.66	52.76
	Equiv. Refl.: (-5,1,11), (-5,4,-11)								
Sapph	(0,6,24)	14.584	79.36	0.677	0.8	2.787	2.29	34.83	34.91
	Equiv. Refl.: (0,6,-24), (0,-6,24), (0,-6,-24), (6,0,24), (6,0,-24), (6,-6,24), (6,-6,-24), (-6,0,24), (-6,0,-24), (-6,6,24), (-6,6,-24)								
Quartz	(4,7,-3)	14.466	77.12	0.675	0.7	3.392	2.48	42.4	42.47
	Equiv. Refl.: (4,-11,3), (-11,4,-3), (-11,7,3)								
Quartz	(7,4,3)	14.466	77.12	0.674	0.7	3.392	2.48	42.4	42.47
	Equiv. Refl.: (7,-11,-3)								
Quartz	(3,5,9)	14.512	77.94	0.67	0.8	3.17	2.47	39.63	39.7
	Equiv. Refl.: (3,-8,-9), (6,5,3), (6,-11,-3), (-11,5,-3), (-11,6,3)								
Quartz	(5,3,-9)	14.512	77.94	0.669	0.8	3.17	2.46	39.63	39.7
	Equiv. Refl.: (5,6,-3), (5,-8,9), (5,-11,3), (-8,3,9), (-8,5,-9)								
Quartz	(3,8,0)	14.35	75.24	0.661	0.8	3.908	3.03	48.85	48.95
	Equiv. Refl.: (3,-11,0), (8,3,0), (8,-11,0), (-11,3,0), (-11,8,0)								
Sapph	(4,7,3)	14.579	79.25	0.66	0.8	2.817	2.27	35.22	35.29
	Equiv. Refl.: (4,7,-3), (4,-11,3), (4,-11,-3), (7,4,3), (7,4,-3), (7,-11,3), (7,-11,-3), (11,-4,3), (11,-4,-3), (11,-7,3), (11,-7,-3), (-4,11,3), (-4,11,-3), (-4,-7,3), (-4,-7,-3), (-7,11,3), (-7,11,-3), (-7,-4,3), (-7,-4,-3), (-11,4,3), (-11,4,-3), (-11,7,3), (-11,7,-3)								
Quartz	(11,-4,3)	14.466	77.12	0.614	0.7	3.392	2.48	42.4	42.47
	Equiv. Refl.: (11,-7,-3), (-4,11,-3), (-4,-7,3)								
Quartz	(-7,11,3)	14.466	77.12	0.613	0.7	3.392	2.48	42.4	42.47
	Equiv. Refl.: (-7,-4,-3)								
Quartz	(0,10,-2)	14.749	83.7	0.605	0.8	1.639	1.3	20.48	20.52
	Equiv. Refl.: (0,-10,2), (10,0,2), (10,-10,-2), (-10,0,-2), (-10,10,2)								
Sapph	(2,4,25)	14.344	75.16	0.595	0.7	3.932	2.76	49.15	49.22
	Equiv. Refl.: (2,-6,-25), (4,2,-25), (4,-6,25), (6,-2,-25), (6,-4,25), (-2,6,25), (-2,-4,-25), (-4,6,-25), (-4,-2,25), (-6,2,25), (-6,4,-25)								
Quartz	(6,4,6)	14.446	76.79	0.576	0.6	3.483	2.19	43.54	43.59
	Equiv. Refl.: (6,-10,-6)								
Quartz	(4,6,-6)	14.446	76.79	0.575	0.6	3.483	2.18	43.54	43.59
	Equiv. Refl.: (4,-10,6), (-10,4,-6)								
Quartz	(-10,6,6)	14.446	76.79	0.574	0.6	3.483	2.18	43.54	43.59
Quartz	(2,6,9)	14.729	83.03	0.573	0.7	1.814	1.21	22.68	22.71
	Equiv. Refl.: (2,-8,-9)								
Quartz	(6,2,-9)	14.729	83.03	0.572	0.7	1.814	1.2	22.68	22.71
Quartz	(6,-8,9)	14.729	83.03	0.571	0.7	1.814	1.2	22.68	22.71
	Equiv. Refl.: (-8,6,-9)								
Quartz	(-8,2,9)	14.729	83.03	0.57	0.7	1.814	1.2	22.68	22.71
Quartz	(5,6,4)	14.636	80.52	0.557	0.7	2.477	1.62	30.96	31.01
	Equiv. Refl.: (5,-11,-4), (-11,5,4), (-11,6,-4)								
Quartz	(6,5,-4)	14.636	80.52	0.556	0.7	2.477	1.62	30.96	31.01
	Equiv. Refl.: (6,-11,4)								
Quartz	(2,-10,-4)	14.12	72.09	0.552	0.6	4.796	2.88	59.96	60.02
	Equiv. Refl.: (-10,2,4), (-10,8,-4)								
Quartz	(2,8,4)	14.12	72.09	0.551	0.6	4.796	2.88	59.96	60.02
	Equiv. Refl.: (8,2,-4), (8,-10,4)								

Ei =	14.839	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
LiNbO3	(3,5,25)	14.823	87.33	0.541	1.9	0.692	1.33	8.64	8.75
	Equiv. Refl.: (3,-8,-25), (5,3,-25), (5,-8,25), (8,-3,-25), (8,-5,25), (-3,8,25), (-3,-5,-25), (-5,8,-25), (-5,-3,25), (-8,3,25), (-8,5,-25)								
Quartz	(-1,5,-11)	14.275	74.15	0.537	0.6	4.213	2.55	52.66	52.72
	Equiv. Refl.: (-1,-4,11), (-4,5,11), (-4,-1,-11)								
Quartz	(5,-1,11)	14.275	74.15	0.534	0.6	4.213	2.54	52.66	52.72
	Equiv. Refl.: (5,-4,-11)								
Quartz	(1,4,-11)	14.275	74.15	0.53	0.6	4.213	2.55	52.66	52.72
	Equiv. Refl.: (1,-5,11)								
Quartz	(4,1,11)	14.275	74.15	0.529	0.6	4.213	2.55	52.66	52.72
	Equiv. Refl.: (4,-5,-11), (10,-3,5), (10,-7,-5), (-7,10,5), (-7,-3,-5)								
Quartz	(-3,10,-5)	14.163	72.64	0.528	0.6	4.639	2.68	57.98	58.05
	Equiv. Refl.: (-3,-7,5)								
Quartz	(-5,1,-11)	14.275	74.15	0.526	0.6	4.213	2.54	52.66	52.72
	Equiv. Refl.: (-5,4,11)								
Quartz	(10,-2,-4)	14.12	72.09	0.524	0.6	4.796	2.88	59.96	60.02
	Equiv. Refl.: (10,-8,4)								
Quartz	(-2,10,4)	14.12	72.09	0.523	0.6	4.796	2.88	59.96	60.02
	Equiv. Refl.: (-2,-8,-4), (-8,10,-4), (-8,-2,4)								
Quartz	(-1,-3,12)	14.733	83.14	0.51	0.8	1.786	1.39	22.33	22.37
Quartz	(-1,4,-12)	14.733	83.14	0.509	0.8	1.786	1.39	22.33	22.37
Quartz	(4,-1,12)	14.733	83.14	0.507	0.8	1.786	1.38	22.33	22.37
Quartz	(4,-3,-12)	14.733	83.14	0.506	0.8	1.786	1.38	22.33	22.37
Quartz	(11,-4,0)	14.051	71.24	0.505	0.6	5.04	2.78	63	63.06
	Equiv. Refl.: (11,-7,0), (-4,11,0), (-4,-7,0), (-5,11,4), (-5,-6,-4), (-7,11,0), (-7,-4,0)								
Quartz	(1,9,-1)	13.946	70.02	0.504	0.6	5.395	2.98	67.43	67.5
	Equiv. Refl.: (1,-10,1), (9,1,1), (9,-10,-1), (11,-5,-4), (11,-6,4), (-6,10,6), (-6,11,-4), (-6,-4,-6), (-6,-5,4), (-10,1,-1), (-10,9,1)								
Quartz	(10,-4,6)	14.446	76.79	0.503	0.6	3.483	2.18	43.54	43.59
	Equiv. Refl.: (10,-6,-6), (-3,4,12), (-4,10,-6), (-4,-6,6)								
Quartz	(-3,-1,-12)	14.733	83.14	0.502	0.8	1.786	1.38	22.33	22.37
Quartz	(7,3,5)	14.163	72.64	0.498	0.6	4.639	2.69	57.98	58.05
	Equiv. Refl.: (7,-10,-5)								
Quartz	(3,7,-5)	14.163	72.64	0.497	0.6	4.639	2.68	57.98	58.05
	Equiv. Refl.: (3,-10,5), (-10,3,-5), (-10,7,5)								
Quartz	(10,-1,1)	13.946	70.02	0.489	0.6	5.395	2.98	67.43	67.5
	Equiv. Refl.: (10,-9,-1)								
Quartz	(-1,10,-1)	13.946	70.02	0.488	0.6	5.395	2.98	67.43	67.5
	Equiv. Refl.: (-1,-9,1), (-9,10,1), (-9,-1,-1)								
LiNbO3	(5,7,-5)	14.688	81.83	0.485	1.1	2.131	2.35	26.64	26.74
	Equiv. Refl.: (5,-12,5), (7,5,5), (7,-12,-5), (12,-5,5), (12,-7,-5), (-5,12,-5), (-5,-7,5), (-7,12,5), (-7,-5,-5), (-12,5,-5), (-12,7,5)								
Quartz	(8,2,5)	14.533	78.34	0.484	0.6	3.061	1.71	38.27	38.3
	Equiv. Refl.: (8,-10,-5)								
Quartz	(2,8,-5)	14.533	78.34	0.483	0.6	3.061	1.7	38.27	38.3
	Equiv. Refl.: (2,-10,5), (-10,2,-5), (-10,8,5)								
Sapph	(1,7,18)	14.241	73.68	0.478	0.6	4.344	2.5	54.3	54.36
	Equiv. Refl.: (1,7,-18), (1,-8,18), (1,-8,-18), (7,1,18), (7,1,-18), (7,-8,18), (7,-8,-18), (8,-1,18), (8,-1,-18), (8,-7,18), (8,-7,-18), (-1,8,18), (-1,8,-18), (-1,-7,18), (-1,-7,-18), (-7,8,18), (-7,8,-18), (-7,-1,18), (-7,-1,-18), (-8,1,18), (-8,1,-18), (-8,7,18), (-8,7,-18)								
Quartz	(4,-9,-8)	14.618	80.1	0.477	0.6	2.589	1.49	32.36	32.39

Ei =	14.839	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(4,5,8)	14.618	80.1	0.476	0.6	2.589	1.49	32.36	32.39
	Equiv. Refl.: (5,4,-8), (5,-9,8)								
Quartz	(-9,4,8)	14.618	80.1	0.475	0.6	2.589	1.48	32.36	32.39
	Equiv. Refl.: (-9,5,-8)								
LiNbO3	(4,7,9)	14	70.64	0.474	0.8	5.213	4.19	65.16	65.29
	Equiv. Refl.: (4,7,-9), (4,-11,9), (4,-11,-9), (7,4,9), (7,4,-9), (7,-11,9), (7,-11,-9), (11,-4,9), (11,-4,-9), (11,-7,9), (11,-7,-9), (-4,11,9), (-4,11,-9), (-4,-7,9), (-4,-7,-9), (-7,11,9), (-7,11,-9), (-7,-4,9), (-7,-4,-9), (-11,4,9), (-11,4,-9), (-11,7,9), (-11,7,-9), (4,7,0), (4,-11,0), (7,4,0), (7,-11,0), (-11,4,0), (-11,7,0)								
Quartz	(10,-2,4)	14.12	72.09	0.462	0.5	4.796	2.3	59.96	60
	Equiv. Refl.: (10,-8,-4), (-2,10,-4), (-2,-8,4), (-8,10,4), (-8,-2,-4)								
Quartz	(0,3,-12)	14.442	76.71	0.453	0.5	3.505	1.91	43.81	43.86
	Equiv. Refl.: (0,-3,12)								
Quartz	(3,0,12)	14.442	76.71	0.451	0.5	3.505	1.9	43.81	43.86
	Equiv. Refl.: (3,-3,-12), (-3,0,-12), (-3,3,12)								
Quartz	(1,-4,-12)	14.733	83.14	0.444	0.6	1.786	1.02	22.33	22.35
	Equiv. Refl.: (3,1,-12)								
Quartz	(1,3,12)	14.733	83.14	0.443	0.6	1.786	1.02	22.33	22.35
	Equiv. Refl.: (3,-4,12)								
Quartz	(-4,1,12)	14.733	83.14	0.441	0.6	1.786	1.01	22.33	22.35
	Equiv. Refl.: (-4,3,-12)								
LiNbO3	(2,9,-7)	14.455	76.94	0.436	0.9	3.443	2.98	43.04	43.15
	Equiv. Refl.: (2,-11,7), (9,2,7), (9,-11,-7), (11,-2,7), (11,-9,-7), (-2,11,-7), (-2,-9,7), (-9,11,7), (-9,-2,-7), (-11,2,-7), (-11,9,7)								
Quartz	(-4,9,8)	14.618	80.1	0.431	0.6	2.589	1.49	32.36	32.39
Quartz	(9,-4,-8)	14.618	80.1	0.43	0.6	2.589	1.48	32.36	32.39
	Equiv. Refl.: (9,-5,8), (-4,-5,-8), (-5,9,-8), (-5,-4,8)								
Quartz	(3,7,5)	14.163	72.64	0.428	0.5	4.639	2.22	57.98	58.03
	Equiv. Refl.: (3,-10,-5), (7,3,-5), (7,-10,5), (-10,3,5), (-10,7,-5)								
Quartz	(-8,10,5)	14.533	78.34	0.426	0.6	3.061	1.71	38.27	38.3
	Equiv. Refl.: (-8,-2,-5)								
Quartz	(-2,8,9)	14.729	83.03	0.425	0.7	1.814	1.21	22.68	22.71
	Equiv. Refl.: (-2,-6,-9), (-2,-8,5)								
Quartz	(10,-2,5)	14.533	78.34	0.424	0.6	3.061	1.7	38.27	38.3
	Equiv. Refl.: (10,-8,-5), (-2,10,-5), (-6,8,-9), (-6,-2,9)								
Quartz	(8,-6,9)	14.729	83.03	0.423	0.7	1.814	1.2	22.68	22.71
Quartz	(8,-2,-9)	14.729	83.03	0.422	0.7	1.814	1.2	22.68	22.71
LiNbO3	(3,4,-25)	14.018	70.86	0.418	0.7	5.151	3.82	64.39	64.5
	Equiv. Refl.: (3,-7,25), (4,3,25), (4,-7,-25), (7,-3,25), (7,-4,-25), (-3,7,-25), (-3,-4,25), (-4,7,25), (-4,-3,-25), (-7,3,-25), (-7,4,25)								
Sapph	(1,6,22)	14.408	76.15	0.399	0.5	3.658	1.89	45.73	45.77
	Equiv. Refl.: (1,-7,-22), (6,1,-22), (6,-7,22), (7,-1,-22), (7,-6,22), (-1,7,22), (-1,-6,-22), (-6,7,-22), (-6,-1,22), (-7,1,22), (-7,6,-22)								
Quartz	(10,-7,5)	14.163	72.64	0.392	0.5	4.639	2.22	57.98	58.03
	Equiv. Refl.: (-3,10,5), (-3,-7,-5), (-7,10,-5)								
Quartz	(10,-3,-5)	14.163	72.64	0.391	0.5	4.639	2.22	57.98	58.03
	Equiv. Refl.: (-7,-3,5)								
LiNbO3	(3,7,17)	14.51	77.91	0.39	0.8	3.179	2.65	39.74	39.83
	Equiv. Refl.: (3,-10,-17), (7,3,-17), (7,-10,17), (10,-3,-17), (10,-7,17), (-3,10,17), (-3,-7,-17), (-7,10,-17), (-7,-3,17), (-10,3,17), (-10,7,-17)								

Ei =	14.839	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(2,9,5)	14.288	74.34	0.376	0.7	4.161	3.08	52.01	52.1
	Equiv. Refl.: (2,-11,-5), (9,2,-5), (9,-11,5), (11,-2,-5), (11,-9,5), (-2,11,5), (-2,-9,-5), (-9,11,-5), (-9,-2,5), (-11,2,5), (-11,9,-5)								
Quartz	(8,2,4)	14.12	72.09	0.368	0.5	4.796	2.3	59.96	60
	Equiv. Refl.: (8,-10,-4), (-10,2,-4), (-10,8,4)								
Quartz	(2,8,-4)	14.12	72.09	0.367	0.5	4.796	2.29	59.96	60
	Equiv. Refl.: (2,-10,4)								
Sapph	(1,2,29)	14.402	76.07	0.365	0.5	3.681	1.77	46.02	46.05
	Equiv. Refl.: (1,-3,-29), (2,1,-29), (2,-3,29), (3,-1,-29), (3,-2,29), (-1,3,29), (-1,-2,-29), (-2,3,-29), (-2,-1,29), (-3,1,29), (-3,2,-29)								
Quartz	(-1,4,12)	14.733	83.14	0.362	0.6	1.786	1.02	22.33	22.35
	Equiv. Refl.: (-3,4,-12), (-3,-1,12)								
Quartz	(-1,-3,-12)	14.733	83.14	0.361	0.6	1.786	1.02	22.33	22.35
Quartz	(4,-1,-12)	14.733	83.14	0.36	0.6	1.786	1.01	22.33	22.35
	Equiv. Refl.: (4,-3,12)								
Quartz	(1,9,2)	14.087	71.68	0.358	0.4	4.914	2.02	61.42	61.45
	Equiv. Refl.: (1,-10,-2), (9,1,-2), (9,-10,2), (-10,1,2), (-10,9,-2)								
LiNbO3	(5,7,1)	14.524	78.17	0.347	0.8	3.107	2.43	38.84	38.92
	Equiv. Refl.: (5,-12,-1), (7,5,-1), (7,-12,1), (12,-5,-1), (12,-7,1), (-5,12,1), (-5,-7,-1), (-7,12,-1), (-7,-5,1), (-12,5,1), (-12,7,-1), (2,8,9), (2,8,-9), (2,-10,9), (2,-10,-9), (8,2,9), (8,2,-9), (8,-10,9), (8,-10,-9), (10,-2,9), (10,-2,-9), (10,-8,9), (10,-8,-9), (-2,10,9), (-2,10,-9), (-2,-8,9), (-2,-8,-9), (-8,10,9), (-8,10,-9), (-8,-2,9), (-8,-2,-9), (-10,2,9), (-10,2,-9), (-10,8,9), (-10,8,-9)								
LiNbO3	(2,9,-1)	14.119	72.08	0.34	0.7	4.799	3.2	59.99	60.07
	Equiv. Refl.: (2,-11,1), (9,2,1), (9,-11,-1), (11,-2,1), (11,-9,-1), (-2,11,-1), (-2,-9,1), (-9,11,1), (-9,-2,-1), (-11,2,-1), (-11,9,1)								
Quartz	(0,10,1)	14.615	80.03	0.337	0.5	2.608	1.2	32.6	32.63
	Equiv. Refl.: (0,-10,-1), (10,0,-1), (10,-10,1), (-10,0,1), (-10,10,-1)								
LiNbO3	(5,6,-13)	14.482	77.41	0.333	0.7	3.313	2.47	41.42	41.49
	Equiv. Refl.: (5,-11,13), (6,5,13), (6,-11,-13), (11,-5,13), (11,-6,-13), (-5,11,-13), (-5,-6,13), (-6,11,13), (-6,-5,-13), (-11,5,-13), (-11,6,13)								
Quartz	(10,-1,-2)	14.087	71.68	0.329	0.4	4.914	2.02	61.42	61.45
	Equiv. Refl.: (10,-9,2), (-1,10,2), (-1,-9,-2)								
Quartz	(-9,10,-2)	14.087	71.68	0.328	0.4	4.914	2.02	61.42	61.45
	Equiv. Refl.: (-9,-1,2)								
LiNbO3	(1,2,-31)	14.342	75.13	0.32	0.7	3.939	2.7	49.24	49.31
	Equiv. Refl.: (1,-3,31), (2,1,31), (2,-3,-31), (3,-1,31), (3,-2,-31), (-1,3,-31), (-1,-2,31), (-2,3,31), (-2,-1,-31), (-3,1,-31), (-3,2,31), (2,3,11), (2,-5,-11)								
Quartz	(3,2,-11)	14.125	72.16	0.319	0.4	4.776	1.83	59.7	59.73
	Equiv. Refl.: (3,-5,11)								
Quartz	(-5,2,11)	14.125	72.16	0.318	0.4	4.776	1.83	59.7	59.73
	Equiv. Refl.: (-5,3,-11)								
Sapph	(1,9,7)	14.735	83.21	0.315	0.5	1.766	0.93	22.07	22.09
	Equiv. Refl.: (1,-10,-7), (9,1,-7), (9,-10,7), (10,-1,-7), (10,-9,7), (-1,10,7), (-1,-9,-7), (-9,10,-7), (-9,-1,7), (-10,1,7), (-10,9,-7), (0,9,5), (0,-9,-5)								
Quartz	(9,0,-5)	14.312	74.69	0.314	0.4	4.063	1.61	50.79	50.81
	Equiv. Refl.: (9,-9,5), (-9,0,5), (-9,9,-5)								
Quartz	(-2,5,11)	14.125	72.16	0.31	0.4	4.776	1.84	59.7	59.73
	Equiv. Refl.: (-2,-3,-11)								
Quartz	(-3,5,-11)	14.125	72.16	0.309	0.4	4.776	1.83	59.7	59.73
Quartz	(-3,-2,11)	14.125	72.16	0.308	0.4	4.776	1.83	59.7	59.73

Ei =	14.839	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(5,-2,-11)	14.125	72.16	0.307	0.4	4.776	1.83	59.7	59.73
	Equiv. Refl.: (5,-3,11)								
Quartz	(0,3,12)	14.442	76.71	0.304	0.4	3.505	1.39	43.81	43.84
	Equiv. Refl.: (0,-3,-12)								
Quartz	(3,0,-12)	14.442	76.71	0.3	0.4	3.505	1.38	43.81	43.84
	Equiv. Refl.: (-3,0,12), (-3,3,-12)								
Quartz	(3,-3,12)	14.442	76.71	0.299	0.4	3.505	1.37	43.81	43.84
LiNbO3	(3,6,21)	14.491	77.57	0.283	0.7	3.271	2.23	40.89	40.95
	Equiv. Refl.: (3,6,-21), (3,-9,21), (3,-9,-21), (6,3,21), (6,3,-21), (6,-9,21), (6,-9,-21), (9,-3,21), (9,-3,-21), (9,-6,21), (9,-6,-21), (-3,9,21), (-3,9,-21), (-3,-6,21), (-3,-6,-21), (-6,9,21), (-6,9,-21), (-6,-3,21), (-6,-3,-21), (-9,3,21), (-9,3,-21), (-9,6,21), (-9,6,-21)								
Quartz	(0,10,0)	14.57	79.07	0.272	0.4	2.865	1.09	35.82	35.83
	Equiv. Refl.: (0,-10,0), (10,0,0), (10,-10,0), (-10,0,0), (-10,10,0)								
Quartz	(8,-8,-7)	14.154	72.52	0.267	0.3	4.673	1.57	58.42	58.44
Quartz	(0,8,-7)	14.154	72.52	0.266	0.3	4.673	1.57	58.42	58.44
	Equiv. Refl.: (0,-8,7), (8,0,7), (-8,0,-7), (-8,8,7)								
LiNbO3	(5,6,11)	14.147	72.43	0.256	0.6	4.697	2.65	58.72	58.78
	Equiv. Refl.: (5,-11,-11), (6,5,-11), (6,-11,11), (11,-5,-11), (11,-6,11), (-5,11,11), (-5,-6,-11), (-6,11,-11), (-6,-5,11), (-11,5,11), (-11,6,-11)								
LiNbO3	(2,8,15)	14.401	76.05	0.24	0.6	3.685	2.19	46.07	46.12
	Equiv. Refl.: (2,8,-15), (2,-10,15), (2,-10,-15), (8,2,15), (8,2,-15), (8,-10,15), (8,-10,-15), (10,-2,15), (10,-2,-15), (10,-8,15), (10,-8,-15), (-2,10,15), (-2,10,-15), (-2,-8,15), (-2,-8,-15), (-8,10,15), (-8,10,-15), (-8,-2,15), (-8,-2,-15), (-10,2,15), (-10,2,-15), (-10,8,15), (-10,8,-15)								
Sapph	(5,5,12)	14.232	73.56	0.206	0.3	4.38	1.33	54.75	54.76
	Equiv. Refl.: (5,5,-12), (5,-10,12), (5,-10,-12), (10,-5,12), (10,-5,-12), (-5,10,12), (-5,10,-12), (-5,-5,12), (-5,-5,-12), (-10,5,12), (-10,5,-12)								
LiNbO3	(2,6,23)	14.364	75.46	0.199	0.5	3.848	2.02	48.1	48.14
	Equiv. Refl.: (2,-8,-23), (6,2,-23), (6,-8,23), (8,-2,-23), (8,-6,23), (-2,8,23), (-2,-6,-23), (-6,8,-23), (-6,-2,23), (-8,2,23), (-8,6,-23)								
Sapph	(1,9,-5)	14.548	78.64	0.198	0.3	2.981	0.98	37.26	37.28
	Equiv. Refl.: (1,-10,5), (9,1,5), (9,-10,-5), (10,-1,5), (10,-9,-5), (-1,10,-5), (-1,-9,5), (-9,10,5), (-9,-1,-5), (-10,1,-5), (-10,9,5)								
Quartz	(11,-5,-2)	14.087	71.68	0.189	0.2	4.914	1.14	61.42	61.43
	Equiv. Refl.: (11,-6,2), (-5,11,2), (-5,-6,-2)								
Quartz	(-6,11,-2)	14.087	71.68	0.188	0.2	4.914	1.14	61.42	61.43
	Equiv. Refl.: (-6,-5,2)								
Quartz	(5,1,-10)	14.049	71.22	0.184	0.2	5.046	1.26	63.08	63.09
	Equiv. Refl.: (5,-6,10)								
Quartz	(1,5,10)	14.049	71.22	0.182	0.2	5.046	1.25	63.08	63.09
	Equiv. Refl.: (1,-6,-10), (-6,1,10), (-6,5,-10)								
Quartz	(-5,6,-10)	14.049	71.22	0.18	0.2	5.046	1.26	63.08	63.09
	Equiv. Refl.: (-5,-1,10)								
Quartz	(6,-1,-10)	14.049	71.22	0.179	0.2	5.046	1.25	63.08	63.09
	Equiv. Refl.: (6,-5,10), (-1,6,10), (-1,-5,-10)								
Quartz	(0,8,7)	14.154	72.52	0.166	0.2	4.673	1.11	58.42	58.43
	Equiv. Refl.: (0,-8,-7), (8,0,-7), (8,-8,7), (-8,0,7), (-8,8,-7)								
Sapph	(1,9,1)	14.359	75.39	0.161	0.3	3.868	1.03	48.35	48.36
	Equiv. Refl.: (1,-10,-1), (9,1,-1), (9,-10,1), (10,-1,-1), (10,-9,1), (-1,10,1), (-1,-9,-1), (-9,10,-1), (-9,-1,1), (-10,1,1), (-10,9,-1)								
Quartz	(11,-4,1)	14.097	71.81	0.15	0.2	4.876	0.93	60.95	60.96
	Equiv. Refl.: (11,-7,-1)								
Quartz	(-4,11,-1)	14.097	71.81	0.149	0.2	4.876	0.93	60.95	60.96

	Equiv. Refl.: (-4,-7,1), (-7,11,1), (-7,-4,-1)								
Quartz	(5,6,2)	14.087	71.68	0.142	0.2	4.914	1.14	61.42	61.43
	Equiv. Refl.: (5,-11,-2), (6,5,-2), (6,-11,2), (-11,5,2), (-11,6,-2)								
LiNbO3	(3,8,-11)	14.551	78.7	0.126	0.5	2.965	1.36	37.06	37.09
	Equiv. Refl.: (3,-11,11), (8,3,11), (8,-11,-11), (11,-3,11), (11,-8,-11), (-3,11,-11), (-3,-8,11), (-8,11,11), (-8,-3,-11), (-11,3,-11), (-11,8,11)								
LiNbO3	(2,3,29)	14.315	74.72	0.123	0.4	4.053	1.6	50.67	50.69
	Equiv. Refl.: (2,-5,-29), (3,2,-29), (3,-5,29), (5,-2,-29), (5,-3,29), (-2,5,29), (-2,-3,-29), (-3,5,-29), (-3,-2,29), (-5,2,29), (-5,3,-29)								
LiNbO3	(1,8,-19)	14.606	79.83	0.118	0.5	2.662	1.24	33.28	33.3
	Equiv. Refl.: (1,-9,19), (8,1,19), (8,-9,-19), (9,-1,19), (9,-8,-19), (-1,9,-19), (-1,-8,19), (-8,9,19), (-8,-1,-19), (-9,1,-19), (-9,8,19)								
LiNbO3	(1,7,21)	14.085	71.66	0.113	0.4	4.919	1.72	61.49	61.52
	Equiv. Refl.: (1,7,-21), (1,-8,21), (1,-8,-21), (7,1,21), (7,1,-21), (7,-8,21), (7,-8,-21), (8,-1,21), (8,-1,-21), (8,-7,21), (8,-7,-21), (-1,8,21), (-1,8,-21), (-1,-7,21), (-1,-7,-21), (-7,8,21), (-7,8,-21), (-7,-1,21), (-7,-1,-21), (-8,1,21), (-8,1,-21), (-8,7,21), (-8,7,-21)								
Quartz	(-11,4,-1)	14.097	71.81	0.103	0.2	4.876	0.93	60.95	60.96
	Equiv. Refl.: (-11,7,1)								
Quartz	(4,7,-1)	14.097	71.81	0.102	0.2	4.876	0.93	60.95	60.96
	Equiv. Refl.: (4,-11,1), (7,4,1), (7,-11,-1)								
LiNbO3	(3,5,-23)	14.161	72.61	0.096	0.3	4.648	1.53	58.1	58.12
	Equiv. Refl.: (3,-8,23), (5,3,23), (5,-8,-23), (8,-3,23), (8,-5,-23), (-3,8,-23), (-3,-5,23), (-5,8,23), (-5,-3,-23), (-8,3,-23), (-8,5,23)								
LiNbO3	(3,8,7)	14.048	71.21	0.085	0.3	5.05	1.51	63.12	63.14
	Equiv. Refl.: (3,-11,-7), (8,3,-7), (8,-11,7), (11,-3,-7), (11,-8,7), (-3,11,7), (-3,-8,-7), (-8,11,-7), (-8,-3,7), (-11,3,7), (-11,8,-7)								
Sapph	(3,4,23)	14.292	74.39	0.077	0.2	4.146	0.67	51.82	51.83
	Equiv. Refl.: (3,-7,-23), (4,3,-23), (4,-7,23), (7,-3,-23), (7,-4,23), (-3,7,23), (-3,-4,-23), (-4,7,-23), (-4,-3,23), (-7,3,23), (-7,4,-23)								
LiNbO3	(1,8,17)	14.104	71.9	0.074	0.3	4.851	1.37	60.64	60.66
	Equiv. Refl.: (1,-9,-17), (8,1,-17), (8,-9,17), (9,-1,-17), (9,-8,17), (-1,9,17), (-1,-8,-17), (-8,9,-17), (-8,-1,17), (-9,1,17), (-9,8,-17)								
Sapph	(4,6,13)	14.509	77.89	0.073	0.2	3.183	0.55	39.79	39.79
	Equiv. Refl.: (4,-10,-13), (6,4,-13), (6,-10,13), (10,-4,-13), (10,-6,13), (-4,10,13), (-4,-6,-13), (-6,10,-13), (-6,-4,13), (-10,4,13), (-10,6,-13)								
Sapph	(4,6,-11)	14.127	72.18	0.055	0.1	4.77	0.61	59.62	59.63
	Equiv. Refl.: (4,-10,11), (6,4,11), (6,-10,-11), (10,-4,11), (10,-6,-11), (-4,10,-11), (-4,-6,11), (-6,10,11), (-6,-4,-11), (-10,4,-11), (-10,6,11)								
Sapph	(5,6,2)	14.383	75.76	0.053	0.1	3.766	0.51	47.08	47.08
	Equiv. Refl.: (5,-11,-2), (6,5,-2), (6,-11,2), (11,-5,-2), (11,-6,2), (-5,11,2), (-5,-6,-2), (-6,11,-2), (-6,-5,2), (-11,5,2), (-11,6,-2)								
LiNbO3	(3,3,27)	14.071	71.48	0.042	0.2	4.971	1.05	62.14	62.15
	Equiv. Refl.: (3,3,-27), (3,-6,27), (3,-6,-27), (6,-3,27), (6,-3,-27), (-3,6,27), (-3,6,-27), (-3,-3,27), (-3,-3,-27), (-6,3,27), (-6,3,-27)								
LiNbO3	(4,8,-1)	14.722	82.81	0.024	0.3	1.872	0.49	23.4	23.4
	Equiv. Refl.: (4,-12,1), (8,4,1), (8,-12,-1), (12,-4,1), (12,-8,-1), (-4,12,-1), (-4,-8,1), (-8,12,1), (-8,-4,-1), (-12,4,-1), (-12,8,1)								

Ei =	14.209	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(2,8,10)	14.203	88.33	14.8869	33.82	0.4155	14.05	5.19	14.98
	Equiv. Refl.: (2,10,8), (8,2,10), (8,10,2), (10,2,8), (10,8,2)								
Si	(2,2,12)	14.073	82.06	3.9235	3.35	1.9826	6.64	24.78	25.66
	Equiv. Refl.: (2,12,2), (4,6,10), (4,10,6), (6,4,10), (6,10,4), (10,4,6), (10,6,4), (12,2,2)								
Ge	(0,4,12)	13.861	77.29	2.2186	4.88	3.2056	15.63	40.07	43.01
	Equiv. Refl.: (0,12,4), (4,0,12), (4,12,0), (12,0,4), (12,4,0)								
Si	(0,0,12)	13.697	74.58	1.8086	1.91	3.9199	7.51	49	49.57
	Equiv. Refl.: (0,12,0), (4,8,8), (8,4,8), (8,8,4), (12,0,0)								
Ge	(2,2,12)	13.51	71.95	1.7762	3.77	4.6307	17.46	57.88	60.46
	Equiv. Refl.: (2,12,2), (4,6,10), (4,10,6), (6,4,10), (6,10,4), (10,4,6), (10,6,4), (12,2,2)								
Ge	(1,9,9)	13.99	79.93	1.4316	4.2	2.5241	10.61	31.55	33.29
	Equiv. Refl.: (9,1,9), (9,9,1)								
Si	(1,5,11)	13.839	76.9	1.3755	1.53	3.3063	5.06	41.33	41.64
	Equiv. Refl.: (1,11,5), (5,1,11), (5,11,1), (7,7,7), (11,1,5), (11,5,1)								
Si	(3,3,11)	13.457	71.28	1.0841	1.19	4.8146	5.75	60.18	60.46
	Equiv. Refl.: (3,7,9), (3,9,7), (3,11,3), (7,3,9), (7,9,3), (9,3,7), (9,7,3), (11,3,3)								
Ge	(3,5,11)	13.642	73.76	1.0186	2.86	4.1377	11.84	51.72	53.06
	Equiv. Refl.: (3,11,5), (5,3,11), (5,7,9), (5,9,7), (5,11,3), (7,5,9), (7,9,5), (9,5,7), (9,7,5), (11,3,5), (11,5,3)								
Sapph	(3,7,-10)	14.198	87.73	28.222	23.1	0.562	12.99	7.03	14.77
	Equiv. Refl.: (3,-10,10), (7,3,10), (7,-10,-10), (10,-3,10), (10,-7,-10), (-3,10,-10), (-3,-7,10), (-7,10,10), (-7,-3,-10), (-10,3,-10), (-10,7,10)								
LiNbO3	(3,8,-8)	14.154	84.97	19.439	17.1	1.251	21.42	15.64	26.52
	Equiv. Refl.: (8,-11,-8), (11,-8,-8), (-3,11,-8), (-8,-3,-8), (-11,3,-8)								
LiNbO3	(3,-11,8)	14.154	84.97	18.584	17.1	1.251	21.42	15.64	26.52
	Equiv. Refl.: (8,3,8), (11,-3,8), (-3,-8,8), (-8,11,8), (-11,8,8)								
LiNbO3	(2,-11,-2)	14.14	84.36	13.657	12.6	1.403	17.64	17.54	24.88
	Equiv. Refl.: (9,2,-2), (11,-2,-2), (-2,-9,-2), (-9,11,-2), (-11,9,-2)								
LiNbO3	(2,9,2)	14.14	84.36	13.447	12.6	1.403	17.64	17.54	24.88
	Equiv. Refl.: (9,-11,2), (11,-9,2), (-2,11,2), (-9,-2,2), (-11,2,2)								
LiNbO3	(0,-3,-30)	14.049	81.39	12.451	11	2.151	23.59	26.89	35.77
	Equiv. Refl.: (3,0,-30), (-3,3,-30)								
LiNbO3	(0,3,-30)	14.049	81.39	12.418	10.9	2.151	23.5	26.89	35.71
	Equiv. Refl.: (3,-3,-30), (-3,0,-30)								
LiNbO3	(0,3,30)	14.049	81.39	12.175	11	2.151	23.59	26.89	35.77
	Equiv. Refl.: (3,-3,30), (-3,0,30)								
LiNbO3	(0,-3,30)	14.049	81.39	12.097	10.9	2.151	23.5	26.89	35.71
	Equiv. Refl.: (3,0,30), (-3,3,30)								
LiNbO3	(2,-8,22)	14.047	81.35	10.551	9.4	2.163	20.43	27.04	33.89
	Equiv. Refl.: (6,2,22), (8,-2,22), (-2,-6,22), (-6,8,22), (-8,6,22)								
LiNbO3	(4,5,20)	14.069	81.94	10.521	9.2	2.012	18.55	25.15	31.25
	Equiv. Refl.: (5,-9,20), (9,-5,20), (-4,9,20), (-5,-4,20), (-9,4,20)								
LiNbO3	(2,6,-22)	14.047	81.35	10.231	9.4	2.163	20.43	27.04	33.89
	Equiv. Refl.: (6,-8,-22), (8,-6,-22), (-2,8,-22), (-6,-2,-22), (-8,2,-22)								
LiNbO3	(0,10,-4)	14.019	80.63	10.068	8.8	2.344	20.52	29.31	35.78
	Equiv. Refl.: (-10,0,-4)								
LiNbO3	(10,-10,-4)	14.019	80.63	10.067	8.8	2.344	20.52	29.31	35.78

Ei =	14.209	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(4,-9,-20)	14.069	81.94	10.002	9.2	2.012	18.54	25.15	31.25
	Equiv. Refl.: (5,4,-20), (9,-4,-20), (-4,-5,-20), (-5,9,-20), (-9,5,-20)								
LiNbO3	(4,6,16)	14.076	82.15	9.912	8.8	1.958	17.26	24.47	29.95
	Equiv. Refl.: (6,-10,16), (10,-6,16), (-4,10,16), (-6,-4,16), (-10,4,16)								
LiNbO3	(0,-10,4)	14.019	80.63	9.76	8.8	2.344	20.52	29.31	35.78
	Equiv. Refl.: (10,0,4), (-10,10,4)								
LiNbO3	(1,-10,-10)	13.998	80.11	9.663	8.3	2.477	20.65	30.96	37.22
	Equiv. Refl.: (9,1,-10), (10,-1,-10), (-1,-9,-10), (-9,10,-10), (-10,9,-10)								
LiNbO3	(2,7,19)	14.203	88.36	9.599	13.2	0.408	5.39	5.1	7.42
	Equiv. Refl.: (2,-9,-19), (7,2,-19), (7,-9,19), (9,-2,-19), (9,-7,19), (-2,9,19), (-2,-7,-19), (-7,9,-19), (-7,-2,19), (-9,2,19), (-9,7,-19)								
LiNbO3	(4,-10,-16)	14.076	82.15	9.459	8.8	1.958	17.26	24.47	29.95
	Equiv. Refl.: (6,4,-16), (10,-4,-16), (-4,-6,-16), (-6,10,-16), (-10,6,-16)								
LiNbO3	(1,9,10)	13.998	80.11	9.232	8.3	2.477	20.65	30.96	37.22
	Equiv. Refl.: (9,-10,10), (10,-9,10), (-1,10,10), (-9,-1,10), (-10,1,10)								
LiNbO3	(3,5,22)	13.839	76.9	8.96	7.5	3.307	24.94	41.33	48.27
	Equiv. Refl.: (5,-8,22), (8,-5,22), (-3,8,22), (-5,-3,22), (-8,3,22)								
LiNbO3	(5,-11,10)	13.998	80.11	8.715	7.6	2.477	18.9	30.96	36.27
	Equiv. Refl.: (6,5,10), (11,-5,10), (-5,-6,10), (-6,11,10), (-11,6,10)								
LiNbO3	(3,-8,-22)	13.839	76.9	8.615	7.5	3.307	24.94	41.33	48.27
	Equiv. Refl.: (5,3,-22), (8,-3,-22), (-3,-5,-22), (-5,8,-22), (-8,5,-22)								
LiNbO3	(3,-11,-4)	13.811	76.41	8.411	7.1	3.436	24.56	42.94	49.47
	Equiv. Refl.: (8,3,-4), (11,-3,-4), (-3,-8,-4), (-8,11,-4), (-11,8,-4)								
LiNbO3	(5,6,-10)	13.998	80.11	8.298	7.6	2.477	18.9	30.96	36.27
	Equiv. Refl.: (6,-11,-10), (11,-6,-10), (-5,11,-10), (-6,-5,-10), (-11,5,-10)								
LiNbO3	(3,8,4)	13.811	76.41	8.195	7.1	3.436	24.56	42.94	49.47
	Equiv. Refl.: (8,-11,4), (11,-8,4), (-3,11,4), (-8,-3,4), (-11,3,4)								
LiNbO3	(1,-6,-26)	13.968	79.44	7.812	7	2.649	18.52	33.11	37.94
	Equiv. Refl.: (5,1,-26), (6,-1,-26), (-1,-5,-26), (-5,6,-26), (-6,5,-26)								
LiNbO3	(1,5,26)	13.968	79.44	7.706	7	2.649	18.52	33.11	37.94
	Equiv. Refl.: (5,-6,26), (6,-5,26), (-1,6,26), (-5,-1,26), (-6,1,26)								
LiNbO3	(1,-9,16)	13.868	77.43	7.294	6.4	3.168	20.42	39.6	44.56
	Equiv. Refl.: (8,1,16), (9,-1,16), (-1,-8,16), (-8,9,16), (-9,8,16)								
LiNbO3	(1,8,-16)	13.868	77.43	7.236	6.4	3.168	20.42	39.6	44.56
	Equiv. Refl.: (8,-9,-16), (9,-8,-16), (-1,9,-16), (-8,-1,-16), (-9,1,-16)								
LiNbO3	(0,-5,26)	13.547	72.44	7.154	6.1	4.497	27.29	56.21	62.49
	Equiv. Refl.: (5,0,26), (-5,5,26)								
LiNbO3	(0,5,-26)	13.547	72.44	7.093	6.1	4.497	27.29	56.21	62.49
	Equiv. Refl.: (5,-5,-26), (-5,0,-26)								
LiNbO3	(0,0,-30)	13.415	70.76	7.064	5.9	4.959	29.24	61.99	68.54
LiNbO3	(2,8,-12)	13.828	76.7	7.055	6.1	3.36	20.66	42	46.8
	Equiv. Refl.: (8,-10,-12), (10,-8,-12), (-2,10,-12), (-8,-2,-12), (-10,2,-12)								
LiNbO3	(5,-11,-8)	13.738	75.21	6.962	6	3.751	22.64	46.89	52.07
	Equiv. Refl.: (6,5,-8), (11,-5,-8), (-5,-6,-8), (-6,11,-8), (-11,6,-8)								
LiNbO3	(0,-4,28)	13.701	74.63	6.94	6	3.906	23.46	48.83	54.17
	Equiv. Refl.: (4,0,28), (-4,4,28)								
LiNbO3	(0,0,30)	13.415	70.76	6.885	5.9	4.959	29.24	61.99	68.54
LiNbO3	(0,4,-28)	13.701	74.63	6.868	6	3.906	23.46	48.83	54.17
	Equiv. Refl.: (-4,0,-28)								
LiNbO3	(4,-4,-28)	13.701	74.63	6.867	6	3.906	23.46	48.83	54.17

Ei =	14.209	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(5,6,8)	13.738	75.21	6.849	6	3.751	22.64	46.89	52.07
	Equiv. Refl.: (6,-11,8), (11,-6,8), (-5,11,8), (-6,-5,8), (-11,5,8)								
LiNbO3	(2,-10,12)	13.828	76.7	6.818	6.1	3.36	20.66	42	46.8
	Equiv. Refl.: (8,2,12), (10,-2,12), (-2,-8,12), (-8,10,12), (-10,8,12)								
LiNbO3	(0,7,-22)	13.839	76.9	6.793	6	3.307	19.77	41.33	45.82
	Equiv. Refl.: (7,-7,-22), (-7,0,-22)								
LiNbO3	(0,-7,22)	13.839	76.9	6.595	6	3.307	19.77	41.33	45.82
	Equiv. Refl.: (7,0,22), (-7,7,22)								
LiNbO3	(2,5,-24)	13.805	76.31	6.35	5.6	3.461	19.53	43.27	47.47
	Equiv. Refl.: (5,-7,-24), (7,-5,-24), (-2,7,-24), (-5,-2,-24), (-7,2,-24)								
LiNbO3	(4,-11,-6)	13.675	74.24	6.336	5.5	4.009	22.14	50.11	54.78
	Equiv. Refl.: (7,4,-6), (11,-4,-6), (-4,-7,-6), (-7,11,-6), (-11,7,-6)								
LiNbO3	(0,9,12)	13.616	73.39	6.254	5.4	4.238	22.8	52.97	57.67
	Equiv. Refl.: (9,-9,12), (-9,0,12)								
LiNbO3	(2,-7,24)	13.805	76.31	6.24	5.6	3.461	19.53	43.27	47.47
	Equiv. Refl.: (5,2,24), (7,-2,24), (-2,-5,24), (-5,7,24), (-7,5,24)								
LiNbO3	(2,-10,-12)	13.828	76.7	6.233	5.5	3.36	18.49	42	45.89
	Equiv. Refl.: (4,7,6), (7,-11,6), (8,2,-12), (10,-2,-12), (11,-7,6), (-2,-8,-12), (-4,11,6), (-7,-4,6), (-8,10,-12), (-10,8,-12), (-11,4,6)								
LiNbO3	(2,-7,-24)	13.805	76.31	6.193	5.6	3.461	19.23	43.27	47.35
	Equiv. Refl.: (5,2,-24), (7,-2,-24), (-2,-5,-24), (-5,7,-24), (-7,5,-24)								
LiNbO3	(2,5,24)	13.805	76.31	6.169	5.6	3.461	19.23	43.27	47.35
	Equiv. Refl.: (5,-7,24), (7,-5,24), (-2,7,24), (-5,-2,24), (-7,2,24)								
LiNbO3	(3,7,14)	13.854	77.17	6.137	5.6	3.237	18.01	40.46	44.28
	Equiv. Refl.: (7,-10,14), (10,-7,14), (-3,10,14), (-7,-3,14), (-10,3,14)								
Quartz	(0,2,-12)	14.069	81.96	6.116	4.8	2.007	9.58	25.09	26.86
	Equiv. Refl.: (0,-2,12)								
Quartz	(2,0,12)	14.069	81.96	6.115	4.8	2.007	9.58	25.09	26.86
Quartz	(2,-2,-12)	14.069	81.96	6.114	4.8	2.007	9.58	25.09	26.86
	Equiv. Refl.: (-2,0,-12), (-2,2,12)								
LiNbO3	(3,-10,-14)	13.854	77.17	6.106	5.6	3.237	18.01	40.46	44.28
	Equiv. Refl.: (7,3,-14), (10,-3,-14), (-3,-7,-14), (-7,10,-14), (-10,7,-14)								
LiNbO3	(4,7,-6)	13.675	74.24	6.046	5.3	4.009	21.08	50.11	54.36
	Equiv. Refl.: (7,-11,-6), (11,-7,-6), (-4,11,-6), (-7,-4,-6), (-11,4,-6)								
LiNbO3	(0,-9,-12)	13.616	73.39	6.035	5.4	4.238	22.8	52.97	57.67
	Equiv. Refl.: (9,0,-12), (-9,9,-12)								
LiNbO3	(1,-4,-28)	13.487	71.66	6.013	5.2	4.71	24.57	58.87	63.79
	Equiv. Refl.: (3,1,-28), (4,-1,-28), (-1,-3,-28), (-3,4,-28), (-4,3,-28)								
LiNbO3	(1,3,28)	13.487	71.66	6.009	5.2	4.71	24.57	58.87	63.79
	Equiv. Refl.: (3,-4,28), (4,-3,28), (-1,4,28), (-3,-1,28), (-4,1,28)								
LiNbO3	(3,6,-18)	13.66	74.02	5.98	5.3	4.069	21.38	50.86	55.17
	Equiv. Refl.: (-3,9,-18), (-6,-3,-18), (-9,3,-18)								
LiNbO3	(6,-9,-18)	13.66	74.02	5.979	5.3	4.069	21.38	50.86	55.17
	Equiv. Refl.: (9,-6,-18)								
LiNbO3	(0,-10,-2)	13.934	78.7	5.967	5.5	2.839	15.59	35.49	38.76
	Equiv. Refl.: (10,0,-2), (-10,10,-2)								
LiNbO3	(2,8,12)	13.828	76.7	5.93	5.5	3.36	18.49	42	45.89
	Equiv. Refl.: (8,-10,12), (10,-8,12), (-2,10,12), (-8,-2,12), (-10,2,12)								
LiNbO3	(3,-9,18)	13.66	74.02	5.899	5.3	4.069	21.38	50.86	55.17
	Equiv. Refl.: (6,3,18), (9,-3,18), (-3,-6,18), (-6,9,18), (-9,6,18)								

Ei =	14.209	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(4,-11,6)	13.675	74.24	5.814	5.3	4.009	21.08	50.11	54.36
	Equiv. Refl.: (7,4,6), (11,-4,6), (-4,-7,6), (-7,11,6), (-11,7,6)								
LiNbO3	(0,10,2)	13.934	78.7	5.802	5.5	2.839	15.59	35.49	38.76
	Equiv. Refl.: (10,-10,2), (-10,0,2)								
LiNbO3	(2,3,-28)	13.911	78.24	5.669	5.3	2.958	15.61	36.97	40.13
	Equiv. Refl.: (3,-5,-28), (5,-3,-28), (-2,5,-28), (-3,-2,-28), (-5,2,-28)								
LiNbO3	(5,6,-4)	13.384	70.39	5.655	4.9	5.064	24.59	63.3	67.9
	Equiv. Refl.: (-5,11,-4), (-6,-5,-4), (-11,5,-4)								
LiNbO3	(6,-11,-4)	13.384	70.39	5.654	4.9	5.064	24.59	63.3	67.9
	Equiv. Refl.: (11,-6,-4)								
LiNbO3	(1,-10,8)	13.738	75.21	5.641	4.9	3.751	18.56	46.89	50.43
	Equiv. Refl.: (9,1,8), (10,-1,8), (-1,-9,8), (-9,10,8), (-10,9,8)								
LiNbO3	(2,-5,28)	13.911	78.24	5.635	5.3	2.958	15.61	36.97	40.13
	Equiv. Refl.: (3,2,28), (5,-2,28), (-2,-3,28), (-3,5,28), (-5,3,28)								
LiNbO3	(2,7,16)	13.444	71.11	5.557	4.8	4.862	23.2	60.78	65.06
	Equiv. Refl.: (7,-9,16), (9,-7,16), (-2,9,16), (-7,-2,16), (-9,2,16)								
LiNbO3	(1,-9,-14)	13.429	70.93	5.518	4.8	4.913	23.52	61.41	65.76
	Equiv. Refl.: (8,1,-14), (9,-1,-14), (-1,-8,-14), (-8,9,-14), (-9,8,-14)								
LiNbO3	(5,-11,4)	13.384	70.39	5.51	4.9	5.064	24.59	63.3	67.9
	Equiv. Refl.: (6,5,4), (11,-5,4), (-5,-6,4), (-6,11,4), (-11,6,4)								
Sapph	(4,6,10)	13.957	79.19	5.481	4.4	2.714	11.84	33.92	35.93
	Equiv. Refl.: (4,-10,-10), (6,4,-10), (6,-10,10), (10,-4,-10), (10,-6,10), (-4,10,10), (-4,-6,-10), (-6,10,-10), (-6,-4,10), (-10,4,10), (-10,6,-10)								
LiNbO3	(4,-10,14)	13.643	73.78	5.442	4.7	4.134	19.34	51.68	55.18
	Equiv. Refl.: (6,4,14), (10,-4,14), (-4,-6,14), (-6,10,14), (-10,6,14)								
LiNbO3	(1,8,14)	13.429	70.93	5.418	4.8	4.913	23.52	61.41	65.76
	Equiv. Refl.: (8,-9,14), (9,-8,14), (-1,9,14), (-8,-1,14), (-9,1,14)								
LiNbO3	(0,-6,-24)	13.594	73.08	5.354	4.4	4.324	19.13	54.05	57.33
	Equiv. Refl.: (6,0,-24), (-6,6,-24)								
LiNbO3	(2,4,-26)	13.759	75.54	5.328	4.6	3.663	16.71	45.79	48.74
	Equiv. Refl.: (4,-6,-26), (6,-4,-26), (-2,6,-26), (-4,-2,-26), (-6,2,-26)								
LiNbO3	(2,-9,-16)	13.444	71.11	5.326	4.8	4.862	23.2	60.78	65.06
	Equiv. Refl.: (7,2,-16), (9,-2,-16), (-2,-7,-16), (-7,9,-16), (-9,7,-16)								
LiNbO3	(4,6,-14)	13.643	73.78	5.29	4.7	4.134	19.34	51.68	55.18
	Equiv. Refl.: (6,-10,-14), (10,-6,-14), (-4,10,-14), (-6,-4,-14), (-10,4,-14)								
LiNbO3	(1,9,-8)	13.738	75.21	5.281	4.9	3.751	18.56	46.89	50.43
	Equiv. Refl.: (9,-10,-8), (10,-9,-8), (-1,10,-8), (-9,-1,-8), (-10,1,-8)								
LiNbO3	(2,-6,26)	13.759	75.54	5.252	4.6	3.663	16.71	45.79	48.74
	Equiv. Refl.: (4,2,26), (6,-2,26), (-2,-4,26)								
LiNbO3	(-4,6,26)	13.759	75.54	5.251	4.6	3.663	16.71	45.79	48.74
	Equiv. Refl.: (-6,4,26)								
LiNbO3	(3,6,18)	13.66	74.02	5.236	4.7	4.069	19.17	50.86	54.35
	Equiv. Refl.: (6,-9,18), (9,-6,18), (-3,9,18), (-6,-3,18), (-9,3,18)								
LiNbO3	(3,-9,-18)	13.66	74.02	5.202	4.7	4.069	19.17	50.86	54.35
	Equiv. Refl.: (6,3,-18), (9,-3,-18), (-3,-6,-18), (-6,9,-18), (-9,6,-18)								
LiNbO3	(0,6,24)	13.594	73.08	5.116	4.4	4.324	19.13	54.05	57.33
	Equiv. Refl.: (6,-6,24), (-6,0,24)								
Sapph	(2,8,6)	14.082	82.35	5.035	4	1.909	7.72	23.86	25.08
	Equiv. Refl.: (2,8,-6), (2,-10,6), (2,-10,-6), (8,2,6), (8,2,-6), (8,-10,6), (8,-10,-6), (10,-2,6), (10,-2,-6), (10,-8,6), (10,-8,-6), (-2,10,6), (-2,10,-6), (-2,-8,6), (-2,-8,-6), (-8,10,6), (-8,10,-6), (-8,-2,6), (-8,-2,-6), (-10,2,6), (-10,2,-6), (-10,8,6), (-10,8,-6)								

Ei =	14.209	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
LiNbO3	(0,6,-24)	13.594	73.08	4.933	4.2	4.324	18.16	54.05	57.02
	Equiv. Refl.: (6,-6,-24), (-6,0,-24)								
LiNbO3	(0,-6,24)	13.594	73.08	4.922	4.2	4.324	18.16	54.05	57.02
	Equiv. Refl.: (6,0,24), (-6,6,24)								
LiNbO3	(4,-11,0)	13.409	70.69	4.767	4	4.98	19.84	62.25	65.33
	Equiv. Refl.: (7,4,0), (11,-4,0), (-4,-7,0), (-7,11,0), (-11,7,0)								
Quartz	(7,-1,-9)	14.066	81.86	4.715	3.6	2.032	7.38	25.4	26.45
	Equiv. Refl.: (7,-6,9), (-6,-1,9)								
Quartz	(-6,7,-9)	14.066	81.86	4.714	3.6	2.032	7.38	25.4	26.45
Quartz	(-1,-6,-9)	14.066	81.86	4.712	3.6	2.032	7.37	25.4	26.45
Quartz	(-1,7,9)	14.066	81.86	4.711	3.6	2.032	7.37	25.4	26.45
LiNbO3	(4,7,0)	13.409	70.69	4.686	4	4.98	19.84	62.25	65.33
	Equiv. Refl.: (7,-11,0), (11,-7,0), (-4,11,0), (-7,-4,0), (-11,4,0)								
LiNbO3	(-6,8,-20)	13.436	71.01	4.667	3.9	4.889	18.98	61.11	63.99
	Equiv. Refl.: (-8,6,-20)								
LiNbO3	(2,-8,-20)	13.436	71.01	4.666	3.9	4.889	18.98	61.11	63.99
	Equiv. Refl.: (6,2,-20), (8,-2,-20), (-2,-6,-20)								
LiNbO3	(0,-9,12)	13.616	73.39	4.64	3.9	4.238	16.71	52.97	55.54
	Equiv. Refl.: (9,0,12), (-9,9,12)								
Quartz	(6,1,-9)	14.066	81.86	4.616	3.6	2.032	7.38	25.4	26.45
	Equiv. Refl.: (6,-7,9), (-7,1,9), (-7,6,-9)								
Quartz	(1,6,9)	14.066	81.86	4.613	3.6	2.032	7.37	25.4	26.45
Quartz	(1,-7,-9)	14.066	81.86	4.612	3.6	2.032	7.37	25.4	26.45
LiNbO3	(1,1,30)	13.63	73.58	4.508	3.9	4.186	16.17	52.33	54.77
	Equiv. Refl.: (1,-2,30), (2,-1,30), (-1,2,30), (-1,-1,30), (-2,1,30)								
LiNbO3	(2,6,20)	13.436	71.01	4.467	3.9	4.889	18.98	61.11	63.99
	Equiv. Refl.: (6,-8,20), (8,-6,20), (-6,-2,20)								
LiNbO3	(-2,8,20)	13.436	71.01	4.466	3.9	4.889	18.98	61.11	63.99
	Equiv. Refl.: (-8,2,20)								
LiNbO3	(1,-7,-22)	13.414	70.74	4.462	3.7	4.966	18.57	62.07	64.79
	Equiv. Refl.: (6,1,-22), (7,-1,-22), (-1,-6,-22), (-6,7,-22), (-7,6,-22)								
LiNbO3	(0,9,-12)	13.616	73.39	4.451	3.9	4.238	16.71	52.97	55.54
	Equiv. Refl.: (9,-9,-12), (-9,0,-12)								
LiNbO3	(1,9,4)	13.384	70.39	4.393	3.7	5.064	18.71	63.3	66
	Equiv. Refl.: (9,-10,4), (10,-9,4), (-1,10,4), (-9,-1,4), (-10,1,4)								
LiNbO3	(1,1,-30)	13.63	73.58	4.342	3.9	4.186	16.17	52.33	54.77
	Equiv. Refl.: (1,-2,-30), (2,-1,-30), (-1,2,-30), (-1,-1,-30), (-2,1,-30)								
LiNbO3	(1,6,22)	13.414	70.74	4.29	3.7	4.966	18.57	62.07	64.79
	Equiv. Refl.: (6,-7,22), (7,-6,22), (-1,7,22), (-6,-1,22), (-7,1,22)								
Quartz	(-7,1,-9)	14.066	81.86	4.275	3.3	2.032	6.81	25.4	26.3
	Equiv. Refl.: (-7,6,9)								
Quartz	(1,-7,9)	14.066	81.86	4.274	3.3	2.032	6.81	25.4	26.3
Quartz	(1,6,-9)	14.066	81.86	4.273	3.3	2.032	6.8	25.4	26.3
Quartz	(6,1,9)	14.066	81.86	4.272	3.3	2.032	6.8	25.4	26.3
	Equiv. Refl.: (6,-7,-9)								
LiNbO3	(1,-10,-4)	13.384	70.39	4.261	3.7	5.064	18.71	63.3	66
	Equiv. Refl.: (9,1,-4), (10,-1,-4), (-1,-9,-4), (-9,10,-4), (-10,9,-4)								
Quartz	(7,-1,9)	14.066	81.86	4.246	3.3	2.032	6.81	25.4	26.3
Quartz	(7,-6,-9)	14.066	81.86	4.245	3.3	2.032	6.81	25.4	26.3
	Equiv. Refl.: (-1,7,-9)								

Ei = Cryst	14.209 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(-1,-6,9)	14.066	81.86	4.244	3.3	2.032	6.8	25.4	26.3
Quartz	(-6,7,9)	14.066	81.86	4.243	3.3	2.032	6.8	25.4	26.3
Quartz	(-6,-1,-9)	14.066	81.86	4.242	3.3	2.032	6.8	25.4	26.3
LiNbO3	(3,-11,2)	13.724	74.99	4.102	3.6	3.811	13.91	47.64	49.63
	Equiv. Refl.: (8,3,2), (11,-3,2), (-3,-8,2), (-8,11,2), (-11,8,2)								
LiNbO3	(3,8,-2)	13.724	74.99	4.014	3.6	3.811	13.91	47.64	49.63
	Equiv. Refl.: (8,-11,-2), (11,-8,-2), (-3,11,-2), (-8,-3,-2), (-11,3,-2)								
Sapph	(3,7,8)	13.906	78.15	3.973	3.1	2.982	9.33	37.27	38.42
	Equiv. Refl.: (3,-10,-8), (7,3,-8), (7,-10,8), (10,-3,-8), (10,-7,8), (-3,10,8), (-3,-7,-8), (-7,10,-8), (-7,-3,8), (-10,3,8), (-10,7,-8)								
Sapph	(2,7,-14)	14.01	80.41	3.806	3.1	2.401	7.39	30.02	30.91
	Equiv. Refl.: (2,-9,14), (7,2,14), (7,-9,-14), (9,-2,14), (9,-7,-14), (-2,9,-14), (-2,-7,14), (-7,9,14), (-7,-2,-14), (-9,2,-14), (-9,7,14)								
Quartz	(0,2,12)	14.069	81.96	3.79	3	2.007	6.01	25.09	25.8
	Equiv. Refl.: (0,-2,-12)								
Quartz	(-2,2,-12)	14.069	81.96	3.789	3	2.007	6.01	25.09	25.8
Quartz	(2,-2,12)	14.069	81.96	3.788	3	2.007	6.01	25.09	25.8
	Equiv. Refl.: (-2,0,12)								
Quartz	(2,0,-12)	14.069	81.96	3.787	3	2.007	6.01	25.09	25.8
Quartz	(4,6,-5)	13.936	78.76	3.705	2.9	2.824	8.06	35.3	36.21
Quartz	(4,-10,5)	13.936	78.76	3.704	2.9	2.824	8.06	35.3	36.21
Quartz	(6,4,5)	13.936	78.76	3.703	2.9	2.824	8.05	35.3	36.2
Quartz	(6,-10,-5)	13.936	78.76	3.702	2.9	2.824	8.05	35.3	36.2
Quartz	(-10,4,-5)	13.936	78.76	3.701	2.9	2.824	8.05	35.3	36.2
	Equiv. Refl.: (-10,6,5)								
Quartz	(-4,-6,5)	13.936	78.76	3.687	2.9	2.824	8.06	35.3	36.21
Quartz	(-4,10,-5)	13.936	78.76	3.686	2.9	2.824	8.06	35.3	36.21
Quartz	(-6,10,5)	13.936	78.76	3.684	2.9	2.824	8.05	35.3	36.2
	Equiv. Refl.: (-6,-4,-5)								
Quartz	(10,-4,5)	13.936	78.76	3.683	2.9	2.824	8.05	35.3	36.2
	Equiv. Refl.: (10,-6,-5)								
Sapph	(4,5,-16)	14.014	80.49	3.644	3	2.382	7.09	29.77	30.6
	Equiv. Refl.: (4,-9,16), (5,4,16), (5,-9,-16), (9,-4,16), (9,-5,-16), (-4,9,-16), (-4,-5,16), (-5,9,16), (-5,-4,-16), (-9,4,-16), (-9,5,16)								
Quartz	(11,-5,-1)	13.946	78.96	3.626	2.8	2.772	7.71	34.66	35.5
Quartz	(11,-6,1)	13.946	78.96	3.625	2.8	2.772	7.71	34.66	35.5
	Equiv. Refl.: (-5,11,1), (-5,-6,-1), (-6,11,-1), (-6,-5,1)								
Quartz	(5,6,1)	13.946	78.96	3.557	2.8	2.772	7.71	34.66	35.5
	Equiv. Refl.: (5,-11,-1), (6,5,-1), (6,-11,1), (-11,5,1), (-11,6,-1)								
Sapph	(0,8,-14)	13.766	75.65	3.522	2.7	3.634	9.96	45.43	46.5
	Equiv. Refl.: (0,-8,14), (8,0,14), (8,-8,-14), (-8,0,-14), (-8,8,14)								
Sapph	(1,6,-20)	13.727	75.04	3.486	2.7	3.796	10.25	47.45	48.55
	Equiv. Refl.: (1,-7,20), (6,1,20), (6,-7,-20), (7,-1,20), (7,-6,-20), (-1,7,-20), (-1,-6,20), (-6,7,20), (-6,-1,-20), (-7,1,-20), (-7,6,20)								
Sapph	(2,6,-19)	14.14	84.34	3.478	3	1.409	4.23	17.62	18.12
	Equiv. Refl.: (2,-8,19), (6,2,19), (6,-8,-19), (8,-2,19), (8,-6,-19), (-2,8,-19), (-2,-6,19), (-6,8,19), (-6,-2,-19), (-8,2,-19), (-8,6,19)								
Sapph	(0,9,0)	13.54	72.35	3.456	2.6	4.522	11.91	56.53	57.77
	Equiv. Refl.: (0,-9,0), (9,0,0), (9,-9,0), (-9,0,0), (-9,9,0)								

Ei =	14.209	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(2,3,26)	14.036	81.04	3.428	2.9	2.24	6.39	28	28.72
	Equiv. Refl.: (2,-5,-26), (3,2,-26), (3,-5,26), (5,-2,-26), (5,-3,26), (-2,5,26), (-2,-3,-26), (-3,5,-26), (-3,-2,26), (-5,2,26), (-5,3,-26)								
Quartz	(1,-6,10)	14.049	81.39	3.417	2.7	2.151	5.89	26.89	27.53
Quartz	(1,5,-10)	14.049	81.39	3.416	2.7	2.151	5.89	26.89	27.53
Quartz	(-6,1,-10)	14.049	81.39	3.415	2.7	2.151	5.89	26.89	27.53
Quartz	(5,1,10)	14.049	81.39	3.414	2.7	2.151	5.89	26.89	27.53
	Equiv. Refl.: (5,-6,-10), (-6,5,10)								
Quartz	(10,-1,-1)	13.946	78.96	3.402	2.7	2.772	7.37	34.66	35.43
	Equiv. Refl.: (10,-9,1), (-1,10,1), (-1,-9,-1), (-9,10,-1), (-9,-1,1)								
Quartz	(9,1,-1)	13.946	78.96	3.398	2.7	2.772	7.37	34.66	35.43
Quartz	(1,9,1)	13.946	78.96	3.397	2.7	2.772	7.37	34.66	35.43
	Equiv. Refl.: (1,-10,-1), (9,-10,1), (-10,1,1), (-10,9,-1)								
Quartz	(-1,6,-10)	14.049	81.39	3.392	2.7	2.151	5.89	26.89	27.53
Quartz	(-1,-5,10)	14.049	81.39	3.391	2.7	2.151	5.89	26.89	27.53
Quartz	(6,-1,10)	14.049	81.39	3.39	2.7	2.151	5.89	26.89	27.53
Quartz	(6,-5,-10)	14.049	81.39	3.389	2.7	2.151	5.89	26.89	27.53
	Equiv. Refl.: (-5,6,10)								
Quartz	(-5,-1,-10)	14.049	81.39	3.388	2.7	2.151	5.89	26.89	27.53
Quartz	(-2,8,-8)	13.949	79.03	3.306	2.6	2.754	7.15	34.42	35.15
	Equiv. Refl.: (-2,-6,8), (-6,8,8), (-6,-2,-8)								
Quartz	(8,-2,8)	13.949	79.03	3.305	2.6	2.754	7.15	34.42	35.15
	Equiv. Refl.: (8,-6,-8)								
Quartz	(2,6,-8)	13.949	79.03	3.301	2.6	2.754	7.15	34.42	35.15
	Equiv. Refl.: (2,-8,8), (6,2,8), (6,-8,-8)								
Quartz	(-8,6,8)	13.949	79.03	3.3	2.6	2.754	7.15	34.42	35.15
Quartz	(-8,2,-8)	13.949	79.03	3.299	2.6	2.754	7.15	34.42	35.15
Quartz	(0,9,-3)	13.557	72.57	3.198	2.4	4.46	10.74	55.75	56.78
	Equiv. Refl.: (0,-9,3), (9,0,3), (9,-9,-3), (-9,0,-3), (-9,9,3)								
Quartz	(3,6,-7)	14.078	82.23	3.186	2.5	1.939	4.76	24.24	24.7
	Equiv. Refl.: (3,-9,7)								
Quartz	(-9,3,-7)	14.078	82.23	3.184	2.5	1.939	4.76	24.24	24.7
Quartz	(6,3,7)	14.078	82.23	3.183	2.5	1.939	4.76	24.24	24.7
	Equiv. Refl.: (6,-9,-7), (-9,6,7)								
Sapph	(1,4,24)	13.37	70.21	3.164	2.4	5.114	12.33	63.92	65.1
	Equiv. Refl.: (1,4,-24), (1,-5,24), (1,-5,-24), (4,1,24), (4,1,-24), (4,-5,24), (4,-5,-24), (5,-1,24), (5,-1,-24), (5,-4,24), (5,-4,-24), (-1,5,24), (-1,5,-24), (-1,-4,24), (-1,-4,-24), (-4,5,24), (-4,5,-24), (-4,-1,24), (-4,-1,-24), (-5,1,24), (-5,1,-24), (-5,4,24), (-5,4,-24)								
Quartz	(9,-3,-7)	14.078	82.23	3.097	2.4	1.939	4.73	24.24	24.7
	Equiv. Refl.: (-3,9,7), (-6,9,-7), (-6,-3,7)								
Quartz	(9,-6,7)	14.078	82.23	3.096	2.4	1.939	4.73	24.24	24.7
	Equiv. Refl.: (-3,-6,-7)								
Quartz	(6,3,-7)	14.078	82.23	3.067	2.4	1.939	4.73	24.24	24.7
Quartz	(3,-9,-7)	14.078	82.23	3.066	2.4	1.939	4.73	24.24	24.7
	Equiv. Refl.: (6,-9,7), (-9,3,7)								
Quartz	(3,6,7)	14.078	82.23	3.065	2.4	1.939	4.73	24.24	24.7
	Equiv. Refl.: (-9,6,-7)								
Quartz	(-3,9,-7)	14.078	82.23	3.039	2.5	1.939	4.76	24.24	24.7
	Equiv. Refl.: (-3,-6,7)								
Quartz	(9,-3,7)	14.078	82.23	3.036	2.5	1.939	4.76	24.24	24.7
	Equiv. Refl.: (-6,9,7), (-6,-3,-7)								

Ei =	14.209	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(9,-6,-7)	14.078	82.23	3.035	2.5	1.939	4.76	24.24	24.7
Sapph	(4,5,14)	13.517	72.05	3.026	2.2	4.604	10.33	57.55	58.47
	Equiv. Refl.: (4,-9,-14), (5,4,-14), (5,-9,14), (9,-4,-14), (9,-5,14), (-4,9,14), (-4,-5,-14), (-5,9,-14), (-5,-4,14), (-9,4,14), (-9,5,-14)								
Quartz	(-4,-7,-1)	14.097	82.81	2.812	2.1	1.791	3.85	22.39	22.72
Quartz	(11,-4,-1)	14.097	82.81	2.811	2.1	1.791	3.85	22.39	22.72
	Equiv. Refl.: (11,-7,1), (-4,11,1), (-7,11,-1), (-7,-4,1)								
Quartz	(4,-3,11)	13.667	74.13	2.733	2	4.041	8.06	50.51	51.15
	Equiv. Refl.: (-3,4,-11), (-3,-1,11)								
Quartz	(4,-1,-11)	13.667	74.13	2.732	2	4.041	8.06	50.51	51.15
Quartz	(-1,-3,-11)	13.667	74.13	2.731	2	4.041	8.06	50.51	51.15
Quartz	(-1,4,11)	13.667	74.13	2.73	2	4.041	8.05	50.51	51.15
Quartz	(3,7,3)	13.399	70.56	2.728	2.3	5.014	11.46	62.67	63.71
	Equiv. Refl.: (3,-10,-3), (7,3,-3), (7,-10,3), (-10,3,3), (-10,7,-3)								
Quartz	(10,-3,-3)	13.399	70.56	2.717	2.3	5.014	11.46	62.67	63.71
	Equiv. Refl.: (10,-7,3), (-3,10,3), (-3,-7,-3), (-7,10,-3), (-7,-3,3)								
Quartz	(3,1,-11)	13.667	74.13	2.676	2	4.041	8.06	50.51	51.15
	Equiv. Refl.: (3,-4,11)								
Quartz	(-4,1,11)	13.667	74.13	2.675	2	4.041	8.06	50.51	51.15
	Equiv. Refl.: (-4,3,-11)								
Quartz	(1,3,11)	13.667	74.13	2.674	2	4.041	8.06	50.51	51.15
Quartz	(1,-4,-11)	13.667	74.13	2.673	2	4.041	8.05	50.51	51.15
Quartz	(0,9,4)	13.892	77.88	2.662	2.3	3.051	7.1	38.14	38.79
	Equiv. Refl.: (0,-9,-4)								
Quartz	(9,0,-4)	13.892	77.88	2.661	2.3	3.051	7.1	38.14	38.79
	Equiv. Refl.: (9,-9,4), (-9,0,4), (-9,9,-4)								
Quartz	(5,6,-1)	13.946	78.96	2.655	2	2.772	5.64	34.66	35.11
	Equiv. Refl.: (5,-11,1), (6,5,1), (6,-11,-1), (-11,5,-1), (-11,6,1)								
Quartz	(3,-5,-11)	14.125	83.78	2.629	2.4	1.548	3.71	19.35	19.7
Quartz	(3,2,11)	14.125	83.78	2.628	2.4	1.548	3.71	19.35	19.7
Quartz	(-5,2,-11)	14.125	83.78	2.626	2.4	1.548	3.71	19.35	19.7
	Equiv. Refl.: (-5,3,11)								
Quartz	(2,3,-11)	14.125	83.78	2.623	2.4	1.548	3.71	19.35	19.7
	Equiv. Refl.: (2,-5,11)								
Quartz	(4,5,7)	13.927	78.56	2.582	2.3	2.874	6.5	35.93	36.51
	Equiv. Refl.: (-9,4,7), (-9,5,-7)								
Quartz	(4,-9,-7)	13.927	78.56	2.581	2.3	2.874	6.5	35.93	36.51
	Equiv. Refl.: (5,4,-7), (5,-9,7)								
LiNbO3	(1,9,-11)	14.147	84.65	2.557	3.9	1.331	5.22	16.63	17.43
	Equiv. Refl.: (1,-10,11), (9,1,11), (9,-10,-11), (10,-1,11), (10,-9,-11), (-1,10,-11), (-1,-9,11), (-9,10,11), (-9,-1,-11), (-10,1,-11), (-10,9,11)								
Quartz	(9,-4,-7)	13.927	78.56	2.538	2.3	2.874	6.5	35.93	36.51
	Equiv. Refl.: (9,-5,7)								
Quartz	(-4,9,7)	13.927	78.56	2.537	2.3	2.874	6.5	35.93	36.51
	Equiv. Refl.: (-4,-5,-7)								
Quartz	(-5,9,-7)	13.927	78.56	2.536	2.3	2.874	6.5	35.93	36.51
	Equiv. Refl.: (-5,-4,7)								
Quartz	(-3,5,11)	14.125	83.78	2.498	2.4	1.548	3.71	19.35	19.7
Quartz	(-3,-2,-11)	14.125	83.78	2.497	2.4	1.548	3.71	19.35	19.7

Ei =	14.209	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(5,-2,11)	14.125	83.78	2.496	2.4	1.548	3.71	19.35	19.7
	Equiv. Refl.: (5,-3,-11)								
Quartz	(-2,5,-11)	14.125	83.78	2.494	2.4	1.548	3.71	19.35	19.7
	Equiv. Refl.: (-2,-3,11)								
Quartz	(6,5,2)	14.087	82.48	2.385	2.1	1.876	3.88	23.44	23.76
	Equiv. Refl.: (6,-11,-2)								
Quartz	(5,6,-2)	14.087	82.48	2.384	2.1	1.876	3.88	23.44	23.76
	Equiv. Refl.: (5,-11,2), (-11,5,-2), (-11,6,2)								
Quartz	(11,-5,1)	13.946	78.96	2.361	2	2.772	5.64	34.66	35.11
	Equiv. Refl.: (11,-6,-1), (-5,11,-1), (-5,-6,1), (-6,11,1), (-6,-5,-1)								
Quartz	(2,8,2)	13.549	72.47	2.303	1.9	4.488	8.74	56.1	56.78
	Equiv. Refl.: (2,-10,-2)								
Quartz	(8,2,-2)	13.549	72.47	2.302	1.9	4.488	8.74	56.1	56.78
	Equiv. Refl.: (8,-10,2), (-10,2,2), (-10,8,-2)								
Quartz	(10,-2,1)	13.403	70.61	2.284	1.9	5.002	9.69	62.53	63.28
	Equiv. Refl.: (10,-8,-1), (-2,10,-1), (-2,-8,1), (-8,10,1), (-8,-2,-1)								
Quartz	(-9,2,-6)	13.769	75.71	2.266	1.9	3.62	6.94	45.25	45.78
	Equiv. Refl.: (-9,7,6)								
Quartz	(2,7,-6)	13.769	75.71	2.265	1.9	3.62	6.94	45.25	45.78
	Equiv. Refl.: (2,-9,6), (7,2,6), (7,-9,-6)								
Quartz	(2,8,-1)	13.403	70.61	2.255	1.9	5.002	9.69	62.53	63.28
	Equiv. Refl.: (2,-10,1), (8,2,1), (8,-10,-1), (-10,2,-1), (-10,8,1)								
Quartz	(9,-2,6)	13.769	75.71	2.232	1.9	3.62	6.94	45.25	45.78
	Equiv. Refl.: (9,-7,-6)								
Quartz	(-2,9,-6)	13.769	75.71	2.231	1.9	3.62	6.94	45.25	45.78
	Equiv. Refl.: (-2,-7,6), (-7,9,6), (-7,-2,-6)								
Quartz	(10,-2,-2)	13.549	72.47	2.216	1.9	4.488	8.74	56.1	56.78
	Equiv. Refl.: (10,-8,2), (-2,10,2), (-2,-8,-2), (-8,10,-2), (-8,-2,2)								
Quartz	(-7,-3,-5)	14.163	85.39	2.03	2.3	1.145	2.58	14.31	14.54
Quartz	(-7,10,5)	14.163	85.39	2.029	2.3	1.145	2.58	14.31	14.54
Quartz	(10,-3,5)	14.163	85.39	2.028	2.3	1.145	2.58	14.31	14.54
	Equiv. Refl.: (10,-7,-5)								
Quartz	(-3,10,-5)	14.163	85.39	2.027	2.2	1.145	2.58	14.31	14.54
	Equiv. Refl.: (-3,-7,5)								
Quartz	(1,9,-2)	14.087	82.48	1.905	2	1.876	3.79	23.44	23.75
	Equiv. Refl.: (1,-10,2), (9,1,2), (9,-10,-2), (-10,1,-2), (-10,9,2)								
Quartz	(7,3,5)	14.163	85.39	1.9	2.3	1.145	2.58	14.31	14.54
	Equiv. Refl.: (7,-10,-5)								
Quartz	(-10,3,-5)	14.163	85.39	1.899	2.3	1.145	2.58	14.31	14.54
Quartz	(3,-10,5)	14.163	85.39	1.898	2.2	1.145	2.58	14.31	14.54
	Equiv. Refl.: (-10,7,5)								
Quartz	(3,7,-5)	14.163	85.39	1.897	2.2	1.145	2.58	14.31	14.54
Quartz	(11,-5,2)	14.087	82.48	1.86	2.1	1.876	3.88	23.44	23.76
	Equiv. Refl.: (11,-6,-2), (-6,11,2), (-6,-5,-2)								
Quartz	(-5,11,-2)	14.087	82.48	1.859	2.1	1.876	3.88	23.44	23.76
	Equiv. Refl.: (-5,-6,2)								
Sapph	(3,7,2)	13.406	70.64	1.855	1.9	4.992	9.46	62.41	63.12
	Equiv. Refl.: (3,-10,-2), (7,3,-2), (7,-10,2), (10,-3,-2), (10,-7,2), (-3,10,2), (-3,-7,-2), (-7,10,-2), (-7,-3,2), (-10,3,2), (-10,7,-2)								

Ei =	14.209	keV						ΔEg	ΔEt
Cryst	Ref	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(4,6,-8)	13.66	74.02	1.854	1.9	4.07	7.81	50.87	51.47
	Equiv. Refl.: (4,-10,8), (6,4,8), (6,-10,-8), (10,-4,8), (10,-6,-8), (-4,10,-8), (-4,-6,8), (-6,10,8), (-6,-4,-8), (-10,4,-8), (-10,6,8)								
Quartz	(4,7,1)	14.097	82.81	1.844	2.1	1.791	3.85	22.39	22.72
	Equiv. Refl.: (4,-11,-1), (7,4,-1), (7,-11,1), (-11,4,1), (-11,7,-1)								
Quartz	(10,-1,2)	14.087	82.48	1.841	2	1.876	3.79	23.44	23.75
	Equiv. Refl.: (10,-9,-2), (-1,10,-2), (-1,-9,2), (-9,10,2), (-9,-1,-2)								
Quartz	(-6,3,10)	13.743	75.29	1.84	1.9	3.73	6.94	46.62	47.14
	Equiv. Refl.: (-6,3,-10)								
Quartz	(3,3,10)	13.743	75.29	1.839	1.9	3.73	6.93	46.62	47.13
	Equiv. Refl.: (3,-6,-10)								
Quartz	(3,-6,10)	13.743	75.29	1.838	1.9	3.73	6.93	46.62	47.13
Quartz	(3,3,-10)	13.743	75.29	1.837	1.9	3.73	6.93	46.62	47.13
Quartz	(6,-3,10)	13.743	75.29	1.803	1.9	3.73	6.94	46.62	47.14
	Equiv. Refl.: (6,-3,-10)								
Quartz	(-3,6,10)	13.743	75.29	1.801	1.9	3.73	6.93	46.62	47.14
	Equiv. Refl.: (-3,-3,-10)								
Quartz	(-3,6,-10)	13.743	75.29	1.8	1.9	3.73	6.93	46.62	47.13
	Equiv. Refl.: (-3,-3,10)								
Sapph	(2,2,27)	13.901	78.04	1.772	1.9	3.009	5.68	37.61	38.04
	Equiv. Refl.: (2,2,-27), (2,-4,27), (2,-4,-27), (4,-2,27), (4,-2,-27), (-2,4,27), (-2,4,-27), (-2,-2,27), (-2,-2,-27), (-4,2,27), (-4,2,-27)								
Sapph	(2,8,0)	13.788	76.02	1.702	1.8	3.537	6.35	44.21	44.67
	Equiv. Refl.: (2,-10,0), (8,2,0), (8,-10,0), (10,-2,0), (10,-8,0), (-2,10,0), (-2,-8,0), (-8,10,0), (-8,-2,0), (-10,2,0), (-10,8,0)								
Quartz	(-1,2,-12)	13.994	80.01	1.701	1.8	2.502	4.39	31.28	31.59
	Equiv. Refl.: (-1,-1,12)								
Quartz	(2,-1,-12)	13.994	80.01	1.7	1.8	2.502	4.38	31.28	31.59
Quartz	(2,-1,12)	13.994	80.01	1.699	1.8	2.502	4.38	31.28	31.58
Sapph	(1,8,11)	13.885	77.73	1.698	1.8	3.089	5.6	38.61	39.02
	Equiv. Refl.: (1,-9,-11), (8,1,-11), (8,-9,11), (9,-1,-11), (9,-8,11), (-1,9,11), (-1,-8,-11), (-8,9,-11), (-8,-1,11), (-9,1,11), (-9,8,-11), (-1,2,12), (-1,-1,-12)								
Quartz	(8,-2,-8)	13.949	79.03	1.654	1.7	2.754	4.69	34.42	34.74
	Equiv. Refl.: (-2,8,8), (-2,-6,-8)								
Quartz	(8,-6,8)	13.949	79.03	1.653	1.7	2.754	4.69	34.42	34.74
	Equiv. Refl.: (-6,8,-8), (-6,-2,8)								
Quartz	(3,7,5)	14.163	85.39	1.638	1.9	1.145	2.13	14.31	14.47
	Equiv. Refl.: (3,-10,-5), (-10,7,-5)								
Quartz	(7,3,-5)	14.163	85.39	1.637	1.9	1.145	2.13	14.31	14.47
	Equiv. Refl.: (7,-10,5), (-10,3,5)								
Quartz	(1,1,-12)	13.994	80.01	1.598	1.8	2.502	4.39	31.28	31.59
	Equiv. Refl.: (1,-2,12), (10,-1,0), (10,-9,0), (-1,10,0), (-1,-9,0), (-9,10,0), (-9,-1,0)								
Quartz	(-2,1,12)	13.994	80.01	1.597	1.8	2.502	4.38	31.28	31.59
Quartz	(-2,1,-12)	13.994	80.01	1.596	1.8	2.502	4.38	31.28	31.58
Quartz	(1,1,12)	13.994	80.01	1.595	1.7	2.502	4.38	31.28	31.58
	Equiv. Refl.: (1,-2,-12)								
Quartz	(7,0,8)	13.719	74.91	1.59	1.6	3.83	6.27	47.88	48.29
	Equiv. Refl.: (7,-7,-8), (-7,0,-8), (-7,7,8)								
Quartz	(0,7,-8)	13.719	74.91	1.588	1.6	3.83	6.26	47.88	48.28
	Equiv. Refl.: (0,-7,8), (-10,4,4), (-10,6,-4)								
Quartz	(4,6,4)	13.505	71.89	1.587	1.6	4.648	7.47	58.09	58.57
	Equiv. Refl.: (4,-10,-4), (6,4,-4), (6,-10,4)								

Ei =	14.209	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(2,6,8)	13.949	79.03	1.578	1.7	2.754	4.69	34.42	34.74
	Equiv. Refl.: (2,-8,-8), (6,2,-8), (6,-8,8), (-8,2,8), (-8,6,-8)								
Quartz	(10,-4,-4)	13.505	71.89	1.572	1.6	4.648	7.47	58.09	58.57
	Equiv. Refl.: (10,-6,4), (-6,10,-4), (-6,-4,4)								
Quartz	(-4,10,4)	13.505	71.89	1.571	1.6	4.648	7.47	58.09	58.57
	Equiv. Refl.: (-4,-6,-4)								
Quartz	(-10,2,4)	14.12	83.57	1.569	1.7	1.6	2.76	20.01	20.2
	Equiv. Refl.: (-10,8,-4)								
Quartz	(2,8,4)	14.12	83.57	1.567	1.7	1.6	2.76	20.01	20.2
	Equiv. Refl.: (2,-10,-4)								
Quartz	(8,2,-4)	14.12	83.57	1.566	1.7	1.6	2.76	20.01	20.2
	Equiv. Refl.: (8,-10,4)								
Quartz	(5,6,0)	13.899	78.01	1.515	1.6	3.019	4.82	37.74	38.04
	Equiv. Refl.: (5,-11,0), (6,5,0), (6,-11,0), (-11,5,0), (-11,6,0)								
Quartz	(11,-5,0)	13.899	78.01	1.514	1.6	3.019	4.82	37.74	38.04
	Equiv. Refl.: (11,-6,0), (-5,11,0), (-5,-6,0), (-6,11,0), (-6,-5,0)								
Sapph	(1,2,-28)	13.944	78.92	1.51	1.7	2.782	4.6	34.77	35.07
	Equiv. Refl.: (1,-3,28), (2,1,28), (2,-3,-28), (3,-1,28), (3,-2,-28), (-1,3,-28), (-1,-2,28), (-2,3,28), (-2,-1,-28), (-3,1,-28), (-3,2,28)								
Quartz	(10,-7,5)	14.163	85.39	1.488	1.9	1.145	2.13	14.31	14.47
	Equiv. Refl.: (-3,10,5), (-3,-7,-5)								
Quartz	(10,-3,-5)	14.163	85.39	1.487	1.9	1.145	2.13	14.31	14.47
	Equiv. Refl.: (-7,10,-5), (-7,-3,5)								
Quartz	(10,-2,-4)	14.12	83.57	1.481	1.7	1.6	2.76	20.01	20.2
	Equiv. Refl.: (10,-8,4)								
Quartz	(-2,10,4)	14.12	83.57	1.48	1.7	1.6	2.76	20.01	20.2
Quartz	(-2,-8,-4)	14.12	83.57	1.479	1.7	1.6	2.76	20.01	20.2
Quartz	(-8,10,-4)	14.12	83.57	1.478	1.7	1.6	2.76	20.01	20.2
	Equiv. Refl.: (-8,-2,4)								
Quartz	(1,9,0)	13.899	78.01	1.443	1.6	3.019	4.83	37.74	38.04
	Equiv. Refl.: (1,-10,0), (9,1,0), (9,-10,0), (-10,1,0), (-10,9,0)								
Quartz	(-4,1,-11)	13.667	74.13	1.379	1.4	4.041	5.59	50.51	50.82
	Equiv. Refl.: (-4,3,11)								
Quartz	(3,1,11)	13.667	74.13	1.378	1.4	4.041	5.59	50.51	50.82
	Equiv. Refl.: (3,-4,-11)								
Quartz	(1,3,-11)	13.667	74.13	1.376	1.4	4.041	5.58	50.51	50.82
	Equiv. Refl.: (1,-4,11)								
Sapph	(0,1,-28)	13.449	71.17	1.331	1.4	4.845	6.79	60.57	60.95
	Equiv. Refl.: (0,-1,28), (1,0,28), (1,-1,-28), (-1,0,-28), (-1,1,28)								
Quartz	(-8,10,4)	14.12	83.57	1.323	1.4	1.6	2.21	20.01	20.13
	Equiv. Refl.: (-8,-2,-4)								
Quartz	(10,-8,-4)	14.12	83.57	1.322	1.4	1.6	2.21	20.01	20.13
Quartz	(10,-2,4)	14.12	83.57	1.321	1.4	1.6	2.21	20.01	20.13
	Equiv. Refl.: (-2,10,-4)								
Quartz	(-2,-8,4)	14.12	83.57	1.32	1.4	1.6	2.21	20.01	20.13
Sapph	(3,4,-22)	13.928	78.59	1.299	1.4	2.867	4.15	35.83	36.07
	Equiv. Refl.: (3,-7,22), (4,3,22), (4,-7,-22), (7,-3,22), (7,-4,-22), (-3,7,-22), (-3,-4,22), (-4,7,22), (-4,-3,-22), (-7,3,-22), (-7,4,22)								
Quartz	(4,2,-10)	13.82	76.57	1.288	1.3	3.393	4.5	42.41	42.65
	Equiv. Refl.: (4,-6,10)								

Ei = Cryst	14.209 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(2,-6,-10) Equiv. Refl.: (-6,2,10)	13.82	76.57	1.286	1.3	3.393	4.49	42.41	42.65
Quartz	(2,4,10) Equiv. Refl.: (-6,4,-10)	13.82	76.57	1.285	1.3	3.393	4.49	42.41	42.65
Quartz	(4,-1,11) Equiv. Refl.: (4,-3,-11)	13.667	74.13	1.281	1.4	4.041	5.59	50.51	50.82
Quartz	(-3,4,11) Equiv. Refl.: (-3,-1,-11)	13.667	74.13	1.28	1.4	4.041	5.59	50.51	50.82
Quartz	(-1,4,-11) Equiv. Refl.: (-1,-3,11)	13.667	74.13	1.278	1.4	4.041	5.58	50.51	50.82
Quartz	(3,-3,11) Equiv. Refl.: (-3,3,-11)	13.353	70.01	1.271	1.3	5.169	6.75	64.61	64.97
Quartz	(3,0,-11) Equiv. Refl.: (-3,0,11)	13.353	70.01	1.27	1.3	5.169	6.75	64.61	64.97
Quartz	(0,3,11) Equiv. Refl.: (0,-3,-11)	13.353	70.01	1.267	1.3	5.169	6.74	64.61	64.96
Sapph	(1,8,-10) Equiv. Refl.: (1,-9,10), (8,1,10), (8,-9,-10), (9,-1,10), (9,-8,-10), (-1,-9,-10), (-1,-8,10), (-8,9,10), (-8,-1,-10), (-9,1,-10), (-9,8,10)	13.711	74.79	1.24	1.3	3.863	5.18	48.29	48.56
Quartz	(4,5,-7) Equiv. Refl.: (4,-9,7), (5,4,7), (5,-9,-7)	13.927	78.56	1.222	1.3	2.874	3.78	35.93	36.13
Quartz	(-9,4,-7)	13.927	78.56	1.221	1.3	2.874	3.78	35.93	36.13
Quartz	(-9,5,7)	13.927	78.56	1.22	1.3	2.874	3.78	35.93	36.13
Quartz	(-4,6,-10) Equiv. Refl.: (-4,-2,10)	13.82	76.57	1.21	1.3	3.393	4.5	42.41	42.65
Quartz	(4,6,5)	13.936	78.76	1.209	1.3	2.824	3.66	35.3	35.49
Quartz	(4,-10,-5) Equiv. Refl.: (6,4,-5), (-2,6,10), (-10,4,5), (-10,6,-5)	13.936	78.76	1.208	1.3	2.824	3.66	35.3	35.49
Quartz	(6,-2,-10) Equiv. Refl.: (6,-4,10), (6,-10,5), (-2,-4,-10)	13.82	76.57	1.207	1.3	3.393	4.49	42.41	42.65
Quartz	(-4,9,-7)	13.927	78.56	1.206	1.3	2.874	3.78	35.93	36.13
Quartz	(-4,-5,7) Equiv. Refl.: (-5,9,7), (-5,-4,-7)	13.927	78.56	1.205	1.3	2.874	3.78	35.93	36.13
Quartz	(9,-4,7) Equiv. Refl.: (9,-5,-7)	13.927	78.56	1.204	1.3	2.874	3.78	35.93	36.13
Quartz	(-2,10,-2) Equiv. Refl.: (-2,-8,2)	13.549	72.47	1.198	1.2	4.488	5.59	56.1	56.38
Quartz	(10,-2,2) Equiv. Refl.: (10,-8,-2), (-8,10,2), (-8,-2,-2)	13.549	72.47	1.197	1.2	4.488	5.59	56.1	56.38
LiNbO3	(1,6,-23) Equiv. Refl.: (1,-7,23), (6,1,23), (6,-7,-23), (7,-1,23), (7,-6,-23), (-1,-7,-23), (-1,-6,23), (-6,7,23), (-6,-1,-23), (-7,1,-23), (-7,6,23)	13.745	75.32	1.19	1.7	3.724	6.4	46.55	46.98
Quartz	(2,8,-2) Equiv. Refl.: (2,-10,2), (8,2,2), (8,-10,-2), (-10,2,-2), (-10,8,2)	13.549	72.47	1.189	1.2	4.488	5.59	56.1	56.38
Quartz	(10,-4,-5) Equiv. Refl.: (10,-6,5), (-4,10,5), (-4,-6,-5), (-6,-4,5)	13.936	78.76	1.176	1.3	2.824	3.66	35.3	35.49
Quartz	(-6,10,-5)	13.936	78.76	1.175	1.3	2.824	3.66	35.3	35.49
Quartz	(-7,-3,-3)	13.399	70.56	1.137	1.1	5.014	5.66	62.67	62.92
Quartz	(10,-3,3) Equiv. Refl.: (10,-7,-3), (-3,10,-3), (-3,-7,3), (-7,10,3)	13.399	70.56	1.136	1.1	5.014	5.66	62.67	62.92

Ei =	14.209	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(11,-4,0)	14.051	81.44	1.129	1.2	2.139	2.67	26.74	26.87
	Equiv. Refl.: (11,-7,0), (-4,11,0), (-4,-7,0), (-7,11,0), (-7,-4,0)								
Quartz	(1,8,5)	13.706	74.71	1.123	1.2	3.884	4.62	48.56	48.77
	Equiv. Refl.: (1,-9,-5), (-9,1,5), (-9,8,-5)								
Quartz	(8,1,-5)	13.706	74.71	1.122	1.2	3.884	4.61	48.56	48.77
	Equiv. Refl.: (8,-9,5)								
Quartz	(-1,9,5)	13.706	74.71	1.117	1.2	3.884	4.62	48.56	48.77
	Equiv. Refl.: (-1,-8,-5)								
Quartz	(9,-1,-5)	13.706	74.71	1.116	1.2	3.884	4.62	48.56	48.77
	Equiv. Refl.: (9,-8,5), (-8,9,-5)								
Quartz	(-8,-1,5)	13.706	74.71	1.115	1.2	3.884	4.61	48.56	48.77
Quartz	(-3,0,-11)	13.353	70.01	1.082	1.1	5.169	5.82	64.61	64.88
	Equiv. Refl.: (-3,3,11)								
Quartz	(0,3,-11)	13.353	70.01	1.081	1.1	5.169	5.82	64.61	64.88
	Equiv. Refl.: (0,-3,11), (3,0,11), (3,-3,-11)								
Quartz	(4,7,0)	14.051	81.44	1.054	1.2	2.139	2.67	26.74	26.87
	Equiv. Refl.: (4,-11,0), (7,4,0), (7,-11,0), (-11,4,0), (-11,7,0)								
Sapph	(1,5,23)	13.808	76.36	1.051	1.2	3.447	4.06	43.09	43.28
	Equiv. Refl.: (1,-6,-23), (5,1,-23), (5,-6,23), (6,-1,-23), (6,-5,23), (-1,6,23), (-1,-5,-23), (-5,6,-23), (-5,-1,23), (-6,1,23), (-6,5,-23)								
Quartz	(8,2,4)	14.12	83.57	1.034	1.4	1.6	2.21	20.01	20.13
	Equiv. Refl.: (8,-10,-4)								
Quartz	(-10,2,-4)	14.12	83.57	1.033	1.4	1.6	2.21	20.01	20.13
	Equiv. Refl.: (-10,8,4)								
Quartz	(2,8,-4)	14.12	83.57	1.032	1.4	1.6	2.21	20.01	20.13
	Equiv. Refl.: (2,-10,4)								
Quartz	(3,7,-3)	13.399	70.56	1.029	1.1	5.014	5.66	62.67	62.92
	Equiv. Refl.: (3,-10,3), (7,3,3), (7,-10,-3), (-10,3,-3), (-10,7,3)								
LiNbO3	(2,7,-17)	13.687	74.42	1.023	1.5	3.962	6.02	49.52	49.89
	Equiv. Refl.: (2,-9,17), (7,2,17), (7,-9,-17), (9,-2,17), (9,-7,-17), (-2,9,-17), (-2,-7,17), (-7,9,17), (-7,-2,-17), (-9,2,-17), (-9,7,17)								
Sapph	(2,5,21)	13.738	75.21	1.011	1.1	3.753	4.23	46.91	47.1
	Equiv. Refl.: (2,5,-21), (2,-7,21), (2,-7,-21), (5,2,21), (5,2,-21), (5,-7,21), (5,-7,-21), (7,-2,21), (7,-2,-21), (7,-5,21), (7,-5,-21), (-2,7,21), (-2,7,-21), (-2,-5,21), (-2,-5,-21), (-5,7,21), (-5,7,-21), (-5,-2,21), (-5,-2,-21), (-7,2,21), (-7,2,-21), (-7,5,21), (-7,5,-21)								
Sapph	(2,6,17)	13.547	72.44	1.004	1.1	4.495	4.93	56.19	56.41
	Equiv. Refl.: (2,-8,-17), (6,2,-17), (6,-8,17), (8,-2,-17), (8,-6,17), (-2,8,17), (-2,-6,-17), (-6,8,-17), (-6,-2,17), (-8,2,17), (-8,6,-17)								
Quartz	(10,-3,-4)	13.739	75.22	0.978	1	3.749	3.93	46.87	47.03
	Equiv. Refl.: (10,-7,4), (-3,10,4), (-3,-7,-4), (-7,10,-4), (-7,-3,4)								
Quartz	(3,7,4)	13.739	75.22	0.958	1	3.749	3.93	46.87	47.03
	Equiv. Refl.: (3,-10,-4), (7,3,-4), (7,-10,4), (-10,3,4), (-10,7,-4)								
Sapph	(0,2,28)	13.699	74.6	0.952	1.1	3.914	4.17	48.93	49.11
	Equiv. Refl.: (0,-2,-28), (2,0,-28), (2,-2,28), (-2,0,28), (-2,2,-28)								
Quartz	(3,6,6)	13.457	71.28	0.943	1	4.815	4.81	60.19	60.38
	Equiv. Refl.: (3,-9,-6)								
Quartz	(6,3,-6)	13.457	71.28	0.942	1	4.815	4.81	60.19	60.38
	Equiv. Refl.: (6,-9,6), (-3,9,6), (-3,-6,-6), (-9,3,6), (-9,6,-6)								
Quartz	(9,-3,-6)	13.457	71.28	0.941	1	4.815	4.81	60.19	60.38
	Equiv. Refl.: (9,-6,6), (-6,9,-6), (-6,-3,6)								

Ei =	14.209	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(8,-8,-7)	14.154	84.94	0.937	1.2	1.258	1.52	15.72	15.79
Quartz	(8,0,7)	14.154	84.94	0.936	1.2	1.258	1.52	15.72	15.79
	Equiv. Refl.: (-8,0,-7), (-8,8,7)								
Quartz	(0,8,-7)	14.154	84.94	0.933	1.2	1.258	1.52	15.72	15.79
	Equiv. Refl.: (0,-8,7)								
Quartz	(2,-5,-11)	14.125	83.78	0.93	1.1	1.548	1.77	19.35	19.43
	Equiv. Refl.: (-10,1,-1), (-10,9,1)								
LiNbO3	(2,9,-1)	14.119	83.55	0.929	1.9	1.607	3.07	20.09	20.32
	Equiv. Refl.: (2,-11,1), (9,2,1), (9,-11,-1), (11,-2,1), (11,-9,-1), (-2,11,-1), (-2,-9,1), (-9,11,1), (-9,-2,-1), (-11,2,-1), (-11,9,1), (1,9,-1), (1,-10,1), (2,3,11), (9,1,1), (9,-10,-1)								
Sapph	(0,9,6)	13.839	76.9	0.928	1.1	3.306	3.52	41.33	41.48
	Equiv. Refl.: (0,9,-6), (0,-9,6), (0,-9,-6), (9,0,6), (9,0,-6), (9,-9,6), (9,-9,-6), (-9,0,6), (-9,0,-6), (-9,9,6), (-9,9,-6)								
Quartz	(3,2,-11)	14.125	83.78	0.926	1.1	1.548	1.76	19.35	19.43
	Equiv. Refl.: (3,-5,11)								
LiNbO3	(1,9,7)	13.629	73.57	0.924	1.4	4.19	5.85	52.38	52.7
	Equiv. Refl.: (1,-10,-7), (9,1,-7), (9,-10,7), (10,-1,-7), (10,-9,7), (-1,10,7), (-1,-9,-7), (-9,10,-7), (-9,-1,7), (-10,1,7), (-10,9,-7)								
LiNbO3	(4,7,9)	14	80.17	0.923	1.6	2.462	4.02	30.78	31.04
	Equiv. Refl.: (4,7,-9), (4,-11,9), (4,-11,-9), (7,4,9), (7,4,-9), (7,-11,9), (7,-11,-9), (11,-4,9), (11,-4,-9), (11,-7,9), (11,-7,-9), (-4,11,9), (-4,11,-9), (-4,-7,9), (-4,-7,-9), (-7,11,9), (-7,11,-9), (-7,-4,9), (-7,-4,-9), (-11,4,9), (-11,4,-9), (-11,7,9), (-11,7,-9)								
Quartz	(-5,3,-11)	14.125	83.78	0.922	1.1	1.548	1.75	19.35	19.43
Quartz	(-5,2,11)	14.125	83.78	0.921	1.1	1.548	1.75	19.35	19.43
Quartz	(10,-1,1)	13.946	78.96	0.898	1	2.772	2.87	34.66	34.77
	Equiv. Refl.: (10,-9,-1), (-1,10,-1), (-1,-9,1), (-9,10,1), (-9,-1,-1)								
Quartz	(-2,5,11)	14.125	83.78	0.896	1.1	1.548	1.77	19.35	19.43
	Equiv. Refl.: (-2,-3,-11)								
Quartz	(-3,5,-11)	14.125	83.78	0.893	1.1	1.548	1.76	19.35	19.43
Quartz	(-3,-2,11)	14.125	83.78	0.892	1.1	1.548	1.76	19.35	19.43
Quartz	(5,-3,11)	14.125	83.78	0.888	1.1	1.548	1.75	19.35	19.43
Quartz	(1,9,2)	14.087	82.48	0.887	1	1.876	1.94	23.44	23.52
	Equiv. Refl.: (1,-10,-2), (5,-2,-11), (-10,9,-2)								
Quartz	(9,1,-2)	14.087	82.48	0.886	1	1.876	1.94	23.44	23.52
	Equiv. Refl.: (9,-10,2), (-10,1,2)								
Quartz	(10,-2,-3)	13.79	76.05	0.845	0.9	3.53	3.23	44.13	44.25
	Equiv. Refl.: (10,-8,3), (-2,10,3), (-2,-8,-3), (-8,10,-3), (-8,-2,3)								
LiNbO3	(3,4,-25)	14.018	80.61	0.84	1.6	2.351	3.67	29.38	29.61
	Equiv. Refl.: (3,-7,25), (4,3,25), (4,-7,-25), (7,-3,25), (7,-4,-25), (-3,7,-25), (-3,-4,25), (-4,7,25), (-4,-3,-25), (-7,3,-25), (-7,4,25)								
LiNbO3	(1,9,-5)	13.452	71.21	0.838	1.3	4.835	6.09	60.44	60.74
	Equiv. Refl.: (1,-10,5), (9,1,5), (9,-10,-5), (10,-1,5), (10,-9,-5), (-1,10,-5), (-1,-9,5), (-9,10,5), (-9,-1,-5), (-10,1,-5), (-10,9,5)								
LiNbO3	(5,6,11)	14.147	84.65	0.822	1.9	1.331	2.54	16.63	16.83
	Equiv. Refl.: (5,-11,-11), (6,5,-11), (6,-11,11), (11,-5,-11), (11,-6,11), (-5,11,11), (-5,-6,-11), (-6,11,-11), (-6,-5,11), (-11,5,11), (-11,6,-11)								
Quartz	(10,-1,-2)	14.087	82.48	0.807	1	1.876	1.94	23.44	23.52
	Equiv. Refl.: (10,-9,2), (-1,10,2), (-1,-9,-2), (-9,10,-2), (-9,-1,2)								
Quartz	(2,8,3)	13.79	76.05	0.802	0.9	3.53	3.23	44.13	44.25
	Equiv. Refl.: (2,-10,-3), (8,2,-3), (8,-10,3), (-10,2,3), (-10,8,-3)								

Ei =	14.209	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-2,9,6)	13.769	75.71	0.524	0.6	3.62	2.15	45.25	45.3
	Equiv. Refl.: (-2,-7,-6)								
LiNbO3	(4,5,-19)	13.789	76.03	0.513	1	3.535	3.52	44.19	44.33
	Equiv. Refl.: (4,-9,19), (5,4,19), (5,-9,-19), (9,-4,19), (9,-5,-19), (-4,9,-19), (-4,-5,19), (-5,9,19), (-5,-4,-19), (-9,4,-19), (-9,5,19)								
Sapph	(2,3,-25)	13.615	73.38	0.477	0.6	4.241	2.52	53.01	53.07
	Equiv. Refl.: (2,-5,25), (3,2,25), (3,-5,-25), (5,-2,25), (5,-3,-25), (-2,5,-25), (-2,-3,25), (-3,5,25), (-3,-2,-25), (-5,2,-25), (-5,3,25)								
Quartz	(-10,2,-3)	13.79	76.05	0.471	0.6	3.53	1.95	44.13	44.17
	Equiv. Refl.: (-10,8,3)								
Quartz	(2,8,-3)	13.79	76.05	0.47	0.6	3.53	1.95	44.13	44.17
	Equiv. Refl.: (2,-10,3), (8,2,3), (8,-10,-3)								
Quartz	(11,-5,-2)	14.087	82.48	0.467	0.6	1.876	1.1	23.44	23.47
	Equiv. Refl.: (11,-6,2), (-5,11,2), (-5,-6,-2)								
Quartz	(7,2,-6)	13.769	75.71	0.466	0.6	3.62	2.16	45.25	45.3
	Equiv. Refl.: (7,-9,6), (-6,11,-2), (-6,-5,2), (-9,2,6), (-9,7,-6)								
Quartz	(2,7,6)	13.769	75.71	0.465	0.6	3.62	2.15	45.25	45.3
	Equiv. Refl.: (2,-9,-6)								
Quartz	(-8,4,8)	13.642	73.76	0.457	0.6	4.14	2.41	51.75	51.81
	Equiv. Refl.: (-8,4,-8)								
Quartz	(4,4,8)	13.642	73.76	0.455	0.6	4.14	2.4	51.75	51.81
	Equiv. Refl.: (4,4,-8), (4,-8,8), (4,-8,-8)								
LiNbO3	(1,4,27)	13.652	73.9	0.453	0.9	4.1	3.6	51.25	51.37
	Equiv. Refl.: (1,4,-27), (1,-5,27), (1,-5,-27), (4,1,27), (4,1,-27), (4,-5,27), (4,-5,-27), (5,-1,27), (5,-1,-27), (5,-4,27), (5,-4,-27), (-1,5,27), (-1,5,-27), (-1,-4,27), (-1,-4,-27), (-4,5,27), (-4,5,-27), (-4,-1,27), (-4,-1,-27), (-5,1,27), (-5,1,-27), (-5,4,27), (-5,4,-27)								
Quartz	(10,-2,3)	13.79	76.05	0.426	0.6	3.53	1.95	44.13	44.17
	Equiv. Refl.: (10,-8,-3)								
Quartz	(-2,10,-3)	13.79	76.05	0.425	0.6	3.53	1.95	44.13	44.17
	Equiv. Refl.: (-2,-8,3), (-8,10,3), (-8,-2,-3)								
Sapph	(2,8,3)	13.862	77.32	0.419	0.6	3.197	1.82	39.97	40.01
	Equiv. Refl.: (2,8,-3), (2,-10,3), (2,-10,-3), (8,2,3), (8,2,-3), (8,-10,3), (8,-10,-3), (10,-2,3), (10,-2,-3), (10,-8,3), (10,-8,-3), (-2,10,3), (-2,10,-3), (-2,-8,3), (-2,-8,-3), (-8,10,3), (-8,10,-3), (-8,-2,3), (-8,-2,-3), (-10,2,3), (-10,2,-3), (-10,8,3), (-10,8,-3)								
Quartz	(5,5,5)	13.86	77.28	0.411	0.5	3.208	1.68	40.1	40.14
	Equiv. Refl.: (5,-10,-5), (-10,5,5), (-10,5,-5)								
Quartz	(5,5,-5)	13.86	77.28	0.409	0.5	3.208	1.67	40.1	40.14
	Equiv. Refl.: (5,-10,5)								
Quartz	(10,-5,5)	13.86	77.28	0.406	0.5	3.208	1.68	40.1	40.14
	Equiv. Refl.: (10,-5,-5), (-5,10,5), (-5,-5,-5)								
Quartz	(5,5,4)	13.426	70.89	0.405	0.5	4.923	2.37	61.53	61.58
	Equiv. Refl.: (5,-10,-4)								
Quartz	(5,-6,10)	14.049	81.39	0.404	0.6	2.151	1.21	26.89	26.92
	Equiv. Refl.: (-5,10,-5), (-5,-5,5)								
Quartz	(5,1,-10)	14.049	81.39	0.403	0.6	2.151	1.21	26.89	26.92
	Equiv. Refl.: (5,5,-4), (5,-10,4), (-10,5,4), (-10,5,-4)								
Quartz	(-5,10,4)	13.426	70.89	0.401	0.5	4.923	2.37	61.53	61.58
	Equiv. Refl.: (-5,-5,-4)								
Quartz	(1,5,10)	14.049	81.39	0.4	0.6	2.151	1.2	26.89	26.92
	Equiv. Refl.: (1,-6,-10), (10,-5,4), (10,-5,-4), (-5,10,-4), (-5,-5,4), (-6,1,10), (-6,5,-10)								

Ei =	14.209	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(5,5,9)	13.719	74.9	0.398	0.5	3.833	2.02	47.92	47.96
	Equiv. Refl.: (5,5,-9), (5,-10,9), (5,-10,-9), (10,-5,9), (10,-5,-9), (-5,10,9), (-5,10,-9), (-5,-5,9), (-5,-5,-9), (-10,5,9), (-10,5,-9)								
Quartz	(-5,6,-10)	14.049	81.39	0.395	0.6	2.151	1.21	26.89	26.92
	Equiv. Refl.: (-5,-1,10)								
Quartz	(6,-1,-10)	14.049	81.39	0.391	0.6	2.151	1.2	26.89	26.92
	Equiv. Refl.: (6,-5,10), (-1,6,10), (-1,-5,-10)								
Quartz	(11,-4,1)	14.097	82.81	0.384	0.5	1.791	0.89	22.39	22.41
	Equiv. Refl.: (11,-7,-1)								
Quartz	(-4,11,-1)	14.097	82.81	0.383	0.5	1.791	0.89	22.39	22.41
	Equiv. Refl.: (-4,-7,1), (-7,11,1), (-7,-4,-1)								
LiNbO3	(1,5,-25)	13.598	73.14	0.357	0.7	4.306	3.22	53.82	53.92
	Equiv. Refl.: (1,-6,25), (5,1,25), (5,-6,-25), (6,-1,25), (6,-5,-25), (-1,6,-25), (-1,-5,25), (-5,6,25), (-5,-1,-25), (-6,1,-25), (-6,5,25)								
LiNbO3	(3,7,-13)	13.658	73.99	0.347	0.7	4.077	3.05	50.96	51.05
	Equiv. Refl.: (3,-10,13), (7,3,13), (7,-10,-13), (10,-3,13), (10,-7,-13), (-3,10,-13), (-3,-7,13), (-7,10,13), (-7,-3,-13), (-10,3,-13), (-10,7,13)								
Quartz	(5,6,2)	14.087	82.48	0.345	0.6	1.876	1.1	23.44	23.47
	Equiv. Refl.: (5,-11,-2), (-11,5,2), (-11,6,-2)								
Quartz	(6,5,-2)	14.087	82.48	0.344	0.6	1.876	1.09	23.44	23.47
	Equiv. Refl.: (6,-11,2)								
LiNbO3	(3,5,-23)	14.161	85.27	0.34	1.2	1.176	1.47	14.7	14.77
	Equiv. Refl.: (3,-8,23), (5,3,23), (5,-8,-23), (8,-3,23), (8,-5,-23), (-3,8,-23), (-3,-5,23), (-5,8,23), (-5,-3,-23), (-8,3,-23), (-8,5,23)								
Sapph	(1,5,-22)	13.432	70.97	0.337	0.4	4.902	2.17	61.28	61.32
	Equiv. Refl.: (1,-6,22), (5,1,22), (5,-6,-22), (6,-1,22), (6,-5,-22), (-1,6,-22), (-1,-5,22), (-5,6,22), (-5,-1,-22), (-6,1,-22), (-6,5,22)								
Quartz	(0,4,-11)	13.898	77.99	0.331	0.5	3.022	1.36	37.77	37.8
	Equiv. Refl.: (0,-4,11)								
Quartz	(4,0,11)	13.898	77.99	0.328	0.4	3.022	1.36	37.77	37.8
	Equiv. Refl.: (4,-4,-11), (-4,0,-11), (-4,4,11)								
LiNbO3	(1,2,29)	13.48	71.57	0.305	0.7	4.736	3.12	59.2	59.29
	Equiv. Refl.: (1,-3,-29), (2,1,-29), (2,-3,29), (3,-1,-29), (3,-2,29), (-1,3,29), (-1,-2,-29), (-2,3,-29), (-2,-1,29), (-3,1,29), (-3,2,-29)								
LiNbO3	(5,6,-7)	13.629	73.57	0.3	0.7	4.19	2.85	52.38	52.45
	Equiv. Refl.: (5,-11,7), (6,5,7), (6,-11,-7), (11,-5,7), (11,-6,-7), (-5,11,-7), (-5,-6,7), (-6,11,7), (-6,-5,-7), (-11,5,-7), (-11,6,7)								
Quartz	(5,0,10)	13.588	73	0.296	0.4	4.344	1.67	54.31	54.33
	Equiv. Refl.: (5,-5,-10), (-5,0,-10), (-5,5,10)								
Quartz	(0,5,-10)	13.588	73	0.294	0.4	4.344	1.66	54.31	54.33
	Equiv. Refl.: (0,-5,10)								
Sapph	(1,6,19)	13.4	70.57	0.293	0.4	5.011	1.98	62.64	62.67
	Equiv. Refl.: (1,-7,-19), (6,1,-19), (6,-7,19), (7,-1,-19), (7,-6,19), (-1,7,19), (-1,-6,-19), (-6,7,-19), (-6,-1,19), (-7,1,19), (-7,6,-19)								
Quartz	(8,-1,7)	13.619	73.43	0.289	0.3	4.229	1.43	52.86	52.88
	Equiv. Refl.: (8,-7,-7), (-7,8,7), (-7,-1,-7)								
Quartz	(-1,8,-7)	13.619	73.43	0.288	0.3	4.229	1.43	52.86	52.88
	Equiv. Refl.: (-1,-7,7)								
LiNbO3	(5,6,5)	13.452	71.21	0.273	0.6	4.835	2.96	60.44	60.51
	Equiv. Refl.: (5,-11,-5), (6,5,-5), (6,-11,5), (11,-5,-5), (11,-6,5), (-5,11,5), (-5,-6,-5), (-6,11,-5), (-6,-5,5), (-11,5,5), (-11,6,-5)								

Sapph	(3,6,15)	13.923	78.48	0.15	0.3	2.896	0.84	36.2	36.21
Equiv. Refl.: (3,6,-15), (3,-9,15), (3,-9,-15), (6,3,15), (6,3,-15), (6,-9,15), (6,-9,-15), (9,-3,15), (9,-3,-15), (9,-6,15), (9,-6,-15), (-3,9,15), (-3,9,-15), (-3,-6,15), (-3,-6,-15), (-6,9,15), (-6,9,-15), (-6,-3,15), (-6,-3,-15), (-9,3,15), (-9,3,-15), (-9,6,15), (-9,6,-15)									
Quartz	(2,8,1)	13.403	70.61	0.147	0.2	5.002	1.19	62.53	62.54
Equiv. Refl.: (8,2,-1), (8,-10,1), (-10,2,1), (-10,8,-1)									
Quartz	(2,-10,-1)	13.403	70.61	0.146	0.2	5.002	1.19	62.53	62.54
Quartz	(5,3,-8)	13.719	74.91	0.144	0.3	3.83	0.97	47.88	47.89
Equiv. Refl.: (5,-8,8)									
Quartz	(3,5,8)	13.719	74.91	0.143	0.3	3.83	0.97	47.88	47.89
Equiv. Refl.: (3,-8,-8), (-8,3,8), (-8,5,-8)									
LiNbO3	(3,8,-5)	13.876	77.57	0.128	0.5	3.131	1.5	39.14	39.17
Equiv. Refl.: (3,-11,5), (8,3,5), (8,-11,-5), (11,-3,5), (11,-8,-5), (-3,11,-5), (-3,-8,5), (-8,11,5), (-8,-3,-5), (-11,3,-5), (-11,8,5)									
Quartz	(2,-6,10)	13.82	76.57	0.126	0.3	3.393	0.92	42.41	42.42
Quartz	(2,4,-10)	13.82	76.57	0.125	0.3	3.393	0.92	42.41	42.42
Quartz	(4,2,10)	13.82	76.57	0.124	0.3	3.393	0.92	42.41	42.42
Equiv. Refl.: (4,-6,-10), (-6,4,10)									
Quartz	(-6,2,-10)	13.82	76.57	0.123	0.3	3.393	0.91	42.41	42.42
Sapph	(3,7,-4)	13.507	71.92	0.112	0.2	4.64	0.94	57.99	58
Equiv. Refl.: (3,-10,4), (7,3,4), (7,-10,-4), (10,-3,4), (10,-7,-4), (-3,10,-4), (-3,-7,4), (-7,10,4), (-7,-3,-4), (-10,3,-4), (-10,7,4)									
LiNbO3	(3,8,1)	13.702	74.65	0.108	0.4	3.901	1.56	48.76	48.79
Equiv. Refl.: (3,-11,-1), (8,3,-1), (8,-11,1), (11,-3,-1), (11,-8,1), (-3,11,1), (-3,-8,-1), (-8,11,-1), (-8,-3,1), (-11,3,1), (-11,8,-1)									
LiNbO3	(3,3,27)	14.071	81.99	0.092	0.5	1.998	1	24.98	25
Equiv. Refl.: (3,3,-27), (3,-6,27), (3,-6,-27), (6,-3,27), (6,-3,-27), (-3,6,27), (-3,6,-27), (-3,-3,27), (-3,-3,-27), (-6,3,27), (-6,3,-27)									
Sapph	(4,6,7)	13.534	72.27	0.064	0.1	4.543	0.68	56.79	56.79
Equiv. Refl.: (4,-10,-7), (6,4,-7), (6,-10,7), (10,-4,-7), (10,-6,7), (-4,10,7), (-4,-6,-7), (-6,10,-7), (-6,-4,7), (-10,4,7), (-10,6,-7)									
LiNbO3	(4,4,21)	13.453	71.23	0.009	0.1	4.829	0.53	60.36	60.36
Equiv. Refl.: (4,4,-21), (4,-8,21), (4,-8,-21), (8,-4,21), (8,-4,-21), (-4,8,21), (-4,8,-21), (-4,-4,21), (-4,-4,-21), (-8,4,21), (-8,4,-21)									
LiNbO3	(5,5,15)	13.784	75.95	0.007	0.1	3.555	0.41	44.44	44.44
Equiv. Refl.: (5,5,-15), (5,-10,15), (5,-10,-15), (10,-5,15), (10,-5,-15), (-5,10,15), (-5,10,-15), (-5,-5,15), (-5,-5,-15), (-10,5,15), (-10,5,-15)									

Ei = Cryst	12.284 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Si	(3,5,9)	12.241	85.18	7.8437	7.38	1.035	7.64	12.94	15.03
	Equiv. Refl.: (3,9,5), (5,3,9), (5,9,3), (9,3,5), (9,5,3)								
Si	(0,2,10)	11.64	71.37	3.943	3.24	4.1406	13.41	51.76	53.47
	Equiv. Refl.: (0,10,2), (2,0,10), (2,6,8), (2,8,6), (2,10,0), (6,2,8), (6,8,2), (8,2,6), (8,6,2), (10,0,2), (10,2,0)								
Ge	(2,4,10)	12.004	77.74	3.8562	8.12	2.6703	21.68	33.38	39.8
	Equiv. Refl.: (2,10,4), (4,2,10), (4,10,2), (10,2,4), (10,4,2)								
Si	(1,5,9)	11.807	73.98	2.9929	2.53	3.5261	8.92	44.08	44.97
	Equiv. Refl.: (1,9,5), (3,7,7), (5,1,9), (5,9,1), (7,3,7), (7,7,3), (9,1,5), (9,5,1)								
Ge	(1,1,11)	12.153	81.62	2.8403	8.03	1.81	14.54	22.62	26.89
	Equiv. Refl.: (1,11,1), (5,7,7), (7,5,7), (7,7,5), (11,1,1)								
Ge	(3,5,9)	11.751	73.06	1.6697	4.49	3.7418	16.8	46.77	49.7
	Equiv. Refl.: (3,9,5), (5,3,9), (5,9,3), (9,3,5), (9,5,3)								
LiNbO3	(3,6,12)	12.272	87.47	52.828	48.5	0.542	26.3	6.78	27.16
	Equiv. Refl.: (6,-9,12), (9,-6,12), (-6,-3,12)								
LiNbO3	(-3,9,12)	12.272	87.47	52.827	48.5	0.542	26.3	6.78	27.16
	Equiv. Refl.: (-9,3,12)								
LiNbO3	(-6,9,-12)	12.272	87.47	51.724	48.5	0.542	26.3	6.78	27.16
	Equiv. Refl.: (-9,6,-12)								
LiNbO3	(3,-9,-12)	12.272	87.47	51.723	48.5	0.542	26.3	6.78	27.16
	Equiv. Refl.: (6,3,-12), (9,-3,-12), (-3,-6,-12)								
LiNbO3	(3,-9,12)	12.272	87.47	45.657	42.9	0.542	23.24	6.78	24.21
	Equiv. Refl.: (6,3,12), (9,-3,12), (-3,-6,12)								
LiNbO3	(-6,9,12)	12.272	87.47	45.656	42.8	0.542	23.24	6.78	24.21
	Equiv. Refl.: (-9,6,12)								
LiNbO3	(3,6,-12)	12.272	87.47	44.829	42.9	0.542	23.24	6.78	24.21
	Equiv. Refl.: (-3,9,-12), (-6,-3,-12), (-9,3,-12)								
LiNbO3	(6,-9,-12)	12.272	87.47	44.828	42.8	0.542	23.24	6.78	24.21
	Equiv. Refl.: (9,-6,-12)								
LiNbO3	(4,6,4)	12.253	85.95	27.808	26.4	0.871	22.95	10.89	25.4
	Equiv. Refl.: (6,-10,4), (10,-6,4), (-4,10,4), (-6,-4,4), (-10,4,4)								
LiNbO3	(4,-10,-4)	12.253	85.95	27.682	26.4	0.871	22.95	10.89	25.4
	Equiv. Refl.: (6,4,-4), (10,-4,-4), (-4,-6,-4), (-6,10,-4), (-10,6,-4)								
LiNbO3	(2,-9,-10)	12.229	84.56	26.007	23.2	1.171	27.21	14.63	30.89
	Equiv. Refl.: (7,2,-10), (9,-2,-10), (-2,-7,-10), (-7,9,-10), (-9,7,-10)								
Quartz	(-3,0,10)	12.275	87.78	24.404	20.8	0.476	9.9	5.95	11.55
Quartz	(0,3,10)	12.275	87.78	24.403	20.8	0.476	9.9	5.95	11.55
	Equiv. Refl.: (0,-3,-10)								
Quartz	(3,0,-10)	12.275	87.78	24.401	20.8	0.476	9.9	5.95	11.55
	Equiv. Refl.: (-3,3,-10)								
Quartz	(3,-3,10)	12.275	87.78	24.399	20.8	0.476	9.9	5.95	11.55
LiNbO3	(2,7,10)	12.229	84.56	24.296	23.2	1.171	27.21	14.63	30.89
	Equiv. Refl.: (7,-9,10), (9,-7,10), (-2,9,10), (-7,-2,10), (-9,2,10)								
Quartz	(-4,-5,4)	12.27	87.22	18.981	16.2	0.596	9.66	7.46	12.2
	Equiv. Refl.: (-5,9,4), (-5,-4,-4)								
Quartz	(-4,9,-4)	12.27	87.22	18.979	16.2	0.596	9.66	7.46	12.2
Quartz	(9,-5,-4)	12.27	87.22	18.978	16.2	0.596	9.66	7.46	12.2
Quartz	(9,-4,4)	12.27	87.22	18.977	16.2	0.596	9.66	7.46	12.2

Ei =	12.284	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Quartz	(4,5,-4)	12.27	87.22	18.86	16.2	0.596	9.66	7.46	12.2
	Equiv. Refl.: (5,4,4), (5,-9,-4)								
Quartz	(4,-9,4)	12.27	87.22	18.859	16.2	0.596	9.66	7.46	12.2
Quartz	(-9,5,4)	12.27	87.22	18.857	16.2	0.596	9.66	7.46	12.2
Quartz	(-9,4,-4)	12.27	87.22	18.855	16.2	0.596	9.66	7.46	12.2
LiNbO3	(1,2,26)	12.195	83.09	18.404	17.2	1.489	25.57	18.61	31.62
	Equiv. Refl.: (2,-3,26), (3,-2,26), (-1,3,26), (-2,-1,26), (-3,1,26)								
LiNbO3	(1,-3,-26)	12.195	83.09	18.369	17.2	1.489	25.57	18.61	31.62
	Equiv. Refl.: (2,1,-26), (3,-1,-26), (-1,-2,-26), (-2,3,-26), (-3,2,-26)								
LiNbO3	(4,6,-2)	12.155	81.69	17.149	15.6	1.795	27.92	22.44	35.81
	Equiv. Refl.: (6,-10,-2), (10,-6,-2), (-4,10,-2), (-6,-4,-2), (-10,4,-2)								
LiNbO3	(6,4,2)	12.155	81.69	16.603	15.6	1.795	27.92	22.44	35.81
	Equiv. Refl.: (-4,-6,2)								
LiNbO3	(4,-10,2)	12.155	81.69	16.602	15.6	1.795	27.92	22.44	35.81
	Equiv. Refl.: (10,-4,2), (-6,10,2), (-10,6,2)								
LiNbO3	(0,5,22)	12.047	78.72	16.186	14.2	2.451	34.71	30.63	46.3
	Equiv. Refl.: (5,-5,22), (-5,0,22)								
LiNbO3	(0,-5,-22)	12.047	78.72	15.466	14.2	2.451	34.71	30.63	46.3
	Equiv. Refl.: (5,0,-22), (-5,5,-22)								
LiNbO3	(5,5,0)	12.042	78.61	14.735	13.3	2.475	32.89	30.94	45.16
	Equiv. Refl.: (5,-10,0), (10,-5,0), (-5,10,0), (-5,-5,0), (-10,5,0)								
Quartz	(5,1,-8)	12.248	85.6	14.454	12.1	0.945	11.47	11.81	16.47
	Equiv. Refl.: (5,-6,8)								
Quartz	(-6,5,-8)	12.248	85.6	14.443	12.1	0.945	11.46	11.81	16.46
Quartz	(-6,1,8)	12.248	85.6	14.441	12.1	0.945	11.46	11.81	16.46
Quartz	(1,5,8)	12.248	85.6	14.436	12.1	0.945	11.46	11.81	16.46
Quartz	(1,-6,-8)	12.248	85.6	14.434	12.1	0.945	11.45	11.81	16.46
Quartz	(-5,-1,8)	12.248	85.6	14.426	12.1	0.945	11.47	11.81	16.47
Quartz	(-5,6,-8)	12.248	85.6	14.425	12.1	0.945	11.47	11.81	16.47
Quartz	(6,-5,8)	12.248	85.6	14.414	12.1	0.945	11.46	11.81	16.46
Quartz	(6,-1,-8)	12.248	85.6	14.412	12.1	0.945	11.46	11.81	16.46
Quartz	(-1,-5,-8)	12.248	85.6	14.407	12.1	0.945	11.46	11.81	16.46
Quartz	(-1,6,8)	12.248	85.6	14.405	12.1	0.945	11.45	11.81	16.46
LiNbO3	(3,-8,-16)	12.08	79.55	12.24	10.9	2.266	24.65	28.32	37.55
	Equiv. Refl.: (5,3,-16), (8,-3,-16), (-3,-5,-16), (-5,8,-16), (-8,5,-16)								
LiNbO3	(0,-2,26)	11.955	76.7	11.74	10.7	2.904	30.99	36.3	47.72
	Equiv. Refl.: (2,0,26), (-2,2,26)								
LiNbO3	(0,2,-26)	11.955	76.7	11.67	10.7	2.904	30.99	36.3	47.72
	Equiv. Refl.: (2,-2,-26), (-2,0,-26)								
LiNbO3	(1,-9,4)	12.014	77.97	11.574	10.5	2.618	27.55	32.72	42.78
	Equiv. Refl.: (8,1,4), (9,-1,4), (-1,-8,4), (-8,9,4), (-9,8,4)								
LiNbO3	(0,-7,16)	12.08	79.55	11.481	10.5	2.266	23.78	28.32	36.98
	Equiv. Refl.: (7,0,16), (-7,7,16)								
LiNbO3	(1,8,-4)	12.014	77.97	11.129	10.5	2.618	27.55	32.72	42.78
	Equiv. Refl.: (8,-9,-4), (9,-8,-4), (-1,9,-4), (-8,-1,-4), (-9,1,-4)								
LiNbO3	(0,7,-16)	12.08	79.55	11.114	10.5	2.266	23.78	28.32	36.98
	Equiv. Refl.: (-7,0,-16)								
LiNbO3	(7,-7,-16)	12.08	79.55	11.113	10.5	2.266	23.78	28.32	36.98
LiNbO3	(3,5,16)	12.08	79.55	11.085	10.9	2.266	24.65	28.32	37.55
	Equiv. Refl.: (5,-8,16), (8,-5,16), (-3,8,16), (-5,-3,16), (-8,3,16)								

Ei =	12.284	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(0,8,10)	11.989	77.42	10.728	9.3	2.741	25.44	34.27	42.68
	Equiv. Refl.: (8,-8,10), (-8,0,10)								
LiNbO3	(0,8,-8)	11.685	72.03	10.658	9.3	3.983	36.94	49.79	62
	Equiv. Refl.: (8,-8,-8), (-8,0,-8)								
LiNbO3	(1,8,2)	11.914	75.9	10.616	9.5	3.085	29.18	38.57	48.36
	Equiv. Refl.: (8,-9,2), (9,-8,2), (-1,9,2), (-8,-1,2), (-9,1,2)								
LiNbO3	(1,-9,-2)	11.914	75.9	10.461	9.5	3.085	29.18	38.57	48.36
	Equiv. Refl.: (8,1,-2), (9,-1,-2), (-1,-8,-2), (-8,9,-2), (-9,8,-2)								
Sapph	(3,6,6)	12.28	88.46	10.46	11.3	0.33	3.72	4.13	5.55
	Equiv. Refl.: (3,6,-6), (3,-9,6), (3,-9,-6), (6,3,6), (6,3,-6), (6,-9,6), (6,-9,-6), (9,-3,6), (9,-3,-6), (9,-6,6), (9,-6,-6), (-3,9,6), (-3,9,-6), (-3,-6,6), (-3,-6,-6), (-6,9,6), (-6,9,-6), (-6,-3,6), (-6,-3,-6), (-9,3,6), (-9,3,-6), (-9,6,6), (-9,6,-6)								
Quartz	(4,5,4)	12.27	87.22	10.187	9.1	0.596	5.44	7.46	9.23
	Equiv. Refl.: (4,-9,-4)								
Quartz	(-9,5,-4)	12.27	87.22	10.186	9.1	0.596	5.44	7.46	9.23
Quartz	(-9,4,4)	12.27	87.22	10.185	9.1	0.596	5.44	7.46	9.23
Quartz	(5,4,-4)	12.27	87.22	10.18	9.1	0.596	5.44	7.46	9.23
Quartz	(5,-9,4)	12.27	87.22	10.179	9.1	0.596	5.44	7.46	9.23
LiNbO3	(0,-8,8)	11.685	72.03	10.069	9.3	3.983	36.94	49.79	62
	Equiv. Refl.: (8,0,8)								
LiNbO3	(-8,8,8)	11.685	72.03	10.068	9.3	3.983	36.94	49.79	62
LiNbO3	(2,2,24)	11.764	73.26	10.067	8.9	3.694	32.79	46.18	56.63
	Equiv. Refl.: (2,-4,24), (4,-2,24), (-2,4,24), (-2,-2,24), (-4,2,24)								
LiNbO3	(2,2,-24)	11.764	73.26	10.045	8.9	3.694	32.79	46.18	56.63
	Equiv. Refl.: (2,-4,-24), (4,-2,-24), (-2,4,-24), (-2,-2,-24), (-4,2,-24)								
Quartz	(-4,-5,-4)	12.27	87.22	10.018	9.1	0.596	5.44	7.46	9.23
Quartz	(9,-5,4)	12.27	87.22	10.017	9.1	0.596	5.44	7.46	9.23
	Equiv. Refl.: (-4,9,4)								
Quartz	(9,-4,-4)	12.27	87.22	10.016	9.1	0.596	5.44	7.46	9.23
Quartz	(-5,9,-4)	12.27	87.22	10.01	9.1	0.596	5.44	7.46	9.23
	Equiv. Refl.: (-5,-4,4)								
LiNbO3	(2,6,14)	11.821	74.22	9.948	8.7	3.472	30.33	43.4	52.95
	Equiv. Refl.: (6,-8,14), (8,-6,14), (-2,8,14), (-6,-2,14), (-8,2,14)								
Sapph	(0,8,4)	12.186	82.75	9.918	8.2	1.562	12.87	19.53	23.39
	Equiv. Refl.: (0,-8,-4), (8,0,-4), (8,-8,4), (-8,0,4), (-8,8,-4)								
LiNbO3	(2,5,18)	11.84	74.55	9.877	8.8	3.394	29.93	42.43	51.92
	Equiv. Refl.: (5,-7,18), (7,-5,18), (-2,7,18), (-5,-2,18), (-7,2,18)								
LiNbO3	(-5,7,-18)	11.84	74.55	9.822	8.8	3.394	29.93	42.43	51.92
	Equiv. Refl.: (-7,5,-18)								
LiNbO3	(2,-7,-18)	11.84	74.55	9.821	8.8	3.394	29.93	42.43	51.92
	Equiv. Refl.: (5,2,-18), (7,-2,-18), (-2,-5,-18)								
LiNbO3	(2,-8,-14)	11.821	74.22	9.604	8.7	3.472	30.33	43.4	52.95
	Equiv. Refl.: (6,2,-14), (8,-2,-14), (-2,-6,-14), (-6,8,-14), (-8,6,-14)								
LiNbO3	(2,-7,18)	11.84	74.55	9.523	8.5	3.394	28.93	42.43	51.35
	Equiv. Refl.: (5,2,18), (7,-2,18), (-2,-5,18), (-5,7,18), (-7,5,18)								
LiNbO3	(0,-8,-10)	11.989	77.42	9.47	9.3	2.741	25.44	34.27	42.68
	Equiv. Refl.: (8,0,-10), (-8,8,-10)								
LiNbO3	(2,-5,22)	11.555	70.16	9.401	8.1	4.432	35.75	55.39	65.93
	Equiv. Refl.: (3,2,22), (5,-2,22), (-2,-3,22), (-3,5,22), (-5,3,22)								

Ei =	12.284	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(2,5,-18)	11.84	74.55	9.4	8.5	3.394	28.93	42.43	51.35
	Equiv. Refl.: (5,-7,-18), (7,-5,-18), (-2,7,-18), (-5,-2,-18), (-7,2,-18)								
LiNbO3	(1,-8,12)	11.79	73.69	9.219	8.2	3.593	29.48	44.92	53.73
	Equiv. Refl.: (7,1,12), (8,-1,12), (-1,-7,12), (-7,8,12), (-8,7,12)								
LiNbO3	(0,-6,18)	11.593	70.69	9.191	8	4.305	34.45	53.81	63.89
	Equiv. Refl.: (6,0,18), (-6,6,18)								
LiNbO3	(2,3,-22)	11.555	70.16	9.042	8.1	4.432	35.75	55.39	65.93
	Equiv. Refl.: (-2,5,-22), (-3,-2,-22), (-5,2,-22)								
LiNbO3	(3,-5,-22)	11.555	70.16	9.041	8.1	4.432	35.75	55.39	65.93
	Equiv. Refl.: (5,-3,-22)								
LiNbO3	(1,7,-12)	11.79	73.69	9.032	8.2	3.593	29.48	44.92	53.73
	Equiv. Refl.: (-1,8,-12), (-7,-1,-12), (-8,1,-12)								
LiNbO3	(7,-8,-12)	11.79	73.69	9.031	8.2	3.593	29.48	44.92	53.73
	Equiv. Refl.: (8,-7,-12)								
LiNbO3	(0,6,-18)	11.593	70.69	9.007	8	4.305	34.45	53.81	63.89
	Equiv. Refl.: (6,-6,-18), (-6,0,-18)								
LiNbO3	(3,-8,14)	11.573	70.41	8.945	7.6	4.372	33.22	54.65	63.95
	Equiv. Refl.: (5,3,14), (8,-3,14), (-3,-5,14), (-5,8,14), (-8,5,14)								
LiNbO3	(2,-9,8)	11.931	76.22	8.838	8	3.012	24	37.65	44.65
	Equiv. Refl.: (7,2,8), (9,-2,8), (-2,-7,8), (-7,9,8), (-9,7,8)								
LiNbO3	(4,5,-10)	11.745	72.96	8.777	7.7	3.765	28.91	47.06	55.23
	Equiv. Refl.: (-4,9,-10), (-5,-4,-10), (-9,4,-10)								
LiNbO3	(5,-9,-10)	11.745	72.96	8.776	7.7	3.765	28.91	47.06	55.23
	Equiv. Refl.: (9,-5,-10)								
LiNbO3	(1,5,20)	11.829	74.36	8.595	7.8	3.44	26.94	43	50.74
	Equiv. Refl.: (5,-6,20), (6,-5,20), (-1,6,20), (-5,-1,20), (-6,1,20)								
LiNbO3	(1,-6,-20)	11.829	74.36	8.548	7.8	3.44	26.94	43	50.74
	Equiv. Refl.: (5,1,-20), (6,-1,-20), (-1,-5,-20), (-5,6,-20), (-6,5,-20)								
LiNbO3	(2,-6,20)	11.581	70.52	8.43	7.4	4.344	32.16	54.3	63.11
	Equiv. Refl.: (4,2,20), (6,-2,20), (-2,-4,20), (-4,6,20), (-6,4,20)								
LiNbO3	(0,6,18)	11.593	70.69	8.386	7.3	4.305	31.57	53.81	62.39
	Equiv. Refl.: (6,-6,18), (-6,0,18)								
LiNbO3	(2,7,-8)	11.931	76.22	8.261	8	3.012	24	37.65	44.65
	Equiv. Refl.: (7,-9,-8), (9,-7,-8), (-2,9,-8), (-7,-2,-8), (-9,2,-8)								
LiNbO3	(3,5,-14)	11.573	70.41	8.222	7.6	4.372	33.22	54.65	63.95
	Equiv. Refl.: (5,-8,-14), (8,-5,-14), (-3,8,-14), (-5,-3,-14), (-8,3,-14)								
LiNbO3	(4,-9,10)	11.745	72.96	8.214	7.7	3.765	28.91	47.06	55.23
	Equiv. Refl.: (5,4,10), (9,-4,10), (-4,-5,10), (-5,9,10), (-9,5,10)								
LiNbO3	(1,6,16)	11.59	70.65	8.21	7.2	4.314	30.89	53.92	62.15
	Equiv. Refl.: (6,-7,16), (7,-6,16), (-1,7,16), (-6,-1,16), (-7,1,16)								
LiNbO3	(2,4,-20)	11.581	70.52	8.192	7.4	4.344	32.16	54.3	63.11
	Equiv. Refl.: (4,-6,-20), (6,-4,-20), (-2,6,-20), (-4,-2,-20), (-6,2,-20)								
LiNbO3	(1,7,12)	11.79	73.69	8.172	7.4	3.593	26.67	44.92	52.24
	Equiv. Refl.: (7,-8,12), (8,-7,12), (-1,8,12), (-7,-1,12), (-8,1,12)								
LiNbO3	(0,-6,-18)	11.593	70.69	8.036	7.3	4.305	31.57	53.81	62.39
	Equiv. Refl.: (6,0,-18), (-6,6,-18)								
LiNbO3	(1,-8,-12)	11.79	73.69	8.023	7.4	3.593	26.67	44.92	52.24
	Equiv. Refl.: (7,1,-12), (8,-1,-12), (-1,-7,-12), (-7,8,-12), (-8,7,-12)								
Quartz	(-5,7,-7)	12.135	81.06	7.822	6.2	1.931	11.97	24.14	26.95
	Equiv. Refl.: (-5,-2,7)								
Quartz	(-2,-5,-7)	12.135	81.06	7.818	6.2	1.931	11.96	24.14	26.94

Ei =	12.284	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-2,7,7)	12.135	81.06	7.817	6.2	1.931	11.96	24.14	26.94
Quartz	(7,-2,-7)	12.135	81.06	7.815	6.2	1.931	11.96	24.14	26.94
	Equiv. Refl.: (7,-5,7)								
LiNbO3	(1,-7,-16)	11.59	70.65	7.759	7.2	4.314	30.89	53.92	62.15
	Equiv. Refl.: (6,1,-16), (7,-1,-16), (-1,-6,-16), (-6,7,-16), (-7,6,-16)								
LiNbO3	(0,1,26)	11.709	72.41	7.701	7	3.895	27.25	48.69	55.8
	Equiv. Refl.: (1,-1,26), (-1,0,26)								
Quartz	(5,2,-7)	12.135	81.06	7.683	6.2	1.931	11.97	24.14	26.95
	Equiv. Refl.: (5,-7,7)								
Quartz	(2,5,7)	12.135	81.06	7.679	6.2	1.931	11.96	24.14	26.94
Quartz	(2,-7,-7)	12.135	81.06	7.678	6.2	1.931	11.96	24.14	26.94
Quartz	(-7,2,7)	12.135	81.06	7.677	6.2	1.931	11.96	24.14	26.94
	Equiv. Refl.: (-7,5,-7)								
LiNbO3	(0,-1,-26)	11.709	72.41	7.588	7	3.895	27.25	48.69	55.8
	Equiv. Refl.: (1,0,-26), (-1,1,-26)								
Sapph	(3,6,0)	11.941	76.43	7.551	6	2.966	17.86	37.07	41.15
	Equiv. Refl.: (3,-9,0), (6,3,0), (6,-9,0), (9,-3,0), (9,-6,0), (-3,9,0), (-3,-6,0), (-6,9,0), (-6,-3,0), (-9,3,0), (-9,6,0)								
LiNbO3	(0,-7,-14)	11.573	70.41	7.155	6.5	4.372	28.28	54.65	61.53
	Equiv. Refl.: (7,0,-14), (-7,7,-14)								
LiNbO3	(0,7,14)	11.573	70.41	7.015	6.5	4.372	28.28	54.65	61.53
	Equiv. Refl.: (7,-7,14), (-7,0,14)								
Sapph	(0,7,-10)	11.562	70.26	6.774	5.3	4.408	23.32	55.1	59.84
	Equiv. Refl.: (0,-7,10), (7,0,10), (7,-7,-10), (-7,0,-10), (-7,7,10)								
Sapph	(1,1,24)	11.748	73.01	6.152	4.9	3.754	18.46	46.93	50.43
	Equiv. Refl.: (1,1,-24), (1,-2,24), (1,-2,-24), (2,-1,24), (2,-1,-24), (-1,2,24), (-1,2,-24), (-1,-1,24), (-1,-1,-24), (-2,1,24), (-2,1,-24)								
Quartz	(-2,9,-2)	12.145	81.36	5.552	4.4	1.867	8.2	23.33	24.73
	Equiv. Refl.: (-2,-7,2)								
Quartz	(-7,9,2)	12.145	81.36	5.551	4.4	1.867	8.2	23.33	24.73
	Equiv. Refl.: (-7,-2,-2)								
Quartz	(9,-2,2)	12.145	81.36	5.55	4.4	1.867	8.2	23.33	24.73
	Equiv. Refl.: (9,-7,-2)								
Quartz	(2,-9,2)	12.145	81.36	5.278	4.4	1.867	8.2	23.33	24.73
Quartz	(2,7,-2)	12.145	81.36	5.277	4.4	1.867	8.2	23.33	24.73
	Equiv. Refl.: (7,2,2)								
Quartz	(7,-9,-2)	12.145	81.36	5.276	4.4	1.867	8.2	23.33	24.73
	Equiv. Refl.: (-9,2,-2), (-9,7,2)								
Sapph	(4,5,-4)	11.904	75.71	5.235	4.3	3.129	13.59	39.11	41.4
	Equiv. Refl.: (4,-9,4), (5,4,4), (5,-9,-4), (9,-4,4), (9,-5,-4), (-4,9,-4), (-4,-5,4), (-5,9,4), (-5,-4,-4), (-9,4,-4), (-9,5,4)								
Sapph	(4,5,-7)	12.216	83.95	5.126	4.7	1.301	6.14	16.26	17.38
	Equiv. Refl.: (4,-9,7), (5,4,7), (5,-9,-7), (9,-4,7), (9,-5,-7), (-4,9,-7), (-4,-5,7), (-5,9,7), (-5,-4,-7), (-9,4,-7), (-9,5,7)								
Sapph	(0,5,-20)	12.153	81.64	5.092	4.4	1.806	7.93	22.57	23.92
	Equiv. Refl.: (0,-5,20), (5,0,20), (5,-5,-20), (-5,0,-20), (-5,5,20)								
Sapph	(3,3,18)	11.615	71.01	5.078	4	4.227	16.72	52.84	55.42
	Equiv. Refl.: (3,3,-18), (3,-6,18), (3,-6,-18), (6,-3,18), (6,-3,-18), (-3,6,18), (-3,6,-18), (-3,-3,18), (-3,-3,-18), (-6,3,18), (-6,3,-18)								

Ei =	12.284	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(0,7,-5)	11.701	72.27	4.877	3.8	3.926	15.02	49.08	51.33
	Equiv. Refl.: (0,-7,5)								
Quartz	(7,0,5)	11.701	72.27	4.874	3.8	3.926	15.01	49.08	51.33
	Equiv. Refl.: (7,-7,-5), (-7,0,-5), (-7,7,5)								
Sapph	(1,4,21)	12.165	82.02	4.854	4.3	1.721	7.38	21.51	22.74
	Equiv. Refl.: (1,4,-21), (1,-5,21), (1,-5,-21), (4,1,21), (4,1,-21), (4,-5,21), (4,-5,-21), (5,-1,21), (5,-1,-21), (5,-4,21), (5,-4,-21), (-1,5,21), (-1,5,-21), (-1,-4,21), (-1,-4,-21), (-4,5,21), (-4,5,-21), (-4,-1,21), (-4,-1,-21), (-5,1,21), (-5,1,-21), (-5,4,21), (-5,4,-21)								
Quartz	(-5,2,9)	12.12	80.64	4.838	4	2.026	8.08	25.32	26.58
	Equiv. Refl.: (-5,3,-9)								
Quartz	(5,-2,-9)	12.12	80.64	4.837	4	2.026	8.08	25.32	26.58
	Equiv. Refl.: (5,-3,9)								
Quartz	(3,-5,9)	12.12	80.64	4.833	4	2.026	8.07	25.32	26.58
Quartz	(3,2,-9)	12.12	80.64	4.832	4	2.026	8.07	25.32	26.58
	Equiv. Refl.: (-3,5,-9)								
Quartz	(-3,-2,9)	12.12	80.64	4.831	4	2.026	8.07	25.32	26.58
Quartz	(2,-5,-9)	12.12	80.64	4.83	4	2.026	8.07	25.32	26.58
Quartz	(2,3,9)	12.12	80.64	4.829	4	2.026	8.07	25.32	26.58
	Equiv. Refl.: (-2,5,9)								
Quartz	(-2,-3,-9)	12.12	80.64	4.828	4	2.026	8.07	25.32	26.58
Quartz	(-8,4,-6)	12.217	84.02	4.802	4.2	1.287	5.38	16.09	16.96
Quartz	(-8,4,6)	12.217	84.02	4.8	4.2	1.287	5.38	16.09	16.96
Quartz	(4,4,6)	12.217	84.02	4.797	4.2	1.287	5.37	16.09	16.96
	Equiv. Refl.: (4,-8,6), (4,-8,-6)								
Quartz	(4,4,-6)	12.217	84.02	4.796	4.2	1.287	5.37	16.09	16.96
Quartz	(4,3,7)	11.959	76.79	4.64	3.6	2.885	10.33	36.06	37.51
	Equiv. Refl.: (4,-7,-7)								
Quartz	(3,4,-7)	11.959	76.79	4.636	3.6	2.885	10.32	36.06	37.5
	Equiv. Refl.: (-7,3,-7), (-7,4,7)								
Quartz	(3,-7,7)	11.959	76.79	4.635	3.6	2.885	10.32	36.06	37.5
Quartz	(8,-4,6)	12.217	84.02	4.6	4.2	1.287	5.38	16.09	16.96
Quartz	(8,-4,-6)	12.217	84.02	4.598	4.2	1.287	5.38	16.09	16.96
Quartz	(-4,8,6)	12.217	84.02	4.594	4.2	1.287	5.37	16.09	16.96
	Equiv. Refl.: (-4,8,-6), (-4,-4,6), (-4,-4,-6)								
Quartz	(2,3,-9)	12.12	80.64	4.467	3.7	2.026	7.53	25.32	26.42
	Equiv. Refl.: (2,7,1), (2,-9,-1), (-9,2,1), (-9,7,-1)								
Quartz	(2,-5,9)	12.12	80.64	4.466	3.7	2.026	7.52	25.32	26.42
	Equiv. Refl.: (7,2,-1), (7,-9,1)								
Quartz	(3,2,9)	12.12	80.64	4.465	3.7	2.026	7.52	25.32	26.42
Quartz	(3,-5,-9)	12.12	80.64	4.464	3.7	2.026	7.52	25.32	26.42
Quartz	(-5,2,-9)	12.12	80.64	4.455	3.7	2.026	7.51	25.32	26.41
	Equiv. Refl.: (-5,3,9)								
Quartz	(-4,7,7)	11.959	76.79	4.447	3.6	2.885	10.33	36.06	37.51
	Equiv. Refl.: (-4,-3,-7)								
Quartz	(7,-3,7)	11.959	76.79	4.444	3.6	2.885	10.32	36.06	37.5
	Equiv. Refl.: (-3,-4,7)								
Quartz	(7,-4,-7)	11.959	76.79	4.443	3.6	2.885	10.32	36.06	37.5
	Equiv. Refl.: (-3,7,-7)								
Quartz	(-2,-3,9)	12.12	80.64	4.434	3.7	2.026	7.53	25.32	26.42
Quartz	(-2,5,-9)	12.12	80.64	4.432	3.7	2.026	7.52	25.32	26.42
	Equiv. Refl.: (-3,-2,-9)								

Ei =	12.284	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-3,5,9)	12.12	80.64	4.43	3.7	2.026	7.52	25.32	26.42
Quartz	(5,-2,9)	12.12	80.64	4.422	3.7	2.026	7.51	25.32	26.41
	Equiv. Refl.: (5,-3,-9)								
Quartz	(0,3,-10)	12.275	87.78	4.298	4.8	0.476	2.29	5.95	6.38
	Equiv. Refl.: (0,-3,10)								
Quartz	(3,-3,-10)	12.275	87.78	4.263	4.8	0.476	2.28	5.95	6.37
	Equiv. Refl.: (-3,3,10)								
Quartz	(-3,0,-10)	12.275	87.78	4.259	4.8	0.476	2.28	5.95	6.37
Quartz	(3,0,10)	12.275	87.78	4.257	4.8	0.476	2.28	5.95	6.37
Quartz	(9,-2,-1)	11.981	77.25	4.203	3.5	2.78	9.6	34.75	36.05
	Equiv. Refl.: (9,-7,1), (-2,9,1), (-2,-7,-1), (-7,9,-1), (-7,-2,1)								
Sapph	(1,7,6)	11.714	72.47	4.137	3.3	3.88	12.9	48.5	50.19
	Equiv. Refl.: (1,7,-6), (1,-8,6), (1,-8,-6), (7,1,6), (7,1,-6), (7,-8,6), (7,-8,-6), (8,-1,6), (8,-1,-6), (8,-7,6), (8,-7,-6), (-1,8,6), (-1,8,-6), (-1,-7,6), (-1,-7,-6), (-7,8,6), (-7,8,-6), (-7,-1,6), (-7,-1,-6), (-8,1,6), (-8,1,-6), (-8,7,6), (-8,7,-6)								
Quartz	(0,6,7)	11.87	75.08	3.933	3.1	3.274	10.28	40.93	42.2
	Equiv. Refl.: (0,-6,-7)								
Quartz	(6,0,-7)	11.87	75.08	3.928	3.1	3.274	10.27	40.93	42.19
	Equiv. Refl.: (6,-6,7), (-6,0,7), (-6,6,-7)								
Quartz	(3,-2,10)	12.101	80.09	3.92	3.3	2.147	7	26.83	27.73
Quartz	(3,-1,-10)	12.101	80.09	3.919	3.3	2.147	7	26.83	27.73
Quartz	(-2,3,-10)	12.101	80.09	3.914	3.3	2.147	6.99	26.83	27.73
	Equiv. Refl.: (-2,-1,10)								
Quartz	(-1,-2,-10)	12.101	80.09	3.912	3.3	2.147	6.98	26.83	27.73
Quartz	(-1,3,10)	12.101	80.09	3.91	3.3	2.147	6.98	26.83	27.73
Quartz	(-3,2,-10)	12.101	80.09	3.786	3.3	2.147	7	26.83	27.73
Quartz	(-3,1,10)	12.101	80.09	3.785	3.3	2.147	7	26.83	27.73
Quartz	(2,-3,10)	12.101	80.09	3.781	3.3	2.147	6.99	26.83	27.73
Quartz	(2,1,-10)	12.101	80.09	3.78	3.3	2.147	6.99	26.83	27.73
Quartz	(1,2,10)	12.101	80.09	3.778	3.3	2.147	6.98	26.83	27.73
Quartz	(1,-3,-10)	12.101	80.09	3.776	3.3	2.147	6.98	26.83	27.73
Quartz	(4,-1,-9)	11.583	70.55	3.56	2.8	4.338	12.01	54.23	55.54
Quartz	(4,-3,9)	11.583	70.55	3.559	2.8	4.338	12.01	54.23	55.54
Quartz	(-1,4,9)	11.583	70.55	3.558	2.8	4.338	12.01	54.23	55.54
	Equiv. Refl.: (-1,-3,-9), (-3,4,-9), (-3,-1,9)								
Quartz	(1,7,-4)	11.918	75.99	3.536	2.8	3.065	8.7	38.32	39.29
	Equiv. Refl.: (1,-8,4), (-8,1,-4), (-8,7,4)								
Quartz	(7,1,4)	11.918	75.99	3.535	2.8	3.065	8.69	38.32	39.29
	Equiv. Refl.: (7,-8,-4)								
Quartz	(-2,-5,7)	12.135	81.06	3.521	3	1.931	5.71	24.14	24.81
	Equiv. Refl.: (-5,7,7), (-5,-2,-7)								
Quartz	(-2,7,-7)	12.135	81.06	3.52	3	1.931	5.71	24.14	24.81
Quartz	(7,-2,7)	12.135	81.06	3.519	3	1.931	5.71	24.14	24.81
	Equiv. Refl.: (7,-5,-7)								
Quartz	(-4,1,9)	11.583	70.55	3.508	2.8	4.338	12.01	54.23	55.54
Quartz	(-4,3,-9)	11.583	70.55	3.507	2.8	4.338	12.01	54.23	55.54
Quartz	(1,3,9)	11.583	70.55	3.506	2.8	4.338	12	54.23	55.54
	Equiv. Refl.: (1,-4,-9), (3,1,-9), (3,-4,9)								
Quartz	(0,1,-10)	11.562	70.26	3.447	2.7	4.407	11.93	55.09	56.37
	Equiv. Refl.: (0,-1,10)								

Ei =	12.284	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(1,0,10)	11.562	70.26	3.445	2.7	4.407	11.92	55.09	56.37
Quartz	(1,-1,-10)	11.562	70.26	3.444	2.7	4.407	11.92	55.09	56.37
	Equiv. Refl.: (-1,0,-10), (-1,1,10)								
Quartz	(1,2,-10)	12.101	80.09	3.437	3.1	2.147	6.73	26.83	27.66
	Equiv. Refl.: (-3,1,-10), (-3,2,10)								
Quartz	(1,-3,10)	12.101	80.09	3.435	3.1	2.147	6.73	26.83	27.66
Quartz	(2,1,10)	12.101	80.09	3.433	3.1	2.147	6.72	26.83	27.66
	Equiv. Refl.: (2,-3,-10)								
Quartz	(-3,9,-3)	12.066	79.18	3.413	2.7	2.348	6.41	29.35	30.04
	Equiv. Refl.: (-6,9,3), (-6,-3,-3)								
Quartz	(9,-3,3)	12.066	79.18	3.412	2.7	2.348	6.41	29.35	30.04
	Equiv. Refl.: (9,-6,-3), (-3,-6,3)								
Quartz	(8,-1,4)	11.918	75.99	3.4	2.8	3.065	8.7	38.32	39.29
	Equiv. Refl.: (-1,8,-4), (-1,-7,4)								
Quartz	(8,-7,-4)	11.918	75.99	3.399	2.8	3.065	8.7	38.32	39.29
	Equiv. Refl.: (-7,8,4), (-7,-1,-4)								
Quartz	(2,5,-7)	12.135	81.06	3.361	3	1.931	5.71	24.14	24.81
Quartz	(2,-7,7)	12.135	81.06	3.36	3	1.931	5.71	24.14	24.81
	Equiv. Refl.: (5,2,7), (5,-7,-7)								
Quartz	(-7,2,-7)	12.135	81.06	3.359	3	1.931	5.71	24.14	24.81
	Equiv. Refl.: (-7,5,7)								
Quartz	(0,1,10)	11.562	70.26	3.349	2.6	4.407	11.57	55.09	56.29
	Equiv. Refl.: (0,-1,-10)								
Quartz	(1,0,-10)	11.562	70.26	3.346	2.6	4.407	11.56	55.09	56.29
	Equiv. Refl.: (1,-1,10), (-1,0,10)								
Quartz	(-1,1,-10)	11.562	70.26	3.345	2.6	4.407	11.56	55.09	56.29
Quartz	(3,-1,10)	12.101	80.09	3.328	3.1	2.147	6.73	26.83	27.67
	Equiv. Refl.: (3,-2,-10), (-1,-2,10)								
Quartz	(-1,3,-10)	12.101	80.09	3.326	3.1	2.147	6.73	26.83	27.66
Quartz	(-2,3,10)	12.101	80.09	3.325	3.1	2.147	6.72	26.83	27.66
	Equiv. Refl.: (-2,-1,-10)								
Quartz	(9,-6,-2)	11.79	73.69	3.286	2.6	3.594	9.5	44.92	45.92
	Equiv. Refl.: (-3,-6,2), (-6,9,2)								
Quartz	(9,-3,2)	11.79	73.69	3.285	2.6	3.594	9.5	44.92	45.92
	Equiv. Refl.: (-3,9,-2), (-6,-3,-2)								
Quartz	(3,-9,3)	12.066	79.18	3.283	2.7	2.348	6.41	29.35	30.04
	Equiv. Refl.: (6,3,3), (6,-9,-3)								
Quartz	(3,6,-3)	12.066	79.18	3.282	2.7	2.348	6.41	29.35	30.04
Quartz	(-9,3,-3)	12.066	79.18	3.281	2.7	2.348	6.41	29.35	30.04
	Equiv. Refl.: (-9,6,3)								
Quartz	(3,6,-2)	11.79	73.69	3.262	2.6	3.594	9.5	44.92	45.92
	Equiv. Refl.: (3,-9,2), (6,3,2), (6,-9,-2), (-9,3,-2), (-9,6,2)								
Quartz	(2,7,-1)	11.981	77.25	3.258	2.6	2.78	7.21	34.75	35.49
	Equiv. Refl.: (2,-9,1), (7,2,1), (7,-9,-1), (-9,7,1)								
Quartz	(-9,2,-1)	11.981	77.25	3.257	2.6	2.78	7.21	34.75	35.49
Quartz	(-2,9,-1)	11.981	77.25	3.224	2.6	2.78	7.21	34.75	35.49
	Equiv. Refl.: (-2,-7,1), (-7,9,1), (-7,-2,-1)								
Quartz	(9,-2,1)	11.981	77.25	3.223	2.6	2.78	7.21	34.75	35.49
	Equiv. Refl.: (9,-7,-1)								
Quartz	(-3,4,9)	11.583	70.55	3.218	2.5	4.338	11.03	54.23	55.34

Ei =	12.284	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-3,-1,-9)	11.583	70.55	3.217	2.5	4.338	11.03	54.23	55.34
Quartz	(4,-3,-9)	11.583	70.55	3.216	2.5	4.338	11.03	54.23	55.34
	Equiv. Refl.: (-1,4,-9), (-1,-3,9)								
Quartz	(4,-1,9)	11.583	70.55	3.215	2.5	4.338	11.02	54.23	55.34
Quartz	(3,1,9)	11.583	70.55	3.197	2.5	4.338	11.03	54.23	55.34
	Equiv. Refl.: (3,-4,-9)								
Quartz	(1,3,-9)	11.583	70.55	3.196	2.5	4.338	11.03	54.23	55.34
	Equiv. Refl.: (-4,3,9)								
Quartz	(1,-4,9)	11.583	70.55	3.195	2.5	4.338	11.03	54.23	55.34
	Equiv. Refl.: (-4,1,-9)								
Quartz	(6,3,-2)	11.79	73.69	3.106	2.4	3.594	8.65	44.92	45.75
	Equiv. Refl.: (6,-9,2), (-9,3,2), (-9,6,-2)								
Quartz	(3,6,2)	11.79	73.69	3.105	2.4	3.594	8.65	44.92	45.75
	Equiv. Refl.: (3,-9,-2)								
Quartz	(2,6,5)	11.97	77.01	3.103	2.8	2.833	7.86	35.41	36.27
	Equiv. Refl.: (2,-8,-5)								
Quartz	(-8,2,5)	11.97	77.01	3.102	2.8	2.833	7.86	35.41	36.27
	Equiv. Refl.: (-8,6,-5)								
Quartz	(6,2,-5)	11.97	77.01	3.101	2.8	2.833	7.86	35.41	36.27
	Equiv. Refl.: (6,-8,5)								
Quartz	(9,-3,-2)	11.79	73.69	3.097	2.4	3.594	8.65	44.92	45.75
	Equiv. Refl.: (9,-6,2), (-6,9,-2), (-6,-3,2)								
Quartz	(-3,9,2)	11.79	73.69	3.096	2.4	3.594	8.65	44.92	45.75
	Equiv. Refl.: (-3,-6,-2)								
Quartz	(9,-3,-3)	12.066	79.18	3.088	2.5	2.348	5.79	29.35	29.92
	Equiv. Refl.: (9,-6,3)								
Quartz	(-3,-6,-3)	12.066	79.18	3.087	2.5	2.348	5.79	29.35	29.92
	Equiv. Refl.: (-6,9,-3), (-6,-3,3)								
Quartz	(-3,9,3)	12.066	79.18	3.086	2.5	2.348	5.79	29.35	29.92
Sapph	(2,6,11)	12.052	78.85	3.081	2.7	2.421	6.5	30.26	30.95
	Equiv. Refl.: (2,-8,-11), (6,2,-11), (6,-8,11), (8,-2,-11), (8,-6,11), (-2,8,11), (-2,-6,-11), (-6,8,-11), (-6,-2,11), (-8,2,11), (-8,6,-11)								
Quartz	(0,8,-1)	11.712	72.45	3.021	2.7	3.885	10.35	48.56	49.65
	Equiv. Refl.: (0,-8,1), (8,0,1), (8,-8,-1), (-8,0,-1), (-8,8,1)								
Quartz	(-2,8,5)	11.97	77.01	2.962	2.8	2.833	7.86	35.41	36.27
	Equiv. Refl.: (-2,-6,-5)								
Quartz	(8,-2,-5)	11.97	77.01	2.961	2.8	2.833	7.86	35.41	36.27
	Equiv. Refl.: (8,-6,5), (-6,8,-5), (-6,-2,5)								
Sapph	(1,6,-14)	11.915	75.92	2.919	2.8	3.08	8.48	38.5	39.42
	Equiv. Refl.: (1,-7,14), (6,1,14), (6,-7,-14), (7,-1,14), (7,-6,-14), (-1,7,-14), (-1,-6,14), (-6,7,14), (-6,-1,-14), (-7,1,-14), (-7,6,14)								
Quartz	(3,3,8)	11.896	75.56	2.843	2.2	3.162	7.03	39.53	40.15
	Equiv. Refl.: (3,-6,-8)								
Quartz	(-6,3,-8)	11.896	75.56	2.842	2.2	3.162	7.03	39.53	40.15
Quartz	(-6,3,8)	11.896	75.56	2.841	2.2	3.162	7.03	39.53	40.15
Quartz	(3,3,-8)	11.896	75.56	2.839	2.2	3.162	7.02	39.53	40.15
	Equiv. Refl.: (3,-6,8)								
Quartz	(6,3,-3)	12.066	79.18	2.815	2.5	2.348	5.79	29.35	29.92
	Equiv. Refl.: (6,-9,3), (-9,3,3), (-9,6,-3)								
Quartz	(3,6,3)	12.066	79.18	2.814	2.5	2.348	5.79	29.35	29.92

Ei =	12.284	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,3,25)	12.252	85.87	2.81	5.5	0.887	4.9	11.09	12.12
	Equiv. Refl.: (1,-4,-25), (3,1,-25), (3,-4,25), (4,-1,-25), (4,-3,25), (-1,4,25), (-1,-3,-25), (-3,4,-25), (-3,-1,25), (-4,1,25), (-4,3,-25)								
Sapph	(2,6,-10)	11.852	74.76	2.605	2.5	3.347	8.22	41.83	42.63
	Equiv. Refl.: (2,-8,10), (6,2,10), (6,-8,-10), (8,-2,10), (8,-6,-10), (-2,8,-10), (-2,-6,10), (-6,8,10), (-6,-2,-10), (-8,2,-10), (-8,6,10)								
Quartz	(4,5,-2)	11.608	70.91	2.564	2.3	4.252	9.63	53.15	54.01
	Equiv. Refl.: (4,-9,2), (5,4,2), (5,-9,-2), (-9,4,-2), (-9,5,2)								
Sapph	(1,7,9)	12.143	81.32	2.554	2.6	1.875	4.95	23.44	23.96
	Equiv. Refl.: (1,7,-9), (1,-8,9), (1,-8,-9), (7,1,9), (7,1,-9), (7,-8,9), (7,-8,-9), (8,-1,9), (8,-1,-9), (8,-7,9), (8,-7,-9), (-1,8,9), (-1,8,-9), (-1,-7,9), (-1,-7,-9), (-7,8,9), (-7,8,-9), (-7,-1,9), (-7,-1,-9), (-8,1,9), (-8,1,-9), (-8,7,9), (-8,7,-9)								
Quartz	(3,-9,-3)	12.066	79.18	2.542	2.5	2.348	5.79	29.35	29.92
Quartz	(-4,9,-2)	11.608	70.91	2.493	2.3	4.252	9.63	53.15	54.01
	Equiv. Refl.: (-4,-5,2), (-5,9,2), (-5,-4,-2)								
Quartz	(9,-4,2)	11.608	70.91	2.492	2.3	4.252	9.63	53.15	54.01
	Equiv. Refl.: (9,-5,-2)								
Quartz	(4,0,9)	11.855	74.81	2.471	2.3	3.336	7.56	41.7	42.38
	Equiv. Refl.: (4,-4,-9), (-4,0,-9)								
Quartz	(-4,4,9)	11.855	74.81	2.47	2.3	3.336	7.56	41.7	42.38
Quartz	(0,4,-9)	11.855	74.81	2.467	2.3	3.336	7.55	41.7	42.38
	Equiv. Refl.: (0,-4,9)								
Sapph	(4,5,5)	11.99	77.44	2.465	2.4	2.738	6.56	34.22	34.85
	Equiv. Refl.: (4,-9,-5), (5,4,-5), (5,-9,5), (9,-4,-5), (9,-5,5), (-4,9,5), (-4,-5,-5), (-5,9,-5), (-5,-4,5), (-9,4,5), (-9,5,-5)								
Sapph	(2,3,20)	11.581	70.53	2.464	2.3	4.344	9.91	54.3	55.19
	Equiv. Refl.: (2,-5,-20), (3,2,-20), (3,-5,20), (5,-2,-20), (5,-3,20), (-2,5,20), (-2,-3,-20), (-3,5,-20), (-3,-2,20), (-5,2,20), (-5,3,-20)								
Quartz	(-3,6,8)	11.896	75.56	2.399	2.2	3.162	7.03	39.53	40.15
	Equiv. Refl.: (-3,-3,-8)								
Quartz	(6,-3,8)	11.896	75.56	2.397	2.2	3.162	7.03	39.53	40.15
	Equiv. Refl.: (6,-3,-8)								
Quartz	(-3,6,-8)	11.896	75.56	2.395	2.2	3.162	7.02	39.53	40.15
	Equiv. Refl.: (-3,-3,8)								
Quartz	(7,1,-4)	11.918	75.99	2.377	2.1	3.065	6.5	38.32	38.87
	Equiv. Refl.: (7,-8,4)								
Quartz	(1,7,4)	11.918	75.99	2.376	2.1	3.065	6.5	38.32	38.87
	Equiv. Refl.: (1,-8,-4)								
Quartz	(-8,1,4)	11.918	75.99	2.375	2.1	3.065	6.5	38.32	38.86
	Equiv. Refl.: (-8,7,-4)								
Sapph	(3,5,10)	11.562	70.26	2.339	2.2	4.408	9.58	55.1	55.93
	Equiv. Refl.: (3,-8,-10), (5,3,-10), (5,-8,10), (8,-3,-10), (8,-5,10), (-3,8,10), (-3,-5,-10), (-5,8,-10), (-5,-3,10), (-8,3,10), (-8,5,-10)								
Quartz	(-3,7,7)	11.959	76.79	2.337	2.1	2.885	6.09	36.06	36.57
	Equiv. Refl.: (-3,-4,-7)								
Quartz	(7,-3,-7)	11.959	76.79	2.336	2.1	2.885	6.09	36.06	36.57
	Equiv. Refl.: (-4,7,-7), (-4,-3,7)								
Quartz	(7,-4,7)	11.959	76.79	2.335	2.1	2.885	6.09	36.06	36.57

Ei =	12.284	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(3,5,13)	12.223	84.28	2.17	2.8	1.229	3.39	15.37	15.74
	Equiv. Refl.: (3,-8,-13), (5,3,-13), (5,-8,13), (8,-3,-13), (8,-5,13), (-3,8,13), (-3,-5,-13), (-5,8,-13), (-5,-3,13), (-8,3,13), (-8,5,-13)								
LiNbO3	(4,6,1)	12.13	80.92	2.044	3.4	1.962	6.69	24.53	25.42
	Equiv. Refl.: (4,-10,-1), (6,4,-1), (6,-10,1), (10,-4,-1), (10,-6,1), (-4,10,1), (-4,-6,-1), (-6,10,-1), (-6,-4,1), (-10,4,1), (-10,6,-1)								
Quartz	(-7,8,-4)	11.918	75.99	1.938	2.1	3.065	6.5	38.32	38.87
	Equiv. Refl.: (-7,-1,4)								
Quartz	(-1,8,4)	11.918	75.99	1.937	2.1	3.065	6.5	38.32	38.87
	Equiv. Refl.: (-1,-7,-4)								
Quartz	(8,-1,-4)	11.918	75.99	1.936	2.1	3.065	6.5	38.32	38.86
	Equiv. Refl.: (8,-7,4)								
Quartz	(3,4,7)	11.959	76.79	1.92	2.1	2.885	6.09	36.06	36.57
	Equiv. Refl.: (3,-7,-7)								
Quartz	(4,3,-7)	11.959	76.79	1.919	2.1	2.885	6.09	36.06	36.57
	Equiv. Refl.: (4,-7,7), (-7,3,7)								
Quartz	(-7,4,-7)	11.959	76.79	1.918	2.1	2.885	6.09	36.06	36.57
Quartz	(-1,7,-6)	11.775	73.44	1.911	2	3.652	7.15	45.65	46.2
	Equiv. Refl.: (-6,7,6), (-6,-1,-6)								
Quartz	(-1,-6,6)	11.775	73.44	1.91	2	3.652	7.14	45.65	46.2
Quartz	(7,-1,6)	11.775	73.44	1.909	2	3.652	7.14	45.65	46.2
	Equiv. Refl.: (7,-6,-6)								
Sapph	(0,4,-22)	12.103	80.14	1.899	2.2	2.135	4.76	26.69	27.11
	Equiv. Refl.: (0,-4,22), (4,0,22), (4,-4,-22), (-4,0,-22), (-4,4,22)								
Quartz	(2,4,-8)	11.985	77.33	1.883	2	2.761	5.47	34.51	34.94
Quartz	(2,-6,8)	11.985	77.33	1.882	2	2.761	5.47	34.51	34.94
	Equiv. Refl.: (-6,2,-8), (-6,4,8)								
Quartz	(4,2,8)	11.985	77.33	1.88	2	2.761	5.46	34.51	34.94
	Equiv. Refl.: (4,-6,-8)								
Quartz	(7,2,-2)	12.145	81.36	1.802	2.1	1.867	3.84	23.33	23.65
	Equiv. Refl.: (7,-9,2)								
Quartz	(2,7,2)	12.145	81.36	1.801	2.1	1.867	3.84	23.33	23.65
	Equiv. Refl.: (2,-9,-2), (-9,2,2), (-9,7,-2)								
LiNbO3	(1,6,-17)	11.871	75.11	1.78	2.7	3.267	8.74	40.84	41.76
	Equiv. Refl.: (1,-7,17), (6,1,17), (6,-7,-17), (7,-1,17), (7,-6,-17), (-1,7,-17), (-1,-6,17), (-6,7,17), (-6,-1,-17), (-7,1,-17), (-7,6,17)								
Quartz	(1,6,6)	11.775	73.44	1.774	1.8	3.652	6.62	45.65	46.12
	Equiv. Refl.: (1,-7,-6), (-7,1,6), (-7,6,-6)								
Quartz	(1,6,-6)	11.775	73.44	1.772	2	3.652	7.14	45.65	46.2
	Equiv. Refl.: (1,-7,6), (6,1,6), (6,1,-6), (6,-7,6), (6,-7,-6)								
Quartz	(-7,1,-6)	11.775	73.44	1.77	2	3.652	7.14	45.65	46.2
	Equiv. Refl.: (-7,6,6)								
Quartz	(3,6,0)	11.564	70.29	1.758	1.8	4.4	7.87	55	55.56
	Equiv. Refl.: (3,-9,0), (6,3,0), (6,-9,0), (-9,3,0), (-9,6,0)								
Quartz	(9,-2,-2)	12.145	81.36	1.745	2.1	1.867	3.84	23.33	23.65
	Equiv. Refl.: (-2,9,2), (-2,-7,-2), (-7,9,-2), (-7,-2,2)								
Quartz	(9,-7,2)	12.145	81.36	1.744	2.1	1.867	3.84	23.33	23.65
Quartz	(-2,-4,8)	11.985	77.33	1.733	2	2.761	5.47	34.51	34.94
Quartz	(6,-2,8)	11.985	77.33	1.732	2	2.761	5.47	34.51	34.94
	Equiv. Refl.: (6,-4,-8), (-2,6,-8)								
Quartz	(-4,6,8)	11.985	77.33	1.73	2	2.761	5.46	34.51	34.94
	Equiv. Refl.: (-4,-2,-8)								

Ei =	12.284	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(4,5,-1)	11.76	73.2	1.713	1.9	3.709	7.03	46.37	46.9
	Equiv. Refl.: (4,-9,1), (5,4,1), (5,-9,-1), (9,-4,1), (9,-5,-1), (-4,9,-1), (-4,-5,1), (-5,9,1), (-5,-4,-1), (-9,4,-1), (-9,5,1)								
Quartz	(9,-3,0)	11.564	70.29	1.629	1.8	4.4	7.87	55	55.56
	Equiv. Refl.: (9,-6,0), (-3,9,0), (-3,-6,0), (-6,9,0), (-6,-3,0)								
Quartz	(0,8,0)	11.656	71.6	1.625	1.7	4.087	7.09	51.08	51.57
	Equiv. Refl.: (0,-8,0), (8,0,0), (8,-8,0), (-8,0,0), (-8,8,0)								
Quartz	(7,-6,6)	11.775	73.44	1.606	1.8	3.652	6.62	45.65	46.12
	Equiv. Refl.: (-1,7,6), (-1,-6,-6)								
Quartz	(7,-1,-6)	11.775	73.44	1.605	1.8	3.652	6.62	45.65	46.12
Quartz	(-6,-1,6)	11.775	73.44	1.604	1.8	3.652	6.61	45.65	46.12
Quartz	(-6,7,-6)	11.775	73.44	1.603	1.8	3.652	6.61	45.65	46.12
Sapph	(2,5,15)	11.812	74.07	1.598	1.8	3.507	6.3	43.84	44.29
	Equiv. Refl.: (2,5,-15), (2,-7,15), (2,-7,-15), (5,2,15), (5,2,-15), (5,-7,15), (5,-7,-15), (7,-2,15), (7,-2,-15), (7,-5,15), (7,-5,-15), (-2,7,15), (-2,7,-15), (-2,-5,15), (-2,-5,-15), (-5,7,15), (-5,7,-15), (-5,-2,15), (-5,-2,-15), (-7,2,15), (-7,2,-15), (-7,5,15), (-7,5,-15)								
Quartz	(8,0,3)	12.153	81.63	1.538	1.8	1.807	3.32	22.59	22.83
	Equiv. Refl.: (-8,0,-3)								
Quartz	(8,-8,-3)	12.153	81.63	1.537	1.8	1.807	3.32	22.59	22.83
	Equiv. Refl.: (-8,8,3)								
Quartz	(0,8,-3)	12.153	81.63	1.535	1.8	1.807	3.31	22.59	22.83
	Equiv. Refl.: (0,-8,3)								
LiNbO3	(2,7,7)	11.804	73.93	1.51	2.3	3.538	8.27	44.22	44.99
	Equiv. Refl.: (2,-9,-7), (7,2,-7), (7,-9,7), (9,-2,-7), (9,-7,7), (-2,9,7), (-2,-7,-7), (-7,9,-7), (-7,-2,7), (-9,2,7), (-9,7,-7)								
Sapph	(2,4,19)	12.067	79.21	1.509	1.8	2.341	4.26	29.26	29.57
	Equiv. Refl.: (2,-6,-19), (4,2,-19), (4,-6,19), (6,-2,-19), (6,-4,19), (-2,6,19), (-2,-4,-19), (-4,6,-19), (-4,-2,19), (-6,2,19), (-6,4,-19)								
Quartz	(-5,-1,-8)	12.248	85.6	1.508	2	0.945	1.85	11.81	11.96
Quartz	(-5,6,8)	12.248	85.6	1.506	2	0.945	1.85	11.81	11.96
Quartz	(0,4,9)	11.855	74.81	1.503	1.6	3.336	5.5	41.7	42.06
	Equiv. Refl.: (0,-4,-9)								
Quartz	(4,-4,9)	11.855	74.81	1.499	1.6	3.336	5.49	41.7	42.06
	Equiv. Refl.: (-4,0,9), (-4,4,-9)								
Quartz	(4,0,-9)	11.855	74.81	1.498	1.6	3.336	5.49	41.7	42.06
Quartz	(-1,6,-8)	12.248	85.6	1.497	1.9	0.945	1.84	11.81	11.96
	Equiv. Refl.: (-1,-5,8)								
Quartz	(6,-5,-8)	12.248	85.6	1.496	1.9	0.945	1.84	11.81	11.96
Quartz	(6,-1,8)	12.248	85.6	1.495	1.9	0.945	1.84	11.81	11.96
Quartz	(4,4,-5)	11.61	70.93	1.494	1.6	4.247	6.76	53.09	53.52
	Equiv. Refl.: (4,-8,5), (-8,4,5), (-8,4,-5)								
Quartz	(4,4,5)	11.61	70.93	1.493	1.6	4.247	6.76	53.09	53.51
	Equiv. Refl.: (4,-8,-5)								
Quartz	(8,-4,5)	11.61	70.93	1.47	1.6	4.247	6.76	53.09	53.51
	Equiv. Refl.: (8,-4,-5), (-4,8,-5), (-4,-4,5)								
Quartz	(-4,8,5)	11.61	70.93	1.469	1.6	4.247	6.76	53.09	53.51
	Equiv. Refl.: (-4,-4,-5)								
Sapph	(1,5,17)	11.662	71.69	1.409	1.6	4.066	6.45	50.82	51.23
	Equiv. Refl.: (1,-6,-17), (5,1,-17), (5,-6,17), (6,-1,-17), (6,-5,17), (-1,6,17), (-1,-5,-17), (-5,6,-17), (-5,-1,17), (-6,1,17), (-6,5,-17)								

Ei =	12.284	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(6,3,1)	11.621	71.09	1.362	1.4	4.207	5.86	52.59	52.92
	Equiv. Refl.: (6,-9,-1), (-9,3,-1), (-9,6,1)								
Quartz	(3,6,-1)	11.621	71.09	1.361	1.4	4.207	5.86	52.59	52.92
	Equiv. Refl.: (3,-9,1)								
Quartz	(4,5,3)	11.888	75.42	1.351	1.5	3.196	4.78	39.94	40.23
	Equiv. Refl.: (4,-9,-3), (5,4,-3), (5,-9,3), (-9,4,3), (-9,5,-3)								
LiNbO3	(2,7,-5)	11.599	70.78	1.331	2	4.283	8.74	53.54	54.25
	Equiv. Refl.: (2,-9,5), (7,2,5), (7,-9,-5), (9,-2,5), (9,-7,-5), (-2,9,-5), (-2,-7,5), (-7,9,5), (-7,-2,-5), (-9,2,-5), (-9,7,5)								
Quartz	(-5,-4,3)	11.888	75.42	1.313	1.5	3.196	4.78	39.94	40.23
Quartz	(9,-4,-3)	11.888	75.42	1.312	1.5	3.196	4.78	39.94	40.23
	Equiv. Refl.: (9,-5,3), (-4,9,3), (-4,-5,-3), (-5,9,-3)								
Quartz	(2,0,10)	11.835	74.45	1.27	1.4	3.418	4.87	42.72	43
	Equiv. Refl.: (-2,0,-10)								
Quartz	(2,-2,-10)	11.835	74.45	1.269	1.4	3.418	4.86	42.72	42.99
	Equiv. Refl.: (-2,2,10)								
Quartz	(0,2,-10)	11.835	74.45	1.266	1.4	3.418	4.85	42.72	42.99
	Equiv. Refl.: (0,-2,10)								
Quartz	(5,1,8)	12.248	85.6	1.265	2	0.945	1.85	11.81	11.96
Quartz	(5,-6,-8)	12.248	85.6	1.264	2	0.945	1.85	11.81	11.96
Quartz	(1,5,-8)	12.248	85.6	1.254	1.9	0.945	1.84	11.81	11.96
	Equiv. Refl.: (1,-6,8)								
Quartz	(-6,1,-8)	12.248	85.6	1.252	1.9	0.945	1.84	11.81	11.96
	Equiv. Refl.: (-6,5,8)								
Quartz	(9,-3,1)	11.621	71.09	1.188	1.4	4.207	5.86	52.59	52.92
	Equiv. Refl.: (9,-6,-1), (-3,9,-1), (-3,-6,1), (-6,9,1), (-6,-3,-1)								
Quartz	(3,5,5)	11.701	72.27	1.182	1.3	3.926	5.12	49.08	49.35
	Equiv. Refl.: (3,-8,-5), (-8,3,5), (-8,5,-5)								
Quartz	(5,3,-5)	11.701	72.27	1.181	1.3	3.926	5.12	49.08	49.35
	Equiv. Refl.: (5,-8,5)								
Sapph	(1,3,-23)	12.245	85.42	1.161	1.9	0.985	1.83	12.31	12.45
	Equiv. Refl.: (1,-4,23), (3,1,23), (3,-4,-23), (4,-1,23), (4,-3,-23), (-1,4,-23), (-1,-3,23), (-3,4,23), (-3,-1,-23), (-4,1,-23), (-4,3,23)								
Quartz	(8,-3,-5)	11.701	72.27	1.157	1.3	3.926	5.12	49.08	49.35
	Equiv. Refl.: (8,-5,5), (-3,8,5), (-3,-5,-5)								
Quartz	(-5,8,-5)	11.701	72.27	1.156	1.3	3.926	5.12	49.08	49.35
	Equiv. Refl.: (-5,-3,5)								
Quartz	(-5,9,3)	11.888	75.42	1.038	1.2	3.196	3.79	39.94	40.12
	Equiv. Refl.: (-5,-4,-3)								
Quartz	(9,-4,3)	11.888	75.42	1.037	1.2	3.196	3.79	39.94	40.12
	Equiv. Refl.: (9,-5,-3)								
Quartz	(-4,9,-3)	11.888	75.42	1.036	1.2	3.196	3.78	39.94	40.12
	Equiv. Refl.: (-4,-5,3)								
Quartz	(5,4,3)	11.888	75.42	0.985	1.2	3.196	3.79	39.94	40.12
Quartz	(5,-9,-3)	11.888	75.42	0.984	1.2	3.196	3.79	39.94	40.12
Quartz	(-9,4,-3)	11.888	75.42	0.983	1.2	3.196	3.79	39.94	40.12
	Equiv. Refl.: (-9,5,3)								
Quartz	(4,5,-3)	11.888	75.42	0.982	1.2	3.196	3.78	39.94	40.12
	Equiv. Refl.: (4,-9,3)								

Ei =	12.284	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(3,4,-19)	11.989	77.41	0.96	1.9	2.744	5.15	34.3	34.68
	Equiv. Refl.: (3,-7,19), (4,3,19), (4,-7,-19), (7,-3,19), (7,-4,-19), (-3,7,-19), (-3,-4,19), (-4,7,19), (-4,-3,-19), (-7,3,-19), (-7,4,19)								
Quartz	(0,8,2)	11.879	75.26	0.95	1.1	3.233	3.62	40.41	40.57
	Equiv. Refl.: (0,-8,-2), (8,0,-2)								
Quartz	(8,-8,2)	11.879	75.26	0.949	1.1	3.233	3.62	40.41	40.57
	Equiv. Refl.: (-8,0,2), (-8,8,-2)								
Quartz	(8,-2,5)	11.97	77.01	0.931	1	2.833	2.97	35.41	35.53
	Equiv. Refl.: (8,-6,-5), (-2,8,-5), (-2,-6,5)								
Quartz	(-6,8,5)	11.97	77.01	0.93	1	2.833	2.97	35.41	35.53
	Equiv. Refl.: (-6,-2,-5)								
Quartz	(7,0,-5)	11.701	72.27	0.92	1.1	3.926	4.18	49.08	49.26
	Equiv. Refl.: (7,-7,5), (-7,0,5), (-7,7,-5)								
Quartz	(0,7,5)	11.701	72.27	0.919	1.1	3.926	4.17	49.08	49.26
	Equiv. Refl.: (0,-7,-5)								
Quartz	(4,5,2)	11.608	70.91	0.899	1	4.252	4.38	53.15	53.33
	Equiv. Refl.: (4,-9,-2), (5,4,-2), (5,-9,2), (-9,4,2), (-9,5,-2)								
Quartz	(9,-4,-2)	11.608	70.91	0.891	1	4.252	4.38	53.15	53.33
	Equiv. Refl.: (9,-5,2), (-4,-5,-2), (-5,9,-2), (-5,-4,2)								
Quartz	(-4,9,2)	11.608	70.91	0.89	1	4.252	4.38	53.15	53.33
Quartz	(-5,-3,-5)	11.701	72.27	0.889	1	3.926	3.97	49.08	49.24
Quartz	(-5,8,5)	11.701	72.27	0.888	1	3.926	3.97	49.08	49.24
Quartz	(8,-3,5)	11.701	72.27	0.887	1	3.926	3.97	49.08	49.24
	Equiv. Refl.: (8,-5,-5), (-3,8,-5), (-3,-5,5)								
Sapph	(3,5,-11)	11.767	73.32	0.844	1.1	3.681	3.88	46.01	46.17
	Equiv. Refl.: (3,-8,11), (5,3,11), (5,-8,-11), (8,-3,11), (8,-5,-11), (-3,8,-11), (-3,-5,11), (-5,8,11), (-5,-3,-11), (-8,3,-11), (-8,5,11)								
Quartz	(5,3,5)	11.701	72.27	0.843	1	3.926	3.97	49.08	49.24
	Equiv. Refl.: (5,-8,-5)								
Quartz	(3,5,-5)	11.701	72.27	0.842	1	3.926	3.97	49.08	49.24
	Equiv. Refl.: (3,-8,5), (-8,3,-5), (-8,5,5)								
Quartz	(2,-8,5)	11.97	77.01	0.771	1	2.833	2.97	35.41	35.53
Quartz	(2,6,-5)	11.97	77.01	0.77	1	2.833	2.97	35.41	35.53
	Equiv. Refl.: (-8,2,-5), (-8,6,5)								
Quartz	(6,2,5)	11.97	77.01	0.769	1	2.833	2.97	35.41	35.53
	Equiv. Refl.: (6,-8,-5)								
LiNbO3	(4,5,11)	11.922	76.06	0.761	1.6	3.05	4.79	38.12	38.42
	Equiv. Refl.: (4,-9,-11), (5,4,-11), (5,-9,11), (9,-4,-11), (9,-5,11), (-4,9,11), (-4,-5,-11), (-5,9,-11), (-5,-4,11), (-9,4,11), (-9,5,-11)								
Quartz	(4,2,-8)	11.985	77.33	0.731	0.9	2.761	2.49	34.51	34.6
	Equiv. Refl.: (-6,2,8), (-6,4,-8)								
Quartz	(2,4,8)	11.985	77.33	0.73	0.9	2.761	2.49	34.51	34.6
	Equiv. Refl.: (2,-6,-8), (4,-6,8)								
Quartz	(6,-6,-7)	11.87	75.08	0.673	0.8	3.274	2.77	40.93	41.02
Quartz	(0,6,-7)	11.87	75.08	0.672	0.8	3.274	2.77	40.93	41.02
	Equiv. Refl.: (0,-6,7), (6,0,7), (-6,0,-7), (-6,6,7)								
Quartz	(6,-2,-8)	11.985	77.33	0.663	0.9	2.761	2.49	34.51	34.6
	Equiv. Refl.: (6,-4,8), (-2,6,8), (-2,-4,-8), (-4,6,-8), (-4,-2,8)								
Quartz	(0,8,1)	11.712	72.45	0.606	0.8	3.885	2.95	48.56	48.65
	Equiv. Refl.: (0,-8,-1), (8,0,-1), (8,-8,1), (-8,0,1), (-8,8,-1)								

Ei =	12.284	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(1,2,23)	11.677	71.91	0.582	0.8	4.012	3.13	50.15	50.25
	Equiv. Refl.: (1,-3,-23), (2,1,-23), (2,-3,23), (3,-1,-23), (3,-2,23), (-1,3,23), (-1,-2,-23), (-2,3,-23), (-2,-1,23), (-3,1,23), (-3,2,-23)								
Sapph	(1,3,22)	11.819	74.18	0.572	0.8	3.481	2.76	43.51	43.6
	Equiv. Refl.: (1,-4,-22), (3,1,-22), (3,-4,22), (4,-1,-22), (4,-3,22), (-1,4,22), (-1,-3,-22), (-3,4,-22), (-3,-1,22), (-4,1,22), (-4,3,-22)								
Quartz	(5,0,8)	11.716	72.51	0.561	0.7	3.87	2.75	48.38	48.45
	Equiv. Refl.: (5,-5,-8), (-5,0,-8), (-5,5,8)								
Quartz	(0,5,-8)	11.716	72.51	0.56	0.7	3.87	2.74	48.38	48.45
	Equiv. Refl.: (0,-5,8)								
Quartz	(1,1,-10)	11.745	72.96	0.533	0.6	3.766	2.37	47.07	47.13
	Equiv. Refl.: (1,-2,10), (1,-2,-10)								
Quartz	(1,1,10)	11.745	72.96	0.532	0.6	3.766	2.36	47.07	47.13
Quartz	(-2,1,-10)	11.745	72.96	0.531	0.6	3.766	2.36	47.07	47.13
Quartz	(-2,1,10)	11.745	72.96	0.53	0.6	3.766	2.36	47.07	47.13
Sapph	(1,6,13)	11.654	71.57	0.5	0.7	4.093	2.84	51.16	51.24
	Equiv. Refl.: (1,-7,-13), (6,1,-13), (6,-7,13), (7,-1,-13), (7,-6,13), (-1,7,13), (-1,-6,-13), (-6,7,-13), (-6,-1,13), (-7,1,13), (-7,6,-13)								
LiNbO3	(1,2,-25)	11.769	73.35	0.483	1.1	3.673	4.13	45.91	46.1
	Equiv. Refl.: (1,-3,25), (2,1,25), (2,-3,-25), (3,-1,25), (3,-2,-25), (-1,3,-25), (-1,-2,25), (-2,3,25), (-2,-1,-25), (-3,1,-25), (-3,2,25)								
Sapph	(3,4,-16)	11.919	76	0.472	0.7	3.064	2.17	38.3	38.36
	Equiv. Refl.: (3,-7,16), (4,3,16), (4,-7,-16), (7,-3,16), (7,-4,-16), (-3,7,-16), (-3,-4,16), (-4,7,16), (-4,-3,-16), (-7,3,-16), (-7,4,16)								
Quartz	(9,-2,0)	11.926	76.13	0.42	0.6	3.033	1.68	37.91	37.94
	Equiv. Refl.: (9,-7,0), (-2,9,0), (-2,-7,0), (-7,9,0), (-7,-2,0)								
Quartz	(-1,2,10)	11.745	72.96	0.417	0.6	3.766	2.37	47.07	47.13
	Equiv. Refl.: (-1,2,-10), (-1,-1,10)								
Quartz	(-1,-1,-10)	11.745	72.96	0.416	0.6	3.766	2.36	47.07	47.13
Quartz	(2,-1,10)	11.745	72.96	0.415	0.6	3.766	2.36	47.07	47.13
	Equiv. Refl.: (2,-1,-10)								
Sapph	(3,4,17)	12.23	84.64	0.365	0.8	1.154	0.98	14.42	14.45
	Equiv. Refl.: (3,-7,-17), (4,3,-17), (4,-7,17), (7,-3,-17), (7,-4,17), (-3,7,17), (-3,-4,-17), (-4,7,-17), (-4,-3,17), (-7,3,17), (-7,4,-17)								
LiNbO3	(3,6,9)	11.748	73	0.361	0.9	3.754	3.54	46.93	47.06
	Equiv. Refl.: (3,6,-9), (3,-9,9), (3,-9,-9), (6,3,9), (6,3,-9), (6,-9,9), (6,-9,-9), (9,-3,9), (9,-3,-9), (9,-6,9), (9,-6,-9), (-3,9,9), (-3,9,-9), (-3,-6,9), (-3,-6,-9), (-6,9,9), (-6,9,-9), (-6,-3,9), (-6,-3,-9), (-9,3,9), (-9,3,-9), (-9,6,9), (-9,6,-9)								
Quartz	(8,0,2)	11.879	75.26	0.356	0.5	3.233	1.71	40.41	40.45
	Equiv. Refl.: (8,-8,-2), (-8,0,-2), (-8,8,2)								
Quartz	(0,8,-2)	11.879	75.26	0.355	0.5	3.233	1.71	40.41	40.45
	Equiv. Refl.: (0,-8,2)								
Quartz	(2,7,0)	11.926	76.13	0.322	0.6	3.033	1.68	37.91	37.94
	Equiv. Refl.: (2,-9,0), (7,2,0), (7,-9,0), (-9,2,0), (-9,7,0)								
Quartz	(0,2,10)	11.835	74.45	0.315	0.5	3.418	1.64	42.72	42.75
	Equiv. Refl.: (0,-2,-10)								
Quartz	(2,0,-10)	11.835	74.45	0.309	0.5	3.418	1.62	42.72	42.75
	Equiv. Refl.: (2,-2,10), (-2,0,10), (-2,2,-10)								
LiNbO3	(2,6,-13)	11.59	70.65	0.265	0.8	4.313	3.26	53.92	54.01
	Equiv. Refl.: (2,-8,13), (6,2,13), (6,-8,-13), (8,-2,13), (8,-6,-13), (-2,8,-13), (-2,-6,13), (-6,8,13), (-6,-2,-13), (-8,2,-13), (-8,6,13)								
Sapph	(3,6,3)	12.027	78.25	0.239	0.5	2.556	1.24	31.94	31.97

	Equiv. Refl.: (3,6,-3), (3,-9,3), (3,-9,-3), (6,3,3), (6,3,-3), (6,-9,3), (6,-9,-3), (9,-3,3), (9,-3,-3)								
	(9,-6,3), (9,-6,-3), (-3,9,3), (-3,9,-3), (-3,-6,3), (-3,-6,-3), (-6,9,3), (-6,9,-3), (-6,-3,3)								
	(-6,-3,-3), (-9,3,3), (-9,3,-3), (-9,6,3), (-9,6,-3)								
LiNbO3	(2,3,23)	11.938	76.37	0.215	0.8	2.978	2.33	37.23	37.3
	Equiv. Refl.: (2,-5,-23), (3,2,-23), (3,-5,23), (5,-2,-23), (5,-3,23), (-2,5,23), (-2,-3,-23), (-3,5,-23), (-3,-2,23)								
	(-5,2,23), (-5,3,-23)								
LiNbO3	(1,8,5)	12.089	79.77	0.184	0.8	2.216	1.83	27.7	27.76
	Equiv. Refl.: (1,-9,-5), (8,1,-5), (8,-9,5), (9,-1,-5), (9,-8,5), (-1,9,5), (-1,-8,-5), (-8,9,-5), (-8,-1,5)								
	(-9,1,5), (-9,8,-5)								
LiNbO3	(1,8,-1)	11.889	75.43	0.137	0.6	3.194	1.93	39.92	39.97
	Equiv. Refl.: (1,-9,1), (8,1,1), (8,-9,-1), (9,-1,1), (9,-8,-1), (-1,9,-1), (-1,-8,1), (-8,9,1), (-8,-1,-1)								
	(-9,1,-1), (-9,8,1)								
LiNbO3	(3,3,21)	11.849	74.7	0.075	0.4	3.361	1.48	42.01	42.03
	Equiv. Refl.: (3,3,-21), (3,-6,21), (3,-6,-21), (6,-3,21), (6,-3,-21), (-3,6,21), (-3,6,-21), (-3,-3,21), (-3,-3,-21)								
	(-6,3,21), (-6,3,-21)								
Sapph	(4,5,2)	11.789	73.67	0.057	0.2	3.598	0.66	44.98	44.99
	Equiv. Refl.: (4,-9,-2), (5,4,-2), (5,-9,2), (9,-4,-2), (9,-5,2), (-4,9,2), (-4,-5,-2), (-5,9,-2), (-5,-4,2)								
	(-9,4,2), (-9,5,-2)								
Sapph	(4,4,12)	11.893	75.5	0.042	0.2	3.176	0.53	39.7	39.7
	Equiv. Refl.: (4,4,-12), (4,-8,12), (4,-8,-12), (8,-4,12), (8,-4,-12), (-4,8,12), (-4,8,-12), (-4,-4,12), (-4,-4,-12)								
	(-8,4,12), (-8,4,-12)								
LiNbO3	(4,4,15)	11.739	72.87	0.013	0.2	3.787	0.71	47.34	47.35
	Equiv. Refl.: (4,4,-15), (4,-8,15), (4,-8,-15), (5,5,3), (5,5,-3), (5,-10,3), (5,-10,-3), (8,-4,15), (8,-4,-15)								
	(10,-5,3), (10,-5,-3), (-4,8,15), (-4,8,-15), (-4,-4,15), (-4,-4,-15), (-5,10,3), (-5,10,-3), (-5,-5,3)								
	(-5,-5,-3), (-8,4,15), (-8,4,-15), (-10,5,3), (-10,5,-3)								

Ei =	15.347	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(8,8,8)	15.184	81.63	2.2248	5.19	2.2578	11.72	28.22	30.56
Ge	(1,5,13)	15.302	85.6	2.1476	6.77	1.1814	8	14.77	16.8
	Equiv. Refl.: (1,13,5), (5,1,13), (5,7,11), (5,11,7), (5,13,1), (7,5,11), (7,11,5), (11,5,7), (11,7,5), (13,1,5), (13,5,1)								
Si	(1,3,13)	15.271	84.31	1.9886	2.26	1.5281	3.45	19.1	19.41
	Equiv. Refl.: (1,13,3), (3,1,13), (3,7,11), (3,11,7), (3,13,1), (7,3,11), (7,7,9), (7,9,7), (7,11,3), (9,7,7), (11,3,7), (11,7,3), (13,1,3), (13,3,1)								
Si	(4,4,12)	15.143	80.65	1.8703	2.01	2.5277	5.07	31.6	32
	Equiv. Refl.: (4,12,4), (12,4,4)								
Ge	(2,6,12)	14.864	75.59	1.4495	3.27	3.9446	12.89	49.31	50.97
	Equiv. Refl.: (2,12,6), (6,2,12), (6,12,2), (12,2,6), (12,6,2)								
Ge	(4,4,12)	14.537	71.3	1.2565	2.74	5.1935	14.23	64.92	66.46
	Equiv. Refl.: (4,12,4), (12,4,4)								
Si	(2,8,10)	14.795	74.58	1.2548	1.34	4.232	5.66	52.9	53.2
	Equiv. Refl.: (2,10,8), (8,2,10), (8,10,2), (10,2,8), (10,8,2)								
Si	(0,4,12)	14.438	70.18	1.0833	1.15	5.5301	6.33	69.13	69.42
	Equiv. Refl.: (0,12,4), (4,0,12), (4,12,0), (12,0,4), (12,4,0)								
Si	(1,1,13)	14.926	76.55	0.9316	1.05	3.6692	3.84	45.87	46.03
	Equiv. Refl.: (1,7,11), (1,11,7), (1,13,1), (3,9,9), (5,5,11), (5,11,5), (7,1,11), (7,11,1), (9,3,9), (9,9,3), (11,1,7), (11,5,5), (11,7,1), (13,1,1)								
Ge	(3,3,13)	14.985	77.52	0.8571	2.59	3.3958	8.79	42.45	43.35
	Equiv. Refl.: (3,13,3), (5,9,9), (9,5,9), (9,9,5), (13,3,3)								
Si	(1,9,9)	14.573	71.73	0.7619	0.85	5.0679	4.29	63.35	63.49
	Equiv. Refl.: (9,1,9), (9,9,1)								
Ge	(1,3,13)	14.661	72.8	0.7046	2.04	4.7511	9.69	59.39	60.17
	Equiv. Refl.: (1,13,3), (3,1,13), (3,7,11), (3,11,7), (3,13,1), (7,3,11), (7,7,9), (7,9,7), (7,11,3), (9,7,7), (11,3,7), (11,7,3), (13,1,3), (13,3,1)								
LiNbO3	(3,9,-6)	15.278	84.56	13.534	12.1	1.462	17.73	18.27	25.46
	Equiv. Refl.: (9,-12,-6), (12,-9,-6), (-3,12,-6), (-9,-3,-6), (-12,3,-6)								
LiNbO3	(3,-12,6)	15.278	84.56	13.491	12.1	1.462	17.73	18.27	25.46
	Equiv. Refl.: (9,3,6), (12,-3,6), (-3,-9,6), (-9,12,6), (-12,9,6)								
LiNbO3	(0,-11,2)	15.321	86.7	12.561	11.8	0.886	10.42	11.07	15.21
	Equiv. Refl.: (11,0,2), (-11,11,2)								
LiNbO3	(0,11,-2)	15.321	86.7	11.854	11.8	0.886	10.42	11.07	15.21
	Equiv. Refl.: (11,-11,-2), (-11,0,-2)								
LiNbO3	(3,-12,-6)	15.278	84.56	11.796	10.4	1.462	15.22	18.27	23.78
	Equiv. Refl.: (9,3,-6), (12,-3,-6), (-3,-9,-6), (-9,12,-6), (-12,9,-6)								
LiNbO3	(3,9,6)	15.278	84.56	10.882	10.4	1.462	15.22	18.27	23.78
	Equiv. Refl.: (9,-12,6), (12,-9,6), (-3,12,6), (-9,-3,6), (-12,3,6)								
LiNbO3	(3,-10,-20)	15.255	83.74	10.343	9.1	1.684	15.31	21.04	26.02
	Equiv. Refl.: (7,3,-20), (10,-3,-20), (-3,-7,-20), (-7,10,-20), (-10,7,-20)								
LiNbO3	(3,3,-30)	15.237	83.14	10.121	9.1	1.845	16.77	23.07	28.52
	Equiv. Refl.: (3,-6,-30), (6,-3,-30), (-3,6,-30), (-3,-3,-30), (-6,3,-30)								
LiNbO3	(3,7,20)	15.255	83.74	10.02	9.1	1.684	15.31	21.04	26.02
	Equiv. Refl.: (7,-10,20), (10,-7,20), (-3,10,20), (-7,-3,20), (-10,3,20)								
LiNbO3	(3,3,30)	15.237	83.14	9.952	9.1	1.845	16.77	23.07	28.52
	Equiv. Refl.: (3,-6,30), (6,-3,30), (-3,6,30), (-3,-3,30), (-6,3,30)								

Ei = Cryst	15.347 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
LiNbO3	(0,-1,34)	15.267	84.16	9.411	8.6	1.569	13.46	19.61	23.78
	Equiv. Refl.: (1,0,34), (-1,1,34)								
LiNbO3	(0,1,-34)	15.267	84.16	9.342	8.6	1.569	13.46	19.61	23.78
	Equiv. Refl.: (1,-1,-34), (-1,0,-34)								
LiNbO3	(3,-8,26)	15.163	81.12	9.315	8.2	2.398	19.69	29.98	35.86
	Equiv. Refl.: (5,3,26), (8,-3,26), (-3,-5,26), (-5,8,26), (-8,5,26)								
LiNbO3	(3,5,-26)	15.163	81.12	9.201	8.2	2.398	19.69	29.98	35.86
	Equiv. Refl.: (5,-8,-26), (8,-5,-26), (-3,8,-26), (-5,-3,-26), (-8,3,-26)								
LiNbO3	(0,10,14)	15.249	83.53	9.112	8.1	1.741	14.02	21.76	25.89
	Equiv. Refl.: (10,-10,14), (-10,0,14)								
LiNbO3	(0,-10,-14)	15.249	83.53	8.63	8.1	1.741	14.02	21.76	25.89
	Equiv. Refl.: (10,0,-14), (-10,10,-14)								
LiNbO3	(1,3,-32)	15.162	81.11	8.096	7	2.401	16.87	30.02	34.43
	Equiv. Refl.: (3,-4,-32), (4,-3,-32), (-1,4,-32), (-3,-1,-32), (-4,1,-32)								
LiNbO3	(1,-4,32)	15.162	81.11	7.872	7	2.401	16.87	30.02	34.43
	Equiv. Refl.: (3,1,32), (4,-1,32), (-1,-3,32), (-3,4,32), (-4,3,32)								
LiNbO3	(2,7,-23)	15.34	88.3	7.595	10.1	0.454	4.61	5.68	7.32
	Equiv. Refl.: (2,-9,23), (7,2,23), (7,-9,-23), (9,-2,23), (9,-7,-23), (-2,9,-23), (-2,-7,23), (-7,9,23), (-7,-2,-23), (-9,2,-23), (-9,7,23)								
LiNbO3	(3,-7,28)	15.11	79.92	7.482	6.5	2.729	17.7	34.11	38.43
	Equiv. Refl.: (4,3,28), (7,-3,28), (-3,-4,28), (-4,7,28), (-7,4,28)								
LiNbO3	(5,-12,-10)	15.19	81.8	7.382	6.4	2.211	14.26	27.63	31.09
	Equiv. Refl.: (7,5,-10), (12,-5,-10), (-5,-7,-10), (-7,12,-10), (-12,7,-10)								
LiNbO3	(3,4,-28)	15.11	79.92	7.371	6.5	2.729	17.7	34.11	38.43
	Equiv. Refl.: (4,-7,-28), (7,-4,-28), (-3,7,-28), (-4,-3,-28), (-7,3,-28)								
Quartz	(-4,-1,12)	15.298	85.43	7.081	5.7	1.228	6.97	15.35	16.85
Quartz	(-4,5,-12)	15.298	85.43	7.08	5.7	1.228	6.97	15.35	16.85
Quartz	(4,1,-12)	15.298	85.43	7.077	5.7	1.228	6.97	15.35	16.85
Quartz	(-1,-4,-12)	15.298	85.43	7.076	5.7	1.228	6.96	15.35	16.85
Quartz	(4,-5,12)	15.298	85.43	7.075	5.7	1.228	6.97	15.35	16.85
Quartz	(-1,5,12)	15.298	85.43	7.074	5.7	1.228	6.96	15.35	16.85
Quartz	(1,4,12)	15.298	85.43	7.071	5.7	1.228	6.96	15.35	16.85
	Equiv. Refl.: (5,-1,-12), (5,-4,12)								
Quartz	(1,-5,-12)	15.298	85.43	7.07	5.7	1.228	6.96	15.35	16.85
Quartz	(-5,1,12)	15.298	85.43	7.067	5.7	1.228	6.96	15.35	16.85
	Equiv. Refl.: (-5,4,-12)								
LiNbO3	(2,8,18)	15.073	79.16	6.943	6	2.939	17.6	36.73	40.73
	Equiv. Refl.: (8,-10,18), (10,-8,18), (-2,10,18), (-8,-2,18), (-10,2,18)								
LiNbO3	(5,7,10)	15.19	81.8	6.847	6.4	2.211	14.26	27.63	31.09
	Equiv. Refl.: (7,-12,10), (12,-7,10), (-5,12,10), (-7,-5,10), (-12,5,10)								
LiNbO3	(2,-10,-18)	15.073	79.16	6.742	6	2.939	17.6	36.73	40.73
	Equiv. Refl.: (8,2,-18), (10,-2,-18), (-2,-8,-18), (-8,10,-18), (-10,8,-18)								
LiNbO3	(8,-8,22)	14.85	75.38	6.574	5.5	4.003	21.86	50.04	54.61
LiNbO3	(0,8,22)	14.85	75.38	6.573	5.5	4.003	21.86	50.04	54.61
	Equiv. Refl.: (-8,0,22)								
LiNbO3	(4,-10,20)	15.064	78.98	6.499	5.7	2.988	17.07	37.35	41.06
	Equiv. Refl.: (6,4,20), (10,-4,20), (-4,-6,20), (-6,10,20), (-10,6,20)								
LiNbO3	(4,6,-20)	15.064	78.98	6.485	5.7	2.988	17.07	37.35	41.06
	Equiv. Refl.: (-4,10,-20), (-6,-4,-20), (-10,4,-20)								
LiNbO3	(6,-10,-20)	15.064	78.98	6.484	5.7	2.988	17.07	37.35	41.06
	Equiv. Refl.: (10,-6,-20)								

Ei =	15.347	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(0,7,26)	15.163	81.12	6.476	5.8	2.398	13.81	29.98	33
	Equiv. Refl.: (7,-7,26), (-7,0,26)								
Quartz	(6,6,2)	15.314	86.26	6.451	5.3	1.004	5.29	12.55	13.62
	Equiv. Refl.: (6,6,-2), (6,-12,2), (6,-12,-2)								
Quartz	(-12,6,-2)	15.314	86.26	6.45	5.3	1.004	5.28	12.55	13.62
Quartz	(-12,6,2)	15.314	86.26	6.449	5.3	1.004	5.28	12.55	13.62
LiNbO3	(2,-10,18)	15.073	79.16	6.339	5.5	2.939	16.12	36.73	40.12
	Equiv. Refl.: (8,2,18), (10,-2,18), (-2,-8,18), (-8,10,18), (-10,8,18)								
Quartz	(-6,-6,2)	15.314	86.26	6.303	5.3	1.004	5.29	12.55	13.62
Quartz	(-6,12,2)	15.314	86.26	6.302	5.3	1.004	5.29	12.55	13.62
	Equiv. Refl.: (-6,12,-2), (-6,-6,-2)								
Quartz	(12,-6,2)	15.314	86.26	6.301	5.3	1.004	5.28	12.55	13.62
	Equiv. Refl.: (12,-6,-2)								
LiNbO3	(0,-8,-22)	14.85	75.38	6.295	5.5	4.003	21.86	50.04	54.61
	Equiv. Refl.: (3,-11,14), (8,0,-22), (8,3,14), (11,-3,14), (-3,-8,14), (-8,8,-22), (-8,11,14), (-11,8,14)								
LiNbO3	(0,-7,-26)	15.163	81.12	6.143	5.8	2.398	13.81	29.98	33
	Equiv. Refl.: (7,0,-26), (-7,7,-26)								
LiNbO3	(2,8,-18)	15.073	79.16	6.005	5.5	2.939	16.12	36.73	40.12
	Equiv. Refl.: (8,-10,-18), (10,-8,-18), (-2,10,-18), (-8,-2,-18), (-10,2,-18)								
LiNbO3	(1,9,16)	15.071	79.12	5.998	5.2	2.95	15.42	36.88	39.98
	Equiv. Refl.: (9,-10,16), (10,-9,16), (-1,10,16), (-9,-1,16), (-10,1,16)								
Quartz	(0,10,-4)	15.275	84.45	5.912	4.6	1.49	6.92	18.62	19.87
	Equiv. Refl.: (0,-10,4)								
Quartz	(10,0,4)	15.275	84.45	5.911	4.6	1.49	6.92	18.62	19.87
	Equiv. Refl.: (10,-10,-4), (-10,0,-4), (-10,10,4)								
LiNbO3	(3,8,-14)	15.058	78.86	5.766	5.4	3.022	16.19	37.78	41.1
	Equiv. Refl.: (8,-11,-14), (11,-8,-14), (-3,11,-14), (-8,-3,-14), (-11,3,-14)								
LiNbO3	(1,7,-24)	15.013	78.02	5.714	5	3.256	16.35	40.69	43.86
	Equiv. Refl.: (-1,8,-24), (-7,-1,-24), (-8,1,-24)								
LiNbO3	(7,-8,-24)	15.013	78.02	5.713	5	3.256	16.35	40.69	43.86
	Equiv. Refl.: (8,-7,-24)								
LiNbO3	(1,-10,-16)	15.071	79.12	5.673	5.2	2.95	15.42	36.88	39.98
	Equiv. Refl.: (9,1,-16), (10,-1,-16), (-1,-9,-16), (-9,10,-16), (-10,9,-16)								
LiNbO3	(1,-8,24)	15.013	78.02	5.602	5	3.256	16.35	40.69	43.86
	Equiv. Refl.: (7,1,24), (8,-1,24), (-1,-7,24), (-7,8,24), (-8,7,24)								
LiNbO3	(7,-8,24)	15.013	78.02	5.462	4.9	3.256	15.79	40.69	43.65
	Equiv. Refl.: (8,-7,24)								
LiNbO3	(1,7,24)	15.013	78.02	5.461	4.9	3.256	15.79	40.69	43.65
	Equiv. Refl.: (-1,8,24), (-7,-1,24), (-8,1,24)								
LiNbO3	(4,8,8)	15.144	80.67	5.439	4.7	2.52	11.9	31.5	33.68
	Equiv. Refl.: (8,-12,8), (12,-8,8), (-4,12,8), (-8,-4,8), (-12,4,8)								
LiNbO3	(5,6,-16)	15.071	79.12	5.405	4.5	2.95	13.3	36.88	39.21
	Equiv. Refl.: (6,-11,-16), (11,-6,-16), (-5,11,-16), (-6,-5,-16), (-11,5,-16)								
LiNbO3	(1,-8,-24)	15.013	78.02	5.395	4.8	3.256	15.79	40.69	43.65
	Equiv. Refl.: (7,1,-24), (8,-1,-24), (-1,-7,-24), (-7,8,-24), (-8,7,-24)								
LiNbO3	(0,9,-18)	14.879	75.82	5.322	4.6	3.877	17.75	48.47	51.61
	Equiv. Refl.: (-9,0,-18)								
LiNbO3	(9,-9,-18)	14.879	75.82	5.321	4.6	3.877	17.75	48.47	51.61
LiNbO3	(4,-12,-8)	15.144	80.67	5.318	4.7	2.52	11.9	31.5	33.68
	Equiv. Refl.: (8,4,-8), (12,-4,-8), (-4,-8,-8), (-8,12,-8), (-12,8,-8)								

Ei =	15.347	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,10,6)	14.893	76.03	5.301	4.3	3.817	16.55	47.71	50.5
	Equiv. Refl.: (10,-11,6), (11,-10,6), (-1,11,6), (-10,-1,6), (-11,1,6)								
LiNbO3	(1,-11,-6)	14.893	76.03	5.187	4.3	3.817	16.55	47.71	50.5
	Equiv. Refl.: (10,1,-6), (11,-1,-6), (-1,-10,-6), (-10,11,-6), (-11,10,-6)								
LiNbO3	(4,-12,-2)	14.743	73.87	5.143	4.2	4.439	18.77	55.49	58.58
	Equiv. Refl.: (8,4,-2), (12,-4,-2), (-4,-8,-2), (-8,12,-2), (-12,8,-2)								
LiNbO3	(3,9,0)	15.04	78.53	5.136	4.3	3.114	13.34	38.93	41.15
	Equiv. Refl.: (9,-12,0), (12,-9,0), (-3,12,0), (-9,-3,0), (-12,3,0)								
LiNbO3	(0,-9,18)	14.879	75.82	5.11	4.6	3.877	17.75	48.47	51.61
	Equiv. Refl.: (9,0,18), (-9,9,18)								
LiNbO3	(5,-11,16)	15.071	79.12	5.058	4.5	2.95	13.3	36.88	39.21
	Equiv. Refl.: (6,5,16), (11,-5,16), (-5,-6,16), (-6,11,16), (-11,6,16)								
LiNbO3	(6,6,-6)	14.697	73.27	5.035	4	4.613	18.59	57.67	60.59
	Equiv. Refl.: (6,-12,-6), (12,-6,-6), (-6,12,-6), (-6,-6,-6), (-12,6,-6)								
LiNbO3	(4,8,2)	14.743	73.87	4.914	4.2	4.439	18.77	55.49	58.58
	Equiv. Refl.: (8,-12,2), (12,-8,2), (-4,12,2), (-8,-4,2), (-12,4,2)								
LiNbO3	(2,9,-10)	14.803	74.71	4.901	4	4.197	16.91	52.46	55.12
	Equiv. Refl.: (9,-11,-10), (11,-9,-10), (-2,11,-10), (-9,-2,-10), (-11,2,-10)								
LiNbO3	(2,-11,10)	14.803	74.71	4.866	4	4.197	16.91	52.46	55.12
	Equiv. Refl.: (6,6,6), (6,-12,6), (9,2,10), (11,-2,10), (12,-6,6), (-2,-9,10), (-6,12,6), (-6,-6,6), (-12,6,6)								
LiNbO3	(-9,11,10)	14.803	74.71	4.865	4	4.197	16.91	52.46	55.12
	Equiv. Refl.: (-11,9,10)								
LiNbO3	(2,-6,-28)	14.523	71.14	4.8	3.8	5.243	20.1	65.54	68.56
	Equiv. Refl.: (4,2,-28), (6,-2,-28), (-2,-4,-28), (-4,6,-28), (-6,4,-28)								
LiNbO3	(4,-12,4)	14.824	75	4.794	3.9	4.113	15.97	51.41	53.84
	Equiv. Refl.: (8,4,4), (12,-4,4), (-4,-8,4), (-8,12,4), (-12,8,4)								
LiNbO3	(3,-12,0)	15.04	78.53	4.789	4.3	3.114	13.34	38.93	41.15
	Equiv. Refl.: (9,3,0), (12,-3,0), (-3,-9,0), (-9,12,0), (-12,9,0)								
LiNbO3	(1,8,20)	14.87	75.68	4.782	4	3.917	15.49	48.96	51.35
	Equiv. Refl.: (8,-9,20), (9,-8,20), (-1,9,20), (-8,-1,20), (-9,1,20)								
LiNbO3	(2,-3,32)	14.775	74.31	4.758	3.9	4.312	16.88	53.9	56.48
	Equiv. Refl.: (3,-2,32)								
LiNbO3	(1,2,32)	14.775	74.31	4.757	3.9	4.312	16.88	53.9	56.48
	Equiv. Refl.: (-1,3,32), (-2,-1,32), (-3,1,32)								
LiNbO3	(5,-12,2)	14.545	71.39	4.744	3.8	5.167	19.61	64.59	67.51
	Equiv. Refl.: (7,5,2), (12,-5,2), (-5,-7,2), (-7,12,2), (-12,7,2)								
LiNbO3	(1,-3,-32)	14.775	74.31	4.718	3.9	4.312	16.88	53.9	56.48
	Equiv. Refl.: (2,1,-32), (3,-1,-32), (-1,-2,-32), (-2,3,-32), (-3,2,-32)								
LiNbO3	(2,4,28)	14.523	71.14	4.714	3.8	5.243	20.1	65.54	68.56
	Equiv. Refl.: (4,-6,28), (6,-4,28), (-2,6,28), (-4,-2,28), (-6,2,28)								
LiNbO3	(5,5,18)	14.484	70.7	4.673	3.7	5.375	19.9	67.18	70.07
	Equiv. Refl.: (5,-10,18), (10,-5,18), (-5,10,18), (-5,-5,18), (-10,5,18)								
LiNbO3	(1,-9,-20)	14.87	75.68	4.652	4	3.917	15.49	48.96	51.35
	Equiv. Refl.: (8,1,-20), (9,-1,-20), (-1,-8,-20), (-8,9,-20), (-9,8,-20)								
LiNbO3	(5,7,-2)	14.545	71.39	4.645	3.8	5.167	19.61	64.59	67.51
	Equiv. Refl.: (7,-12,-2), (12,-7,-2), (-5,12,-2), (-7,-5,-2), (-12,5,-2)								
LiNbO3	(2,-9,-22)	15.044	78.6	4.599	4	3.095	12.34	38.69	40.61
	Equiv. Refl.: (7,2,-22), (9,-2,-22), (-2,-7,-22), (-7,9,-22), (-9,7,-22)								
LiNbO3	(1,-11,0)	14.65	72.66	4.549	3.7	4.791	17.67	59.89	62.44
	Equiv. Refl.: (10,1,0), (11,-1,0), (-1,-10,0), (-10,11,0), (-11,10,0)								

Ei =	15.347	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(0,3,30)	15.013	78.03	4.535	3.5	3.254	11.55	40.68	42.29
	Equiv. Refl.: (0,3,-30), (0,-3,30), (0,-3,-30), (3,0,30), (3,0,-30), (3,-3,30), (3,-3,-30), (-3,0,30), (-3,0,-30), (-3,3,30), (-3,3,-30)								
LiNbO3	(1,5,-28)	14.721	73.58	4.528	3.7	4.523	16.78	56.53	58.97
	Equiv. Refl.: (5,-6,-28), (6,-5,-28), (-1,6,-28), (-5,-1,-28), (-6,1,-28)								
LiNbO3	(2,7,22)	15.044	78.6	4.525	4	3.095	12.34	38.69	40.61
	Equiv. Refl.: (7,-9,22), (9,-7,22), (-2,9,22), (-7,-2,22), (-9,2,22)								
LiNbO3	(1,10,-6)	14.893	76.03	4.522	3.8	3.817	14.41	47.71	49.84
	Equiv. Refl.: (10,-11,-6), (11,-10,-6), (-1,11,-6), (-10,-1,-6), (-11,1,-6)								
LiNbO3	(5,5,-18)	14.484	70.7	4.458	3.7	5.375	19.9	67.18	70.07
	Equiv. Refl.: (5,-10,-18), (10,-5,-18), (-5,10,-18), (-5,-5,-18), (-10,5,-18)								
LiNbO3	(4,8,-4)	14.824	75	4.457	3.9	4.113	15.97	51.41	53.84
	Equiv. Refl.: (8,-12,-4), (12,-8,-4), (-4,12,-4), (-8,-4,-4), (-12,4,-4)								
LiNbO3	(1,-6,28)	14.721	73.58	4.417	3.7	4.523	16.78	56.53	58.97
	Equiv. Refl.: (5,1,28), (6,-1,28), (-1,-5,28), (-5,6,28), (-6,5,28)								
LiNbO3	(0,-10,10)	14.606	72.13	4.412	3.6	4.949	17.65	61.87	64.33
	Equiv. Refl.: (2,-9,20), (7,2,20), (9,-2,20), (10,0,10), (-2,-7,20), (-7,9,20), (-9,7,20), (-10,10,10)								
LiNbO3	(1,10,0)	14.65	72.66	4.41	3.7	4.791	17.67	59.89	62.44
	Equiv. Refl.: (10,-11,0), (11,-10,0), (-1,11,0), (-10,-1,0), (-11,1,0)								
LiNbO3	(4,4,24)	14.422	70	4.383	3.5	5.585	19.8	69.81	72.56
	Equiv. Refl.: (4,-8,24), (8,-4,24), (-4,8,24), (-4,-4,24), (-8,4,24)								
LiNbO3	(4,4,-24)	14.422	70	4.371	3.5	5.585	19.8	69.81	72.56
	Equiv. Refl.: (4,-8,-24), (8,-4,-24), (-4,8,-24), (-4,-4,-24), (-8,4,-24)								
LiNbO3	(1,9,-14)	14.668	72.89	4.366	3.5	4.725	16.72	59.06	61.38
	Equiv. Refl.: (-1,10,-14), (-9,-1,-14), (-10,1,-14)								
LiNbO3	(9,-10,-14)	14.668	72.89	4.365	3.5	4.725	16.72	59.06	61.38
	Equiv. Refl.: (10,-9,-14)								
LiNbO3	(1,-11,6)	14.893	76.03	4.358	3.8	3.817	14.41	47.71	49.84
	Equiv. Refl.: (10,1,6), (11,-1,6), (-1,-10,6), (-10,11,6), (-11,10,6)								
LiNbO3	(5,6,14)	14.668	72.89	4.286	3.5	4.725	16.47	59.06	61.32
	Equiv. Refl.: (6,-11,14), (11,-6,14), (-5,11,14), (-6,-5,14), (-11,5,14)								
LiNbO3	(0,10,-10)	14.606	72.13	4.231	3.6	4.949	17.65	61.87	64.33
	Equiv. Refl.: (10,-10,-10), (-10,0,-10)								
LiNbO3	(2,7,-20)	14.475	70.59	4.23	3.5	5.406	19.07	67.58	70.22
	Equiv. Refl.: (7,-9,-20), (9,-7,-20), (-2,9,-20), (-7,-2,-20), (-9,2,-20)								
LiNbO3	(5,-12,8)	14.951	76.96	4.159	3.6	3.554	12.69	44.42	46.2
	Equiv. Refl.: (7,5,8), (12,-5,8), (-5,-7,8), (-7,12,8), (-12,7,8)								
LiNbO3	(5,7,4)	14.627	72.38	4.158	3.4	4.875	16.44	60.93	63.11
	Equiv. Refl.: (7,-12,4), (12,-7,4), (-5,12,4), (-7,-5,4), (-12,5,4)								
LiNbO3	(2,9,8)	14.558	71.55	4.15	3.4	5.12	17.41	64	66.32
	Equiv. Refl.: (9,-11,8), (11,-9,8), (-2,11,8), (-9,-2,8), (-11,2,8)								
LiNbO3	(1,-10,14)	14.668	72.89	4.124	3.5	4.725	16.72	59.06	61.38
	Equiv. Refl.: (9,1,14), (10,-1,14), (-1,-9,14), (-9,10,14), (-10,9,14)								
LiNbO3	(2,-11,-8)	14.558	71.55	4.077	3.4	5.12	17.41	64	66.32
	Equiv. Refl.: (9,2,-8), (11,-2,-8), (-2,-9,-8), (-9,11,-8), (-11,9,-8)								
LiNbO3	(5,-11,-14)	14.668	72.89	4.052	3.5	4.725	16.47	59.06	61.32
	Equiv. Refl.: (6,5,-14), (11,-5,-14), (-5,-6,-14), (-6,11,-14), (-11,6,-14)								
LiNbO3	(1,-5,30)	14.852	75.4	4.05	3.4	3.996	13.72	49.96	51.8
	Equiv. Refl.: (4,1,30), (5,-1,30), (-1,-4,30), (-4,5,30), (-5,4,30)								

Ei =	15.347	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(5,7,-8)	14.951	76.96	4.037	3.6	3.554	12.69	44.42	46.2
	Equiv. Refl.: (7,-12,-8), (12,-7,-8), (-5,12,-8), (-7,-5,-8), (-12,5,-8)								
LiNbO3	(4,-11,12)	14.443	70.24	4.012	3.2	5.513	17.9	68.92	71.21
	Equiv. Refl.: (7,4,12), (11,-4,12), (-4,-7,12)								
LiNbO3	(-7,11,12)	14.443	70.24	4.011	3.2	5.513	17.9	68.92	71.21
	Equiv. Refl.: (-11,7,12)								
LiNbO3	(1,4,30)	14.852	75.4	3.966	3.4	3.996	13.53	49.96	51.76
	Equiv. Refl.: (4,-5,30), (5,-4,30), (-1,5,30), (-4,-1,30), (-5,1,30)								
LiNbO3	(0,9,18)	14.879	75.82	3.963	3.4	3.877	13.26	48.47	50.25
	Equiv. Refl.: (9,-9,18), (-9,0,18)								
LiNbO3	(0,-9,-18)	14.879	75.82	3.942	3.4	3.877	13.26	48.47	50.25
	Equiv. Refl.: (9,0,-18), (-9,9,-18)								
LiNbO3	(1,4,-30)	14.852	75.4	3.936	3.4	3.996	13.72	49.96	51.8
	Equiv. Refl.: (4,-5,-30), (5,-4,-30), (-1,5,-30), (-4,-1,-30), (-5,1,-30)								
LiNbO3	(1,-5,-30)	14.852	75.4	3.897	3.4	3.996	13.53	49.96	51.76
	Equiv. Refl.: (4,1,-30), (5,-1,-30), (-1,-4,-30), (-4,5,-30), (-5,4,-30)								
LiNbO3	(5,-12,-4)	14.627	72.38	3.884	3.4	4.875	16.44	60.93	63.11
	Equiv. Refl.: (7,5,-4), (12,-5,-4), (-5,-7,-4), (-7,12,-4), (-12,7,-4)								
LiNbO3	(4,7,-12)	14.443	70.24	3.849	3.2	5.513	17.9	68.92	71.21
	Equiv. Refl.: (7,-11,-12), (11,-7,-12), (-4,11,-12), (-7,-4,-12), (-11,4,-12)								
Quartz	(7,-11,-5)	15.176	81.44	3.769	2.8	2.31	6.52	28.88	29.6
Quartz	(7,4,5)	15.176	81.44	3.768	2.8	2.31	6.52	28.88	29.6
	Equiv. Refl.: (-11,4,-5)								
Quartz	(4,7,-5)	15.176	81.44	3.767	2.8	2.31	6.52	28.88	29.6
	Equiv. Refl.: (4,-11,5), (-11,7,5)								
LiNbO3	(0,-2,32)	14.577	71.78	3.747	3.1	5.052	15.66	63.15	65.07
	Equiv. Refl.: (2,0,32)								
LiNbO3	(-2,2,32)	14.577	71.78	3.746	3.1	5.052	15.66	63.15	65.07
Sapph	(1,9,10)	15.124	80.22	3.654	2.8	2.644	7.52	33.05	33.9
	Equiv. Refl.: (1,-10,-10), (9,1,-10), (9,-10,10), (10,-1,-10), (10,-9,10), (-1,10,10), (-1,-9,-10), (-9,10,-10), (-9,-1,10), (-10,1,10), (-10,9,-10)								
Sapph	(0,5,28)	15.336	87.8	3.627	3.6	0.59	2.1	7.37	7.67
	Equiv. Refl.: (0,-5,-28), (5,0,-28), (5,-5,28), (-5,0,28), (-5,5,-28)								
Sapph	(2,9,-1)	15.276	84.47	3.602	3.1	1.485	4.53	18.56	19.11
	Equiv. Refl.: (2,-11,1), (9,2,1), (9,-11,-1), (11,-2,1), (11,-9,-1), (-2,11,-1), (-2,-9,1), (-9,11,1), (-9,-2,-1), (-11,2,-1), (-11,9,1)								
LiNbO3	(0,2,-32)	14.577	71.78	3.59	3.1	5.052	15.66	63.15	65.07
	Equiv. Refl.: (2,-2,-32), (-2,0,-32)								
Quartz	(-7,11,5)	15.176	81.44	3.589	2.8	2.31	6.52	28.88	29.6
	Equiv. Refl.: (-7,-4,-5)								
Quartz	(11,-4,5)	15.176	81.44	3.588	2.8	2.31	6.52	28.88	29.6
	Equiv. Refl.: (11,-7,-5)								
Quartz	(-4,11,-5)	15.176	81.44	3.587	2.8	2.31	6.52	28.88	29.6
	Equiv. Refl.: (-4,-7,5)								
LiNbO3	(4,7,12)	14.443	70.24	3.57	2.9	5.513	16.22	68.92	70.8
	Equiv. Refl.: (7,-11,12), (11,-7,12), (-4,11,12), (-7,-4,12), (-11,4,12)								
Quartz	(0,5,-11)	14.569	71.68	3.512	2.5	5.081	12.62	63.51	64.76
	Equiv. Refl.: (0,-5,11)								
Quartz	(5,0,11)	14.569	71.68	3.51	2.5	5.081	12.62	63.51	64.75
	Equiv. Refl.: (5,-5,-11), (-5,0,-11), (-5,5,11)								

Ei = Cryst	15.347 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Sapph	(0,10,2)	15.074	79.19	3.259	2.6	2.931	7.51	36.64	37.4
	Equiv. Refl.: (0,-10,-2), (10,0,-2), (10,-10,2), (-10,0,2), (-10,10,-2)								
LiNbO3	(1,-7,26)	14.776	74.32	3.255	3	4.309	12.81	53.87	55.37
	Equiv. Refl.: (6,1,26), (7,-1,26), (-1,-6,26), (-6,7,26), (-7,6,26)								
Quartz	(-1,2,13)	15.123	80.2	3.214	2.4	2.65	6.46	33.12	33.74
	Equiv. Refl.: (-1,-1,-13)								
Quartz	(-1,2,-13)	15.123	80.2	3.213	2.4	2.65	6.46	33.12	33.74
Quartz	(-1,-1,13)	15.123	80.2	3.212	2.4	2.65	6.45	33.12	33.74
Quartz	(2,-1,13)	15.123	80.2	3.211	2.4	2.65	6.45	33.12	33.74
	Equiv. Refl.: (2,-1,-13)								
LiNbO3	(1,6,-26)	14.776	74.32	3.206	3	4.309	12.81	53.87	55.37
	Equiv. Refl.: (4,-11,-12), (7,4,-12), (11,-4,-12), (-1,7,-26), (-4,-7,-12), (-6,-1,-26), (-7,1,-26), (-7,11,-12), (-11,7,-12)								
LiNbO3	(6,-7,-26)	14.776	74.32	3.205	3	4.309	12.81	53.87	55.37
	Equiv. Refl.: (7,-6,-26)								
LiNbO3	(4,-9,22)	14.653	72.71	3.198	2.9	4.777	13.79	59.71	61.29
	Equiv. Refl.: (5,4,22), (9,-4,22), (-4,-5,22), (-5,9,22), (-9,5,22)								
LiNbO3	(4,5,-22)	14.653	72.71	3.128	2.9	4.777	13.79	59.71	61.29
	Equiv. Refl.: (5,-9,-22), (9,-5,-22), (-4,9,-22), (-5,-4,-22), (-9,4,-22)								
Quartz	(1,1,13)	15.123	80.2	3.123	2.4	2.65	6.46	33.12	33.74
	Equiv. Refl.: (1,-2,13), (1,-2,-13)								
Quartz	(1,1,-13)	15.123	80.2	3.121	2.4	2.65	6.45	33.12	33.74
	Equiv. Refl.: (-2,1,13), (-2,1,-13)								
Quartz	(-1,5,-12)	15.298	85.43	3.077	2.5	1.228	3.07	15.35	15.65
Quartz	(-4,5,12)	15.298	85.43	3.076	2.5	1.228	3.07	15.35	15.65
Quartz	(5,-1,12)	15.298	85.43	3.075	2.5	1.228	3.07	15.35	15.65
	Equiv. Refl.: (5,-4,-12), (-1,-4,12), (-4,-1,-12)								
LiNbO3	(6,6,0)	14.45	70.32	3.069	2.8	5.49	15.22	68.62	70.29
	Equiv. Refl.: (6,-12,0), (12,-6,0), (-6,12,0), (-6,-6,0), (-12,6,0)								
Quartz	(1,-5,12)	15.298	85.43	3.024	2.5	1.228	3.07	15.35	15.65
Quartz	(4,-5,-12)	15.298	85.43	3.023	2.5	1.228	3.07	15.35	15.65
Quartz	(1,4,-12)	15.298	85.43	3.022	2.5	1.228	3.07	15.35	15.65
	Equiv. Refl.: (4,1,12), (-5,1,-12), (-5,4,12)								
Sapph	(2,5,24)	14.815	74.87	2.955	2.2	4.15	8.96	51.87	52.64
	Equiv. Refl.: (2,5,-24), (2,-7,24), (2,-7,-24), (5,2,24), (5,2,-24), (5,-7,24), (5,-7,-24), (7,-2,24), (7,-2,-24), (7,-5,24), (7,-5,-24), (-2,7,24), (-2,7,-24), (-2,-5,24), (-2,-5,-24), (-5,7,24), (-5,7,-24), (-5,-2,24), (-5,-2,-24), (-7,2,24), (-7,2,-24), (-7,5,24), (-7,5,-24)								
Quartz	(-2,11,-2)	14.964	77.17	2.931	2.2	3.496	7.54	43.7	44.35
	Equiv. Refl.: (-2,-9,2), (-9,11,2), (-9,-2,-2)								
Quartz	(11,-2,2)	14.964	77.17	2.93	2.2	3.496	7.54	43.7	44.35
	Equiv. Refl.: (11,-9,-2)								
Quartz	(2,9,-2)	14.964	77.17	2.907	2.2	3.496	7.54	43.7	44.35
	Equiv. Refl.: (2,-11,2), (9,2,2), (9,-11,-2), (-11,2,-2), (-11,9,2)								
Quartz	(0,9,6)	14.809	74.79	2.876	2.1	4.174	8.59	52.17	52.87
	Equiv. Refl.: (0,-9,-6), (9,0,-6), (9,-9,6), (-9,0,6), (-9,9,-6)								
Quartz	(3,7,-6)	14.665	72.86	2.853	2	4.734	9.52	59.18	59.94
	Equiv. Refl.: (3,-10,6)								
Quartz	(7,3,6)	14.665	72.86	2.852	2	4.734	9.52	59.18	59.94
	Equiv. Refl.: (7,-10,-6), (-10,3,-6), (-10,7,6)								
Quartz	(-3,10,-6)	14.665	72.86	2.817	2	4.734	9.52	59.18	59.94
	Equiv. Refl.: (-3,-7,6)								

Ei =	15.347	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(10,-3,6)	14.665	72.86	2.816	2	4.734	9.51	59.18	59.94
	Equiv. Refl.: (-7,10,6), (-7,-3,-6)								
Quartz	(10,-7,-6)	14.665	72.86	2.815	2	4.734	9.51	59.18	59.94
Quartz	(0,10,2)	14.749	73.96	2.803	2.3	4.413	10.21	55.16	56.1
	Equiv. Refl.: (0,-10,-2), (10,0,-2), (10,-10,2), (-10,0,2), (-10,10,-2)								
Quartz	(-1,8,9)	15.085	79.4	2.767	2	2.871	5.79	35.88	36.35
	Equiv. Refl.: (-1,-7,-9)								
Quartz	(-7,8,-9)	15.085	79.4	2.766	2	2.871	5.79	35.88	36.35
Quartz	(-7,-1,9)	15.085	79.4	2.765	2	2.871	5.79	35.88	36.35
Quartz	(8,-1,-9)	15.085	79.4	2.764	2	2.871	5.79	35.88	36.35
	Equiv. Refl.: (8,-7,9)								
Quartz	(4,7,4)	14.781	74.39	2.681	1.9	4.288	8.1	53.61	54.21
	Equiv. Refl.: (4,-11,-4), (7,4,-4), (7,-11,4), (-11,4,4), (-11,7,-4)								
Quartz	(1,7,9)	15.085	79.4	2.679	2	2.871	5.79	35.88	36.35
	Equiv. Refl.: (1,-8,-9)								
Quartz	(7,-8,9)	15.085	79.4	2.678	2	2.871	5.79	35.88	36.35
Quartz	(7,1,-9)	15.085	79.4	2.677	2	2.871	5.79	35.88	36.35
	Equiv. Refl.: (-8,1,9)								
Quartz	(-8,7,-9)	15.085	79.4	2.676	2	2.871	5.79	35.88	36.35
Sapph	(3,8,4)	14.939	76.76	2.647	2	3.61	7.16	45.12	45.69
	Equiv. Refl.: (3,-11,-4), (8,3,-4), (8,-11,4), (11,-3,-4), (11,-8,4), (-3,11,4), (-3,-8,-4), (-8,11,-4), (-8,-3,4), (-11,3,4), (-11,8,-4)								
Sapph	(5,6,11)	15.281	84.7	2.474	2.4	1.423	3.38	17.79	18.1
	Equiv. Refl.: (5,-11,-11), (6,5,-11), (6,-11,11), (11,-5,-11), (11,-6,11), (-5,11,11), (-5,-6,-11), (-6,11,-11), (-6,-5,11), (-11,5,11), (-11,6,-11)								
Quartz	(-12,5,-1)	15.255	83.71	2.472	2.2	1.692	3.76	21.15	21.48
	Equiv. Refl.: (-12,7,1)								
Quartz	(5,7,-1)	15.255	83.71	2.471	2.2	1.692	3.76	21.15	21.48
	Equiv. Refl.: (5,-12,1), (7,5,1), (7,-12,-1)								
Quartz	(12,-5,1)	15.255	83.71	2.449	2.2	1.692	3.76	21.15	21.48
	Equiv. Refl.: (12,-7,-1), (-5,12,-1), (-5,-7,1), (-7,12,1), (-7,-5,-1)								
Quartz	(2,-2,-13)	15.193	81.88	2.367	2.1	2.189	4.5	27.36	27.72
	Equiv. Refl.: (-2,2,13)								
Quartz	(2,0,13)	15.193	81.88	2.366	2.1	2.189	4.5	27.36	27.72
	Equiv. Refl.: (-2,0,-13)								
Quartz	(0,2,-13)	15.193	81.88	2.364	2.1	2.189	4.5	27.36	27.72
	Equiv. Refl.: (0,-2,13)								
Sapph	(1,8,-16)	14.951	76.96	2.312	2	3.555	6.97	44.43	44.98
	Equiv. Refl.: (1,-9,16), (8,1,16), (8,-9,-16), (9,-1,16), (9,-8,-16), (-1,9,-16), (-1,-8,16), (-8,9,16), (-8,-1,-16), (-9,1,-16), (-9,8,16)								
Quartz	(-4,11,4)	14.781	74.39	2.261	1.9	4.288	8.1	53.61	54.21
	Equiv. Refl.: (-4,-7,-4)								
Quartz	(11,-4,-4)	14.781	74.39	2.26	1.9	4.288	8.1	53.61	54.21
	Equiv. Refl.: (11,-7,4), (-7,11,-4), (-7,-4,4)								
LiNbO3	(1,9,-17)	15.288	84.99	2.216	3.3	1.345	4.46	16.81	17.4
	Equiv. Refl.: (1,-10,17), (9,1,17), (9,-10,-17), (10,-1,17), (10,-9,-17), (-1,10,-17), (-1,-9,17), (-9,10,17), (-9,-1,-17), (-10,1,-17), (-10,9,17)								
Sapph	(1,8,17)	15.201	82.08	1.909	2	2.136	4.35	26.7	27.05
	Equiv. Refl.: (1,-9,-17), (8,1,-17), (8,-9,17), (9,-1,-17), (9,-8,17), (-1,9,17), (-1,-8,-17), (-8,9,-17), (-8,-1,17), (-9,1,17), (-9,8,-17)								

Ei =	15.347	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(6,5,-5)	15.036	78.44	1.819	1.8	3.14	5.79	39.25	39.67
	Equiv. Refl.: (6,-11,5), (-11,5,5), (-11,6,-5)								
Quartz	(5,6,5)	15.036	78.44	1.817	1.8	3.14	5.78	39.25	39.67
	Equiv. Refl.: (5,-11,-5)								
Quartz	(-6,11,-5)	15.036	78.44	1.813	1.8	3.14	5.79	39.25	39.67
	Equiv. Refl.: (-6,-5,5)								
Quartz	(11,-5,-5)	15.036	78.44	1.812	1.8	3.14	5.79	39.25	39.67
	Equiv. Refl.: (11,-6,5)								
Quartz	(-5,11,5)	15.036	78.44	1.81	1.8	3.14	5.78	39.25	39.67
	Equiv. Refl.: (-5,-6,-5)								
Sapph	(1,8,14)	14.487	70.73	1.797	1.8	5.366	9.68	67.08	67.77
	Equiv. Refl.: (1,-9,-14), (8,1,-14), (8,-9,14), (9,-1,-14), (9,-8,14), (-1,9,14), (-1,-8,-14), (-8,9,-14), (-8,-1,14), (-9,1,14), (-9,8,-14)								
Quartz	(7,1,9)	15.085	79.4	1.744	1.8	2.871	5.12	35.88	36.25
	Equiv. Refl.: (7,-8,-9)								
Quartz	(1,7,-9)	15.085	79.4	1.743	1.8	2.871	5.11	35.88	36.25
Quartz	(0,4,-12)	14.947	76.89	1.742	1.8	3.573	6.29	44.67	45.11
	Equiv. Refl.: (0,-4,12), (1,-8,9), (-8,1,-9), (-8,7,9)								
Quartz	(4,0,12)	14.947	76.89	1.739	1.8	3.573	6.28	44.67	45.1
	Equiv. Refl.: (-4,0,-12), (-4,4,12)								
Quartz	(4,-4,-12)	14.947	76.89	1.738	1.8	3.573	6.27	44.67	45.1
	Equiv. Refl.: (-7,8,9), (-7,-1,-9)								
Quartz	(8,-7,-9)	15.085	79.4	1.737	1.8	2.871	5.11	35.88	36.25
	Equiv. Refl.: (-1,8,-9), (-1,-7,9)								
Quartz	(8,-1,9)	15.085	79.4	1.736	1.8	2.871	5.11	35.88	36.25
Quartz	(3,7,7)	15.237	83.14	1.734	1.8	1.847	3.36	23.08	23.33
	Equiv. Refl.: (3,-10,-7)								
Quartz	(7,3,-7)	15.237	83.14	1.733	1.8	1.847	3.35	23.08	23.33
	Equiv. Refl.: (7,-10,7)								
Quartz	(-10,3,7)	15.237	83.14	1.731	1.8	1.847	3.35	23.08	23.33
Quartz	(-10,7,-7)	15.237	83.14	1.73	1.8	1.847	3.35	23.08	23.33
Quartz	(12,-5,0)	15.211	82.38	1.722	1.8	2.054	3.64	25.67	25.93
	Equiv. Refl.: (12,-7,0), (-5,12,0), (-5,-7,0), (-7,12,0), (-7,-5,0)								
Quartz	(7,2,8)	15.048	78.66	1.713	1.7	3.077	5.23	38.46	38.81
	Equiv. Refl.: (7,-9,-8)								
Quartz	(-9,2,-8)	15.048	78.66	1.712	1.7	3.077	5.23	38.46	38.81
	Equiv. Refl.: (-9,7,8)								
Quartz	(2,7,-8)	15.048	78.66	1.711	1.7	3.077	5.23	38.46	38.81
	Equiv. Refl.: (2,-9,8)								
Sapph	(4,5,20)	15.139	80.55	1.681	1.8	2.554	4.56	31.93	32.25
	Equiv. Refl.: (4,-9,-20), (5,4,-20), (5,-9,20), (9,-4,-20), (9,-5,20), (-4,9,20), (-4,-5,-20), (-5,9,-20), (-5,-4,20), (-9,4,20), (-9,5,-20)								
Quartz	(-3,10,7)	15.237	83.14	1.679	1.8	1.847	3.36	23.08	23.33
	Equiv. Refl.: (-3,-7,-7)								
Quartz	(-7,10,-7)	15.237	83.14	1.678	1.8	1.847	3.35	23.08	23.33
	Equiv. Refl.: (-7,-3,7)								
Quartz	(10,-3,-7)	15.237	83.14	1.675	1.8	1.847	3.35	23.08	23.33
	Equiv. Refl.: (10,-7,7)								
Quartz	(-9,2,8)	15.048	78.66	1.654	1.7	3.077	5.18	38.46	38.81
Quartz	(-9,7,-8)	15.048	78.66	1.653	1.7	3.077	5.18	38.46	38.81

Ei =	15.347	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(2,7,8)	15.048	78.66	1.651	1.7	3.077	5.17	38.46	38.81
	Equiv. Refl.: (2,-9,-8), (7,2,-8), (7,-9,8)								
Quartz	(5,7,0)	15.211	82.38	1.642	1.8	2.054	3.64	25.67	25.93
	Equiv. Refl.: (5,-12,0), (7,5,0), (7,-12,0), (-12,5,0), (-12,7,0)								
Sapph	(5,6,-4)	14.478	70.62	1.639	1.7	5.398	8.92	67.47	68.06
	Equiv. Refl.: (5,-11,4), (6,5,4), (6,-11,-4), (11,-5,4), (11,-6,-4), (-5,11,-4), (-5,-6,4), (-6,11,4), (-6,-5,-4), (-11,5,-4), (-11,6,4)								
Quartz	(9,-2,-8)	15.048	78.66	1.635	1.7	3.077	5.18	38.46	38.81
Quartz	(9,-7,8)	15.048	78.66	1.634	1.7	3.077	5.18	38.46	38.81
Quartz	(-2,9,8)	15.048	78.66	1.632	1.7	3.077	5.17	38.46	38.81
	Equiv. Refl.: (-2,-7,-8), (-7,9,-8), (-7,-2,8)								
Quartz	(-7,9,8)	15.048	78.66	1.615	1.7	3.077	5.23	38.46	38.81
	Equiv. Refl.: (-7,-2,-8)								
Quartz	(9,-2,8)	15.048	78.66	1.614	1.7	3.077	5.23	38.46	38.81
Quartz	(9,-7,-8)	15.048	78.66	1.613	1.7	3.077	5.23	38.46	38.81
	Equiv. Refl.: (-2,9,-8), (-2,-7,8)								
Quartz	(2,4,11)	14.786	74.46	1.584	1.6	4.267	6.77	53.33	53.76
	Equiv. Refl.: (2,-6,-11), (4,2,-11), (4,-6,11), (-6,2,11)								
Quartz	(-6,4,-11)	14.786	74.46	1.583	1.6	4.267	6.77	53.33	53.76
Quartz	(-2,6,11)	14.786	74.46	1.571	1.6	4.267	6.77	53.33	53.76
	Equiv. Refl.: (-2,-4,-11), (-4,6,-11), (-4,-2,11)								
Quartz	(6,-2,-11)	14.786	74.46	1.57	1.6	4.267	6.77	53.33	53.76
	Equiv. Refl.: (6,-4,11)								
Sapph	(0,4,-28)	14.657	72.75	1.547	1.6	4.766	7.52	59.58	60.05
	Equiv. Refl.: (0,-4,28), (4,0,28), (4,-4,-28), (-4,0,-28), (-4,4,28)								
Quartz	(5,7,1)	15.255	83.71	1.546	1.7	1.692	2.83	21.15	21.34
	Equiv. Refl.: (5,-12,-1), (7,5,-1), (7,-12,1)								
Quartz	(-12,5,1)	15.255	83.71	1.545	1.7	1.692	2.83	21.15	21.34
	Equiv. Refl.: (-12,7,-1)								
Quartz	(12,-5,-1)	15.255	83.71	1.525	1.7	1.692	2.83	21.15	21.34
	Equiv. Refl.: (12,-7,1), (-5,12,1), (-5,-7,-1), (-7,12,-1), (-7,-5,1)								
Quartz	(2,5,10)	14.641	72.55	1.481	1.5	4.824	7.12	60.3	60.71
	Equiv. Refl.: (2,-7,-10), (5,2,-10), (5,-7,10), (-7,2,10), (-7,5,-10)								
Sapph	(2,2,30)	15.238	83.16	1.476	1.7	1.842	3.04	23.02	23.22
	Equiv. Refl.: (2,2,-30), (2,-4,30), (2,-4,-30), (4,-2,30), (4,-2,-30), (-2,4,30), (-2,4,-30), (-2,-2,30), (-2,-2,-30), (-4,2,30), (-4,2,-30)								
Sapph	(3,6,18)	14.71	73.44	1.475	1.5	4.564	6.9	57.04	57.46
	Equiv. Refl.: (3,6,-18), (3,-9,18), (3,-9,-18), (6,3,18), (6,3,-18), (6,-9,18), (6,-9,-18), (9,-3,18), (9,-3,-18), (9,-6,18), (9,-6,-18), (-3,9,18), (-3,9,-18), (-3,-6,18), (-3,-6,-18), (-6,9,18), (-6,9,-18), (-6,-3,18), (-6,-3,-18), (-9,3,18), (-9,3,-18), (-9,6,18), (-9,6,-18)								
Sapph	(1,5,26)	14.972	77.31	1.459	1.5	3.457	5.28	43.21	43.53
	Equiv. Refl.: (1,-6,-26), (5,1,-26), (5,-6,26), (6,-1,-26), (6,-5,26), (-1,6,26), (-1,-5,-26), (-5,6,-26), (-5,-1,26), (-6,1,26), (-6,5,-26), (2,9,0), (2,-11,0), (9,2,0), (9,-11,0), (11,-2,0), (11,-9,0), (-2,11,0), (-2,-9,0), (-9,11,0), (-9,-2,0), (-11,2,0), (-11,9,0)								
Quartz	(7,-2,-10)	14.641	72.55	1.457	1.5	4.824	7.12	60.3	60.71
	Equiv. Refl.: (7,-5,10)								
Quartz	(-2,7,10)	14.641	72.55	1.456	1.5	4.824	7.12	60.3	60.71
	Equiv. Refl.: (-2,-5,-10), (-5,7,-10), (-5,-2,10)								
Sapph	(2,3,29)	15.316	86.37	1.451	1.8	0.973	1.77	12.16	12.29
	Equiv. Refl.: (2,-5,-29), (3,2,-29), (3,-5,29), (5,-2,-29), (5,-3,29), (-2,5,29), (-2,-3,-29), (-3,5,-29), (-3,-2,29), (-5,2,29), (-5,3,-29)								

Ei =	15.347	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(10,-4,7)	15.027	78.27	1.434	1.4	3.186	4.61	39.82	40.09
	Equiv. Refl.: (10,-6,-7), (-4,10,-7), (-4,-6,7), (-6,10,7), (-6,-4,-7)								
Sapph	(5,6,-10)	15.124	80.22	1.426	1.5	2.644	4.06	33.05	33.3
	Equiv. Refl.: (5,-11,10), (6,5,10), (6,-11,-10), (11,-5,10), (11,-6,-10), (-5,11,-10), (-5,-6,10), (-6,11,10), (-6,-5,-10), (-11,5,-10), (-11,6,10)								
Sapph	(4,7,0)	14.508	70.97	1.417	1.4	5.294	7.65	66.17	66.61
	Equiv. Refl.: (4,-11,0), (7,4,0), (7,-11,0), (11,-4,0), (11,-7,0), (-4,11,0), (-4,-7,0), (-7,11,0), (-7,-4,0), (-11,4,0), (-11,7,0)								
Sapph	(2,7,19)	15.293	85.2	1.39	1.7	1.29	2.15	16.12	16.27
	Equiv. Refl.: (2,-9,-19), (7,2,-19), (7,-9,19), (9,-2,-19), (9,-7,19), (-2,9,19), (-2,-7,-19), (-7,9,-19), (-7,-2,19), (-9,2,19), (-9,7,-19)								
Quartz	(4,6,-7)	15.027	78.27	1.368	1.4	3.186	4.61	39.82	40.09
	Equiv. Refl.: (4,-10,7), (6,4,7), (6,-10,-7), (-10,4,-7), (-10,6,7)								
Quartz	(4,0,-12)	14.947	76.89	1.343	1.4	3.573	4.93	44.67	44.94
	Equiv. Refl.: (4,-4,12), (-4,4,-12)								
Quartz	(-4,0,12)	14.947	76.89	1.342	1.4	3.573	4.93	44.67	44.94
Quartz	(0,4,12)	14.947	76.89	1.34	1.4	3.573	4.92	44.67	44.94
	Equiv. Refl.: (0,-4,-12), (8,3,-4), (8,-11,4), (-11,3,4), (-11,8,-4)								
Quartz	(3,8,4)	15.065	79	1.339	1.4	2.982	4.15	37.27	37.5
	Equiv. Refl.: (3,-11,-4)								
Quartz	(8,3,-3)	14.756	74.05	1.333	1.3	4.385	5.92	54.81	55.13
	Equiv. Refl.: (8,-11,3)								
Quartz	(3,8,3)	14.756	74.05	1.332	1.3	4.385	5.92	54.81	55.13
	Equiv. Refl.: (3,-11,-3), (-11,3,3), (-11,8,-3)								
Quartz	(11,-3,-4)	15.065	79	1.328	1.4	2.982	4.15	37.27	37.5
	Equiv. Refl.: (11,-8,4), (-3,11,4), (-3,-8,-4), (-8,11,-4), (-8,-3,4)								
Quartz	(-8,11,-3)	14.756	74.05	1.324	1.3	4.385	5.92	54.81	55.13
	Equiv. Refl.: (-8,-3,3)								
Quartz	(11,-3,-3)	14.756	74.05	1.323	1.3	4.385	5.92	54.81	55.13
	Equiv. Refl.: (11,-8,3), (-3,11,3), (-3,-8,-3)								
Quartz	(9,-4,8)	14.618	72.27	1.321	1.3	4.906	6.5	61.33	61.67
	Equiv. Refl.: (9,-5,-8), (-4,9,-8), (-4,-5,8)								
Quartz	(-5,9,8)	14.618	72.27	1.319	1.3	4.906	6.5	61.33	61.67
	Equiv. Refl.: (-5,-4,-8)								
Quartz	(0,6,-10)	14.422	70	1.303	1.3	5.585	7.31	69.81	70.19
	Equiv. Refl.: (0,-6,10), (4,-9,8), (6,0,10), (6,-6,-10), (-6,0,-10), (-6,6,10), (-9,4,-8), (-9,5,8)								
Quartz	(4,5,-8)	14.618	72.27	1.302	1.3	4.906	6.5	61.33	61.67
Quartz	(5,4,8)	14.618	72.27	1.301	1.3	4.906	6.5	61.33	61.67
	Equiv. Refl.: (5,-9,-8), (7,4,-5), (7,-11,5)								
Quartz	(4,-11,-5)	15.176	81.44	1.3	1.4	2.31	3.13	28.88	29.04
	Equiv. Refl.: (-11,4,5), (-11,7,-5)								
Quartz	(4,7,5)	15.176	81.44	1.299	1.4	2.31	3.12	28.88	29.04
Sapph	(1,2,-31)	15.322	86.73	1.252	1.7	0.876	1.46	10.95	11.05
	Equiv. Refl.: (1,-3,31), (2,1,31), (2,-3,-31), (3,-1,31), (3,-2,-31), (-1,3,-31), (-1,-2,31), (-2,3,31), (-2,-1,-31), (-3,1,-31), (-3,2,31)								
LiNbO3	(5,7,-11)	15.328	87.14	1.241	2.8	0.768	2.14	9.59	9.83
	Equiv. Refl.: (5,-12,11), (7,5,11), (7,-12,-11), (12,-5,11), (12,-7,-11), (-5,12,-11), (-5,-7,11), (-7,12,11), (-7,-5,-11), (-12,5,-11), (-12,7,11)								
Quartz	(-9,1,7)	14.813	74.84	1.23	1.3	4.157	5.24	51.96	52.22
	Equiv. Refl.: (-9,8,-7)								

Ei =	15.347	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(1,8,7)	14.813	74.84	1.229	1.3	4.157	5.23	51.96	52.22
	Equiv. Refl.: (1,-9,-7), (-3,10,-7), (-3,-7,7)								
Quartz	(8,1,-7)	14.813	74.84	1.228	1.3	4.157	5.23	51.96	52.22
	Equiv. Refl.: (8,-9,7), (9,-1,-7)								
Quartz	(9,-8,7)	14.813	74.84	1.227	1.3	4.157	5.23	51.96	52.22
	Equiv. Refl.: (-1,9,7), (-1,-8,-7), (-7,10,7), (-7,-3,-7)								
Quartz	(-8,9,-7)	14.813	74.84	1.226	1.3	4.157	5.23	51.96	52.22
	Equiv. Refl.: (-8,-1,7)								
Quartz	(10,-3,7)	15.237	83.14	1.224	1.3	1.847	2.47	23.08	23.22
	Equiv. Refl.: (10,-7,-7)								
Quartz	(-7,11,-5)	15.176	81.44	1.22	1.4	2.31	3.13	28.88	29.04
	Equiv. Refl.: (-7,-4,5)								
Quartz	(11,-4,-5)	15.176	81.44	1.219	1.4	2.31	3.13	28.88	29.04
	Equiv. Refl.: (11,-7,5), (-4,11,5)								
Quartz	(-4,-7,-5)	15.176	81.44	1.218	1.4	2.31	3.12	28.88	29.04
Quartz	(3,-10,7)	15.237	83.14	1.185	1.3	1.847	2.47	23.08	23.22
Quartz	(3,7,-7)	15.237	83.14	1.184	1.3	1.847	2.47	23.08	23.22
Quartz	(7,3,7)	15.237	83.14	1.183	1.3	1.847	2.47	23.08	23.22
	Equiv. Refl.: (7,-10,-7)								
Quartz	(-10,3,-7)	15.237	83.14	1.18	1.3	1.847	2.47	23.08	23.22
	Equiv. Refl.: (-10,7,7)								
Quartz	(7,0,9)	14.512	71.01	1.169	1.2	5.282	6.26	66.03	66.32
	Equiv. Refl.: (7,-7,-9), (-7,0,-9), (-7,7,9)								
Quartz	(0,7,-9)	14.512	71.01	1.168	1.2	5.282	6.26	66.03	66.32
	Equiv. Refl.: (0,-7,9)								
Quartz	(0,1,-13)	14.982	77.48	1.16	1.2	3.407	4.13	42.59	42.79
	Equiv. Refl.: (0,-1,13)								
Quartz	(1,0,13)	14.982	77.48	1.159	1.2	3.407	4.13	42.59	42.79
	Equiv. Refl.: (-1,0,-13), (-1,1,13)								
Quartz	(1,-1,-13)	14.982	77.48	1.158	1.2	3.407	4.12	42.59	42.79
Quartz	(0,7,9)	14.512	71.01	1.152	1.2	5.282	6.18	66.03	66.31
	Equiv. Refl.: (0,-7,-9)								
Quartz	(7,0,-9)	14.512	71.01	1.151	1.2	5.282	6.18	66.03	66.31
	Equiv. Refl.: (7,-7,9), (11,-2,-2), (11,-9,2), (-2,11,2), (-2,-9,-2), (-7,0,9), (-7,7,-9), (-9,11,-2), (-9,-2,2)								
Sapph	(0,5,-26)	14.511	71.01	1.15	1.2	5.283	6.29	66.03	66.33
	Equiv. Refl.: (0,-5,26), (5,0,26), (5,-5,-26), (-5,0,-26), (-5,5,26)								
Sapph	(0,7,-22)	14.871	75.7	1.147	1.2	3.912	4.76	48.9	49.13
	Equiv. Refl.: (0,-7,22), (7,0,22), (7,-7,-22), (-7,0,-22), (-7,7,22)								
Quartz	(8,-5,-9)	14.512	71.01	1.135	1.1	5.282	6.01	66.03	66.3
Quartz	(8,-3,9)	14.512	71.01	1.134	1.1	5.282	6.01	66.03	66.3
	Equiv. Refl.: (-5,8,9), (-5,-3,-9)								
Quartz	(-3,8,-9)	14.512	71.01	1.133	1.1	5.282	6	66.03	66.3
	Equiv. Refl.: (-3,-5,9)								
Sapph	(1,3,28)	14.423	70.02	1.126	1.2	5.581	6.5	69.76	70.06
	Equiv. Refl.: (1,-4,-28), (3,1,-28), (3,-4,28), (4,-1,-28), (4,-3,28), (-1,4,28), (-1,-3,-28), (-3,4,-28), (-3,-1,28), (-4,1,28), (-4,3,-28)								
Sapph	(4,7,6)	14.788	74.49	1.121	1.2	4.259	5.04	53.24	53.48
	Equiv. Refl.: (4,7,-6), (4,-11,6), (4,-11,-6), (7,4,6), (7,4,-6), (7,-11,6), (7,-11,-6), (11,-4,6), (11,-4,-6), (11,-7,6), (11,-7,-6), (-4,11,6), (-4,11,-6), (-4,-7,6), (-4,-7,-6), (-7,11,6), (-7,11,-6), (-7,-4,6), (-7,-4,-6), (-11,4,6), (-11,4,-6), (-11,7,6), (-11,7,-6)								

Ei =	15.347	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-8,3,-9)	14.512	71.01	1.103	1.1	5.282	6.01	66.03	66.3
	Equiv. Refl.: (-8,5,9)								
Quartz	(3,5,-9)	14.512	71.01	1.102	1.1	5.282	6	66.03	66.3
	Equiv. Refl.: (3,-8,9), (5,3,9), (5,-8,-9)								
LiNbO3	(1,1,33)	14.952	76.97	1.097	1.5	3.551	5.47	44.38	44.72
	Equiv. Refl.: (1,1,-33), (1,-2,33), (1,-2,-33), (2,-1,33), (2,-1,-33), (-1,2,33), (-1,2,-33), (-1,-1,33), (-1,-1,-33), (-2,1,33), (-2,1,-33)								
Quartz	(2,9,2)	14.964	77.17	1.096	1.2	3.496	4.11	43.7	43.89
	Equiv. Refl.: (2,-11,-2), (9,2,-2), (9,-11,2), (-11,2,2), (-11,9,-2)								
Quartz	(0,10,3)	14.971	77.29	1.081	1.1	3.463	3.93	43.28	43.46
	Equiv. Refl.: (0,-10,-3)								
Quartz	(10,0,-3)	14.971	77.29	1.08	1.1	3.463	3.93	43.28	43.46
	Equiv. Refl.: (10,-10,3), (-10,0,3), (-10,10,-3)								
Quartz	(2,2,12)	14.66	72.8	1.067	1.1	4.752	5.09	59.4	59.61
	Equiv. Refl.: (2,-4,-12), (-4,2,-12)								
Quartz	(-4,2,12)	14.66	72.8	1.066	1.1	4.752	5.09	59.4	59.61
Quartz	(2,2,-12)	14.66	72.8	1.065	1.1	4.752	5.09	59.4	59.61
	Equiv. Refl.: (2,-4,12)								
Quartz	(10,-2,6)	15.023	78.2	1.061	1.1	3.206	3.55	40.08	40.24
	Equiv. Refl.: (10,-8,-6), (-2,-8,6)								
Quartz	(-2,10,-6)	15.023	78.2	1.06	1.1	3.206	3.55	40.08	40.24
Quartz	(5,6,-4)	14.636	72.5	1.059	1.1	4.84	5.26	60.5	60.73
	Equiv. Refl.: (5,-11,4), (-8,10,6), (-8,-2,-6)								
Quartz	(6,5,4)	14.636	72.5	1.058	1.1	4.84	5.26	60.5	60.72
	Equiv. Refl.: (6,-11,-4), (11,-5,4), (11,-6,-4), (-5,11,-4), (-5,-6,4), (-6,-5,-4), (-11,5,-4), (-11,6,4)								
Quartz	(-6,11,4)	14.636	72.5	1.057	1.1	4.84	5.25	60.5	60.72
Quartz	(4,7,-4)	14.781	74.39	1.038	1.1	4.288	4.54	53.61	53.8
	Equiv. Refl.: (4,-11,4), (-11,4,-4), (-11,7,4)								
Quartz	(7,4,4)	14.781	74.39	1.037	1.1	4.288	4.54	53.61	53.8
	Equiv. Refl.: (7,-11,-4)								
Quartz	(2,8,-6)	15.023	78.2	1.028	1.1	3.206	3.55	40.08	40.24
	Equiv. Refl.: (-10,2,-6), (-10,8,6)								
Quartz	(2,-10,6)	15.023	78.2	1.027	1.1	3.206	3.55	40.08	40.24
Quartz	(8,2,6)	15.023	78.2	1.026	1.1	3.206	3.55	40.08	40.24
	Equiv. Refl.: (8,-10,-6)								
Quartz	(11,-3,2)	14.532	71.24	1.022	1	5.212	5.37	65.15	65.37
	Equiv. Refl.: (11,-8,-2), (-3,11,-2), (-3,-8,2), (-8,11,2), (-8,-3,-2)								
Quartz	(-2,4,12)	14.66	72.8	1.017	1.1	4.752	5.09	59.4	59.61
	Equiv. Refl.: (-2,-2,-12)								
Quartz	(4,-2,12)	14.66	72.8	1.016	1.1	4.752	5.09	59.4	59.61
	Equiv. Refl.: (4,-2,-12), (8,3,3), (8,-11,-3), (-11,3,-3), (-11,8,3)								
Quartz	(3,8,-3)	14.756	74.05	1.015	1	4.385	4.51	54.81	55
	Equiv. Refl.: (3,-11,3), (-2,4,-12), (-2,-2,12)								
Quartz	(-4,11,-4)	14.781	74.39	1.004	1.1	4.288	4.54	53.61	53.8
	Equiv. Refl.: (-4,-7,4)								
Quartz	(11,-4,4)	14.781	74.39	1.003	1.1	4.288	4.54	53.61	53.8
	Equiv. Refl.: (11,-7,-4), (-7,11,4), (-7,-4,-4)								
Quartz	(3,8,-2)	14.532	71.24	0.987	1	5.212	5.37	65.15	65.37
	Equiv. Refl.: (3,-11,2), (8,3,2), (8,-11,-2), (-4,8,9), (-4,-4,-9), (-11,3,-2), (-11,8,2)								

Ei =	15.347	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(8,-4,-9)	14.438	70.18	0.986	1	5.53	5.4	69.13	69.34
	Equiv. Refl.: (-4,8,-9), (-4,-4,9)								
Quartz	(8,-4,9)	14.438	70.18	0.985	1	5.53	5.4	69.13	69.34
Quartz	(7,-3,10)	14.495	70.82	0.976	1	5.338	5.21	66.73	66.93
	Equiv. Refl.: (7,-4,-10)								
Sapph	(1,7,21)	15.148	80.77	0.975	1.1	2.494	2.78	31.18	31.3
	Equiv. Refl.: (1,7,-21), (1,-8,21), (1,-8,-21), (7,1,21), (7,1,-21), (7,-8,21), (7,-8,-21), (8,-1,21), (8,-1,-21), (8,-7,21), (8,-7,-21), (-1,8,21), (-1,8,-21), (-1,-7,21), (-1,-7,-21), (-7,8,21), (-7,8,-21), (-7,-1,21), (-7,-1,-21), (-8,1,21), (-8,1,-21), (-8,7,21), (-8,7,-21), (-4,7,10), (-4,-3,-10)								
Quartz	(-3,7,-10)	14.495	70.82	0.974	1	5.338	5.2	66.73	66.93
	Equiv. Refl.: (-3,-4,10)								
Quartz	(11,-3,3)	14.756	74.05	0.966	1	4.385	4.51	54.81	55
	Equiv. Refl.: (11,-8,-3), (-3,11,-3), (-3,-8,3), (-8,11,3), (-8,-3,-3)								
Quartz	(0,-8,-8)	14.834	75.15	0.956	1	4.069	4.07	50.86	51.02
Quartz	(0,8,8)	14.834	75.15	0.955	1	4.069	4.07	50.86	51.02
	Equiv. Refl.: (-8,0,8), (-8,8,-8)								
Quartz	(8,0,-8)	14.834	75.15	0.954	1	4.069	4.07	50.86	51.02
	Equiv. Refl.: (8,-8,8)								
LiNbO3	(1,10,9)	15.192	81.86	0.951	1.6	2.195	3.51	27.43	27.66
	Equiv. Refl.: (1,10,-9), (1,-11,9), (1,-11,-9), (10,1,9), (10,1,-9), (10,-11,9), (10,-11,-9), (11,-1,9), (11,-1,-9), (11,-10,9), (11,-10,-9), (-1,11,9), (-1,11,-9), (-1,-10,9), (-1,-10,-9), (-10,11,9), (-10,11,-9), (-10,-1,9), (-10,-1,-9), (-11,1,9), (-11,1,-9), (-11,10,9), (-11,10,-9)								
Sapph	(1,9,-8)	14.851	75.39	0.95	1	4.001	4.11	50.02	50.19
	Equiv. Refl.: (1,-10,8), (9,1,8), (9,-10,-8), (10,-1,8), (10,-9,-8), (-1,10,-8), (-1,-9,8), (-9,10,8), (-9,-1,-8), (-10,1,-8), (-10,9,8)								
Quartz	(-7,3,-10)	14.495	70.82	0.92	1	5.338	5.21	66.73	66.93
	Equiv. Refl.: (-7,4,10)								
Quartz	(3,-7,10)	14.495	70.82	0.919	1	5.338	5.2	66.73	66.93
	Equiv. Refl.: (4,3,10), (4,-7,-10)								
Quartz	(0,10,4)	15.275	84.45	0.918	1.1	1.49	1.64	18.62	18.7
	Equiv. Refl.: (0,-10,-4), (3,4,-10)								
Quartz	(4,4,9)	14.438	70.18	0.917	1	5.53	5.4	69.13	69.34
	Equiv. Refl.: (4,-8,-9), (10,0,-4), (10,-10,4), (-10,0,4), (-10,10,-4)								
Quartz	(4,4,-9)	14.438	70.18	0.916	1	5.53	5.4	69.13	69.34
	Equiv. Refl.: (4,-8,9), (-8,4,9), (-8,4,-9)								
Sapph	(2,7,16)	14.49	70.76	0.912	1	5.356	5.16	66.95	67.15
	Equiv. Refl.: (2,-9,-16), (7,2,-16), (7,-9,16), (9,-2,-16), (9,-7,16), (-2,9,16), (-2,-7,-16), (-7,9,-16), (-7,-2,16), (-9,2,16), (-9,7,-16)								
Sapph	(1,4,27)	14.615	72.23	0.905	1	4.917	4.74	61.47	61.65
	Equiv. Refl.: (1,4,-27), (1,-5,27), (1,-5,-27), (4,1,27), (4,1,-27), (4,-5,27), (4,-5,-27), (5,-1,27), (5,-1,-27), (5,-4,27), (5,-4,-27), (-1,5,27), (-1,5,-27), (-1,-4,27), (-1,-4,-27), (-4,5,27), (-4,5,-27), (-4,-1,27), (-4,-1,-27), (-5,1,27), (-5,1,-27), (-5,4,27), (-5,4,-27)								
Quartz	(3,-9,-8)	14.763	74.14	0.876	0.9	4.36	3.79	54.5	54.63
Quartz	(3,6,8)	14.763	74.14	0.875	0.9	4.36	3.79	54.5	54.63
	Equiv. Refl.: (6,3,-8), (6,-9,8)								
Quartz	(-9,3,8)	14.763	74.14	0.874	0.9	4.36	3.78	54.5	54.63
	Equiv. Refl.: (-9,6,-8)								
Quartz	(6,6,1)	15.185	81.66	0.867	0.9	2.249	2.03	28.11	28.18
	Equiv. Refl.: (6,6,-1), (6,-12,1), (6,-12,-1), (-12,6,1), (-12,6,-1)								

Ei =	15.347	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(4,5,-19)	14.842	75.27	0.858	0.9	4.035	3.79	50.44	50.59
	Equiv. Refl.: (4,-9,19), (5,4,19), (5,-9,-19), (9,-4,19), (9,-5,-19), (-4,9,-19), (-4,-5,19), (-5,9,19), (-5,-4,-19), (-9,4,-19), (-9,5,19)								
Quartz	(-4,8,10)	15.279	84.62	0.856	1	1.445	1.37	18.07	18.12
	Equiv. Refl.: (-4,-4,-10)								
Quartz	(-4,8,-10)	15.279	84.62	0.855	0.9	1.445	1.37	18.07	18.12
Quartz	(-4,-4,10)	15.279	84.62	0.854	0.9	1.445	1.37	18.07	18.12
Quartz	(8,-4,-10)	15.279	84.62	0.853	0.9	1.445	1.37	18.07	18.12
Quartz	(8,-4,10)	15.279	84.62	0.852	0.9	1.445	1.37	18.07	18.12
Quartz	(10,-1,-5)	15.036	78.44	0.851	0.9	3.14	2.83	39.25	39.35
	Equiv. Refl.: (10,-9,5)								
Quartz	(-1,10,5)	15.036	78.44	0.85	0.9	3.14	2.82	39.25	39.35
	Equiv. Refl.: (-1,-9,-5), (-9,10,-5), (-9,-1,5)								
Quartz	(6,2,9)	14.729	73.69	0.848	0.9	4.491	3.86	56.13	56.27
	Equiv. Refl.: (6,-8,-9)								
Quartz	(2,6,-9)	14.729	73.69	0.847	0.9	4.491	3.86	56.13	56.27
	Equiv. Refl.: (2,-8,9), (-8,2,-9), (-8,6,9)								
Sapph	(1,9,4)	14.478	70.62	0.846	0.9	5.398	4.86	67.47	67.64
	Equiv. Refl.: (1,-10,-4), (9,1,-4), (9,-10,4), (10,-1,-4), (10,-9,4), (-1,10,4), (-1,-9,-4), (-9,10,-4), (-9,-1,4), (-10,1,4), (-10,9,-4)								
Sapph	(2,4,-26)	14.743	73.88	0.837	0.9	4.436	4.03	55.45	55.6
	Equiv. Refl.: (2,-6,26), (4,2,26), (4,-6,-26), (6,-2,26), (6,-4,-26), (-2,6,-26), (-2,-4,26), (-4,6,26), (-4,-2,-26), (-6,2,-26), (-6,4,26)								
LiNbO3	(2,4,-29)	14.91	76.29	0.817	1.2	3.743	4.61	46.78	47.01
	Equiv. Refl.: (2,9,-13), (2,-6,29), (2,-11,13), (4,2,29), (4,-6,-29), (6,-2,29), (6,-4,-29), (9,2,13), (9,-11,-13), (11,-2,13), (11,-9,-13), (-2,6,-29), (-2,11,-13), (-2,-4,29), (-2,-9,13), (-4,6,29), (-4,-2,-29), (-6,2,-29), (-6,4,29), (-9,11,13), (-9,-2,-13), (-11,2,-13), (-11,9,13)								
Quartz	(7,-1,-10)	14.928	76.58	0.815	0.9	3.661	3.14	45.77	45.88
	Equiv. Refl.: (7,-6,10)								
Quartz	(-1,7,10)	14.928	76.58	0.814	0.9	3.661	3.14	45.77	45.88
	Equiv. Refl.: (-1,-6,-10), (-6,7,-10), (-6,-1,10)								
Quartz	(-7,3,10)	14.495	70.82	0.798	0.8	5.338	4.45	66.73	66.88
	Equiv. Refl.: (-7,4,-10), (-10,1,5), (-10,9,-5)								
Quartz	(1,9,5)	15.036	78.44	0.797	0.9	3.14	2.82	39.25	39.35
	Equiv. Refl.: (1,-10,-5), (4,3,-10), (4,-7,10), (7,-3,-10), (7,-4,10), (9,1,-5), (9,-10,5), (-4,7,-10), (-4,-3,10)								
Quartz	(3,4,10)	14.495	70.82	0.796	0.8	5.338	4.44	66.73	66.88
	Equiv. Refl.: (3,-7,-10), (-3,7,10), (-3,-4,-10)								
Sapph	(5,6,-7)	14.735	73.77	0.792	0.9	4.469	3.87	55.86	55.99
	Equiv. Refl.: (5,-11,7), (6,5,7), (6,-11,-7), (11,-5,7), (11,-6,-7), (-5,11,-7), (-5,-6,7), (-6,11,7), (-6,-5,-7), (-11,5,-7), (-11,6,7)								
Quartz	(-6,8,9)	14.729	73.69	0.783	0.9	4.491	3.86	56.13	56.27
Quartz	(8,-2,9)	14.729	73.69	0.782	0.9	4.491	3.86	56.13	56.27
	Equiv. Refl.: (8,-6,-9), (-2,8,-9), (-2,-6,9), (-6,-2,-9)								
Quartz	(11,-3,-2)	14.532	71.24	0.779	0.8	5.212	4.09	65.15	65.28
	Equiv. Refl.: (11,-8,2), (-3,11,2), (-3,-8,-2), (-8,11,-2), (-8,-3,2)								
Quartz	(-7,1,10)	14.928	76.58	0.776	0.9	3.661	3.14	45.77	45.88
Quartz	(1,6,10)	14.928	76.58	0.775	0.9	3.661	3.14	45.77	45.88
	Equiv. Refl.: (1,-7,-10), (6,1,-10), (6,-4,-11), (6,-7,10), (-7,6,-10)								
Quartz	(6,-2,11)	14.786	74.46	0.774	0.8	4.267	3.4	53.33	53.44
Quartz	(-2,6,-11)	14.786	74.46	0.773	0.8	4.267	3.4	53.33	53.44
	Equiv. Refl.: (-2,-4,11)								

Ei =	15.347	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	ΘB	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(-3,9,8)	14.763	74.14	0.772	0.9	4.36	3.79	54.5	54.63
	Equiv. Refl.: (-3,-6,-8)								
Quartz	(9,-6,8)	14.763	74.14	0.771	0.9	4.36	3.79	54.5	54.63
	Equiv. Refl.: (-4,6,11), (-4,-2,-11), (-6,9,-8), (-6,-3,8)								
Quartz	(9,-3,-8)	14.763	74.14	0.77	0.9	4.36	3.78	54.5	54.63
Quartz	(11,-2,-1)	14.831	75.1	0.768	0.8	4.083	3.29	51.03	51.14
	Equiv. Refl.: (11,-9,1), (-2,11,1), (-2,-9,-1), (-9,11,-1), (-9,-2,1)								
LiNbO3	(1,6,25)	14.426	70.05	0.766	1.1	5.57	5.96	69.62	69.88
	Equiv. Refl.: (1,-7,-25), (6,1,-25), (6,-7,25), (7,-1,-25), (7,-6,25), (-1,7,25), (-1,-6,-25), (-6,7,-25), (-6,-1,25), (-7,1,25), (-7,6,-25)								
Sapph	(2,6,20)	14.45	70.32	0.76	0.8	5.49	4.49	68.62	68.77
	Equiv. Refl.: (2,-8,-20), (6,2,-20), (6,-8,20), (8,-2,-20), (8,-6,20), (-2,8,20), (-2,-6,-20), (-6,8,-20), (-6,-2,20), (-8,2,20), (-8,6,-20)								
Sapph	(3,5,-23)	15.212	82.4	0.756	0.9	2.048	1.92	25.6	25.67
	Equiv. Refl.: (3,-8,23), (5,3,23), (5,-8,-23), (8,-3,23), (8,-5,-23), (-3,8,-23), (-3,-5,23), (-5,8,23), (-5,-3,-23), (-8,3,-23), (-8,5,23)								
LiNbO3	(6,6,9)	15	77.8	0.744	1.2	3.318	3.96	41.48	41.67
	Equiv. Refl.: (6,6,-9), (6,-12,9), (6,-12,-9), (12,-6,9), (12,-6,-9), (-6,12,9), (-6,12,-9), (-6,-6,9), (-6,-6,-9), (-12,6,9), (-12,6,-9)								
Quartz	(2,-7,10)	14.641	72.55	0.735	0.8	4.824	3.74	60.3	60.41
	Equiv. Refl.: (5,2,10), (5,-7,-10)								
Quartz	(2,5,-10)	14.641	72.55	0.734	0.8	4.824	3.74	60.3	60.41
	Equiv. Refl.: (-7,2,-10)								
Quartz	(-6,10,-6)	14.446	70.27	0.733	0.8	5.503	4.17	68.79	68.91
	Equiv. Refl.: (-6,-4,6), (-7,5,10)								
Quartz	(10,-4,-6)	14.446	70.27	0.732	0.8	5.503	4.16	68.79	68.91
	Equiv. Refl.: (-4,10,6), (-4,-6,-6)								
Quartz	(2,9,1)	14.831	75.1	0.731	0.8	4.083	3.29	51.03	51.14
	Equiv. Refl.: (2,-11,-1), (9,2,-1), (9,-11,1), (10,-6,6), (-11,2,1), (-11,9,-1)								
Quartz	(-2,7,-10)	14.641	72.55	0.727	0.8	4.824	3.74	60.3	60.41
	Equiv. Refl.: (-5,7,10), (-5,-2,-10)								
Quartz	(7,-2,10)	14.641	72.55	0.726	0.8	4.824	3.74	60.3	60.41
	Equiv. Refl.: (-2,-5,10)								
Quartz	(7,-5,-10)	14.641	72.55	0.725	0.8	4.824	3.74	60.3	60.41
LiNbO3	(5,6,17)	15.288	84.99	0.724	1.6	1.345	2.17	16.81	16.95
	Equiv. Refl.: (5,-11,-17), (6,5,-17), (6,-11,17), (11,-5,-17), (11,-6,17), (-5,11,17), (-5,-6,-17), (-6,11,-17), (-6,-5,17), (-11,5,17), (-11,6,-17), (-3,-7,-6)								
Quartz	(10,-3,-6)	14.665	72.86	0.723	0.7	4.734	3.4	59.18	59.27
	Equiv. Refl.: (10,-7,6), (-3,10,6)								
Quartz	(-7,10,-6)	14.665	72.86	0.722	0.7	4.734	3.4	59.18	59.27
	Equiv. Refl.: (-7,-3,6)								
Sapph	(5,6,5)	14.548	71.43	0.721	0.8	5.155	4.05	64.43	64.56
	Equiv. Refl.: (5,-11,-5), (6,5,-5), (6,-11,5), (11,-5,-5), (11,-6,5), (-5,11,5), (-5,-6,-5), (-6,11,-5), (-6,-5,5), (-11,5,5), (-11,6,-5)								
Quartz	(-6,2,-11)	14.786	74.46	0.717	0.8	4.267	3.4	53.33	53.44
	Equiv. Refl.: (-6,4,11)								
Quartz	(2,-6,11)	14.786	74.46	0.716	0.8	4.267	3.4	53.33	53.44
Quartz	(2,4,-11)	14.786	74.46	0.715	0.8	4.267	3.4	53.33	53.44
Quartz	(3,8,2)	14.532	71.24	0.714	0.8	5.212	4.09	65.15	65.28
	Equiv. Refl.: (3,-11,-2), (8,3,-2), (8,-11,2), (-11,3,2), (-11,8,-2)								

Ei =	15.347	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(4,2,11)	14.786	74.46	0.713	0.8	4.267	3.39	53.33	53.44
	Equiv. Refl.: (4,-6,-11)								
Quartz	(2,-5,12)	15.159	81.02	0.712	0.8	2.426	2	30.33	30.39
	Equiv. Refl.: (-2,5,-12)								
Quartz	(2,3,-12)	15.159	81.02	0.711	0.8	2.426	1.99	30.33	30.39
	Equiv. Refl.: (-2,-3,12)								
Quartz	(3,2,12)	15.159	81.02	0.71	0.8	2.426	1.99	30.33	30.39
	Equiv. Refl.: (3,-5,-12), (-3,5,12), (-3,-2,-12)								
Quartz	(5,-2,12)	15.159	81.02	0.708	0.8	2.426	1.99	30.33	30.39
	Equiv. Refl.: (5,-3,-12), (-5,2,-12), (-5,3,12), (-5,6,11), (-5,-1,-11)								
Quartz	(6,4,-6)	14.446	70.27	0.707	0.8	5.503	4.17	68.79	68.91
	Equiv. Refl.: (6,-10,6), (-6,12,1), (-6,12,-1), (-6,-6,1), (-6,-6,-1)								
Quartz	(4,6,6)	14.446	70.27	0.706	0.8	5.503	4.16	68.79	68.91
	Equiv. Refl.: (4,-10,-6), (6,-1,11), (6,-5,-11), (12,-6,1), (12,-6,-1), (-1,6,-11), (-1,-5,11), (-10,4,6), (-10,6,-6)								
Quartz	(5,1,11)	15	77.79	0.705	0.8	3.32	2.6	41.5	41.58
	Equiv. Refl.: (5,-6,-11)								
LiNbO3	(4,6,19)	14.803	74.7	0.703	1.1	4.198	4.52	52.48	52.68
	Equiv. Refl.: (4,-10,-19), (6,4,-19), (6,-10,19), (10,-4,-19), (10,-6,19), (-4,10,19), (-4,-6,-19), (-6,10,-19), (-6,-4,19), (-10,4,19), (-10,6,-19), (2,9,-1), (2,-11,1), (-11,2,-1), (-11,9,1)								
Quartz	(1,5,-11)	15	77.79	0.702	0.8	3.32	2.59	41.5	41.58
	Equiv. Refl.: (1,-6,11), (9,2,1), (9,-11,-1), (-6,1,-11), (-6,5,11)								
Sapph	(2,6,-22)	15.098	79.66	0.69	0.8	2.799	2.3	34.99	35.06
	Equiv. Refl.: (2,-8,22), (6,2,22), (6,-8,-22), (8,-2,22), (8,-6,-22), (-2,8,-22), (-2,-6,22), (-6,8,22), (-6,-2,-22), (-8,2,-22), (-8,6,22)								
Quartz	(8,0,8)	14.834	75.15	0.686	0.7	4.069	3.03	50.86	50.95
	Equiv. Refl.: (8,-8,-8), (-8,0,-8), (-8,8,8)								
Quartz	(0,8,-8)	14.834	75.15	0.684	0.7	4.069	3.03	50.86	50.95
	Equiv. Refl.: (0,-8,8)								
Quartz	(4,4,10)	15.279	84.62	0.672	1	1.445	1.37	18.07	18.12
Quartz	(4,-8,-10)	15.279	84.62	0.671	1	1.445	1.37	18.07	18.12
Quartz	(4,-8,10)	15.279	84.62	0.67	0.9	1.445	1.37	18.07	18.12
Quartz	(4,4,-10)	15.279	84.62	0.669	0.9	1.445	1.37	18.07	18.12
Quartz	(-8,4,10)	15.279	84.62	0.668	0.9	1.445	1.37	18.07	18.12
Quartz	(-8,4,-10)	15.279	84.62	0.667	0.9	1.445	1.37	18.07	18.12
LiNbO3	(1,9,13)	14.482	70.68	0.666	1	5.382	5.25	67.27	67.48
	Equiv. Refl.: (1,-10,-13), (9,1,-13), (9,-10,13), (10,-1,-13), (10,-9,13), (-1,10,13), (-1,-9,-13), (-9,10,-13), (-9,-1,13), (-10,1,13), (-10,9,-13), (0,9,12), (0,9,-12), (0,-9,12), (0,-9,-12), (9,0,12), (9,0,-12), (9,-9,12), (9,-9,-12), (-9,0,12), (-9,0,-12), (-9,9,12), (-9,9,-12)								
Quartz	(11,-2,1)	14.831	75.1	0.66	0.7	4.083	3.02	51.03	51.12
	Equiv. Refl.: (11,-9,-1), (-2,11,-1), (-2,-9,1), (-9,11,1), (-9,-2,-1)								
Sapph	(4,4,21)	14.46	70.43	0.647	0.7	5.456	3.88	68.2	68.31
	Equiv. Refl.: (4,4,-21), (4,-8,21), (4,-8,-21), (8,-4,21), (8,-4,-21), (-4,8,21), (-4,8,-21), (-4,-4,21), (-4,-4,-21), (-8,4,21), (-8,4,-21)								
Sapph	(4,7,9)	15.131	80.37	0.645	0.8	2.604	2.05	32.55	32.62
	Equiv. Refl.: (4,7,-9), (4,-11,9), (4,-11,-9), (7,4,9), (7,4,-9), (7,-11,9), (7,-11,-9), (11,-4,9), (11,-4,-9), (11,-7,9), (11,-7,-9), (-4,11,9), (-4,11,-9), (-4,-7,9), (-4,-7,-9), (-7,11,9), (-7,11,-9), (-7,-4,9), (-7,-4,-9), (-11,4,9), (-11,4,-9), (-11,7,9), (-11,7,-9)								
Sapph	(1,5,-25)	14.579	71.79	0.643	0.7	5.047	3.6	63.09	63.19
	Equiv. Refl.: (1,-6,25), (5,1,25), (5,-6,-25), (6,-1,25), (6,-5,-25), (-1,6,-25), (-1,-5,25), (-5,6,25), (-5,-1,-25), (-6,1,-25), (-6,5,25)								

Ei =	15.347	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(11,-6,-5)	15.036	78.44	0.642	0.7	3.14	2.25	39.25	39.31
	Equiv. Refl.: (-5,11,-5), (-5,-6,5), (-6,11,5), (-6,-5,-5)								
Quartz	(11,-5,5)	15.036	78.44	0.641	0.7	3.14	2.25	39.25	39.31
Sapph	(3,8,7)	15.189	81.77	0.632	0.8	2.221	1.77	27.76	27.81
	Equiv. Refl.: (3,-11,-7), (8,3,-7), (8,-11,7), (11,-3,-7), (11,-8,7), (-3,11,7), (-3,-8,-7), (-8,11,-7), (-8,-3,7), (-11,3,7), (-11,8,-7)								
Quartz	(5,6,-5)	15.036	78.44	0.625	0.7	3.14	2.25	39.25	39.31
	Equiv. Refl.: (5,-11,5), (6,5,5), (6,-11,-5), (-11,6,5)								
Quartz	(-11,5,-5)	15.036	78.44	0.624	0.7	3.14	2.25	39.25	39.31
Quartz	(3,7,6)	14.665	72.86	0.62	0.7	4.734	3.4	59.18	59.27
	Equiv. Refl.: (3,-10,-6)								
Quartz	(7,3,-6)	14.665	72.86	0.619	0.7	4.734	3.4	59.18	59.27
	Equiv. Refl.: (7,-10,6), (-10,3,6), (-10,7,-6)								
LiNbO3	(4,7,15)	14.993	77.68	0.617	1.1	3.352	3.52	41.9	42.05
	Equiv. Refl.: (4,7,-15), (4,-11,15), (4,-11,-15), (7,4,15), (7,4,-15), (7,-11,15), (7,-11,-15), (11,-4,15), (11,-4,-15), (11,-7,15), (11,-7,-15), (-4,11,15), (-4,11,-15), (-4,-7,15), (-4,-7,-15), (-7,11,15), (-7,11,-15), (-7,-4,15), (-7,-4,-15), (-11,4,15), (-11,4,-15), (-11,7,15), (-11,7,-15)								
Quartz	(5,-2,-12)	15.159	81.02	0.611	0.7	2.426	1.72	30.33	30.38
	Equiv. Refl.: (5,-3,12)								
Quartz	(-9,1,-7)	14.813	74.84	0.609	0.6	4.157	2.65	51.96	52.03
Quartz	(1,8,-7)	14.813	74.84	0.608	0.6	4.157	2.64	51.96	52.03
	Equiv. Refl.: (1,-9,7), (-9,8,7)								
Sapph	(3,8,-8)	15.301	85.56	0.607	0.9	1.192	1.08	14.9	14.94
	Equiv. Refl.: (3,-11,8), (8,3,8), (8,-11,-8), (11,-3,8), (11,-8,-8), (-3,11,-8), (-3,-8,8), (-8,11,8), (-8,-3,-8), (-11,3,-8), (-11,8,8), (8,1,7), (8,-9,-7), (-2,-3,-12), (-3,5,-12), (-3,-2,12)								
Quartz	(-2,5,12)	15.159	81.02	0.606	0.7	2.426	1.71	30.33	30.38
Sapph	(1,1,30)	14.554	71.5	0.597	0.7	5.135	3.42	64.19	64.28
	Equiv. Refl.: (1,1,-30), (1,-2,30), (1,-2,-30), (2,-1,30), (2,-1,-30), (-1,2,30), (-1,2,-30), (-1,-1,30), (-1,-1,-30), (-2,1,30), (-2,1,-30)								
Quartz	(-5,2,12)	15.159	81.02	0.582	0.7	2.426	1.72	30.33	30.38
	Equiv. Refl.: (-5,3,-12)								
Quartz	(3,2,-12)	15.159	81.02	0.578	0.7	2.426	1.71	30.33	30.38
	Equiv. Refl.: (3,-5,12)								
Quartz	(2,3,12)	15.159	81.02	0.577	0.7	2.426	1.71	30.33	30.38
	Equiv. Refl.: (2,-5,-12)								
Quartz	(-2,-8,-5)	14.533	71.26	0.573	0.6	5.208	2.96	65.1	65.17
Quartz	(10,-2,-5)	14.533	71.26	0.572	0.6	5.208	2.95	65.1	65.17
	Equiv. Refl.: (10,-8,5), (-2,10,5)								
Quartz	(-8,10,-5)	14.533	71.26	0.571	0.6	5.208	2.95	65.1	65.17
	Equiv. Refl.: (-8,-2,5)								
Sapph	(2,3,-28)	14.886	75.93	0.564	0.7	3.847	2.54	48.09	48.16
	Equiv. Refl.: (2,-5,28), (3,2,28), (3,-5,-28), (5,-2,28), (5,-3,-28), (-2,5,-28), (-2,-3,28), (-3,5,28), (-3,-2,-28), (-5,2,-28), (-5,3,28)								
Sapph	(4,6,-14)	14.719	73.56	0.558	0.6	4.529	2.89	56.62	56.69
	Equiv. Refl.: (4,-10,14), (6,4,14), (6,-10,-14), (10,-4,14), (10,-6,-14), (-4,10,-14), (-4,-6,14), (-6,10,14), (-6,-4,-14), (-10,4,-14), (-10,6,14)								
Quartz	(-1,10,-4)	14.636	72.5	0.557	0.6	4.84	2.86	60.5	60.56
	Equiv. Refl.: (-1,-9,4), (-9,10,4), (-9,-1,-4)								
Quartz	(8,2,-6)	15.023	78.2	0.556	0.6	3.206	1.98	40.08	40.13
	Equiv. Refl.: (10,-1,4), (10,-9,-4)								

Ei =	15.347	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(2,8,6)	15.023	78.2	0.555	0.6	3.206	1.97	40.08	40.13
	Equiv. Refl.: (2,-10,-6), (8,-10,6), (-7,1,-10), (-7,6,10)								
Quartz	(-10,2,6)	15.023	78.2	0.554	0.6	3.206	1.97	40.08	40.13
	Equiv. Refl.: (-10,8,-6)								
Quartz	(1,6,-10)	14.928	76.58	0.553	0.6	3.661	2.09	45.77	45.82
	Equiv. Refl.: (1,-7,10), (6,1,10), (6,-7,-10)								
Quartz	(11,-4,-3)	14.466	70.49	0.55	0.6	5.437	3.23	67.97	68.04
	Equiv. Refl.: (11,-7,3), (-4,11,3), (-4,-7,-3), (-7,11,-3), (-7,-4,3)								
Quartz	(4,7,3)	14.466	70.49	0.547	0.6	5.437	3.23	67.97	68.04
	Equiv. Refl.: (4,-11,-3), (7,4,-3), (7,-11,3), (-11,4,3), (-11,7,-3)								
Quartz	(9,-1,7)	14.813	74.84	0.542	0.6	4.157	2.65	51.96	52.03
Quartz	(9,-8,-7)	14.813	74.84	0.541	0.6	4.157	2.64	51.96	52.03
	Equiv. Refl.: (-1,9,-7), (-1,-8,7)								
Quartz	(-8,9,7)	14.813	74.84	0.54	0.6	4.157	2.64	51.96	52.03
	Equiv. Refl.: (-8,-1,-7)								
LiNbO3	(6,6,3)	14.513	71.02	0.524	0.8	5.279	4.38	65.98	66.13
	Equiv. Refl.: (6,6,-3), (6,-12,3), (6,-12,-3), (12,-6,3), (12,-6,-3), (-6,12,3), (-6,12,-3), (-6,-6,3), (-6,-6,-3), (-12,6,3), (-12,6,-3)								
Quartz	(1,9,-4)	14.636	72.5	0.52	0.6	4.84	2.86	60.5	60.56
	Equiv. Refl.: (1,-10,4), (9,1,4), (9,-10,-4)								
Quartz	(-10,1,-4)	14.636	72.5	0.519	0.6	4.84	2.86	60.5	60.56
	Equiv. Refl.: (-10,9,4)								
Quartz	(10,-1,5)	15.036	78.44	0.516	0.6	3.14	1.81	39.25	39.29
	Equiv. Refl.: (10,-9,-5), (-1,10,-5), (-1,-9,5), (-9,-1,-5)								
Quartz	(-9,10,5)	15.036	78.44	0.515	0.6	3.14	1.8	39.25	39.29
LiNbO3	(1,10,3)	14.711	73.45	0.512	0.8	4.561	3.87	57.02	57.15
	Equiv. Refl.: (1,10,-3), (1,-11,3), (1,-11,-3), (10,1,3), (10,1,-3), (10,-11,3), (10,-11,-3), (11,-1,3), (11,-1,-3), (11,-10,3), (11,-10,-3), (-1,11,3), (-1,11,-3), (-1,-10,3), (-1,-10,-3), (-10,11,3), (-10,11,-3), (-10,-1,3), (-10,-1,-3), (-11,1,3), (-11,1,-3), (-11,10,3), (-11,10,-3)								
Quartz	(-8,10,-6)	15.023	78.2	0.507	0.6	3.206	1.98	40.08	40.13
	Equiv. Refl.: (-8,-2,6)								
Quartz	(10,-8,6)	15.023	78.2	0.506	0.6	3.206	1.97	40.08	40.13
	Equiv. Refl.: (-2,10,6), (-2,-8,-6)								
Quartz	(10,-2,-6)	15.023	78.2	0.505	0.6	3.206	1.97	40.08	40.13
LiNbO3	(3,9,3)	15.1	79.71	0.502	1	2.786	2.73	34.83	34.94
	Equiv. Refl.: (3,9,-3), (3,-12,3), (3,-12,-3), (9,3,3), (9,3,-3), (9,-12,3), (9,-12,-3), (12,-3,3), (12,-3,-3), (12,-9,3), (12,-9,-3), (-3,12,3), (-3,12,-3), (-3,-9,3), (-3,-9,-3), (-9,12,3), (-9,12,-3), (-9,-3,3), (-9,-3,-3), (-12,3,3), (-12,3,-3), (-12,9,3), (-12,9,-3)								
Quartz	(-9,10,-4)	14.636	72.5	0.478	0.5	4.84	2.53	60.5	60.55
	Equiv. Refl.: (-9,-1,4)								
Quartz	(10,-1,-4)	14.636	72.5	0.477	0.5	4.84	2.52	60.5	60.55
	Equiv. Refl.: (10,-9,4), (-1,10,4), (-1,-9,-4)								
Sapph	(2,9,2)	15.298	85.42	0.471	0.8	1.229	0.92	15.36	15.39
	Equiv. Refl.: (2,-11,-2), (9,2,-2), (9,-11,2), (11,-2,-2), (11,-9,2), (-2,11,2), (-2,-9,-2), (-9,11,-2), (-9,-2,2), (-11,2,2), (-11,9,-2)								
Sapph	(2,7,-17)	14.747	73.93	0.469	0.6	4.422	2.46	55.27	55.33
	Equiv. Refl.: (2,-9,17), (7,2,17), (7,-9,-17), (9,-2,17), (9,-7,-17), (-2,9,-17), (-2,-7,17), (-7,9,17), (-7,-2,-17), (-9,2,-17), (-9,7,17), (2,8,5), (2,-10,-5)								
Quartz	(8,2,-5)	14.533	71.26	0.468	0.6	5.208	2.95	65.1	65.17
	Equiv. Refl.: (8,-10,5), (-10,2,5), (-10,8,-5)								

Ei =	15.347	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-10,1,-5)	15.036	78.44	0.459	0.6	3.14	1.81	39.25	39.29
	Equiv. Refl.: (-10,9,5)								
Quartz	(1,9,-5)	15.036	78.44	0.458	0.6	3.14	1.81	39.25	39.29
	Equiv. Refl.: (1,-10,5), (9,1,5), (9,-10,-5)								
Quartz	(9,1,-4)	14.636	72.5	0.454	0.5	4.84	2.53	60.5	60.55
	Equiv. Refl.: (9,-10,4)								
Sapph	(3,5,22)	14.871	75.7	0.453	0.6	3.912	2.16	48.9	48.95
	Equiv. Refl.: (3,-8,-22), (5,3,-22), (5,-8,22), (8,-3,-22), (8,-5,22), (-3,8,22), (-3,-5,-22), (-5,8,-22), (-5,-3,22), (-8,3,22), (-8,5,-22), (1,9,4), (1,-10,-4), (-10,1,4), (-10,9,-4)								
Sapph	(3,8,-5)	15.008	77.93	0.45	0.6	3.281	1.85	41.02	41.06
	Equiv. Refl.: (3,-11,5), (8,3,5), (8,-11,-5), (11,-3,5), (11,-8,-5), (-3,11,-5), (-3,-8,5), (-8,11,5), (-8,-3,-5), (-11,3,-5), (-11,8,5), (0,9,-6), (0,-9,6), (9,0,6), (9,-9,-6), (-9,0,-6), (-9,9,6)								
LiNbO3	(4,5,23)	14.957	77.06	0.448	0.8	3.526	2.97	44.07	44.17
	Equiv. Refl.: (4,-9,-23), (5,4,-23), (5,-9,23), (9,-4,-23), (9,-5,23), (-4,9,23), (-4,-5,-23), (-5,9,-23), (-5,-4,23), (-9,4,23), (-9,5,-23)								
LiNbO3	(1,5,29)	15.103	79.78	0.446	0.9	2.768	2.53	34.6	34.69
	Equiv. Refl.: (1,-6,-29), (5,1,-29), (5,-6,29), (6,-1,-29), (6,-5,29), (-1,6,29), (-1,-5,-29), (-5,6,-29), (-5,-1,29), (-6,1,29), (-6,5,-29), (7,-1,10), (7,-6,-10)								
Quartz	(-1,-6,10)	14.928	76.58	0.445	0.6	3.661	2.09	45.77	45.82
	Equiv. Refl.: (-6,7,10)								
LiNbO3	(1,3,31)	14.741	73.85	0.444	0.8	4.445	3.46	55.56	55.67
	Equiv. Refl.: (1,-4,-31), (3,1,-31), (3,-4,31), (4,-1,-31), (4,-3,31), (-1,4,31), (-1,-3,-31), (-3,4,-31), (-3,-1,31), (-4,1,31), (-4,3,-31), (-1,7,-10), (-6,-1,-10)								
Quartz	(9,2,3)	15.182	81.59	0.44	0.6	2.269	1.27	28.37	28.4
	Equiv. Refl.: (9,-11,-3), (-11,2,-3), (-11,9,3)								
Quartz	(2,9,-3)	15.182	81.59	0.439	0.6	2.269	1.27	28.37	28.4
	Equiv. Refl.: (2,-11,3), (8,-3,-9), (-3,8,9), (-3,-5,-9), (-5,8,-9), (-5,-3,9)								
Quartz	(4,7,-3)	14.466	70.49	0.438	0.5	5.437	2.56	67.97	68.02
	Equiv. Refl.: (4,-11,3), (7,4,3), (7,-11,-3), (8,-5,9), (-11,4,-3), (-11,7,3)								
Quartz	(11,-2,3)	15.182	81.59	0.433	0.6	2.269	1.27	28.37	28.4
	Equiv. Refl.: (11,-9,-3)								
Quartz	(-2,11,-3)	15.182	81.59	0.432	0.6	2.269	1.27	28.37	28.4
	Equiv. Refl.: (-2,-9,3), (-9,11,3), (-9,-2,-3)								
Quartz	(3,5,9)	14.512	71.01	0.419	0.5	5.282	2.54	66.03	66.07
	Equiv. Refl.: (3,-8,-9), (5,-8,9)								
Quartz	(5,3,-9)	14.512	71.01	0.418	0.5	5.282	2.54	66.03	66.07
	Equiv. Refl.: (-8,3,9), (-8,5,-9)								
Quartz	(-3,6,11)	14.714	73.49	0.414	0.4	4.549	2.02	56.86	56.9
	Equiv. Refl.: (-3,-3,-11)								
Quartz	(6,-3,-11)	14.714	73.49	0.413	0.4	4.549	2.01	56.86	56.9
Quartz	(6,-3,11)	14.714	73.49	0.412	0.4	4.549	2.01	56.86	56.9
	Equiv. Refl.: (-3,6,-11), (-3,-3,11)								
Quartz	(1,0,-13)	14.982	77.48	0.407	0.5	3.407	1.67	42.59	42.62
	Equiv. Refl.: (-1,0,13), (-1,1,-13)								
Quartz	(0,1,13)	14.982	77.48	0.406	0.5	3.407	1.66	42.59	42.62
	Equiv. Refl.: (0,-1,-13), (1,-1,13)								
Quartz	(11,-4,3)	14.466	70.49	0.401	0.5	5.437	2.56	67.97	68.02
	Equiv. Refl.: (11,-7,-3), (-4,11,-3), (-4,-7,3), (-7,11,3), (-7,-4,-3)								
LiNbO3	(2,9,11)	14.945	76.85	0.398	0.8	3.585	2.79	44.81	44.9
	Equiv. Refl.: (2,-11,-11), (9,2,-11), (9,-11,11), (11,-2,-11), (11,-9,11), (-2,11,11), (-2,-9,-11), (-9,11,-11), (-9,-2,11), (-11,2,11), (-11,9,-11)								

Ei =	15.347	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(0,6,24)	14.584	71.86	0.392	0.5	5.029	2.36	62.86	62.9
	Equiv. Refl.: (0,6,-24), (0,-6,24), (0,-6,-24), (6,0,24), (6,0,-24), (6,-6,24), (6,-6,-24), (-6,0,24), (-6,0,-24), (-6,6,24), (-6,6,-24)								
Quartz	(-5,10,7)	14.956	77.04	0.39	0.5	3.533	1.66	44.16	44.19
	Equiv. Refl.: (-5,-5,-7)								
Quartz	(10,-5,7)	14.956	77.04	0.389	0.5	3.533	1.66	44.16	44.19
	Equiv. Refl.: (10,-5,-7), (-5,10,-7), (-5,-5,7)								
Quartz	(5,5,7)	14.956	77.04	0.388	0.5	3.533	1.66	44.16	44.19
	Equiv. Refl.: (5,-10,-7), (-1,-5,-11)								
Sapph	(4,7,3)	14.579	71.79	0.387	0.5	5.048	2.35	63.1	63.14
	Equiv. Refl.: (4,7,-3), (4,-11,3), (4,-11,-3), (7,4,3), (7,4,-3), (7,-11,3), (7,-11,-3), (11,-4,3), (11,-4,-3), (11,-7,3), (11,-7,-3), (-4,11,3), (-4,11,-3), (-4,-7,3), (-4,-7,-3), (-7,11,3), (-7,11,-3), (-7,-4,3), (-7,-4,-3), (-11,4,3), (-11,4,-3), (-11,7,3), (-11,7,-3), (5,5,-7), (5,-10,7), (-1,6,11), (-10,5,7), (-10,5,-7)								
Quartz	(6,-1,-11)	15	77.79	0.386	0.5	3.32	1.52	41.5	41.53
	Equiv. Refl.: (6,-5,11), (-5,6,-11), (-5,-1,11)								
Quartz	(6,4,6)	14.446	70.27	0.38	0.4	5.503	2.26	68.79	68.83
	Equiv. Refl.: (6,-10,-6)								
Quartz	(4,6,-6)	14.446	70.27	0.379	0.4	5.503	2.26	68.79	68.83
	Equiv. Refl.: (4,-10,6), (-10,4,-6), (-10,6,6)								
Sapph	(3,8,1)	14.825	75.01	0.377	0.5	4.11	1.94	51.38	51.42
	Equiv. Refl.: (3,-11,-1), (8,3,-1), (8,-11,1), (11,-3,-1), (11,-8,1), (-3,11,1), (-3,-8,-1), (-8,11,-1), (-8,-3,1), (-11,3,1), (-11,8,-1)								
Quartz	(1,5,11)	15	77.79	0.357	0.5	3.32	1.52	41.5	41.53
	Equiv. Refl.: (1,-6,-11)								
Quartz	(5,1,-11)	15	77.79	0.356	0.5	3.32	1.52	41.5	41.53
	Equiv. Refl.: (5,-6,11), (-6,1,11), (-6,5,-11)								
LiNbO3	(3,7,-19)	14.998	77.75	0.355	0.7	3.331	2.48	41.64	41.72
	Equiv. Refl.: (3,-10,19), (7,3,19), (7,-10,-19), (10,-3,19), (10,-7,-19), (-3,10,-19), (-3,-7,19), (-7,10,19), (-7,-3,-19), (-10,3,-19), (-10,7,19), (1,9,-11), (1,-10,11), (9,1,11), (9,-10,-11), (10,-1,11), (10,-9,-11), (-1,10,-11), (-1,-9,11), (-9,10,11), (-9,-1,-11), (-10,1,-11), (-10,9,11)								
Quartz	(3,3,11)	14.714	73.49	0.351	0.4	4.549	2.02	56.86	56.9
Quartz	(3,-6,-11)	14.714	73.49	0.35	0.4	4.549	2.02	56.86	56.9
Quartz	(3,3,-11)	14.714	73.49	0.349	0.4	4.549	2.01	56.86	56.9
	Equiv. Refl.: (3,-6,11), (-6,3,11), (-6,3,-11)								
Quartz	(10,-4,6)	14.446	70.27	0.335	0.4	5.503	2.26	68.79	68.83
	Equiv. Refl.: (10,-6,-6), (-4,10,-6), (-4,-6,6), (-6,10,6), (-6,-4,-6)								
Sapph	(5,5,15)	14.866	75.62	0.316	0.4	3.935	1.63	49.19	49.21
	Equiv. Refl.: (5,5,-15), (5,-10,15), (5,-10,-15), (10,-5,15), (10,-5,-15), (-5,10,15), (-5,10,-15), (-5,-5,15), (-5,-5,-15), (-10,5,15), (-10,5,-15)								
Quartz	(10,-4,-7)	15.027	78.27	0.306	0.4	3.186	1.24	39.82	39.84
	Equiv. Refl.: (10,-6,7)								
Quartz	(-6,10,-7)	15.027	78.27	0.305	0.4	3.186	1.24	39.82	39.84
	Equiv. Refl.: (-6,-4,7)								
Quartz	(-4,10,7)	15.027	78.27	0.303	0.4	3.186	1.23	39.82	39.84
	Equiv. Refl.: (-4,-6,-7)								
Quartz	(0,3,-12)	14.442	70.22	0.302	0.4	5.519	1.97	68.99	69.02
	Equiv. Refl.: (0,-3,12)								
Quartz	(3,0,12)	14.442	70.22	0.3	0.4	5.519	1.96	68.99	69.02
	Equiv. Refl.: (3,-3,-12), (-3,0,-12), (-3,3,12)								

Ei =	15.347	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(8,2,5)	14.533	71.26	0.298	0.3	5.208	1.76	65.1	65.13
	Equiv. Refl.: (8,-10,-5)								
Quartz	(1,3,-12)	14.733	73.73	0.297	0.3	4.478	1.44	55.98	55.99
	Equiv. Refl.: (2,8,-5), (2,-10,5), (5,6,4), (5,-11,-4), (6,5,-4), (6,-11,4), (-10,2,-5), (-10,8,5), (-11,5,4), (-11,6,-4)								
Quartz	(1,-4,12)	14.733	73.73	0.296	0.3	4.478	1.43	55.98	55.99
	Equiv. Refl.: (-4,1,-12)								
Quartz	(-4,3,12)	14.733	73.73	0.295	0.3	4.478	1.43	55.98	55.99
LiNbO3	(2,9,-7)	14.455	70.37	0.294	0.6	5.474	3.08	68.43	68.5
	Equiv. Refl.: (2,-11,7), (9,2,7), (9,-11,-7), (11,-2,7), (11,-9,-7), (-2,11,-7), (-2,-9,7), (-9,11,7), (-9,-2,-7), (-11,2,-7), (-11,9,7), (3,-4,-12)								
Quartz	(3,1,12)	14.733	73.73	0.293	0.3	4.478	1.42	55.98	55.99
Sapph	(4,6,16)	15.177	81.45	0.292	0.4	2.307	1.03	28.83	28.85
	Equiv. Refl.: (4,-10,-16), (6,4,-16), (6,-10,16), (10,-4,-16), (10,-6,16), (-4,10,16), (-4,-6,-16), (-6,10,-16), (-6,-4,16), (-10,4,16), (-10,6,-16), (-10,4,7), (-10,6,-7)								
Quartz	(6,4,-7)	15.027	78.27	0.291	0.4	3.186	1.24	39.82	39.84
	Equiv. Refl.: (6,-10,7)								
Quartz	(4,6,7)	15.027	78.27	0.289	0.4	3.186	1.23	39.82	39.84
	Equiv. Refl.: (4,-10,-7)								
Quartz	(11,-5,-4)	14.636	72.5	0.271	0.3	4.84	1.67	60.5	60.52
	Equiv. Refl.: (11,-6,4), (-5,11,4), (-5,-6,-4), (-6,-5,4)								
Quartz	(-6,11,-4)	14.636	72.5	0.27	0.3	4.84	1.67	60.5	60.52
LiNbO3	(5,7,7)	14.851	75.39	0.267	0.6	4	2.35	50.01	50.06
	Equiv. Refl.: (5,-12,-7), (7,5,-7), (7,-12,7), (12,-5,-7), (12,-7,7), (-5,12,7), (-5,-7,-7), (-7,12,-7), (-7,-5,7), (-12,5,7), (-12,7,-7)								
Quartz	(-8,10,5)	14.533	71.26	0.264	0.3	5.208	1.76	65.1	65.13
	Equiv. Refl.: (-8,-2,-5)								
Quartz	(4,5,8)	14.618	72.27	0.263	0.3	4.906	1.53	61.33	61.34
	Equiv. Refl.: (4,-9,-8), (5,4,-8), (5,-9,8), (10,-2,5), (10,-8,-5), (-2,10,-5), (-2,-8,5)								
Quartz	(-9,4,8)	14.618	72.27	0.262	0.3	4.906	1.53	61.33	61.34
	Equiv. Refl.: (-9,5,-8)								
Sapph	(1,6,-23)	14.759	74.09	0.255	0.3	4.375	1.51	54.68	54.7
	Equiv. Refl.: (1,-7,23), (6,1,23), (6,-7,-23), (7,-1,23), (7,-6,-23), (-1,7,-23), (-1,-6,23), (-6,7,23), (-6,-1,-23), (-7,1,-23), (-7,6,23)								
LiNbO3	(3,7,17)	14.51	70.99	0.252	0.5	5.288	2.74	66.1	66.16
	Equiv. Refl.: (3,-10,-17), (7,3,-17), (7,-10,17), (10,-3,-17), (10,-7,17), (-3,10,17), (-3,-7,-17), (-7,10,-17), (-7,-3,17), (-10,3,17), (-10,7,-17)								
Quartz	(2,6,9)	14.729	73.69	0.242	0.3	4.491	1.25	56.13	56.15
	Equiv. Refl.: (2,-8,-9)								
Quartz	(6,2,-9)	14.729	73.69	0.241	0.3	4.491	1.24	56.13	56.15
	Equiv. Refl.: (6,-8,9), (-8,2,9), (-8,6,-9)								
LiNbO3	(5,7,-5)	14.688	73.15	0.24	0.5	4.647	2.43	58.09	58.14
	Equiv. Refl.: (5,-12,5), (7,5,5), (7,-12,-5), (12,-5,5), (12,-7,-5), (-5,12,-5), (-5,-7,5), (-7,12,5), (-7,-5,-5), (-12,5,-5), (-12,7,5)								
Quartz	(9,-4,-8)	14.618	72.27	0.239	0.3	4.906	1.53	61.33	61.34
	Equiv. Refl.: (-4,9,8), (-4,-5,-8), (-5,9,-8), (-5,-4,8)								
Quartz	(9,-5,8)	14.618	72.27	0.238	0.3	4.906	1.53	61.33	61.34
Quartz	(0,10,-2)	14.749	73.96	0.237	0.3	4.413	1.35	55.16	55.18
	Equiv. Refl.: (0,-10,2), (10,0,2), (10,-10,-2), (-10,0,-2), (-10,10,2)								

Ei =	15.347	keV						ΔEg	ΔEt
Cryst	Ref	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-11,3,-4)	15.065	79	0.235	0.3	2.982	0.88	37.27	37.28
	Equiv. Refl.: (-11,8,4)								
Quartz	(3,8,-4)	15.065	79	0.234	0.3	2.982	0.88	37.27	37.28
	Equiv. Refl.: (3,-11,4), (6,6,0), (6,-12,0), (8,3,4), (8,-11,-4), (-12,6,0)								
Sapph	(2,8,9)	14.442	70.22	0.233	0.3	5.518	1.69	68.97	69
	Equiv. Refl.: (2,8,-9), (2,-10,9), (2,-10,-9), (8,2,9), (8,2,-9), (8,-10,9), (8,-10,-9), (10,-2,9), (10,-2,-9), (10,-8,9), (10,-8,-9), (-2,10,9), (-2,10,-9), (-2,-8,9), (-2,-8,-9), (-8,10,9), (-8,10,-9), (-8,-2,9), (-8,-2,-9), (-10,2,9), (-10,2,-9), (-10,8,9), (-10,8,-9)								
LiNbO3	(5,7,1)	14.524	71.15	0.222	0.5	5.239	2.52	65.49	65.54
	Equiv. Refl.: (5,-12,-1), (7,5,-1), (7,-12,1), (12,-5,-1), (12,-7,1), (-5,12,1), (-5,-7,-1), (-7,12,-1), (-7,-5,1), (-12,5,1), (-12,7,-1)								
LiNbO3	(5,6,-13)	14.482	70.68	0.221	0.5	5.382	2.56	67.27	67.32
	Equiv. Refl.: (5,-11,13), (6,5,13), (6,-11,-13), (11,-5,13), (11,-6,-13), (-5,11,-13), (-5,-6,13), (-6,11,13), (-6,-5,-13), (-11,5,-13), (-11,6,13)								
LiNbO3	(2,6,-25)	15.017	78.1	0.217	0.6	3.234	1.83	40.42	40.46
	Equiv. Refl.: (2,-8,25), (6,2,25), (6,-8,-25), (8,-2,25), (8,-6,-25), (-2,8,-25), (-2,-6,25), (-6,8,25), (-6,-2,-25), (-8,2,-25), (-8,6,25)								
Quartz	(-1,4,-12)	14.733	73.73	0.216	0.3	4.478	1.43	55.98	55.99
	Equiv. Refl.: (-1,-3,12)								
Quartz	(4,-1,12)	14.733	73.73	0.215	0.3	4.478	1.43	55.98	55.99
	Equiv. Refl.: (4,-3,-12)								
Quartz	(-3,4,12)	14.733	73.73	0.213	0.3	4.478	1.42	55.98	55.99
	Equiv. Refl.: (-3,-1,-12)								
Quartz	(0,3,12)	14.442	70.22	0.204	0.3	5.519	1.44	68.99	69
	Equiv. Refl.: (0,-3,-12)								
Quartz	(3,0,-12)	14.442	70.22	0.201	0.3	5.519	1.42	68.99	69
	Equiv. Refl.: (3,-3,12), (-3,0,12), (-3,3,-12)								
Quartz	(12,-6,0)	15.141	80.61	0.197	0.3	2.537	0.82	31.72	31.73
	Equiv. Refl.: (-6,12,0), (-6,-6,0)								
LiNbO3	(2,5,27)	14.872	75.71	0.196	0.5	3.909	1.94	48.86	48.9
	Equiv. Refl.: (2,5,-27), (2,-7,27), (2,-7,-27), (5,2,27), (5,2,-27), (5,-7,27), (5,-7,-27), (7,-2,27), (7,-2,-27), (7,-5,27), (7,-5,-27), (-2,7,27), (-2,7,-27), (-2,-5,27), (-2,-5,-27), (-5,7,27), (-5,7,-27), (-5,-2,27), (-5,-2,-27), (-7,2,27), (-7,2,-27), (-7,5,27), (-7,5,-27), (3,7,14), (3,-10,-14), (7,3,-14), (7,-10,14), (10,-3,-14), (10,-7,14), (-3,10,14), (-3,-7,-14), (-7,10,-14), (-7,-3,14), (-10,3,14), (-10,7,-14)								
Sapph	(1,3,-29)	14.866	75.62	0.192	0.3	3.934	1.13	49.17	49.19
	Equiv. Refl.: (1,-4,29), (3,1,29), (3,-4,-29), (4,-1,29), (4,-3,-29), (-1,4,-29), (-1,-3,29), (-3,4,29), (-3,-1,-29), (-4,1,-29), (-4,3,29)								
Quartz	(0,10,1)	14.615	72.23	0.189	0.3	4.918	1.23	61.47	61.49
	Equiv. Refl.: (0,-10,-1), (10,0,-1), (10,-10,1), (-10,0,1), (-10,10,-1)								
LiNbO3	(3,6,21)	14.491	70.77	0.187	0.4	5.352	2.31	66.9	66.94
	Equiv. Refl.: (3,6,-21), (3,-9,21), (3,-9,-21), (6,3,21), (6,3,-21), (6,-9,21), (6,-9,-21), (9,-3,21), (9,-3,-21), (9,-6,21), (9,-6,-21), (-3,9,21), (-3,9,-21), (-3,-6,21), (-3,-6,-21), (-6,9,21), (-6,9,-21), (-6,-3,21), (-6,-3,-21), (-9,3,21), (-9,3,-21), (-9,6,21), (-9,6,-21)								
Quartz	(1,3,12)	14.733	73.73	0.185	0.2	4.478	1.05	55.98	55.99
	Equiv. Refl.: (1,-4,-12), (3,1,-12), (3,-4,12)								
Quartz	(-4,1,12)	14.733	73.73	0.184	0.2	4.478	1.04	55.98	55.99
	Equiv. Refl.: (-4,3,-12)								
Quartz	(-2,8,9)	14.729	73.69	0.183	0.3	4.491	1.25	56.13	56.15
	Equiv. Refl.: (-2,-6,-9)								
Quartz	(8,-2,-9)	14.729	73.69	0.182	0.3	4.491	1.24	56.13	56.15
	Equiv. Refl.: (8,-6,9), (-6,8,-9), (-6,-2,9)								
Quartz	(11,-3,4)	15.065	79	0.173	0.3	2.982	0.88	37.27	37.28

	Equiv. Refl.: (11,-8,-4)								
Quartz	(-3,11,-4)	15.065	79	0.172	0.3	2.982	0.88	37.27	37.28
	Equiv. Refl.: (-3,-8,4), (-8,11,4), (-8,-3,-4)								
LiNbO3	(2,3,-31)	15.13	80.34	0.168	0.5	2.611	1.4	32.64	32.67
	Equiv. Refl.: (2,-5,31), (3,2,31), (3,-5,-31), (5,-2,31), (5,-3,-31), (-2,-5,-31), (-2,-3,31), (-3,5,31), (-3,-2,-31), (-5,2,-31), (-5,3,31)								
Quartz	(0,10,0)	14.57	71.69	0.163	0.2	5.079	1.13	63.49	63.5
	Equiv. Refl.: (0,-10,0), (10,0,0), (10,-10,0), (-10,0,0), (-10,10,0)								
Quartz	(-1,4,12)	14.733	73.73	0.153	0.2	4.478	1.05	55.98	55.99
	Equiv. Refl.: (-3,4,-12), (-3,-1,12)								
Quartz	(4,-1,-12)	14.733	73.73	0.152	0.2	4.478	1.04	55.98	55.99
	Equiv. Refl.: (4,-3,12), (-1,-3,-12)								
Sapph	(1,9,7)	14.735	73.77	0.133	0.2	4.469	0.97	55.86	55.87
	Equiv. Refl.: (1,-10,-7), (9,1,-7), (9,-10,7), (10,-1,-7), (10,-9,7), (-1,10,7), (-1,-9,-7), (-9,10,-7), (-9,-1,7), (-10,1,7), (-10,9,-7)								
Sapph	(1,9,-5)	14.548	71.43	0.122	0.2	5.155	1.01	64.43	64.44
	Equiv. Refl.: (1,-10,5), (9,1,5), (9,-10,-5), (10,-1,5), (10,-9,-5), (-1,10,-5), (-1,-9,5), (-9,10,5), (-9,-1,-5), (-10,1,-5), (-10,9,5)								
LiNbO3	(3,5,25)	14.823	74.98	0.099	0.3	4.117	1.38	51.46	51.48
	Equiv. Refl.: (3,-8,-25), (5,3,-25), (5,-8,25), (8,-3,-25), (8,-5,25), (-3,8,25), (-3,-5,-25), (-5,8,-25), (-5,-3,25), (-8,3,25), (-8,5,-25)								
LiNbO3	(3,8,13)	14.877	75.79	0.096	0.3	3.886	1.31	48.57	48.59
	Equiv. Refl.: (3,-11,-13), (8,3,-13), (8,-11,13), (11,-3,-13), (11,-8,13), (-3,11,13), (-3,-8,-13), (-8,11,-13), (-8,-3,13), (-11,3,13), (-11,8,-13)								
Sapph	(2,8,12)	14.93	76.62	0.088	0.2	3.65	0.64	45.63	45.63
	Equiv. Refl.: (2,8,-12), (2,-10,12), (2,-10,-12), (8,2,12), (8,2,-12), (8,-10,12), (8,-10,-12), (10,-2,12), (10,-2,-12), (10,-8,12), (10,-8,-12), (-2,10,12), (-2,10,-12), (-2,-8,12), (-2,-8,-12), (-8,10,12), (-8,10,-12), (-8,-2,12), (-8,-2,-12), (-10,2,12), (-10,2,-12), (-10,8,12), (-10,8,-12)								
Sapph	(3,4,-25)	15.037	78.47	0.086	0.2	3.131	0.58	39.13	39.14
	Equiv. Refl.: (3,-7,25), (4,3,25), (4,-7,-25), (7,-3,25), (7,-4,-25), (-3,7,-25), (-3,-4,25), (-4,7,25), (-4,-3,-25), (-7,3,-25), (-7,4,25)								
LiNbO3	(3,8,-11)	14.551	71.47	0.079	0.3	5.144	1.4	64.3	64.32
	Equiv. Refl.: (3,-11,11), (8,3,11), (8,-11,-11), (11,-3,11), (11,-8,-11), (-3,11,-11), (-3,-8,11), (-8,11,11), (-8,-3,-11), (-11,3,-11), (-11,8,11)								
LiNbO3	(1,8,-19)	14.606	72.12	0.069	0.3	4.951	1.28	61.88	61.9
	Equiv. Refl.: (1,-9,19), (8,1,19), (8,-9,-19), (9,-1,19), (9,-8,-19), (-1,9,-19), (-1,-8,19), (-8,9,19), (-8,-1,-19), (-9,1,-19), (-9,8,19)								
Sapph	(4,6,13)	14.509	70.98	0.048	0.1	5.291	0.57	66.14	66.14
	Equiv. Refl.: (4,-10,-13), (6,4,-13), (6,-10,13), (10,-4,-13), (10,-6,13), (-4,10,13), (-4,-6,-13), (-6,10,-13), (-6,-4,13), (-10,4,13), (-10,6,-13)								
Sapph	(5,6,8)	14.851	75.39	0.038	0.1	4.001	0.41	50.02	50.02
	Equiv. Refl.: (5,-11,-8), (6,5,-8), (6,-11,8), (11,-5,-8), (11,-6,8), (-5,11,8), (-5,-6,-8), (-6,11,-8), (-6,-5,8), (-11,5,8), (-11,6,-8)								
LiNbO3	(4,8,-7)	15.045	78.61	0.015	0.2	3.092	0.48	38.64	38.65
	Equiv. Refl.: (4,-12,7), (8,4,7), (8,-12,-7), (12,-4,7), (12,-8,-7), (-4,12,-7), (-4,-8,7), (-8,12,7), (-8,-4,-7), (-12,4,-7), (-12,8,7)								
LiNbO3	(4,8,5)	14.884	75.9	0.013	0.1	3.856	0.49	48.2	48.2
	Equiv. Refl.: (4,-12,-5), (5,5,21), (5,5,-21), (5,-10,21), (5,-10,-21), (8,4,-5), (8,-12,5), (10,-5,21), (10,-5,-21), (12,-4,-5), (12,-8,5), (-4,12,5), (-4,-8,-5), (-5,10,21), (-5,10,-21), (-5,-5,21), (-5,-5,-21), (-8,12,-5), (-8,-4,5), (-10,5,21), (-10,5,-21), (-12,4,5), (-12,8,-5)								
LiNbO3	(4,8,-1)	14.722	73.6	0.011	0.1	4.518	0.51	56.47	56.48
	Equiv. Refl.: (4,-12,1), (8,4,1), (8,-12,-1), (12,-4,1), (12,-8,-1), (-4,12,-1), (-4,-8,1), (-8,12,1), (-8,-4,-1), (-12,4,-1), (-12,8,1)								

Ei =	14.698	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(1,3,13)	14.661	85.91	2.8229	8.66	1.0515	9.11	13.14	15.99
	Equiv. Refl.: (1,13,3), (3,1,13), (3,7,11), (3,11,7), (3,13,1), (7,3,11), (7,7,9), (7,9,7), (7,11,3), (9,7,7), (11,3,7), (11,7,3), (13,1,3), (13,3,1)								
Si	(0,4,12)	14.438	79.21	2.6849	2.17	2.8005	6.09	35.01	35.53
	Equiv. Refl.: (0,12,4), (4,0,12), (4,12,0), (12,0,4), (12,4,0)								
Ge	(4,4,12)	14.537	81.52	2.6772	6.1	2.1924	13.37	27.41	30.49
	Equiv. Refl.: (4,12,4), (12,4,4)								
Si	(1,9,9)	14.573	82.52	1.8967	2.14	1.9293	4.12	24.12	24.47
	Equiv. Refl.: (9,1,9), (9,9,1)								
Ge	(2,8,10)	14.203	75.09	1.719	3.78	3.9144	14.8	48.93	51.12
	Equiv. Refl.: (2,10,8), (8,2,10), (8,10,2), (10,2,8), (10,8,2)								
Ge	(0,4,12)	13.861	70.57	1.4929	3.17	5.1856	16.46	64.82	66.88
	Equiv. Refl.: (0,12,4), (4,0,12), (4,12,0), (12,0,4), (12,4,0)								
Si	(2,2,12)	14.073	73.23	1.4591	1.55	4.4301	6.85	55.38	55.8
	Equiv. Refl.: (2,12,2), (4,6,10), (4,10,6), (6,4,10), (6,10,4), (10,4,6), (10,6,4), (12,2,2)								
Si	(3,5,11)	14.211	75.21	1.0704	1.19	3.8813	4.63	48.52	48.74
	Equiv. Refl.: (3,11,5), (5,3,11), (5,7,9), (5,9,7), (5,11,3), (7,5,9), (7,9,5), (9,5,7), (9,7,5), (11,3,5), (11,5,3)								
Ge	(1,1,13)	14.329	77.14	1.0222	3	3.3562	10.07	41.95	43.14
	Equiv. Refl.: (1,7,11), (1,11,7), (1,13,1), (3,9,9), (5,5,11), (5,11,5), (7,1,11), (7,11,1), (9,3,9), (9,9,3), (11,1,7), (11,5,5), (11,7,1), (13,1,1)								
Si	(1,5,11)	13.839	70.32	0.9017	0.99	5.2575	5.23	65.72	65.93
	Equiv. Refl.: (1,11,5), (5,1,11), (5,11,1), (7,7,7), (11,1,5), (11,5,1)								
Ge	(1,9,9)	13.99	72.14	0.8403	2.36	4.7349	11.18	59.19	60.23
	Equiv. Refl.: (9,1,9), (9,9,1)								
LiNbO3	(6,6,-6)	14.697	89.46	146.096	130.5	0.138	18.06	1.73	18.14
	Equiv. Refl.: (-6,12,-6), (-6,-6,-6), (-12,6,-6)								
LiNbO3	(6,-12,-6)	14.697	89.46	146.095	130.5	0.138	18.06	1.73	18.14
	Equiv. Refl.: (12,-6,-6)								
LiNbO3	(6,6,6)	14.697	89.46	140.963	130.5	0.138	18.06	1.73	18.14
	Equiv. Refl.: (-6,-6,6)								
LiNbO3	(6,-12,6)	14.697	89.46	140.962	130.5	0.138	18.06	1.73	18.14
	Equiv. Refl.: (12,-6,6)								
LiNbO3	(-6,12,6)	14.697	89.46	140.961	130.5	0.138	18.06	1.73	18.14
	Equiv. Refl.: (-12,6,6)								
LiNbO3	(1,9,-14)	14.668	86.31	19.112	17.2	0.947	16.26	11.84	20.12
	Equiv. Refl.: (-1,10,-14), (-9,-1,-14), (-10,1,-14)								
LiNbO3	(9,-10,-14)	14.668	86.31	19.111	17.2	0.947	16.26	11.84	20.12
	Equiv. Refl.: (10,-9,-14)								
LiNbO3	(5,6,14)	14.668	86.31	18.775	16.9	0.947	16.02	11.84	19.92
	Equiv. Refl.: (6,-11,14), (11,-6,14), (-5,11,14), (-6,-5,14), (-11,5,14)								
LiNbO3	(1,-10,14)	14.668	86.31	18.009	17.2	0.947	16.26	11.84	20.12
	Equiv. Refl.: (9,1,14), (10,-1,14), (-1,-9,14)								
LiNbO3	(-9,10,14)	14.668	86.31	18.008	17.2	0.947	16.26	11.84	20.12
	Equiv. Refl.: (-10,9,14)								
LiNbO3	(5,-11,-14)	14.668	86.31	17.707	16.9	0.947	16.02	11.84	19.92
	Equiv. Refl.: (6,5,-14), (11,-5,-14), (-5,-6,-14), (-6,11,-14), (-11,6,-14)								

Ei =	14.698	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,-11,0)	14.65	85.35	15.922	14.4	1.195	17.18	14.93	22.76
	Equiv. Refl.: (10,1,0), (11,-1,0), (-1,-10,0), (-10,11,0), (-11,10,0)								
LiNbO3	(1,10,0)	14.65	85.35	15.414	14.4	1.195	17.18	14.93	22.76
	Equiv. Refl.: (10,-11,0), (11,-10,0), (-1,11,0), (-10,-1,0), (-11,1,0)								
LiNbO3	(4,-9,22)	14.653	85.54	12.672	11.7	1.146	13.46	14.33	19.66
	Equiv. Refl.: (5,4,22), (9,-4,22), (-4,-5,22), (-5,9,22), (-9,5,22)								
LiNbO3	(4,5,-22)	14.653	85.54	12.387	11.7	1.146	13.46	14.33	19.66
	Equiv. Refl.: (-4,9,-22), (-5,-4,-22), (-9,4,-22)								
LiNbO3	(5,-9,-22)	14.653	85.54	12.386	11.7	1.146	13.46	14.33	19.66
	Equiv. Refl.: (9,-5,-22)								
LiNbO3	(5,7,4)	14.627	84.36	12.29	11	1.451	15.99	18.14	24.18
	Equiv. Refl.: (7,-12,4), (12,-7,4), (-5,12,4), (-7,-5,4), (-12,5,4)								
LiNbO3	(0,-10,10)	14.606	83.59	11.564	10.4	1.65	17.16	20.63	26.83
	Equiv. Refl.: (10,0,10), (-10,10,10)								
LiNbO3	(5,-12,-4)	14.627	84.36	11.446	11	1.451	15.99	18.14	24.18
	Equiv. Refl.: (7,5,-4), (12,-5,-4), (-5,-7,-4), (-7,12,-4), (-12,7,-4)								
Quartz	(3,7,-6)	14.665	86.17	11.428	9.3	0.985	9.14	12.31	15.33
	Equiv. Refl.: (3,-10,6)								
Quartz	(7,3,6)	14.665	86.17	11.427	9.3	0.985	9.14	12.31	15.33
	Equiv. Refl.: (7,-10,-6)								
Quartz	(-10,3,-6)	14.665	86.17	11.424	9.3	0.985	9.13	12.31	15.33
	Equiv. Refl.: (-10,7,6)								
Quartz	(-3,-7,6)	14.665	86.17	11.272	9.3	0.985	9.14	12.31	15.33
Quartz	(-3,10,-6)	14.665	86.17	11.271	9.3	0.985	9.14	12.31	15.33
Quartz	(-7,10,6)	14.665	86.17	11.269	9.3	0.985	9.14	12.31	15.33
	Equiv. Refl.: (-7,-3,-6)								
Quartz	(10,-3,6)	14.665	86.17	11.267	9.3	0.985	9.13	12.31	15.33
	Equiv. Refl.: (10,-7,-6)								
LiNbO3	(0,10,-10)	14.606	83.59	11.069	10.4	1.65	17.16	20.63	26.83
	Equiv. Refl.: (10,-10,-10), (-10,0,-10)								
LiNbO3	(5,-12,2)	14.545	81.72	9.936	8.9	2.14	19.04	26.75	32.84
	Equiv. Refl.: (7,5,2), (12,-5,2), (-5,-7,2), (-7,12,2), (-12,7,2)								
LiNbO3	(5,7,-2)	14.545	81.72	9.719	8.9	2.14	19.04	26.75	32.84
	Equiv. Refl.: (7,-12,-2), (12,-7,-2), (-5,12,-2), (-7,-5,-2), (-12,5,-2)								
LiNbO3	(2,4,28)	14.523	81.14	9.636	8.5	2.29	19.51	28.63	34.64
	Equiv. Refl.: (4,-6,28), (6,-4,28), (-2,6,28), (-4,-2,28), (-6,2,28)								
LiNbO3	(2,-6,-28)	14.523	81.14	9.528	8.5	2.29	19.51	28.63	34.64
	Equiv. Refl.: (4,2,-28), (6,-2,-28), (-2,-4,-28), (-4,6,-28), (-6,4,-28)								
LiNbO3	(2,9,8)	14.558	82.09	9.324	8.3	2.041	16.93	25.51	30.62
	Equiv. Refl.: (9,-11,8), (11,-9,8), (-2,11,8), (-9,-2,8), (-11,2,8)								
LiNbO3	(2,-11,-8)	14.558	82.09	9.152	8.3	2.041	16.93	25.51	30.62
	Equiv. Refl.: (9,2,-8), (11,-2,-8), (-2,-9,-8), (-9,11,-8), (-11,9,-8)								
LiNbO3	(0,-2,32)	14.577	82.65	8.989	8.1	1.895	15.25	23.68	28.17
	Equiv. Refl.: (2,0,32), (-2,2,32)								
LiNbO3	(5,5,18)	14.484	80.22	8.897	7.6	2.533	19.31	31.67	37.09
	Equiv. Refl.: (5,-10,18), (10,-5,18), (-5,10,18), (-5,-5,18), (-10,5,18)								
LiNbO3	(0,2,-32)	14.577	82.65	8.598	8.1	1.895	15.25	23.68	28.17
	Equiv. Refl.: (2,-2,-32), (-2,0,-32)								
LiNbO3	(5,5,-18)	14.484	80.22	8.467	7.6	2.533	19.31	31.67	37.09
	Equiv. Refl.: (5,-10,-18), (10,-5,-18), (-5,10,-18), (-5,-5,-18), (-10,5,-18)								

Ei =	14.698	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
LiNbO3	(2,-9,20)	14.475	80.01	8.26	7.2	2.589	18.52	32.37	37.29
	Equiv. Refl.: (7,2,20), (9,-2,20), (-2,-7,20), (-7,9,20), (-9,7,20)								
LiNbO3	(2,7,-20)	14.475	80.01	7.903	7.2	2.589	18.52	32.37	37.29
	Equiv. Refl.: (7,-9,-20), (9,-7,-20), (-2,9,-20), (-7,-2,-20), (-9,2,-20)								
Sapph	(0,4,-28)	14.657	85.69	7.77	6.5	1.107	7.22	13.83	15.6
	Equiv. Refl.: (0,-4,28), (4,0,28), (4,-4,-28), (-4,0,-28), (-4,4,28)								
Quartz	(0,5,-11)	14.569	82.41	7.714	6.2	1.958	12.12	24.48	27.31
	Equiv. Refl.: (0,-5,11)								
Quartz	(-5,5,11)	14.569	82.41	7.711	6.2	1.958	12.11	24.48	27.31
Quartz	(5,0,11)	14.569	82.41	7.71	6.2	1.958	12.11	24.48	27.31
	Equiv. Refl.: (5,-5,-11), (-5,0,-11)								
LiNbO3	(4,4,24)	14.422	78.87	7.565	6.7	2.891	19.22	36.13	40.93
	Equiv. Refl.: (4,-8,24), (8,-4,24), (-4,8,24), (-4,-4,24), (-8,4,24)								
LiNbO3	(4,4,-24)	14.422	78.87	7.542	6.7	2.891	19.22	36.13	40.93
	Equiv. Refl.: (4,-8,-24), (8,-4,-24), (-4,8,-24), (-4,-4,-24), (-8,4,-24)								
LiNbO3	(4,-11,12)	14.443	79.32	7.158	6.3	2.773	17.4	34.66	38.78
	Equiv. Refl.: (7,4,12), (11,-4,12), (-4,-7,12), (-7,11,12), (-11,7,12)								
LiNbO3	(0,-10,-8)	14.358	77.65	7.137	6.2	3.219	20.02	40.24	44.94
	Equiv. Refl.: (10,0,-8), (-10,10,-8)								
LiNbO3	(0,10,8)	14.358	77.65	7.07	6.2	3.219	20.02	40.24	44.94
	Equiv. Refl.: (10,-10,8), (-10,0,8)								
LiNbO3	(4,7,-12)	14.443	79.32	6.856	6.3	2.773	17.4	34.66	38.78
	Equiv. Refl.: (7,-11,-12), (11,-7,-12), (-4,11,-12), (-7,-4,-12), (-11,4,-12)								
LiNbO3	(-1,1,-32)	14.377	78	6.73	5.9	3.123	18.53	39.04	43.21
LiNbO3	(0,-1,-32)	14.377	78	6.729	5.9	3.123	18.53	39.04	43.21
	Equiv. Refl.: (1,0,-32)								
LiNbO3	(0,1,32)	14.377	78	6.65	5.9	3.123	18.53	39.04	43.21
	Equiv. Refl.: (1,-1,32), (-1,0,32)								
Quartz	(-7,5,-10)	14.641	84.95	6.629	5.3	1.3	6.84	16.25	17.63
Quartz	(2,5,10)	14.641	84.95	6.628	5.3	1.3	6.83	16.25	17.63
	Equiv. Refl.: (2,-7,-10), (-7,2,10)								
Quartz	(5,2,-10)	14.641	84.95	6.627	5.3	1.3	6.83	16.25	17.63
Quartz	(5,-7,10)	14.641	84.95	6.626	5.3	1.3	6.83	16.25	17.63
Quartz	(7,-5,10)	14.641	84.95	6.511	5.3	1.3	6.84	16.25	17.63
Quartz	(7,-2,-10)	14.641	84.95	6.51	5.3	1.3	6.84	16.25	17.63
Quartz	(-2,7,10)	14.641	84.95	6.508	5.3	1.3	6.83	16.25	17.63
	Equiv. Refl.: (-2,-5,-10), (-5,-2,10)								
Quartz	(-5,7,-10)	14.641	84.95	6.507	5.3	1.3	6.83	16.25	17.63
LiNbO3	(3,8,10)	14.406	78.57	6.401	5.5	2.973	16.48	37.16	40.65
	Equiv. Refl.: (8,-11,10), (11,-8,10), (-3,11,10), (-8,-3,10), (-11,3,10)								
LiNbO3	(4,7,12)	14.443	79.32	6.383	5.7	2.773	15.79	34.66	38.09
	Equiv. Refl.: (7,-11,12), (11,-7,12), (-4,11,12), (-7,-4,12), (-11,4,12)								
LiNbO3	(0,-3,-30)	14.049	72.91	6.336	5.4	4.519	24.21	56.49	61.46
	Equiv. Refl.: (3,0,-30), (-3,3,-30)								
LiNbO3	(0,3,-30)	14.049	72.91	6.319	5.3	4.519	24.11	56.49	61.42
	Equiv. Refl.: (3,-3,-30), (-3,0,-30)								
LiNbO3	(3,8,-8)	14.154	74.37	6.303	5.3	4.113	21.97	51.41	55.91
	Equiv. Refl.: (8,-11,-8), (11,-8,-8), (-3,11,-8), (-8,-3,-8), (-11,3,-8)								
LiNbO3	(0,3,30)	14.049	72.91	6.202	5.4	4.519	24.21	56.49	61.46
	Equiv. Refl.: (3,-3,30), (-3,0,30)								

Ei = Cryst	14.698 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
LiNbO3	(0,-3,30)	14.049	72.91	6.162	5.3	4.519	24.11	56.49	61.42
	Equiv. Refl.: (3,0,30), (-3,3,30)								
LiNbO3	(4,-11,-12)	14.443	79.32	6.096	5.7	2.773	15.79	34.66	38.09
	Equiv. Refl.: (7,4,-12), (11,-4,-12), (-4,-7,-12), (-7,11,-12), (-11,7,-12)								
LiNbO3	(3,-11,8)	14.154	74.37	6.036	5.3	4.113	21.97	51.41	55.91
	Equiv. Refl.: (8,3,8), (11,-3,8), (-3,-8,8), (-8,11,8), (-11,8,8)								
LiNbO3	(6,6,0)	14.45	79.47	5.878	5.4	2.733	14.84	34.16	37.24
	Equiv. Refl.: (6,-12,0), (12,-6,0), (-6,12,0), (-6,-6,0), (-12,6,0)								
LiNbO3	(3,-11,-10)	14.406	78.57	5.838	5.5	2.973	16.48	37.16	40.65
	Equiv. Refl.: (8,3,-10), (11,-3,-10), (-3,-8,-10), (-8,11,-10), (-11,8,-10)								
LiNbO3	(3,5,22)	13.839	70.32	5.828	4.9	5.258	25.6	65.72	70.53
	Equiv. Refl.: (5,-8,22), (8,-5,22), (-3,8,22), (-5,-3,22), (-8,3,22)								
Quartz	(2,-4,-12)	14.66	85.9	5.659	4.6	1.053	4.89	13.17	14.05
Quartz	(2,2,12)	14.66	85.9	5.658	4.6	1.053	4.89	13.17	14.05
Quartz	(-4,2,-12)	14.66	85.9	5.654	4.6	1.053	4.89	13.17	14.05
Quartz	(-4,2,12)	14.66	85.9	5.652	4.6	1.053	4.89	13.17	14.04
Quartz	(2,2,-12)	14.66	85.9	5.648	4.6	1.053	4.89	13.17	14.04
Quartz	(2,-4,12)	14.66	85.9	5.647	4.6	1.053	4.88	13.17	14.04
LiNbO3	(3,-8,-22)	13.839	70.32	5.613	4.9	5.258	25.6	65.72	70.53
	Equiv. Refl.: (5,3,-22), (8,-3,-22), (-3,-5,-22), (-5,8,-22), (-8,5,-22)								
LiNbO3	(3,4,26)	14.378	78.01	5.57	4.7	3.12	14.71	39	41.68
	Equiv. Refl.: (4,-7,26), (7,-4,26), (-3,7,26), (-4,-3,26), (-7,3,26)								
Quartz	(-2,4,12)	14.66	85.9	5.369	4.6	1.053	4.89	13.17	14.05
	Equiv. Refl.: (-2,-2,-12)								
Quartz	(4,-2,12)	14.66	85.9	5.367	4.6	1.053	4.89	13.17	14.05
LiNbO3	(2,-8,22)	14.047	72.89	5.366	4.6	4.526	20.94	56.57	60.32
	Equiv. Refl.: (6,2,22), (8,-2,22), (-2,-6,22), (-6,8,22), (-8,6,22)								
Quartz	(4,-2,-12)	14.66	85.9	5.364	4.6	1.053	4.89	13.17	14.04
Quartz	(-2,-2,12)	14.66	85.9	5.36	4.6	1.053	4.89	13.17	14.04
Quartz	(-2,4,-12)	14.66	85.9	5.359	4.6	1.053	4.88	13.17	14.04
LiNbO3	(3,-7,-26)	14.378	78.01	5.32	4.7	3.12	14.71	39	41.68
	Equiv. Refl.: (4,3,-26), (7,-3,-26), (-3,-4,-26), (-4,7,-26), (-7,4,-26)								
LiNbO3	(0,10,-4)	14.019	72.52	5.273	4.5	4.628	21.04	57.85	61.56
	Equiv. Refl.: (10,-10,-4), (-10,0,-4)								
LiNbO3	(4,5,20)	14.069	73.17	5.27	4.3	4.445	19	55.56	58.72
	Equiv. Refl.: (5,-9,20), (9,-5,20), (-4,9,20), (-5,-4,20), (-9,4,20)								
LiNbO3	(1,-10,-10)	13.998	72.24	5.257	4.5	4.706	21.17	58.83	62.52
	Equiv. Refl.: (9,1,-10), (10,-1,-10), (-1,-9,-10), (-9,10,-10), (-10,9,-10)								
LiNbO3	(2,-11,-2)	14.14	74.16	5.23	4.3	4.169	18.07	52.11	55.15
	Equiv. Refl.: (9,2,-2), (11,-2,-2), (-2,-9,-2), (-9,11,-2), (-11,9,-2)								
LiNbO3	(2,9,-4)	14.225	75.42	5.224	4.7	3.822	17.9	47.78	51.02
	Equiv. Refl.: (9,-11,-4), (11,-9,-4), (-2,11,-4), (-9,-2,-4), (-11,2,-4)								
LiNbO3	(2,-11,4)	14.225	75.42	5.223	4.7	3.822	17.9	47.78	51.02
	Equiv. Refl.: (9,2,4), (11,-2,4), (-2,-9,4), (-9,11,4), (-11,9,4)								
LiNbO3	(2,6,-22)	14.047	72.89	5.209	4.6	4.526	20.94	56.57	60.32
	Equiv. Refl.: (6,-8,-22), (8,-6,-22), (-2,8,-22), (-6,-2,-22), (-8,2,-22)								
Sapph	(0,0,30)	14.319	76.96	5.195	4	3.405	13.79	42.57	44.74
	Equiv. Refl.: (0,0,-30)								
LiNbO3	(2,9,2)	14.14	74.16	5.153	4.3	4.169	18.07	52.11	55.15
	Equiv. Refl.: (9,-11,2), (11,-9,2), (-2,11,2), (-9,-2,2), (-11,2,2)								

Ei = Cryst	14.698 Ref (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
LiNbO3	(3,-10,16)	14.281	76.31	5.132	4.4	3.58	15.68	44.75	47.41
Equiv. Refl.: (7,3,16), (10,-3,16), (-3,-7,16), (-7,10,16), (-10,7,16)									
LiNbO3	(0,-10,4)	14.019	72.52	5.118	4.5	4.628	21.04	57.85	61.56
Equiv. Refl.: (10,0,4), (-10,10,4)									
LiNbO3	(3,7,-16)	14.281	76.31	5.111	4.4	3.58	15.68	44.75	47.41
Equiv. Refl.: (7,-10,-16), (10,-7,-16), (-3,10,-16), (-7,-3,-16), (-10,3,-16)									
LiNbO3	(5,-11,10)	13.998	72.24	5.074	4.1	4.706	19.36	58.83	61.93
Equiv. Refl.: (6,5,10), (11,-5,10), (-5,-6,10), (-6,11,10), (-11,6,10)									
LiNbO3	(1,9,10)	13.998	72.24	5.031	4.5	4.706	21.17	58.83	62.52
Equiv. Refl.: (9,-10,10), (10,-9,10), (-1,10,10), (-9,-1,10), (-10,1,10)									
LiNbO3	(4,-9,-20)	14.069	73.17	5.02	4.3	4.445	19	55.56	58.72
Equiv. Refl.: (5,4,-20), (9,-4,-20), (-4,-5,-20), (-5,9,-20), (-9,5,-20), (9,-4,8)									
Quartz	(9,-5,-8)	14.618	84.03	5.019	4.1	1.537	6.25	19.22	20.21
Quartz	(-4,9,-8)	14.618	84.03	5.018	4.1	1.537	6.25	19.22	20.21
Equiv. Refl.: (-4,-5,8)									
Quartz	(-5,9,8)	14.618	84.03	5.011	4.1	1.537	6.24	19.22	20.21
Equiv. Refl.: (-5,-4,-8)									
LiNbO3	(1,-9,16)	13.868	70.66	4.981	4.1	5.159	20.93	64.49	67.8
Equiv. Refl.: (8,1,16), (9,-1,16), (-1,-8,16)									
LiNbO3	(-8,9,16)	13.868	70.66	4.98	4.1	5.159	20.93	64.49	67.8
Equiv. Refl.: (-9,8,16)									
LiNbO3	(2,8,-12)	13.828	70.18	4.966	4	5.296	21.17	66.2	69.51
Equiv. Refl.: (8,-10,-12), (10,-8,-12), (-2,10,-12), (-8,-2,-12), (-10,2,-12)									
Quartz	(-9,4,-8)	14.618	84.03	4.944	4.1	1.537	6.25	19.22	20.21
LiNbO3	(1,8,-16)	13.868	70.66	4.943	4.1	5.159	20.93	64.49	67.8
Equiv. Refl.: (-1,9,-16), (-8,-1,-16), (-9,1,-16), (4,-9,8), (-9,5,8)									
LiNbO3	(8,-9,-16)	13.868	70.66	4.942	4.1	5.159	20.93	64.49	67.8
Equiv. Refl.: (9,-8,-16), (4,5,-8)									
Quartz	(5,4,8)	14.618	84.03	4.936	4.1	1.537	6.24	19.22	20.21
Equiv. Refl.: (5,-9,-8)									
LiNbO3	(4,6,16)	14.076	73.27	4.861	4	4.417	17.67	55.22	57.98
Equiv. Refl.: (6,-10,16), (10,-6,16), (-4,10,16), (-6,-4,16), (-10,4,16)									
LiNbO3	(5,6,-10)	13.998	72.24	4.841	4.1	4.706	19.36	58.83	61.93
Equiv. Refl.: (-5,11,-10), (-6,-5,-10), (-11,5,-10)									
LiNbO3	(6,-11,-10)	13.998	72.24	4.84	4.1	4.706	19.36	58.83	61.93
Equiv. Refl.: (11,-6,-10)									
LiNbO3	(2,2,30)	14.254	75.88	4.83	4.1	3.698	15.21	46.22	48.66
Equiv. Refl.: (2,-4,30), (4,-2,30), (-2,4,30), (-2,-2,30), (-4,2,30)									
LiNbO3	(2,-10,12)	13.828	70.18	4.805	4	5.296	21.17	66.2	69.51
Equiv. Refl.: (8,2,12), (10,-2,12), (-2,-8,12), (-8,10,12), (-10,8,12)									
Sapph	(1,8,14)	14.487	80.28	4.783	3.7	2.518	9.29	31.48	32.82
Equiv. Refl.: (1,-9,-14), (8,1,-14), (8,-9,14), (9,-1,-14), (9,-8,14), (-1,9,14), (-1,-8,-14), (-8,9,-14), (-8,-1,14), (-9,1,14), (-9,8,-14)									
LiNbO3	(1,-6,-26)	13.968	71.87	4.773	3.9	4.812	18.97	60.15	63.07
Equiv. Refl.: (5,1,-26), (6,-1,-26), (-1,-5,-26), (-5,6,-26), (-6,5,-26)									
LiNbO3	(0,7,-22)	13.839	70.32	4.737	3.9	5.258	20.26	65.72	68.77
Equiv. Refl.: (7,-7,-22), (-7,0,-22)									
LiNbO3	(2,2,-30)	14.254	75.88	4.717	4.1	3.698	15.21	46.22	48.66
Equiv. Refl.: (2,-4,-30), (4,-2,-30), (-2,4,-30), (-2,-2,-30), (-4,2,-30)									
LiNbO3	(1,5,26)	13.968	71.87	4.711	3.9	4.812	18.97	60.15	63.07
Equiv. Refl.: (5,-6,26), (6,-5,26), (-1,6,26), (-5,-1,26), (-6,1,26)									

Ei =	14.698	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
LiNbO3	(4,-10,-16)	14.076	73.27	4.647	4	4.417	17.67	55.22	57.98
	Equiv. Refl.: (6,4,-16), (10,-4,-16), (-4,-6,-16), (-6,10,-16), (-10,6,-16)								
LiNbO3	(0,8,-20)	14.273	76.19	4.646	3.8	3.612	13.84	45.15	47.22
	Equiv. Refl.: (8,-8,-20), (-8,0,-20)								
Quartz	(5,6,-4)	14.636	84.76	4.633	3.7	1.349	5.05	16.87	17.61
	Equiv. Refl.: (5,-11,4)								
Quartz	(-5,11,-4)	14.636	84.76	4.632	3.7	1.349	5.05	16.87	17.61
	Equiv. Refl.: (-5,-6,4)								
Quartz	(6,5,4)	14.636	84.76	4.629	3.7	1.349	5.05	16.87	17.6
	Equiv. Refl.: (-11,5,-4), (-11,6,4)								
Quartz	(6,-11,-4)	14.636	84.76	4.628	3.7	1.349	5.05	16.87	17.6
	Equiv. Refl.: (11,-5,4)								
Quartz	(11,-6,-4)	14.636	84.76	4.627	3.7	1.349	5.05	16.87	17.6
	Equiv. Refl.: (-6,11,4), (-6,-5,-4)								
LiNbO3	(0,-7,22)	13.839	70.32	4.605	3.9	5.258	20.26	65.72	68.77
	Equiv. Refl.: (7,0,22)								
LiNbO3	(-7,7,22)	13.839	70.32	4.604	3.9	5.258	20.26	65.72	68.77
Sapph	(3,7,-10)	14.198	75.01	4.594	3.4	3.935	13.41	49.19	50.99
	Equiv. Refl.: (3,-10,10), (7,3,10), (7,-10,-10), (10,-3,10), (10,-7,-10), (-3,10,-10), (-3,-7,10), (-7,10,10), (-7,-3,-10), (-10,3,-10), (-10,7,10)								
Sapph	(0,7,20)	14.214	75.25	4.403	3.3	3.87	12.71	48.38	50.02
	Equiv. Refl.: (0,-7,-20), (7,0,-20), (7,-7,20), (-7,0,20), (-7,7,-20)								
LiNbO3	(2,-10,-12)	13.828	70.18	4.373	3.6	5.296	18.93	66.2	68.86
	Equiv. Refl.: (8,2,-12), (10,-2,-12), (-2,-8,-12), (-8,10,-12), (-10,8,-12)								
Sapph	(5,6,-4)	14.478	80.07	4.264	3.3	2.574	8.57	32.17	33.29
	Equiv. Refl.: (5,-11,4), (6,5,4), (6,-11,-4), (11,-5,4), (11,-6,-4), (-5,11,-4), (-5,-6,4), (-6,11,4), (-6,-5,-4), (-11,5,-4), (-11,6,4)								
LiNbO3	(3,7,14)	13.854	70.49	4.228	3.5	5.208	18.44	65.1	67.66
	Equiv. Refl.: (7,-10,14), (10,-7,14), (-3,10,14), (-7,-3,14), (-10,3,14)								
LiNbO3	(3,-10,-14)	13.854	70.49	4.207	3.5	5.208	18.44	65.1	67.66
	Equiv. Refl.: (7,3,-14), (10,-3,-14), (-3,-7,-14), (-7,10,-14), (-10,7,-14)								
LiNbO3	(2,8,12)	13.828	70.18	4.168	3.6	5.296	18.93	66.2	68.86
	Equiv. Refl.: (8,-10,12), (10,-8,12), (-2,10,12), (-8,-2,12), (-10,2,12)								
LiNbO3	(0,5,28)	14.322	77.01	3.941	3.5	3.391	12.02	42.39	44.07
	Equiv. Refl.: (5,-5,28), (-5,0,28)								
LiNbO3	(0,-8,20)	14.273	76.19	3.924	3.8	3.612	13.84	45.15	47.22
	Equiv. Refl.: (8,0,20), (-8,8,20)								
LiNbO3	(-5,5,-28)	14.322	77.01	3.88	3.5	3.391	12.03	42.39	44.07
LiNbO3	(0,-5,-28)	14.322	77.01	3.879	3.5	3.391	12.02	42.39	44.07
	Equiv. Refl.: (5,0,-28)								
Sapph	(4,7,0)	14.508	80.78	3.872	3.1	2.386	7.34	29.82	30.71
	Equiv. Refl.: (4,-11,0), (7,4,0), (7,-11,0), (11,-4,0), (11,-7,0), (-4,11,0), (-4,-7,0), (-7,11,0), (-7,-4,0), (-11,4,0), (-11,7,0)								
LiNbO3	(0,-10,-2)	13.934	71.44	3.797	3.2	4.935	15.94	61.69	63.71
	Equiv. Refl.: (10,0,-2), (-10,10,-2)								
Quartz	(-3,-7,-6)	14.665	86.17	3.767	3.3	0.985	3.27	12.31	12.74
Quartz	(-3,10,6)	14.665	86.17	3.766	3.3	0.985	3.27	12.31	12.74
Quartz	(10,-3,-6)	14.665	86.17	3.763	3.3	0.985	3.27	12.31	12.74
Quartz	(10,-7,6)	14.665	86.17	3.762	3.3	0.985	3.26	12.31	12.74
Quartz	(-7,10,-6)	14.665	86.17	3.761	3.3	0.985	3.26	12.31	12.74

Ei = Cryst	14.698 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(-7,-3,6)	14.665	86.17	3.76	3.3	0.985	3.26	12.31	12.74
LiNbO3	(-2,5,-28) Equiv. Refl.: (-5,2,-28)	13.911	71.16	3.699	3.2	5.014	15.96	62.68	64.68
LiNbO3	(2,3,-28) Equiv. Refl.: (3,-5,-28), (5,-3,-28), (-3,-2,-28)	13.911	71.16	3.698	3.2	5.014	15.96	62.68	64.68
LiNbO3	(0,10,2) Equiv. Refl.: (10,-10,2), (-10,0,2)	13.934	71.44	3.695	3.2	4.935	15.94	61.69	63.71
LiNbO3	(2,-5,28) Equiv. Refl.: (3,2,28), (5,-2,28), (-2,-3,28), (-3,5,28), (-5,3,28)	13.911	71.16	3.677	3.2	5.014	15.96	62.68	64.68
Quartz	(5,2,10) Equiv. Refl.: (5,-7,-10)	14.641	84.95	3.378	2.8	1.3	3.59	16.25	16.64
Quartz	(2,-7,10)	14.641	84.95	3.376	2.8	1.3	3.58	16.25	16.64
Quartz	(2,5,-10)	14.641	84.95	3.375	2.8	1.3	3.58	16.25	16.64
Quartz	(-7,2,-10)	14.641	84.95	3.371	2.8	1.3	3.58	16.25	16.64
Quartz	(-7,5,10)	14.641	84.95	3.37	2.8	1.3	3.58	16.25	16.64
Sapph	(4,6,10) Equiv. Refl.: (4,-10,-10), (6,4,-10), (6,-10,10), (10,-4,-10), (10,-6,10), (-4,10,10), (-4,-6,-10), (-6,10,-10), (-6,-4,10), (-10,4,10), (-10,6,-10)	13.957	71.73	3.351	2.5	4.854	12.23	60.67	61.89
Quartz	(-5,7,10) Equiv. Refl.: (-5,-2,-10)	14.641	84.95	3.338	2.8	1.3	3.59	16.25	16.64
Sapph	(1,4,27) Equiv. Refl.: (1,4,-27), (1,-5,27), (1,-5,-27), (4,1,27), (4,1,-27), (4,-5,27), (4,-5,-27), (5,-1,27), (5,-1,-27), (5,-4,27), (5,-4,-27), (-1,5,27), (-1,5,-27), (-1,-4,27), (-1,-4,-27), (-4,5,27), (-4,5,-27), (-4,-1,27), (-4,-1,-27), (-5,1,27), (-5,1,-27), (-5,4,27), (-5,4,-27)	14.615	83.91	3.337	2.9	1.568	4.55	19.6	20.12
Quartz	(-2,7,-10)	14.641	84.95	3.336	2.8	1.3	3.58	16.25	16.64
Quartz	(-2,-5,10)	14.641	84.95	3.335	2.8	1.3	3.58	16.25	16.64
Quartz	(7,-2,10)	14.641	84.95	3.332	2.8	1.3	3.58	16.25	16.64
Quartz	(7,-5,-10)	14.641	84.95	3.33	2.8	1.3	3.58	16.25	16.64
Sapph	(0,5,-26) Equiv. Refl.: (0,-5,26), (5,0,26), (5,-5,-26), (-5,0,-26), (-5,5,26)	14.511	80.86	3.263	2.6	2.365	6.04	29.56	30.17
Quartz	(7,-7,-9) Equiv. Refl.: (-7,7,9)	14.512	80.86	3.203	2.5	2.364	6.01	29.55	30.15
Quartz	(7,0,9) Equiv. Refl.: (-7,0,-9)	14.512	80.86	3.202	2.5	2.364	6.01	29.55	30.15
Quartz	(0,7,-9) Equiv. Refl.: (0,-7,9)	14.512	80.86	3.2	2.5	2.364	6	29.55	30.15
Quartz	(3,7,6)	14.665	86.17	3.188	3.3	0.985	3.27	12.31	12.74
Quartz	(3,-10,-6)	14.665	86.17	3.187	3.3	0.985	3.27	12.31	12.74
Quartz	(-10,3,6)	14.665	86.17	3.184	3.3	0.985	3.27	12.31	12.74
Quartz	(7,-10,6)	14.665	86.17	3.183	3.3	0.985	3.26	12.31	12.74
Quartz	(-10,7,-6)	14.665	86.17	3.182	3.3	0.985	3.26	12.31	12.74
Quartz	(7,3,-6)	14.665	86.17	3.181	3.3	0.985	3.26	12.31	12.74
Quartz	(0,7,9) Equiv. Refl.: (0,-7,-9)	14.512	80.86	3.152	2.5	2.364	5.93	29.55	30.13
Quartz	(7,0,-9) Equiv. Refl.: (-7,0,9)	14.512	80.86	3.151	2.5	2.364	5.92	29.55	30.13
Quartz	(7,-7,9) Equiv. Refl.: (-7,7,-9)	14.512	80.86	3.15	2.5	2.364	5.92	29.55	30.13
Quartz	(0,6,-10) Equiv. Refl.: (0,-6,10), (6,-6,-10), (-6,0,-10), (-6,6,10)	14.422	78.87	3.145	2.4	2.891	7.02	36.13	36.81

Ei =	14.698	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(6,0,10)	14.422	78.87	3.144	2.4	2.891	7.02	36.13	36.81
Quartz	(11,-3,2)	14.532	81.38	3.08	2.3	2.229	5.16	27.86	28.33
	Equiv. Refl.: (11,-8,-2)								
Quartz	(-3,11,-2)	14.532	81.38	3.079	2.3	2.229	5.16	27.86	28.33
	Equiv. Refl.: (-3,-8,2), (-8,11,2), (-8,-3,-2)								
Quartz	(8,3,2)	14.532	81.38	2.965	2.3	2.229	5.16	27.86	28.33
	Equiv. Refl.: (8,-11,-2), (-11,3,-2), (-11,8,2)								
Quartz	(3,8,-2)	14.532	81.38	2.964	2.3	2.229	5.16	27.86	28.33
	Equiv. Refl.: (3,-11,2)								
Quartz	(-10,1,3)	14.318	76.95	2.898	2.1	3.407	7.18	42.59	43.19
	Equiv. Refl.: (-10,9,-3)								
Quartz	(1,9,3)	14.318	76.95	2.897	2.1	3.407	7.18	42.59	43.19
	Equiv. Refl.: (1,-10,-3)								
Quartz	(9,1,-3)	14.318	76.95	2.896	2.1	3.407	7.18	42.59	43.19
	Equiv. Refl.: (9,-10,3)								
Quartz	(10,-1,-3)	14.318	76.95	2.836	2.1	3.407	7.18	42.59	43.19
	Equiv. Refl.: (10,-9,3)								
Quartz	(-1,10,3)	14.318	76.95	2.835	2.1	3.407	7.18	42.59	43.19
	Equiv. Refl.: (-1,-9,-3), (-9,10,-3), (-9,-1,3)								
Quartz	(8,-3,9)	14.512	80.86	2.819	2.4	2.364	5.77	29.55	30.1
	Equiv. Refl.: (8,-5,-9)								
Quartz	(-5,8,9)	14.512	80.86	2.817	2.4	2.364	5.77	29.55	30.1
	Equiv. Refl.: (-5,-3,-9)								
Quartz	(-3,8,-9)	14.512	80.86	2.816	2.4	2.364	5.77	29.55	30.1
	Equiv. Refl.: (-3,-5,9)								
Sapph	(1,3,28)	14.423	78.9	2.776	2.2	2.884	6.24	36.05	36.58
	Equiv. Refl.: (1,-4,-28), (3,1,-28), (3,-4,28), (4,-1,-28), (4,-3,28), (-1,4,28), (-1,-3,-28), (-3,4,-28), (-3,-1,28), (-4,1,28), (-4,3,-28)								
Quartz	(3,8,-1)	14.395	78.35	2.744	2	3.029	6.16	37.87	38.37
	Equiv. Refl.: (3,-11,1), (8,3,1), (8,-11,-1), (-11,3,-1), (-11,8,1)								
Quartz	(-8,3,-9)	14.512	80.86	2.734	2.4	2.364	5.77	29.55	30.1
	Equiv. Refl.: (-8,5,9)								
Quartz	(3,5,-9)	14.512	80.86	2.732	2.4	2.364	5.77	29.55	30.1
	Equiv. Refl.: (3,-8,9), (5,3,9), (5,-8,-9)								
Quartz	(0,2,-12)	14.069	73.18	2.652	2.2	4.443	9.89	55.54	56.41
	Equiv. Refl.: (0,-2,12), (2,0,12), (-2,0,-12)								
Quartz	(2,-2,-12)	14.069	73.18	2.651	2.2	4.443	9.89	55.54	56.41
	Equiv. Refl.: (-2,2,12)								
Quartz	(11,-3,1)	14.395	78.35	2.37	2	3.029	6.16	37.87	38.36
	Equiv. Refl.: (11,-8,-1), (-3,11,-1), (-3,-8,1), (-8,11,1), (-8,-3,-1)								
Quartz	(7,-3,10)	14.495	80.47	2.321	2	2.468	5	30.85	31.25
	Equiv. Refl.: (7,-4,-10)								
Quartz	(9,0,5)	14.312	76.84	2.32	1.9	3.436	6.62	42.95	43.45
	Equiv. Refl.: (9,-9,-5), (-9,0,-5), (-9,9,5)								
Quartz	(-4,-3,-10)	14.495	80.47	2.319	2	2.468	5	30.85	31.25
Quartz	(-4,7,10)	14.495	80.47	2.318	2	2.468	4.99	30.85	31.25
Quartz	(-3,7,-10)	14.495	80.47	2.317	2	2.468	4.99	30.85	31.25
	Equiv. Refl.: (-3,-4,10)								
Quartz	(-7,3,-10)	14.495	80.47	2.301	2	2.468	5	30.85	31.25
	Equiv. Refl.: (-7,4,10)								

Ei =	14.698	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(4,3,10)	14.495	80.47	2.299	2	2.468	5	30.85	31.25
Quartz	(4,-7,-10)	14.495	80.47	2.298	2	2.468	4.99	30.85	31.25
Quartz	(3,4,-10)	14.495	80.47	2.297	2	2.468	4.99	30.85	31.25
	Equiv. Refl.: (3,-7,10)								
Sapph	(3,7,8)	13.906	71.11	2.274	1.9	5.03	9.64	62.88	63.62
	Equiv. Refl.: (3,-10,-8), (7,3,-8), (7,-10,8), (10,-3,-8), (10,-7,8), (-3,10,8), (-3,-7,-8), (-7,10,-8), (-7,-3,8), (-10,3,8), (-10,7,-8)								
Quartz	(0,9,-5)	14.312	76.84	2.208	1.9	3.436	6.62	42.95	43.45
	Equiv. Refl.: (0,-9,5)								
Quartz	(-1,10,-4)	14.636	84.76	1.898	2	1.349	2.75	16.87	17.09
	Equiv. Refl.: (-1,-9,4)								
Quartz	(-9,10,4)	14.636	84.76	1.897	2	1.349	2.75	16.87	17.09
	Equiv. Refl.: (-9,-1,-4)								
LiNbO3	(5,7,-5)	14.688	87.92	1.895	4.4	0.535	2.33	6.68	7.08
	Equiv. Refl.: (5,-12,5), (7,5,5), (7,-12,-5), (12,-5,5), (12,-7,-5), (-5,12,-5), (-5,-7,5), (-7,12,5), (-7,-5,-5), (-12,5,-5), (-12,7,5), (10,-1,4), (10,-9,-4)								
Sapph	(0,8,16)	14.254	75.88	1.874	1.9	3.698	7.15	46.23	46.78
	Equiv. Refl.: (0,-8,-16), (8,0,-16), (8,-8,16), (-8,0,16), (-8,8,-16)								
Quartz	(-4,8,9)	14.438	79.21	1.861	1.8	2.801	5.18	35.01	35.39
	Equiv. Refl.: (-4,-4,-9)								
Quartz	(8,-4,9)	14.438	79.21	1.859	1.8	2.801	5.17	35.01	35.39
	Equiv. Refl.: (8,-4,-9), (-4,8,-9), (-4,-4,9)								
Sapph	(2,7,16)	14.49	80.35	1.858	2	2.5	4.96	31.25	31.64
	Equiv. Refl.: (2,-9,-16), (7,2,-16), (7,-9,16), (9,-2,-16), (9,-7,16), (-2,9,16), (-2,-7,-16), (-7,9,-16), (-7,-2,16), (-9,2,16), (-9,7,-16)								
Quartz	(-2,3,12)	14.294	76.53	1.842	1.9	3.52	6.59	44	44.49
Quartz	(3,-1,12)	14.294	76.53	1.841	1.9	3.52	6.58	44	44.49
	Equiv. Refl.: (3,-2,-12), (-2,-1,-12)								
Quartz	(2,1,12)	14.294	76.53	1.84	1.9	3.52	6.58	44	44.49
	Equiv. Refl.: (2,-3,-12), (-1,3,-12), (-1,-2,12), (-3,1,-12), (-3,2,12)								
Quartz	(1,-3,12)	14.294	76.53	1.839	1.9	3.52	6.58	44	44.49
Quartz	(1,2,-12)	14.294	76.53	1.838	1.9	3.52	6.58	44	44.49
Sapph	(2,8,6)	14.082	73.36	1.772	1.8	4.393	7.97	54.91	55.49
	Equiv. Refl.: (2,8,-6), (2,-10,6), (2,-10,-6), (8,2,6), (8,2,-6), (8,-10,6), (8,-10,-6), (10,-2,6), (10,-2,-6), (10,-8,6), (10,-8,-6), (-2,10,6), (-2,10,-6), (-2,-8,6), (-2,-8,-6), (-8,10,6), (-8,10,-6), (-8,-2,6), (-8,-2,-6), (-10,2,6), (-10,2,-6), (-10,8,6), (-10,8,-6)								
Quartz	(1,9,-4)	14.636	84.76	1.76	2	1.349	2.75	16.87	17.09
	Equiv. Refl.: (1,-10,4), (9,1,4), (9,-10,-4)								
Quartz	(-10,9,4)	14.636	84.76	1.758	2	1.349	2.74	16.87	17.09
Quartz	(-10,1,-4)	14.636	84.76	1.757	2	1.349	2.74	16.87	17.09
Quartz	(11,-3,-2)	14.532	81.38	1.737	1.8	2.229	3.93	27.86	28.14
	Equiv. Refl.: (11,-8,2), (-3,11,2), (-3,-8,-2), (-8,11,-2), (-8,-3,2)								
Quartz	(4,4,9)	14.438	79.21	1.718	1.9	2.801	5.18	35.01	35.39
	Equiv. Refl.: (4,-8,-9)								
Quartz	(4,4,-9)	14.438	79.21	1.716	1.8	2.801	5.18	35.01	35.39
	Equiv. Refl.: (4,-8,9), (-8,4,9), (-8,4,-9)								
Quartz	(7,-1,-9)	14.066	73.14	1.712	1.7	4.456	7.62	55.7	56.22
	Equiv. Refl.: (7,-6,9), (-6,7,-9), (-6,-1,9)								
Quartz	(-1,7,9)	14.066	73.14	1.711	1.7	4.456	7.61	55.7	56.21
	Equiv. Refl.: (-1,-6,-9)								

Ei =	14.698	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(1,9,4)	14.478	80.07	1.688	1.8	2.574	4.67	32.17	32.51
	Equiv. Refl.: (1,-10,-4), (9,1,-4), (9,-10,4), (10,-1,-4), (10,-9,4), (-1,10,4), (-1,-9,-4), (-9,10,-4), (-9,-1,4), (-10,1,4), (-10,9,-4)								
Quartz	(4,6,-5)	13.936	71.48	1.687	1.7	4.925	8.32	61.56	62.12
	Equiv. Refl.: (4,-10,5)								
Quartz	(6,4,5)	13.936	71.48	1.686	1.7	4.925	8.32	61.56	62.12
	Equiv. Refl.: (6,-10,-5)								
Quartz	(-10,4,-5)	13.936	71.48	1.685	1.7	4.925	8.31	61.56	62.12
	Equiv. Refl.: (-10,6,5)								
Quartz	(6,1,-9)	14.066	73.14	1.679	1.7	4.456	7.62	55.7	56.22
	Equiv. Refl.: (-4,10,-5), (-4,-6,5), (-7,1,9), (-7,6,-9)								
Quartz	(1,6,9)	14.066	73.14	1.678	1.7	4.456	7.61	55.7	56.21
	Equiv. Refl.: (6,-7,9), (-6,10,5), (-6,-4,-5)								
Quartz	(1,-7,-9)	14.066	73.14	1.677	1.7	4.456	7.61	55.7	56.21
	Equiv. Refl.: (10,-4,5), (10,-6,-5)								
Sapph	(5,6,5)	14.548	81.82	1.665	1.8	2.114	3.88	26.42	26.71
	Equiv. Refl.: (5,-11,-5), (6,5,-5), (6,-11,5), (11,-5,-5), (11,-6,5), (-5,11,5), (-5,-6,-5), (-6,11,-5), (-6,-5,5), (-11,5,5), (-11,6,-5)								
Quartz	(11,-4,-2)	14.237	75.61	1.654	1.7	3.772	6.33	47.15	47.57
	Equiv. Refl.: (11,-7,2), (-4,11,2), (-4,-7,-2), (-7,11,-2), (-7,-4,2)								
Quartz	(-7,3,10)	14.495	80.47	1.642	1.7	2.468	4.27	30.85	31.14
Quartz	(7,-3,-10)	14.495	80.47	1.641	1.7	2.468	4.27	30.85	31.14
	Equiv. Refl.: (7,-4,10), (-7,4,-10)								
Quartz	(4,3,-10)	14.495	80.47	1.64	1.7	2.468	4.26	30.85	31.14
	Equiv. Refl.: (4,-7,10), (-4,-3,10)								
Quartz	(3,4,10)	14.495	80.47	1.639	1.7	2.468	4.26	30.85	31.14
	Equiv. Refl.: (3,-7,-10), (-3,7,10), (-3,-4,-10), (-4,7,-10)								
Quartz	(4,7,2)	14.237	75.61	1.636	1.7	3.772	6.33	47.15	47.57
	Equiv. Refl.: (4,-11,-2), (7,4,-2), (7,-11,2), (-11,4,2), (-11,7,-2)								
Quartz	(11,-5,-1)	13.946	71.59	1.631	1.6	4.891	7.96	61.14	61.66
Sapph	(1,5,-25)	14.579	82.7	1.63	1.8	1.883	3.45	23.54	23.79
	Equiv. Refl.: (1,-6,25), (5,1,25), (5,-6,-25), (6,-1,25), (6,-5,-25), (-1,6,-25), (-1,-5,25), (-5,6,25), (-5,-1,-25), (-6,1,-25), (-6,5,25), (11,-6,1), (-5,11,1), (-5,-6,-1), (-6,11,-1), (-6,-5,1)								
Quartz	(-9,10,-4)	14.636	84.76	1.619	1.8	1.349	2.42	16.87	17.04
	Equiv. Refl.: (-9,-1,4)								
Quartz	(10,-1,-4)	14.636	84.76	1.617	1.8	1.349	2.41	16.87	17.04
	Equiv. Refl.: (10,-9,4), (-1,10,4)								
Quartz	(-1,-9,-4)	14.636	84.76	1.616	1.8	1.349	2.41	16.87	17.04
Quartz	(5,6,1)	13.946	71.59	1.602	1.6	4.891	7.96	61.14	61.66
	Equiv. Refl.: (5,-11,-1), (6,5,-1), (6,-11,1), (-11,5,1), (-11,6,-1)								
Sapph	(2,7,-14)	14.01	72.4	1.59	1.6	4.661	7.63	58.26	58.76
	Equiv. Refl.: (2,-9,14), (7,2,14), (7,-9,-14), (9,-2,14), (9,-7,-14), (-2,9,-14), (-2,-7,14), (-7,9,14), (-7,-2,-14), (-9,2,-14), (-9,7,14)								
Quartz	(9,-2,-7)	14.377	78	1.585	1.6	3.124	5.07	39.05	39.37
	Equiv. Refl.: (9,-7,7)								
Quartz	(-7,9,-7)	14.377	78	1.583	1.6	3.124	5.07	39.05	39.37
	Equiv. Refl.: (-7,-2,7)								
Quartz	(-2,9,7)	14.377	78	1.582	1.6	3.124	5.06	39.05	39.37
	Equiv. Refl.: (-2,-7,-7)								

Ei =	14.698	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(3,8,2)	14.532	81.38	1.581	1.8	2.229	3.93	27.86	28.14
	Equiv. Refl.: (3,-11,-2), (8,3,-2), (8,-11,2), (-11,3,2), (-11,8,-2)								
Quartz	(9,1,3)	14.318	76.95	1.578	1.6	3.407	5.41	42.59	42.93
	Equiv. Refl.: (9,-10,-3)								
Quartz	(1,9,-3)	14.318	76.95	1.577	1.6	3.407	5.41	42.59	42.93
	Equiv. Refl.: (1,-10,3), (-10,1,-3), (-10,9,3)								
Quartz	(1,-7,9)	14.066	73.14	1.561	1.6	4.456	7.03	55.7	56.14
	Equiv. Refl.: (-7,1,-9), (-7,6,9)								
Quartz	(1,6,-9)	14.066	73.14	1.56	1.6	4.456	7.03	55.7	56.14
	Equiv. Refl.: (6,1,9), (6,-7,-9)								
Quartz	(7,-1,9)	14.066	73.14	1.551	1.6	4.456	7.03	55.7	56.14
	Equiv. Refl.: (7,-6,-9), (-1,7,-9)								
Quartz	(-1,-6,9)	14.066	73.14	1.55	1.6	4.456	7.03	55.7	56.14
	Equiv. Refl.: (-6,7,9), (-6,-1,-9)								
Quartz	(-9,2,7)	14.377	78	1.547	1.6	3.124	5.07	39.05	39.37
	Equiv. Refl.: (-9,7,-7)								
Quartz	(7,2,-7)	14.377	78	1.546	1.6	3.124	5.07	39.05	39.37
	Equiv. Refl.: (7,-9,7)								
Quartz	(2,7,7)	14.377	78	1.545	1.6	3.124	5.06	39.05	39.37
	Equiv. Refl.: (2,-9,-7)								
Quartz	(10,-1,-1)	13.946	71.59	1.542	1.6	4.891	7.61	61.14	61.61
	Equiv. Refl.: (10,-9,1), (-1,10,1), (-1,-9,-1), (-9,10,-1), (-9,-1,1)								
Quartz	(1,9,1)	13.946	71.59	1.54	1.6	4.891	7.61	61.14	61.61
	Equiv. Refl.: (1,-10,-1), (9,1,-1), (9,-10,1), (-10,1,1), (-10,9,-1)								
Quartz	(9,1,-4)	14.636	84.76	1.53	1.8	1.349	2.42	16.87	17.04
	Equiv. Refl.: (9,-10,4)								
Quartz	(-10,1,4)	14.636	84.76	1.528	1.8	1.349	2.41	16.87	17.04
	Equiv. Refl.: (-10,9,-4)								
Quartz	(1,9,4)	14.636	84.76	1.527	1.8	1.349	2.41	16.87	17.04
	Equiv. Refl.: (1,-10,-4)								
Sapph	(4,5,-16)	14.014	72.45	1.525	1.6	4.65	7.32	58.12	58.58
	Equiv. Refl.: (4,-9,16), (5,4,16), (5,-9,-16), (9,-4,16), (9,-5,-16), (-4,9,-16), (-4,-5,16), (-5,9,16), (-5,-4,-16), (-9,4,-16), (-9,5,16)								
Quartz	(-9,10,3)	14.318	76.95	1.502	1.6	3.407	5.41	42.59	42.93
	Equiv. Refl.: (-9,-1,-3)								
Quartz	(10,-1,3)	14.318	76.95	1.501	1.6	3.407	5.41	42.59	42.93
	Equiv. Refl.: (10,-9,-3), (-1,10,-3), (-1,-9,3)								
Quartz	(-2,8,-8)	13.949	71.64	1.497	1.5	4.879	7.38	60.99	61.44
	Equiv. Refl.: (-2,-6,8), (-6,8,8), (-6,-2,-8)								
Quartz	(8,-2,8)	13.949	71.64	1.496	1.5	4.879	7.38	60.99	61.43
	Equiv. Refl.: (8,-6,-8)								
Quartz	(2,6,-8)	13.949	71.64	1.495	1.5	4.879	7.38	60.99	61.44
	Equiv. Refl.: (2,-8,8), (6,2,8), (6,-8,-8)								
Quartz	(-8,2,-8)	13.949	71.64	1.494	1.5	4.879	7.38	60.99	61.43
	Equiv. Refl.: (-8,6,8)								
Quartz	(11,-4,2)	14.237	75.61	1.459	1.5	3.772	5.62	47.15	47.48
	Equiv. Refl.: (11,-7,-2), (-4,11,-2), (-4,-7,2), (-7,11,2), (-7,-4,-2)								
Sapph	(2,6,20)	14.45	79.47	1.452	1.6	2.733	4.31	34.16	34.43
	Equiv. Refl.: (2,-8,-20), (6,2,-20), (6,-8,20), (8,-2,-20), (8,-6,20), (-2,8,20), (-2,-6,-20), (-6,8,-20), (-6,-2,20), (-8,2,20), (-8,6,-20)								

Ei =	14.698	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Quartz	(10,-5,6)	14.373	77.92	1.445	1.5	3.145	4.74	39.31	39.6
	Equiv. Refl.: (10,-5,-6), (-5,10,6), (-5,-5,-6)								
Quartz	(-5,10,-6)	14.373	77.92	1.444	1.5	3.145	4.74	39.31	39.59
	Equiv. Refl.: (-5,-5,6)								
Quartz	(5,5,6)	14.373	77.92	1.443	1.5	3.145	4.74	39.31	39.6
	Equiv. Refl.: (5,-10,-6), (-10,5,6), (-10,5,-6)								
Quartz	(5,5,-6)	14.373	77.92	1.442	1.5	3.145	4.74	39.31	39.59
	Equiv. Refl.: (5,-10,6)								
Quartz	(4,-11,2)	14.237	75.61	1.436	1.5	3.772	5.62	47.15	47.48
	Equiv. Refl.: (-11,4,-2)								
Quartz	(4,7,-2)	14.237	75.61	1.435	1.5	3.772	5.62	47.15	47.48
	Equiv. Refl.: (7,4,2), (7,-11,-2), (-11,7,2)								
Quartz	(0,9,4)	13.892	70.94	1.426	1.4	5.078	7.33	63.47	63.89
	Equiv. Refl.: (0,-9,-4)								
Quartz	(9,0,-4)	13.892	70.94	1.425	1.4	5.078	7.33	63.47	63.89
	Equiv. Refl.: (9,-9,4), (-9,0,4), (-9,9,-4)								
Sapph	(1,1,30)	14.554	81.97	1.404	1.6	2.073	3.29	25.92	26.13
	Equiv. Refl.: (1,1,-30), (1,-2,30), (1,-2,-30), (2,-1,30), (2,-1,-30), (-1,2,30), (-1,2,-30), (-1,-1,30), (-1,-1,-30), (-2,1,30), (-2,1,-30)								
Quartz	(-6,10,-6)	14.446	79.38	1.393	1.5	2.755	4	34.44	34.67
	Equiv. Refl.: (-6,-4,6)								
Quartz	(-4,10,6)	14.446	79.38	1.392	1.4	2.755	3.99	34.44	34.67
	Equiv. Refl.: (-4,-6,-6)								
Quartz	(10,-4,-6)	14.446	79.38	1.391	1.4	2.755	3.99	34.44	34.67
	Equiv. Refl.: (10,-6,6)								
LiNbO3	(1,6,25)	14.426	78.97	1.386	2	2.866	5.72	35.83	36.28
	Equiv. Refl.: (1,-7,-25), (6,1,-25), (6,-7,25), (7,-1,-25), (7,-6,25), (-1,7,25), (-1,-6,-25), (-6,7,-25), (-6,-1,25), (-7,1,25), (-7,6,-25), (2,3,26), (2,-5,-26), (3,2,-26), (3,-5,26), (5,-2,-26), (5,-3,26), (-2,5,26), (-2,-3,-26), (-3,5,-26), (-3,-2,26), (-5,2,26), (-5,3,-26)								
Quartz	(0,2,12)	14.069	73.18	1.365	1.4	4.443	6.21	55.54	55.88
	Equiv. Refl.: (0,-2,-12), (2,-2,12), (-2,0,12), (-2,2,-12)								
Quartz	(2,0,-12)	14.069	73.18	1.364	1.4	4.443	6.2	55.54	55.88
Sapph	(1,8,-13)	14.273	76.19	1.363	1.5	3.613	5.24	45.17	45.47
	Equiv. Refl.: (1,-9,13), (8,1,13), (8,-9,-13), (9,-1,13), (9,-8,-13), (-1,9,-13), (-1,-8,13), (-8,9,13), (-8,-1,-13), (-9,1,-13), (-9,8,13)								
Quartz	(3,8,1)	14.395	78.35	1.353	1.4	3.029	4.24	37.87	38.1
	Equiv. Refl.: (3,-11,-1), (8,3,-1), (8,-11,1), (-11,3,1), (-11,8,-1)								
Quartz	(6,4,-6)	14.446	79.38	1.34	1.5	2.755	4	34.44	34.67
	Equiv. Refl.: (6,-10,6), (-9,5,-7)								
Quartz	(4,5,7)	13.927	71.36	1.339	1.4	4.958	6.71	61.98	62.34
	Equiv. Refl.: (4,6,6), (4,-9,-7), (4,-10,-6), (5,4,-7), (5,-9,7), (-9,4,7)								
Quartz	(-10,4,6)	14.446	79.38	1.338	1.4	2.755	3.99	34.44	34.67
	Equiv. Refl.: (-10,6,-6)								
Quartz	(9,-4,-7)	13.927	71.36	1.318	1.4	4.958	6.71	61.98	62.34
	Equiv. Refl.: (9,-5,7), (-4,9,7), (-4,-5,-7)								
Quartz	(1,5,-10)	14.049	72.91	1.317	1.3	4.519	6.08	56.49	56.82
	Equiv. Refl.: (1,-6,10), (-5,9,-7), (-5,-4,7), (-6,1,-10)								
Quartz	(5,1,10)	14.049	72.91	1.316	1.3	4.519	6.08	56.49	56.82
	Equiv. Refl.: (5,-6,-10), (-6,5,10)								

Ei = Cryst	14.698 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
LiNbO3	(1,9,13)	14.482	80.17	1.308	2	2.546	5.03	31.82	32.22
	Equiv. Refl.: (1,-10,-13), (9,1,-13), (9,-10,13), (10,-1,-13), (10,-9,13), (-1,10,13), (-1,-9,-13), (-9,10,-13), (-9,-1,13), (-10,1,13), (-10,9,-13), (6,-1,10), (-1,6,-10), (-1,-5,10)								
Quartz	(6,-5,-10)	14.049	72.91	1.307	1.3	4.519	6.08	56.49	56.82
	Equiv. Refl.: (-5,6,10), (-5,-1,-10)								
Quartz	(11,-3,-1)	14.395	78.35	1.301	1.4	3.029	4.24	37.87	38.1
	Equiv. Refl.: (11,-8,1), (-3,11,1), (-3,-8,-1), (-8,11,-1), (-8,-3,1)								
Quartz	(2,7,-7)	14.377	78	1.29	1.3	3.124	4.21	39.05	39.27
	Equiv. Refl.: (2,-9,7), (-9,7,7)								
Quartz	(7,2,7)	14.377	78	1.289	1.3	3.124	4.21	39.05	39.27
	Equiv. Refl.: (7,-9,-7), (-9,2,-7)								
Quartz	(-2,10,5)	14.533	81.41	1.284	1.3	2.221	2.84	27.77	27.91
	Equiv. Refl.: (-2,-8,-5)								
Quartz	(10,-2,-5)	14.533	81.41	1.283	1.3	2.221	2.84	27.77	27.91
Quartz	(10,-8,5)	14.533	81.41	1.282	1.3	2.221	2.84	27.77	27.91
	Equiv. Refl.: (-8,10,-5)								
Quartz	(-8,-2,5)	14.533	81.41	1.281	1.3	2.221	2.84	27.77	27.91
Quartz	(9,-7,-7)	14.377	78	1.263	1.3	3.124	4.21	39.05	39.27
	Equiv. Refl.: (-2,9,-7), (-2,-7,7)								
Quartz	(9,-2,7)	14.377	78	1.262	1.3	3.124	4.21	39.05	39.27
	Equiv. Refl.: (-7,9,7), (-7,-2,-7)								
Sapph	(4,4,21)	14.46	79.68	1.248	1.4	2.676	3.72	33.45	33.65
	Equiv. Refl.: (4,4,-21), (4,-8,21), (4,-8,-21), (8,-4,21), (8,-4,-21), (-4,8,21), (-4,8,-21), (-4,-4,21), (-4,-4,-21), (-8,4,21), (-8,4,-21)								
Quartz	(3,-1,-12)	14.294	76.53	1.197	1.2	3.52	4.36	44	44.21
	Equiv. Refl.: (3,-2,12)								
Quartz	(-1,3,12)	14.294	76.53	1.195	1.2	3.52	4.35	44	44.21
	Equiv. Refl.: (-1,-2,-12)								
Quartz	(-2,3,-12)	14.294	76.53	1.193	1.2	3.52	4.35	44	44.21
	Equiv. Refl.: (-2,-1,12)								
Sapph	(3,5,-20)	14.214	75.25	1.179	1.3	3.87	4.9	48.38	48.63
	Equiv. Refl.: (3,-8,20), (5,3,20), (5,-8,-20), (8,-3,20), (8,-5,-20), (-3,8,-20), (-3,-5,20), (-5,8,20), (-5,-3,-20), (-8,3,-20), (-8,5,20)								
Quartz	(5,6,3)	14.318	76.95	1.17	1.2	3.407	4.18	42.59	42.79
	Equiv. Refl.: (5,-11,-3), (6,5,-3), (6,-11,3), (-11,5,3), (-11,6,-3)								
Quartz	(5,6,-1)	13.946	71.59	1.161	1.2	4.891	5.82	61.14	61.42
	Equiv. Refl.: (5,-11,1), (6,5,1), (6,-11,-1), (-11,5,-1), (-11,6,1)								
Sapph	(5,6,-1)	14.359	77.67	1.153	1.3	3.212	4.07	40.15	40.35
	Equiv. Refl.: (5,-11,1), (6,5,1), (6,-11,-1), (11,-5,1), (11,-6,-1), (-5,11,-1), (-5,-6,1), (-6,11,1), (-6,-5,-1), (-11,5,-1), (-11,6,1), (-3,1,12), (-3,2,-12)								
Quartz	(1,2,12)	14.294	76.53	1.151	1.2	3.52	4.35	44	44.21
	Equiv. Refl.: (1,-3,-12)								
Quartz	(11,-5,1)	13.946	71.59	1.15	1.2	4.891	5.82	61.14	61.42
	Equiv. Refl.: (11,-5,-3), (11,-6,3), (11,-6,-1), (-5,11,3), (-5,11,-1), (-5,-6,1), (-5,-6,-3), (-6,11,1), (-6,11,-3), (-6,-5,3), (-6,-5,-1)								
Quartz	(2,1,-12)	14.294	76.53	1.149	1.2	3.52	4.35	44	44.21
	Equiv. Refl.: (2,-3,12)								
Sapph	(2,2,27)	13.901	71.04	1.1	1.2	5.049	5.87	63.11	63.38
	Equiv. Refl.: (2,2,-27), (2,-4,27), (2,-4,-27), (4,-2,27), (4,-2,-27), (-2,4,27), (-2,4,-27), (-2,-2,27), (-2,-2,-27), (-4,2,27), (-4,2,-27)								
Quartz	(3,6,-7)	14.078	73.31	1.091	1.1	4.408	4.91	55.1	55.32
	Equiv. Refl.: (3,-9,7)								

Ei =	14.698	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[°]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Quartz	(6,3,7)	14.078	73.31	1.09	1.1	4.408	4.91	55.1	55.32
	Equiv. Refl.: (6,-9,-7), (-9,3,-7), (-9,6,7)								
LiNbO3	(6,6,3)	14.513	80.89	1.085	1.8	2.357	4.2	29.47	29.77
	Equiv. Refl.: (6,6,-3), (6,-12,3), (6,-12,-3), (12,-6,3), (12,-6,-3), (-6,12,3), (-6,12,-3), (-6,-6,3), (-6,-6,-3), (-12,6,3), (-12,6,-3)								
Quartz	(11,-4,-3)	14.466	79.8	1.074	1.2	2.644	3.11	33.04	33.19
	Equiv. Refl.: (11,-7,3), (-4,11,3), (-4,-7,-3), (-7,11,-3), (-7,-4,3)								
Sapph	(1,8,11)	13.885	70.85	1.071	1.1	5.104	5.79	63.8	64.06
	Equiv. Refl.: (1,-9,-11), (8,1,-11), (8,-9,11), (9,-1,-11), (9,-8,11), (-1,9,11), (-1,-8,-11), (-8,9,-11), (-8,-1,11), (-9,1,11), (-9,8,-11)								
Quartz	(4,7,3)	14.466	79.8	1.068	1.2	2.644	3.11	33.04	33.19
	Equiv. Refl.: (4,-11,-3), (7,4,-3)								
Quartz	(7,-11,3)	14.466	79.8	1.067	1.2	2.644	3.11	33.04	33.19
	Equiv. Refl.: (-11,4,3), (-11,7,-3)								
Quartz	(9,-1,-6)	14.224	75.41	1.065	1.1	3.825	4.23	47.81	48
	Equiv. Refl.: (9,-8,6)								
Quartz	(9,-3,-7)	14.078	73.31	1.064	1.1	4.408	4.88	55.1	55.32
	Equiv. Refl.: (9,-6,7), (-1,9,6), (-1,-8,-6), (-3,9,7), (-3,-6,-7), (-6,9,-7), (-6,-3,7), (-8,9,-6), (-8,-1,6)								
Sapph	(4,5,17)	14.279	76.29	1.061	1.2	3.586	4.18	44.82	45.02
	Equiv. Refl.: (4,-9,-17), (5,4,-17), (5,-9,17), (9,-4,-17), (9,-5,17), (-4,9,17), (-4,-5,-17), (-5,9,-17), (-5,-4,17), (-9,4,17), (-9,5,-17)								
Quartz	(6,3,-7)	14.078	73.31	1.055	1.1	4.408	4.88	55.1	55.32
Quartz	(3,6,7)	14.078	73.31	1.054	1.1	4.408	4.88	55.1	55.32
	Equiv. Refl.: (3,-9,-7), (6,-9,7), (-9,3,7), (-9,6,-7)								
Quartz	(-3,9,-7)	14.078	73.31	1.044	1.1	4.408	4.91	55.1	55.32
	Equiv. Refl.: (-3,-6,7)								
Quartz	(9,-3,7)	14.078	73.31	1.043	1.1	4.408	4.91	55.1	55.32
	Equiv. Refl.: (-6,9,7), (-6,-3,-7)								
Quartz	(9,-6,-7)	14.078	73.31	1.042	1.1	4.408	4.91	55.1	55.32
Quartz	(2,8,5)	14.533	81.41	1.035	1.3	2.221	2.84	27.77	27.91
Quartz	(2,-10,-5)	14.533	81.41	1.034	1.3	2.221	2.84	27.77	27.91
	Equiv. Refl.: (-10,2,5)								
Quartz	(8,-10,5)	14.533	81.41	1.033	1.3	2.221	2.84	27.77	27.91
	Equiv. Refl.: (-10,8,-5)								
Quartz	(8,2,-5)	14.533	81.41	1.032	1.3	2.221	2.84	27.77	27.91
Quartz	(-9,1,6)	14.224	75.41	1.024	1.1	3.825	4.23	47.81	48
	Equiv. Refl.: (-9,8,-6)								
Quartz	(1,8,6)	14.224	75.41	1.023	1.1	3.825	4.22	47.81	48
Quartz	(1,-9,-6)	14.224	75.41	1.022	1.1	3.825	4.22	47.81	48
	Equiv. Refl.: (8,1,-6), (8,-9,6)								
Sapph	(0,6,24)	14.584	82.86	1.012	1.2	1.841	2.27	23.01	23.12
	Equiv. Refl.: (0,6,-24), (0,-6,24), (0,-6,-24), (6,0,24), (6,0,-24), (6,-6,24), (6,-6,-24), (-6,0,24), (-6,0,-24), (-6,6,24), (-6,6,-24)								
Quartz	(5,6,4)	14.636	84.76	1.01	1.2	1.349	1.61	16.87	16.94
	Equiv. Refl.: (5,-11,-4), (-11,5,4), (-11,6,-4)								
Quartz	(6,5,-4)	14.636	84.76	1.009	1.2	1.349	1.61	16.87	16.94
Quartz	(6,-11,4)	14.636	84.76	1.008	1.2	1.349	1.61	16.87	16.94
Quartz	(8,-1,-8)	14.325	77.06	1.007	1	3.377	3.5	42.21	42.35
Quartz	(8,-7,8)	14.325	77.06	1.006	1	3.377	3.5	42.21	42.35
	Equiv. Refl.: (-1,-7,-8)								

Ei = Cryst	14.698 Ref (h,k,l)	keV EB [keV]	ΘB [°]	\int IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(-1,8,8)	14.325	77.06	1.005	1	3.377	3.5	42.21	42.35
	Equiv. Refl.: (-7,8,-8), (-7,-1,8)								
Sapph	(1,9,-2)	14.383	78.12	1.001	1.1	3.093	3.49	38.66	38.82
	Equiv. Refl.: (1,-10,2), (9,1,2), (9,-10,-2), (10,-1,2), (10,-9,-2), (-1,10,-2), (-1,-9,2), (-9,10,2), (-9,-1,-2), (-10,1,-2), (-10,9,2)								
Quartz	(8,1,6)	14.224	75.41	0.998	1	3.825	3.93	47.81	47.97
	Equiv. Refl.: (8,-9,-6)								
Quartz	(1,8,-6)	14.224	75.41	0.997	1	3.825	3.93	47.81	47.97
	Equiv. Refl.: (1,-9,6), (-9,1,-6), (-9,8,6)								
Quartz	(10,-1,0)	13.899	71.02	0.989	1	5.056	4.98	63.2	63.39
	Equiv. Refl.: (10,-9,0), (-1,10,0), (-1,-9,0), (-9,10,0), (-9,-1,0)								
Sapph	(4,7,3)	14.579	82.69	0.973	1.2	1.885	2.25	23.56	23.67
	Equiv. Refl.: (4,7,-3), (4,-11,3), (4,-11,-3), (7,4,3), (7,4,-3), (7,-11,3), (7,-11,-3), (11,-4,3), (11,-4,-3), (11,-7,3), (11,-7,-3), (-4,11,3), (-4,11,-3), (-4,-7,3), (-4,-7,-3), (-7,11,3), (-7,11,-3), (-7,-4,3), (-7,-4,-3), (-11,4,3), (-11,4,-3), (-11,7,3), (-11,7,-3)								
Quartz	(-2,8,8)	13.949	71.64	0.969	1	4.879	4.84	60.99	61.18
	Equiv. Refl.: (-2,-6,-8)								
Quartz	(8,-2,-8)	13.949	71.64	0.968	1	4.879	4.84	60.99	61.18
	Equiv. Refl.: (8,-6,8), (-6,8,-8), (-6,-2,8)								
LiNbO3	(2,7,19)	14.203	75.09	0.966	1.4	3.914	5.57	48.92	49.23
	Equiv. Refl.: (2,-9,-19), (7,2,-19), (7,-9,19), (9,-2,-19), (9,-7,19), (-2,9,19), (-2,-7,-19), (-7,9,-19), (-7,-2,19), (-9,2,19), (-9,7,-19)								
Sapph	(2,6,-19)	14.14	74.16	0.959	1	4.171	4.37	52.14	52.32
	Equiv. Refl.: (2,-8,19), (6,2,19), (6,-8,-19), (8,-2,19), (8,-6,-19), (-2,8,-19), (-2,-6,19), (-6,8,19), (-6,-2,-19), (-8,2,-19), (-8,6,19)								
Quartz	(5,6,0)	13.899	71.02	0.941	1	5.056	4.97	63.2	63.39
	Equiv. Refl.: (5,-11,0), (6,5,0), (6,-11,0), (-11,5,0), (-11,6,0)								
Quartz	(11,-5,0)	13.899	71.02	0.94	1	5.056	4.97	63.2	63.39
	Equiv. Refl.: (11,-6,0), (-5,11,0), (-5,-6,0), (-6,11,0), (-6,-5,0)								
Quartz	(2,-1,-12)	13.994	72.19	0.936	1	4.722	4.53	59.02	59.19
	Equiv. Refl.: (-1,2,-12), (-1,-1,12)								
Quartz	(2,-1,12)	13.994	72.19	0.935	1	4.722	4.52	59.02	59.19
Quartz	(-1,2,12)	13.994	72.19	0.934	1	4.722	4.52	59.02	59.19
	Equiv. Refl.: (-1,-1,-12), (-3,8,9), (-3,-5,-9)								
Quartz	(8,-3,-9)	14.512	80.86	0.933	1	2.364	2.44	29.55	29.65
	Equiv. Refl.: (-5,8,-9), (-5,-3,9)								
Quartz	(8,-5,9)	14.512	80.86	0.932	1	2.364	2.44	29.55	29.65
Quartz	(2,6,8)	13.949	71.64	0.927	1	4.879	4.84	60.99	61.18
	Equiv. Refl.: (2,-8,-8), (6,2,-8), (-1,8,-8), (-7,8,8), (-7,-1,-8), (-8,2,8), (-8,9,6), (-8,-1,-6)								
Quartz	(6,-8,8)	13.949	71.64	0.926	1	4.879	4.84	60.99	61.18
	Equiv. Refl.: (9,-1,6), (9,-8,-6), (-1,9,-6), (-1,-7,8), (-1,-8,6), (-8,6,-8)								
Quartz	(8,-1,8)	14.325	77.06	0.924	1	3.377	3.32	42.21	42.34
	Equiv. Refl.: (8,-7,-8)								
Quartz	(11,-4,-1)	14.097	73.56	0.923	0.9	4.336	3.97	54.2	54.34
	Equiv. Refl.: (11,-7,1), (-4,11,1), (-4,-7,-1)								
Quartz	(-7,11,-1)	14.097	73.56	0.922	0.9	4.336	3.97	54.2	54.34
	Equiv. Refl.: (-7,-4,1)								
Quartz	(11,-5,-4)	14.636	84.76	0.914	1.2	1.349	1.61	16.87	16.94
	Equiv. Refl.: (11,-6,4), (-5,11,4), (-5,-6,-4)								

Ei =	14.698	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-6,11,-4) Equiv. Refl.: (-6,-5,4)	14.636	84.76	0.913	1.2	1.349	1.61	16.87	16.94
Quartz	(-8,1,8) Equiv. Refl.: (-8,7,-8)	14.325	77.06	0.912	1	3.377	3.5	42.21	42.35
Quartz	(1,7,8) Equiv. Refl.: (1,-8,-8)	14.325	77.06	0.911	1	3.377	3.5	42.21	42.35
Quartz	(7,1,-8) Equiv. Refl.: (7,-8,8)	14.325	77.06	0.91	1	3.377	3.49	42.21	42.35
Quartz	(1,9,0) Equiv. Refl.: (1,-10,0), (9,1,0), (9,-10,0), (-10,1,0), (-10,9,0)	13.899	71.02	0.898	1	5.056	4.98	63.2	63.39
Sapph	(1,2,-28) Equiv. Refl.: (1,-3,28), (2,1,28), (2,-3,-28), (3,-1,28), (3,-2,-28), (-1,3,-28), (-1,-2,28), (-2,3,28), (-2,-1,-28), (-3,1,-28), (-3,2,28)	13.944	71.57	0.893	1	4.897	4.75	61.22	61.4
LiNbO3	(4,6,-17) Equiv. Refl.: (4,-10,17), (6,4,17), (6,-10,-17), (10,-4,17), (10,-6,-17), (-4,10,-17), (-4,-6,17), (-6,10,17), (-6,-4,-17), (-10,4,-17), (-10,6,17)	14.308	76.78	0.891	1.4	3.453	4.8	43.16	43.43
Quartz	(11,-3,0) Equiv. Refl.: (11,-8,0), (-3,11,0), (-3,-8,0), (-8,11,0), (-8,-3,0)	14.35	77.5	0.89	0.9	3.258	3.01	40.73	40.84
Quartz	(3,5,9) Equiv. Refl.: (3,-8,-9)	14.512	80.86	0.888	1	2.364	2.45	29.55	29.65
Quartz	(5,3,-9) Equiv. Refl.: (5,-8,9), (-8,3,9)	14.512	80.86	0.887	1	2.364	2.44	29.55	29.65
Quartz	(-8,5,-9)	14.512	80.86	0.886	1	2.364	2.44	29.55	29.65
Quartz	(5,6,-2) Equiv. Refl.: (5,-11,2), (6,5,2), (6,-11,-2), (-11,5,-2), (-11,6,2)	14.087	73.42	0.885	0.9	4.376	4.01	54.7	54.85
Quartz	(1,1,-12) Equiv. Refl.: (1,-2,12)	13.994	72.19	0.883	1	4.722	4.53	59.02	59.19
Quartz	(-2,1,12) Equiv. Refl.: (-2,1,-12)	13.994	72.19	0.882	1	4.722	4.53	59.02	59.19
Quartz	(1,1,12) Equiv. Refl.: (1,7,-8), (1,-2,-12), (1,-8,8), (7,1,8), (7,-8,-8)	13.994	72.19	0.881	1	4.722	4.52	59.02	59.19
Quartz	(-8,1,-8) Equiv. Refl.: (-8,7,8)	14.325	77.06	0.879	1	3.377	3.32	42.21	42.34
Quartz	(-1,5,11) Equiv. Refl.: (-1,-4,-11)	14.275	76.22	0.876	0.9	3.605	3.27	45.06	45.18
Quartz	(-4,5,-11)	14.275	76.22	0.874	0.9	3.605	3.27	45.06	45.18
Quartz	(5,-1,-11) Equiv. Refl.: (5,-4,11), (-4,-1,11)	14.275	76.22	0.873	0.9	3.605	3.26	45.06	45.18
LiNbO3	(1,9,-11) Equiv. Refl.: (1,-10,11), (9,1,11), (9,-10,-11), (10,-1,11), (10,-9,-11), (-1,10,-11), (-1,-9,11), (-9,10,11), (-9,-1,-11), (-10,1,-11), (-10,9,11)	14.147	74.26	0.871	1.3	4.142	5.4	51.77	52.05
Quartz	(3,2,11) Equiv. Refl.: (3,-5,-11)	14.125	73.95	0.865	0.9	4.227	3.83	52.84	52.98
Quartz	(-5,2,-11) Equiv. Refl.: (-5,3,11)	14.125	73.95	0.864	0.9	4.227	3.82	52.84	52.98
Quartz	(2,3,-11) Equiv. Refl.: (2,-5,11)	14.125	73.95	0.863	0.9	4.227	3.82	52.84	52.98
Quartz	(4,7,-3) Equiv. Refl.: (4,-11,3), (-11,4,-3), (-11,7,3)	14.466	79.8	0.856	0.9	2.644	2.46	33.04	33.14
Quartz	(7,4,3) Equiv. Refl.: (7,-11,-3)	14.466	79.8	0.855	0.9	2.644	2.46	33.04	33.14

Ei = Cryst	14.698 Refl (h,k,l)	keV EB [keV]	Θ B [$^\circ$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(4,2,-10)	13.82	70.1	0.853	0.9	5.32	4.65	66.51	66.67
	Equiv. Refl.: (4,-6,10)								
Quartz	(2,-6,-10)	13.82	70.1	0.852	0.9	5.32	4.64	66.51	66.67
Quartz	(2,4,10)	13.82	70.1	0.851	0.9	5.32	4.64	66.51	66.67
	Equiv. Refl.: (-6,2,10), (-6,4,-10)								
Quartz	(1,9,-2)	14.087	73.42	0.849	0.9	4.376	3.92	54.7	54.84
	Equiv. Refl.: (1,-10,2), (9,1,2), (9,-10,-2), (-10,1,-2), (-10,9,2)								
Quartz	(11,-5,2)	14.087	73.42	0.831	0.9	4.376	4.01	54.7	54.85
	Equiv. Refl.: (11,-6,-2), (-5,11,-2), (-5,-6,2), (-6,11,2), (-6,-5,-2)								
Quartz	(5,-2,11)	14.125	73.95	0.824	0.9	4.227	3.82	52.84	52.98
	Equiv. Refl.: (5,-3,-11), (-3,5,11), (-3,-2,-11)								
Quartz	(-2,5,-11)	14.125	73.95	0.823	0.9	4.227	3.82	52.84	52.98
	Equiv. Refl.: (-2,-3,11)								
Quartz	(10,-1,2)	14.087	73.42	0.822	0.9	4.376	3.92	54.7	54.84
	Equiv. Refl.: (10,-9,-2), (-1,10,-2), (-1,-9,2), (-9,10,2), (-9,-1,-2)								
Quartz	(11,-5,3)	14.318	76.95	0.812	0.9	3.407	3.01	42.59	42.69
	Equiv. Refl.: (11,-6,-3)								
Quartz	(-5,11,-3)	14.318	76.95	0.811	0.9	3.407	3	42.59	42.69
	Equiv. Refl.: (-5,-6,3), (-6,11,3), (-6,-5,-3)								
Quartz	(-4,6,-10)	13.82	70.1	0.804	0.9	5.32	4.65	66.51	66.67
	Equiv. Refl.: (-4,-2,10)								
Quartz	(6,-2,-10)	13.82	70.1	0.803	0.9	5.32	4.64	66.51	66.67
	Equiv. Refl.: (6,-4,10), (-2,6,10)								
Quartz	(-2,-4,-10)	13.82	70.1	0.802	0.9	5.32	4.64	66.51	66.67
Quartz	(4,7,1)	14.097	73.56	0.797	0.9	4.336	3.98	54.2	54.34
	Equiv. Refl.: (4,-11,-1), (7,4,-1), (7,-11,1), (-11,4,1), (-11,7,-1)								
Quartz	(4,-9,-8)	14.618	84.03	0.792	1	1.537	1.47	19.22	19.27
Quartz	(4,5,8)	14.618	84.03	0.791	1	1.537	1.47	19.22	19.27
	Equiv. Refl.: (5,4,-8), (5,-9,8)								
Quartz	(-9,4,8)	14.618	84.03	0.79	1	1.537	1.47	19.22	19.27
	Equiv. Refl.: (-9,5,-8)								
Quartz	(1,4,11)	14.275	76.22	0.789	0.9	3.605	3.27	45.06	45.18
Quartz	(1,-5,-11)	14.275	76.22	0.788	0.9	3.605	3.27	45.06	45.18
Quartz	(4,-5,11)	14.275	76.22	0.787	0.9	3.605	3.27	45.06	45.18
Quartz	(4,1,-11)	14.275	76.22	0.786	0.9	3.605	3.26	45.06	45.18
	Equiv. Refl.: (-5,1,11), (-5,4,-11)								
Sapph	(3,4,-22)	13.928	71.38	0.785	0.9	4.953	4.28	61.91	62.06
	Equiv. Refl.: (3,-7,22), (4,3,22), (4,-7,-22), (7,-3,22), (7,-4,-22), (-3,7,-22), (-3,-4,22), (-4,7,22), (-4,-3,-22), (-7,3,-22), (-7,4,22)								
Quartz	(6,5,3)	14.318	76.95	0.784	0.9	3.407	3.01	42.59	42.69
	Equiv. Refl.: (6,-11,-3), (-11,5,-3), (-11,6,3)								
Quartz	(5,6,-3)	14.318	76.95	0.783	0.9	3.407	3	42.59	42.69
	Equiv. Refl.: (5,-11,3)								
Quartz	(3,8,0)	14.35	77.5	0.782	0.9	3.258	3.01	40.73	40.84
	Equiv. Refl.: (3,-11,0), (8,3,0), (8,-11,0), (-11,3,0), (-11,8,0)								
Quartz	(11,-4,3)	14.466	79.8	0.777	0.9	2.644	2.46	33.04	33.14
	Equiv. Refl.: (11,-7,-3), (-4,11,-3), (-4,-7,3), (-7,11,3)								
Quartz	(-7,-4,-3)	14.466	79.8	0.776	0.9	2.644	2.46	33.04	33.14
Quartz	(4,-9,7)	13.927	71.36	0.74	0.8	4.958	3.91	61.98	62.1

Ei =	14.698	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(4,5,-7)	13.927	71.36	0.739	0.8	4.958	3.91	61.98	62.1
	Equiv. Refl.: (5,4,7), (5,-9,-7), (-9,4,-7)								
Quartz	(-9,5,7)	13.927	71.36	0.738	0.8	4.958	3.91	61.98	62.1
Quartz	(-4,9,-7)	13.927	71.36	0.73	0.8	4.958	3.91	61.98	62.1
	Equiv. Refl.: (-4,-5,7), (-5,9,7), (-5,-4,-7)								
Quartz	(9,-4,7)	13.927	71.36	0.729	0.8	4.958	3.91	61.98	62.1
	Equiv. Refl.: (9,-5,-7)								
Quartz	(4,6,5)	13.936	71.48	0.72	0.8	4.925	3.78	61.56	61.68
	Equiv. Refl.: (4,-10,-5), (6,4,-5), (6,-10,5), (-10,4,5), (-10,6,-5)								
Quartz	(6,4,6)	14.446	79.38	0.719	0.8	2.755	2.17	34.44	34.51
	Equiv. Refl.: (6,-10,-6)								
Quartz	(4,6,-6)	14.446	79.38	0.718	0.8	2.755	2.16	34.44	34.51
	Equiv. Refl.: (4,-10,6), (-10,4,-6), (-10,6,6)								
Quartz	(-4,9,8)	14.618	84.03	0.714	1	1.537	1.47	19.22	19.27
	Equiv. Refl.: (-4,-5,-8)								
Quartz	(9,-4,-8)	14.618	84.03	0.713	1	1.537	1.47	19.22	19.27
	Equiv. Refl.: (9,-5,8), (-5,9,-8), (-5,-4,8)								
Sapph	(2,4,25)	14.344	77.4	0.703	0.8	3.285	2.73	41.07	41.16
	Equiv. Refl.: (2,-6,-25), (4,2,-25), (4,-6,25), (6,-2,-25), (6,-4,25), (-2,6,25), (-2,-4,-25), (-4,6,-25), (-4,-2,25), (-6,2,25), (-6,4,-25)								
Quartz	(10,-4,-5)	13.936	71.48	0.702	0.8	4.925	3.78	61.56	61.68
	Equiv. Refl.: (10,-6,5), (-4,10,5), (-4,-6,-5), (-6,10,-5), (-6,-4,5)								
Quartz	(8,2,5)	14.533	81.41	0.659	0.8	2.221	1.69	27.77	27.82
	Equiv. Refl.: (8,-10,-5)								
Quartz	(2,8,-5)	14.533	81.41	0.657	0.8	2.221	1.69	27.77	27.82
	Equiv. Refl.: (2,-10,5), (-10,2,-5), (-10,8,5)								
Quartz	(-6,10,6)	14.446	79.38	0.628	0.8	2.755	2.17	34.44	34.51
	Equiv. Refl.: (-6,-4,-6)								
Quartz	(10,-4,6)	14.446	79.38	0.627	0.8	2.755	2.16	34.44	34.51
	Equiv. Refl.: (-4,10,-6), (-4,-6,6)								
Quartz	(10,-6,-6)	14.446	79.38	0.626	0.8	2.755	2.16	34.44	34.51
Quartz	(-1,5,-11)	14.275	76.22	0.62	0.7	3.605	2.53	45.06	45.13
	Equiv. Refl.: (-1,-4,11), (-4,5,11), (-4,-1,-11)								
Quartz	(5,-1,11)	14.275	76.22	0.616	0.7	3.605	2.52	45.06	45.13
	Equiv. Refl.: (5,-4,-11), (-10,2,4), (-10,8,-4)								
Quartz	(2,8,4)	14.12	73.87	0.615	0.7	4.249	2.85	53.12	53.19
	Equiv. Refl.: (2,-10,-4), (8,2,-4), (8,-10,4)								
Quartz	(1,4,-11)	14.275	76.22	0.611	0.7	3.605	2.53	45.06	45.13
	Equiv. Refl.: (1,-5,11), (4,1,11), (4,-5,-11)								
Sapph	(0,9,6)	13.839	70.32	0.609	0.7	5.257	3.63	65.72	65.82
	Equiv. Refl.: (0,9,-6), (0,-9,6), (0,-9,-6), (9,0,6), (9,0,-6), (9,-9,6), (9,-9,-6), (-9,0,6), (-9,0,-6), (-9,9,6), (-9,9,-6)								
Quartz	(-5,1,-11)	14.275	76.22	0.607	0.7	3.605	2.52	45.06	45.13
	Equiv. Refl.: (-5,4,11)								
Quartz	(-7,10,5)	14.163	74.49	0.595	0.7	4.078	2.66	50.97	51.04
	Equiv. Refl.: (-7,-3,-5)								
Quartz	(10,-3,5)	14.163	74.49	0.594	0.7	4.078	2.66	50.97	51.04
	Equiv. Refl.: (10,-7,-5), (-3,10,-5), (-3,-7,5)								
Quartz	(10,-2,-4)	14.12	73.87	0.584	0.7	4.249	2.85	53.12	53.19
	Equiv. Refl.: (10,-8,4)								

Ei = Cryst	14.698 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(-2,10,4)	14.12	73.87	0.583	0.7	4.249	2.85	53.12	53.19
	Equiv. Refl.: (-2,-8,-4), (-8,10,-4), (-8,-2,4)								
Quartz	(-8,10,5)	14.533	81.41	0.578	0.8	2.221	1.69	27.77	27.82
	Equiv. Refl.: (-8,-2,-5)								
Quartz	(-2,-8,5)	14.533	81.41	0.577	0.8	2.221	1.69	27.77	27.82
Quartz	(10,-2,5)	14.533	81.41	0.576	0.8	2.221	1.69	27.77	27.82
	Equiv. Refl.: (10,-8,-5), (-2,10,-5)								
Quartz	(0,3,-12)	14.442	79.28	0.563	0.7	2.782	1.89	34.78	34.83
	Equiv. Refl.: (0,-3,12)								
Quartz	(3,0,12)	14.442	79.28	0.561	0.7	2.782	1.88	34.78	34.83
	Equiv. Refl.: (3,-3,-12), (-3,0,-12), (-3,3,12)								
Quartz	(7,3,5)	14.163	74.49	0.559	0.7	4.078	2.66	50.97	51.04
	Equiv. Refl.: (7,-10,-5), (-10,3,-5), (-10,7,5)								
Quartz	(3,7,-5)	14.163	74.49	0.558	0.7	4.078	2.66	50.97	51.04
	Equiv. Refl.: (3,-10,5), (11,-4,0), (11,-7,0), (-4,11,0), (-4,-7,0), (-7,11,0), (-7,-4,0)								
Quartz	(0,10,1)	14.615	83.91	0.551	0.8	1.569	1.18	19.62	19.65
	Equiv. Refl.: (0,-10,-1), (10,0,-1), (10,-10,1), (-10,0,1), (-10,10,-1)								
Quartz	(-10,1,-1)	13.946	71.59	0.55	0.6	4.891	2.96	61.14	61.21
	Equiv. Refl.: (-10,9,1)								
Quartz	(1,9,-1)	13.946	71.59	0.549	0.6	4.891	2.96	61.14	61.21
	Equiv. Refl.: (1,-10,1), (9,1,1), (9,-10,-1)								
Sapph	(1,7,18)	14.241	75.68	0.546	0.7	3.752	2.48	46.9	46.96
	Equiv. Refl.: (1,7,-18), (1,-8,18), (1,-8,-18), (7,1,18), (7,1,-18), (7,-8,18), (7,-8,-18), (8,-1,18), (8,-1,-18), (8,-7,18), (8,-7,-18), (-1,8,18), (-1,8,-18), (-1,-7,18), (-1,-7,-18), (-7,8,18), (-7,8,-18), (-7,-1,18), (-7,-1,-18), (-8,1,18), (-8,1,-18), (-8,7,18), (-8,7,-18)								
LiNbO3	(2,9,-7)	14.455	79.56	0.543	1.1	2.707	2.95	33.84	33.96
	Equiv. Refl.: (2,-11,7), (9,2,7), (9,-11,-7), (11,-2,7), (11,-9,-7), (-2,11,-7), (-2,-9,7), (-9,11,7), (-9,-2,-7), (-11,2,-7), (-11,9,7)								
Quartz	(10,-1,1)	13.946	71.59	0.532	0.6	4.891	2.96	61.14	61.21
	Equiv. Refl.: (10,-9,-1), (-1,10,-1), (-1,-9,1), (-9,10,1), (-9,-1,-1)								
Quartz	(4,7,0)	14.051	72.93	0.523	0.6	4.513	2.75	56.41	56.48
	Equiv. Refl.: (4,-11,0), (7,4,0), (7,-11,0), (-11,4,0), (-11,7,0)								
Quartz	(-8,10,4)	14.12	73.87	0.517	0.5	4.249	2.28	53.12	53.17
	Equiv. Refl.: (-8,-2,-4)								
LiNbO3	(4,7,9)	14	72.28	0.516	0.9	4.698	4.15	58.72	58.87
	Equiv. Refl.: (4,7,-9), (4,-11,9), (4,-11,-9), (7,4,9), (7,4,-9), (7,-11,9), (7,-11,-9), (11,-4,9), (11,-4,-9), (11,-7,9), (11,-7,-9), (-4,11,9), (-4,11,-9), (-4,-7,9), (-4,-7,-9), (-7,11,9), (-7,11,-9), (-7,-4,9), (-7,-4,-9), (-11,4,9), (-11,4,-9), (-11,7,9), (-11,7,-9), (10,-2,4), (10,-8,-4), (-2,10,-4), (-2,-8,4)								
LiNbO3	(3,7,17)	14.51	80.82	0.512	1.1	2.375	2.62	29.69	29.8
	Equiv. Refl.: (3,-10,-17), (7,3,-17), (7,-10,17), (10,-3,-17), (10,-7,17), (-3,10,17), (-3,-7,-17), (-7,10,-17), (-7,-3,17), (-10,3,17), (-10,7,-17)								
Quartz	(1,0,-12)	13.841	70.34	0.496	0.6	5.251	2.93	65.64	65.71
	Equiv. Refl.: (1,-1,12), (-1,0,12), (-1,1,-12)								
Quartz	(0,1,12)	13.841	70.34	0.495	0.6	5.251	2.92	65.64	65.71
	Equiv. Refl.: (0,-1,-12)								
Sapph	(1,6,22)	14.408	78.59	0.484	0.6	2.966	1.87	37.07	37.12
	Equiv. Refl.: (1,-7,-22), (6,1,-22), (6,-7,22), (7,-1,-22), (7,-6,22), (-1,7,22), (-1,-6,-22), (-6,7,-22), (-6,-1,22), (-7,1,22), (-7,6,-22)								
Quartz	(3,7,5)	14.163	74.49	0.481	0.5	4.078	2.2	50.97	51.02
	Equiv. Refl.: (3,-10,-5), (7,3,-5), (7,-10,5), (-10,7,-5)								
Quartz	(-10,3,5)	14.163	74.49	0.48	0.5	4.078	2.2	50.97	51.02

Ei =	14.698	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(5,7,1)	14.524	81.18	0.463	1.1	2.282	2.41	28.52	28.63
	Equiv. Refl.: (5,-12,-1), (7,5,-1), (7,-12,1), (12,-5,-1), (12,-7,1), (-5,12,1), (-5,-7,-1), (-7,12,-1), (-7,-5,1), (-12,5,1), (-12,7,-1)								
LiNbO3	(3,4,-25)	14.018	72.51	0.456	0.8	4.632	3.79	57.9	58.02
	Equiv. Refl.: (3,-7,25), (4,3,25), (4,-7,-25), (7,-3,25), (7,-4,-25), (-3,7,-25), (-3,-4,25), (-4,7,25), (-4,-3,-25), (-7,3,-25), (-7,4,25)								
LiNbO3	(1,3,-29)	13.903	71.08	0.443	0.8	5.039	3.95	62.99	63.12
	Equiv. Refl.: (1,-4,29), (3,1,29), (3,-4,-29), (4,-1,29), (4,-3,-29), (-1,4,-29), (-1,-3,29), (-3,4,29), (-3,-1,-29), (-4,1,-29), (-4,3,29)								
Sapph	(1,2,29)	14.402	78.49	0.442	0.6	2.993	1.76	37.41	37.46
	Equiv. Refl.: (1,-3,-29), (2,1,-29), (2,-3,29), (3,-1,-29), (3,-2,29), (-1,3,29), (-1,-2,-29), (-2,3,-29), (-2,-1,29), (-3,1,29), (-3,2,-29)								
Quartz	(10,-3,-5)	14.163	74.49	0.439	0.5	4.078	2.2	50.97	51.02
	Equiv. Refl.: (10,-7,5), (-3,10,5), (-3,-7,-5), (-7,10,-5), (-7,-3,5)								
LiNbO3	(2,9,5)	14.288	76.43	0.433	0.9	3.547	3.06	44.33	44.44
	Equiv. Refl.: (2,-11,-5), (9,2,-5), (9,-11,5), (11,-2,-5), (11,-9,5), (-2,11,5), (-2,-9,-5), (-9,11,-5), (-9,-2,5), (-11,2,5), (-11,9,-5)								
Sapph	(2,8,9)	14.442	79.29	0.43	0.6	2.78	1.62	34.75	34.79
	Equiv. Refl.: (2,8,-9), (2,-10,9), (2,-10,-9), (8,2,9), (8,2,-9), (8,-10,9), (8,-10,-9), (10,-2,9), (10,-2,-9), (10,-8,9), (10,-8,-9), (-2,10,9), (-2,10,-9), (-2,-8,9), (-2,-8,-9), (-8,10,9), (-8,10,-9), (-8,-2,9), (-8,-2,-9), (-10,2,9), (-10,2,-9), (-10,8,9), (-10,8,-9)								
LiNbO3	(5,6,-13)	14.482	80.17	0.425	1	2.546	2.45	31.82	31.92
	Equiv. Refl.: (5,-11,13), (6,5,13), (6,-11,-13), (11,-5,13), (11,-6,-13), (-5,11,-13), (-5,-6,13), (-6,11,13), (-6,-5,-13), (-11,5,-13), (-11,6,13)								
Sapph	(3,5,19)	13.897	71	0.413	0.5	5.06	2.55	63.25	63.3
	Equiv. Refl.: (3,-8,-19), (5,3,-19), (5,-8,19), (8,-3,-19), (8,-5,19), (-3,8,19), (-3,-5,-19), (-5,8,-19), (-5,-3,19), (-8,3,19), (-8,5,-19)								
Quartz	(2,8,-4)	14.12	73.87	0.409	0.5	4.249	2.27	53.12	53.17
	Equiv. Refl.: (2,-10,4), (8,2,4), (8,-10,-4), (-10,2,-4), (-10,8,4)								
Quartz	(1,9,2)	14.087	73.42	0.397	0.5	4.376	2	54.7	54.74
	Equiv. Refl.: (1,-10,-2), (9,1,-2), (9,-10,2), (-10,1,2), (-10,9,-2)								
Quartz	(0,10,0)	14.57	82.43	0.392	0.6	1.954	1.08	24.42	24.44
	Equiv. Refl.: (0,-10,0), (10,0,0), (10,-10,0), (-10,0,0), (-10,10,0)								
LiNbO3	(2,9,-1)	14.119	73.86	0.377	0.7	4.252	3.17	53.15	53.25
	Equiv. Refl.: (2,-11,1), (9,2,1), (9,-11,-1), (11,-2,1), (11,-9,-1), (-2,11,-1), (-2,-9,1), (-9,11,1), (-9,-2,-1), (-11,2,-1), (-11,9,1), (0,3,12), (0,-3,-12)								
LiNbO3	(1,2,-31)	14.342	77.37	0.375	0.8	3.294	2.67	41.17	41.26
	Equiv. Refl.: (1,-3,31), (2,1,31), (2,-3,-31), (3,-1,31), (3,-2,-31), (-1,3,-31), (-1,-2,31), (-2,3,31), (-2,-1,-31), (-3,1,-31), (-3,2,31)								
Quartz	(3,0,-12)	14.442	79.28	0.372	0.5	2.782	1.36	34.78	34.8
	Equiv. Refl.: (-3,0,12)								
Quartz	(3,-3,12)	14.442	79.28	0.371	0.5	2.782	1.36	34.78	34.8
	Equiv. Refl.: (-3,3,-12)								
Quartz	(0,9,5)	14.312	76.84	0.368	0.5	3.436	1.6	42.95	42.98
	Equiv. Refl.: (0,-9,-5)								
Quartz	(9,0,-5)	14.312	76.84	0.367	0.5	3.436	1.59	42.95	42.98
Quartz	(9,-9,5)	14.312	76.84	0.366	0.5	3.436	1.59	42.95	42.98
	Equiv. Refl.: (-9,0,5), (-9,9,-5)								

Ei =	14.698	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(3,6,21)	14.491	80.38	0.364	0.9	2.492	2.21	31.15	31.23
Equiv. Refl.: (3,6,-21), (3,-9,21), (3,-9,-21), (6,3,21), (6,3,-21), (6,-9,21), (6,-9,-21), (9,-3,21), (9,-3,-21), (9,-6,21), (9,-6,-21), (-3,9,21), (-3,9,-21), (-3,-6,21), (-3,-6,-21), (-6,9,21), (-6,9,-21), (-6,-3,21), (-6,-3,-21), (-9,3,21), (-9,3,-21), (-9,6,21), (-9,6,-21), (10,-1,-2), (10,-9,2), (-1,10,2), (-1,-9,-2), (-9,10,-2), (-9,-1,2)									
Quartz	(2,3,11)	14.125	73.95	0.357	0.4	4.227	1.82	52.84	52.87
Equiv. Refl.: (2,-5,-11)									
Quartz	(3,2,-11)	14.125	73.95	0.356	0.4	4.227	1.82	52.84	52.87
Equiv. Refl.: (3,-5,11)									
Quartz	(-5,2,11)	14.125	73.95	0.354	0.4	4.227	1.81	52.84	52.87
Equiv. Refl.: (-5,3,-11)									
Quartz	(-2,5,11)	14.125	73.95	0.345	0.4	4.227	1.82	52.84	52.87
Equiv. Refl.: (-2,-3,-11)									
Quartz	(-3,5,-11)	14.125	73.95	0.344	0.4	4.227	1.82	52.84	52.87
Equiv. Refl.: (-3,-2,11)									
Quartz	(5,-2,-11)	14.125	73.95	0.342	0.4	4.227	1.81	52.84	52.87
Equiv. Refl.: (5,-3,11)									
Sapph	(3,3,24)	13.868	70.65	0.338	0.4	5.16	2.2	64.5	64.54
Equiv. Refl.: (3,3,-24), (3,-6,24), (3,-6,-24), (6,-3,24), (6,-3,-24), (-3,6,24), (-3,6,-24), (-3,-3,24), (-3,-3,-24), (-6,3,24), (-6,3,-24)									
Quartz	(8,0,7)	14.154	74.36	0.299	0.4	4.115	1.56	51.44	51.47
Equiv. Refl.: (8,-8,-7), (-8,0,-7), (-8,8,7)									
Quartz	(0,8,-7)	14.154	74.36	0.298	0.4	4.115	1.56	51.44	51.46
Equiv. Refl.: (0,-8,7)									
LiNbO3	(2,8,15)	14.401	78.47	0.288	0.7	2.998	2.17	37.47	37.54
Equiv. Refl.: (2,8,-15), (2,-10,15), (2,-10,-15), (8,2,15), (8,2,-15), (8,-10,15), (8,-10,-15), (10,-2,15), (10,-2,-15), (10,-8,15), (10,-8,-15), (-2,10,15), (-2,10,-15), (-2,-8,15), (-2,-8,-15), (-8,10,15), (-8,10,-15), (-8,-2,15), (-8,-2,-15), (-10,2,15), (-10,2,-15), (-10,8,15), (-10,8,-15)									
LiNbO3	(5,6,11)	14.147	74.26	0.285	0.6	4.142	2.63	51.77	51.84
Equiv. Refl.: (5,-11,-11), (6,5,-11), (6,-11,11), (11,-5,-11), (11,-6,11), (-5,11,11), (-5,-6,-11), (-6,11,-11), (-6,-5,11), (-11,5,11), (-11,6,-11)									
Sapph	(1,9,-5)	14.548	81.82	0.273	0.5	2.114	0.97	26.42	26.44
Equiv. Refl.: (1,-10,5), (2,8,3), (2,8,-3), (2,-10,3), (2,-10,-3), (8,2,3), (8,2,-3), (8,-10,3), (8,-10,-3), (9,1,5), (9,-10,-5), (10,-1,5), (10,-2,3), (10,-2,-3), (10,-8,3), (10,-8,-3), (10,-9,-5), (-1,10,-5), (-1,-9,5), (-2,10,3), (-2,10,-3), (-2,-8,3), (-2,-8,-3), (-8,10,3), (-8,10,-3), (-8,-2,3), (-8,-2,-3), (-9,10,5), (-9,-1,-5), (-10,1,-5), (-10,2,3), (-10,2,-3), (-10,8,3), (-10,8,-3), (-10,9,5)									
Quartz	(5,5,5)	13.86	70.56	0.268	0.3	5.187	1.74	64.84	64.87
Equiv. Refl.: (5,-10,-5), (-10,5,5), (-10,5,-5)									
Quartz	(5,5,-5)	13.86	70.56	0.267	0.3	5.187	1.73	64.84	64.87
Equiv. Refl.: (5,-10,5)									
Quartz	(10,-5,5)	13.86	70.56	0.265	0.3	5.187	1.74	64.84	64.87
Equiv. Refl.: (10,-5,-5), (-5,10,5), (-5,-5,-5)									
Quartz	(-5,10,-5)	13.86	70.56	0.264	0.3	5.187	1.73	64.84	64.87
Equiv. Refl.: (-5,-5,5)									
LiNbO3	(2,6,23)	14.364	77.76	0.235	0.6	3.188	2	39.85	39.91
Equiv. Refl.: (2,-8,-23), (6,2,-23), (6,-8,23), (8,-2,-23), (8,-6,23), (-2,8,23), (-2,-6,-23), (-6,8,-23), (-6,-2,23), (-8,2,23), (-8,6,-23)									
Sapph	(5,5,12)	14.232	75.53	0.234	0.3	3.792	1.32	47.4	47.42
Equiv. Refl.: (5,5,-12), (5,-10,12), (5,-10,-12), (10,-5,12), (10,-5,-12), (-5,10,12), (-5,10,-12), (-5,-5,12), (-5,-5,-12), (-10,5,12), (-10,5,-12)									
Quartz	(11,-5,-2)	14.087	73.42	0.209	0.3	4.376	1.13	54.7	54.72
Equiv. Refl.: (11,-6,2), (-5,11,2), (-5,-6,-2), (-6,11,-2), (-6,-5,2)									

Quartz	(0,4,-11)	13.898	71.01	0.208	0.3	5.058	1.41	63.22	63.24
Equiv. Refl.: (0,-4,11)									
Quartz	(4,0,11)	13.898	71.01	0.207	0.3	5.058	1.4	63.22	63.24
Equiv. Refl.: (4,-4,-11), (-4,4,11)									
Quartz	(-4,0,-11)	13.898	71.01	0.206	0.3	5.058	1.4	63.22	63.24
Quartz	(5,1,-10)	14.049	72.91	0.202	0.3	4.519	1.25	56.49	56.5
Equiv. Refl.: (5,-6,10)									
Quartz	(1,5,10)	14.049	72.91	0.201	0.3	4.519	1.24	56.49	56.5
Equiv. Refl.: (1,-6,-10), (-6,1,10), (-6,5,-10)									
Quartz	(-5,6,-10)	14.049	72.91	0.198	0.3	4.519	1.25	56.49	56.5
Equiv. Refl.: (-5,-1,10)									
Quartz	(6,-1,-10)	14.049	72.91	0.197	0.3	4.519	1.24	56.49	56.5
Equiv. Refl.: (6,-5,10), (-1,6,10), (-1,-5,-10)									
Sapph	(1,9,1)	14.359	77.67	0.191	0.3	3.212	1.02	40.15	40.16
Equiv. Refl.: (1,-10,-1), (9,1,-1), (9,-10,1), (10,-1,-1), (10,-9,1), (-1,10,1), (-1,-9,-1), (-9,10,-1), (-9,-1,1), (-10,1,1), (-10,9,-1)									
LiNbO3	(1,8,-19)	14.606	83.58	0.185	0.7	1.654	1.22	20.67	20.71
Equiv. Refl.: (1,-9,19), (8,1,19), (8,-9,-19), (9,-1,19), (9,-8,-19), (-1,9,-19), (-1,-8,19), (-8,9,19), (-8,-1,-19), (-9,1,-19), (-9,8,19), (0,8,7), (0,-8,-7), (8,0,-7), (8,-8,7), (-8,0,7), (-8,8,-7)									
LiNbO3	(3,8,-11)	14.551	81.9	0.174	0.6	2.092	1.34	26.15	26.19
Equiv. Refl.: (3,-11,11), (8,3,11), (8,-11,-11), (11,-3,11), (11,-8,-11), (-3,11,-11), (-3,-8,11), (-8,11,11), (-8,-3,-11), (-11,3,-11), (-11,8,11)									
Quartz	(11,-4,1)	14.097	73.56	0.166	0.2	4.336	0.92	54.2	54.21
Equiv. Refl.: (11,-7,-1), (-4,11,-1), (-4,-7,1), (-7,11,1), (-7,-4,-1)									
Quartz	(5,6,2)	14.087	73.42	0.157	0.3	4.376	1.13	54.7	54.72
Equiv. Refl.: (5,-11,-2), (6,-11,2), (-11,5,2), (-11,6,-2)									
Quartz	(6,5,-2)	14.087	73.42	0.156	0.3	4.376	1.13	54.7	54.72
Quartz	(-2,6,-10)	13.82	70.1	0.152	0.2	5.32	0.95	66.51	66.51
Equiv. Refl.: (-2,-4,10)									
Quartz	(6,-4,-10)	13.82	70.1	0.151	0.2	5.32	0.95	66.51	66.51
Equiv. Refl.: (-4,-2,-10)									
Quartz	(6,-2,10)	13.82	70.1	0.15	0.2	5.32	0.94	66.51	66.51
Equiv. Refl.: (-4,6,10)									
Quartz	(0,9,-4)	13.892	70.94	0.147	0.2	5.078	1.09	63.47	63.48
Equiv. Refl.: (0,-9,4), (9,0,4), (9,-9,-4), (-9,0,-4), (-9,9,4)									
LiNbO3	(2,3,29)	14.315	76.88	0.142	0.5	3.424	1.59	42.81	42.84
Equiv. Refl.: (2,-5,-29), (3,2,-29), (3,-5,29), (5,-2,-29), (5,-3,29), (-2,5,29), (-2,-3,-29), (-3,5,-29), (-3,-2,29), (-5,2,29), (-5,3,-29)									
LiNbO3	(1,7,21)	14.085	73.4	0.124	0.4	4.383	1.71	54.78	54.81
Equiv. Refl.: (1,-7,-21), (1,-8,21), (1,-8,-21), (7,1,21), (7,1,-21), (7,-8,21), (7,-8,-21), (8,-1,21), (8,-1,-21), (8,-7,21), (8,-7,-21), (-1,8,21), (-1,8,-21), (-1,-7,21), (-1,-7,-21), (-7,8,21), (-7,8,-21), (-7,-1,21), (-7,-1,-21), (-8,1,21), (-8,1,-21), (-8,7,21), (-8,7,-21)									
Quartz	(4,7,-1)	14.097	73.56	0.113	0.2	4.336	0.92	54.2	54.21
Equiv. Refl.: (4,-11,1), (7,4,1), (7,-11,-1), (-11,4,-1), (-11,7,1)									
LiNbO3	(3,5,-23)	14.161	74.46	0.107	0.4	4.088	1.52	51.1	51.12
Equiv. Refl.: (3,-8,23), (5,3,23), (5,-8,-23), (8,-3,23), (8,-5,-23), (-3,8,-23), (-3,-5,23), (-5,8,23), (-5,-3,-23), (-8,3,-23), (-8,5,23)									
Sapph	(4,6,13)	14.509	80.8	0.095	0.2	2.381	0.55	29.76	29.76
Equiv. Refl.: (4,-10,-13), (6,4,-13), (6,-10,13), (10,-4,-13), (10,-6,13), (-4,10,13), (-4,-6,-13), (-6,10,-13), (-6,-4,13), (-10,4,13), (-10,6,-13)									
Sapph	(3,6,15)	13.923	71.31	0.094	0.2	4.973	0.87	62.16	62.16
Equiv. Refl.: (3,-6,-15), (3,-9,15), (3,-9,-15), (6,3,15), (6,3,-15), (6,-9,15), (6,-9,-15), (9,-3,15), (9,-3,-15), (9,-6,15), (9,-6,-15), (-3,9,15), (-3,9,-15), (-3,-6,15), (-3,-6,-15), (-6,9,15), (-6,9,-15), (-6,-3,15), (-6,-3,-15), (-9,3,15), (-9,3,-15), (-9,6,15), (-9,6,-15)									
LiNbO3	(3,8,7)	14.048	72.9	0.093	0.3	4.523	1.5	56.54	56.56
Equiv. Refl.: (3,-11,-7), (8,3,-7), (8,-11,7), (11,-3,-7), (11,-8,7), (-3,11,7), (-3,-8,-7), (-8,11,-7), (-8,-3,7)									

	(-11,3,7), (-11,8,-7)								
Sapph	(3,4,23)	14.292	76.5	0.088	0.2	3.53	0.67	44.12	44.13
	Equiv. Refl.: (3,-7,-23), (4,3,-23), (4,-7,23), (7,-3,-23), (7,-4,23), (-3,7,23), (-3,-4,-23), (-4,7,-23), (-4,-3,23), (-7,3,23), (-7,4,-23)								
Quartz	(2,4,-10)	13.82	70.1	0.087	0.2	5.32	0.95	66.51	66.51
	Equiv. Refl.: (2,-6,10)								
LiNbO3	(3,8,-5)	13.876	70.75	0.086	0.3	5.133	1.55	64.17	64.19
	Equiv. Refl.: (3,-11,5), (8,3,5), (8,-11,-5), (11,-3,5), (11,-8,-5), (-3,11,-5), (-3,-8,5), (-8,11,5), (-8,-3,-5), (-11,3,-5), (-11,8,5), (4,2,10), (4,-6,-10), (-6,4,10)								
Quartz	(-6,2,-10)	13.82	70.1	0.085	0.2	5.32	0.94	66.51	66.51
LiNbO3	(1,8,17)	14.104	73.66	0.081	0.3	4.309	1.36	53.86	53.88
	Equiv. Refl.: (1,-9,-17), (8,1,-17), (8,-9,17), (9,-1,-17), (9,-8,17), (-1,9,17), (-1,-8,-17), (-8,9,-17), (-8,-1,17), (-9,1,17), (-9,8,-17)								
Sapph	(5,6,2)	14.383	78.12	0.063	0.2	3.093	0.5	38.66	38.67
	Equiv. Refl.: (5,-11,-2), (6,5,-2), (6,-11,2), (11,-5,-2), (11,-6,2), (-5,11,2), (-5,-6,-2), (-6,11,-2), (-6,-5,2), (-11,5,2), (-11,6,-2)								
Sapph	(4,6,-11)	14.127	73.98	0.061	0.1	4.221	0.6	52.76	52.76
	Equiv. Refl.: (4,-10,11), (6,4,11), (6,-10,-11), (10,-4,11), (10,-6,-11), (-4,10,-11), (-4,-6,11), (-6,10,11), (-6,-4,-11), (-10,4,-11), (-10,6,11)								
LiNbO3	(3,3,27)	14.071	73.2	0.046	0.2	4.438	1.04	55.48	55.49
	Equiv. Refl.: (3,3,-27), (3,-6,27), (3,-6,-27), (6,-3,27), (6,-3,-27), (-3,6,27), (-3,6,-27), (-3,-3,27), (-3,-3,-27), (-6,3,27), (-6,3,-27)								

Ei = Cryst	12.658 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Ge	(1,3,11)	12.542	82.23	2.8	7.9	1.727	13.69	21.59	25.56
Ge	(0,8,8)	12.397	78.35	3.7	7.8	2.609	20.34	32.62	38.44
Ge	(2,4,10)	12.004	71.5	2.7	5.5	4.236	23.34	52.95	57.87
Si	(2,4,10)	12.504	81.05	5.8	5.1	1.993	10.13	24.92	26.9
Ge	(1,1,11)	12.153	73.76	1.6	4.2	3.688	15.66	46.1	48.68
Si	(3,5,9)	12.241	75.25	2.8	2.4	3.334	7.86	41.67	42.4
LiNbO3	(4,-10,8) Equiv. Refl.: (6,4,8), (10,-4,8), (-4,-6,8)	12.639	86.85	37.732	34.2	0.697	23.81	8.71	25.36
LiNbO3	(-6,10,8) Equiv. Refl.: (-10,6,8)	12.639	86.85	37.731	34.2	0.697	23.81	8.71	25.36
LiNbO3	(4,6,-8) Equiv. Refl.: (6,-10,-8), (10,-6,-8), (-4,10,-8), (-6,-4,-8), (-10,4,-8)	12.639	86.85	35.708	34.2	0.697	23.81	8.71	25.36
LiNbO3	(0,1,-28) Equiv. Refl.: (1,-1,-28), (-1,0,-28)	12.598	84.42	22.945	21	1.238	26.05	15.47	30.29
LiNbO3	(0,-1,28) Equiv. Refl.: (1,0,28), (-1,1,28)	12.598	84.42	22.898	21	1.238	26.05	15.47	30.29
Quartz	(5,5,0) Equiv. Refl.: (5,-10,0), (-10,5,0)	12.618	85.44	19.358	15.7	1.01	15.86	12.63	20.28
Quartz	(10,-5,0) Equiv. Refl.: (-5,10,0), (-5,-5,0)	12.618	85.44	19.34	15.7	1.01	15.86	12.63	20.28
LiNbO3	(5,4,-14) Equiv. Refl.: (-4,-5,-14), (-5,9,-14), (-9,5,-14)	12.535	82.02	17.414	15.6	1.775	27.62	22.19	35.43
LiNbO3	(4,-9,-14) Equiv. Refl.: (9,-4,-14)	12.535	82.02	17.413	15.6	1.775	27.62	22.19	35.43
LiNbO3	(4,5,14) Equiv. Refl.: (5,-9,14), (9,-5,14), (-4,9,14), (-5,-4,14), (-9,4,14)	12.535	82.02	16.731	15.6	1.775	27.62	22.19	35.43
LiNbO3	(4,4,-18) Equiv. Refl.: (4,-8,-18), (8,-4,-18), (-4,8,-18), (-4,-4,-18), (-8,4,-18)	12.554	82.64	15.669	14.4	1.635	23.59	20.44	31.21
LiNbO3	(4,4,18) Equiv. Refl.: (4,-8,18), (8,-4,18), (-4,-4,18)	12.554	82.64	15.226	14.4	1.635	23.59	20.44	31.21
LiNbO3	(-4,8,18) Equiv. Refl.: (-8,4,18)	12.554	82.64	15.225	14.4	1.635	23.59	20.44	31.21
LiNbO3	(1,4,-24) Equiv. Refl.: (4,-5,-24), (5,-4,-24), (-1,5,-24), (-4,-1,-24), (-5,1,-24)	12.481	80.42	14.308	13	2.137	27.86	26.72	38.6
LiNbO3	(1,-5,24) Equiv. Refl.: (4,1,24), (5,-1,24), (-1,-4,24), (-4,5,24), (-5,4,24)	12.481	80.42	14.296	13	2.137	27.86	26.72	38.6
LiNbO3	(1,4,24) Equiv. Refl.: (4,-5,24), (5,-4,24), (-1,5,24), (-4,-1,24), (-5,1,24)	12.481	80.42	14.228	12.9	2.137	27.66	26.72	38.46
LiNbO3	(1,-5,-24) Equiv. Refl.: (4,1,-24), (5,-1,-24), (-1,-4,-24), (-4,5,-24), (-5,4,-24)	12.481	80.42	14.148	12.9	2.137	27.66	26.72	38.46
LiNbO3	(1,-6,22) Equiv. Refl.: (5,1,22), (6,-1,22), (-1,-5,22), (-5,6,22), (-6,5,22)	12.519	81.5	13.739	12.6	1.893	23.9	23.66	33.63
LiNbO3	(1,5,-22) Equiv. Refl.: (5,-6,-22), (6,-5,-22), (-1,6,-22), (-5,-1,-22), (-6,1,-22)	12.519	81.5	13.338	12.6	1.893	23.9	23.66	33.63
LiNbO3	(0,9,0) Equiv. Refl.: (9,-9,0), (-9,0,0)	12.514	81.36	13.297	12.1	1.923	23.31	24.04	33.48
LiNbO3	(3,7,-4) Equiv. Refl.: (7,-10,-4), (10,-7,-4), (-3,10,-4), (-7,-3,-4), (-10,3,-4)	12.488	80.59	12.734	11.7	2.098	24.56	26.22	35.93

Ei = Cryst	12.658 Refl (h,k,l)	keV EB [keV]	ΘB [°]	IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Sapph	(2,2,24)	12.585	83.83	12.622	10.6	1.368	14.44	17.09	22.38
	Equiv. Refl.: (2,2,-24), (2,-4,24), (2,-4,-24), (4,-2,24), (4,-2,-24), (-2,4,24), (-2,4,-24), (-2,-2,24), (-2,-2,-24), (-4,2,24), (-4,2,-24)								
LiNbO3	(0,-9,0)	12.514	81.36	12.575	12.1	1.923	23.31	24.04	33.48
	Equiv. Refl.: (9,0,0), (-9,9,0)								
LiNbO3	(3,-10,4)	12.488	80.59	12.464	11.7	2.098	24.56	26.22	35.93
	Equiv. Refl.: (7,3,4), (10,-3,4), (-3,-7,4), (-7,10,4), (-10,7,4)								
LiNbO3	(3,4,20)	12.31	76.52	10.632	9.7	3.033	29.27	37.91	47.9
	Equiv. Refl.: (4,-7,20), (7,-4,20), (-3,7,20), (-4,-3,20), (-7,3,20)								
LiNbO3	(3,-7,-20)	12.31	76.52	10.617	9.7	3.033	29.27	37.91	47.9
	Equiv. Refl.: (4,3,-20), (7,-3,-20), (-3,-4,-20), (-4,7,-20), (-7,4,-20)								
LiNbO3	(3,-10,-2)	12.391	78.22	10.09	9.1	2.641	23.92	33.01	40.76
	Equiv. Refl.: (7,3,-2), (10,-3,-2), (-3,-7,-2), (-7,10,-2), (-10,7,-2)								
LiNbO3	(0,5,22)	12.047	72.12	10.026	8.7	4.084	35.63	51.05	62.25
	Equiv. Refl.: (5,-5,22), (-5,0,22)								
LiNbO3	(1,8,8)	12.407	78.58	9.75	8.9	2.558	22.84	31.97	39.29
	Equiv. Refl.: (8,-9,8), (9,-8,8), (-1,9,8), (-8,-1,8), (-9,1,8)								
LiNbO3	(3,7,2)	12.391	78.22	9.726	9.1	2.641	23.92	33.01	40.76
	Equiv. Refl.: (7,-10,2), (10,-7,2), (-3,10,2), (-7,-3,2), (-10,3,2)								
LiNbO3	(1,-9,-8)	12.407	78.58	9.621	8.9	2.558	22.84	31.97	39.29
	Equiv. Refl.: (8,1,-8), (9,-1,-8), (-1,-8,-8), (-8,9,-8), (-9,8,-8)								
LiNbO3	(0,-5,-22)	12.047	72.12	9.599	8.7	4.084	35.63	51.05	62.25
	Equiv. Refl.: (5,0,-22), (-5,5,-22)								
LiNbO3	(2,-9,-10)	12.229	75.03	9.544	8.2	3.384	27.9	42.3	50.67
	Equiv. Refl.: (7,2,-10), (9,-2,-10), (-2,-7,-10), (-7,9,-10), (-9,7,-10)								
LiNbO3	(3,6,12)	12.272	75.81	9.496	8.4	3.199	26.97	39.99	48.24
	Equiv. Refl.: (6,-9,12), (9,-6,12), (-3,9,12), (-6,-3,12), (-9,3,12)								
LiNbO3	(3,-9,-12)	12.272	75.81	9.306	8.4	3.199	26.97	39.99	48.24
	Equiv. Refl.: (6,3,-12), (9,-3,-12), (-3,-6,-12), (-6,9,-12), (-9,6,-12)								
Sapph	(4,4,15)	12.645	87.4	9.261	9	0.576	5.2	7.2	8.88
	Equiv. Refl.: (4,4,-15), (4,-8,15), (4,-8,-15), (8,-4,15), (8,-4,-15), (-4,8,15), (-4,8,-15), (-4,-4,15), (-4,-4,-15), (-8,4,15), (-8,4,-15)								
LiNbO3	(2,6,-16)	12.318	76.69	9.26	8.2	2.995	24.66	37.44	44.83
	Equiv. Refl.: (6,-8,-16), (8,-6,-16), (-2,8,-16), (-6,-2,-16), (-8,2,-16)								
LiNbO3	(5,5,0)	12.042	72.05	9.19	8.2	4.1	33.75	51.25	61.37
	Equiv. Refl.: (-5,-5,0)								
LiNbO3	(5,-10,0)	12.042	72.05	9.189	8.2	4.1	33.75	51.25	61.37
	Equiv. Refl.: (10,-5,0), (-5,10,0), (-10,5,0)								
LiNbO3	(2,7,10)	12.229	75.03	8.941	8.2	3.384	27.9	42.3	50.67
	Equiv. Refl.: (7,-9,10), (9,-7,10), (-2,9,10), (-7,-2,10), (-9,2,10)								
LiNbO3	(4,6,-2)	12.155	73.79	8.879	7.8	3.679	28.63	45.99	54.17
	Equiv. Refl.: (6,-10,-2), (10,-6,-2), (-4,10,-2), (-6,-4,-2), (-10,4,-2)								
LiNbO3	(2,-8,16)	12.318	76.69	8.821	8.2	2.995	24.66	37.44	44.83
	Equiv. Refl.: (6,2,16), (8,-2,16), (-2,-6,16), (-6,8,16), (-8,6,16)								
LiNbO3	(4,-10,2)	12.155	73.79	8.607	7.8	3.679	28.63	45.99	54.17
	Equiv. Refl.: (6,4,2), (10,-4,2), (-4,-6,2), (-6,10,2), (-10,6,2)								
Quartz	(-1,4,10)	12.616	85.33	8.571	7.2	1.035	7.4	12.93	14.9
	Equiv. Refl.: (-1,-3,-10)								
Quartz	(-3,4,-10)	12.616	85.33	8.569	7.2	1.035	7.4	12.93	14.9
Quartz	(-3,-1,10)	12.616	85.33	8.565	7.2	1.035	7.4	12.93	14.9

Ei =	12.658	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	[IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(4,-1,-10)	12.616	85.33	8.556	7.1	1.035	7.39	12.93	14.9
	Equiv. Refl.: (4,-3,10)								
LiNbO3	(5,5,6)	12.337	77.07	8.258	7.5	2.905	21.89	36.31	42.4
	Equiv. Refl.: (5,-10,6), (10,-5,6), (-5,10,6), (-5,-5,6), (-10,5,6)								
LiNbO3	(1,2,26)	12.195	74.45	8.242	7.4	3.522	26.21	44.02	51.24
	Equiv. Refl.: (2,-3,26), (3,-2,26), (-1,3,26), (-2,-1,26), (-3,1,26)								
LiNbO3	(0,-2,26)	11.955	70.81	8.233	7.2	4.406	31.79	55.07	63.59
	Equiv. Refl.: (2,0,26), (-2,2,26)								
LiNbO3	(1,-3,-26)	12.195	74.45	8.227	7.4	3.522	26.21	44.02	51.24
	Equiv. Refl.: (2,1,-26), (3,-1,-26), (-1,-2,-26), (-2,3,-26), (-3,2,-26)								
LiNbO3	(0,2,-26)	11.955	70.81	8.186	7.2	4.406	31.79	55.07	63.59
	Equiv. Refl.: (2,-2,-26), (-2,0,-26)								
LiNbO3	(3,-9,12)	12.272	75.81	8.178	7.4	3.199	23.82	39.99	46.55
	Equiv. Refl.: (6,3,12), (9,-3,12), (-3,-6,12), (-6,9,12), (-9,6,12)								
Quartz	(1,3,10)	12.616	85.33	8.051	7.2	1.035	7.4	12.93	14.9
	Equiv. Refl.: (1,-4,-10)								
Quartz	(3,-4,10)	12.616	85.33	8.05	7.2	1.035	7.4	12.93	14.9
Quartz	(3,1,-10)	12.616	85.33	8.046	7.2	1.035	7.4	12.93	14.9
Quartz	(-4,1,10)	12.616	85.33	8.037	7.1	1.035	7.39	12.93	14.9
	Equiv. Refl.: (-4,3,-10)								
LiNbO3	(3,6,-12)	12.272	75.81	8.035	7.4	3.199	23.82	39.99	46.55
	Equiv. Refl.: (6,-9,-12), (9,-6,-12), (-3,9,-12), (-6,-3,-12), (-9,3,-12)								
LiNbO3	(5,5,-6)	12.337	77.07	7.909	7.5	2.905	21.89	36.31	42.4
	Equiv. Refl.: (5,-10,-6), (10,-5,-6), (-5,10,-6), (-5,-5,-6), (-10,5,-6)								
LiNbO3	(4,6,4)	12.253	75.47	7.798	7.2	3.28	23.52	41	47.27
	Equiv. Refl.: (6,-10,4), (10,-6,4), (-4,10,4), (-6,-4,4), (-10,4,4)								
LiNbO3	(2,-6,-22)	12.285	76.06	7.792	7.2	3.143	22.67	39.29	45.36
	Equiv. Refl.: (4,2,-22), (6,-2,-22), (-2,-4,-22), (-4,6,-22), (-6,4,-22)								
LiNbO3	(4,-6,22)	12.285	76.06	7.766	7.2	3.143	22.67	39.29	45.36
	Equiv. Refl.: (6,-4,22)								
LiNbO3	(2,4,22)	12.285	76.06	7.765	7.2	3.143	22.67	39.29	45.36
	Equiv. Refl.: (6,4,-4), (-2,6,22), (-4,-2,22), (-4,-6,-4), (-6,2,22)								
LiNbO3	(4,-10,-4)	12.253	75.47	7.764	7.2	3.28	23.52	41	47.27
	Equiv. Refl.: (10,-4,-4), (-6,10,-4), (-10,6,-4)								
Quartz	(0,8,-4)	12.526	81.73	7.698	6.2	1.84	11.32	23	25.63
	Equiv. Refl.: (0,-8,4)								
Quartz	(8,-8,-4)	12.526	81.73	7.696	6.1	1.84	11.31	23	25.63
	Equiv. Refl.: (-8,0,-4), (-8,8,4)								
Quartz	(8,0,4)	12.526	81.73	7.695	6.1	1.84	11.31	23	25.63
LiNbO3	(1,-9,4)	12.014	71.65	7.65	6.7	4.199	28.25	52.49	59.61
	Equiv. Refl.: (8,1,4), (9,-1,4), (-1,-8,4), (-8,9,4), (-9,8,4)								
LiNbO3	(2,4,-23)	12.646	87.5	7.559	11.4	0.553	6.3	6.92	9.36
	Equiv. Refl.: (2,-6,23), (4,2,23), (4,-6,-23), (6,-2,23), (6,-4,-23), (-2,6,-23), (-2,-4,23), (-4,6,23), (-4,-2,-23), (-6,2,-23), (-6,4,23)								
Sapph	(3,5,-14)	12.472	80.17	7.47	6.1	2.194	13.39	27.43	30.52
	Equiv. Refl.: (3,-8,14), (5,3,14), (5,-8,-14), (8,-3,14), (8,-5,-14), (-3,8,-14), (-3,-5,14), (-5,8,14), (-5,-3,-14), (-8,3,-14), (-8,5,14)								
LiNbO3	(1,8,2)	11.914	70.26	7.458	6.6	4.543	29.92	56.79	64.19
	Equiv. Refl.: (8,-9,2), (9,-8,2), (-1,9,2), (-8,-1,2), (-9,1,2)								

Ei = Cryst	12.658 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
LiNbO3	(3,-8,-16)	12.08	72.62	7.397	6.4	3.962	25.28	49.52	55.6
Equiv. Refl.: (5,3,-16), (8,-3,-16), (-3,-5,-16), (-5,8,-16), (-8,5,-16)									
LiNbO3	(1,8,-4)	12.014	71.65	7.368	6.7	4.199	28.25	52.49	59.61
Equiv. Refl.: (8,-9,-4), (9,-8,-4), (-1,9,-4), (-8,-1,-4), (-9,1,-4)									
LiNbO3	(1,-9,-2)	11.914	70.26	7.354	6.6	4.543	29.92	56.79	64.19
Equiv. Refl.: (8,1,-2), (9,-1,-2), (-1,-8,-2), (-8,9,-2), (-9,8,-2)									
LiNbO3	(0,8,10)	11.989	71.29	7.085	6.1	4.287	26.08	53.59	59.6
Equiv. Refl.: (8,-8,10), (-8,0,10)									
LiNbO3	(0,-7,16)	12.08	72.62	6.791	6.2	3.962	24.37	49.52	55.19
Equiv. Refl.: (7,0,16), (-7,7,16)									
Sapph	(0,6,18)	12.461	79.89	6.703	5.6	2.257	12.58	28.21	30.89
Equiv. Refl.: (0,6,-18), (0,-6,18), (0,-6,-18), (6,0,18), (6,0,-18), (6,-6,18), (6,-6,-18), (-6,0,18), (-6,0,-18), (-6,6,18), (-6,6,-18)									
LiNbO3	(0,7,-16)	12.08	72.62	6.582	6.2	3.962	24.37	49.52	55.19
Equiv. Refl.: (7,-7,-16), (-7,0,-16)									
LiNbO3	(3,5,16)	12.08	72.62	6.58	6.4	3.962	25.28	49.52	55.6
Equiv. Refl.: (5,-8,16), (8,-5,16), (-3,8,16), (-5,-3,16), (-8,3,16)									
LiNbO3	(0,-8,-10)	11.989	71.29	6.286	6.1	4.287	26.08	53.59	59.6
Equiv. Refl.: (8,0,-10), (-8,8,-10)									
LiNbO3	(2,-9,8)	11.931	70.48	6.131	5.5	4.487	24.59	56.09	61.24
Equiv. Refl.: (7,2,8), (9,-2,8), (-2,-7,8), (-7,9,8), (-9,7,8)									
Quartz	(7,-6,-7)	12.48	80.38	6.117	4.9	2.146	10.51	26.83	28.81
Quartz	(7,-1,7)	12.48	80.38	6.116	4.9	2.146	10.51	26.83	28.81
Quartz	(-6,-1,-7)	12.48	80.38	6.114	4.9	2.146	10.5	26.83	28.81
Quartz	(-1,7,-7)	12.48	80.38	6.113	4.9	2.146	10.5	26.83	28.81
Equiv. Refl.: (-1,-6,7)									
Quartz	(-6,7,7)	12.48	80.38	6.112	4.9	2.146	10.5	26.83	28.81
Quartz	(8,-3,-6)	12.304	76.41	5.934	4.6	3.06	14.15	38.24	40.78
Equiv. Refl.: (-5,8,-6), (-5,-3,6)									
Quartz	(8,-5,6)	12.304	76.41	5.933	4.6	3.06	14.15	38.24	40.78
Equiv. Refl.: (-3,8,6), (-3,-5,-6)									
Quartz	(5,3,-6)	12.304	76.41	5.891	4.6	3.06	14.15	38.24	40.78
Equiv. Refl.: (5,-8,6)									
Quartz	(3,-8,-6)	12.304	76.41	5.89	4.6	3.06	14.15	38.24	40.78
Equiv. Refl.: (-8,3,6), (-8,5,-6)									
Quartz	(3,5,6)	12.304	76.41	5.889	4.6	3.06	14.15	38.24	40.78
Quartz	(-7,6,7)	12.48	80.38	5.856	4.9	2.146	10.51	26.83	28.81
Quartz	(-7,1,-7)	12.48	80.38	5.855	4.9	2.146	10.51	26.83	28.81
Quartz	(6,1,7)	12.48	80.38	5.853	4.9	2.146	10.5	26.83	28.81
Quartz	(1,6,-7)	12.48	80.38	5.852	4.9	2.146	10.5	26.83	28.81
Equiv. Refl.: (1,-7,7)									
Quartz	(6,-7,-7)	12.48	80.38	5.851	4.9	2.146	10.5	26.83	28.81
LiNbO3	(2,7,-8)	11.931	70.48	5.746	5.5	4.487	24.59	56.09	61.24
Equiv. Refl.: (7,-9,-8), (9,-7,-8), (-2,9,-8), (-7,-2,-8), (-9,2,-8)									
Quartz	(0,8,4)	12.526	81.73	5.717	4.8	1.84	8.85	23	24.64
Equiv. Refl.: (0,-8,-4)									
Quartz	(8,-8,4)	12.526	81.73	5.715	4.8	1.84	8.85	23	24.64
Equiv. Refl.: (-8,8,-4)									
Quartz	(8,0,-4)	12.526	81.73	5.714	4.8	1.84	8.85	23	24.64
Equiv. Refl.: (-8,0,4)									
Quartz	(6,-8,6)	12.56	82.86	5.681	4.8	1.586	7.62	19.82	21.23

Ei = Cryst	12.658 Refl (h,k,l)	keV EB [keV]	Θ B [$^{\circ}$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(6,2,-6) Equiv. Refl.: (-8,6,-6)	12.56	82.86	5.68	4.8	1.586	7.62	19.82	21.23
Quartz	(-8,2,6)	12.56	82.86	5.679	4.8	1.586	7.61	19.82	21.23
Quartz	(2,6,6) Equiv. Refl.: (2,-8,-6)	12.56	82.86	5.675	4.8	1.586	7.61	19.82	21.23
Quartz	(8,-6,6) Equiv. Refl.: (-6,8,-6), (-6,-2,6)	12.56	82.86	5.539	4.8	1.586	7.62	19.82	21.23
Quartz	(8,-2,-6)	12.56	82.86	5.537	4.8	1.586	7.61	19.82	21.23
Quartz	(-2,8,6) Equiv. Refl.: (-2,-6,-6)	12.56	82.86	5.533	4.8	1.586	7.61	19.82	21.23
Quartz	(9,-1,1) Equiv. Refl.: (9,-8,-1)	12.501	80.97	5.278	4.3	2.011	8.69	25.14	26.6
Quartz	(-1,9,-1) Equiv. Refl.: (-1,-8,1), (-8,9,1), (-8,-1,-1)	12.501	80.97	5.277	4.3	2.011	8.69	25.14	26.6
Sapph	(2,4,-20) Equiv. Refl.: (2,-6,20), (4,2,20), (4,-6,-20), (6,-2,20), (6,-4,-20), (-2,6,-20), (-2,-4,20), (-4,6,20), (-4,-2,-20), (-6,2,-20), (-6,4,20)	12.43	79.1	5.271	4.3	2.438	10.39	30.47	32.2
Quartz	(-9,1,-1) Equiv. Refl.: (-9,8,1)	12.501	80.97	5.227	4.3	2.011	8.69	25.14	26.6
Quartz	(1,8,-1) Equiv. Refl.: (1,-9,1), (8,1,1), (8,-9,-1)	12.501	80.97	5.226	4.3	2.011	8.69	25.14	26.6
Sapph	(3,6,0) Equiv. Refl.: (3,-9,0), (6,3,0), (6,-9,0), (9,-3,0), (9,-6,0), (-3,9,0), (-3,-6,0), (-6,9,0), (-6,-3,0), (-9,3,0), (-9,6,0)	11.941	70.62	5.204	4.1	4.452	18.38	55.65	58.61
Sapph	(2,7,4) Equiv. Refl.: (2,-9,-4), (7,2,-4), (7,-9,4), (9,-2,-4), (9,-7,4), (-2,9,4), (-2,-7,-4), (-7,9,-4), (-7,-2,4), (-9,2,4), (-9,7,-4)	12.461	79.89	5.148	4.2	2.258	9.56	28.22	29.8
Quartz	(-9,3,-4) Equiv. Refl.: (-9,6,4)	12.441	79.38	5.08	4.1	2.372	9.71	29.66	31.2
Quartz	(3,6,-4) Equiv. Refl.: (3,-9,4)	12.441	79.38	5.078	4.1	2.372	9.7	29.66	31.2
Quartz	(6,3,4)	12.441	79.38	5.077	4.1	2.372	9.7	29.66	31.2
Quartz	(6,-9,-4)	12.441	79.38	5.076	4.1	2.372	9.7	29.66	31.2
Quartz	(9,-3,4) Equiv. Refl.: (9,-6,-4)	12.441	79.38	5.066	4.1	2.372	9.71	29.66	31.2
Quartz	(-3,9,-4) Equiv. Refl.: (-3,-6,4)	12.441	79.38	5.064	4.1	2.372	9.7	29.66	31.2
Quartz	(-6,9,4) Equiv. Refl.: (-6,-3,-4)	12.441	79.38	5.063	4.1	2.372	9.7	29.66	31.2
Sapph	(0,8,4) Equiv. Refl.: (0,-8,-4), (8,0,-4), (8,-8,4), (-8,0,4), (-8,8,-4)	12.186	74.3	4.733	3.7	3.558	13.24	44.47	46.4
Quartz	(5,1,-8) Equiv. Refl.: (5,-6,8)	12.248	75.37	4.64	3.6	3.303	11.8	41.29	42.95
Quartz	(-6,5,-8)	12.248	75.37	4.636	3.6	3.303	11.79	41.29	42.94
Quartz	(-6,1,8)	12.248	75.37	4.635	3.6	3.303	11.79	41.29	42.94
Quartz	(1,5,8)	12.248	75.37	4.634	3.6	3.303	11.79	41.29	42.94
Quartz	(1,-6,-8)	12.248	75.37	4.633	3.6	3.303	11.79	41.29	42.94
Quartz	(-5,6,-8) Equiv. Refl.: (-5,-1,8)	12.248	75.37	4.631	3.6	3.303	11.8	41.29	42.95

Ei = Cryst	12.658 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(6,-1,-8)	12.248	75.37	4.627	3.6	3.303	11.79	41.29	42.94
	Equiv. Refl.: (6,-5,8)								
Quartz	(-1,-5,-8)	12.248	75.37	4.625	3.6	3.303	11.79	41.29	42.94
Quartz	(-1,6,8)	12.248	75.37	4.624	3.6	3.303	11.79	41.29	42.94
Quartz	(9,-1,0)	12.448	79.56	4.621	3.7	2.332	8.54	29.15	30.37
	Equiv. Refl.: (9,-8,0), (-1,9,0), (-1,-8,0), (-8,9,0), (-8,-1,0)								
Quartz	(4,-2,-10)	12.532	81.89	4.533	3.8	1.803	6.81	22.54	23.55
Quartz	(4,-2,10)	12.532	81.89	4.532	3.8	1.803	6.81	22.54	23.54
Quartz	(-2,4,-10)	12.532	81.89	4.528	3.8	1.803	6.81	22.54	23.54
	Equiv. Refl.: (-2,-2,10)								
Quartz	(-2,4,10)	12.532	81.89	4.526	3.8	1.803	6.8	22.54	23.54
Quartz	(-2,-2,-10)	12.532	81.89	4.524	3.8	1.803	6.8	22.54	23.54
	Equiv. Refl.: (-4,2,10)								
Quartz	(-4,2,-10)	12.532	81.89	4.523	3.8	1.803	6.81	22.54	23.54
Quartz	(2,2,-10)	12.532	81.89	4.518	3.8	1.803	6.81	22.54	23.54
	Equiv. Refl.: (2,-4,10)								
Quartz	(2,-4,-10)	12.532	81.89	4.516	3.8	1.803	6.8	22.54	23.54
Quartz	(2,2,10)	12.532	81.89	4.515	3.8	1.803	6.8	22.54	23.54
Quartz	(1,8,0)	12.448	79.56	4.509	3.7	2.332	8.54	29.15	30.37
	Equiv. Refl.: (1,-9,0), (8,1,0), (8,-9,0), (-9,1,0), (-9,8,0)								
Quartz	(7,2,-3)	12.412	78.7	4.427	3.5	2.53	8.91	31.63	32.86
Quartz	(2,7,3)	12.412	78.7	4.426	3.5	2.53	8.91	31.63	32.86
	Equiv. Refl.: (2,-9,-3), (7,-9,3), (-9,2,3)								
Quartz	(-9,7,-3)	12.412	78.7	4.425	3.5	2.53	8.9	31.63	32.86
Quartz	(-5,7,-7)	12.135	73.47	4.36	3.3	3.756	12.31	46.96	48.54
	Equiv. Refl.: (-5,-2,7)								
Quartz	(-2,7,7)	12.135	73.47	4.358	3.3	3.756	12.3	46.96	48.54
	Equiv. Refl.: (-2,9,3), (-2,-5,-7), (-2,-7,-3), (-7,9,-3), (-7,-2,3)								
Quartz	(7,-2,-7)	12.135	73.47	4.357	3.3	3.756	12.3	46.96	48.54
	Equiv. Refl.: (7,-5,7), (9,-2,-3), (9,-7,3)								
Quartz	(5,2,-7)	12.135	73.47	4.287	3.3	3.756	12.31	46.96	48.54
	Equiv. Refl.: (5,-7,7)								
Quartz	(2,5,7)	12.135	73.47	4.285	3.3	3.756	12.3	46.96	48.54
Quartz	(2,-7,-7)	12.135	73.47	4.284	3.3	3.756	12.3	46.96	48.54
	Equiv. Refl.: (-7,2,7), (-7,5,-7)								
Quartz	(0,3,10)	12.275	75.87	4.118	3.2	3.188	10.19	39.84	41.13
	Equiv. Refl.: (0,-3,-10), (3,0,-10), (-3,0,10), (-3,3,-10)								
Quartz	(3,-3,10)	12.275	75.87	4.117	3.2	3.188	10.19	39.84	41.13
Quartz	(-4,-5,4)	12.27	75.77	3.932	3.1	3.21	9.94	40.13	41.34
	Equiv. Refl.: (-5,9,4), (-5,-4,-4)								
Quartz	(9,-4,4)	12.27	75.77	3.931	3.1	3.21	9.94	40.13	41.34
	Equiv. Refl.: (9,-5,-4), (-4,9,-4)								
Quartz	(7,1,-5)	12.405	78.53	3.921	3.1	2.568	8.07	32.1	33.1
	Equiv. Refl.: (7,-8,5)								
Quartz	(-8,7,-5)	12.405	78.53	3.92	3.1	2.568	8.06	32.1	33.1
Quartz	(-8,1,5)	12.405	78.53	3.919	3.1	2.568	8.06	32.1	33.1
Quartz	(1,7,5)	12.405	78.53	3.918	3.1	2.568	8.06	32.1	33.1
	Equiv. Refl.: (1,-8,-5)								
Quartz	(4,5,-4)	12.27	75.77	3.908	3.1	3.21	9.94	40.13	41.34
	Equiv. Refl.: (4,-9,4), (5,4,4), (5,-9,-4)								

Ei = Cryst	12.658 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(-9,4,-4) Equiv. Refl.: (-9,5,4)	12.27	75.77	3.907	3.1	3.21	9.94	40.13	41.34
Sapph	(4,5,-4) Equiv. Refl.: (4,-9,4), (5,4,4), (5,-9,-4), (9,-4,4), (9,-5,-4), (-4,9,-4), (-4,-5,4), (-5,9,4), (-5,-4,-4), (-9,4,-4), (-9,5,4)	11.904	70.12	3.89	3.1	4.576	13.98	57.2	58.89
Quartz	(-7,8,-5) Equiv. Refl.: (-7,-1,5)	12.405	78.53	3.806	3.1	2.568	8.07	32.1	33.1
Quartz	(8,-7,5)	12.405	78.53	3.805	3.1	2.568	8.06	32.1	33.1
Quartz	(8,-1,-5)	12.405	78.53	3.804	3.1	2.568	8.06	32.1	33.1
Quartz	(-1,8,5) Equiv. Refl.: (-1,-7,-5)	12.405	78.53	3.803	3.1	2.568	8.06	32.1	33.1
Quartz	(3,6,4) Equiv. Refl.: (3,-9,-4), (-9,3,4)	12.441	79.38	3.782	3.1	2.372	7.38	29.66	30.56
Quartz	(6,3,-4) Equiv. Refl.: (6,-9,4), (-9,6,-4)	12.441	79.38	3.781	3.1	2.372	7.38	29.66	30.56
Quartz	(9,-3,-4) Equiv. Refl.: (9,-6,4), (-3,9,4), (-3,-6,-4)	12.441	79.38	3.78	3.1	2.372	7.38	29.66	30.56
Quartz	(-6,9,-4) Equiv. Refl.: (-6,-3,4)	12.441	79.38	3.779	3.1	2.372	7.38	29.66	30.56
Quartz	(-8,1,-5) Equiv. Refl.: (-8,7,5)	12.405	78.53	3.758	3	2.568	7.81	32.1	33.04
Quartz	(1,7,-5) Equiv. Refl.: (1,-8,5)	12.405	78.53	3.757	3	2.568	7.81	32.1	33.04
Quartz	(7,1,5) Equiv. Refl.: (7,-8,-5)	12.405	78.53	3.755	3	2.568	7.8	32.1	33.03
Quartz	(8,-1,5) Equiv. Refl.: (8,-7,-5)	12.405	78.53	3.678	3	2.568	7.81	32.1	33.04
Quartz	(-1,8,-5) Equiv. Refl.: (-1,-7,5)	12.405	78.53	3.677	3	2.568	7.81	32.1	33.04
Quartz	(-7,8,5) Equiv. Refl.: (-7,-1,-5)	12.405	78.53	3.675	3	2.568	7.81	32.1	33.03
Sapph	(2,6,-13) Equiv. Refl.: (2,-8,13), (6,2,13), (6,-8,-13), (8,-2,13), (8,-6,-13), (-2,8,-13), (-2,-6,13), (-6,8,13), (-6,-2,-13), (-8,2,-13), (-8,6,13)	12.498	80.87	3.318	2.9	2.035	5.88	25.43	26.1
Quartz	(3,-4,-10)	12.616	85.33	3.297	2.9	1.035	2.97	12.93	13.27
Quartz	(3,1,10)	12.616	85.33	3.294	2.9	1.035	2.97	12.93	13.27
Quartz	(1,3,-10) Equiv. Refl.: (-4,1,-10)	12.616	85.33	3.285	2.9	1.035	2.96	12.93	13.27
Quartz	(1,-4,10)	12.616	85.33	3.283	2.9	1.035	2.96	12.93	13.27
Quartz	(-4,3,10)	12.616	85.33	3.282	2.9	1.035	2.96	12.93	13.27
Quartz	(-6,-2,-6)	12.56	82.86	3.26	2.7	1.586	4.26	19.82	20.27
Quartz	(-6,8,6)	12.56	82.86	3.259	2.7	1.586	4.26	19.82	20.27
Quartz	(8,-6,-6)	12.56	82.86	3.258	2.7	1.586	4.26	19.82	20.27
Quartz	(8,-2,6)	12.56	82.86	3.257	2.7	1.586	4.25	19.82	20.27
Quartz	(-2,8,-6)	12.56	82.86	3.256	2.7	1.586	4.25	19.82	20.27
Quartz	(-2,-6,6)	12.56	82.86	3.255	2.7	1.586	4.25	19.82	20.27
Quartz	(-5,2,9) Equiv. Refl.: (-5,3,-9)	12.12	73.24	2.819	2.2	3.812	8.31	47.65	48.37
Quartz	(5,-2,-9) Equiv. Refl.: (5,-3,9)	12.12	73.24	2.818	2.2	3.812	8.31	47.65	48.37

Ei = Cryst	12.658 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(3,2,-9)	12.12	73.24	2.816	2.2	3.812	8.31	47.65	48.37
	Equiv. Refl.: (3,-5,9), (-3,5,-9)								
Quartz	(-3,-2,9)	12.12	73.24	2.815	2.2	3.812	8.31	47.65	48.37
Quartz	(2,3,9)	12.12	73.24	2.814	2.2	3.812	8.3	47.65	48.37
	Equiv. Refl.: (2,-5,-9), (-2,5,9)								
Quartz	(-2,-3,-9)	12.12	73.24	2.813	2.2	3.812	8.3	47.65	48.37
Quartz	(4,3,7)	11.959	70.87	2.808	2.4	4.392	10.62	54.9	55.91
	Equiv. Refl.: (4,-7,-7)								
Quartz	(3,4,-7)	11.959	70.87	2.805	2.4	4.392	10.61	54.9	55.91
	Equiv. Refl.: (3,-7,7), (-7,3,-7), (-7,4,7)								
Quartz	(-4,7,7)	11.959	70.87	2.697	2.4	4.392	10.62	54.9	55.91
	Equiv. Refl.: (-4,-3,-7)								
Quartz	(7,-3,7)	11.959	70.87	2.695	2.4	4.392	10.61	54.9	55.91
	Equiv. Refl.: (7,-4,-7), (-3,-4,7)								
Quartz	(-3,7,-7)	11.959	70.87	2.694	2.4	4.392	10.61	54.9	55.91
Quartz	(2,7,1)	11.981	71.18	2.658	2.3	4.315	9.87	53.94	54.83
	Equiv. Refl.: (2,-9,-1), (7,2,-1), (7,-9,1), (-9,2,1), (-9,7,-1)								
Quartz	(6,2,6)	12.56	82.86	2.598	2.7	1.586	4.26	19.82	20.27
Quartz	(6,-8,-6)	12.56	82.86	2.597	2.7	1.586	4.26	19.82	20.27
Quartz	(-2,9,-2)	12.145	73.63	2.596	2.3	3.719	8.44	46.49	47.25
	Equiv. Refl.: (-8,6,6)								
Quartz	(9,-2,2)	12.145	73.63	2.595	2.3	3.719	8.43	46.49	47.25
	Equiv. Refl.: (9,-7,-2), (-2,-7,2), (-7,9,2), (-7,-2,-2), (-8,2,-6)								
Quartz	(2,6,-6)	12.56	82.86	2.594	2.7	1.586	4.25	19.82	20.27
	Equiv. Refl.: (2,-8,6)								
Sapph	(0,1,26)	12.5	80.95	2.52	2.5	2.016	4.97	25.2	25.69
	Equiv. Refl.: (0,-1,-26), (1,0,-26), (1,-1,26), (-1,0,26), (-1,1,-26)								
Quartz	(9,-7,1)	11.981	71.18	2.51	2.3	4.315	9.87	53.94	54.83
	Equiv. Refl.: (-2,9,1), (-2,-7,-1)								
Quartz	(9,-2,-1)	11.981	71.18	2.509	2.3	4.315	9.87	53.94	54.83
	Equiv. Refl.: (-7,9,-1), (-7,-2,1)								
Quartz	(2,7,-2)	12.145	73.63	2.474	2.3	3.719	8.44	46.49	47.25
	Equiv. Refl.: (2,-9,2)								
Quartz	(7,2,2)	12.145	73.63	2.473	2.3	3.719	8.43	46.49	47.25
	Equiv. Refl.: (7,-9,-2), (-9,2,-2), (-9,7,2)								
Sapph	(0,5,-20)	12.153	73.77	2.362	2.2	3.685	8.15	46.07	46.78
	Equiv. Refl.: (0,-5,20), (5,0,20), (5,-5,-20), (-5,0,-20), (-5,5,20)								
Quartz	(1,7,-4)	11.918	70.32	2.332	2	4.528	8.95	56.6	57.3
	Equiv. Refl.: (1,-8,4), (7,1,4), (7,-8,-4), (-8,1,-4), (-8,7,4)								
Quartz	(2,3,-9)	12.12	73.24	2.318	2	3.812	7.75	47.65	48.28
Quartz	(2,-5,9)	12.12	73.24	2.317	2	3.812	7.74	47.65	48.28
	Equiv. Refl.: (3,2,9)								
Quartz	(3,-5,-9)	12.12	73.24	2.316	2	3.812	7.74	47.65	48.28
Quartz	(-5,2,-9)	12.12	73.24	2.312	2	3.812	7.73	47.65	48.27
	Equiv. Refl.: (-5,3,9)								
Quartz	(-2,5,-9)	12.12	73.24	2.301	2	3.812	7.74	47.65	48.28
	Equiv. Refl.: (-2,-3,9)								
Quartz	(-3,5,9)	12.12	73.24	2.3	2	3.812	7.74	47.65	48.28
	Equiv. Refl.: (-3,-2,-9)								
Quartz	(5,-2,9)	12.12	73.24	2.295	2	3.812	7.73	47.65	48.27
	Equiv. Refl.: (5,-3,-9)								

Ei =	12.658	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,6,19)	12.463	79.93	2.285	3.4	2.248	7.73	28.1	29.14
	Equiv. Refl.: (6,1,-19), (6,-7,19), (7,-6,19), (-1,-6,-19), (-6,7,-19), (-6,-1,19), (-7,6,-19)								
LiNbO3	(1,-7,-19)	12.463	79.93	2.284	3.4	2.248	7.73	28.1	29.14
	Equiv. Refl.: (7,-1,-19), (-1,7,19), (-7,1,19)								
Quartz	(-3,4,10)	12.616	85.33	2.148	2.9	1.035	2.97	12.93	13.27
Quartz	(-3,-1,-10)	12.616	85.33	2.146	2.9	1.035	2.97	12.93	13.27
Quartz	(4,-1,10)	12.616	85.33	2.139	2.9	1.035	2.96	12.93	13.27
	Equiv. Refl.: (-1,-3,10)								
Quartz	(-1,4,-10)	12.616	85.33	2.138	2.9	1.035	2.96	12.93	13.27
Quartz	(4,-3,-10)	12.616	85.33	2.137	2.9	1.035	2.96	12.93	13.27
LiNbO3	(4,6,7)	12.52	81.52	1.999	3.3	1.887	6.24	23.59	24.4
	Equiv. Refl.: (4,-10,-7), (6,4,-7), (6,-10,7), (10,-4,-7), (10,-6,7), (-4,10,7), (-4,-6,-7), (-6,10,-7), (-6,-4,7), (-10,4,7), (-10,6,-7)								
Sapph	(1,4,21)	12.165	73.96	1.934	2.1	3.639	7.59	45.49	46.12
	Equiv. Refl.: (1,4,-21), (1,-5,21), (1,-5,-21), (4,1,21), (4,1,-21), (4,-5,21), (4,-5,-21), (5,-1,21), (5,-1,-21), (5,-4,21), (5,-4,-21), (-1,5,21), (-1,5,-21), (-1,-4,21), (-1,-4,-21), (-4,5,21), (-4,5,-21), (-4,-1,21), (-4,-1,-21), (-5,1,21), (-5,1,-21), (-5,4,21), (-5,4,-21)								
Quartz	(8,-1,4)	11.918	70.32	1.877	2	4.528	8.95	56.6	57.3
	Equiv. Refl.: (8,-7,-4), (-1,8,-4), (-1,-7,4), (-7,8,4), (-7,-1,-4)								
Sapph	(1,6,16)	12.476	80.26	1.833	2.1	2.173	4.62	27.16	27.55
	Equiv. Refl.: (1,-7,-16), (6,1,-16), (6,-7,16), (7,-1,-16), (7,-6,16), (-1,7,16), (-1,-6,-16), (-6,7,-16), (-6,-1,16), (-7,1,16), (-7,6,-16)								
LiNbO3	(1,1,27)	12.312	76.57	1.83	2.7	3.024	8.2	37.8	38.67
	Equiv. Refl.: (1,1,-27), (1,-2,27), (1,-2,-27), (2,-1,27), (2,-1,-27), (-1,2,27), (-1,2,-27), (-1,-1,27), (-1,-1,-27), (-2,1,27), (-2,1,-27)								
Quartz	(2,6,5)	11.97	71.02	1.821	1.9	4.353	8.08	54.42	55.02
	Equiv. Refl.: (2,-8,-5), (-8,2,5), (-8,6,-5)								
Quartz	(6,2,-5)	11.97	71.02	1.82	1.9	4.353	8.08	54.42	55.01
	Equiv. Refl.: (6,-8,5)								
LiNbO3	(2,7,-11)	12.399	78.39	1.81	2.8	2.6	7.29	32.5	33.31
	Equiv. Refl.: (2,-9,11), (7,2,11), (7,-9,-11), (9,-2,11), (9,-7,-11), (-2,9,-11), (-2,-7,11), (-7,9,11), (-7,-2,-11), (-9,2,-11), (-9,7,11)								
Sapph	(1,6,-14)	11.915	70.27	1.802	1.9	4.539	8.71	56.73	57.4
	Equiv. Refl.: (1,-7,14), (6,1,14), (6,-7,-14), (7,-1,14), (7,-6,-14), (-1,7,-14), (-1,-6,14), (-6,7,14), (-6,-1,-14), (-7,1,-14), (-7,6,14)								
Quartz	(3,-1,-10)	12.101	72.93	1.789	1.9	3.886	7.2	48.57	49.11
	Equiv. Refl.: (3,-2,10)								
Quartz	(-2,3,-10)	12.101	72.93	1.787	1.9	3.886	7.19	48.57	49.1
Quartz	(-2,-1,10)	12.101	72.93	1.786	1.9	3.886	7.19	48.57	49.1
Quartz	(-1,3,10)	12.101	72.93	1.785	1.8	3.886	7.18	48.57	49.1
	Equiv. Refl.: (-1,-2,-10)								
Quartz	(-2,8,5)	11.97	71.02	1.743	1.9	4.353	8.08	54.42	55.02
	Equiv. Refl.: (-2,-6,-5)								
Quartz	(8,-2,-5)	11.97	71.02	1.742	1.9	4.353	8.08	54.42	55.01
	Equiv. Refl.: (8,-6,5), (-6,8,-5), (-6,-2,5)								
Sapph	(2,7,-5)	12.543	82.28	1.74	2.1	1.716	3.64	21.44	21.75
	Equiv. Refl.: (2,-9,5), (7,2,5), (7,-9,-5), (9,-2,5), (9,-7,-5), (-2,9,-5), (-2,-7,5), (-7,9,5), (-7,-2,-5), (-9,2,-5), (-9,7,5)								
Quartz	(-3,1,10)	12.101	72.93	1.731	1.9	3.886	7.2	48.57	49.11
	Equiv. Refl.: (-3,2,-10)								

Ei = Cryst	12.658 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(2,1,-10)	12.101	72.93	1.729	1.9	3.886	7.19	48.57	49.1
	Equiv. Refl.: (2,-3,10)								
Quartz	(1,2,10)	12.101	72.93	1.728	1.8	3.886	7.19	48.57	49.1
Quartz	(1,-3,-10)	12.101	72.93	1.727	1.8	3.886	7.18	48.57	49.1
Quartz	(1,2,-10)	12.101	72.93	1.711	1.8	3.886	6.92	48.57	49.06
	Equiv. Refl.: (-3,1,-10), (-3,2,10)								
Quartz	(1,-3,10)	12.101	72.93	1.71	1.8	3.886	6.92	48.57	49.06
Quartz	(2,1,10)	12.101	72.93	1.709	1.8	3.886	6.91	48.57	49.06
	Equiv. Refl.: (2,-3,-10)								
Sapph	(1,5,-19)	12.345	77.23	1.669	1.9	2.868	5.42	35.85	36.26
	Equiv. Refl.: (1,-6,19), (5,1,19), (5,-6,-19), (6,-1,19), (6,-5,-19), (-1,6,-19), (-1,-5,19), (-5,6,19), (-5,-1,-19), (-6,1,-19), (-6,5,19)								
Sapph	(4,5,-7)	12.216	74.81	1.661	1.8	3.437	6.32	42.96	43.43
	Equiv. Refl.: (4,-9,7), (5,4,7), (5,-9,-7), (9,-4,7), (9,-5,-7), (-4,9,-7), (-4,-5,7), (-5,9,7), (-5,-4,-7), (-9,4,-7), (-9,5,7)								
Quartz	(3,-1,10)	12.101	72.93	1.659	1.8	3.886	6.92	48.57	49.06
	Equiv. Refl.: (3,-2,-10), (-1,3,-10), (-1,-2,10)								
Quartz	(-2,3,10)	12.101	72.93	1.658	1.8	3.886	6.91	48.57	49.06
	Equiv. Refl.: (-2,-1,-10)								
Quartz	(2,7,-1)	11.981	71.18	1.644	1.7	4.315	7.42	53.94	54.45
	Equiv. Refl.: (2,-9,1), (7,2,1), (7,-9,-1), (-9,2,-1), (-9,7,1)								
Quartz	(9,-2,1)	11.981	71.18	1.628	1.7	4.315	7.42	53.94	54.45
	Equiv. Refl.: (9,-7,-1), (-2,9,-1), (-2,-7,1), (-7,9,1), (-7,-2,-1)								
Quartz	(4,5,4)	12.27	75.77	1.627	1.7	3.21	5.6	40.13	40.52
Quartz	(4,-9,-4)	12.27	75.77	1.626	1.7	3.21	5.6	40.13	40.52
	Equiv. Refl.: (-9,4,4), (-9,5,-4)								
Quartz	(5,4,-4)	12.27	75.77	1.625	1.7	3.21	5.59	40.13	40.52
	Equiv. Refl.: (5,-9,4)								
Quartz	(9,-4,-4)	12.27	75.77	1.601	1.7	3.21	5.59	40.13	40.52
	Equiv. Refl.: (9,-5,4), (-4,9,4), (-4,-5,-4)								
Quartz	(-5,9,-4)	12.27	75.77	1.6	1.7	3.21	5.59	40.13	40.52
	Equiv. Refl.: (-5,-4,4)								
Quartz	(9,-3,3)	12.066	72.4	1.574	1.6	4.015	6.6	50.19	50.62
	Equiv. Refl.: (9,-6,-3), (-3,9,-3), (-3,-6,3), (-6,9,3), (-6,-3,-3)								
Quartz	(6,1,-7)	12.48	80.38	1.561	1.7	2.146	3.73	26.83	27.08
Quartz	(6,-7,7)	12.48	80.38	1.56	1.7	2.146	3.73	26.83	27.08
Quartz	(1,6,7)	12.48	80.38	1.557	1.7	2.146	3.72	26.83	27.08
	Equiv. Refl.: (1,-7,-7)								
Quartz	(-7,1,7)	12.48	80.38	1.556	1.7	2.146	3.72	26.83	27.08
	Equiv. Refl.: (-7,6,-7)								
Quartz	(3,3,8)	11.896	70.02	1.534	1.6	4.602	7.24	57.53	57.98
	Equiv. Refl.: (3,-6,-8)								
Quartz	(-6,3,-8)	11.896	70.02	1.533	1.6	4.602	7.23	57.53	57.98
Quartz	(3,3,-8)	11.896	70.02	1.532	1.6	4.602	7.23	57.53	57.98
	Equiv. Refl.: (3,-6,8), (-6,3,8)								
Quartz	(-8,4,-6)	12.217	74.83	1.518	1.6	3.431	5.53	42.89	43.24
Quartz	(3,6,-3)	12.066	72.4	1.517	1.6	4.015	6.6	50.19	50.62
	Equiv. Refl.: (3,-9,3), (6,3,3), (6,-9,-3), (-8,4,6), (-9,3,-3), (-9,6,3)								
Quartz	(4,4,6)	12.217	74.83	1.516	1.6	3.431	5.53	42.89	43.24
	Equiv. Refl.: (4,4,-6), (4,-8,6), (4,-8,-6)								

Ei = Cryst	12.658 Refl (h,k,l)	keV EB [keV]	ØB [°]	∫ IR dØ [µrad]	Width [µrad]	Ei cotØ [meV/µrad]	ΔE [meV]	ΔEg 2m, 50µm [meV]	ΔEt 2m, 50µm [meV]
Sapph	(2,6,11)	12.052	72.2	1.497	1.6	4.064	6.7	50.79	51.23
	Equiv. Refl.: (2,-8,-11), (6,2,-11), (6,-8,11), (8,-2,-11), (8,-6,11), (-2,8,11), (-2,-6,-11), (-6,8,-11), (-6,-2,11), (-8,2,11), (-8,6,-11)								
Quartz	(-6,-1,7)	12.48	80.38	1.469	1.7	2.146	3.73	26.83	27.08
Quartz	(-6,7,-7)	12.48	80.38	1.468	1.7	2.146	3.73	26.83	27.08
Quartz	(-1,7,7)	12.48	80.38	1.465	1.7	2.146	3.72	26.83	27.08
	Equiv. Refl.: (-1,-6,-7)								
Quartz	(7,-1,-7)	12.48	80.38	1.464	1.7	2.146	3.72	26.83	27.08
	Equiv. Refl.: (7,-6,7)								
Quartz	(8,-4,6)	12.217	74.83	1.457	1.6	3.431	5.53	42.89	43.24
	Equiv. Refl.: (8,-4,-6)								
Quartz	(-4,8,-6)	12.217	74.83	1.456	1.6	3.431	5.53	42.89	43.24
	Equiv. Refl.: (-4,-4,-6)								
Quartz	(2,5,-7)	12.135	73.47	1.455	1.6	3.756	5.88	46.96	47.32
	Equiv. Refl.: (5,2,7), (5,-7,-7), (-4,8,6), (-4,-4,6)								
Quartz	(2,-7,7)	12.135	73.47	1.454	1.6	3.756	5.87	46.96	47.32
	Equiv. Refl.: (-7,2,-7), (-7,5,7)								
Quartz	(-2,-5,7)	12.135	73.47	1.449	1.6	3.756	5.88	46.96	47.32
	Equiv. Refl.: (-5,7,7), (-5,-2,-7)								
Quartz	(7,-2,7)	12.135	73.47	1.448	1.6	3.756	5.87	46.96	47.32
	Equiv. Refl.: (7,-5,-7), (-2,7,-7)								
Quartz	(-3,6,8)	11.896	70.02	1.446	1.6	4.602	7.24	57.53	57.98
Quartz	(6,-3,8)	11.896	70.02	1.445	1.6	4.602	7.23	57.53	57.98
	Equiv. Refl.: (-3,-3,-8)								
Quartz	(6,-3,-8)	11.896	70.02	1.444	1.6	4.602	7.23	57.53	57.98
	Equiv. Refl.: (-3,-3,8)								
Quartz	(-3,6,-8)	11.896	70.02	1.443	1.6	4.602	7.23	57.53	57.98
Quartz	(9,-3,-3)	12.066	72.4	1.44	1.5	4.015	5.96	50.19	50.54
Quartz	(9,-6,3)	12.066	72.4	1.439	1.5	4.015	5.96	50.19	50.54
	Equiv. Refl.: (-3,9,3), (-3,-6,-3), (-6,9,-3), (-6,-3,3)								
Sapph	(4,5,5)	11.99	71.3	1.431	1.6	4.284	6.75	53.56	53.98
	Equiv. Refl.: (4,-9,-5), (5,4,-5), (5,-9,5), (9,-4,-5), (9,-5,5), (-4,9,5), (-4,-5,-5), (-5,9,-5), (-5,-4,5), (-9,4,5), (-9,5,-5)								
Quartz	(1,7,4)	11.918	70.32	1.413	1.5	4.528	6.69	56.6	56.99
	Equiv. Refl.: (7,1,-4), (7,-8,4)								
Quartz	(1,-8,-4)	11.918	70.32	1.412	1.5	4.528	6.69	56.6	56.99
	Equiv. Refl.: (-8,1,4), (-8,7,-4)								
Quartz	(-7,-1,4)	11.918	70.32	1.362	1.5	4.528	6.69	56.6	56.99
Quartz	(-1,8,4)	11.918	70.32	1.361	1.5	4.528	6.69	56.6	56.99
	Equiv. Refl.: (-1,-7,-4), (-7,8,-4)								
Quartz	(8,-1,-4)	11.918	70.32	1.36	1.5	4.528	6.68	56.6	56.99
	Equiv. Refl.: (8,-7,4)								
LiNbO3	(4,6,-5)	12.326	76.86	1.352	2.2	2.955	6.55	36.94	37.52
	Equiv. Refl.: (4,-10,5), (6,4,5), (6,-10,-5), (10,-4,5), (10,-6,-5), (-4,10,-5), (-4,-6,5), (-6,10,5), (-6,-4,-5), (-10,4,-5), (-10,6,5), (7,-3,-7), (-3,7,7), (-3,-4,-7), (-4,7,-7), (-4,-3,7)								
Quartz	(7,-4,7)	11.959	70.87	1.351	1.4	4.392	6.26	54.9	55.25
Quartz	(3,6,3)	12.066	72.4	1.319	1.5	4.015	5.96	50.19	50.54
	Equiv. Refl.: (6,3,-3), (6,-9,3), (-9,3,3), (-9,6,-3)								
Quartz	(3,-9,-3)	12.066	72.4	1.318	1.5	4.015	5.96	50.19	50.54

Ei =	12.658	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(3,4,7)	11.959	70.87	1.309	1.4	4.392	6.27	54.9	55.25
	Equiv. Refl.: (3,-7,-7)								
Quartz	(4,3,-7)	11.959	70.87	1.308	1.4	4.392	6.27	54.9	55.25
	Equiv. Refl.: (4,-7,7), (-7,3,7), (-7,4,-7)								
Sapph	(1,2,-25)	12.579	83.58	1.268	1.7	1.424	2.47	17.8	17.97
	Equiv. Refl.: (1,-3,25), (2,1,25), (2,-3,-25), (3,-1,25), (3,-2,-25), (-1,3,-25), (-1,-2,25), (-2,3,25), (-2,-1,-25), (-3,1,-25), (-3,2,25)								
Quartz	(2,4,-8)	11.985	71.23	1.251	1.3	4.301	5.63	53.76	54.06
	Equiv. Refl.: (-6,2,-8), (-6,4,8)								
Quartz	(2,-6,8)	11.985	71.23	1.25	1.3	4.301	5.62	53.76	54.06
Quartz	(4,2,8)	11.985	71.23	1.249	1.3	4.301	5.62	53.76	54.06
	Equiv. Refl.: (4,-6,-8)								
Quartz	(-8,3,-6)	12.304	76.41	1.214	1.3	3.06	3.94	38.24	38.45
Quartz	(5,3,6)	12.304	76.41	1.213	1.3	3.06	3.94	38.24	38.45
	Equiv. Refl.: (5,-8,-6), (-8,5,6)								
Quartz	(3,5,-6)	12.304	76.41	1.212	1.3	3.06	3.93	38.24	38.45
Quartz	(3,-8,6)	12.304	76.41	1.211	1.3	3.06	3.93	38.24	38.45
Sapph	(1,7,9)	12.143	73.6	1.191	1.4	3.724	5.1	46.55	46.83
	Equiv. Refl.: (1,7,-9), (1,-8,9), (1,-8,-9), (7,1,9), (7,1,-9), (7,-8,9), (7,-8,-9), (8,-1,9), (8,-1,-9), (8,-7,9), (8,-7,-9), (-1,8,9), (-1,8,-9), (-1,-7,9), (-1,-7,-9), (-7,8,9), (-7,8,-9), (-7,-1,9), (-7,-1,-9), (-8,1,9), (-8,1,-9), (-8,7,9), (-8,7,-9)								
Quartz	(-2,-4,8)	11.985	71.23	1.157	1.3	4.301	5.63	53.76	54.06
Quartz	(6,-2,8)	11.985	71.23	1.156	1.3	4.301	5.62	53.76	54.06
	Equiv. Refl.: (6,-4,-8), (-2,6,-8)								
Quartz	(-4,6,8)	11.985	71.23	1.155	1.3	4.301	5.62	53.76	54.06
	Equiv. Refl.: (-4,-2,-8)								
Quartz	(1,4,9)	12.294	76.23	1.152	1.3	3.102	4.01	38.78	38.98
	Equiv. Refl.: (1,-5,-9)								
Quartz	(4,1,-9)	12.294	76.23	1.151	1.3	3.102	4	38.78	38.98
	Equiv. Refl.: (-5,1,9), (-5,4,-9)								
Quartz	(4,-5,9)	12.294	76.23	1.15	1.3	3.102	4	38.78	38.98
LiNbO3	(4,6,1)	12.13	73.4	1.123	1.8	3.774	6.89	47.18	47.68
	Equiv. Refl.: (4,-10,-1), (6,4,-1), (6,-10,1), (10,-4,-1), (10,-6,1), (-4,10,1), (-4,-6,-1), (-6,10,-1), (-6,-4,1), (-10,4,1), (-10,6,-1)								
Quartz	(-1,5,9)	12.294	76.23	1.118	1.3	3.102	4	38.78	38.98
	Equiv. Refl.: (-1,-4,-9), (-4,-1,9)								
Quartz	(5,-1,-9)	12.294	76.23	1.117	1.3	3.102	4	38.78	38.98
	Equiv. Refl.: (5,-4,9), (-4,5,-9)								
Sapph	(0,4,-22)	12.103	72.96	1.09	1.3	3.879	4.91	48.49	48.73
	Equiv. Refl.: (0,-4,22), (4,0,22), (4,-4,-22), (-4,0,-22), (-4,4,22)								
Sapph	(2,7,1)	12.323	76.8	1.078	1.3	2.969	3.88	37.12	37.32
	Equiv. Refl.: (2,-9,-1), (7,2,-1), (7,-9,1), (9,-2,-1), (9,-7,1), (-2,9,1), (-2,-7,-1), (-7,9,-1), (-7,-2,1), (-9,2,1), (-9,7,-1)								
Quartz	(8,-3,6)	12.304	76.41	1.051	1.3	3.06	3.94	38.24	38.45
	Equiv. Refl.: (8,-5,-6), (-5,8,6), (-5,-3,-6)								
Quartz	(-3,-5,6)	12.304	76.41	1.05	1.3	3.06	3.93	38.24	38.45
Quartz	(-3,8,-6)	12.304	76.41	1.049	1.3	3.06	3.93	38.24	38.45
Sapph	(3,6,6)	12.28	75.95	0.991	1.2	3.167	3.81	39.58	39.77
	Equiv. Refl.: (3,6,-6), (3,-9,6), (3,-9,-6), (6,3,6), (6,3,-6), (6,-9,6), (6,-9,-6), (9,-3,6), (9,-3,-6), (9,-6,6), (9,-6,-6), (-3,9,6), (-3,9,-6), (-3,-6,6), (-3,-6,-6), (-6,9,6), (-6,9,-6), (-6,-3,6), (-6,-3,-6), (-9,3,6), (-9,3,-6), (-9,6,6), (-9,6,-6)								

Ei =	12.658	keV						ΔEg	ΔEt
Cryst	Ref	EB	ΘB	IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(0,8,-8)	12.627	85.96	0.981	1.7	0.894	1.48	11.18	11.27
	Equiv. Refl.: (0,-8,8), (8,0,8), (8,-8,-8), (-8,0,-8), (-8,8,8)								
LiNbO3	(3,7,5)	12.56	82.85	0.95	2.2	1.588	3.52	19.85	20.16
	Equiv. Refl.: (3,-10,-5), (7,3,-5), (7,-10,5), (10,-3,-5), (10,-7,5), (-3,10,5), (-3,-7,-5), (-7,10,-5), (-7,-3,5), (-10,3,5), (-10,7,-5)								
Quartz	(2,7,2)	12.145	73.63	0.94	1.1	3.719	3.95	46.49	46.66
	Equiv. Refl.: (2,-9,-2), (7,2,-2), (7,-9,2), (-9,2,2)								
Quartz	(-9,7,-2)	12.145	73.63	0.939	1.1	3.719	3.95	46.49	46.66
Sapph	(2,4,19)	12.067	72.42	0.919	1.1	4.01	4.39	50.13	50.32
	Equiv. Refl.: (2,-6,-19), (4,2,-19), (4,-6,19), (6,-2,-19), (6,-4,19), (-2,6,19), (-2,-4,-19), (-4,6,-19), (-4,-2,19), (-6,2,19), (-6,4,-19)								
Quartz	(9,-2,-2)	12.145	73.63	0.912	1.1	3.719	3.95	46.49	46.66
	Equiv. Refl.: (9,-7,2), (-2,9,2), (-2,-7,-2), (-7,9,-2), (-7,-2,2)								
Sapph	(0,7,14)	12.472	80.17	0.885	1.2	2.194	2.6	27.43	27.55
	Equiv. Refl.: (0,-7,-14), (7,0,-14), (7,-7,14), (-7,0,14), (-7,7,-14)								
Sapph	(3,5,13)	12.223	74.93	0.819	1	3.407	3.49	42.59	42.73
	Equiv. Refl.: (3,-8,-13), (5,3,-13), (5,-8,13), (8,-3,-13), (8,-5,13), (-3,8,13), (-3,-5,-13), (-5,8,-13), (-5,-3,13), (-8,3,13), (-8,5,-13)								
LiNbO3	(1,3,25)	12.252	75.45	0.806	1.5	3.285	5.04	41.06	41.37
	Equiv. Refl.: (1,-4,-25), (3,1,-25), (3,-4,25), (4,-1,-25), (4,-3,25), (-1,4,25), (-1,-3,-25), (-3,4,-25), (-3,-1,25), (-4,1,25), (-4,3,-25)								
Sapph	(2,3,-22)	12.38	77.97	0.786	1	2.698	2.81	33.73	33.84
	Equiv. Refl.: (2,-5,22), (3,2,22), (3,-5,-22), (5,-2,22), (5,-3,-22), (-2,5,-22), (-2,-3,22), (-3,5,22), (-3,-2,-22), (-5,2,-22), (-5,3,22)								
Quartz	(0,5,9)	12.635	86.53	0.785	1.4	0.768	1.06	9.59	9.65
	Equiv. Refl.: (0,-5,-9), (8,0,3), (8,-8,-3), (-8,0,-3), (-8,8,3)								
Quartz	(0,8,-3)	12.153	73.76	0.784	0.9	3.686	3.41	46.07	46.2
	Equiv. Refl.: (0,-8,3)								
Quartz	(-5,0,9)	12.635	86.53	0.776	1.4	0.768	1.05	9.59	9.65
Quartz	(5,0,-9)	12.635	86.53	0.775	1.4	0.768	1.05	9.59	9.65
Quartz	(5,-5,9)	12.635	86.53	0.774	1.4	0.768	1.05	9.59	9.65
	Equiv. Refl.: (-5,5,-9)								
Sapph	(2,7,-2)	12.351	77.36	0.767	1	2.839	2.86	35.49	35.6
	Equiv. Refl.: (2,-9,2), (7,2,2), (7,-9,-2), (9,-2,2), (9,-7,-2), (-2,9,-2), (-2,-7,2), (-7,9,2), (-7,-2,-2), (-9,2,-2), (-9,7,2)								
LiNbO3	(4,5,-13)	12.318	76.69	0.727	1.5	2.994	4.45	37.43	37.69
	Equiv. Refl.: (4,-9,13), (5,4,13), (5,-9,-13), (9,-4,13), (9,-5,-13), (-4,9,-13), (-4,-5,13), (-5,9,13), (-5,-4,-13), (-9,4,-13), (-9,5,13)								
Quartz	(1,8,1)	12.501	80.97	0.663	0.8	2.011	1.62	25.14	25.19
	Equiv. Refl.: (1,-9,-1), (8,1,-1), (8,-9,1), (-9,1,1), (-9,8,-1)								
LiNbO3	(3,4,-19)	11.989	71.28	0.653	1.2	4.289	5.3	53.61	53.87
	Equiv. Refl.: (3,-7,19), (4,3,19), (4,-7,-19), (7,-3,19), (7,-4,-19), (-3,7,-19), (-3,-4,19), (-4,7,19), (-4,-3,-19), (-7,3,-19), (-7,4,19)								
LiNbO3	(2,6,17)	12.583	83.76	0.633	1.9	1.385	2.59	17.31	17.5
	Equiv. Refl.: (2,-8,-17), (6,2,-17), (6,-8,17), (8,-2,-17), (8,-6,17), (-2,8,17), (-2,-6,-17), (-6,8,-17), (-6,-2,17), (-8,2,17), (-8,6,-17)								
Quartz	(8,-2,5)	11.97	71.02	0.63	0.7	4.353	3.06	54.42	54.5
	Equiv. Refl.: (8,-6,-5), (-2,8,-5), (-2,-6,5)								
Quartz	(-6,8,5)	11.97	71.02	0.629	0.7	4.353	3.05	54.42	54.5
	Equiv. Refl.: (-6,-2,-5)								

Ei = Cryst	12.658 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
LiNbO3	(3,7,-1)	12.367	77.69	0.58	1.3	2.762	3.69	34.53	34.72
	Equiv. Refl.: (3,-10,1), (7,3,1), (7,-10,-1), (10,-3,1), (10,-7,-1), (-3,10,-1), (-3,-7,1), (-7,10,1), (-7,-3,-1), (-10,3,-1), (-10,7,1)								
Quartz	(0,3,-10)	12.275	75.87	0.576	0.7	3.188	2.36	39.84	39.91
	Equiv. Refl.: (0,-3,10)								
Quartz	(3,0,10)	12.275	75.87	0.571	0.7	3.188	2.35	39.84	39.91
	Equiv. Refl.: (3,-3,-10), (-3,0,-10), (-3,3,10)								
LiNbO3	(4,5,11)	11.922	70.37	0.547	1.1	4.516	4.93	56.44	56.66
	Equiv. Refl.: (4,-9,-11), (5,4,-11), (5,-9,11), (9,-4,-11), (9,-5,11), (-4,9,11), (-4,-5,-11), (-5,9,-11), (-5,-4,11), (-9,4,11), (-9,5,-11)								
Quartz	(2,-8,5)	11.97	71.02	0.527	0.7	4.353	3.06	54.42	54.5
Quartz	(2,6,-5)	11.97	71.02	0.526	0.7	4.353	3.06	54.42	54.5
	Equiv. Refl.: (6,2,5), (6,-8,-5), (-8,2,-5), (-8,6,5)								
Quartz	(-6,2,8)	11.985	71.23	0.489	0.6	4.301	2.56	53.76	53.82
	Equiv. Refl.: (-6,4,-8)								
Quartz	(2,4,8)	11.985	71.23	0.488	0.6	4.301	2.55	53.76	53.82
	Equiv. Refl.: (2,-6,-8), (4,2,-8), (4,-6,8)								
Sapph	(4,5,8)	12.355	77.43	0.479	0.7	2.822	2.02	35.27	35.33
	Equiv. Refl.: (4,-9,-8), (5,4,-8), (5,-9,8), (9,-4,-8), (9,-5,8), (-4,9,8), (-4,-5,-8), (-5,9,-8), (-5,-4,8), (-9,4,8), (-9,5,-8)								
Quartz	(-5,1,-9)	12.294	76.23	0.474	0.6	3.102	1.97	38.78	38.83
Quartz	(1,4,-9)	12.294	76.23	0.473	0.6	3.102	1.97	38.78	38.83
	Equiv. Refl.: (-5,4,9)								
Quartz	(1,-5,9)	12.294	76.23	0.472	0.6	3.102	1.97	38.78	38.83
Quartz	(4,1,9)	12.294	76.23	0.471	0.6	3.102	1.96	38.78	38.83
	Equiv. Refl.: (4,-5,-9)								
Quartz	(-1,9,1)	12.501	80.97	0.466	0.8	2.011	1.62	25.14	25.19
	Equiv. Refl.: (-8,9,-1), (-8,-1,1)								
Quartz	(9,-1,-1)	12.501	80.97	0.465	0.8	2.011	1.62	25.14	25.19
	Equiv. Refl.: (9,-8,1), (-1,-8,-1)								
Quartz	(5,-1,9)	12.294	76.23	0.461	0.6	3.102	1.97	38.78	38.83
	Equiv. Refl.: (5,-4,-9)								
Quartz	(-1,5,-9)	12.294	76.23	0.46	0.6	3.102	1.97	38.78	38.83
	Equiv. Refl.: (-1,-4,9)								
Quartz	(-4,-1,-9)	12.294	76.23	0.459	0.6	3.102	1.96	38.78	38.83
Quartz	(-4,5,9)	12.294	76.23	0.458	0.6	3.102	1.96	38.78	38.83
Quartz	(-5,-1,-8)	12.248	75.37	0.453	0.6	3.303	1.91	41.29	41.34
Quartz	(-5,6,8)	12.248	75.37	0.452	0.6	3.303	1.9	41.29	41.34
Quartz	(6,-1,8)	12.248	75.37	0.449	0.6	3.303	1.89	41.29	41.34
	Equiv. Refl.: (6,-5,-8), (-1,6,-8), (-1,-5,8)								
Quartz	(6,-2,-8)	11.985	71.23	0.446	0.6	4.301	2.56	53.76	53.82
	Equiv. Refl.: (-4,-2,8)								
Quartz	(6,-4,8)	11.985	71.23	0.445	0.6	4.301	2.56	53.76	53.82
	Equiv. Refl.: (-2,6,8), (-2,-4,-8), (-4,6,-8)								
Quartz	(-2,9,-3)	12.412	78.7	0.409	0.6	2.53	1.42	31.63	31.66
	Equiv. Refl.: (-2,-7,3)								
Quartz	(9,-2,3)	12.412	78.7	0.408	0.6	2.53	1.41	31.63	31.66
	Equiv. Refl.: (9,-7,-3), (-7,9,3), (-7,-2,-3)								
Quartz	(5,1,8)	12.248	75.37	0.384	0.6	3.303	1.91	41.29	41.34
Quartz	(5,-6,-8)	12.248	75.37	0.383	0.6	3.303	1.9	41.29	41.34
Quartz	(1,5,-8)	12.248	75.37	0.38	0.6	3.303	1.89	41.29	41.34
	Equiv. Refl.: (1,-6,8), (-6,1,-8), (-6,5,8)								

Sapph	(1,3,-23)	12.245	75.32	0.365	0.6	3.316	1.88	41.46	41.5
Equiv. Refl.: (1,-4,23), (3,1,23), (3,-4,-23), (4,-1,23), (4,-3,-23), (-1,4,-23), (-1,-3,23), (-3,4,23), (-3,-1,-23), (-4,1,-23), (-4,3,23)									
Sapph	(3,4,-16)	11.919	70.32	0.335	0.5	4.526	2.22	56.58	56.62
Equiv. Refl.: (3,-7,16), (4,3,16), (4,-7,-16), (7,-3,16), (7,-4,-16), (-3,7,-16), (-3,-4,16), (-4,7,16), (-4,-3,-16), (-7,3,-16), (-7,4,16)									
Quartz	(2,7,-3)	12.412	78.7	0.323	0.6	2.53	1.42	31.63	31.66
Equiv. Refl.: (2,-9,3)									
Quartz	(-9,7,3)	12.412	78.7	0.322	0.6	2.53	1.41	31.63	31.66
Quartz	(7,2,3)	12.412	78.7	0.321	0.6	2.53	1.41	31.63	31.66
Equiv. Refl.: (7,-9,-3), (-9,2,-3)									
Sapph	(0,3,24)	12.312	76.57	0.318	0.5	3.022	1.57	37.77	37.8
Equiv. Refl.: (0,3,-24), (0,-3,24), (0,-3,-24), (3,0,24), (3,0,-24), (3,-3,24), (3,-3,-24), (-3,0,24), (-3,0,-24), (-3,3,24), (-3,3,-24)									
Quartz	(9,-2,0)	11.926	70.42	0.297	0.4	4.503	1.73	56.28	56.31
Equiv. Refl.: (9,-7,0), (-2,9,0), (-2,-7,0), (-7,9,0), (-7,-2,0)									
LiNbO3	(1,7,15)	12.458	79.8	0.266	0.9	2.278	2.15	28.47	28.55
Equiv. Refl.: (1,7,-15), (1,-8,15), (1,-8,-15), (7,1,15), (7,1,-15), (7,-8,15), (7,-8,-15), (8,-1,15), (8,-1,-15), (8,-7,15), (8,-7,-15), (-1,8,15), (-1,8,-15), (-1,-7,15), (-1,-7,-15), (-7,8,15), (-7,8,-15), (-7,-1,15), (-7,-1,-15), (-8,1,15), (-8,1,-15), (-8,7,15), (-8,7,-15)									
Quartz	(2,7,0)	11.926	70.42	0.231	0.4	4.503	1.73	56.28	56.31
Equiv. Refl.: (2,-9,0), (7,2,0), (7,-9,0), (-9,2,0), (-9,7,0)									
LiNbO3	(3,5,-17)	12.35	77.34	0.181	0.7	2.843	1.99	35.54	35.59
Equiv. Refl.: (3,-8,17), (5,3,17), (5,-8,-17), (8,-3,17), (8,-5,-17), (-3,8,-17), (-3,-5,17), (-5,8,17), (-5,-3,-17), (-8,3,-17), (-8,5,17)									
Sapph	(3,6,3)	12.027	71.83	0.157	0.3	4.155	1.27	51.94	51.96
Equiv. Refl.: (3,6,-3), (3,-9,3), (3,-9,-3), (6,3,3), (6,3,-3), (6,-9,3), (6,-9,-3), (9,-3,3), (9,-3,-3), (9,-6,3), (9,-6,-3), (-3,9,3), (-3,9,-3), (-3,-6,3), (-3,-6,-3), (-6,9,3), (-6,9,-3), (-6,-3,3), (-6,-3,-3), (-9,3,3), (-9,3,-3), (-9,6,3), (-9,6,-3)									
LiNbO3	(2,3,23)	11.938	70.58	0.155	0.5	4.462	2.4	55.77	55.82
Equiv. Refl.: (2,-5,-23), (3,2,-23), (3,-5,23), (5,-2,-23), (5,-3,23), (-2,5,23), (-2,-3,-23), (-3,5,-23), (-3,-2,23), (-5,2,23), (-5,3,-23)									
Sapph	(3,4,17)	12.23	75.06	0.134	0.3	3.377	1.01	42.21	42.23
Equiv. Refl.: (3,-7,-17), (4,3,-17), (4,-7,17), (7,-3,-17), (7,-4,17), (-3,7,17), (-3,-4,-17), (-4,7,-17), (-4,-3,17), (-7,3,17), (-7,4,-17)									
LiNbO3	(1,8,-7)	12.286	76.07	0.132	0.6	3.139	1.8	39.24	39.28
Equiv. Refl.: (1,-9,7), (8,1,7), (8,-9,-7), (9,-1,7), (9,-8,-7), (-1,9,-7), (-1,-8,7), (-8,9,7), (-8,-1,-7), (-9,1,-7), (-9,8,7)									
LiNbO3	(1,8,5)	12.089	72.75	0.113	0.5	3.929	1.89	49.12	49.15
Equiv. Refl.: (1,-9,-5), (8,1,-5), (8,-9,5), (9,-1,-5), (9,-8,5), (-1,9,5), (-1,-8,-5), (-8,9,-5), (-8,-1,5), (-9,1,5), (-9,8,-5)									
LiNbO3	(5,5,3)	12.116	73.18	0.008	0.1	3.826	0.55	47.83	47.83
Equiv. Refl.: (5,5,-3), (5,-10,3), (5,-10,-3), (10,-5,3), (10,-5,-3), (-5,10,3), (-5,10,-3), (-5,-5,3), (-5,-5,-3), (-10,5,3), (-10,5,-3)									

Ei = Cryst	15.861 Refl (h,k,l)	keV EB [keV]	Θ B [$^\circ$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Si	(8,8,8)	15.816	85.7	4.0901	3.57	1.193	4.26	14.91	15.51
Ge	(0,8,12)	15.804	85.12	3.1282	7.55	1.3535	10.22	16.92	19.77
Equiv. Refl.: (0,12,8), (8,0,12), (8,12,0), (12,0,8), (12,8,0)									
Ge	(0,2,14)	15.497	77.7	1.3858	3.23	3.4595	11.18	43.24	44.67
Equiv. Refl.: (0,10,10), (0,14,2), (2,0,14), (2,14,0), (6,8,10), (6,10,8), (8,6,10), (8,10,6), (10,0,10) (10,6,8), (10,8,6), (10,10,0), (14,0,2), (14,2,0)									
Si	(2,6,12)	15.483	77.47	1.2459	1.34	3.5246	4.71	44.06	44.31
Equiv. Refl.: (2,12,6), (6,2,12), (6,12,2), (12,2,6), (12,6,2)									
Ge	(8,8,8)	15.184	73.19	1.1353	2.56	4.7905	12.26	59.88	61.12
Si	(4,4,12)	15.143	72.69	0.9939	1.06	4.9419	5.23	61.77	62
Equiv. Refl.: (4,12,4), (12,4,4)									
Si	(3,3,13)	15.609	79.77	0.9882	1.12	2.8615	3.21	35.77	35.91
Equiv. Refl.: (3,13,3), (5,9,9), (9,5,9), (9,9,5), (13,3,3)									
Ge	(1,9,11)	15.612	79.84	0.8548	2.69	2.8414	7.64	35.52	36.33
Equiv. Refl.: (1,11,9), (3,5,13), (3,13,5), (5,3,13), (5,13,3), (9,1,11), (9,11,1), (11,1,9), (11,9,1) (13,3,5), (13,5,3)									
Si	(1,3,13)	15.271	74.33	0.7119	0.8	4.4494	3.55	55.62	55.73
Equiv. Refl.: (1,13,3), (3,1,13), (3,7,11), (3,11,7), (3,13,1), (7,3,11), (7,7,9), (7,9,7), (7,11,3) (9,7,7), (11,3,7), (11,7,3), (13,1,3), (13,3,1)									
Ge	(1,5,13)	15.302	74.74	0.6416	1.93	4.3273	8.37	54.09	54.74
Equiv. Refl.: (1,13,5), (5,1,13), (5,7,11), (5,11,7), (5,13,1), (7,5,11), (7,11,5), (11,5,7), (11,7,5) (13,1,5), (13,5,1)									
Si	(1,1,13)	14.926	70.23	0.6247	0.69	5.7003	3.96	71.25	71.36
Equiv. Refl.: (1,7,11), (1,11,7), (1,13,1), (3,9,9), (5,5,11), (5,11,5), (7,1,11), (7,11,1), (9,3,9) (9,9,3), (11,1,7), (11,5,5), (11,7,1), (13,1,1)									
Ge	(3,3,13)	14.985	70.86	0.5779	1.67	5.5036	9.2	68.79	69.41
Equiv. Refl.: (3,13,3), (5,9,9), (9,5,9), (9,9,5), (13,3,3)									
LiNbO3	(0,-7,28)	15.859	89.13	65.68	59.1	0.241	14.23	3.01	14.54
Equiv. Refl.: (7,0,28)									
LiNbO3	(-7,7,28)	15.859	89.13	65.678	59.1	0.241	14.23	3.01	14.54
LiNbO3	(0,7,-28)	15.859	89.13	63.771	59.1	0.241	14.23	3.01	14.54
Equiv. Refl.: (-7,0,-28)									
LiNbO3	(7,-7,-28)	15.859	89.13	63.77	59.1	0.241	14.23	3.01	14.54
LiNbO3	(5,-8,28)	15.859	89.13	37.109	36.3	0.241	8.74	3.01	9.25
Equiv. Refl.: (8,-5,28)									
LiNbO3	(3,5,28)	15.859	89.13	37.108	36.3	0.241	8.74	3.01	9.25
Equiv. Refl.: (-3,8,28), (-5,-3,28), (-8,3,28)									
LiNbO3	(5,3,-28)	15.859	89.13	35.875	36.3	0.241	8.74	3.01	9.25
Equiv. Refl.: (-3,-5,-28), (-5,8,-28), (-8,5,-28)									
LiNbO3	(3,-8,-28)	15.859	89.13	35.874	36.3	0.241	8.74	3.01	9.25
Equiv. Refl.: (8,-3,-28)									
Quartz	(-9,-2,-5)	15.86	89.37	26.299	21.7	0.176	3.81	2.19	4.39
Quartz	(-9,11,5)	15.86	89.37	26.293	21.7	0.176	3.81	2.19	4.39
Quartz	(-2,11,-5)	15.86	89.37	26.291	21.7	0.176	3.81	2.19	4.39
Quartz	(-2,-9,5)	15.86	89.37	26.286	21.7	0.176	3.81	2.19	4.39
Quartz	(11,-9,-5)	15.86	89.37	26.282	21.7	0.176	3.8	2.19	4.39
Quartz	(11,-2,5)	15.86	89.37	26.278	21.7	0.176	3.8	2.19	4.39
Quartz	(9,2,5)	15.86	89.37	23.487	21.7	0.176	3.81	2.19	4.39

Ei =	15.861	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(9,-11,-5)	15.86	89.37	23.481	21.7	0.176	3.81	2.19	4.39
Quartz	(2,-11,5)	15.86	89.37	23.48	21.7	0.176	3.81	2.19	4.39
Quartz	(2,9,-5)	15.86	89.37	23.476	21.7	0.176	3.81	2.19	4.39
Quartz	(-11,9,5)	15.86	89.37	23.471	21.7	0.176	3.8	2.19	4.39
Quartz	(-11,2,-5)	15.86	89.37	23.467	21.7	0.176	3.8	2.19	4.39
LiNbO3	(5,-13,0)	15.793	84.69	13.648	12.1	1.474	17.79	18.43	25.61
	Equiv. Refl.: (8,5,0), (13,-5,0), (-5,-8,0), (-8,13,0), (-13,8,0)								
LiNbO3	(5,8,0)	15.793	84.69	13.579	12.1	1.474	17.79	18.43	25.61
	Equiv. Refl.: (8,-13,0), (13,-8,0), (-5,13,0), (-8,-5,0), (-13,5,0)								
LiNbO3	(5,7,-14)	15.809	85.38	13.386	11.9	1.281	15.21	16.02	22.09
	Equiv. Refl.: (-5,12,-14), (-7,-5,-14), (-12,5,-14)								
LiNbO3	(7,-12,-14)	15.809	85.38	13.385	11.9	1.281	15.21	16.02	22.09
	Equiv. Refl.: (12,-7,-14)								
LiNbO3	(5,-12,14)	15.809	85.38	12.843	11.9	1.281	15.21	16.02	22.09
	Equiv. Refl.: (12,-5,14)								
LiNbO3	(7,5,14)	15.809	85.38	12.842	11.9	1.281	15.21	16.02	22.09
	Equiv. Refl.: (-5,-7,14), (-7,12,14), (-12,7,14)								
LiNbO3	(2,-11,16)	15.822	85.98	11.968	11.1	1.114	12.4	13.92	18.64
	Equiv. Refl.: (9,2,16), (11,-2,16), (-2,-9,16)								
LiNbO3	(-9,11,16)	15.822	85.98	11.967	11.1	1.114	12.4	13.92	18.64
	Equiv. Refl.: (-11,9,16)								
LiNbO3	(2,9,-16)	15.822	85.98	11.881	11.1	1.114	12.4	13.92	18.64
	Equiv. Refl.: (-2,11,-16), (-9,-2,-16), (-11,2,-16)								
LiNbO3	(9,-11,-16)	15.822	85.98	11.88	11.1	1.114	12.4	13.92	18.64
	Equiv. Refl.: (11,-9,-16)								
LiNbO3	(6,-6,30)	15.798	84.89	11.32	10.3	1.419	14.58	17.73	22.96
LiNbO3	(0,6,30)	15.798	84.89	11.319	10.3	1.419	14.58	17.73	22.96
	Equiv. Refl.: (-6,0,30)								
LiNbO3	(0,-6,-30)	15.798	84.89	11.247	10.3	1.419	14.58	17.73	22.96
	Equiv. Refl.: (6,0,-30), (-6,6,-30)								
LiNbO3	(0,6,-30)	15.798	84.89	10.941	9.9	1.419	14	17.73	22.59
	Equiv. Refl.: (6,-6,-30), (-6,0,-30)								
LiNbO3	(3,7,-22)	15.796	84.83	10.79	9.8	1.436	14.08	17.95	22.81
	Equiv. Refl.: (7,-10,-22), (10,-7,-22), (-3,10,-22), (-7,-3,-22), (-10,3,-22)								
Sapph	(1,10,0)	15.85	87.87	10.769	9.1	0.59	5.34	7.37	9.1
	Equiv. Refl.: (1,-11,0), (10,1,0), (10,-11,0), (11,-1,0), (11,-10,0), (-1,11,0), (-1,-10,0), (-10,11,0), (-10,-1,0), (-11,1,0), (-11,10,0)								
LiNbO3	(3,-10,22)	15.796	84.83	10.622	9.8	1.436	14.08	17.95	22.81
	Equiv. Refl.: (7,3,22), (10,-3,22), (-3,-7,22), (-7,10,22), (-10,7,22)								
LiNbO3	(0,-6,30)	15.798	84.89	10.594	9.9	1.419	14	17.73	22.59
	Equiv. Refl.: (6,0,30), (-6,6,30)								
Quartz	(-11,2,5)	15.86	89.37	9.598	9.2	0.176	1.61	2.19	2.72
	Equiv. Refl.: (-11,9,-5)								
Quartz	(2,-11,-5)	15.86	89.37	9.597	9.2	0.176	1.61	2.19	2.72
Quartz	(2,9,5)	15.86	89.37	9.59	9.2	0.176	1.61	2.19	2.72
Quartz	(9,2,-5)	15.86	89.37	9.585	9.2	0.176	1.61	2.19	2.72
	Equiv. Refl.: (9,-11,5)								
LiNbO3	(6,7,-4)	15.772	83.92	9.015	8	1.69	13.58	21.12	25.11
	Equiv. Refl.: (7,-13,-4), (13,-7,-4), (-6,13,-4), (-7,-6,-4), (-13,6,-4)								

Ei =	15.861	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(6,-13,4)	15.772	83.92	8.888	8	1.69	13.58	21.12	25.11
Equiv. Refl.: (7,6,4), (13,-6,4), (-6,-7,4), (-7,13,4), (-13,7,4)									
Sapph	(5,6,14)	15.831	86.45	8.722	7.1	0.983	6.98	12.29	14.13
Equiv. Refl.: (5,-11,-14), (6,5,-14), (6,-11,14), (11,-5,-14), (11,-6,14), (-5,11,14), (-5,-6,-14), (-6,11,-14), (-6,-5,14), (-11,5,14), (-11,6,-14)									
Sapph	(0,10,-10)	15.783	84.32	8.55	6.7	1.577	10.5	19.71	22.34
Equiv. Refl.: (0,-10,10), (10,0,10), (10,-10,-10), (-10,0,-10), (-10,10,10)									
Quartz	(11,-2,-5)	15.86	89.37	8.361	9.2	0.176	1.61	2.19	2.72
Equiv. Refl.: (11,-9,5)									
Quartz	(-2,11,5)	15.86	89.37	8.359	9.2	0.176	1.61	2.19	2.72
Quartz	(-2,-9,-5)	15.86	89.37	8.352	9.2	0.176	1.61	2.19	2.72
Quartz	(-9,-2,5)	15.86	89.37	8.349	9.2	0.176	1.61	2.19	2.72
Quartz	(-9,11,-5)	15.86	89.37	8.348	9.2	0.176	1.61	2.19	2.72
LiNbO3	(0,11,-8)	15.708	82.04	8.183	7	2.218	15.48	27.73	31.76
Equiv. Refl.: (11,-11,-8), (-11,0,-8)									
LiNbO3	(0,-11,8)	15.708	82.04	7.721	7	2.218	15.48	27.73	31.76
Equiv. Refl.: (11,0,8), (-11,11,8)									
LiNbO3	(1,6,-29)	15.853	88.16	7.146	9.1	0.511	4.64	6.38	7.89
Equiv. Refl.: (1,-7,29), (6,1,29), (6,-7,-29), (7,-1,29), (7,-6,-29), (-1,7,-29), (-1,-6,29), (-6,7,29), (-6,-1,-29), (-7,1,-29), (-7,6,29)									
Quartz	(-6,7,-11)	15.826	86.21	7.095	5.6	1.05	5.92	13.12	14.4
Quartz	(7,-1,-11)	15.826	86.21	7.093	5.6	1.05	5.92	13.12	14.39
Equiv. Refl.: (7,-6,11), (-6,-1,11)									
Quartz	(-1,7,11)	15.826	86.21	7.091	5.6	1.05	5.92	13.12	14.39
Quartz	(-1,-6,-11)	15.826	86.21	7.09	5.6	1.05	5.92	13.12	14.39
Quartz	(6,-7,11)	15.826	86.21	6.942	5.6	1.05	5.92	13.12	14.4
Quartz	(-7,1,11)	15.826	86.21	6.941	5.6	1.05	5.92	13.12	14.39
Equiv. Refl.: (-7,6,-11)									
Quartz	(6,1,-11)	15.826	86.21	6.94	5.6	1.05	5.92	13.12	14.39
Quartz	(1,6,11)	15.826	86.21	6.938	5.6	1.05	5.92	13.12	14.39
Equiv. Refl.: (1,-7,-11)									
Sapph	(5,7,4)	15.822	85.99	6.58	5.5	1.111	6.07	13.89	15.16
Equiv. Refl.: (5,-12,-4), (7,5,-4), (7,-12,4), (12,-5,-4), (12,-7,4), (-5,12,4), (-5,-7,-4), (-7,12,-4), (-7,-5,4), (-12,5,4), (-12,7,-4)									
LiNbO3	(7,6,-2)	15.696	81.72	5.985	5.4	2.309	12.5	28.87	31.46
Equiv. Refl.: (-6,-7,-2)									
LiNbO3	(6,-13,-2)	15.696	81.72	5.984	5.4	2.309	12.5	28.87	31.46
Equiv. Refl.: (13,-6,-2), (-7,13,-2), (-13,7,-2)									
Quartz	(-6,12,-4)	15.821	85.95	5.958	4.7	1.124	5.34	14.05	15.03
Quartz	(-6,-6,4)	15.821	85.95	5.957	4.7	1.124	5.34	14.05	15.03
Quartz	(-6,12,4)	15.821	85.95	5.956	4.7	1.124	5.34	14.05	15.03
Equiv. Refl.: (-6,-6,-4)									
Quartz	(12,-6,4)	15.821	85.95	5.953	4.7	1.124	5.34	14.05	15.03
Equiv. Refl.: (12,-6,-4)									
LiNbO3	(6,7,2)	15.696	81.72	5.865	5.4	2.309	12.5	28.87	31.46
Equiv. Refl.: (7,-13,2), (13,-7,2), (-6,13,2), (-7,-6,2), (-13,6,2)									
LiNbO3	(1,-11,12)	15.602	79.62	5.841	5.2	2.905	15	36.31	39.28
Equiv. Refl.: (10,1,12), (11,-1,12), (-1,-10,12), (-10,11,12), (-11,10,12)									
LiNbO3	(1,10,-12)	15.602	79.62	5.824	5.2	2.905	15	36.31	39.28
Equiv. Refl.: (10,-11,-12), (11,-10,-12), (-1,11,-12), (-10,-1,-12), (-11,1,-12)									

Ei =	15.861	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(4,-11,-18)	15.64	80.42	5.822	5.1	2.678	13.75	33.47	36.18
	Equiv. Refl.: (7,4,-18), (11,-4,-18), (-4,-7,-18), (-7,11,-18), (-11,7,-18)								
LiNbO3	(1,-7,-28)	15.489	77.57	5.708	4.9	3.496	17.26	43.71	46.99
	Equiv. Refl.: (6,1,-28), (7,-1,-28), (-1,-6,-28), (-6,7,-28), (-7,6,-28)								
LiNbO3	(1,6,28)	15.489	77.57	5.692	4.9	3.496	17.26	43.71	46.99
	Equiv. Refl.: (6,-7,28), (7,-6,28), (-6,-1,28)								
LiNbO3	(-1,7,28)	15.489	77.57	5.691	4.9	3.496	17.26	43.71	46.99
	Equiv. Refl.: (-7,1,28)								
LiNbO3	(1,2,-34)	15.643	80.48	5.676	5.1	2.659	13.58	33.23	35.9
	Equiv. Refl.: (2,-3,-34), (3,-2,-34), (-1,3,-34), (-2,-1,-34), (-3,1,-34)								
LiNbO3	(1,-3,34)	15.643	80.48	5.672	5.1	2.659	13.58	33.23	35.9
	Equiv. Refl.: (2,1,34), (3,-1,34), (-1,-2,34), (-2,3,34), (-3,2,34)								
Quartz	(6,6,-4)	15.821	85.95	5.671	4.7	1.124	5.34	14.05	15.03
	Equiv. Refl.: (6,-12,4)								
Quartz	(6,6,4)	15.821	85.95	5.67	4.7	1.124	5.34	14.05	15.03
	Equiv. Refl.: (6,-12,-4)								
Quartz	(-12,6,4)	15.821	85.95	5.667	4.7	1.124	5.34	14.05	15.03
	Equiv. Refl.: (-12,6,-4)								
LiNbO3	(4,7,18)	15.64	80.42	5.608	5.1	2.678	13.75	33.47	36.18
	Equiv. Refl.: (7,-11,18), (11,-7,18), (-4,11,18), (-7,-4,18), (-11,4,18)								
LiNbO3	(4,7,-18)	15.64	80.42	5.547	4.7	2.678	12.51	33.47	35.73
	Equiv. Refl.: (-4,11,-18), (-7,-4,-18), (-11,4,-18)								
LiNbO3	(7,-11,-18)	15.64	80.42	5.546	4.7	2.678	12.51	33.47	35.73
	Equiv. Refl.: (11,-7,-18)								
LiNbO3	(0,-11,-4)	15.4	76.15	5.523	4.7	3.912	18.41	48.9	52.25
	Equiv. Refl.: (11,0,-4), (-11,11,-4)								
LiNbO3	(-6,10,-22)	15.612	79.83	5.503	4.6	2.846	13.01	35.57	37.87
	Equiv. Refl.: (-10,6,-22)								
LiNbO3	(4,-10,-22)	15.612	79.83	5.502	4.6	2.846	13.01	35.57	37.87
	Equiv. Refl.: (6,4,-22), (10,-4,-22), (-4,-6,-22)								
LiNbO3	(0,11,4)	15.4	76.15	5.44	4.7	3.912	18.41	48.9	52.25
	Equiv. Refl.: (11,-11,4), (-11,0,4)								
LiNbO3	(4,-11,18)	15.64	80.42	5.415	4.7	2.678	12.51	33.47	35.73
	Equiv. Refl.: (7,4,18), (11,-4,18), (-4,-7,18), (-7,11,18), (-11,7,18)								
LiNbO3	(4,6,22)	15.612	79.83	5.287	4.6	2.846	13.01	35.57	37.87
	Equiv. Refl.: (6,-10,22), (10,-6,22), (-4,10,22), (-6,-4,22), (-10,4,22)								
LiNbO3	(2,10,-2)	15.51	77.92	5.186	4.6	3.395	15.51	42.44	45.19
	Equiv. Refl.: (10,-12,-2), (12,-10,-2), (-2,12,-2), (-10,-2,-2), (-12,2,-2)								
LiNbO3	(2,-12,2)	15.51	77.92	5.179	4.6	3.395	15.51	42.44	45.19
	Equiv. Refl.: (10,2,2), (12,-2,2), (-2,-10,2), (-10,12,2), (-12,10,2)								
LiNbO3	(0,2,34)	15.456	77.03	5.159	4.3	3.654	15.71	45.67	48.3
	Equiv. Refl.: (2,-2,34), (-2,0,34)								
LiNbO3	(0,10,-16)	15.638	80.37	5.15	4.3	2.69	11.67	33.63	35.59
	Equiv. Refl.: (10,-10,-16), (-10,0,-16)								
LiNbO3	(2,10,4)	15.587	79.33	5.119	4.3	2.988	12.75	37.35	39.47
	Equiv. Refl.: (10,-12,4), (12,-10,4), (-2,12,4), (-10,-2,4), (-12,2,4)								
LiNbO3	(0,-2,-34)	15.456	77.03	4.965	4.3	3.654	15.71	45.67	48.3
	Equiv. Refl.: (2,0,-34), (-2,2,-34)								
LiNbO3	(2,-12,-4)	15.587	79.33	4.902	4.3	2.988	12.75	37.35	39.47
	Equiv. Refl.: (10,2,-4), (12,-2,-4), (-2,-10,-4), (-10,12,-4), (-12,10,-4)								

Ei =	15.861	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(2,6,26)	15.353	75.46	4.894	4	4.113	16.35	51.42	53.96
	Equiv. Refl.: (6,-8,26), (8,-6,26), (-2,8,26), (-6,-2,26), (-8,2,26)								
LiNbO3	(3,-8,26)	15.163	72.94	4.884	4.1	4.868	20.11	60.85	64.08
	Equiv. Refl.: (5,3,26), (8,-3,26), (-3,-5,26), (-5,8,26), (-8,5,26)								
LiNbO3	(0,-4,-32)	15.353	75.45	4.879	3.9	4.116	16.12	51.45	53.91
	Equiv. Refl.: (4,0,-32), (-4,4,-32)								
LiNbO3	(2,-8,-26)	15.353	75.46	4.869	4	4.113	16.35	51.42	53.96
	Equiv. Refl.: (6,2,-26), (8,-2,-26), (-2,-6,-26), (-6,8,-26), (-8,6,-26)								
LiNbO3	(0,-10,16)	15.638	80.37	4.864	4.3	2.69	11.67	33.63	35.59
	Equiv. Refl.: (10,0,16), (-10,10,16)								
LiNbO3	(1,-11,-12)	15.602	79.62	4.845	4.1	2.905	12.03	36.31	38.25
	Equiv. Refl.: (10,1,-12), (11,-1,-12), (-1,-10,-12), (-10,11,-12), (-11,10,-12)								
LiNbO3	(3,5,-26)	15.163	72.94	4.826	4.1	4.868	20.11	60.85	64.08
	Equiv. Refl.: (5,-8,-26), (8,-5,-26), (-3,8,-26), (-5,-3,-26), (-8,3,-26)								
LiNbO3	(1,10,12)	15.602	79.62	4.788	4.1	2.905	12.03	36.31	38.25
	Equiv. Refl.: (10,-11,12), (11,-10,12), (-1,11,12), (-10,-1,12), (-11,1,12)								
LiNbO3	(3,-9,-24)	15.394	76.07	4.784	3.9	3.934	15.34	49.18	51.52
	Equiv. Refl.: (6,3,-24), (9,-3,-24), (-3,-6,-24), (-6,9,-24), (-9,6,-24)								
Sapph	(1,9,-14)	15.831	86.45	4.75	4	0.983	3.96	12.29	12.91
	Equiv. Refl.: (1,-10,14), (9,1,14), (9,-10,-14), (10,-1,14), (10,-9,-14), (-1,10,-14), (-1,-9,14), (-9,10,14), (-9,-1,-14), (-10,1,-14), (-10,9,14)								
LiNbO3	(3,9,-6)	15.278	74.42	4.744	4.1	4.424	18.09	55.3	58.18
	Equiv. Refl.: (9,-12,-6), (12,-9,-6), (-3,12,-6), (-9,-3,-6), (-12,3,-6)								
LiNbO3	(3,-12,6)	15.278	74.42	4.729	4.1	4.424	18.09	55.3	58.18
	Equiv. Refl.: (9,3,6), (12,-3,6), (-3,-9,6), (-9,12,6), (-12,9,6)								
LiNbO3	(0,4,32)	15.353	75.45	4.685	3.9	4.116	16.12	51.45	53.91
	Equiv. Refl.: (4,-4,32), (-4,0,32)								
Quartz	(12,-8,-3)	15.799	84.92	4.679	3.6	1.411	5.13	17.64	18.37
	Equiv. Refl.: (-4,12,-3), (-4,-8,3), (-8,12,3), (-8,-4,-3)								
Quartz	(12,-4,3)	15.799	84.92	4.678	3.6	1.411	5.13	17.64	18.37
LiNbO3	(3,6,24)	15.394	76.07	4.673	3.9	3.934	15.34	49.18	51.52
	Equiv. Refl.: (6,-9,24), (9,-6,24), (-3,9,24), (-6,-3,24), (-9,3,24)								
LiNbO3	(3,3,-30)	15.237	73.88	4.64	3.7	4.585	17.1	57.31	59.8
	Equiv. Refl.: (3,-6,-30), (6,-3,-30), (-3,6,-30), (-3,-3,-30), (-6,3,-30)								
Quartz	(4,8,-3)	15.799	84.92	4.607	3.6	1.411	5.13	17.64	18.37
	Equiv. Refl.: (4,-12,3)								
Quartz	(8,4,3)	15.799	84.92	4.606	3.6	1.411	5.13	17.64	18.37
	Equiv. Refl.: (8,-12,-3), (-12,4,-3), (-12,8,3)								
LiNbO3	(3,3,30)	15.237	73.88	4.565	3.7	4.585	17.1	57.31	59.8
	Equiv. Refl.: (3,-6,30), (6,-3,30), (-3,-3,30)								
LiNbO3	(-3,6,30)	15.237	73.88	4.564	3.7	4.585	17.1	57.31	59.8
	Equiv. Refl.: (-6,3,30)								
LiNbO3	(3,-9,24)	15.394	76.07	4.525	3.7	3.934	14.67	49.18	51.32
	Equiv. Refl.: (6,3,24), (9,-3,24), (-3,-6,24), (-6,9,24), (-9,6,24)								
LiNbO3	(2,-11,-14)	15.438	76.74	4.524	3.8	3.737	14.1	46.71	48.8
	Equiv. Refl.: (9,2,-14), (11,-2,-14), (-2,-9,-14), (-9,11,-14), (-11,9,-14)								
LiNbO3	(2,3,32)	15.54	78.46	4.5	3.8	3.239	12.16	40.48	42.27
	Equiv. Refl.: (3,-5,32), (5,-3,32), (-2,5,32), (-3,-2,32), (-5,2,32)								
LiNbO3	(2,9,14)	15.438	76.74	4.496	3.8	3.737	14.1	46.71	48.8
	Equiv. Refl.: (9,-11,14), (11,-9,14), (-2,11,14), (-9,-2,14), (-11,2,14)								

Ei =	15.861	keV						ΔE_g	ΔE_t
Cryst	Ref.	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
LiNbO3	(3,-7,28)	15.11	72.3	4.459	3.6	5.063	18.06	63.28	65.81
	Equiv. Refl.: (4,3,28), (7,-3,28), (-3,-4,28), (-4,7,28), (-7,4,28)								
LiNbO3	(3,6,-24)	15.394	76.07	4.449	3.7	3.934	14.67	49.18	51.32
	Equiv. Refl.: (6,-9,-24), (9,-6,-24), (-3,9,-24), (-6,-3,-24), (-9,3,-24)								
LiNbO3	(6,6,12)	15.415	76.37	4.419	3.6	3.845	13.87	48.06	50.02
	Equiv. Refl.: (6,-12,12), (12,-6,12), (-6,12,12), (-6,-6,12), (-12,6,12)								
LiNbO3	(1,3,-32)	15.162	72.93	4.406	3.5	4.87	17.2	60.87	63.25
	Equiv. Refl.: (3,-4,-32), (4,-3,-32), (-1,4,-32), (-3,-1,-32), (-4,1,-32)								
LiNbO3	(3,4,-28)	15.11	72.3	4.395	3.6	5.063	18.06	63.28	65.81
	Equiv. Refl.: (4,-7,-28), (7,-4,-28), (-3,7,-28), (-4,-3,-28), (-7,3,-28)								
LiNbO3	(3,-12,-6)	15.278	74.42	4.383	3.5	4.424	15.5	55.3	57.43
	Equiv. Refl.: (9,3,-6), (12,-3,-6), (-3,-9,-6), (-9,12,-6), (-12,9,-6)								
LiNbO3	(2,8,18)	15.073	71.87	4.336	3.5	5.195	17.95	64.94	67.37
	Equiv. Refl.: (8,-10,18), (10,-8,18), (-2,10,18), (-8,-2,18), (-10,2,18)								
LiNbO3	(3,-11,-16)	15.451	76.95	4.312	3.5	3.678	12.89	45.97	47.74
	Equiv. Refl.: (8,3,-16), (11,-3,-16), (-3,-8,-16), (-8,11,-16), (-11,8,-16)								
LiNbO3	(1,-4,32)	15.162	72.93	4.288	3.5	4.87	17.2	60.87	63.25
	Equiv. Refl.: (3,1,32), (4,-1,32), (-1,-3,32), (-3,4,32), (-4,3,32)								
LiNbO3	(3,-10,-20)	15.255	74.12	4.253	3.5	4.513	15.59	56.41	58.53
	Equiv. Refl.: (7,3,-20), (10,-3,-20), (-3,-7,-20), (-7,10,-20), (-10,7,-20)								
Quartz	(1,-4,13)	15.81	85.38	4.242	3.4	1.281	4.32	16.01	16.58
Quartz	(-4,1,-13)	15.81	85.38	4.241	3.4	1.281	4.32	16.01	16.58
Quartz	(1,3,-13)	15.81	85.38	4.24	3.4	1.281	4.32	16.01	16.58
	Equiv. Refl.: (-4,3,13)								
Quartz	(3,-4,-13)	15.81	85.38	4.235	3.4	1.281	4.31	16.01	16.58
Quartz	(3,1,13)	15.81	85.38	4.234	3.4	1.281	4.31	16.01	16.58
LiNbO3	(2,-10,-18)	15.073	71.87	4.214	3.5	5.195	17.95	64.94	67.37
	Equiv. Refl.: (8,2,-18), (10,-2,-18), (-2,-8,-18), (-8,10,-18), (-10,8,-18)								
Quartz	(4,-1,13)	15.81	85.38	4.21	3.4	1.281	4.32	16.01	16.58
Quartz	(4,-3,-13)	15.81	85.38	4.209	3.4	1.281	4.32	16.01	16.58
	Equiv. Refl.: (-1,4,-13)								
Quartz	(-1,-3,13)	15.81	85.38	4.208	3.4	1.281	4.32	16.01	16.58
Quartz	(-3,4,13)	15.81	85.38	4.203	3.4	1.281	4.31	16.01	16.58
Quartz	(-3,-1,-13)	15.81	85.38	4.202	3.4	1.281	4.31	16.01	16.58
LiNbO3	(3,2,-32)	15.54	78.46	4.198	3.8	3.239	12.16	40.48	42.27
	Equiv. Refl.: (-2,-3,-32), (-3,5,-32), (-5,3,-32)								
LiNbO3	(2,-5,-32)	15.54	78.46	4.197	3.8	3.239	12.16	40.48	42.27
	Equiv. Refl.: (5,-2,-32)								
LiNbO3	(4,8,-10)	15.38	75.85	4.162	3.4	3.998	13.59	49.97	51.79
	Equiv. Refl.: (8,-12,-10), (12,-8,-10), (-4,12,-10), (-8,-4,-10), (-12,4,-10)								
LiNbO3	(6,6,-12)	15.415	76.37	4.14	3.6	3.845	13.87	48.06	50.02
	Equiv. Refl.: (6,-12,-12), (12,-6,-12), (-6,12,-12), (-6,-6,-12), (-12,6,-12)								
LiNbO3	(3,7,20)	15.255	74.12	4.123	3.5	4.513	15.59	56.41	58.53
	Equiv. Refl.: (7,-10,20), (10,-7,20), (-3,10,20), (-7,-3,20), (-10,3,20)								
LiNbO3	(4,-10,20)	15.064	71.76	4.108	3.3	5.227	17.4	65.33	67.61
	Equiv. Refl.: (6,4,20), (10,-4,20), (-4,-6,20), (-6,10,20), (-10,6,20)								
LiNbO3	(4,6,-20)	15.064	71.76	4.099	3.3	5.227	17.4	65.33	67.61
	Equiv. Refl.: (6,-10,-20), (10,-6,-20), (-4,10,-20), (-6,-4,-20), (-10,4,-20)								
LiNbO3	(1,-9,22)	15.425	76.53	4.062	3.4	3.798	12.97	47.48	49.22
	Equiv. Refl.: (8,1,22), (9,-1,22), (-1,-8,22), (-8,9,22), (-9,8,22)								

Ei =	15.861	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(3,9,6)	15.278	74.42	4.053	3.5	4.424	15.5	55.3	57.43
	Equiv. Refl.: (9,-12,6), (12,-9,6), (-9,-3,6)								
LiNbO3	(-3,12,6)	15.278	74.42	4.052	3.5	4.424	15.5	55.3	57.43
	Equiv. Refl.: (-12,3,6)								
LiNbO3	(3,-11,14)	15.058	71.69	3.958	3.1	5.249	16.5	65.61	67.66
	Equiv. Refl.: (8,3,14), (11,-3,14), (-3,-8,14), (-8,11,14), (-11,8,14)								
LiNbO3	(1,8,-22)	15.425	76.53	3.957	3.4	3.798	12.97	47.48	49.22
	Equiv. Refl.: (8,-9,-22), (9,-8,-22), (-1,9,-22), (-8,-1,-22), (-9,1,-22)								
LiNbO3	(2,-10,18)	15.073	71.87	3.94	3.2	5.195	16.43	64.94	66.98
	Equiv. Refl.: (8,2,18), (10,-2,18), (-2,-8,18), (-8,10,18), (-10,8,18)								
LiNbO3	(4,-12,10)	15.38	75.85	3.843	3.4	3.998	13.59	49.97	51.79
	Equiv. Refl.: (8,4,10), (12,-4,10), (-4,-8,10), (-8,12,10), (-12,8,10)								
LiNbO3	(0,10,14)	15.249	74.03	3.834	3.1	4.538	14.27	56.72	58.49
	Equiv. Refl.: (10,-10,14), (-10,0,14)								
LiNbO3	(3,8,16)	15.451	76.95	3.831	3.5	3.678	12.89	45.97	47.74
	Equiv. Refl.: (8,-11,16), (11,-8,16), (-8,-3,16)								
LiNbO3	(-3,11,16)	15.451	76.95	3.83	3.5	3.678	12.89	45.97	47.74
	Equiv. Refl.: (-11,3,16)								
LiNbO3	(1,7,-24)	15.013	71.18	3.795	3.1	5.406	16.66	67.58	69.6
	Equiv. Refl.: (7,-8,-24), (8,-7,-24), (-1,8,-24), (-7,-1,-24), (-8,1,-24)								
LiNbO3	(5,-12,-10)	15.19	73.28	3.747	3	4.765	14.51	59.57	61.31
	Equiv. Refl.: (7,5,-10), (12,-5,-10), (-5,-7,-10), (-7,12,-10), (-12,7,-10)								
LiNbO3	(2,8,-18)	15.073	71.87	3.738	3.2	5.195	16.43	64.94	66.98
	Equiv. Refl.: (8,-10,-18), (10,-8,-18), (-2,10,-18), (-8,-2,-18), (-10,2,-18)								
LiNbO3	(1,9,16)	15.071	71.84	3.737	3	5.202	15.71	65.03	66.9
	Equiv. Refl.: (9,-10,16), (10,-9,16), (-1,10,16), (-9,-1,16), (-10,1,16)								
LiNbO3	(1,-8,24)	15.013	71.18	3.724	3.1	5.406	16.66	67.58	69.6
	Equiv. Refl.: (7,1,24), (8,-1,24), (-1,-7,24), (-7,8,24), (-8,7,24)								
Quartz	(1,10,-3)	15.731	82.67	3.67	2.8	2.041	5.75	25.52	26.15
	Equiv. Refl.: (1,-11,3)								
Quartz	(-11,1,-3)	15.731	82.67	3.668	2.8	2.041	5.74	25.52	26.15
	Equiv. Refl.: (-11,10,3)								
Quartz	(10,1,3)	15.731	82.67	3.667	2.8	2.041	5.74	25.52	26.15
	Equiv. Refl.: (10,-11,-3)								
Quartz	(-1,11,-3)	15.731	82.67	3.647	2.8	2.041	5.75	25.52	26.15
	Equiv. Refl.: (-1,-10,3)								
Quartz	(11,-1,3)	15.731	82.67	3.646	2.8	2.041	5.74	25.52	26.15
Quartz	(11,-10,-3)	15.731	82.67	3.645	2.8	2.041	5.74	25.52	26.15
Quartz	(-10,11,3)	15.731	82.67	3.644	2.8	2.041	5.74	25.52	26.15
	Equiv. Refl.: (-10,-1,-3)								
LiNbO3	(0,-1,34)	15.267	74.28	3.639	3.1	4.465	13.68	55.82	57.47
	Equiv. Refl.: (1,0,34), (-1,1,34)								
LiNbO3	(0,-10,-14)	15.249	74.03	3.636	3.1	4.538	14.27	56.72	58.49
	Equiv. Refl.: (10,0,-14), (-10,10,-14)								
LiNbO3	(3,8,-14)	15.058	71.69	3.634	3.1	5.249	16.5	65.61	67.66
	Equiv. Refl.: (8,-11,-14), (11,-8,-14), (-3,11,-14), (-8,-3,-14), (-11,3,-14)								
LiNbO3	(1,7,24)	15.013	71.18	3.627	3	5.406	16.08	67.58	69.46
	Equiv. Refl.: (7,-8,24), (8,-7,24), (-1,8,24), (-7,-1,24), (-8,1,24)								
LiNbO3	(0,1,-34)	15.267	74.28	3.613	3.1	4.465	13.68	55.82	57.47
	Equiv. Refl.: (1,-1,-34), (-1,0,-34)								

Ei =	15.861	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(3,9,0)	15.76	83.52	3.591	2.7	1.801	4.91	22.51	23.04
Equiv. Refl.: (3,-12,0), (9,3,0), (9,-12,0), (-12,3,0), (-12,9,0)									
LiNbO3	(1,-8,-24)	15.013	71.18	3.584	3	5.406	16.08	67.58	69.46
Equiv. Refl.: (7,1,-24), (8,-1,-24), (-1,-7,-24), (-7,8,-24), (-8,7,-24)									
LiNbO3	(1,-10,-16)	15.071	71.84	3.54	3	5.202	15.71	65.03	66.9
Equiv. Refl.: (9,1,-16), (10,-1,-16), (-1,-9,-16), (-9,10,-16), (-10,9,-16)									
Quartz	(4,6,8)	15.67	81.09	3.416	2.6	2.487	6.37	31.09	31.73
Equiv. Refl.: (4,-10,-8), (6,4,-8)									
Quartz	(6,-10,8)	15.67	81.09	3.415	2.6	2.487	6.36	31.09	31.73
Quartz	(-10,4,8)	15.67	81.09	3.414	2.6	2.487	6.36	31.09	31.73
Equiv. Refl.: (-10,6,-8)									
Quartz	(12,-3,0)	15.76	83.52	3.397	2.7	1.801	4.91	22.51	23.04
Equiv. Refl.: (12,-9,0), (-3,12,0), (-3,-9,0), (-9,12,0), (-9,-3,0)									
Quartz	(-4,10,8)	15.67	81.09	3.335	2.6	2.487	6.37	31.09	31.73
Equiv. Refl.: (-4,-6,-8), (-6,-4,8)									
Quartz	(-6,10,-8)	15.67	81.09	3.334	2.6	2.487	6.36	31.09	31.73
Quartz	(10,-4,-8)	15.67	81.09	3.333	2.6	2.487	6.36	31.09	31.73
Equiv. Refl.: (10,-6,8)									
Quartz	(8,-10,-7)	15.581	79.23	3.332	2.4	3.018	7.37	37.72	38.43
Quartz	(8,2,7)	15.581	79.23	3.331	2.4	3.018	7.37	37.72	38.43
Equiv. Refl.: (-10,2,-7), (-10,8,7)									
Quartz	(2,8,-7)	15.581	79.23	3.33	2.4	3.018	7.37	37.72	38.43
Equiv. Refl.: (2,-10,7)									
LiNbO3	(0,7,26)	15.163	72.94	3.29	2.9	4.868	14.04	60.85	62.45
Equiv. Refl.: (7,-7,26), (-7,0,26)									
LiNbO3	(5,7,10)	15.19	73.28	3.263	3	4.765	14.51	59.57	61.31
Equiv. Refl.: (7,-12,10), (12,-7,10), (-5,12,10), (-7,-5,10), (-12,5,10)									
Sapph	(6,6,0)	15.634	80.3	3.261	2.5	2.71	6.87	33.88	34.57
Equiv. Refl.: (6,-12,0), (12,-6,0), (-6,12,0), (-6,-6,0), (-12,6,0)									
Quartz	(-8,10,7)	15.581	79.23	3.24	2.4	3.018	7.37	37.72	38.43
Equiv. Refl.: (-8,-2,-7)									
Quartz	(10,-2,7)	15.581	79.23	3.239	2.4	3.018	7.37	37.72	38.43
Equiv. Refl.: (10,-8,-7), (-2,10,-7), (-2,-8,7)									
Sapph	(1,6,-26)	15.853	88.18	3.235	3.3	0.503	1.67	6.29	6.5
Equiv. Refl.: (1,-7,26), (6,1,26), (6,-7,-26), (7,-1,26), (7,-6,-26), (-1,7,-26), (-1,-6,26), (-6,7,26), (-6,-1,-26), (-7,1,-26), (-7,6,26)									
LiNbO3	(0,-7,-26)	15.163	72.94	3.125	2.9	4.868	14.04	60.85	62.45
Equiv. Refl.: (7,0,-26), (-7,7,-26)									
Sapph	(0,10,8)	15.521	78.12	2.996	2.3	3.337	7.73	41.71	42.42
Equiv. Refl.: (0,-10,-8), (10,0,-8), (10,-10,8), (-10,0,8), (-10,10,-8)									
Quartz	(5,7,-3)	15.596	79.51	2.988	2.5	2.938	7.36	36.72	37.45
Equiv. Refl.: (5,-12,3)									
Quartz	(7,5,3)	15.596	79.51	2.987	2.5	2.938	7.35	36.72	37.45
Equiv. Refl.: (7,-12,-3), (-12,5,-3), (-12,7,3)									
Sapph	(0,3,30)	15.013	71.18	2.986	2.2	5.405	11.92	67.56	68.61
Equiv. Refl.: (0,3,-30), (0,-3,30), (0,-3,-30), (3,0,30), (3,0,-30), (3,-3,30), (3,-3,-30), (-3,0,30), (-3,0,-30), (-3,3,30), (-3,3,-30), (-5,12,-3), (-5,-7,3)									
Quartz	(12,-5,3)	15.596	79.51	2.985	2.5	2.938	7.36	36.72	37.45
Equiv. Refl.: (12,-7,-3), (-7,12,3), (-7,-5,-3)									
LiNbO3	(5,6,-16)	15.071	71.84	2.957	2.6	5.202	13.52	65.03	66.42
Equiv. Refl.: (6,-11,-16), (11,-6,-16), (-5,11,-16), (-6,-5,-16), (-11,5,-16)									

Ei = Cryst	15.861 Refl (h,k,l)	keV EB [keV]	Θ B [$^\circ$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
LiNbO3	(3,9,0)	15.04	71.49	2.905	2.6	5.31	13.56	66.38	67.75
Equiv. Refl.: (9,-12,0), (12,-9,0), (-3,12,0), (-9,-3,0), (-12,3,0)									
Quartz	(3,1,-13)	15.81	85.38	2.868	2.2	1.281	2.87	16.01	16.27
Quartz	(3,-4,13)	15.81	85.38	2.867	2.2	1.281	2.87	16.01	16.27
Quartz	(1,-4,-13)	15.81	85.38	2.865	2.2	1.281	2.87	16.01	16.26
Quartz	(1,3,13)	15.81	85.38	2.864	2.2	1.281	2.87	16.01	16.26
Quartz	(-4,3,-13)	15.81	85.38	2.856	2.2	1.281	2.86	16.01	16.26
Quartz	(-4,1,13)	15.81	85.38	2.855	2.2	1.281	2.86	16.01	16.26
LiNbO3	(5,-11,16)	15.071	71.84	2.771	2.6	5.202	13.52	65.03	66.42
Equiv. Refl.: (6,5,16), (11,-5,16), (-5,-6,16), (-6,11,16), (-11,6,16)									
LiNbO3	(0,-11,2)	15.321	75.01	2.731	2.5	4.246	10.55	53.08	54.11
Equiv. Refl.: (11,0,2), (-11,11,2)									
LiNbO3	(3,-12,0)	15.04	71.49	2.713	2.6	5.31	13.56	66.38	67.75
Equiv. Refl.: (9,3,0), (12,-3,0), (-3,-9,0), (-9,12,0), (-12,9,0)									
Sapph	(2,9,-4)	15.387	75.96	2.699	2	3.967	7.85	49.58	50.2
Equiv. Refl.: (2,-11,4), (9,2,4), (9,-11,-4), (11,-2,4), (11,-9,-4), (-2,11,-4), (-2,-9,4), (-9,11,4), (-9,-2,-4), (-11,2,-4), (-11,9,4)									
LiNbO3	(4,8,8)	15.144	72.71	2.693	2.4	4.938	12.07	61.72	62.89
Equiv. Refl.: (8,-12,8), (12,-8,8), (-4,12,8), (-8,-4,8), (-12,4,8)									
Sapph	(4,4,24)	15.487	77.54	2.668	2	3.506	6.94	43.82	44.37
Equiv. Refl.: (4,4,-24), (4,-8,24), (4,-8,-24), (8,-4,24), (8,-4,-24), (-4,8,24), (-4,8,-24), (-4,-4,24), (-4,-4,-24), (-8,4,24), (-8,4,-24)									
LiNbO3	(4,-12,-8)	15.144	72.71	2.634	2.4	4.938	12.07	61.72	62.89
Equiv. Refl.: (8,4,-8), (12,-4,-8), (-4,-8,-8), (-8,12,-8), (-12,8,-8)									
LiNbO3	(2,-9,-22)	15.044	71.53	2.604	2.4	5.297	12.52	66.22	67.39
Equiv. Refl.: (7,2,-22), (9,-2,-22), (-2,-7,-22), (-7,9,-22), (-9,7,-22)									
LiNbO3	(0,11,-2)	15.321	75.01	2.58	2.5	4.246	10.55	53.08	54.11
Equiv. Refl.: (11,-11,-2), (-11,0,-2)									
LiNbO3	(2,7,22)	15.044	71.53	2.563	2.4	5.297	12.52	66.22	67.39
Equiv. Refl.: (7,-9,22), (9,-7,22), (-2,9,22), (-7,-2,22), (-9,2,22)									
LiNbO3	(5,-12,8)	14.951	70.5	2.548	2.3	5.616	12.88	70.2	71.37
Equiv. Refl.: (7,5,8), (12,-5,8), (-5,-7,8), (-7,12,8), (-12,7,8)									
Quartz	(-3,-1,13)	15.81	85.38	2.352	2.2	1.281	2.87	16.01	16.27
Quartz	(-3,4,-13)	15.81	85.38	2.35	2.2	1.281	2.87	16.01	16.27
Quartz	(-1,4,13)	15.81	85.38	2.349	2.2	1.281	2.87	16.01	16.26
Quartz	(-1,-3,-13)	15.81	85.38	2.348	2.2	1.281	2.87	16.01	16.26
Quartz	(4,-3,13)	15.81	85.38	2.342	2.2	1.281	2.86	16.01	16.26
Quartz	(4,-1,-13)	15.81	85.38	2.341	2.2	1.281	2.86	16.01	16.26
LiNbO3	(5,7,-8)	14.951	70.5	2.025	2.3	5.616	12.88	70.2	71.37
Equiv. Refl.: (7,-12,-8), (12,-7,-8), (-5,12,-8), (-7,-5,-8), (-12,5,-8)									
Sapph	(1,8,-19)	15.731	82.65	1.815	1.9	2.045	3.96	25.56	25.87
Equiv. Refl.: (1,-9,19), (8,1,19), (8,-9,-19), (9,-1,19), (9,-8,-19), (-1,9,-19), (-1,-8,19), (-8,9,19), (-8,-1,-19), (-9,1,-19), (-9,8,19)									
Quartz	(1,6,-11)	15.826	86.21	1.777	1.9	1.05	2.01	13.12	13.27
Quartz	(1,-7,11)	15.826	86.21	1.776	1.9	1.05	2.01	13.12	13.27
Quartz	(-7,1,-11)	15.826	86.21	1.771	1.9	1.05	2.01	13.12	13.27
Quartz	(-7,6,11)	15.826	86.21	1.77	1.9	1.05	2	13.12	13.27
Quartz	(0,10,5)	15.658	80.82	1.762	1.8	2.562	4.62	32.03	32.36
Equiv. Refl.: (0,-10,-5), (6,1,11), (6,-7,-11), (10,0,-5), (10,-10,5), (-10,0,5), (-10,10,-5)									

Ei =	15.861	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(0,7,10)	15.349	75.4	1.756	1.7	4.132	7.23	51.65	52.15
	Equiv. Refl.: (0,-7,-10), (7,0,-10), (7,-7,10), (-7,0,10), (-7,7,-10)								
Sapph	(2,7,-20)	15.581	79.22	1.753	1.8	3.021	5.47	37.77	38.16
	Equiv. Refl.: (2,-9,20), (7,2,20), (7,-9,-20), (9,-2,20), (9,-7,-20), (-2,9,-20), (-2,-7,20), (-7,9,20), (-7,-2,-20), (-9,2,-20), (-9,7,20)								
Quartz	(-4,-2,-12)	15.776	84.08	1.715	1.7	1.646	2.81	20.57	20.76
Quartz	(-4,6,12)	15.776	84.08	1.714	1.7	1.646	2.8	20.57	20.76
Quartz	(6,-4,-12)	15.776	84.08	1.712	1.7	1.646	2.8	20.57	20.76
Quartz	(6,-2,12)	15.776	84.08	1.711	1.7	1.646	2.8	20.57	20.76
Quartz	(-2,6,-12)	15.776	84.08	1.709	1.7	1.646	2.8	20.57	20.76
Quartz	(-2,-4,12)	15.776	84.08	1.708	1.7	1.646	2.8	20.57	20.76
Quartz	(7,-2,-11)	15.556	78.74	1.663	1.7	3.157	5.31	39.47	39.82
	Equiv. Refl.: (7,-5,11)								
Quartz	(-2,7,11)	15.556	78.74	1.662	1.7	3.157	5.31	39.47	39.82
	Equiv. Refl.: (-2,-5,-11), (-4,-1,12)								
Quartz	(4,1,-12)	15.298	74.69	1.661	1.7	4.342	7.19	54.28	54.75
	Equiv. Refl.: (-4,5,-12), (-5,7,-11), (-5,-2,11)								
Quartz	(4,-5,12)	15.298	74.69	1.66	1.7	4.342	7.19	54.28	54.75
	Equiv. Refl.: (-1,5,12), (-1,-4,-12)								
Quartz	(1,4,12)	15.298	74.69	1.659	1.7	4.342	7.19	54.28	54.75
	Equiv. Refl.: (1,-5,-12), (5,-1,-12), (5,-4,12)								
Quartz	(-5,1,12)	15.298	74.69	1.658	1.7	4.342	7.18	54.28	54.75
	Equiv. Refl.: (-5,4,-12)								
Quartz	(-7,2,11)	15.556	78.74	1.657	1.7	3.157	5.31	39.47	39.82
	Equiv. Refl.: (-7,5,-11)								
Quartz	(2,-7,-11)	15.556	78.74	1.656	1.7	3.157	5.31	39.47	39.82
Quartz	(2,5,11)	15.556	78.74	1.655	1.7	3.157	5.31	39.47	39.82
Quartz	(5,2,-11)	15.556	78.74	1.654	1.7	3.157	5.31	39.47	39.82
	Equiv. Refl.: (5,-7,11)								
Quartz	(-2,8,10)	15.555	78.72	1.627	1.6	3.163	5.18	39.53	39.87
	Equiv. Refl.: (-2,-6,-10)								
Quartz	(-6,8,-10)	15.555	78.72	1.626	1.6	3.163	5.18	39.53	39.87
	Equiv. Refl.: (-6,-2,10)								
Quartz	(8,-2,-10)	15.555	78.72	1.625	1.6	3.163	5.17	39.53	39.87
	Equiv. Refl.: (8,-6,10)								
Quartz	(-1,7,-11)	15.826	86.21	1.622	1.9	1.05	2.01	13.12	13.27
	Equiv. Refl.: (-1,-6,11)								
Quartz	(7,-1,11)	15.826	86.21	1.617	1.9	1.05	2.01	13.12	13.27
Quartz	(7,-6,-11)	15.826	86.21	1.616	1.9	1.05	2	13.12	13.27
Quartz	(0,10,-4)	15.275	74.38	1.614	1.6	4.435	7.14	55.43	55.89
	Equiv. Refl.: (0,-10,4)								
Quartz	(10,0,4)	15.275	74.38	1.613	1.6	4.435	7.14	55.43	55.89
	Equiv. Refl.: (10,-10,-4), (-10,0,-4), (-10,10,4)								
Quartz	(1,9,-6)	15.509	77.91	1.61	1.6	3.397	5.51	42.46	42.82
	Equiv. Refl.: (1,-10,6), (9,1,6)								
Quartz	(9,-10,-6)	15.509	77.91	1.609	1.6	3.397	5.51	42.46	42.82
	Equiv. Refl.: (-6,7,11), (-10,1,-6), (-10,9,6)								
Quartz	(-6,-1,-11)	15.826	86.21	1.608	1.9	1.05	2	13.12	13.27
Quartz	(10,-9,-6)	15.509	77.91	1.6	1.6	3.397	5.51	42.46	42.82
	Equiv. Refl.: (-1,10,-6), (-1,-9,6), (-9,10,6), (-9,-1,-6)								
Quartz	(10,-1,6)	15.509	77.91	1.599	1.6	3.397	5.51	42.46	42.82

Ei =	15.861	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(2,6,10)	15.555	78.72	1.597	1.6	3.163	5.18	39.53	39.87
	Equiv. Refl.: (2,-8,-10)								
Quartz	(6,2,-10)	15.555	78.72	1.596	1.6	3.163	5.17	39.53	39.87
	Equiv. Refl.: (6,-8,10), (11,-1,-1), (11,-10,1), (-1,11,1), (-1,-10,-1), (-10,11,-1), (-10,-1,1)								
Quartz	(-8,2,10)	15.555	78.72	1.595	1.6	3.163	5.17	39.53	39.87
	Equiv. Refl.: (-8,6,-10)								
Quartz	(5,7,3)	15.596	79.51	1.544	1.6	2.938	4.58	36.72	37.01
	Equiv. Refl.: (5,-12,-3), (7,5,-3), (7,-12,3), (-12,5,3), (-12,7,-3)								
Quartz	(1,10,1)	15.393	76.05	1.536	1.6	3.94	6.2	49.25	49.64
	Equiv. Refl.: (1,-11,-1), (10,1,-1), (10,-11,1), (-11,1,1), (-11,10,-1)								
Sapph	(1,9,10)	15.124	72.47	1.533	1.5	5.011	7.76	62.64	63.12
	Equiv. Refl.: (1,-10,-10), (9,1,-10), (9,-10,10), (10,-1,-10), (10,-9,10), (-1,10,10), (-1,-9,-10), (-9,10,-10), (-9,-1,10), (-10,1,10), (-10,9,-10)								
LiNbO3	(1,9,19)	15.752	83.29	1.526	2.3	1.867	4.21	23.34	23.72
	Equiv. Refl.: (1,-10,-19), (9,1,-19), (9,-10,19), (10,-1,-19), (10,-9,19), (-1,10,19), (-1,-9,-19), (-9,10,-19), (-9,-1,19), (-10,1,19), (-10,9,-19)								
Quartz	(12,-9,-1)	15.801	85.03	1.497	1.6	1.379	2.25	17.24	17.38
	Equiv. Refl.: (-3,12,-1), (-3,-9,1), (-5,12,3), (-5,-7,-3)								
Quartz	(12,-3,1)	15.801	85.03	1.496	1.6	1.379	2.25	17.24	17.38
	Equiv. Refl.: (12,-5,-3), (12,-7,3), (-7,12,-3), (-7,-5,3), (-9,12,1), (-9,-3,-1)								
Sapph	(2,9,-7)	15.629	80.2	1.484	1.6	2.74	4.3	34.25	34.52
	Equiv. Refl.: (2,-11,7), (9,2,7), (9,-11,-7), (11,-2,7), (11,-9,-7), (-2,11,-7), (-2,-9,7), (-9,11,7), (-9,-2,-7), (-11,2,-7), (-11,9,7)								
Sapph	(0,10,2)	15.074	71.88	1.477	1.5	5.19	7.75	64.88	65.34
	Equiv. Refl.: (0,-10,-2), (10,0,-2), (10,-10,2), (-10,0,2), (-10,10,-2)								
Quartz	(4,2,12)	15.776	84.08	1.467	1.7	1.646	2.81	20.57	20.76
Quartz	(4,-6,-12)	15.776	84.08	1.466	1.7	1.646	2.8	20.57	20.76
Quartz	(-6,4,12)	15.776	84.08	1.464	1.7	1.646	2.8	20.57	20.76
Quartz	(-6,2,-12)	15.776	84.08	1.463	1.7	1.646	2.8	20.57	20.76
Quartz	(2,-6,12)	15.776	84.08	1.461	1.7	1.646	2.8	20.57	20.76
Quartz	(2,4,-12)	15.776	84.08	1.46	1.7	1.646	2.8	20.57	20.76
Quartz	(6,5,6)	15.509	77.91	1.452	1.5	3.397	5	42.46	42.75
	Equiv. Refl.: (6,-11,-6), (-11,5,-6), (-11,6,6)								
Quartz	(5,6,-6)	15.509	77.91	1.451	1.5	3.397	5	42.46	42.75
	Equiv. Refl.: (5,-11,6)								
Quartz	(3,9,-1)	15.801	85.03	1.448	1.6	1.379	2.25	17.24	17.38
	Equiv. Refl.: (3,-12,1), (9,3,1), (9,-12,-1), (-12,3,-1), (-12,9,1)								
Quartz	(11,-5,6)	15.509	77.91	1.438	1.5	3.397	5	42.46	42.75
	Equiv. Refl.: (11,-6,-6)								
Quartz	(-5,11,-6)	15.509	77.91	1.437	1.5	3.397	5	42.46	42.75
	Equiv. Refl.: (-5,-6,6), (-6,11,6), (-6,-5,-6)								
Quartz	(-7,4,-11)	15.419	76.44	1.433	1.4	3.826	5.44	47.83	48.13
Quartz	(3,4,11)	15.419	76.44	1.432	1.4	3.826	5.44	47.83	48.13
	Equiv. Refl.: (3,-7,-11), (4,3,-11), (4,-7,11), (-7,3,11)								
Quartz	(2,9,-2)	14.964	70.64	1.428	1.4	5.575	7.78	69.68	70.12
	Equiv. Refl.: (2,-11,2), (9,2,2), (9,-11,-2), (-11,2,-2), (-11,9,2)								
Quartz	(4,7,-5)	15.176	73.1	1.426	1.4	4.819	6.73	60.24	60.61
	Equiv. Refl.: (4,-11,5), (7,4,5), (7,-11,-5), (-11,4,-5), (-11,7,5)								

Ei =	15.861	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(6,7,5)	15.829	86.34	1.423	2.6	1.014	2.66	12.67	12.95
	Equiv. Refl.: (6,-13,-5), (7,6,-5), (7,-13,5), (13,-6,-5), (13,-7,5), (-6,13,5), (-6,-7,-5), (-7,13,-5), (-7,-6,5), (-13,6,5), (-13,7,-5)								
Quartz	(3,-6,-12)	15.709	82.06	1.408	1.5	2.213	3.27	27.66	27.85
Quartz	(3,3,12)	15.709	82.06	1.407	1.5	2.213	3.27	27.66	27.85
	Equiv. Refl.: (-6,3,12), (-6,3,-12)								
Quartz	(3,3,-12)	15.709	82.06	1.406	1.5	2.213	3.27	27.66	27.85
	Equiv. Refl.: (3,-6,12)								
Quartz	(-8,12,-2)	15.589	79.37	1.398	1.4	2.976	4.28	37.2	37.44
	Equiv. Refl.: (-8,-4,2)								
Quartz	(12,-4,-2)	15.589	79.37	1.397	1.4	2.976	4.28	37.2	37.44
	Equiv. Refl.: (12,-8,2), (-4,12,2), (-4,-8,-2)								
Quartz	(-3,6,12)	15.709	82.06	1.396	1.5	2.213	3.27	27.66	27.85
Quartz	(6,-3,12)	15.709	82.06	1.395	1.5	2.213	3.27	27.66	27.85
	Equiv. Refl.: (6,-3,-12), (-3,6,-12), (-3,-3,12), (-3,-3,-12)								
Quartz	(4,8,2)	15.589	79.37	1.394	1.4	2.976	4.28	37.2	37.44
	Equiv. Refl.: (4,-12,-2), (8,4,-2), (8,-12,2), (-12,4,2), (-12,8,-2)								
Quartz	(11,-2,2)	14.964	70.64	1.378	1.4	5.575	7.78	69.68	70.12
	Equiv. Refl.: (11,-9,-2), (-2,11,-2), (-2,-9,2), (-9,11,2), (-9,-2,-2)								
Quartz	(7,-4,11)	15.419	76.44	1.376	1.4	3.826	5.44	47.83	48.13
Quartz	(7,-3,-11)	15.419	76.44	1.375	1.4	3.826	5.44	47.83	48.13
	Equiv. Refl.: (-3,7,11), (-3,-4,-11), (-4,7,-11), (-4,-3,11)								
Sapph	(3,8,10)	15.567	78.94	1.363	1.4	3.099	4.45	38.74	39
	Equiv. Refl.: (3,-11,-10), (8,3,-10), (8,-11,10), (11,-3,-10), (11,-8,10), (-3,11,10), (-3,-8,-10), (-8,11,-10), (-8,-3,10), (-11,3,10), (-11,8,-10)								
Quartz	(11,-4,5)	15.176	73.1	1.362	1.4	4.819	6.73	60.24	60.61
	Equiv. Refl.: (11,-7,-5), (-4,11,-5), (-4,-7,5), (-7,11,5), (-7,-4,-5)								
Quartz	(-11,1,2)	15.521	78.11	1.348	1.4	3.339	4.59	41.74	41.99
	Equiv. Refl.: (-11,10,-2)								
Quartz	(1,10,2)	15.521	78.11	1.347	1.4	3.339	4.58	41.74	41.99
	Equiv. Refl.: (1,-11,-2), (10,1,-2), (10,-11,2)								
Quartz	(-1,2,13)	15.123	72.46	1.343	1.3	5.014	6.66	62.68	63.03
	Equiv. Refl.: (-1,2,-13), (-1,-1,-13)								
Quartz	(2,-1,13)	15.123	72.46	1.342	1.3	5.014	6.66	62.68	63.03
	Equiv. Refl.: (2,-1,-13), (-1,-1,13)								
Quartz	(11,-1,-2)	15.521	78.11	1.331	1.4	3.339	4.59	41.74	41.99
	Equiv. Refl.: (11,-10,2)								
Quartz	(-1,11,2)	15.521	78.11	1.33	1.4	3.339	4.58	41.74	41.99
	Equiv. Refl.: (-1,-10,-2), (-10,11,-2), (-10,-1,2)								
Quartz	(2,2,-13)	15.742	82.98	1.322	1.4	1.952	2.72	24.4	24.55
	Equiv. Refl.: (2,-4,13), (2,-4,-13)								
Quartz	(2,2,13)	15.742	82.98	1.321	1.4	1.952	2.72	24.4	24.55
Quartz	(-4,2,13)	15.742	82.98	1.32	1.4	1.952	2.72	24.4	24.55
	Equiv. Refl.: (-4,2,-13)								
Quartz	(1,1,13)	15.123	72.46	1.308	1.3	5.014	6.66	62.68	63.03
	Equiv. Refl.: (1,-2,-13)								
Quartz	(1,1,-13)	15.123	72.46	1.307	1.3	5.014	6.66	62.68	63.03
	Equiv. Refl.: (1,-2,13), (-2,1,13), (-2,1,-13)								
Quartz	(3,-1,13)	15.401	76.17	1.3	1.3	3.903	5.1	48.79	49.06
	Equiv. Refl.: (3,-2,-13)								
Quartz	(-2,3,13)	15.401	76.17	1.299	1.3	3.903	5.1	48.79	49.06
	Equiv. Refl.: (-2,-1,-13)								

Ei = Cryst	15.861 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(-1,3,-13)	15.401	76.17	1.298	1.3	3.903	5.09	48.79	49.06
	Equiv. Refl.: (-1,-2,13)								
Quartz	(-1,9,8)	15.465	77.17	1.289	1.3	3.612	4.63	45.15	45.39
	Equiv. Refl.: (-1,-8,-8), (-8,9,-8), (-8,-1,8)								
Quartz	(9,-1,-8)	15.465	77.17	1.288	1.3	3.612	4.63	45.15	45.39
	Equiv. Refl.: (9,-8,8)								
Sapph	(3,8,4)	14.939	70.37	1.287	1.3	5.657	7.39	70.71	71.09
	Equiv. Refl.: (3,-11,-4), (8,3,-4), (8,-11,4), (11,-3,-4), (11,-8,4), (-3,11,4), (-3,-8,-4), (-8,11,-4), (-8,-3,4), (-11,3,4), (-11,8,-4)								
Quartz	(6,6,2)	15.314	74.91	1.271	1.3	4.276	5.45	53.45	53.73
	Equiv. Refl.: (6,6,-2), (6,-12,2), (6,-12,-2), (-12,6,2), (-12,6,-2)								
Quartz	(-3,2,13)	15.401	76.17	1.267	1.3	3.903	5.1	48.79	49.06
Quartz	(2,1,13)	15.401	76.17	1.266	1.3	3.903	5.1	48.79	49.06
	Equiv. Refl.: (2,-3,-13), (-3,1,-13)								
Quartz	(1,2,-13)	15.401	76.17	1.265	1.3	3.903	5.09	48.79	49.06
	Equiv. Refl.: (1,-3,13)								
Sapph	(1,8,-16)	14.951	70.5	1.259	1.3	5.617	7.19	70.21	70.58
	Equiv. Refl.: (1,-9,16), (8,1,16), (8,-9,-16), (9,-1,16), (9,-8,-16), (-1,9,-16), (-1,-8,16), (-8,9,16), (-8,-1,-16), (-9,1,-16), (-9,8,16), (-2,4,13), (-2,4,-13), (-2,-2,13)								
Quartz	(7,-5,-11)	15.556	78.74	1.258	1.3	3.157	4.03	39.47	39.67
	Equiv. Refl.: (-2,-2,-13)								
Quartz	(4,-2,13)	15.742	82.98	1.257	1.4	1.952	2.72	24.4	24.55
	Equiv. Refl.: (4,-2,-13), (7,-2,11)								
Quartz	(-2,7,-11)	15.556	78.74	1.256	1.3	3.157	4.03	39.47	39.67
	Equiv. Refl.: (-5,7,11), (-5,-2,-11)								
Quartz	(-2,-5,11)	15.556	78.74	1.255	1.3	3.157	4.03	39.47	39.67
Quartz	(12,-4,2)	15.589	79.37	1.253	1.3	2.976	3.82	37.2	37.39
	Equiv. Refl.: (12,-8,-2), (-4,12,-2), (-4,-8,2), (-8,12,2), (-8,-4,-2)								
Quartz	(-6,12,2)	15.314	74.91	1.244	1.3	4.276	5.45	53.45	53.73
	Equiv. Refl.: (-6,12,-2), (-6,-6,2), (-6,-6,-2)								
Quartz	(12,-6,2)	15.314	74.91	1.243	1.3	4.276	5.45	53.45	53.73
	Equiv. Refl.: (12,-6,-2)								
Quartz	(6,-9,-9)	15.502	77.78	1.233	1.2	3.434	4.24	42.93	43.14
Quartz	(6,3,9)	15.502	77.78	1.232	1.2	3.434	4.24	42.93	43.14
Quartz	(3,6,-9)	15.502	77.78	1.231	1.2	3.434	4.23	42.93	43.14
	Equiv. Refl.: (3,-9,9), (-9,3,-9), (-9,6,9)								
Quartz	(0,8,-9)	15.57	79.01	1.227	1.3	3.08	3.93	38.5	38.7
	Equiv. Refl.: (0,-8,9)								
Quartz	(8,0,9)	15.57	79.01	1.224	1.3	3.08	3.92	38.5	38.7
	Equiv. Refl.: (8,-8,-9), (-8,0,-9), (-8,8,9)								
Quartz	(8,-9,8)	15.465	77.17	1.214	1.3	3.612	4.63	45.15	45.39
Quartz	(1,8,8)	15.465	77.17	1.213	1.3	3.612	4.63	45.15	45.39
	Equiv. Refl.: (1,-9,-8), (8,1,-8)								
Quartz	(-5,12,2)	15.383	75.9	1.212	1.2	3.983	4.91	49.79	50.03
	Equiv. Refl.: (-5,-7,-2), (-9,1,8), (-9,8,-8)								
Quartz	(12,-5,-2)	15.383	75.9	1.211	1.2	3.983	4.91	49.79	50.03
	Equiv. Refl.: (12,-7,2), (-7,12,-2), (-7,-5,2)								
Quartz	(4,8,-2)	15.589	79.37	1.209	1.3	2.976	3.81	37.2	37.39
	Equiv. Refl.: (8,4,2), (8,-12,-2), (-12,4,-2), (-12,8,2)								

Ei =	15.861	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(4,-12,2)	15.589	79.37	1.208	1.3	2.976	3.81	37.2	37.39
	Equiv. Refl.: (-7,2,-11), (-7,5,11)								
Quartz	(2,5,-11)	15.556	78.74	1.207	1.3	3.157	4.03	39.47	39.67
	Equiv. Refl.: (2,-7,11), (5,2,11), (5,-7,-11)								
Quartz	(5,7,2)	15.383	75.9	1.202	1.2	3.983	4.91	49.79	50.03
	Equiv. Refl.: (5,-12,-2), (7,5,-2), (7,-12,2), (-12,5,2), (-12,7,-2)								
LiNbO3	(2,10,7)	15.797	84.85	1.186	2.1	1.429	2.96	17.86	18.1
	Equiv. Refl.: (2,-12,-7), (10,2,-7), (10,-12,7), (12,-2,-7), (12,-10,7), (-2,12,7), (-2,-10,-7), (-10,12,-7), (-10,-2,7), (-12,2,7), (-12,10,-7)								
LiNbO3	(2,4,31)	15.694	81.68	1.172	1.8	2.319	4.09	28.99	29.28
	Equiv. Refl.: (2,-6,-31), (4,2,-31), (4,-6,31), (6,-2,-31), (6,-4,31), (-2,6,31), (-2,-4,-31), (-4,6,-31), (-4,-2,31), (-6,2,31), (-6,4,-31)								
Quartz	(8,-1,-9)	15.085	72.01	1.166	1.2	5.151	5.97	64.39	64.67
	Equiv. Refl.: (-1,8,9), (-1,-7,-9), (-7,8,-9), (-7,-1,9)								
Quartz	(8,-7,9)	15.085	72.01	1.165	1.2	5.151	5.97	64.39	64.67
Sapph	(2,9,5)	15.454	76.99	1.159	1.2	3.666	4.48	45.83	46.04
	Equiv. Refl.: (2,-11,-5), (9,2,-5), (9,-11,5), (11,-2,-5), (11,-9,5), (-2,11,5), (-2,-9,-5), (-9,11,-5), (-9,-2,5), (-11,2,5), (-11,9,-5)								
Quartz	(-6,9,9)	15.502	77.78	1.158	1.2	3.434	4.24	42.93	43.14
	Equiv. Refl.: (-6,-3,-9)								
Quartz	(9,-3,9)	15.502	77.78	1.157	1.2	3.434	4.23	42.93	43.14
	Equiv. Refl.: (9,-6,-9), (-3,9,-9), (-3,-6,9)								
Quartz	(0,4,-12)	14.947	70.46	1.145	1.2	5.63	6.48	70.38	70.68
	Equiv. Refl.: (0,-4,12)								
Quartz	(12,-4,1)	15.462	77.12	1.144	1.1	3.627	4.12	45.34	45.52
	Equiv. Refl.: (12,-8,-1), (-4,12,-1), (-4,-8,1), (-8,12,1), (-8,-4,-1)								
Quartz	(4,0,12)	14.947	70.46	1.143	1.1	5.63	6.47	70.38	70.68
	Equiv. Refl.: (4,-4,-12), (-4,0,-12), (-4,4,12)								
Quartz	(1,7,9)	15.085	72.01	1.132	1.2	5.151	5.98	64.39	64.67
	Equiv. Refl.: (1,-8,-9)								
Sapph	(1,5,-28)	15.772	83.93	1.131	1.3	1.685	2.22	21.07	21.18
	Equiv. Refl.: (1,-6,28), (5,1,28), (5,-6,-28), (6,-1,28), (6,-5,-28), (-1,6,-28), (-1,-5,28), (-5,6,28), (-5,-1,-28), (-6,1,-28), (-6,5,28), (7,1,-9), (7,-8,9), (-8,1,9), (-8,7,-9)								
Quartz	(9,-2,9)	15.773	83.97	1.124	1.2	1.675	2.04	20.94	21.04
	Equiv. Refl.: (9,-7,-9)								
Quartz	(-7,-2,-9)	15.773	83.97	1.123	1.2	1.675	2.04	20.94	21.04
Quartz	(-7,9,9)	15.773	83.97	1.122	1.2	1.675	2.04	20.94	21.04
Quartz	(-2,9,-9)	15.773	83.97	1.121	1.2	1.675	2.04	20.94	21.04
	Equiv. Refl.: (-2,-7,9)								
Quartz	(10,-2,-7)	15.581	79.23	1.115	1.2	3.018	3.51	37.72	37.88
	Equiv. Refl.: (10,-8,7), (-2,10,7), (-8,10,-7), (-8,-2,7)								
Quartz	(-2,-8,-7)	15.581	79.23	1.114	1.2	3.018	3.5	37.72	37.88
Quartz	(6,5,-5)	15.036	71.43	1.111	1.1	5.327	5.97	66.59	66.86
	Equiv. Refl.: (6,-11,5), (-11,5,5), (-11,6,-5)								
Quartz	(5,6,5)	15.036	71.43	1.11	1.1	5.327	5.96	66.59	66.86
	Equiv. Refl.: (5,-11,-5)								
Quartz	(11,-5,-5)	15.036	71.43	1.107	1.1	5.327	5.97	66.59	66.86
	Equiv. Refl.: (11,-6,5), (-6,11,-5), (-6,-5,5)								
Quartz	(-5,11,5)	15.036	71.43	1.106	1.1	5.327	5.96	66.59	66.86
	Equiv. Refl.: (-5,-6,-5)								
Quartz	(8,-10,7)	15.581	79.23	1.097	1.2	3.018	3.51	37.72	37.88

Ei =	15.861	keV						ΔEg	ΔEt
Cryst	RefI	EB	ΘB	IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(2,8,7)	15.581	79.23	1.096	1.2	3.018	3.5	37.72	37.88
	Equiv. Refl.: (2,-10,-7), (8,2,-7), (-10,2,7), (-10,8,-7)								
Sapph	(5,6,-13)	15.635	80.32	1.081	1.2	2.706	3.21	33.82	33.97
	Equiv. Refl.: (5,-11,13), (6,5,13), (6,-11,-13), (11,-5,13), (11,-6,-13), (-5,11,-13), (-5,-6,13), (-6,11,13), (-6,-5,-13), (-11,5,-13), (-11,6,13)								
Quartz	(3,9,1)	15.801	85.03	1.078	1.2	1.379	1.69	17.24	17.32
	Equiv. Refl.: (3,-12,-1), (9,3,-1), (9,-12,1), (-12,3,1), (-12,9,-1)								
Sapph	(2,4,28)	15.555	78.74	1.076	1.2	3.159	3.66	39.49	39.66
	Equiv. Refl.: (2,-6,-28), (4,2,-28), (4,-6,28), (6,-2,-28), (6,-4,28), (-2,6,28), (-2,-4,-28), (-4,6,-28), (-4,-2,28), (-6,2,28), (-6,4,-28)								
Quartz	(11,-2,-4)	15.482	77.45	1.075	1.1	3.53	3.78	44.12	44.28
	Equiv. Refl.: (11,-9,4), (-2,11,4), (-2,-9,-4), (-9,11,-4), (-9,-2,4)								
Sapph	(5,7,1)	15.714	82.19	1.065	1.2	2.176	2.62	27.2	27.32
	Equiv. Refl.: (5,-12,-1), (7,5,-1), (7,-12,1), (12,-5,-1), (12,-7,1), (-5,12,1), (-5,-7,-1), (-7,12,-1), (-7,-5,1), (-12,5,1), (-12,7,-1)								
Quartz	(4,8,-1)	15.462	77.12	1.052	1.1	3.627	4.12	45.34	45.52
	Equiv. Refl.: (4,-12,1), (8,4,1), (8,-12,-1), (-12,4,-1), (-12,8,1)								
Quartz	(-9,2,-9)	15.773	83.97	1.043	1.2	1.675	2.04	20.94	21.04
Quartz	(7,2,9)	15.773	83.97	1.042	1.2	1.675	2.04	20.94	21.04
	Equiv. Refl.: (-9,7,9)								
Quartz	(7,-9,-9)	15.773	83.97	1.041	1.2	1.675	2.04	20.94	21.04
Quartz	(2,7,-9)	15.773	83.97	1.04	1.2	1.675	2.04	20.94	21.04
	Equiv. Refl.: (2,-9,9)								
Quartz	(-2,6,12)	15.776	84.08	1.036	1.2	1.646	1.93	20.57	20.66
	Equiv. Refl.: (-2,-4,-12)								
Quartz	(6,-4,12)	15.776	84.08	1.032	1.2	1.646	1.93	20.57	20.66
	Equiv. Refl.: (7,-9,-8), (-4,6,-12), (-4,-2,12)								
Quartz	(2,4,12)	15.776	84.08	1.031	1.2	1.646	1.93	20.57	20.66
	Equiv. Refl.: (2,7,-8), (2,-6,-12), (2,-9,8), (6,-2,-12), (7,2,8), (-9,2,-8), (-9,7,8)								
Quartz	(4,2,-12)	15.776	84.08	1.027	1.2	1.646	1.93	20.57	20.66
	Equiv. Refl.: (4,-6,12), (-6,2,12), (-6,4,-12)								
Quartz	(-9,-3,1)	15.801	85.03	1.025	1.2	1.379	1.69	17.24	17.32
Quartz	(12,-3,-1)	15.801	85.03	1.024	1.2	1.379	1.69	17.24	17.32
	Equiv. Refl.: (12,-9,1), (-3,12,1), (-3,-9,-1), (-9,12,-1)								
Quartz	(3,8,-5)	15.453	76.98	1.012	1	3.667	3.81	45.84	46
	Equiv. Refl.: (3,-11,5), (8,-11,-5), (-11,3,-5), (-11,8,5)								
Quartz	(8,3,5)	15.453	76.98	1.011	1	3.667	3.81	45.84	46
Quartz	(7,1,9)	15.085	72.01	1.007	1	5.151	5.28	64.39	64.61
	Equiv. Refl.: (7,-8,-9)								
Quartz	(1,7,-9)	15.085	72.01	1.006	1	5.151	5.27	64.39	64.61
	Equiv. Refl.: (1,-8,9), (-8,1,-9), (-8,7,9)								
Quartz	(-7,8,9)	15.085	72.01	1.004	1	5.151	5.28	64.39	64.61
	Equiv. Refl.: (-7,-1,-9)								
Sapph	(2,9,-1)	15.276	74.39	1.003	1.1	4.433	4.68	55.41	55.61
	Equiv. Refl.: (2,-11,1), (9,2,1), (9,-11,-1), (11,-2,1), (11,-9,-1), (-2,11,-1), (-2,-9,1), (-9,11,1), (-9,-2,-1), (-11,2,-1), (-11,9,1), (8,-1,9), (8,-7,-9), (-1,8,-9), (-1,-7,9)								
Quartz	(1,9,6)	15.509	77.91	0.999	1	3.397	3.5	42.46	42.6
	Equiv. Refl.: (1,-10,-6), (-10,1,6), (-10,9,-6)								
Quartz	(9,1,-6)	15.509	77.91	0.998	1	3.397	3.5	42.46	42.6
	Equiv. Refl.: (9,-10,6), (-9,2,8), (-9,7,-8)								

Ei =	15.861	keV						ΔEg	ΔEt
Cryst	Ref	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(2,7,8)	15.048	71.57	0.997	1	5.285	5.34	66.06	66.28
	Equiv. Refl.: (2,-9,-8), (7,2,-8), (7,-9,8)								
Quartz	(11,-7,-6)	15.646	80.55	0.991	1.1	2.641	2.78	33.01	33.13
	Equiv. Refl.: (-7,11,6), (-7,-4,-6)								
Quartz	(11,-4,6)	15.646	80.55	0.99	1.1	2.641	2.78	33.01	33.13
	Equiv. Refl.: (-4,11,-6), (-4,-7,6)								
Quartz	(1,10,3)	15.731	82.67	0.988	1.1	2.041	2.2	25.52	25.61
	Equiv. Refl.: (1,-11,-3), (-11,10,-3)								
Quartz	(9,-2,-8)	15.048	71.57	0.987	1	5.285	5.34	66.06	66.28
	Equiv. Refl.: (9,-7,8), (10,1,-3), (10,-11,3), (-11,1,3)								
Quartz	(-2,9,8)	15.048	71.57	0.986	1	5.285	5.34	66.06	66.28
	Equiv. Refl.: (-2,-7,-8), (-7,9,-8), (-7,-2,8)								
Quartz	(9,-11,4)	15.482	77.45	0.982	1.1	3.53	3.78	44.12	44.28
	Equiv. Refl.: (11,-3,5), (11,-8,-5), (-3,11,-5), (-3,-8,5), (-8,11,5), (-8,-3,-5), (-11,2,4), (-11,9,-4)								
Quartz	(2,9,4)	15.482	77.45	0.981	1.1	3.53	3.78	44.12	44.28
	Equiv. Refl.: (2,-11,-4), (9,2,-4)								
Quartz	(-7,9,8)	15.048	71.57	0.976	1	5.285	5.39	66.06	66.28
	Equiv. Refl.: (-7,-2,-8)								
Quartz	(9,-2,8)	15.048	71.57	0.975	1	5.285	5.39	66.06	66.28
	Equiv. Refl.: (9,-7,-8), (-2,9,-8), (-2,-7,8)								
Sapph	(0,8,-20)	15.361	75.58	0.974	1	4.078	4.22	50.97	51.15
	Equiv. Refl.: (0,-8,20), (8,0,20), (8,-8,-20), (-8,0,-20), (-8,8,20)								
Quartz	(7,4,6)	15.646	80.55	0.966	1.1	2.641	2.79	33.01	33.13
	Equiv. Refl.: (7,-11,-6)								
Quartz	(4,7,-6)	15.646	80.55	0.965	1.1	2.641	2.78	33.01	33.13
	Equiv. Refl.: (4,-11,6), (-11,4,-6), (-11,7,6)								
Quartz	(10,-1,-6)	15.509	77.91	0.962	1	3.397	3.5	42.46	42.6
	Equiv. Refl.: (10,-9,6), (-1,10,6), (-1,-9,-6)								
Quartz	(-9,10,-6)	15.509	77.91	0.961	1	3.397	3.5	42.46	42.6
	Equiv. Refl.: (-9,-1,6)								
Quartz	(2,0,13)	15.193	73.32	0.951	1	4.754	4.65	59.42	59.6
	Equiv. Refl.: (2,-2,-13), (2,-8,10), (11,-1,-3), (11,-10,3), (-1,11,3), (-1,-10,-3), (-2,0,-13), (-2,2,13), (-8,2,-10), (-8,6,10)								
Quartz	(0,2,-13)	15.193	73.32	0.95	1	4.754	4.64	59.42	59.6
	Equiv. Refl.: (0,-2,13), (2,6,-10), (6,2,10), (6,-8,-10), (8,-2,10), (8,-6,-10), (-10,11,-3), (-10,-1,3)								
Quartz	(-2,8,-10)	15.555	78.72	0.949	1	3.163	3.19	39.53	39.66
	Equiv. Refl.: (-2,-6,10), (-6,8,10), (-6,-2,-10)								
Quartz	(6,0,11)	15.35	75.41	0.947	1	4.128	4.06	51.59	51.75
	Equiv. Refl.: (6,-6,-11), (-6,0,-11), (-6,6,11)								
Quartz	(0,3,-13)	15.539	78.43	0.945	1	3.247	3.25	40.59	40.72
	Equiv. Refl.: (0,6,-11), (0,-3,13), (0,-6,11)								
Sapph	(1,5,26)	14.972	70.73	0.944	1	5.547	5.45	69.33	69.55
	Equiv. Refl.: (1,-6,-26), (5,1,-26), (5,-6,26), (6,-1,-26), (6,-5,26), (-1,6,26), (-1,-5,-26), (-5,6,-26), (-5,-1,26), (-6,1,26), (-6,5,-26)								
Quartz	(3,0,13)	15.539	78.43	0.941	1	3.247	3.24	40.59	40.72
	Equiv. Refl.: (-3,0,-13), (-3,3,13)								
Quartz	(3,-3,-13)	15.539	78.43	0.94	1	3.247	3.24	40.59	40.72
Quartz	(-9,3,9)	15.502	77.78	0.916	0.9	3.434	3.2	42.93	43.05
	Equiv. Refl.: (-9,6,-9)								

Ei = Cryst	15.861 Refl (h,k,l)	keV EB [keV]	Θ B [$^\circ$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(3,6,9)	15.502	77.78	0.914	0.9	3.434	3.19	42.93	43.05
Equiv. Refl.: (3,-9,-9), (6,3,-9), (6,-9,9)									
Sapph	(4,5,20)	15.139	72.64	0.899	0.9	4.957	4.7	61.97	62.14
Equiv. Refl.: (4,-9,-20), (5,4,-20), (5,-9,20), (9,-4,-20), (9,-5,20), (-4,9,20), (-4,-5,-20), (-5,9,-20), (-5,-4,20), (-9,4,20), (-9,5,-20)									
Sapph	(1,8,17)	15.201	73.41	0.898	1	4.726	4.49	59.08	59.25
Equiv. Refl.: (1,-9,-17), (8,1,-17), (8,-9,17), (9,-1,-17), (9,-8,17), (-1,9,17), (-1,-8,-17), (-8,9,-17), (-8,-1,17), (-9,1,17), (-9,8,-17)									
Quartz	(4,0,-12)	14.947	70.46	0.883	0.9	5.63	5.09	70.38	70.56
Equiv. Refl.: (4,-4,12), (10,-4,7), (10,-6,-7), (-4,0,12), (-4,4,-12), (-4,10,-7), (-4,-6,7), (-6,10,7), (-6,-4,-7)									
Quartz	(0,4,12)	14.947	70.46	0.881	0.9	5.63	5.08	70.38	70.56
Equiv. Refl.: (0,-4,-12)									
Quartz	(0,9,7)	15.376	75.79	0.874	0.9	4.016	3.68	50.2	50.34
Equiv. Refl.: (0,-9,-7)									
Quartz	(9,-9,7)	15.376	75.79	0.873	0.9	4.016	3.67	50.2	50.33
Equiv. Refl.: (-9,9,-7)									
Quartz	(9,0,-7)	15.376	75.79	0.872	0.9	4.016	3.67	50.2	50.33
Equiv. Refl.: (-9,0,7)									
Quartz	(8,-8,9)	15.57	79.01	0.857	0.9	3.08	2.84	38.5	38.61
Equiv. Refl.: (-8,8,-9)									
Quartz	(8,0,-9)	15.57	79.01	0.856	0.9	3.08	2.84	38.5	38.61
Equiv. Refl.: (-8,0,9)									
Quartz	(0,8,9)	15.57	79.01	0.853	0.9	3.08	2.83	38.5	38.61
Equiv. Refl.: (0,-8,-9)									
Quartz	(4,-10,7)	15.027	71.33	0.845	0.9	5.358	4.76	66.98	67.15
Quartz	(4,6,-7)	15.027	71.33	0.844	0.9	5.358	4.75	66.98	67.15
Equiv. Refl.: (6,4,7), (6,-10,-7), (-10,4,-7), (-10,6,7)									
Quartz	(9,-3,-9)	15.502	77.78	0.84	0.9	3.434	3.2	42.93	43.05
Equiv. Refl.: (9,-6,9)									
Quartz	(-6,-3,9)	15.502	77.78	0.839	0.9	3.434	3.19	42.93	43.05
Quartz	(-3,9,9)	15.502	77.78	0.838	0.9	3.434	3.19	42.93	43.05
Equiv. Refl.: (-3,-6,-9), (-6,9,-9)									
Sapph	(2,6,23)	15.434	76.67	0.835	0.9	3.758	3.42	46.97	47.1
Equiv. Refl.: (2,-8,-23), (6,2,-23), (6,-8,23), (8,-2,-23), (8,-6,23), (-2,8,23), (-2,-6,-23), (-6,8,-23), (-6,-2,23), (-8,2,23), (-8,6,-23)									
Quartz	(5,7,-1)	15.255	74.11	0.828	0.9	4.517	3.89	56.46	56.59
Equiv. Refl.: (5,-12,1), (7,5,1), (7,-12,-1), (-12,5,-1), (-12,7,1)									
Quartz	(10,-5,8)	15.602	79.63	0.823	0.9	2.904	2.6	36.3	36.39
Quartz	(10,-5,-8)	15.602	79.63	0.822	0.9	2.904	2.6	36.3	36.39
Equiv. Refl.: (-5,10,8), (-5,-5,-8)									
Quartz	(12,-5,1)	15.255	74.11	0.821	0.9	4.517	3.89	56.46	56.59
Equiv. Refl.: (12,-7,-1), (-5,12,-1), (-5,-7,1), (-7,12,1), (-7,-5,-1)									
Quartz	(5,5,8)	15.602	79.63	0.82	0.9	2.904	2.6	36.3	36.39
Equiv. Refl.: (5,-10,-8), (-5,10,-8), (-5,-5,8), (-10,5,8), (-10,5,-8)									
Quartz	(5,5,-8)	15.602	79.63	0.817	0.9	2.904	2.59	36.3	36.39
Equiv. Refl.: (5,-10,8)									
LiNbO3	(2,2,33)	15.523	78.15	0.794	1.2	3.328	4.03	41.59	41.79
Equiv. Refl.: (2,2,-33), (2,-4,33), (2,-4,-33), (4,-2,33), (4,-2,-33), (-2,4,33), (-2,4,-33), (-2,-2,33), (-2,-2,-33), (-4,2,33), (-4,2,-33)									

Ei = Cryst	15.861 Refl (h,k,l)	keV EB [keV]	Θ B [°]	IR d Θ [μrad]	Width [μrad]	Ei cot Θ [meV/μrad]	Δ E [meV]	Δ Eg 2m, 50μm [meV]	Δ Et 2m, 50μm [meV]
LiNbO3	(2,7,-23)	15.34	75.28	0.793	1.1	4.168	4.76	52.1	52.31
Equiv. Refl.: (2,-9,23), (7,2,23), (7,-9,-23), (9,-2,23), (9,-7,-23), (-2,9,-23), (-2,-7,23), (-7,9,23), (-7,-2,-23), (-9,2,-23), (-9,7,23), (3,8,4), (3,-11,-4), (8,3,-4), (8,-11,4), (-11,3,4), (-11,8,-4)									
Quartz	(11,-3,-4)	15.065	71.77	0.787	0.8	5.223	4.28	65.28	65.42
Equiv. Refl.: (11,-8,4), (-3,11,4), (-3,-8,-4), (-8,11,-4), (-8,-3,4)									
Quartz	(12,-5,0)	15.211	73.55	0.782	0.8	4.685	3.75	58.56	58.68
Equiv. Refl.: (12,-7,0), (-5,12,0), (-5,-7,0), (-7,12,0), (-7,-5,0)									
Sapph	(5,6,-10)	15.124	72.47	0.781	0.8	5.011	4.18	62.64	62.78
Equiv. Refl.: (5,-11,10), (6,5,10), (6,-11,-10), (11,-5,10), (11,-6,-10), (-5,11,-10), (-5,-6,10), (-6,11,10), (-6,-5,-10), (-11,5,-10), (-11,6,10)									
Quartz	(8,4,-3)	15.799	84.92	0.767	0.9	1.411	1.27	17.64	17.69
Equiv. Refl.: (8,-12,3)									
Quartz	(4,8,3)	15.799	84.92	0.766	0.9	1.411	1.26	17.64	17.69
Equiv. Refl.: (4,-12,-3), (-12,8,-3)									
Quartz	(10,-6,-8)	15.67	81.09	0.765	0.8	2.487	2.07	31.09	31.15
Equiv. Refl.: (-6,-4,-8), (-12,4,3)									
Quartz	(10,-4,8)	15.67	81.09	0.764	0.8	2.487	2.07	31.09	31.15
Equiv. Refl.: (-4,10,-8), (-4,-6,8), (-6,10,8)									
Quartz	(-2,11,2)	14.964	70.64	0.749	0.8	5.575	4.24	69.68	69.81
Equiv. Refl.: (-2,-9,-2), (-9,11,-2), (-9,-2,2)									
Quartz	(5,7,0)	15.211	73.55	0.748	0.8	4.685	3.75	58.56	58.68
Equiv. Refl.: (5,-12,0), (7,5,0), (7,-12,0), (11,-2,-2), (11,-9,2), (-12,5,0), (-12,7,0)									
Quartz	(0,1,-13)	14.982	70.84	0.745	0.8	5.511	4.26	68.89	69.02
Equiv. Refl.: (0,-1,13)									
Quartz	(1,0,13)	14.982	70.84	0.744	0.8	5.511	4.26	68.89	69.02
Equiv. Refl.: (-1,0,-13)									
Quartz	(1,-1,-13)	14.982	70.84	0.743	0.8	5.511	4.25	68.89	69.02
Equiv. Refl.: (-1,1,13)									
Quartz	(1,10,-2)	15.521	78.11	0.741	0.7	3.339	2.48	41.74	41.81
Equiv. Refl.: (1,-11,2), (10,1,2), (10,-11,-2), (-11,1,-2), (-11,10,2)									
LiNbO3	(1,1,33)	14.952	70.51	0.732	1	5.614	5.65	70.17	70.4
Equiv. Refl.: (1,1,-33), (1,-2,33), (1,-2,-33), (2,-1,33), (2,-1,-33), (-1,2,33), (-1,2,-33), (-1,-1,33), (-1,-1,-33), (-2,1,33), (-2,1,-33)									
LiNbO3	(2,8,21)	15.83	86.43	0.731	1.8	0.99	1.76	12.37	12.49
Equiv. Refl.: (2,8,-21), (2,-10,21), (2,-10,-21), (8,2,21), (8,2,-21), (8,-10,21), (8,-10,-21), (10,-2,21), (10,-2,-21), (10,-8,21), (10,-8,-21), (-2,10,21), (-2,10,-21), (-2,-8,21), (-2,-8,-21), (-8,10,21), (-8,10,-21), (-8,-2,21), (-8,-2,-21), (-10,2,21), (-10,2,-21), (-10,8,21), (-10,8,-21)									
Quartz	(10,0,5)	15.658	80.82	0.728	0.8	2.562	2.1	32.03	32.1
Equiv. Refl.: (-10,0,-5)									
Quartz	(0,10,-5)	15.658	80.82	0.727	0.8	2.562	2.1	32.03	32.1
Equiv. Refl.: (0,-10,5), (10,-10,-5), (-10,10,5)									
Sapph	(5,6,11)	15.281	74.46	0.726	0.8	4.409	3.49	55.12	55.23
Equiv. Refl.: (5,-11,-11), (6,5,-11), (6,-11,11), (11,-5,-11), (11,-6,11), (-5,11,11), (-5,-6,-11), (-6,11,-11), (-6,-5,11), (-11,5,11), (-11,6,-11)									
Quartz	(3,7,7)	15.237	73.88	0.725	0.8	4.585	3.46	57.32	57.42
Equiv. Refl.: (3,-10,-7), (7,3,-7), (7,-10,7)									
Quartz	(-10,3,7)	15.237	73.88	0.724	0.8	4.585	3.46	57.32	57.42
Equiv. Refl.: (-10,7,-7)									
LiNbO3	(1,9,-17)	15.288	74.56	0.72	1.1	4.381	4.61	54.77	54.96
Equiv. Refl.: (1,-10,17), (9,1,17), (9,-10,-17), (10,-1,17), (10,-9,-17), (-1,10,-17), (-1,-9,17), (-9,10,17), (-9,-1,-17), (-10,1,-17), (-10,9,17), (8,4,-1), (8,-12,1), (-12,4,1), (-12,8,-1)									

Ei =	15.861	keV								ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m		
	(h,k,l)	[keV]	[°]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]		
Quartz	(4,8,1)	15.462	77.12	0.719	0.8	3.627	2.79	45.34	45.42		
	Equiv. Refl.: (4,-12,-1), (12,-6,3), (12,-6,-3), (-6,12,3), (-6,12,-3), (-6,-6,3), (-6,-6,-3)										
Quartz	(2,9,2)	14.964	70.64	0.715	0.8	5.575	4.24	69.68	69.81		
	Equiv. Refl.: (2,-11,-2), (9,2,-2), (9,-11,2), (-10,6,8), (-11,2,2), (-11,9,-2)										
Quartz	(4,6,-8)	15.67	81.09	0.714	0.8	2.487	2.07	31.09	31.15		
	Equiv. Refl.: (4,-10,8), (6,4,8), (6,-10,-8), (-10,4,-8)										
Quartz	(6,6,3)	15.528	78.23	0.713	0.8	3.305	2.58	41.31	41.39		
	Equiv. Refl.: (6,-12,-3)										
Quartz	(6,6,-3)	15.528	78.23	0.712	0.8	3.305	2.58	41.31	41.39		
	Equiv. Refl.: (6,-12,3), (-12,6,3), (-12,6,-3)										
Quartz	(-5,11,6)	15.509	77.91	0.711	0.8	3.397	2.59	42.46	42.54		
	Equiv. Refl.: (-5,-6,-6)										
Quartz	(11,-5,-6)	15.509	77.91	0.71	0.8	3.397	2.58	42.46	42.54		
	Equiv. Refl.: (11,-6,6), (-6,11,-6), (-6,-5,6)										
Quartz	(12,-4,-1)	15.462	77.12	0.707	0.8	3.627	2.8	45.34	45.42		
	Equiv. Refl.: (12,-8,1), (-4,12,1), (-4,-8,-1), (-8,12,-1), (-8,-4,1)										
Quartz	(-3,10,7)	15.237	73.88	0.704	0.8	4.585	3.46	57.32	57.42		
	Equiv. Refl.: (-3,-7,-7), (-7,-3,7)										
Quartz	(-7,10,-7)	15.237	73.88	0.703	0.8	4.585	3.46	57.32	57.42		
Quartz	(10,-3,-7)	15.237	73.88	0.702	0.8	4.585	3.46	57.32	57.42		
	Equiv. Refl.: (10,-7,7)										
Quartz	(0,10,3)	14.971	70.71	0.701	0.7	5.551	4.06	69.39	69.5		
	Equiv. Refl.: (0,-10,-3)										
Quartz	(10,0,-3)	14.971	70.71	0.7	0.7	5.551	4.05	69.39	69.5		
	Equiv. Refl.: (10,-10,3), (-10,0,3), (-10,10,-3)										
Quartz	(-1,5,-12)	15.298	74.69	0.69	0.7	4.342	3.17	54.28	54.37		
	Equiv. Refl.: (-4,5,12)										
Quartz	(5,-1,12)	15.298	74.69	0.689	0.7	4.342	3.17	54.28	54.37		
	Equiv. Refl.: (5,-4,-12), (-1,-4,12), (-4,-1,-12)										
Quartz	(5,6,6)	15.509	77.91	0.685	0.8	3.397	2.59	42.46	42.54		
Quartz	(5,-11,-6)	15.509	77.91	0.684	0.8	3.397	2.59	42.46	42.54		
	Equiv. Refl.: (6,5,-6), (6,-11,6)										
Quartz	(-11,5,6)	15.509	77.91	0.683	0.8	3.397	2.58	42.46	42.54		
	Equiv. Refl.: (-11,6,-6)										
Quartz	(1,-5,12)	15.298	74.69	0.679	0.7	4.342	3.17	54.28	54.37		
Quartz	(1,4,-12)	15.298	74.69	0.678	0.7	4.342	3.17	54.28	54.37		
	Equiv. Refl.: (4,1,12), (4,-5,-12), (-5,1,-12), (-5,4,12)										
Quartz	(-8,12,-3)	15.799	84.92	0.672	0.9	1.411	1.27	17.64	17.69		
	Equiv. Refl.: (-8,-4,3)										
Quartz	(12,-8,3)	15.799	84.92	0.671	0.9	1.411	1.26	17.64	17.69		
	Equiv. Refl.: (-4,12,3), (-4,-8,-3)										
Quartz	(12,-4,-3)	15.799	84.92	0.67	0.9	1.411	1.26	17.64	17.69		
LiNbO3	(2,10,-5)	15.644	80.52	0.662	1.1	2.648	3.04	33.1	33.24		
	Equiv. Refl.: (2,-12,5), (10,2,5), (10,-12,-5), (12,-2,5), (12,-10,-5), (-2,12,-5), (-2,-10,5), (-10,12,5), (-10,-2,-5), (-12,2,-5), (-12,10,5)										
Quartz	(10,-8,-6)	15.023	71.29	0.658	0.7	5.372	3.67	67.15	67.25		
Quartz	(10,-2,6)	15.023	71.29	0.657	0.7	5.372	3.67	67.15	67.25		
	Equiv. Refl.: (-2,10,-6), (-2,-8,6), (-8,10,6), (-8,-2,-6)										
Quartz	(7,4,-5)	15.176	73.1	0.647	0.7	4.819	3.23	60.24	60.32		
	Equiv. Refl.: (7,-11,5)										

Ei =	15.861	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(4,7,5)	15.176	73.1	0.646	0.7	4.819	3.22	60.24	60.32
	Equiv. Refl.: (4,-11,-5), (-11,4,5), (-11,7,-5)								
Quartz	(2,8,-6)	15.023	71.29	0.638	0.7	5.372	3.67	67.15	67.25
	Equiv. Refl.: (2,-10,6), (-10,2,-6), (-10,8,6)								
Quartz	(8,2,6)	15.023	71.29	0.637	0.7	5.372	3.66	67.15	67.25
	Equiv. Refl.: (8,-10,-6)								
Quartz	(11,-1,2)	15.521	78.11	0.618	0.7	3.339	2.48	41.74	41.81
	Equiv. Refl.: (11,-10,-2)								
Sapph	(2,2,30)	15.238	73.88	0.617	0.7	4.583	3.14	57.29	57.37
	Equiv. Refl.: (2,2,-30), (2,-4,30), (2,-4,-30), (4,-2,30), (4,-2,-30), (-2,4,30), (-2,4,-30), (-2,-2,30), (-2,-2,-30), (-4,2,30), (-4,2,-30), (-1,11,-2), (-1,-10,2), (-10,11,2), (-10,-1,-2)								
LiNbO3	(6,7,-1)	15.676	81.25	0.611	1.1	2.441	2.74	30.52	30.64
	Equiv. Refl.: (6,-13,1), (7,6,1), (7,-13,-1), (13,-6,1), (13,-7,-1), (-6,13,-1), (-6,-7,1), (-7,13,1), (-7,-6,-1), (-13,6,-1), (-13,7,1)								
Quartz	(11,-4,-5)	15.176	73.1	0.609	0.7	4.819	3.22	60.24	60.32
	Equiv. Refl.: (11,-7,5), (-4,11,5), (-7,11,-5), (-7,-4,5)								
Quartz	(-4,-7,-5)	15.176	73.1	0.608	0.7	4.819	3.22	60.24	60.32
Quartz	(4,7,6)	15.646	80.55	0.605	0.7	2.641	1.76	33.01	33.06
	Equiv. Refl.: (4,-11,-6), (7,4,-6)								
Quartz	(7,-11,6)	15.646	80.55	0.604	0.7	2.641	1.76	33.01	33.06
	Equiv. Refl.: (-11,4,6), (-11,7,-6)								
Quartz	(5,7,1)	15.255	74.11	0.603	0.6	4.517	2.92	56.46	56.53
	Equiv. Refl.: (5,-12,-1), (7,5,-1), (7,-12,1), (-12,5,1), (-12,7,-1)								
Sapph	(3,8,-11)	15.72	82.34	0.6	0.8	2.133	1.61	26.66	26.71
	Equiv. Refl.: (3,-11,11), (8,3,11), (8,-11,-11), (11,-3,11), (11,-8,-11), (-3,11,-11), (-3,-8,11), (-8,11,11), (-8,-3,-11), (-11,3,-11), (-11,8,11)								
Quartz	(12,-5,-1)	15.255	74.11	0.595	0.6	4.517	2.92	56.46	56.53
	Equiv. Refl.: (12,-7,1), (-5,12,1), (-5,-7,-1), (-7,12,-1), (-7,-5,1)								
Quartz	(3,8,5)	15.453	76.98	0.592	0.6	3.667	2.27	45.84	45.9
	Equiv. Refl.: (3,-11,-5), (8,3,-5), (8,-11,5)								
Quartz	(-11,3,5)	15.453	76.98	0.591	0.6	3.667	2.27	45.84	45.9
	Equiv. Refl.: (-11,8,-5)								
LiNbO3	(5,8,3)	15.85	87.84	0.589	2	0.597	1.18	7.46	7.55
	Equiv. Refl.: (5,8,-3), (5,-13,3), (5,-13,-3), (8,5,3), (8,5,-3), (8,-13,3), (8,-13,-3), (13,-5,3), (13,-5,-3), (13,-8,3), (13,-8,-3), (-5,13,3), (-5,13,-3), (-5,-8,3), (-5,-8,-3), (-8,13,3), (-8,13,-3), (-8,-5,3), (-8,-5,-3), (-13,5,3), (-13,5,-3), (-13,8,3), (-13,8,-3)								
LiNbO3	(2,4,-29)	14.91	70.06	0.562	0.8	5.754	4.76	71.93	72.09
	Equiv. Refl.: (2,-6,29), (4,2,29), (4,-6,-29), (6,-2,29), (6,-4,-29), (-2,6,-29), (-2,-4,29), (-4,6,29), (-4,-2,-29), (-6,2,-29), (-6,4,29)								
Quartz	(7,-1,-10)	14.928	70.25	0.544	0.6	5.695	3.24	71.18	71.26
	Equiv. Refl.: (7,-6,10), (-1,7,10), (-1,-6,-10), (-6,7,-10), (-6,-1,10)								
Sapph	(4,5,-22)	15.758	83.47	0.542	0.7	1.815	1.32	22.69	22.73
	Equiv. Refl.: (4,-9,22), (5,4,22), (5,-9,-22), (9,-4,22), (9,-5,-22), (-4,9,-22), (-4,-5,22), (-5,9,22), (-5,-4,-22), (-9,4,-22), (-9,5,-22), (11,-4,-6), (-4,11,6), (-4,-7,-6), (-7,11,-6), (-7,-4,6)								
Quartz	(11,-7,6)	15.646	80.55	0.541	0.7	2.641	1.76	33.01	33.06
Quartz	(7,0,10)	15.349	75.4	0.538	0.6	4.132	2.45	51.65	51.71
	Equiv. Refl.: (7,-7,-10), (-7,0,-10), (-7,7,10)								
Quartz	(0,7,-10)	15.349	75.4	0.535	0.6	4.132	2.44	51.65	51.71
	Equiv. Refl.: (0,-7,10)								
Quartz	(11,-3,-5)	15.453	76.98	0.523	0.6	3.667	2.27	45.84	45.9
	Equiv. Refl.: (11,-8,5), (-3,11,5), (-3,-8,-5), (-8,11,-5), (-8,-3,5)								

Ei =	15.861	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(10,-1,-5)	15.036	71.43	0.521	0.5	5.327	2.92	66.59	66.66
	Equiv. Refl.: (10,-9,5), (-1,10,5), (-1,-9,-5), (-9,10,-5), (-9,-1,5)								
LiNbO3	(2,10,1)	15.49	77.59	0.52	0.9	3.491	3.14	43.64	43.75
	Equiv. Refl.: (2,-12,-1), (10,2,-1), (10,-12,1), (12,-2,-1), (12,-10,1), (-2,12,1), (-2,-10,-1), (-10,12,-1), (-10,-2,1), (-12,2,1), (-12,10,-1), (-7,1,10)								
Quartz	(1,6,10)	14.928	70.25	0.519	0.6	5.695	3.24	71.18	71.26
	Equiv. Refl.: (1,-7,-10), (6,1,-10), (6,-7,10), (-7,6,-10)								
Sapph	(1,7,21)	15.148	72.76	0.516	0.6	4.922	2.87	61.53	61.6
	Equiv. Refl.: (1,7,-21), (1,-8,21), (1,-8,-21), (7,1,21), (7,1,-21), (7,-8,21), (7,-8,-21), (8,-1,21), (8,-1,-21), (8,-7,21), (8,-7,-21), (-1,8,21), (-1,8,-21), (-1,-7,21), (-1,-7,-21), (-7,8,21), (-7,8,-21), (-7,-1,21), (-7,-1,-21), (-8,1,21), (-8,1,-21), (-8,7,21), (-8,7,-21)								
Quartz	(-3,10,-7)	15.237	73.88	0.515	0.6	4.585	2.55	57.32	57.37
	Equiv. Refl.: (-3,-7,7), (-7,10,7), (-7,-3,-7)								
Quartz	(10,-3,7)	15.237	73.88	0.513	0.6	4.585	2.54	57.32	57.37
	Equiv. Refl.: (10,-7,-7)								
Sapph	(1,2,32)	15.783	84.33	0.505	0.7	1.574	1.12	19.68	19.71
	Equiv. Refl.: (1,-3,-32), (2,1,-32), (2,-3,32), (3,-1,-32), (3,-2,32), (-1,3,32), (-1,-2,-32), (-2,3,-32), (-2,-1,32), (-3,1,32), (-3,2,-32)								
LiNbO3	(5,6,-19)	15.752	83.29	0.502	1.1	1.867	2.05	23.34	23.43
	Equiv. Refl.: (5,-11,19), (6,5,19), (6,-11,-19), (11,-5,19), (11,-6,-19), (-5,11,-19), (-5,-6,19), (-6,11,19), (-6,-5,-19), (-11,5,-19), (-11,6,19)								
Quartz	(3,7,-7)	15.237	73.88	0.498	0.6	4.585	2.55	57.32	57.37
	Equiv. Refl.: (3,-10,7), (-2,9,9), (-2,-7,-9)								
Quartz	(7,3,7)	15.237	73.88	0.497	0.6	4.585	2.55	57.32	57.37
	Equiv. Refl.: (7,-10,-7), (9,-2,-9)								
Quartz	(9,-7,9)	15.773	83.97	0.496	0.6	1.675	1.07	20.94	20.97
	Equiv. Refl.: (-10,3,-7), (-10,7,7)								
Quartz	(-7,9,-9)	15.773	83.97	0.495	0.6	1.675	1.07	20.94	20.97
	Equiv. Refl.: (-7,-2,9)								
Quartz	(-10,1,5)	15.036	71.43	0.491	0.5	5.327	2.92	66.59	66.66
	Equiv. Refl.: (-10,9,-5)								
Quartz	(1,9,5)	15.036	71.43	0.49	0.5	5.327	2.91	66.59	66.66
	Equiv. Refl.: (1,-10,-5), (9,1,-5), (9,-10,5)								
LiNbO3	(3,4,29)	15.483	77.46	0.488	0.9	3.528	3.03	44.1	44.21
	Equiv. Refl.: (3,-7,-29), (4,3,-29), (4,-7,29), (7,-3,-29), (7,-4,29), (-3,7,29), (-3,-4,-29), (-4,7,-29), (-4,-3,29), (-7,3,29), (-7,4,-29)								
LiNbO3	(4,5,-25)	15.586	79.31	0.487	0.9	2.993	2.71	37.42	37.51
	Equiv. Refl.: (4,-9,25), (5,4,25), (5,-9,-25), (9,-4,25), (9,-5,-25), (-4,9,-25), (-4,-5,25), (-5,9,25), (-5,-4,-25), (-9,4,-25), (-9,5,25)								
Sapph	(6,6,3)	15.7	81.82	0.486	0.6	2.279	1.44	28.48	28.52
	Equiv. Refl.: (6,6,-3), (6,-12,3), (6,-12,-3), (12,-6,3), (12,-6,-3), (-6,12,3), (-6,12,-3), (-6,-6,3), (-6,-6,-3), (-12,6,3), (-12,6,-3)								
Quartz	(2,7,9)	15.773	83.97	0.485	0.6	1.675	1.08	20.94	20.97
	Equiv. Refl.: (2,-9,-9)								
Quartz	(-9,2,9)	15.773	83.97	0.484	0.6	1.675	1.08	20.94	20.97
	Equiv. Refl.: (-9,7,-9)								
Quartz	(7,2,-9)	15.773	83.97	0.483	0.6	1.675	1.07	20.94	20.97
	Equiv. Refl.: (7,-9,9)								

Ei =	15.861	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(6,6,9)	15	71.04	0.48	0.8	5.449	4.09	68.12	68.24
	Equiv. Refl.: (6,6,-9), (6,-12,9), (6,-12,-9), (12,-6,9), (12,-6,-9), (-6,12,9), (-6,12,-9), (-6,-6,9), (-6,-6,-9), (-12,6,9), (-12,6,-9)								
LiNbO3	(1,10,9)	15.192	73.31	0.467	0.8	4.757	3.63	59.46	59.57
	Equiv. Refl.: (1,10,-9), (1,-11,9), (1,-11,-9), (10,1,9), (10,1,-9), (10,-11,9), (10,-11,-9), (11,-1,9), (11,-1,-9), (11,-10,9), (11,-10,-9), (-1,11,9), (-1,11,-9), (-1,-10,9), (-1,-10,-9), (-10,11,9), (-10,11,-9), (-10,-1,9), (-10,-1,-9), (-11,1,9), (-11,1,-9), (-11,10,9), (-11,10,-9)								
Quartz	(-5,6,11)	15	71.04	0.449	0.5	5.451	2.68	68.13	68.18
	Equiv. Refl.: (-5,-1,-11)								
Quartz	(6,-1,11)	15	71.04	0.448	0.5	5.451	2.67	68.13	68.18
	Equiv. Refl.: (6,-5,-11), (-1,6,-11), (-1,-5,11)								
Quartz	(5,1,11)	15	71.04	0.447	0.5	5.451	2.68	68.13	68.18
	Equiv. Refl.: (5,-6,-11)								
Quartz	(1,5,-11)	15	71.04	0.446	0.5	5.451	2.67	68.13	68.18
	Equiv. Refl.: (1,-6,11), (-6,1,-11), (-6,5,11)								
Sapph	(0,2,-32)	15.567	78.95	0.442	0.6	3.098	1.71	38.72	38.76
	Equiv. Refl.: (0,-2,32), (2,0,32), (2,-2,-32), (-2,0,-32), (-2,2,32)								
LiNbO3	(3,9,9)	15.57	79	0.435	0.8	3.083	2.58	38.54	38.63
	Equiv. Refl.: (3,9,-9), (3,-12,9), (3,-12,-9), (9,3,9), (9,3,-9), (9,-12,9), (9,-12,-9), (12,-3,9), (12,-3,-9), (12,-9,9), (12,-9,-9), (-3,12,9), (-3,12,-9), (-3,-9,9), (-3,-9,-9), (-9,12,9), (-9,12,-9), (-9,-3,9), (-9,-3,-9), (-12,3,9), (-12,3,-9), (-12,9,9), (-12,9,-9), (0,5,28), (0,-5,-28), (5,0,-28), (5,-5,28), (-5,0,28), (-5,-5,-28)								
Sapph	(2,7,19)	15.293	74.62	0.431	0.5	4.363	2.22	54.53	54.58
	Equiv. Refl.: (2,-9,-19), (7,2,-19), (7,-9,19), (9,-2,-19), (9,-7,19), (-2,9,19), (-2,-7,-19), (-7,9,-19), (-7,-2,19), (-9,2,19), (-9,7,-19)								
Quartz	(6,6,1)	15.185	73.21	0.423	0.4	4.786	2.09	59.82	59.86
	Equiv. Refl.: (6,6,-1), (6,-12,1), (6,-12,-1)								
Quartz	(-12,6,1)	15.185	73.21	0.422	0.4	4.786	2.09	59.82	59.86
	Equiv. Refl.: (-12,6,-1)								
LiNbO3	(4,7,15)	14.993	70.96	0.402	0.7	5.473	3.64	68.41	68.51
	Equiv. Refl.: (4,7,-15), (4,-11,15), (4,-11,-15), (7,4,15), (7,4,-15), (7,-11,15), (7,-11,-15), (11,-4,15), (11,-4,-15), (11,-7,15), (11,-7,-15), (-4,11,15), (-4,11,-15), (-4,-7,15), (-4,-7,-15), (-7,11,15), (-7,11,-15), (-7,-4,15), (-7,-4,-15), (-11,4,15), (-11,4,-15), (-11,7,15), (-11,7,-15)								
Sapph	(2,6,-22)	15.098	72.16	0.396	0.5	5.106	2.37	63.82	63.87
	Equiv. Refl.: (2,-8,22), (6,2,22), (6,-8,-22), (8,-2,22), (8,-6,-22), (-2,8,-22), (-2,-6,22), (-6,8,22), (-6,-2,-22), (-8,2,-22), (-8,6,22)								
Quartz	(-6,11,5)	15.036	71.43	0.394	0.4	5.327	2.32	66.59	66.63
	Equiv. Refl.: (-6,-5,-5)								
Quartz	(11,-5,5)	15.036	71.43	0.393	0.4	5.327	2.32	66.59	66.63
	Equiv. Refl.: (11,-6,-5), (-5,11,-5), (-5,-6,5)								
Quartz	(5,6,-5)	15.036	71.43	0.384	0.4	5.327	2.32	66.59	66.63
	Equiv. Refl.: (5,-11,5), (6,5,5), (6,-11,-5), (-11,6,5)								
Quartz	(-11,5,-5)	15.036	71.43	0.383	0.4	5.327	2.32	66.59	66.63
	Equiv. Refl.: (-11,-5,-5)								
Quartz	(11,-1,0)	15.35	75.42	0.375	0.4	4.125	1.71	51.57	51.59
	Equiv. Refl.: (11,-10,0), (-1,11,0), (-1,-10,0), (-10,11,0), (-10,-1,0)								
Quartz	(2,3,-12)	15.159	72.89	0.37	0.4	4.884	2.06	61.04	61.08
	Equiv. Refl.: (2,-5,12), (3,-5,-12), (-2,5,-12), (-2,-3,12), (-7,1,-10), (-7,6,10)								
Quartz	(1,6,-10)	14.928	70.25	0.369	0.4	5.695	2.16	71.18	71.21
	Equiv. Refl.: (1,-7,10), (3,2,12), (6,1,10), (6,-7,-10), (-3,5,12), (-3,-2,-12)								
Quartz	(5,-2,12)	15.159	72.89	0.368	0.4	4.884	2.05	61.04	61.08
	Equiv. Refl.: (5,-3,-12), (-5,2,-12), (-5,3,12)								

Ei =	15.861	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(8,1,8)	15.465	77.17	0.362	0.4	3.612	1.47	45.15	45.18
	Equiv. Refl.: (8,-9,-8), (-9,1,-8), (-9,8,8)								
Quartz	(1,8,-8)	15.465	77.17	0.361	0.4	3.612	1.46	45.15	45.18
	Equiv. Refl.: (1,-9,8)								
LiNbO3	(5,7,13)	15.638	80.38	0.354	0.8	2.689	2.08	33.62	33.68
	Equiv. Refl.: (5,-12,-13), (7,5,-13), (7,-12,13), (12,-5,-13), (12,-7,13), (-5,12,13), (-5,-7,-13), (-7,12,-13), (-7,-5,13), (-12,5,13), (-12,7,-13), (4,7,9), (4,7,-9), (4,-11,9), (4,-11,-9), (7,4,9), (7,4,-9), (7,-11,9), (7,-11,-9), (11,-4,9), (11,-4,-9), (11,-7,9), (11,-7,-9), (-4,11,9), (-4,11,-9), (-4,-7,9), (-4,-7,-9), (-7,11,9), (-7,11,-9), (-7,-4,9), (-7,-4,-9), (-11,4,9), (-11,4,-9), (-11,7,9), (-11,7,-9)								
Quartz	(12,-6,1)	15.185	73.21	0.349	0.4	4.786	2.09	59.82	59.86
	Equiv. Refl.: (12,-6,-1), (-6,12,1), (-6,12,-1), (-6,-6,1), (-6,-6,-1)								
Sapph	(2,3,29)	15.316	74.94	0.348	0.4	4.268	1.83	53.35	53.38
	Equiv. Refl.: (2,-5,-29), (3,2,-29), (3,-5,29), (5,-2,-29), (5,-3,29), (-2,5,29), (-2,-3,-29), (-3,5,-29), (-3,-2,29), (-5,2,29), (-5,3,-29)								
Sapph	(3,5,-23)	15.212	73.56	0.347	0.4	4.682	1.98	58.52	58.55
	Equiv. Refl.: (3,-8,23), (5,3,23), (5,-8,-23), (8,-3,23), (8,-5,-23), (-3,8,-23), (-3,-5,23), (-5,8,23), (-5,-3,-23), (-8,3,-23), (-8,5,23)								
Quartz	(2,8,6)	15.023	71.29	0.346	0.4	5.372	2.04	67.15	67.19
	Equiv. Refl.: (2,-10,-6), (8,2,-6), (8,-10,6)								
Quartz	(-10,2,6)	15.023	71.29	0.345	0.4	5.372	2.04	67.15	67.19
	Equiv. Refl.: (-10,8,-6)								
Sapph	(1,3,31)	15.759	83.5	0.343	0.5	1.808	0.94	22.6	22.62
	Equiv. Refl.: (1,-4,-31), (3,1,-31), (3,-4,31), (4,-1,-31), (4,-3,31), (-1,4,31), (-1,-3,-31), (-3,4,-31), (-3,-1,31), (-4,1,31), (-4,3,-31)								
Quartz	(5,0,12)	15.573	79.07	0.334	0.4	3.063	1.28	38.29	38.31
	Equiv. Refl.: (-5,0,-12)								
Quartz	(5,-5,-12)	15.573	79.07	0.333	0.4	3.063	1.28	38.29	38.31
	Equiv. Refl.: (-5,5,12)								
Quartz	(1,10,0)	15.35	75.42	0.332	0.4	4.125	1.71	51.57	51.59
	Equiv. Refl.: (1,-11,0), (10,1,0), (10,-11,0), (-11,1,0), (-11,10,0)								
Quartz	(0,5,-12)	15.573	79.07	0.331	0.4	3.063	1.27	38.29	38.31
	Equiv. Refl.: (0,-5,12)								
Quartz	(0,10,4)	15.275	74.38	0.323	0.4	4.435	1.69	55.43	55.46
	Equiv. Refl.: (0,-10,-4), (10,0,-4), (10,-10,4), (-10,0,4), (-10,10,-4)								
Quartz	(5,-2,-12)	15.159	72.89	0.318	0.4	4.884	1.78	61.04	61.07
	Equiv. Refl.: (5,-3,12), (10,-1,5), (10,-9,-5), (-1,10,-5), (-1,-9,5), (-8,10,-6), (-8,-2,6), (-9,10,5), (-9,-1,-5)								
Quartz	(10,-2,-6)	15.023	71.29	0.317	0.4	5.372	2.04	67.15	67.19
	Equiv. Refl.: (10,-8,6), (-2,10,6), (-2,-8,-6)								
Quartz	(-2,-3,-12)	15.159	72.89	0.316	0.4	4.884	1.77	61.04	61.07
	Equiv. Refl.: (-3,5,-12), (-3,-2,12)								
LiNbO3	(2,9,-13)	15.262	74.21	0.315	0.6	4.486	2.7	56.07	56.14
	Equiv. Refl.: (2,-11,13), (9,2,13), (9,-11,-13), (11,-2,13), (11,-9,-13), (-2,11,-13), (-2,-9,13), (-9,11,13), (-9,-2,-13), (-11,2,-13), (-11,9,13), (-2,5,12)								
Sapph	(5,5,18)	15.606	79.72	0.312	0.4	2.877	1.23	35.97	35.99
	Equiv. Refl.: (5,5,-18), (5,-10,18), (5,-10,-18), (10,-5,18), (10,-5,-18), (-5,10,18), (-5,10,-18), (-5,-5,18), (-5,-5,-18), (-10,5,18), (-10,5,-18)								
Sapph	(3,8,7)	15.189	73.26	0.31	0.4	4.771	1.83	59.63	59.66
	Equiv. Refl.: (3,-11,-7), (8,3,-7), (8,-11,7), (11,-3,-7), (11,-8,7), (-3,11,7), (-3,-8,-7), (-8,11,-7), (-8,-3,7), (-11,3,7), (-11,8,-7)								
Quartz	(9,2,4)	15.482	77.45	0.309	0.4	3.53	1.31	44.12	44.14
	Equiv. Refl.: (9,-1,8), (9,-8,-8), (9,-11,-4)								

Ei =	15.861	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(2,9,-4)	15.482	77.45	0.308	0.4	3.53	1.31	44.12	44.14
	Equiv. Refl.: (2,-11,4), (-1,-8,8), (-8,9,8), (-8,-1,-8), (-11,2,-4), (-11,9,4)								
Quartz	(-1,9,-8)	15.465	77.17	0.307	0.4	3.612	1.46	45.15	45.18
Sapph	(2,8,15)	15.536	78.38	0.306	0.4	3.26	1.34	40.75	40.78
	Equiv. Refl.: (2,8,-15), (2,-10,15), (2,-10,-15), (8,2,15), (8,2,-15), (8,-10,15), (8,-10,-15), (10,-2,15), (10,-2,-15), (10,-8,15), (10,-8,-15), (-2,10,15), (-2,10,-15), (-2,-8,15), (-2,-8,-15), (-8,10,15), (-8,10,-15), (-8,-2,15), (-8,-2,-15), (-10,2,15), (-10,2,-15), (-10,8,15), (-10,8,-15)								
Quartz	(-5,2,12)	15.159	72.89	0.304	0.4	4.884	1.78	61.04	61.07
	Equiv. Refl.: (-5,3,-12)								
LiNbO3	(4,5,23)	14.957	70.57	0.302	0.5	5.596	3.07	69.95	70.02
	Equiv. Refl.: (4,-9,-23), (5,4,-23), (5,-9,23), (9,-4,-23), (9,-5,23), (-4,9,23), (-4,-5,-23), (-5,9,-23), (-5,-4,23), (-9,4,23), (-9,5,-23), (2,3,12), (3,2,-12), (3,-5,12), (7,-1,10)								
Quartz	(2,-5,-12)	15.159	72.89	0.301	0.4	4.884	1.77	61.04	61.07
	Equiv. Refl.: (7,-6,-10)								
Quartz	(-1,7,-10)	14.928	70.25	0.3	0.4	5.695	2.15	71.18	71.21
	Equiv. Refl.: (-1,-6,10), (-6,7,10), (-6,-1,-10)								
LiNbO3	(3,9,3)	15.1	72.18	0.294	0.6	5.098	2.82	63.73	63.79
	Equiv. Refl.: (3,9,-3), (3,-12,3), (3,-12,-3), (9,3,3), (9,3,-3), (9,-12,3), (9,-12,-3), (12,-3,3), (12,-3,-3), (12,-9,3), (12,-9,-3), (-3,12,3), (-3,12,-3), (-3,-9,3), (-3,-9,-3), (-9,12,3), (-9,12,-3), (-9,-3,3), (-9,-3,-3), (-12,3,3), (-12,3,-3), (-12,9,3), (-12,9,-3)								
Quartz	(0,3,13)	15.539	78.43	0.293	0.4	3.247	1.2	40.59	40.61
	Equiv. Refl.: (0,-3,-13), (3,0,-13), (3,-3,13), (-3,0,13), (-3,3,-13)								
Quartz	(-4,8,10)	15.279	74.44	0.291	0.3	4.418	1.41	55.22	55.24
	Equiv. Refl.: (-4,8,-10), (-4,-4,10), (-4,-4,-10)								
Quartz	(8,-4,10)	15.279	74.44	0.29	0.3	4.418	1.41	55.22	55.24
	Equiv. Refl.: (8,-4,-10)								
Quartz	(-9,11,4)	15.482	77.45	0.287	0.4	3.53	1.31	44.12	44.14
	Equiv. Refl.: (-9,-2,-4)								
Sapph	(3,8,-5)	15.008	71.12	0.286	0.4	5.424	1.91	67.8	67.82
	Equiv. Refl.: (3,-11,5), (8,3,5), (8,-11,-5), (11,-3,5), (11,-8,-5), (-3,11,-5), (-3,-8,5), (-8,11,5), (-8,-3,-5), (-11,3,-5), (-11,8,5), (11,-2,4), (11,-9,-4), (-2,11,-4), (-2,-9,4)								
Quartz	(1,9,-5)	15.036	71.43	0.285	0.4	5.327	1.87	66.59	66.62
	Equiv. Refl.: (1,-10,5), (-10,1,-5), (-10,9,5)								
Quartz	(9,1,5)	15.036	71.43	0.284	0.4	5.327	1.87	66.59	66.62
	Equiv. Refl.: (9,-10,-5)								
Quartz	(0,6,11)	15.35	75.41	0.281	0.3	4.128	1.42	51.59	51.61
	Equiv. Refl.: (0,-6,-11), (-6,0,11)								
Quartz	(6,0,-11)	15.35	75.41	0.28	0.3	4.128	1.42	51.59	51.61
	Equiv. Refl.: (6,-6,11), (-6,6,-11)								
Sapph	(1,2,-31)	15.322	75.02	0.273	0.4	4.244	1.51	53.05	53.07
	Equiv. Refl.: (1,6,25), (1,-3,31), (1,-7,-25), (2,1,31), (2,-3,-31), (3,-1,31), (3,-2,-31), (6,1,-25), (6,-7,25), (7,-1,-25), (7,-6,25), (-1,3,-31), (-1,7,25), (-1,-2,31), (-1,-6,-25), (-2,3,31), (-2,-1,-31), (-3,1,-31), (-3,2,31), (-6,7,-25), (-6,-1,25), (-7,1,25), (-7,6,-25)								
LiNbO3	(2,9,11)	14.945	70.43	0.27	0.5	5.639	2.88	70.49	70.55
	Equiv. Refl.: (2,-11,-11), (9,2,-11), (9,-11,11), (11,-2,-11), (11,-9,11), (-2,11,11), (-2,-9,-11), (-9,11,-11), (-9,-2,11), (-11,2,11), (-11,9,-11)								
Quartz	(-1,0,13)	14.982	70.84	0.263	0.3	5.511	1.72	68.89	68.91
Quartz	(1,0,-13)	14.982	70.84	0.262	0.3	5.511	1.72	68.89	68.91
	Equiv. Refl.: (1,-1,13), (-1,1,-13)								

Ei = Cryst	15.861 Refl (h,k,l)	keV EB [keV]	Θ_B [°]	$\int IR d\Theta$ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	ΔE [meV]	ΔE_g 2m, 50 μ m [meV]	ΔE_t 2m, 50 μ m [meV]
Quartz	(0,1,13)	14.982	70.84	0.261	0.3	5.511	1.71	68.89	68.91
	Equiv. Refl.: (0,-1,-13)								
LiNbO3	(1,5,29)	15.103	72.22	0.26	0.5	5.087	2.61	63.58	63.64
	Equiv. Refl.: (1,-6,-29), (5,1,-29), (5,-6,29), (6,-1,-29), (6,-5,29), (-1,6,29), (-1,-5,-29), (-5,6,-29), (-5,-1,29), (-6,1,29), (-6,5,-29)								
Quartz	(-5,10,7)	14.956	70.55	0.258	0.3	5.601	1.71	70.01	70.03
	Equiv. Refl.: (-5,-5,-7)								
Quartz	(10,-5,7)	14.956	70.55	0.257	0.3	5.601	1.71	70.01	70.03
	Equiv. Refl.: (10,-5,-7), (-5,10,-7), (-5,-5,7)								
Quartz	(5,5,7)	14.956	70.55	0.256	0.3	5.601	1.71	70.01	70.03
	Equiv. Refl.: (5,5,-7), (5,-10,7), (5,-10,-7), (-10,5,7), (-10,5,-7)								
Quartz	(1,10,-1)	15.393	76.05	0.247	0.3	3.94	1.2	49.25	49.27
	Equiv. Refl.: (1,-11,1), (10,1,1), (10,-11,-1), (-11,1,-1), (-11,10,1)								
Quartz	(-1,6,11)	15	71.04	0.246	0.3	5.451	1.56	68.13	68.15
	Equiv. Refl.: (-1,-5,-11)								
Quartz	(6,-1,-11)	15	71.04	0.245	0.3	5.451	1.56	68.13	68.15
	Equiv. Refl.: (6,-5,11), (-5,6,-11), (-5,-1,11)								
LiNbO3	(5,7,-11)	15.328	75.1	0.243	0.5	4.22	2.21	52.75	52.79
	Equiv. Refl.: (5,-12,11), (7,5,11), (7,-12,-11), (12,-5,11), (12,-7,-11), (-5,12,-11), (-5,-7,11), (-7,12,11), (-7,-5,-11), (-12,5,-11), (-12,7,11)								
Sapph	(4,7,12)	15.598	79.55	0.241	0.4	2.926	1.04	36.58	36.59
	Equiv. Refl.: (4,7,-12), (4,-11,12), (4,-11,-12), (7,4,12), (7,4,-12), (7,-11,12), (7,-11,-12), (11,-4,12), (11,-4,-12), (11,-7,12), (11,-7,-12), (-4,11,12), (-4,11,-12), (-4,-7,12), (-4,-7,-12), (-7,11,12), (-7,11,-12), (-7,-4,12), (-7,-4,-12), (-11,4,12), (-11,4,-12), (-11,7,12), (-11,7,-12)								
LiNbO3	(5,6,17)	15.288	74.56	0.239	0.5	4.381	2.24	54.77	54.81
	Equiv. Refl.: (5,-11,-17), (6,5,-17), (6,-11,17), (11,-5,-17), (11,-6,17), (-5,11,17), (-5,-6,-17), (-6,11,-17), (-6,-5,17), (-11,5,17), (-11,6,-17)								
LiNbO3	(3,7,-19)	14.998	71.01	0.232	0.5	5.459	2.56	68.23	68.28
	Equiv. Refl.: (3,-10,19), (7,3,19), (7,-10,-19), (10,-3,19), (10,-7,-19), (-3,10,-19), (-3,-7,19), (-7,10,19), (-7,-3,-19), (-10,3,-19), (-10,7,19), (4,4,10), (4,-8,-10)								
Quartz	(4,4,-10)	15.279	74.44	0.231	0.3	4.418	1.41	55.22	55.24
	Equiv. Refl.: (4,-8,10), (-8,4,10)								
Quartz	(-8,4,-10)	15.279	74.44	0.23	0.3	4.418	1.41	55.22	55.24
Quartz	(5,4,-9)	15.364	75.62	0.229	0.3	4.066	1.16	50.82	50.84
	Equiv. Refl.: (5,-9,9)								
Quartz	(1,5,11)	15	71.04	0.228	0.3	5.451	1.57	68.13	68.15
	Equiv. Refl.: (1,-6,-11), (4,5,9), (4,-9,-9)								
Quartz	(5,1,-11)	15	71.04	0.227	0.3	5.451	1.56	68.13	68.15
	Equiv. Refl.: (5,-6,11), (11,-1,1), (11,-10,-1), (-1,11,-1), (-1,-10,1), (-6,1,11), (-6,5,-11), (-9,4,9), (-9,5,-9)								
Quartz	(-10,11,1)	15.393	76.05	0.226	0.3	3.94	1.2	49.25	49.27
	Equiv. Refl.: (-10,-1,-1)								
Quartz	(2,9,-3)	15.182	73.17	0.218	0.3	4.797	1.31	59.96	59.97
	Equiv. Refl.: (2,-11,3), (9,2,3), (9,-11,-3), (-11,2,-3), (-11,9,3)								
Quartz	(11,-2,3)	15.182	73.17	0.214	0.3	4.797	1.31	59.96	59.97
	Equiv. Refl.: (11,-9,-3), (-2,11,-3), (-2,-9,3), (-9,11,3), (-9,-2,-3)								
Quartz	(-5,9,-9)	15.364	75.62	0.208	0.3	4.066	1.16	50.82	50.84
	Equiv. Refl.: (-5,-4,9)								
Quartz	(-4,9,9)	15.364	75.62	0.207	0.3	4.066	1.15	50.82	50.84
Quartz	(9,-4,-9)	15.364	75.62	0.206	0.3	4.066	1.15	50.82	50.84
	Equiv. Refl.: (9,-5,9), (-4,-5,-9)								

Ei = Cryst	15.861 Refl (h,k,l)	keV EB [keV]	Θ B [$^\circ$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(4,8,0)	15.419	76.45	0.203	0.3	3.824	0.97	47.79	47.8
	Equiv. Refl.: (4,-12,0), (8,4,0), (8,-12,0), (-12,4,0), (-12,8,0)								
Quartz	(0,9,-7)	15.376	75.79	0.201	0.3	4.016	1.07	50.2	50.21
	Equiv. Refl.: (0,-9,7)								
Quartz	(9,0,7)	15.376	75.79	0.199	0.3	4.016	1.07	50.2	50.21
	Equiv. Refl.: (9,-9,-7), (-9,0,-7), (-9,9,7)								
Quartz	(-2,3,-13)	15.401	76.17	0.195	0.3	3.903	0.99	48.79	48.8
	Equiv. Refl.: (-2,-1,13)								
Quartz	(3,-1,-13)	15.401	76.17	0.194	0.3	3.903	0.98	48.79	48.8
	Equiv. Refl.: (3,-2,13)								
Quartz	(-1,3,13)	15.401	76.17	0.193	0.3	3.903	0.98	48.79	48.8
	Equiv. Refl.: (-1,-2,-13)								
Quartz	(10,-4,-7)	15.027	71.33	0.192	0.2	5.358	1.28	66.98	66.99
	Equiv. Refl.: (10,-6,7), (-6,10,-7), (-6,-4,7)								
Quartz	(-4,-6,-7)	15.027	71.33	0.191	0.2	5.358	1.28	66.98	66.99
Quartz	(-4,10,7)	15.027	71.33	0.19	0.2	5.358	1.28	66.98	66.99
Quartz	(6,4,-7)	15.027	71.33	0.184	0.2	5.358	1.28	66.98	66.99
	Equiv. Refl.: (-10,4,7), (-10,6,-7)								
Quartz	(6,-10,7)	15.027	71.33	0.183	0.2	5.358	1.28	66.98	66.99
Quartz	(4,6,7)	15.027	71.33	0.182	0.2	5.358	1.28	66.98	66.99
	Equiv. Refl.: (4,-10,-7)								
Sapph	(1,9,13)	15.635	80.32	0.18	0.3	2.706	0.8	33.82	33.83
	Equiv. Refl.: (1,-10,-13), (9,1,-13), (9,-10,13), (10,-1,-13), (10,-9,13), (-1,10,13), (-1,-9,-13), (-9,10,-13), (-9,-1,13), (-10,1,13), (-10,9,-13)								
Sapph	(3,8,-8)	15.301	74.73	0.176	0.3	4.331	1.11	54.13	54.14
	Equiv. Refl.: (3,-11,8), (8,3,8), (8,-11,-8), (11,-3,8), (11,-8,-8), (-3,11,-8), (-3,-8,8), (-8,11,8), (-8,-3,-8), (-11,3,-8), (-11,8,8), (2,1,-13), (2,-3,13)								
Quartz	(-3,1,13)	15.401	76.17	0.175	0.3	3.903	0.98	48.79	48.8
	Equiv. Refl.: (-3,2,-13)								
Quartz	(1,2,13)	15.401	76.17	0.173	0.3	3.903	0.98	48.79	48.8
	Equiv. Refl.: (1,-3,-13)								
Quartz	(12,-4,0)	15.419	76.45	0.167	0.3	3.824	0.97	47.79	47.8
	Equiv. Refl.: (12,-8,0), (-4,12,0), (-4,-8,0), (-8,12,0), (-8,-4,0)								
Sapph	(4,6,16)	15.177	73.11	0.147	0.2	4.817	1.05	60.21	60.22
	Equiv. Refl.: (4,-10,-16), (6,4,-16), (6,-10,16), (10,-4,-16), (10,-6,16), (-4,10,16), (-4,-6,-16), (-6,10,-16), (-6,-4,16), (-10,4,16), (-10,6,-16), (3,5,10), (3,-8,-10), (-8,3,10)								
Quartz	(-8,5,-10)	15.349	75.4	0.146	0.2	4.132	0.86	51.65	51.66
Quartz	(5,3,-10)	15.349	75.4	0.145	0.2	4.132	0.86	51.65	51.66
	Equiv. Refl.: (5,-8,10)								
Quartz	(-3,8,10)	15.349	75.4	0.144	0.2	4.132	0.86	51.65	51.66
	Equiv. Refl.: (-3,-5,-10)								
Sapph	(2,9,2)	15.298	74.69	0.143	0.2	4.342	0.96	54.28	54.29
	Equiv. Refl.: (2,-11,-2), (9,2,-2), (9,-11,2), (11,-2,-2), (11,-9,2), (-2,11,2), (-2,-9,-2), (-9,11,-2), (-9,-2,2), (-11,2,2), (-11,9,-2), (8,-3,-10), (8,-5,10)								
Quartz	(-5,8,-10)	15.349	75.4	0.142	0.2	4.132	0.85	51.65	51.66
	Equiv. Refl.: (-5,-3,10)								
LiNbO3	(2,6,-25)	15.017	71.23	0.141	0.4	5.391	1.89	67.39	67.41
	Equiv. Refl.: (2,-8,25), (6,2,25), (6,-8,-25), (8,-2,25), (8,-6,-25), (-2,8,-25), (-2,-6,25), (-6,8,25), (-6,-2,-25), (-8,2,-25), (-8,6,25), (-11,3,-4)								
Quartz	(3,8,-4)	15.065	71.77	0.14	0.2	5.223	0.9	65.28	65.29
	Equiv. Refl.: (3,-11,4), (8,3,4), (8,-11,-4), (-11,8,4)								
LiNbO3	(3,8,-17)	15.663	80.94	0.132	0.5	2.529	1.16	31.61	31.63

										Equiv. Refl.: (3,-11,17), (8,3,17), (8,-11,-17), (11,-3,17), (11,-8,-17), (-3,11,-17), (-3,-8,17), (-8,11,17), (-8,-3,-17) (-11,3,-17), (-11,8,17)
Sapph	(3,7,14)	14.948	70.47	0.13	0.2	5.627	1.08	70.34	70.34	Equiv. Refl.: (3,-10,-14), (7,3,-14), (7,-10,14), (10,-3,-14), (10,-7,14), (-3,10,14), (-3,-7,-14), (-7,10,-14), (-7,-3,14) (-10,3,14), (-10,7,-14)
LiNbO3	(1,8,23)	15.714	82.19	0.129	0.5	2.176	1.06	27.2	27.22	Equiv. Refl.: (1,-9,-23), (8,1,-23), (8,-9,23), (9,-1,-23), (9,-8,23), (-1,9,23), (-1,-8,-23), (-8,9,-23), (-8,-1,23) (-9,1,23), (-9,8,-23)
Sapph	(1,9,-11)	15.281	74.46	0.122	0.2	4.409	0.87	55.12	55.12	Equiv. Refl.: (1,-10,11), (9,1,11), (9,-10,-11), (10,-1,11), (10,-9,-11), (-1,10,-11), (-1,-9,11), (-9,10,11), (-9,-1,-11) (-10,1,-11), (-10,9,11)
Sapph	(3,6,21)	15.59	79.39	0.11	0.2	2.97	0.62	37.12	37.13	Equiv. Refl.: (3,6,-21), (3,-9,21), (3,-9,-21), (6,3,21), (6,3,-21), (6,-9,21), (6,-9,-21), (9,-3,21), (9,-3,-21) (9,-6,21), (9,-6,-21), (-3,9,21), (-3,9,-21), (-3,-6,21), (-3,-6,-21), (-6,9,21), (-6,9,-21), (-6,-3,21) (-6,-3,-21), (-9,3,21), (-9,3,-21), (-9,6,21), (-9,6,-21)
Quartz	(11,-3,4)	15.065	71.77	0.105	0.2	5.223	0.91	65.28	65.29	Equiv. Refl.: (11,-8,-4), (-3,11,-4), (-3,-8,4), (-8,11,4), (-8,-3,-4)
LiNbO3	(2,3,-31)	15.13	72.53	0.095	0.3	4.991	1.45	62.39	62.41	Equiv. Refl.: (2,-5,31), (3,2,31), (3,-5,-31), (5,-2,31), (5,-3,-31), (-2,5,-31), (-2,-3,31), (-3,5,31), (-3,-2,-31) (-5,2,-31), (-5,3,31)
Sapph	(3,7,-16)	15.399	76.13	0.07	0.1	3.916	0.55	48.95	48.95	Equiv. Refl.: (3,-10,16), (7,3,16), (7,-10,-16), (10,-3,16), (10,-7,-16), (-3,10,-16), (-3,-7,16), (-7,10,16), (-7,-3,-16) (-10,3,-16), (-10,7,16)
Sapph	(2,8,12)	14.93	70.28	0.061	0.1	5.686	0.67	71.08	71.08	Equiv. Refl.: (2,8,-12), (2,-10,12), (2,-10,-12), (8,2,12), (8,2,-12), (8,-10,12), (8,-10,-12), (10,-2,12), (10,-2,-12) (10,-8,12), (10,-8,-12), (-2,10,12), (-2,10,-12), (-2,-8,12), (-2,-8,-12), (-8,10,12), (-8,10,-12), (-8,-2,12) (-8,-2,-12), (-10,2,12), (-10,2,-12), (-10,8,12), (-10,8,-12)
Sapph	(3,4,-25)	15.037	71.45	0.055	0.1	5.321	0.6	66.51	66.52	Equiv. Refl.: (3,-7,25), (4,3,25), (4,-7,-25), (7,-3,25), (7,-4,-25), (-3,7,-25), (-3,-4,25), (-4,7,25), (-4,-3,-25) (-7,3,-25), (-7,4,25)
Sapph	(4,6,-17)	15.422	76.49	0.053	0.1	3.81	0.47	47.63	47.63	Equiv. Refl.: (4,-10,17), (6,4,17), (6,-10,-17), (10,-4,17), (10,-6,-17), (-4,10,-17), (-4,-6,17), (-6,10,17), (-6,-4,-17) (-10,4,-17), (-10,6,17)
LiNbO3	(4,8,-13)	15.822	85.99	0.037	0.4	1.112	0.42	13.9	13.9	Equiv. Refl.: (4,-12,13), (8,4,13), (8,-12,-13), (12,-4,13), (12,-8,-13), (-4,12,-13), (-4,-8,13), (-8,12,13), (-8,-4,-13) (-12,4,-13), (-12,8,13)
LiNbO3	(4,8,11)	15.516	78.03	0.013	0.1	3.364	0.45	42.05	42.05	Equiv. Refl.: (4,-12,-11), (8,4,-11), (8,-12,11), (12,-4,-11), (12,-8,11), (-4,12,11), (-4,-8,-11), (-8,12,-11), (-8,-4,11) (-12,4,11), (-12,8,-11)
LiNbO3	(4,8,-7)	15.045	71.54	0.01	0.1	5.295	0.49	66.19	66.19	Equiv. Refl.: (4,-12,7), (8,4,7), (8,-12,-7), (12,-4,7), (12,-8,-7), (-4,12,-7), (-4,-8,7), (-8,12,7), (-8,-4,-7) (-12,4,-7), (-12,8,7)
LiNbO3	(4,4,27)	15.446	76.87	0.009	0.1	3.701	0.39	46.26	46.26	Equiv. Refl.: (4,4,-27), (4,-8,27), (4,-8,-27), (8,-4,27), (8,-4,-27), (-4,8,27), (-4,8,-27), (-4,-4,27), (-4,-4,-27) (-8,4,27), (-8,4,-27)
LiNbO3	(5,5,21)	15.271	74.32	0.005	0.1	4.453	0.34	55.66	55.66	Equiv. Refl.: (5,5,-21), (5,-10,21), (5,-10,-21), (10,-5,21), (10,-5,-21), (-5,10,21), (-5,10,-21), (-5,-5,21), (-5,-5,-21) (-10,5,21), (-10,5,-21)

Ei = Cryst	15.2 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Ge	(8,8,8)	15.184	87.34	6.9345	16.35	0.7073	11.56	8.84	14.56
Si	(4,4,12)	15.143	85.04	4.4005	3.81	1.3204	5.03	16.5	17.25
	Equiv. Refl.: (4,12,4), (12,4,4)								
Ge	(2,6,12)	14.864	77.93	1.718	3.91	3.2507	12.72	40.63	42.58
	Equiv. Refl.: (2,12,6), (6,2,12), (6,12,2), (12,2,6), (12,6,2)								
Si	(2,8,10)	14.795	76.74	1.4662	1.57	3.5817	5.61	44.77	45.12
	Equiv. Refl.: (2,10,8), (8,2,10), (8,10,2), (10,2,8), (10,8,2)								
Ge	(4,4,12)	14.537	73.02	1.3735	3.02	4.6421	14.04	58.03	59.7
	Equiv. Refl.: (4,12,4), (12,4,4)								
Si	(0,4,12)	14.438	71.78	1.1845	1.25	5.0022	6.28	62.53	62.84
	Equiv. Refl.: (0,12,4), (4,0,12), (4,12,0), (12,0,4), (12,4,0)								
Si	(1,1,13)	14.926	79.11	1.1551	1.3	2.924	3.8	36.55	36.75
	Equiv. Refl.: (1,7,11), (1,11,7), (1,13,1), (3,9,9), (5,5,11), (5,11,5), (7,1,11), (7,11,1), (9,3,9), (9,9,3), (11,1,7), (11,5,5), (11,7,1), (13,1,1)								
Ge	(3,3,13)	14.985	80.34	1.0956	3.35	2.5867	8.68	32.33	33.48
	Equiv. Refl.: (3,13,3), (5,9,9), (9,5,9), (9,9,5), (13,3,3)								
Si	(1,9,9)	14.573	73.49	0.8467	0.94	4.5065	4.25	56.33	56.49
	Equiv. Refl.: (9,1,9), (9,9,1)								
Ge	(1,3,13)	14.661	74.69	0.7836	2.3	4.1613	9.56	52.02	52.89
	Equiv. Refl.: (1,13,3), (3,1,13), (3,7,11), (3,11,7), (3,13,1), (7,3,11), (7,7,9), (7,9,7), (7,11,3), (9,7,7), (11,3,7), (11,7,3), (13,1,3), (13,3,1)								
Ge	(1,1,13)	14.329	70.51	0.6996	1.97	5.3791	10.57	67.24	68.07
	Equiv. Refl.: (1,7,11), (1,11,7), (1,13,1), (3,9,9), (5,5,11), (5,11,5), (7,1,11), (7,11,1), (9,3,9), (9,9,3), (11,1,7), (11,5,5), (11,7,1), (13,1,1)								
LiNbO3	(7,5,-10)	15.19	87.95	28.99	26	0.545	14.18	6.81	15.73
	Equiv. Refl.: (-5,-7,-10), (-7,12,-10), (-12,7,-10)								
LiNbO3	(5,-12,-10)	15.19	87.95	28.989	26	0.545	14.18	6.81	15.73
	Equiv. Refl.: (12,-5,-10)								
LiNbO3	(5,7,10)	15.19	87.95	26.873	26	0.545	14.18	6.81	15.73
	Equiv. Refl.: (7,-12,10), (12,-7,10), (-7,-5,10)								
LiNbO3	(-5,12,10)	15.19	87.95	26.872	26	0.545	14.18	6.81	15.73
	Equiv. Refl.: (-12,5,10)								
LiNbO3	(3,-8,26)	15.163	86	20.852	18.4	1.062	19.56	13.28	23.64
	Equiv. Refl.: (5,3,26), (8,-3,26), (-3,-5,26), (-5,8,26), (-8,5,26)								
LiNbO3	(3,5,-26)	15.163	86	20.595	18.4	1.062	19.56	13.28	23.64
	Equiv. Refl.: (5,-8,-26), (8,-5,-26), (-3,8,-26), (-5,-3,-26), (-8,3,-26)								
LiNbO3	(1,3,-32)	15.162	85.97	17.505	15.7	1.07	16.77	13.37	21.45
	Equiv. Refl.: (-1,4,-32), (-3,-1,-32), (-4,1,-32)								
LiNbO3	(3,-4,-32)	15.162	85.97	17.504	15.7	1.07	16.76	13.37	21.45
	Equiv. Refl.: (4,-3,-32)								
LiNbO3	(1,-4,32)	15.162	85.97	17.017	15.7	1.07	16.77	13.37	21.45
	Equiv. Refl.: (3,1,32), (4,-1,32), (-1,-3,32)								
LiNbO3	(-3,4,32)	15.162	85.97	17.016	15.7	1.07	16.76	13.37	21.45
	Equiv. Refl.: (-4,3,32)								
LiNbO3	(0,7,26)	15.163	86	14.172	12.9	1.062	13.74	13.28	19.11
	Equiv. Refl.: (7,-7,26), (-7,0,26)								
LiNbO3	(-7,7,-26)	15.163	86	13.438	12.9	1.062	13.74	13.28	19.11

Ei = Cryst	15.2 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
LiNbO3	(0,-7,-26)	15.163	86	13.437	12.9	1.062	13.74	13.28	19.11
	Equiv. Refl.: (7,0,-26)								
LiNbO3	(3,-7,28)	15.11	83.76	11.821	10.6	1.662	17.59	20.77	27.22
	Equiv. Refl.: (4,3,28), (7,-3,28), (-3,-4,28)								
LiNbO3	(-4,7,28)	15.11	83.76	11.82	10.6	1.662	17.59	20.77	27.22
	Equiv. Refl.: (-7,4,28)								
LiNbO3	(3,4,-28)	15.11	83.76	11.644	10.6	1.662	17.59	20.77	27.22
	Equiv. Refl.: (4,-7,-28), (7,-4,-28), (-3,7,-28), (-4,-3,-28), (-7,3,-28)								
Quartz	(2,-2,-13)	15.193	88.3	11.546	9.9	0.452	4.46	5.64	7.2
	Equiv. Refl.: (-2,2,13)								
Quartz	(2,0,13)	15.193	88.3	11.542	9.9	0.452	4.46	5.64	7.19
Quartz	(-2,0,-13)	15.193	88.3	11.541	9.9	0.452	4.46	5.64	7.19
Quartz	(0,2,-13)	15.193	88.3	11.53	9.9	0.452	4.46	5.64	7.19
	Equiv. Refl.: (0,-2,13)								
LiNbO3	(2,8,18)	15.073	82.59	9.935	8.8	1.976	17.49	24.7	30.27
	Equiv. Refl.: (8,-10,18), (10,-8,18), (-2,10,18), (-8,-2,18), (-10,2,18)								
LiNbO3	(4,8,8)	15.144	85.09	9.715	9.1	1.307	11.85	16.33	20.18
	Equiv. Refl.: (8,-12,8), (12,-8,8), (-4,12,8), (-8,-4,8), (-12,4,8)								
LiNbO3	(2,-10,-18)	15.073	82.59	9.645	8.8	1.976	17.49	24.7	30.27
	Equiv. Refl.: (8,2,-18), (10,-2,-18), (-2,-8,-18), (-8,10,-18), (-10,8,-18)								
Quartz	(7,-11,-5)	15.176	86.78	9.582	7.6	0.854	6.46	10.68	12.48
Quartz	(7,4,5)	15.176	86.78	9.581	7.6	0.854	6.46	10.68	12.48
Quartz	(-11,4,-5)	15.176	86.78	9.579	7.6	0.854	6.46	10.68	12.48
Quartz	(-11,7,5)	15.176	86.78	9.578	7.6	0.854	6.46	10.68	12.48
Quartz	(4,7,-5)	15.176	86.78	9.577	7.6	0.854	6.46	10.68	12.48
Quartz	(4,-11,5)	15.176	86.78	9.576	7.6	0.854	6.46	10.68	12.48
LiNbO3	(4,-12,-8)	15.144	85.09	9.497	9.1	1.307	11.85	16.33	20.18
	Equiv. Refl.: (8,4,-8), (12,-4,-8), (-4,-8,-8), (-8,12,-8), (-12,8,-8)								
LiNbO3	(4,-10,20)	15.064	82.33	9.412	8.3	2.046	16.96	25.57	30.69
	Equiv. Refl.: (6,4,20), (10,-4,20), (-4,-6,20), (-6,10,20), (-10,6,20)								
LiNbO3	(-4,10,-20)	15.064	82.33	9.391	8.3	2.046	16.96	25.57	30.69
	Equiv. Refl.: (-10,4,-20)								
LiNbO3	(4,6,-20)	15.064	82.33	9.39	8.3	2.046	16.96	25.57	30.69
	Equiv. Refl.: (6,-10,-20), (10,-6,-20), (-6,-4,-20)								
LiNbO3	(2,-10,18)	15.073	82.59	9.349	8.1	1.976	16.02	24.7	29.44
	Equiv. Refl.: (8,2,18), (10,-2,18), (-2,-8,18), (-8,10,18), (-10,8,18)								
Quartz	(-7,11,5)	15.176	86.78	9.117	7.6	0.854	6.46	10.68	12.48
	Equiv. Refl.: (-7,-4,-5)								
Quartz	(11,-4,5)	15.176	86.78	9.115	7.6	0.854	6.46	10.68	12.48
Quartz	(11,-7,-5)	15.176	86.78	9.113	7.6	0.854	6.46	10.68	12.48
Quartz	(-4,11,-5)	15.176	86.78	9.112	7.6	0.854	6.46	10.68	12.48
	Equiv. Refl.: (-4,-7,5)								
LiNbO3	(3,-11,14)	15.058	82.16	9.014	7.7	2.094	16.09	26.17	30.72
	Equiv. Refl.: (8,3,14), (11,-3,14), (-3,-8,14), (-8,11,14), (-11,8,14)								
LiNbO3	(2,8,-18)	15.073	82.59	8.852	8.1	1.976	16.02	24.7	29.44
	Equiv. Refl.: (8,-10,-18), (10,-8,-18), (-2,10,-18), (-8,-2,-18), (-10,2,-18)								
LiNbO3	(9,-10,16)	15.071	82.53	8.81	7.7	1.993	15.34	24.91	29.25
	Equiv. Refl.: (10,-9,16)								
LiNbO3	(1,9,16)	15.071	82.53	8.809	7.7	1.993	15.34	24.91	29.25
	Equiv. Refl.: (-1,10,16), (-9,-1,16), (-10,1,16)								

Ei = Cryst	15.2 Refl (h,k,l)	keV EB [keV]	ΘB [°]	 IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
LiNbO3	(1,-10,-16)	15.071	82.53	8.328	7.7	1.993	15.34	24.91	29.25
	Equiv. Refl.: (9,1,-16), (10,-1,-16), (-1,-9,-16), (-9,10,-16), (-10,9,-16)								
LiNbO3	(3,8,-14)	15.058	82.16	8.25	7.7	2.094	16.09	26.17	30.72
	Equiv. Refl.: (-3,11,-14), (-8,-3,-14), (-11,3,-14)								
LiNbO3	(8,-11,-14)	15.058	82.16	8.249	7.7	2.094	16.09	26.17	30.72
	Equiv. Refl.: (11,-8,-14)								
LiNbO3	(0,8,22)	14.85	77.68	7.859	6.5	3.319	21.71	41.49	46.83
	Equiv. Refl.: (8,-8,22), (-8,0,22)								
LiNbO3	(1,7,-24)	15.013	81	7.664	6.8	2.407	16.26	30.09	34.2
	Equiv. Refl.: (7,-8,-24), (8,-7,-24), (-1,8,-24), (-7,-1,-24), (-8,1,-24)								
LiNbO3	(0,-8,-22)	14.85	77.68	7.523	6.5	3.319	21.71	41.49	46.83
	Equiv. Refl.: (8,0,-22), (-8,8,-22)								
LiNbO3	(1,-8,24)	15.013	81	7.513	6.8	2.407	16.26	30.09	34.2
	Equiv. Refl.: (7,1,24), (8,-1,24), (-1,-7,24), (-7,8,24), (-8,7,24)								
LiNbO3	(5,6,-16)	15.071	82.53	7.425	6.6	1.993	13.23	24.91	28.21
	Equiv. Refl.: (6,-11,-16), (11,-6,-16), (-5,11,-16), (-6,-5,-16), (-11,5,-16)								
LiNbO3	(1,7,24)	15.013	81	7.326	6.5	2.407	15.7	30.09	33.94
	Equiv. Refl.: (7,-8,24), (8,-7,24), (-1,8,24), (-7,-1,24), (-8,1,24)								
LiNbO3	(1,-8,-24)	15.013	81	7.237	6.5	2.407	15.7	30.09	33.94
	Equiv. Refl.: (7,1,-24), (8,-1,-24), (-1,-7,-24), (-7,8,-24), (-8,7,-24)								
LiNbO3	(5,-11,16)	15.071	82.53	6.945	6.6	1.993	13.23	24.91	28.21
	Equiv. Refl.: (6,5,16), (11,-5,16), (-5,-6,16), (-6,11,16), (-11,6,16)								
LiNbO3	(3,9,0)	15.04	81.69	6.695	6	2.22	13.27	27.75	30.76
	Equiv. Refl.: (9,-12,0), (12,-9,0), (-3,12,0), (-9,-3,0), (-12,3,0)								
LiNbO3	(0,9,-18)	14.879	78.21	6.451	5.6	3.172	17.64	39.65	43.39
	Equiv. Refl.: (9,-9,-18), (-9,0,-18)								
LiNbO3	(3,-12,0)	15.04	81.69	6.24	6	2.22	13.27	27.75	30.76
	Equiv. Refl.: (9,3,0), (12,-3,0), (-3,-9,0), (-9,12,0), (-12,9,0)								
LiNbO3	(0,-9,18)	14.879	78.21	6.191	5.6	3.172	17.64	39.65	43.39
	Equiv. Refl.: (9,0,18), (-9,9,18)								
Sapph	(0,3,30)	15.013	81.01	6.07	4.8	2.405	11.45	30.07	32.17
	Equiv. Refl.: (0,3,-30), (0,-3,30), (0,-3,-30), (3,0,30), (3,0,-30), (3,-3,30), (3,-3,-30), (-3,0,30), (-3,0,-30), (-3,3,30), (-3,3,-30)								
LiNbO3	(1,10,6)	14.893	78.47	6.023	5.3	3.1	16.45	38.75	42.1
	Equiv. Refl.: (10,-11,6), (11,-10,6), (-1,11,6), (-10,-1,6), (-11,1,6)								
LiNbO3	(2,-9,-22)	15.044	81.79	6.007	5.6	2.194	12.28	27.42	30.05
	Equiv. Refl.: (7,2,-22), (9,-2,-22), (-2,-7,-22), (-7,9,-22), (-9,7,-22)								
Sapph	(1,9,10)	15.124	84.27	5.972	4.9	1.524	7.45	19.06	20.46
	Equiv. Refl.: (1,-10,-10), (9,1,-10), (9,-10,10), (10,-1,-10), (10,-9,10), (-1,10,10), (-1,-9,-10), (-9,10,-10), (-9,-1,10), (-10,1,10), (-10,9,-10)								
LiNbO3	(2,7,22)	15.044	81.79	5.91	5.6	2.194	12.28	27.42	30.05
	Equiv. Refl.: (7,-9,22), (9,-7,22), (-2,9,22), (-7,-2,22), (-9,2,22)								
LiNbO3	(1,-11,-6)	14.893	78.47	5.893	5.3	3.1	16.45	38.75	42.1
	Equiv. Refl.: (10,1,-6), (11,-1,-6), (-1,-10,-6), (-10,11,-6), (-11,10,-6)								
LiNbO3	(4,8,2)	14.743	75.91	5.669	4.9	3.815	18.65	47.69	51.21
	Equiv. Refl.: (8,-12,2), (12,-8,2), (-4,12,2), (-8,-4,2), (-12,4,2)								
LiNbO3	(1,10,-6)	14.893	78.47	5.524	4.6	3.1	14.33	38.75	41.32
	Equiv. Refl.: (10,-11,-6), (11,-10,-6), (-1,11,-6), (-10,-1,-6), (-11,1,-6)								
LiNbO3	(4,-12,-2)	14.743	75.91	5.516	4.9	3.815	18.65	47.69	51.21
	Equiv. Refl.: (8,4,-2), (12,-4,-2), (-4,-8,-2), (-8,12,-2), (-12,8,-2)								

Ei = Cryst	15.2 Refl (h,k,l)	keV EB [keV]	ΘB [°]	IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
LiNbO3	(1,8,20)	14.87	78.05	5.378	4.8	3.218	15.4	40.22	43.07
Equiv. Refl.: (8,-9,20), (9,-8,20), (-1,9,20), (-8,-1,20), (-9,1,20)									
LiNbO3	(2,9,-10)	14.803	76.88	5.36	4.7	3.542	16.81	44.27	47.36
Equiv. Refl.: (9,-11,-10), (11,-9,-10), (-2,11,-10), (-9,-2,-10), (-11,2,-10)									
LiNbO3	(6,6,-6)	14.697	75.22	5.349	4.6	4.009	18.48	50.11	53.41
Equiv. Refl.: (6,-12,-6), (12,-6,-6), (-6,12,-6), (-6,-6,-6), (-12,6,-6)									
LiNbO3	(1,-11,6)	14.893	78.47	5.322	4.6	3.1	14.33	38.75	41.32
Equiv. Refl.: (10,1,6), (11,-1,6), (-1,-10,6)									
LiNbO3	(-10,11,6)	14.893	78.47	5.321	4.6	3.1	14.33	38.75	41.32
Equiv. Refl.: (-11,10,6)									
LiNbO3	(2,-11,10)	14.803	76.88	5.32	4.7	3.542	16.81	44.27	47.36
Equiv. Refl.: (9,2,10), (11,-2,10), (-2,-9,10), (-9,11,10), (-11,9,10)									
LiNbO3	(4,-12,4)	14.824	77.23	5.319	4.6	3.446	15.87	43.07	45.9
Equiv. Refl.: (8,4,4), (12,-4,4), (-4,-8,4), (-8,12,4), (-12,8,4)									
LiNbO3	(4,8,-4)	14.824	77.23	5.275	4.6	3.446	15.87	43.07	45.9
Equiv. Refl.: (8,-12,-4), (12,-8,-4), (-4,12,-4), (-8,-4,-4), (-12,4,-4)									
LiNbO3	(5,-12,8)	14.951	79.62	5.272	4.5	2.783	12.63	34.79	37.01
Equiv. Refl.: (7,5,8), (12,-5,8), (-5,-7,8), (-7,12,8), (-12,7,8)									
LiNbO3	(1,-9,-20)	14.87	78.05	5.231	4.8	3.218	15.4	40.22	43.07
Equiv. Refl.: (8,1,-20), (9,-1,-20), (-1,-8,-20), (-8,9,-20), (-9,8,-20)									
Quartz	(-1,2,13)	15.123	84.24	5.222	4.2	1.533	6.4	19.16	20.2
Equiv. Refl.: (-1,-1,-13)									
Quartz	(-1,2,-13)	15.123	84.24	5.221	4.2	1.533	6.4	19.16	20.2
Quartz	(-1,-1,13)	15.123	84.24	5.219	4.2	1.533	6.4	19.16	20.2
Quartz	(2,-1,13)	15.123	84.24	5.218	4.2	1.533	6.39	19.16	20.2
Equiv. Refl.: (2,-1,-13)									
LiNbO3	(-1,6,-28)	14.721	75.58	5.197	4.3	3.908	16.68	48.86	51.62
Equiv. Refl.: (-6,1,-28)									
LiNbO3	(1,5,-28)	14.721	75.58	5.196	4.3	3.908	16.68	48.86	51.62
Equiv. Refl.: (5,-6,-28), (6,-5,-28), (-5,-1,-28)									
LiNbO3	(6,6,6)	14.697	75.22	5.168	4.6	4.009	18.48	50.11	53.41
Equiv. Refl.: (6,-12,6), (12,-6,6), (-6,12,6), (-6,-6,6), (-12,6,6)									
LiNbO3	(1,2,32)	14.775	76.42	5.157	4.6	3.672	16.78	45.9	48.87
Equiv. Refl.: (2,-3,32), (3,-2,32), (-1,3,32), (-2,-1,32), (-3,1,32)									
LiNbO3	(5,5,18)	14.484	72.35	5.15	4.1	4.837	19.77	60.46	63.61
Equiv. Refl.: (5,-10,18), (10,-5,18), (-5,10,18), (-5,-5,18), (-10,5,18)									
LiNbO3	(1,-11,0)	14.65	74.54	5.14	4.2	4.205	17.56	52.56	55.42
Equiv. Refl.: (10,1,0), (11,-1,0), (-1,-10,0), (-10,11,0), (-11,10,0)									
LiNbO3	(5,7,-8)	14.951	79.62	5.115	4.5	2.783	12.63	34.79	37.01
Equiv. Refl.: (7,-12,-8), (12,-7,-8), (-5,12,-8), (-7,-5,-8), (-12,5,-8)									
LiNbO3	(1,-3,-32)	14.775	76.42	5.113	4.6	3.672	16.78	45.9	48.87
Equiv. Refl.: (2,1,-32), (3,-1,-32), (-1,-2,-32), (-2,3,-32), (-3,2,-32)									
Quartz	(1,1,13)	15.123	84.24	5.072	4.2	1.533	6.4	19.16	20.2
Equiv. Refl.: (1,-2,13), (1,-2,-13)									
Quartz	(1,1,-13)	15.123	84.24	5.07	4.2	1.533	6.4	19.16	20.2
LiNbO3	(1,-6,28)	14.721	75.58	5.069	4.3	3.908	16.68	48.86	51.62
Equiv. Refl.: (5,1,28), (6,-1,28), (-1,-5,28), (-5,6,28), (-6,5,28), (-2,1,13), (-2,1,-13)									
LiNbO3	(1,10,0)	14.65	74.54	4.982	4.2	4.205	17.56	52.56	55.42
Equiv. Refl.: (10,-11,0), (11,-10,0), (-1,11,0), (-10,-1,0), (-11,1,0)									
LiNbO3	(1,9,-14)	14.668	74.79	4.951	4	4.132	16.62	51.66	54.26
Equiv. Refl.: (9,-10,-14), (10,-9,-14), (-1,10,-14), (-9,-1,-14), (-10,1,-14)									

Ei = Cryst	15.2 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
LiNbO3	(0,-10,10)	14.606	73.93	4.947	4	4.378	17.54	54.72	57.47
	Equiv. Refl.: (10,0,10), (-10,10,10)								
LiNbO3	(2,-6,-28)	14.523	72.83	4.942	4.3	4.696	19.97	58.7	62
	Equiv. Refl.: (4,2,-28), (6,-2,-28), (-2,-4,-28), (-4,6,-28), (-6,4,-28)								
LiNbO3	(5,5,-18)	14.484	72.35	4.91	4.1	4.837	19.77	60.46	63.61
	Equiv. Refl.: (5,-10,-18), (10,-5,-18), (-5,10,-18), (-5,-5,-18), (-10,5,-18)								
LiNbO3	(5,-12,2)	14.545	73.11	4.897	4.2	4.614	19.49	57.68	60.88
	Equiv. Refl.: (7,5,2), (12,-5,2), (-5,-7,2), (-7,12,2), (-12,7,2)								
LiNbO3	(5,6,14)	14.668	74.79	4.862	4	4.132	16.37	51.66	54.19
	Equiv. Refl.: (6,-11,14), (11,-6,14), (-5,11,14), (-6,-5,14), (-11,5,14)								
LiNbO3	(2,-9,20)	14.475	72.23	4.858	3.9	4.87	18.95	60.88	63.76
	Equiv. Refl.: (7,2,20), (9,-2,20), (-2,-7,20)								
LiNbO3	(-7,9,20)	14.475	72.23	4.857	3.9	4.87	18.95	60.88	63.76
	Equiv. Refl.: (-9,7,20)								
LiNbO3	(2,4,28)	14.523	72.83	4.853	4.3	4.696	19.98	58.7	62
	Equiv. Refl.: (4,-6,28), (6,-4,28), (-2,6,28), (-4,-2,28), (-6,2,28)								
LiNbO3	(1,-5,30)	14.852	77.71	4.852	4.1	3.311	13.64	41.39	43.58
	Equiv. Refl.: (4,1,30), (5,-1,30), (-1,-4,30), (-4,5,30), (-5,4,30)								
LiNbO3	(0,-10,-8)	14.358	70.84	4.83	3.9	5.282	20.49	66.03	69.14
	Equiv. Refl.: (10,0,-8), (-10,10,-8)								
LiNbO3	(0,9,18)	14.879	78.21	4.807	4.2	3.172	13.19	39.65	41.78
	Equiv. Refl.: (9,-9,18), (-9,0,18)								
Sapph	(0,10,2)	15.074	82.63	4.803	3.8	1.966	7.44	24.57	25.67
	Equiv. Refl.: (0,-10,-2), (10,0,-2), (10,-10,2), (-10,0,2), (-10,10,-2)								
LiNbO3	(4,-8,24)	14.422	71.59	4.797	3.9	5.06	19.67	63.26	66.24
	Equiv. Refl.: (8,-4,24)								
LiNbO3	(4,4,24)	14.422	71.59	4.796	3.9	5.06	19.67	63.26	66.24
	Equiv. Refl.: (-4,8,24), (-4,-4,24), (-8,4,24)								
LiNbO3	(5,7,-2)	14.545	73.11	4.794	4.2	4.614	19.49	57.68	60.88
	Equiv. Refl.: (7,-12,-2), (12,-7,-2), (-5,12,-2), (-7,-5,-2), (-12,5,-2)								
LiNbO3	(0,10,8)	14.358	70.84	4.786	3.9	5.282	20.49	66.03	69.14
	Equiv. Refl.: (10,-10,8), (-10,0,8)								
LiNbO3	(0,-9,-18)	14.879	78.21	4.783	4.2	3.172	13.19	39.65	41.78
	Equiv. Refl.: (9,0,-18), (-9,9,-18)								
LiNbO3	(4,4,-24)	14.422	71.59	4.782	3.9	5.06	19.67	63.26	66.24
	Equiv. Refl.: (4,-8,-24), (8,-4,-24), (-4,8,-24), (-4,-4,-24), (-8,4,-24)								
LiNbO3	(1,4,30)	14.852	77.71	4.751	4.1	3.311	13.47	41.39	43.52
	Equiv. Refl.: (4,-5,30), (5,-4,30), (-1,5,30), (-4,-1,30), (-5,1,30)								
LiNbO3	(0,10,-10)	14.606	73.93	4.742	4	4.378	17.54	54.72	57.47
	Equiv. Refl.: (10,-10,-10), (-10,0,-10)								
LiNbO3	(1,4,-30)	14.852	77.71	4.713	4.1	3.311	13.64	41.39	43.58
	Equiv. Refl.: (4,-5,-30), (5,-4,-30), (-1,5,-30), (-4,-1,-30), (-5,1,-30)								
LiNbO3	(5,7,4)	14.627	74.22	4.681	3.8	4.296	16.34	53.71	56.14
	Equiv. Refl.: (7,-12,4), (12,-7,4), (-5,12,4), (-7,-5,4), (-12,5,4)								
LiNbO3	(1,-10,14)	14.668	74.79	4.675	4	4.132	16.62	51.66	54.26
	Equiv. Refl.: (9,1,14), (10,-1,14), (-1,-9,14), (-9,10,14), (-10,9,14)								
LiNbO3	(1,-5,-30)	14.852	77.71	4.667	4.1	3.311	13.46	41.39	43.52
	Equiv. Refl.: (4,1,-30), (5,-1,-30), (-1,-4,-30), (-4,5,-30), (-5,4,-30)								
LiNbO3	(2,7,-20)	14.475	72.23	4.655	3.9	4.87	18.95	60.88	63.76
	Equiv. Refl.: (7,-9,-20), (9,-7,-20), (-2,9,-20), (-7,-2,-20), (-9,2,-20)								

Ei =	15.2	keV						ΔEg	ΔEt
Cryst	Ref.	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(2,9,8)	14.558	73.29	4.619	3.8	4.563	17.3	57.03	59.6
Equiv. Refl.: (9,-11,8), (11,-9,8), (-2,11,8), (-9,-2,8), (-11,2,8)									
LiNbO3	(5,-11,-14)	14.668	74.79	4.594	4	4.132	16.37	51.66	54.19
Equiv. Refl.: (6,5,-14), (11,-5,-14), (-5,-6,-14), (-6,11,-14), (-11,6,-14)									
LiNbO3	(2,-11,-8)	14.558	73.29	4.537	3.8	4.563	17.3	57.03	59.6
Equiv. Refl.: (9,2,-8), (11,-2,-8), (-2,-9,-8), (-9,11,-8), (-11,9,-8)									
LiNbO3	(1,10,9)	15.192	88.2	4.467	7.3	0.479	3.48	5.99	6.92
Equiv. Refl.: (1,10,-9), (1,-11,9), (1,-11,-9), (10,1,9), (10,1,-9), (10,-11,9), (10,-11,-9), (11,-1,9), (11,-1,-9), (11,-10,9), (11,-10,-9), (-1,11,9), (-1,11,-9), (-1,-10,9), (-1,-10,-9), (-10,11,9), (-10,11,-9), (-10,-1,9), (-10,-1,-9), (-11,1,9), (-11,1,-9), (-11,10,9), (-11,10,-9)									
LiNbO3	(0,-1,-32)	14.377	71.06	4.465	3.6	5.216	18.96	65.2	67.9
Equiv. Refl.: (1,0,-32), (-1,1,-32)									
LiNbO3	(0,1,32)	14.377	71.06	4.414	3.6	5.216	18.96	65.2	67.9
Equiv. Refl.: (1,-1,32), (-1,0,32)									
LiNbO3	(4,-11,12)	14.443	71.84	4.401	3.6	4.985	17.79	62.31	64.8
Equiv. Refl.: (7,4,12), (11,-4,12), (-4,-7,12), (-7,11,12), (-11,7,12)									
LiNbO3	(5,-12,-4)	14.627	74.22	4.37	3.8	4.296	16.34	53.71	56.14
Equiv. Refl.: (7,5,-4), (12,-5,-4), (-5,-7,-4), (-7,12,-4), (-12,7,-4)									
Quartz	(7,4,-5)	15.176	86.78	4.313	3.6	0.854	3.1	10.68	11.12
Equiv. Refl.: (7,-11,5)									
Quartz	(4,-11,-5)	15.176	86.78	4.309	3.6	0.854	3.1	10.68	11.12
Equiv. Refl.: (-11,4,5), (-11,7,-5)									
Quartz	(4,7,5)	15.176	86.78	4.308	3.6	0.854	3.1	10.68	11.12
LiNbO3	(4,7,-12)	14.443	71.84	4.222	3.6	4.985	17.79	62.31	64.8
Equiv. Refl.: (-4,11,-12), (-7,-4,-12), (-11,4,-12)									
LiNbO3	(7,-11,-12)	14.443	71.84	4.221	3.6	4.985	17.79	62.31	64.8
Equiv. Refl.: (11,-7,-12)									
LiNbO3	(0,-2,32)	14.577	73.54	4.183	3.5	4.49	15.57	56.12	58.24
Equiv. Refl.: (2,0,32), (-2,2,32)									
LiNbO3	(3,8,10)	14.406	71.4	4.076	3.3	5.115	16.84	63.93	66.11
Equiv. Refl.: (8,-11,10), (11,-8,10), (-3,11,10), (-8,-3,10), (-11,3,10)									
Quartz	(-7,11,-5)	15.176	86.78	4.041	3.6	0.854	3.1	10.68	11.12
Equiv. Refl.: (-7,-4,5)									
Quartz	(11,-4,-5)	15.176	86.78	4.038	3.6	0.854	3.1	10.68	11.12
Equiv. Refl.: (11,-7,5)									
Quartz	(-4,11,5)	15.176	86.78	4.037	3.6	0.854	3.1	10.68	11.12
Quartz	(-4,-7,-5)	15.176	86.78	4.036	3.6	0.854	3.1	10.68	11.12
LiNbO3	(0,2,-32)	14.577	73.54	4.007	3.5	4.49	15.57	56.12	58.24
Equiv. Refl.: (2,-2,-32), (-2,0,-32)									
LiNbO3	(1,-7,26)	14.776	76.43	3.996	3.5	3.67	12.75	45.87	47.61
Equiv. Refl.: (6,1,26), (7,-1,26), (-1,-6,26), (-6,7,26), (-7,6,26)									
Quartz	(-1,8,9)	15.085	82.96	3.994	3.1	1.878	5.74	23.47	24.16
Quartz	(-1,-7,-9)	15.085	82.96	3.993	3.1	1.878	5.74	23.47	24.16
Quartz	(-7,8,-9)	15.085	82.96	3.992	3.1	1.878	5.74	23.47	24.16
Quartz	(-7,-1,9)	15.085	82.96	3.991	3.1	1.878	5.74	23.47	24.16
Quartz	(8,-1,-9)	15.085	82.96	3.99	3.1	1.878	5.74	23.47	24.16
Quartz	(8,-7,9)	15.085	82.96	3.989	3.1	1.878	5.74	23.47	24.16
LiNbO3	(1,6,-26)	14.776	76.43	3.934	3.5	3.67	12.75	45.87	47.61
Equiv. Refl.: (6,-7,-26), (7,-6,-26), (-1,7,-26), (-6,-1,-26), (-7,1,-26)									

Ei = Cryst	15.2 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
LiNbO3	(4,7,12)	14.443	71.84	3.918	3.2	4.985	16.12	62.31	64.36
	Equiv. Refl.: (7,-11,12), (11,-7,12), (-4,11,12), (-7,-4,12), (-11,4,12)								
Quartz	(0,5,-11)	14.569	73.44	3.907	2.8	4.521	12.51	56.51	57.88
	Equiv. Refl.: (0,-5,11)								
Quartz	(5,0,11)	14.569	73.44	3.904	2.8	4.521	12.5	56.51	57.88
	Equiv. Refl.: (5,-5,-11), (-5,0,-11), (-5,5,11)								
Sapph	(4,5,20)	15.139	84.86	3.897	3.3	1.368	4.52	17.1	17.69
	Equiv. Refl.: (4,-9,-20), (5,4,-20), (5,-9,20), (9,-4,-20), (9,-5,20), (-4,9,20), (-4,-5,-20), (-5,9,-20), (-5,-4,20), (-9,4,20), (-9,5,-20)								
Quartz	(1,7,9)	15.085	82.96	3.865	3.1	1.878	5.74	23.47	24.16
	Equiv. Refl.: (1,-8,-9)								
Quartz	(7,-8,9)	15.085	82.96	3.863	3.1	1.878	5.74	23.47	24.16
Quartz	(7,1,-9)	15.085	82.96	3.862	3.1	1.878	5.74	23.47	24.16
	Equiv. Refl.: (-8,1,9)								
Quartz	(-8,7,-9)	15.085	82.96	3.861	3.1	1.878	5.74	23.47	24.16
LiNbO3	(4,-9,22)	14.653	74.59	3.824	3.3	4.19	13.72	52.37	54.14
	Equiv. Refl.: (9,-4,22)								
LiNbO3	(5,4,22)	14.653	74.59	3.823	3.3	4.19	13.72	52.37	54.14
	Equiv. Refl.: (-4,-5,22), (-5,9,22), (-9,5,22)								
LiNbO3	(4,-11,-12)	14.443	71.84	3.747	3.2	4.985	16.12	62.31	64.36
	Equiv. Refl.: (7,4,-12), (11,-4,-12), (-4,-7,-12), (-7,11,-12), (-11,7,-12)								
LiNbO3	(4,5,-22)	14.653	74.59	3.74	3.3	4.19	13.72	52.37	54.14
	Equiv. Refl.: (5,-9,-22), (9,-5,-22), (-4,9,-22), (-5,-4,-22), (-9,4,-22)								
LiNbO3	(3,-11,-10)	14.406	71.4	3.729	3.3	5.115	16.84	63.93	66.11
	Equiv. Refl.: (8,3,-10), (11,-3,-10), (-3,-8,-10), (-8,11,-10), (-11,8,-10)								
Quartz	(2,9,-2)	14.964	79.88	3.707	2.8	2.712	7.47	33.9	34.71
	Equiv. Refl.: (2,-11,2), (9,2,2), (9,-11,-2)								
Quartz	(-11,2,-2)	14.964	79.88	3.706	2.8	2.712	7.47	33.9	34.71
	Equiv. Refl.: (-11,9,2)								
Quartz	(10,0,-2)	14.749	76.01	3.691	2.7	3.786	10.12	47.33	48.4
	Equiv. Refl.: (10,-10,2), (-10,0,2), (-10,10,-2)								
Quartz	(0,10,2)	14.749	76.01	3.69	2.7	3.786	10.12	47.33	48.4
	Equiv. Refl.: (0,-10,-2)								
LiNbO3	(6,6,0)	14.45	71.93	3.576	3.1	4.959	15.14	61.99	63.81
	Equiv. Refl.: (6,-12,0), (12,-6,0), (-6,12,0), (-6,-6,0), (-12,6,0)								
Sapph	(0,0,30)	14.319	70.39	3.575	2.6	5.414	14.23	67.68	69.16
	Equiv. Refl.: (0,0,-30)								
Quartz	(-2,11,-2)	14.964	79.88	3.566	2.8	2.712	7.47	33.9	34.71
	Equiv. Refl.: (-2,-9,2), (-9,11,2), (-9,-2,-2)								
Quartz	(11,-2,2)	14.964	79.88	3.565	2.8	2.712	7.47	33.9	34.71
	Equiv. Refl.: (11,-9,-2)								
Quartz	(6,-12,-1)	15.185	87.44	3.549	3	0.68	2.01	8.5	8.73
Quartz	(6,6,1)	15.185	87.44	3.548	3	0.68	2.01	8.5	8.73
	Equiv. Refl.: (6,6,-1), (6,-12,1)								
Quartz	(-12,6,1)	15.185	87.44	3.547	3	0.68	2.01	8.5	8.73
	Equiv. Refl.: (-12,6,-1)								
Sapph	(2,5,24)	14.815	77.08	3.318	2.5	3.488	8.88	43.6	44.49
	Equiv. Refl.: (2,5,-24), (2,-7,24), (2,-7,-24), (5,2,24), (5,2,-24), (5,-7,24), (5,-7,-24), (7,-2,24), (7,-2,-24), (7,-5,24), (7,-5,-24), (-2,7,24), (-2,7,-24), (-2,-5,24), (-2,-5,-24), (-5,7,24), (-5,7,-24), (-5,-2,24), (-5,-2,-24), (-7,2,24), (-7,2,-24), (-7,5,24), (-7,5,-24)								

Ei = Cryst	15.2 Refl (h,k,l)	keV EB [keV]	ΘB [°]	IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(6,5,-5)	15.036	81.56	3.256	2.5	2.254	5.73	28.18	28.76
	Equiv. Refl.: (6,-11,5), (-11,6,-5)								
Quartz	(-11,5,5)	15.036	81.56	3.255	2.5	2.254	5.73	28.18	28.76
Quartz	(5,6,5)	15.036	81.56	3.252	2.5	2.254	5.73	28.18	28.76
	Equiv. Refl.: (5,-11,-5)								
Quartz	(11,-6,5)	15.036	81.56	3.244	2.5	2.254	5.73	28.18	28.76
	Equiv. Refl.: (-6,11,-5), (-6,-5,5)								
Quartz	(11,-5,-5)	15.036	81.56	3.243	2.5	2.254	5.73	28.18	28.76
Quartz	(-5,11,5)	15.036	81.56	3.24	2.5	2.254	5.73	28.18	28.76
	Equiv. Refl.: (-5,-6,-5)								
LiNbO3	(4,-7,26)	14.378	71.07	3.238	2.9	5.214	15.01	65.18	66.88
	Equiv. Refl.: (7,-4,26)								
LiNbO3	(3,4,26)	14.378	71.07	3.237	2.9	5.214	15.01	65.18	66.88
	Equiv. Refl.: (-3,7,26), (-4,-3,26), (-7,3,26)								
Quartz	(9,0,-6)	14.809	76.98	3.219	2.4	3.515	8.51	43.94	44.76
	Equiv. Refl.: (-9,0,6)								
Quartz	(0,9,6)	14.809	76.98	3.218	2.4	3.515	8.51	43.94	44.76
	Equiv. Refl.: (0,-9,-6), (9,-9,6), (-9,9,-6)								
Sapph	(3,8,4)	14.939	79.37	3.148	2.5	2.852	7.1	35.65	36.35
	Equiv. Refl.: (3,-11,-4), (8,3,-4), (8,-11,4), (11,-3,-4), (11,-8,4), (-3,11,4), (-3,-8,-4), (-8,11,-4), (-8,-3,4), (-11,3,4), (-11,8,-4)								
Quartz	(-9,2,8)	15.048	81.88	3.141	2.4	2.169	5.13	27.11	27.59
Quartz	(-9,7,-8)	15.048	81.88	3.14	2.4	2.169	5.13	27.11	27.59
Quartz	(2,-9,-8)	15.048	81.88	3.136	2.4	2.169	5.12	27.11	27.59
	Equiv. Refl.: (7,2,-8), (7,-9,8)								
Quartz	(2,7,8)	15.048	81.88	3.135	2.4	2.169	5.12	27.11	27.59
Sapph	(1,8,-16)	14.951	79.62	3.119	2.5	2.785	6.91	34.81	35.49
	Equiv. Refl.: (1,-9,16), (8,1,16), (8,-9,-16), (9,-1,16), (9,-8,-16), (-1,9,-16), (-1,-8,16), (-8,9,16), (-8,-1,-16), (-9,1,-16), (-9,8,16)								
Quartz	(9,-2,-8)	15.048	81.88	3.104	2.4	2.169	5.13	27.11	27.59
	Equiv. Refl.: (9,-7,8)								
Quartz	(-2,9,8)	15.048	81.88	3.099	2.4	2.169	5.12	27.11	27.59
	Equiv. Refl.: (-7,9,-8), (-7,-2,8)								
Quartz	(-2,-7,-8)	15.048	81.88	3.098	2.4	2.169	5.12	27.11	27.59
LiNbO3	(3,-7,-26)	14.378	71.07	3.097	2.9	5.214	15.01	65.18	66.88
	Equiv. Refl.: (4,3,-26), (7,-3,-26), (-3,-4,-26), (-4,7,-26), (-7,4,-26)								
Quartz	(7,1,9)	15.085	82.96	3.053	2.7	1.878	5.07	23.47	24.01
	Equiv. Refl.: (7,-8,-9)								
Quartz	(1,7,-9)	15.085	82.96	3.051	2.7	1.878	5.07	23.47	24.01
Quartz	(1,-8,9)	15.085	82.96	3.05	2.7	1.878	5.07	23.47	24.01
	Equiv. Refl.: (-8,1,-9), (-8,7,9)								
Quartz	(-7,8,9)	15.085	82.96	3.042	2.7	1.878	5.07	23.47	24.01
	Equiv. Refl.: (-7,-1,-9)								
Quartz	(-1,-7,9)	15.085	82.96	3.041	2.7	1.878	5.07	23.47	24.01
Quartz	(8,-1,9)	15.085	82.96	3.04	2.7	1.878	5.07	23.47	24.01
	Equiv. Refl.: (8,-7,-9), (-1,8,-9)								
Quartz	(11,-7,4)	14.781	76.51	2.993	2.2	3.646	8.03	45.57	46.27
	Equiv. Refl.: (-4,11,4), (-4,-7,-4)								
Quartz	(11,-4,-4)	14.781	76.51	2.992	2.2	3.646	8.03	45.57	46.27
	Equiv. Refl.: (-7,11,-4), (-7,-4,4)								

Ei = Cryst	15.2 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(4,7,4)	14.781	76.51	2.979	2.2	3.646	8.03	45.57	46.27
	Equiv. Refl.: (4,-11,-4)								
Quartz	(7,4,-4)	14.781	76.51	2.978	2.2	3.646	8.03	45.57	46.27
	Equiv. Refl.: (7,-11,4), (-11,4,4), (-11,7,-4)								
Quartz	(7,2,8)	15.048	81.88	2.78	2.4	2.169	5.18	27.11	27.6
	Equiv. Refl.: (7,-9,-8)								
Quartz	(-9,2,-8)	15.048	81.88	2.779	2.4	2.169	5.18	27.11	27.6
Sapph	(5,6,-10)	15.124	84.27	2.778	2.6	1.524	4.02	19.06	19.48
	Equiv. Refl.: (5,-11,10), (6,5,10), (6,-11,-10), (11,-5,10), (11,-6,-10), (-5,11,-10), (-5,-6,10), (-6,11,10), (-6,-5,-10), (-11,5,-10), (-11,6,10), (2,7,-8), (2,-9,8), (-9,7,8)								
Quartz	(3,7,-6)	14.665	74.75	2.738	2.3	4.143	9.43	51.78	52.63
Quartz	(3,-10,6)	14.665	74.75	2.737	2.3	4.143	9.43	51.78	52.63
	Equiv. Refl.: (7,3,6), (7,-10,-6)								
Quartz	(-10,3,-6)	14.665	74.75	2.736	2.3	4.143	9.43	51.78	52.63
	Equiv. Refl.: (-10,7,6)								
Sapph	(1,8,14)	14.487	72.38	2.721	2	4.828	9.59	60.35	61.1
	Equiv. Refl.: (1,-9,-14), (8,1,-14), (8,-9,14), (9,-1,-14), (9,-8,14), (-1,9,14), (-1,-8,-14), (-8,9,-14), (-8,-1,14), (-9,1,14), (-9,8,-14)								
Quartz	(-3,10,-6)	14.665	74.75	2.702	2.3	4.143	9.43	51.78	52.63
	Equiv. Refl.: (-3,-7,6), (-7,10,6), (-7,-3,-6)								
Quartz	(10,-3,6)	14.665	74.75	2.701	2.3	4.143	9.43	51.78	52.63
	Equiv. Refl.: (10,-7,-6)								
Quartz	(-6,12,1)	15.185	87.44	2.666	3	0.68	2.01	8.5	8.73
	Equiv. Refl.: (-6,-6,-1)								
Quartz	(12,-6,1)	15.185	87.44	2.665	3	0.68	2.01	8.5	8.73
	Equiv. Refl.: (12,-6,-1), (-6,12,-1), (-6,-6,1)								
Quartz	(-7,9,8)	15.048	81.88	2.618	2.4	2.169	5.18	27.11	27.6
	Equiv. Refl.: (-7,-2,-8)								
Quartz	(9,-2,8)	15.048	81.88	2.617	2.4	2.169	5.18	27.11	27.6
Quartz	(9,-7,-8)	15.048	81.88	2.616	2.4	2.169	5.18	27.11	27.6
	Equiv. Refl.: (-2,9,-8), (-2,-7,8)								
Sapph	(3,8,7)	15.189	87.8	2.601	3	0.583	1.76	7.29	7.5
	Equiv. Refl.: (3,-11,-7), (8,3,-7), (8,-11,7), (11,-3,-7), (11,-8,7), (-3,11,7), (-3,-8,-7), (-8,11,-7), (-8,-3,7), (-11,3,7), (-11,8,-7)								
Quartz	(0,4,-12)	14.947	79.54	2.549	2.2	2.807	6.23	35.09	35.64
	Equiv. Refl.: (0,-4,12)								
Quartz	(-4,0,-12)	14.947	79.54	2.545	2.2	2.807	6.22	35.09	35.64
Quartz	(4,0,12)	14.947	79.54	2.544	2.2	2.807	6.22	35.09	35.64
	Equiv. Refl.: (4,-4,-12), (-4,4,12)								
Quartz	(-4,10,-7)	15.027	81.34	2.368	2	2.315	4.57	28.94	29.3
Quartz	(10,-4,7)	15.027	81.34	2.367	2	2.315	4.57	28.94	29.3
	Equiv. Refl.: (10,-6,-7), (-4,-6,7), (-6,10,7), (-6,-4,-7)								
Quartz	(8,3,-4)	15.065	82.37	2.352	2	2.037	4.11	25.47	25.8
	Equiv. Refl.: (8,-11,4), (-11,3,4), (-11,8,-4)								
Quartz	(3,8,4)	15.065	82.37	2.351	2	2.037	4.11	25.47	25.8
	Equiv. Refl.: (3,-11,-4)								
Quartz	(11,-3,-4)	15.065	82.37	2.332	2	2.037	4.11	25.47	25.8
Quartz	(11,-8,4)	15.065	82.37	2.331	2	2.037	4.11	25.47	25.8
	Equiv. Refl.: (-3,11,4), (-3,-8,-4), (-8,11,-4), (-8,-3,4)								
Quartz	(4,2,-11)	14.786	76.6	2.242	1.9	3.621	6.71	45.26	45.76

Ei = Cryst	15.2 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(2,4,11)	14.786	76.6	2.241	1.9	3.621	6.71	45.26	45.76
	Equiv. Refl.: (2,-6,-11), (4,-6,11), (-6,2,11)								
Quartz	(-6,4,-11)	14.786	76.6	2.24	1.9	3.621	6.71	45.26	45.76
LiNbO3	(0,5,28)	14.322	70.43	1.985	2.3	5.404	12.23	67.55	68.65
	Equiv. Refl.: (5,-5,28), (-5,0,28)								
LiNbO3	(0,-5,-28)	14.322	70.43	1.955	2.3	5.404	12.23	67.55	68.65
	Equiv. Refl.: (5,0,-28), (-5,5,-28)								
Sapph	(1,7,21)	15.148	85.27	1.909	2.2	1.257	2.75	15.72	15.96
	Equiv. Refl.: (1,7,-21), (1,-8,21), (1,-8,-21), (7,1,21), (7,1,-21), (7,-8,21), (7,-8,-21), (8,-1,21), (8,-1,-21), (8,-7,21), (8,-7,-21), (-1,8,21), (-1,8,-21), (-1,-7,21), (-1,-7,-21), (-7,8,21), (-7,8,-21), (-7,-1,21), (-7,-1,-21), (-8,1,21), (-8,1,-21), (-8,7,21), (-8,7,-21)								
Sapph	(1,5,26)	14.972	80.06	1.873	2	2.663	5.24	33.29	33.7
	Equiv. Refl.: (1,-6,-26), (5,1,-26), (5,-6,26), (6,-1,-26), (6,-5,26), (-1,6,26), (-1,-5,-26), (-5,6,-26), (-5,-1,26), (-6,1,26), (-6,5,-26)								
Quartz	(4,-10,7)	15.027	81.34	1.862	2	2.315	4.57	28.94	29.3
Quartz	(4,6,-7)	15.027	81.34	1.861	2	2.315	4.57	28.94	29.3
	Equiv. Refl.: (6,4,7), (6,-10,-7), (-10,4,-7), (-10,6,7)								
Quartz	(-4,-2,11)	14.786	76.6	1.832	1.9	3.621	6.71	45.26	45.76
Quartz	(6,-2,-11)	14.786	76.6	1.831	1.9	3.621	6.71	45.26	45.76
	Equiv. Refl.: (6,-4,11), (-2,6,11), (-2,-4,-11), (-4,6,-11)								
Sapph	(5,6,-4)	14.478	72.27	1.801	1.8	4.861	8.84	60.76	61.4
	Equiv. Refl.: (5,-11,4), (6,5,4), (6,-11,-4), (11,-5,4), (11,-6,-4), (-5,11,-4), (-5,-6,4), (-6,11,4), (-6,-5,-4), (-11,5,-4), (-11,6,4)								
Sapph	(0,4,-28)	14.657	74.63	1.747	1.8	4.178	7.45	52.22	52.75
	Equiv. Refl.: (0,-4,28), (4,0,28), (4,-4,-28), (-4,0,-28), (-4,4,28)								
Quartz	(2,9,0)	14.787	76.61	1.702	1.7	3.618	6.24	45.23	45.66
	Equiv. Refl.: (2,-11,0), (9,2,0), (9,-11,0), (-11,2,0), (-11,9,0)								
Quartz	(11,-2,0)	14.787	76.61	1.701	1.7	3.618	6.24	45.23	45.66
	Equiv. Refl.: (11,-9,0), (-2,11,0), (-2,-9,0), (-9,11,0), (-9,-2,0)								
Quartz	(4,0,-12)	14.947	79.54	1.691	1.7	2.807	4.89	35.09	35.43
	Equiv. Refl.: (4,-4,12), (-4,0,12), (-4,4,-12)								
Quartz	(0,4,12)	14.947	79.54	1.688	1.7	2.807	4.88	35.09	35.43
	Equiv. Refl.: (0,-4,-12)								
Sapph	(3,6,18)	14.71	75.42	1.684	1.7	3.954	6.84	49.43	49.9
	Equiv. Refl.: (3,6,-18), (3,-9,18), (3,-9,-18), (6,3,18), (6,3,-18), (6,-9,18), (6,-9,-18), (9,-3,18), (9,-3,-18), (9,-6,18), (9,-6,-18), (-3,9,18), (-3,9,-18), (-3,-6,18), (-3,-6,-18), (-6,9,18), (-6,9,-18), (-6,-3,18), (-6,-3,-18), (-9,3,18), (-9,3,-18), (-9,6,18), (-9,6,-18)								
Quartz	(2,5,10)	14.641	74.41	1.668	1.7	4.241	7.05	53.01	53.48
	Equiv. Refl.: (2,-7,-10), (-7,2,10), (-7,5,-10)								
Quartz	(5,2,-10)	14.641	74.41	1.667	1.7	4.241	7.05	53.01	53.48
	Equiv. Refl.: (5,-7,10)								
Quartz	(7,-2,-10)	14.641	74.41	1.64	1.7	4.241	7.05	53.01	53.48
	Equiv. Refl.: (7,-5,10)								
Quartz	(-2,7,10)	14.641	74.41	1.639	1.7	4.241	7.05	53.01	53.48
	Equiv. Refl.: (-2,-5,-10), (-5,7,-10), (-5,-2,10)								
Sapph	(4,7,0)	14.508	72.65	1.563	1.6	4.75	7.58	59.37	59.86
	Equiv. Refl.: (4,-11,0), (7,4,0), (7,-11,0), (11,-4,0), (11,-7,0), (-4,11,0), (-4,-7,0), (-7,11,0), (-7,-4,0), (-11,4,0), (-11,7,0)								
Quartz	(3,8,3)	14.756	76.12	1.54	1.6	3.755	5.86	46.93	47.3
	Equiv. Refl.: (3,-11,-3), (8,3,-3), (8,-11,3), (-11,3,3), (-11,8,-3)								

Ei = Cryst	15.2 Refl (h,k,l)	keV EB [keV]	ΘB [°]	IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(-8,11,-3) Equiv. Refl.: (-8,-3,3)	14.756	76.12	1.53	1.6	3.755	5.86	46.93	47.3
Quartz	(11,-3,-3) Equiv. Refl.: (11,-8,3), (-3,11,3), (-3,-8,-3)	14.756	76.12	1.529	1.6	3.755	5.86	46.93	47.3
Quartz	(2,-5,12) Equiv. Refl.: (-2,5,-12)	15.159	85.78	1.518	1.8	1.122	1.98	14.03	14.17
Quartz	(2,3,-12) Equiv. Refl.: (-2,-3,12)	15.159	85.78	1.517	1.8	1.122	1.98	14.03	14.17
Quartz	(3,-5,-12)	15.159	85.78	1.515	1.8	1.122	1.97	14.03	14.17
Quartz	(3,2,12) Equiv. Refl.: (-3,5,12)	15.159	85.78	1.514	1.8	1.122	1.97	14.03	14.17
Quartz	(-3,-2,-12)	15.159	85.78	1.513	1.8	1.122	1.97	14.03	14.17
Quartz	(5,-2,12) Equiv. Refl.: (5,-3,-12), (-5,2,-12), (-5,3,12)	15.159	85.78	1.51	1.8	1.122	1.97	14.03	14.17
Quartz	(0,1,-13) Equiv. Refl.: (0,-1,13)	14.982	80.29	1.504	1.6	2.601	4.09	32.51	32.77
Quartz	(1,0,13) Equiv. Refl.: (-1,0,-13)	14.982	80.29	1.502	1.6	2.601	4.09	32.51	32.77
Quartz	(1,-1,-13) Equiv. Refl.: (-1,1,13)	14.982	80.29	1.501	1.6	2.601	4.09	32.51	32.77
Quartz	(9,-4,8)	14.618	74.1	1.482	1.5	4.331	6.45	54.13	54.52
Quartz	(9,-5,-8) Equiv. Refl.: (-4,9,-8), (-4,-5,8)	14.618	74.1	1.481	1.5	4.331	6.45	54.13	54.52
Quartz	(-5,9,8) Equiv. Refl.: (-5,-4,-8)	14.618	74.1	1.479	1.5	4.331	6.44	54.13	54.52
Quartz	(11,-2,-2) Equiv. Refl.: (11,-9,2), (-2,11,2), (-2,-9,-2), (-9,11,-2), (-9,-2,2)	14.964	79.88	1.468	1.5	2.712	4.07	33.9	34.14
Quartz	(4,5,-8) Equiv. Refl.: (4,-9,8), (-9,4,-8), (-9,5,8)	14.618	74.1	1.46	1.5	4.331	6.44	54.13	54.52
Quartz	(5,4,8) Equiv. Refl.: (5,-9,-8)	14.618	74.1	1.458	1.5	4.331	6.44	54.13	54.52
Quartz	(-9,1,7)	14.813	77.05	1.447	1.5	3.496	5.19	43.7	44.01
Quartz	(1,8,7) Equiv. Refl.: (1,-9,-7), (-9,8,-7)	14.813	77.05	1.446	1.5	3.496	5.19	43.7	44.01
Quartz	(8,1,-7) Equiv. Refl.: (8,-9,7)	14.813	77.05	1.445	1.5	3.496	5.18	43.7	44.01
Quartz	(9,-1,-7) Equiv. Refl.: (9,-8,7), (-1,9,7)	14.813	77.05	1.444	1.5	3.496	5.19	43.7	44.01
Quartz	(-1,-8,-7) Equiv. Refl.: (-8,9,-7), (-8,-1,7)	14.813	77.05	1.443	1.5	3.496	5.19	43.7	44.01
Quartz	(10,-8,-6)	15.023	81.24	1.436	1.5	2.343	3.52	29.28	29.49
Quartz	(10,-2,6) Equiv. Refl.: (-2,10,-6), (-2,-8,6)	15.023	81.24	1.435	1.5	2.343	3.52	29.28	29.49
Quartz	(-8,10,6) Equiv. Refl.: (-8,-2,-6)	15.023	81.24	1.434	1.5	2.343	3.52	29.28	29.49
Quartz	(0,6,-10) Equiv. Refl.: (0,-6,10), (6,0,10), (6,-6,-10), (-6,0,-10), (-6,6,10)	14.422	71.59	1.423	1.4	5.061	7.25	63.26	63.67
Quartz	(2,9,2) Equiv. Refl.: (2,-11,-2), (9,2,-2), (9,-11,2)	14.964	79.88	1.397	1.5	2.712	4.07	33.9	34.14
Quartz	(-11,2,2) Equiv. Refl.: (-11,9,-2)	14.964	79.88	1.396	1.5	2.712	4.07	33.9	34.14

Ei =	15.2	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[°]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Quartz	(2,8,-6)	15.023	81.24	1.39	1.5	2.343	3.52	29.28	29.49
	Equiv. Refl.: (2,-10,6), (-10,2,-6), (-10,8,6)								
Quartz	(8,2,6)	15.023	81.24	1.388	1.5	2.343	3.52	29.28	29.49
	Equiv. Refl.: (8,-10,-6)								
Quartz	(0,10,3)	14.971	80.04	1.385	1.5	2.671	3.9	33.38	33.61
	Equiv. Refl.: (0,-10,-3)								
Quartz	(10,0,-3)	14.971	80.04	1.384	1.5	2.671	3.89	33.38	33.61
	Equiv. Refl.: (10,-10,3), (-10,0,3), (-10,10,-3)								
Sapph	(0,7,-22)	14.871	78.07	1.381	1.5	3.213	4.72	40.16	40.44
	Equiv. Refl.: (0,-7,22), (7,0,22), (7,-7,-22), (-7,0,-22), (-7,7,22)								
LiNbO3	(1,1,33)	14.952	79.64	1.379	2	2.779	5.42	34.74	35.16
	Equiv. Refl.: (1,1,-33), (1,-2,33), (1,-2,-33), (2,-1,33), (2,-1,-33), (-1,2,33), (-1,2,-33), (-1,-1,33), (-1,-1,-33), (-2,1,33), (-2,1,-33)								
Quartz	(-10,1,3)	14.318	70.39	1.376	1.4	5.415	7.42	67.69	68.1
	Equiv. Refl.: (-10,9,-3)								
Quartz	(1,9,3)	14.318	70.39	1.375	1.4	5.415	7.41	67.69	68.1
	Equiv. Refl.: (1,-10,-3), (9,1,-3), (9,-10,3)								
Quartz	(10,-1,-3)	14.318	70.39	1.348	1.4	5.415	7.42	67.69	68.1
	Equiv. Refl.: (10,-9,3), (-1,10,3), (-1,-9,-3), (-9,10,-3), (-9,-1,3)								
Quartz	(9,2,3)	15.182	87.2	1.326	1.7	0.742	1.26	9.28	9.37
	Equiv. Refl.: (9,-11,-3), (-11,2,-3), (-11,9,3)								
Quartz	(2,9,-3)	15.182	87.2	1.325	1.7	0.742	1.26	9.28	9.37
	Equiv. Refl.: (2,-11,3)								
Sapph	(4,7,6)	14.788	76.63	1.307	1.4	3.613	4.99	45.16	45.43
	Equiv. Refl.: (4,7,-6), (4,-11,6), (4,-11,-6), (7,4,6), (7,4,-6), (7,-11,6), (7,-11,-6), (11,-4,6), (11,-4,-6), (11,-7,6), (11,-7,-6), (-4,11,6), (-4,11,-6), (-4,-7,6), (-4,-7,-6), (-7,11,6), (-7,11,-6), (-7,-4,6), (-7,-4,-6), (-11,4,6), (-11,4,-6), (-11,7,6), (-11,7,-6)								
Quartz	(11,-9,-3)	15.182	87.2	1.305	1.7	0.742	1.26	9.28	9.37
Quartz	(11,-2,3)	15.182	87.2	1.304	1.7	0.742	1.26	9.28	9.37
	Equiv. Refl.: (-9,11,3)								
Quartz	(5,-2,-12)	15.159	85.78	1.303	1.5	1.122	1.71	14.03	14.13
	Equiv. Refl.: (5,-3,12), (-2,11,-3), (-2,-9,3), (-9,-2,-3)								
Quartz	(-3,-2,12)	15.159	85.78	1.294	1.5	1.122	1.7	14.03	14.13
Quartz	(-2,-3,-12)	15.159	85.78	1.293	1.5	1.122	1.7	14.03	14.13
	Equiv. Refl.: (-3,5,-12)								
Quartz	(-2,5,12)	15.159	85.78	1.292	1.5	1.122	1.69	14.03	14.13
Quartz	(7,-7,-9)	14.512	72.69	1.29	1.3	4.737	6.21	59.22	59.54
	Equiv. Refl.: (-7,7,9)								
Quartz	(0,7,-9)	14.512	72.69	1.289	1.3	4.737	6.2	59.22	59.54
	Equiv. Refl.: (0,-7,9), (7,0,9), (-7,0,-9)								
Quartz	(0,7,9)	14.512	72.69	1.271	1.3	4.737	6.12	59.22	59.53
	Equiv. Refl.: (0,-7,-9)								
Quartz	(7,0,-9)	14.512	72.69	1.27	1.3	4.737	6.12	59.22	59.53
	Equiv. Refl.: (7,-7,9), (-7,0,9), (-7,7,-9)								
Sapph	(0,5,-26)	14.511	72.69	1.268	1.3	4.738	6.24	59.22	59.55
	Equiv. Refl.: (0,-5,26), (5,0,26), (5,-5,-26), (-5,0,-26), (-5,5,26)								
Quartz	(8,-3,9)	14.512	72.69	1.252	1.3	4.737	5.96	59.22	59.51
	Equiv. Refl.: (8,-5,-9)								
Quartz	(-3,8,-9)	14.512	72.69	1.251	1.3	4.737	5.95	59.22	59.51
	Equiv. Refl.: (-3,-5,9), (-5,8,9), (-5,-3,-9)								

Ei = Cryst	15.2 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(0,9,-5)	14.312	70.32	1.243	1.3	5.436	6.83	67.95	68.3
	Equiv. Refl.: (0,-9,5), (9,0,5), (9,-9,-5), (-9,0,-5), (-9,9,5)								
Quartz	(-5,2,12)	15.159	85.78	1.24	1.5	1.122	1.71	14.03	14.13
	Equiv. Refl.: (-5,3,-12)								
Quartz	(3,2,-12)	15.159	85.78	1.231	1.5	1.122	1.7	14.03	14.13
	Equiv. Refl.: (3,8,-1), (3,-11,1), (8,3,1), (8,-11,-1), (-11,3,-1), (-11,8,1)								
Sapph	(1,3,28)	14.423	71.6	1.23	1.3	5.056	6.44	63.2	63.53
	Equiv. Refl.: (1,-4,-28), (3,1,-28), (3,-4,28), (4,-1,-28), (4,-3,28), (-1,4,28), (-1,-3,-28), (-3,4,-28), (-3,-1,28) (-4,1,28), (-4,3,-28), (2,3,12), (3,-5,12)								
Quartz	(2,-5,-12)	15.159	85.78	1.229	1.5	1.122	1.69	14.03	14.13
Quartz	(3,-1,12)	14.294	70.12	1.223	1.2	5.498	6.8	68.72	69.05
	Equiv. Refl.: (3,-2,-12), (-2,3,12), (-2,-1,-12)								
Quartz	(2,1,12)	14.294	70.12	1.222	1.2	5.498	6.8	68.72	69.05
	Equiv. Refl.: (2,-3,-12), (-1,3,-12), (-1,-2,12), (-3,1,-12), (-3,2,12)								
Quartz	(1,2,-12)	14.294	70.12	1.221	1.2	5.498	6.79	68.72	69.05
	Equiv. Refl.: (1,-3,12)								
Quartz	(-8,3,-9)	14.512	72.69	1.217	1.3	4.737	5.96	59.22	59.51
	Equiv. Refl.: (-8,5,9)								
Quartz	(3,5,-9)	14.512	72.69	1.216	1.3	4.737	5.95	59.22	59.51
	Equiv. Refl.: (3,-8,9), (5,3,9), (5,-8,-9)								
Quartz	(4,7,-4)	14.781	76.51	1.208	1.2	3.646	4.5	45.57	45.79
	Equiv. Refl.: (4,-11,4), (-11,4,-4), (-11,7,4)								
Quartz	(7,4,4)	14.781	76.51	1.207	1.2	3.646	4.5	45.57	45.79
	Equiv. Refl.: (7,-11,-4)								
Quartz	(2,2,12)	14.66	74.69	1.206	1.2	4.162	5.05	52.02	52.27
	Equiv. Refl.: (2,-4,-12)								
Quartz	(-4,2,12)	14.66	74.69	1.205	1.2	4.162	5.04	52.02	52.27
	Equiv. Refl.: (-4,2,-12)								
Quartz	(2,2,-12)	14.66	74.69	1.204	1.2	4.162	5.04	52.02	52.27
	Equiv. Refl.: (2,-4,12)								
Quartz	(11,-3,1)	14.395	71.27	1.201	1.2	5.152	6.36	64.41	64.72
	Equiv. Refl.: (11,-8,-1), (-3,11,-1), (-3,-8,1), (-8,11,1), (-8,-3,-1)								
Quartz	(5,6,-4)	14.636	74.35	1.191	1.2	4.258	5.21	53.23	53.48
	Equiv. Refl.: (5,-11,4)								
Quartz	(6,5,4)	14.636	74.35	1.19	1.2	4.258	5.21	53.23	53.48
	Equiv. Refl.: (-5,11,-4), (-5,-6,4), (-11,5,-4), (-11,6,4)								
Quartz	(6,-11,-4)	14.636	74.35	1.189	1.2	4.258	5.21	53.23	53.48
	Equiv. Refl.: (11,-5,4), (11,-6,-4), (-6,11,4), (-6,-5,-4)								
Quartz	(3,8,-3)	14.756	76.12	1.174	1.2	3.755	4.47	46.93	47.15
	Equiv. Refl.: (8,3,3), (8,-11,-3), (-11,3,-3), (-11,8,3)								
Quartz	(3,-11,3)	14.756	76.12	1.173	1.2	3.755	4.47	46.93	47.15
Quartz	(10,-1,-5)	15.036	81.56	1.172	1.2	2.254	2.8	28.18	28.32
	Equiv. Refl.: (10,-9,5)								
Quartz	(-9,10,-5)	15.036	81.56	1.171	1.2	2.254	2.8	28.18	28.32
	Equiv. Refl.: (-9,-1,5)								
Quartz	(-1,10,5)	15.036	81.56	1.17	1.2	2.254	2.8	28.18	28.32
	Equiv. Refl.: (-1,-9,-5)								
Quartz	(-4,11,-4)	14.781	76.51	1.168	1.2	3.646	4.5	45.57	45.79
	Equiv. Refl.: (-4,-7,4)								

Ei = Cryst	15.2 Refl (h,k,l)	keV EB [keV]	ØB [°]	∫ IR dØ [µrad]	Width [µrad]	Ei cotØ [meV/µrad]	ΔE [meV]	ΔEg 2m, 50µm [meV]	ΔEt 2m, 50µm [meV]
Quartz	(11,-4,4)	14.781	76.51	1.167	1.2	3.646	4.5	45.57	45.79
	Equiv. Refl.: (11,-7,-4), (-7,11,4), (-7,-4,-4)								
Quartz	(4,-2,12)	14.66	74.69	1.148	1.2	4.162	5.04	52.02	52.27
	Equiv. Refl.: (-2,4,12), (-2,-2,-12)								
Quartz	(4,-2,-12)	14.66	74.69	1.147	1.2	4.162	5.04	52.02	52.27
Quartz	(-2,4,-12)	14.66	74.69	1.146	1.2	4.162	5.04	52.02	52.27
	Equiv. Refl.: (-2,-2,12)								
Sapph	(4,7,9)	15.131	84.53	1.138	1.4	1.457	2.03	18.21	18.32
	Equiv. Refl.: (4,7,-9), (4,-11,9), (4,-11,-9), (7,4,9), (7,4,-9), (7,-11,9), (7,-11,-9), (11,-4,9), (11,-4,-9), (11,-7,9), (11,-7,-9), (-4,11,9), (-4,11,-9), (-4,-7,9), (-4,-7,-9), (-7,11,9), (-7,11,-9), (-7,-4,9), (-7,-4,-9), (-11,4,9), (-11,4,-9), (-11,7,9), (-11,7,-9)								
Sapph	(1,9,-8)	14.851	77.69	1.133	1.2	3.317	4.07	41.46	41.66
	Equiv. Refl.: (1,-10,8), (9,1,8), (9,-10,-8), (10,-1,8), (10,-9,-8), (-1,10,-8), (-1,-9,8), (-9,10,8), (-9,-1,-8), (-10,1,-8), (-10,9,8), (0,8,8), (0,-8,-8)								
Quartz	(8,0,-8)	14.834	77.41	1.132	1.2	3.395	4.04	42.44	42.63
	Equiv. Refl.: (8,-8,8), (-8,0,8), (-8,8,-8)								
Quartz	(11,-3,2)	14.532	72.95	1.131	1.1	4.662	5.32	58.27	58.52
	Equiv. Refl.: (11,-8,-2), (-3,11,-2), (-3,-8,2), (-8,11,2), (-8,-3,-2)								
Quartz	(-8,11,3)	14.756	76.12	1.116	1.2	3.755	4.47	46.93	47.15
	Equiv. Refl.: (-8,-3,-3)								
Quartz	(11,-3,3)	14.756	76.12	1.115	1.2	3.755	4.47	46.93	47.15
	Equiv. Refl.: (11,-8,-3), (-3,11,-3), (-3,-8,3)								
Quartz	(-10,1,5)	15.036	81.56	1.098	1.2	2.254	2.8	28.18	28.32
	Equiv. Refl.: (-10,9,-5)								
Quartz	(9,1,-5)	15.036	81.56	1.097	1.2	2.254	2.8	28.18	28.32
	Equiv. Refl.: (9,-10,5)								
Quartz	(1,9,5)	15.036	81.56	1.096	1.2	2.254	2.8	28.18	28.32
	Equiv. Refl.: (1,-10,-5)								
Quartz	(3,8,-2)	14.532	72.95	1.091	1.1	4.662	5.32	58.27	58.52
	Equiv. Refl.: (3,-11,2), (8,3,2), (8,-11,-2), (-11,3,-2), (-11,8,2)								
Quartz	(-4,8,9)	14.438	71.78	1.08	1.1	5.002	5.35	62.53	62.76
	Equiv. Refl.: (-4,-4,-9)								
Quartz	(8,-4,-9)	14.438	71.78	1.079	1.1	5.002	5.35	62.53	62.76
	Equiv. Refl.: (-4,8,-9)								
Quartz	(8,-4,9)	14.438	71.78	1.078	1.1	5.002	5.35	62.53	62.76
	Equiv. Refl.: (-4,-4,9)								
Sapph	(2,6,-22)	15.098	83.36	1.076	1.3	1.77	2.27	22.12	22.24
	Equiv. Refl.: (2,-8,22), (6,2,22), (6,-8,-22), (8,-2,22), (8,-6,-22), (-2,8,-22), (-2,-6,22), (-6,8,22), (-6,-2,-22), (-8,2,-22), (-8,6,22)								
Quartz	(7,-3,10)	14.495	72.48	1.075	1.1	4.798	5.16	59.97	60.19
	Equiv. Refl.: (7,-4,-10)								
Quartz	(-4,7,10)	14.495	72.48	1.074	1.1	4.798	5.15	59.97	60.19
	Equiv. Refl.: (-4,-3,-10)								
Quartz	(-3,7,-10)	14.495	72.48	1.073	1.1	4.798	5.15	59.97	60.19
	Equiv. Refl.: (-3,-4,10)								
Quartz	(1,9,-3)	14.318	70.39	1.028	1	5.415	5.58	67.69	67.92
	Equiv. Refl.: (1,-10,3), (9,1,3), (9,-10,-3), (-10,1,-3), (-10,9,3)								
Sapph	(4,5,-19)	14.842	77.55	1.019	1.1	3.356	3.75	41.95	42.12
	Equiv. Refl.: (4,-9,19), (5,4,19), (5,-9,-19), (9,-4,19), (9,-5,-19), (-4,9,-19), (-4,-5,19), (-5,9,19), (-5,-4,-19), (-9,4,-19), (-9,5,19)								

Ei =	15.2	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(3,6,8)	14.763	76.22	1.014	1	3.727	3.76	46.58	46.74
	Equiv. Refl.: (3,-9,-8)								
Sapph	(1,4,27)	14.615	74.05	1.013	1.1	4.343	4.7	54.29	54.49
	Equiv. Refl.: (1,4,-27), (1,-5,27), (1,-5,-27), (4,1,27), (4,1,-27), (4,-5,27), (4,-5,-27), (5,-1,27), (5,-1,-27), (5,-4,27), (5,-4,-27), (-1,5,27), (-1,5,-27), (-1,-4,27), (-1,-4,-27), (-4,5,27), (-4,5,-27), (-4,-1,27), (-4,-1,-27), (-5,1,27), (-5,1,-27), (-5,4,27), (-5,4,-27), (6,3,-8), (6,-9,8), (7,-1,-10)								
Quartz	(7,-6,10)	14.928	79.14	1.012	1.1	2.915	3.11	36.43	36.57
	Equiv. Refl.: (-6,7,-10), (-6,-1,10), (-7,3,-10), (-7,4,10), (-9,3,8), (-9,6,-8)								
Quartz	(3,4,-10)	14.495	72.48	1.011	1.1	4.798	5.15	59.97	60.19
	Equiv. Refl.: (3,-7,10), (4,3,10), (4,-7,-10), (-1,7,10), (-1,-6,-10)								
Sapph	(2,7,16)	14.49	72.42	1.003	1.1	4.816	5.12	60.21	60.42
	Equiv. Refl.: (2,-9,-16), (7,2,-16), (7,-9,16), (9,-2,-16), (9,-7,16), (-2,9,16), (-2,-7,-16), (-7,9,-16), (-7,-2,16), (-9,2,16), (-9,7,-16)								
Quartz	(4,4,9)	14.438	71.78	1.002	1.1	5.002	5.35	62.53	62.76
	Equiv. Refl.: (4,-8,-9)								
Quartz	(4,4,-9)	14.438	71.78	1.001	1.1	5.002	5.35	62.53	62.76
	Equiv. Refl.: (4,-8,9), (-8,4,9), (-8,4,-9)								
LiNbO3	(2,4,-29)	14.91	78.79	0.998	1.5	3.012	4.57	37.65	37.93
	Equiv. Refl.: (2,-6,29), (4,2,29), (4,-6,-29), (6,-2,29), (6,-4,-29), (-2,6,-29), (-2,-4,29), (-4,6,29), (-4,-2,-29), (-6,2,-29), (-6,4,29)								
Quartz	(9,-2,-7)	14.377	71.06	0.984	1	5.217	5.23	65.21	65.42
	Equiv. Refl.: (9,-7,7)								
Quartz	(-7,9,-7)	14.377	71.06	0.983	1	5.217	5.23	65.21	65.42
	Equiv. Refl.: (-7,-2,7)								
Quartz	(-2,9,7)	14.377	71.06	0.982	1	5.217	5.22	65.21	65.42
	Equiv. Refl.: (-2,-7,-7), (-9,10,3), (-9,-1,-3)								
Quartz	(10,-1,3)	14.318	70.39	0.981	1	5.415	5.58	67.69	67.92
	Equiv. Refl.: (10,-9,-3), (-1,10,-3), (-1,-9,3)								
LiNbO3	(6,6,9)	15	80.7	0.974	1.6	2.488	3.93	31.1	31.35
	Equiv. Refl.: (6,6,-9), (6,-12,9), (6,-12,-9), (12,-6,9), (12,-6,-9), (-6,12,9), (-6,12,-9), (-6,-6,9), (-6,-6,-9), (-12,6,9), (-12,6,-9)								
Quartz	(6,-8,-9)	14.729	75.7	0.973	1	3.873	3.83	48.41	48.56
Quartz	(2,6,-9)	14.729	75.7	0.972	1	3.873	3.82	48.41	48.56
	Equiv. Refl.: (2,-8,9), (6,2,9), (-8,2,-9), (-8,6,9)								
Quartz	(-7,1,10)	14.928	79.14	0.963	1.1	2.915	3.11	36.43	36.57
Sapph	(2,4,-26)	14.743	75.92	0.962	1	3.812	3.99	47.65	47.82
	Equiv. Refl.: (2,-6,26), (4,2,26), (4,-6,-26), (6,-2,26), (6,-4,-26), (-2,6,-26), (-2,-4,26), (-4,6,26), (-4,-2,-26), (-6,2,-26), (-6,4,26), (1,6,10), (1,-7,-10), (6,1,-10), (6,-7,10), (-7,6,-10), (-9,2,7), (-9,7,-7)								
Quartz	(7,2,-7)	14.377	71.06	0.961	1	5.217	5.23	65.21	65.42
	Equiv. Refl.: (7,-9,7)								
Quartz	(2,7,7)	14.377	71.06	0.96	1	5.217	5.22	65.21	65.42
	Equiv. Refl.: (2,-9,-7)								
Quartz	(-5,6,11)	15	80.7	0.933	1	2.49	2.57	31.13	31.23
	Equiv. Refl.: (-5,-1,-11)								
Quartz	(6,-1,11)	15	80.7	0.93	1	2.49	2.57	31.13	31.23
	Equiv. Refl.: (6,-5,-11), (-1,6,-11), (-1,-5,11)								
Sapph	(1,9,4)	14.478	72.27	0.929	1	4.861	4.82	60.76	60.95
	Equiv. Refl.: (1,-10,-4), (9,1,-4), (9,-10,4), (10,-1,-4), (10,-9,4), (-1,10,4), (-1,-9,-4), (-9,10,-4), (-9,-1,4), (-10,1,4), (-10,9,-4)								
Quartz	(5,1,11)	15	80.7	0.928	1	2.49	2.57	31.13	31.23
	Equiv. Refl.: (5,-6,-11)								

Ei = Cryst	15.2 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(1,5,-11)	15	80.7	0.925	1	2.49	2.57	31.13	31.23
	Equiv. Refl.: (1,-6,11), (-6,1,-11), (-6,5,11)								
Quartz	(11,-2,-1)	14.831	77.35	0.909	1	3.411	3.26	42.63	42.76
	Equiv. Refl.: (11,-9,1), (-2,11,1), (-2,-9,-1), (-9,11,-1), (-9,-2,1)								
Sapph	(5,6,-7)	14.735	75.79	0.908	1	3.849	3.83	48.11	48.26
	Equiv. Refl.: (5,-11,7), (6,5,7), (6,-11,-7), (11,-5,7), (11,-6,-7), (-5,11,-7), (-5,-6,7), (-6,11,7), (-6,-5,-7), (-11,5,-7), (-11,6,7)								
Quartz	(6,-2,11)	14.786	76.6	0.903	0.9	3.621	3.37	45.26	45.39
	Equiv. Refl.: (6,-4,-11)								
Quartz	(10,-5,6)	14.373	71.01	0.901	0.9	5.231	4.88	65.39	65.57
	Equiv. Refl.: (10,-5,-6), (-2,6,-11), (-2,-4,11), (-5,10,6), (-5,10,-6), (-5,-5,6), (-5,-5,-6)								
Quartz	(5,5,6)	14.373	71.01	0.9	0.9	5.231	4.89	65.39	65.57
	Equiv. Refl.: (5,5,-6), (5,-10,6), (5,-10,-6), (-10,5,6), (-10,5,-6)								
Quartz	(-4,6,11)	14.786	76.6	0.899	0.9	3.621	3.36	45.26	45.39
	Equiv. Refl.: (-4,-2,-11)								
Quartz	(8,-2,9)	14.729	75.7	0.896	1	3.873	3.83	48.41	48.56
	Equiv. Refl.: (-2,8,-9), (-2,-6,9), (-6,8,9), (-6,-2,-9)								
Quartz	(8,-6,-9)	14.729	75.7	0.895	1	3.873	3.82	48.41	48.56
Quartz	(-3,9,8)	14.763	76.22	0.892	1	3.727	3.76	46.58	46.74
	Equiv. Refl.: (-3,-6,-8)								
Quartz	(9,-6,8)	14.763	76.22	0.891	1	3.727	3.75	46.58	46.74
	Equiv. Refl.: (-6,9,-8), (-6,-3,8)								
Quartz	(9,-3,-8)	14.763	76.22	0.89	1	3.727	3.75	46.58	46.74
Quartz	(-6,11,5)	15.036	81.56	0.884	1	2.254	2.23	28.18	28.27
	Equiv. Refl.: (-6,-5,-5)								
Quartz	(11,-5,5)	15.036	81.56	0.883	1	2.254	2.23	28.18	28.27
	Equiv. Refl.: (11,-6,-5), (-5,11,-5), (-5,-6,5)								
Quartz	(7,-3,-10)	14.495	72.48	0.878	0.9	4.798	4.41	59.97	60.13
	Equiv. Refl.: (-7,3,10), (-7,4,-10)								
Quartz	(4,3,-10)	14.495	72.48	0.877	0.9	4.798	4.4	59.97	60.13
	Equiv. Refl.: (4,-7,10), (7,-4,10), (-4,7,-10), (-4,-3,10)								
Quartz	(3,4,10)	14.495	72.48	0.876	0.9	4.798	4.4	59.97	60.13
	Equiv. Refl.: (3,-7,-10), (-3,7,10), (-3,-4,-10)								
Quartz	(2,9,1)	14.831	77.35	0.865	1	3.411	3.26	42.63	42.76
	Equiv. Refl.: (2,-11,-1), (9,2,-1), (9,-11,1), (-11,2,1), (-11,9,-1)								
Quartz	(-8,11,-2)	14.532	72.95	0.862	0.9	4.662	4.05	58.27	58.42
	Equiv. Refl.: (-8,-3,2)								
Quartz	(11,-3,-2)	14.532	72.95	0.861	0.9	4.662	4.05	58.27	58.42
	Equiv. Refl.: (11,-8,2), (-3,11,2), (-3,-8,-2)								
Quartz	(6,5,5)	15.036	81.56	0.86	1	2.254	2.23	28.18	28.27
	Equiv. Refl.: (6,-11,-5), (-11,6,5)								
Quartz	(5,6,-5)	15.036	81.56	0.859	1	2.254	2.23	28.18	28.27
	Equiv. Refl.: (5,-11,5), (-11,5,-5)								
Quartz	(-6,2,-11)	14.786	76.6	0.834	0.9	3.621	3.37	45.26	45.39
	Equiv. Refl.: (-6,4,11)								
Quartz	(2,4,-11)	14.786	76.6	0.833	0.9	3.621	3.37	45.26	45.39
	Equiv. Refl.: (2,-6,11)								

Ei = Cryst	15.2 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
LiNbO3	(1,6,25)	14.426	71.64	0.832	1.2	5.044	5.91	63.06	63.33
Equiv. Refl.: (1,-7,-25), (6,1,-25), (6,-7,25), (7,-1,-25), (7,-6,25), (-1,7,25), (-1,-6,-25), (-6,7,-25), (-6,-1,25), (-7,1,25), (-7,6,-25), (2,6,20), (2,-8,-20), (6,2,-20), (6,-8,20), (8,-2,-20), (8,-6,20), (-2,8,20), (-2,-6,-20), (-6,8,-20), (-6,-2,20), (-8,2,20), (-8,6,-20), (2,9,-1), (2,-11,1), (9,2,1), (9,-11,-1), (-11,2,-1), (-11,9,1)									
Quartz	(4,2,11)	14.786	76.6	0.83	0.9	3.621	3.36	45.26	45.39
Equiv. Refl.: (4,-6,-11)									
Quartz	(2,5,-10)	14.641	74.41	0.826	0.9	4.241	3.7	53.01	53.14
Equiv. Refl.: (2,-7,10), (5,2,10), (5,-7,-10)									
Quartz	(3,8,1)	14.395	71.27	0.825	0.8	5.152	4.38	64.41	64.55
Equiv. Refl.: (3,-11,-1), (8,3,-1), (8,-11,1), (-7,2,-10), (-11,3,1), (-11,8,-1)									
Quartz	(-7,5,10)	14.641	74.41	0.824	0.9	4.241	3.7	53.01	53.14
LiNbO3	(4,6,19)	14.803	76.88	0.819	1.3	3.544	4.48	44.29	44.52
Equiv. Refl.: (4,-10,-19), (6,4,-19), (6,-10,19), (10,-4,-19), (10,-6,19), (-4,10,19), (-4,-6,-19), (-6,10,-19), (-6,-4,19), (-10,4,19), (-10,6,-19), (-3,10,6), (-3,-7,-6)									
Quartz	(10,-3,-6)	14.665	74.75	0.818	0.8	4.143	3.37	51.78	51.89
Equiv. Refl.: (10,-7,6)									
Quartz	(-2,7,-10)	14.641	74.41	0.817	0.9	4.241	3.71	53.01	53.14
Equiv. Refl.: (-5,7,10), (-5,-2,-10), (-7,10,-6), (-7,-3,6)									
Quartz	(7,-2,10)	14.641	74.41	0.816	0.9	4.241	3.7	53.01	53.14
Equiv. Refl.: (-2,-5,10)									
Quartz	(7,-5,-10)	14.641	74.41	0.815	0.9	4.241	3.7	53.01	53.14
Quartz	(8,0,8)	14.834	77.41	0.812	0.9	3.395	3	42.44	42.54
Equiv. Refl.: (8,-8,-8), (-8,0,-8), (-8,8,8)									
Quartz	(0,8,-8)	14.834	77.41	0.81	0.9	3.395	3	42.44	42.54
Equiv. Refl.: (0,-8,8)									
Quartz	(2,7,-7)	14.377	71.06	0.803	0.8	5.217	4.35	65.21	65.35
Equiv. Refl.: (2,-9,7)									
LiNbO3	(4,7,15)	14.993	80.54	0.802	1.4	2.532	3.49	31.65	31.84
Equiv. Refl.: (4,7,-15), (4,-11,15), (4,-11,-15), (7,4,15), (7,4,-15), (7,-11,15), (7,-11,-15), (11,-4,15), (11,-4,-15), (11,-7,15), (11,-7,-15), (-4,11,15), (-4,11,-15), (-4,-7,15), (-4,-7,-15), (-7,11,15), (-7,11,-15), (-7,-4,15), (-7,-4,-15), (-11,4,15), (-11,4,-15), (-11,7,15), (-11,7,-15), (7,2,7), (7,-9,-7), (-6,10,-6), (-6,-4,6), (-9,2,-7), (-9,7,7)									
Quartz	(10,-4,-6)	14.446	71.88	0.801	0.8	4.973	4.12	62.17	62.3
Equiv. Refl.: (10,-6,6), (-4,10,6), (-4,-6,-6)									
Sapph	(5,6,5)	14.548	73.16	0.798	0.9	4.6	4.01	57.5	57.64
Equiv. Refl.: (5,-11,-5), (6,5,-5), (6,-11,5), (11,-5,-5), (11,-6,5), (-5,11,5), (-5,-6,-5), (-6,11,-5), (-6,-5,5), (-11,5,5), (-11,6,-5)									
Quartz	(3,-1,-12)	14.294	70.12	0.796	0.8	5.498	4.5	68.72	68.87
Equiv. Refl.: (3,-2,12)									
Quartz	(11,-3,-1)	14.395	71.27	0.795	0.8	5.152	4.38	64.41	64.55
Equiv. Refl.: (11,-8,1), (-1,3,12), (-1,-2,-12), (-3,11,1), (-3,-8,-1), (-8,11,-1), (-8,-3,1)									
Quartz	(-2,3,-12)	14.294	70.12	0.794	0.8	5.498	4.49	68.72	68.87
Equiv. Refl.: (-2,-1,12)									
Quartz	(3,8,2)	14.532	72.95	0.789	0.9	4.662	4.05	58.27	58.42
Equiv. Refl.: (3,-11,-2), (8,3,-2), (8,-11,2), (-11,3,2), (-11,8,-2)									
Quartz	(9,-2,7)	14.377	71.06	0.787	0.8	5.217	4.35	65.21	65.35
Equiv. Refl.: (9,-7,-7), (-2,9,-7), (-2,-7,7), (-7,9,7), (-7,-2,-7)									
Sapph	(4,6,16)	15.177	86.82	0.786	1.2	0.845	1.02	10.56	10.61
Equiv. Refl.: (4,-10,-16), (6,4,-16), (6,-10,16), (10,-4,-16), (10,-6,16), (-4,10,16), (-4,-6,-16), (-6,10,-16), (-6,-4,16), (-10,4,16), (-10,6,-16)									

Ei =	15.2	keV						ΔE_g	ΔE_t
Cryst	Ref	EB	Θ_B	$\int IR d\Theta$	Width	$E_i \cot\Theta$	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(3,9,3)	15.1	83.43	0.784	1.5	1.751	2.71	21.89	22.05
	Equiv. Refl.: (3,9,-3), (3,-12,3), (3,-12,-3), (9,3,3), (9,3,-3), (9,-12,3), (9,-12,-3), (12,-3,3), (12,-3,-3) (12,-9,3), (12,-9,-3), (-3,12,3), (-3,12,-3), (-3,-9,3), (-3,-9,-3), (-9,12,3), (-9,12,-3), (-9,-3,3) (-9,-3,-3), (-12,3,3), (-12,3,-3), (-12,9,3), (-12,9,-3)								
Quartz	(11,-2,1)	14.831	77.35	0.781	0.9	3.411	2.99	42.63	42.74
	Equiv. Refl.: (11,-9,-1), (-2,11,-1), (-2,-9,1)								
Quartz	(-9,11,1)	14.831	77.35	0.78	0.9	3.411	2.99	42.63	42.74
	Equiv. Refl.: (-9,-2,-1)								
Quartz	(6,4,-6)	14.446	71.88	0.773	0.8	4.973	4.13	62.17	62.31
	Equiv. Refl.: (6,-10,6)								
Quartz	(4,6,6)	14.446	71.88	0.772	0.8	4.973	4.12	62.17	62.3
	Equiv. Refl.: (4,-10,-6), (-10,4,6), (-10,6,-6)								
Quartz	(-3,1,12)	14.294	70.12	0.768	0.8	5.498	4.5	68.72	68.87
	Equiv. Refl.: (-3,2,-12)								
Quartz	(1,2,12)	14.294	70.12	0.767	0.8	5.498	4.5	68.72	68.87
	Equiv. Refl.: (1,-3,-12)								
Quartz	(2,1,-12)	14.294	70.12	0.766	0.8	5.498	4.49	68.72	68.87
	Equiv. Refl.: (2,-3,12)								
Quartz	(5,6,3)	14.318	70.39	0.765	0.8	5.415	4.32	67.69	67.83
	Equiv. Refl.: (5,-11,-3), (6,5,-3), (6,-11,3), (-11,5,3), (-11,6,-3)								
Sapph	(0,9,12)	14.701	75.28	0.757	0.8	3.992	3.38	49.9	50.02
	Equiv. Refl.: (0,9,-12), (0,-9,12), (0,-9,-12), (9,0,12), (9,0,-12), (9,-9,12), (9,-9,-12), (-9,0,12), (-9,0,-12) (-9,9,12), (-9,9,-12)								
Quartz	(11,-5,-3)	14.318	70.39	0.753	0.8	5.415	4.32	67.69	67.83
	Equiv. Refl.: (11,-6,3), (-5,11,3), (-5,-6,-3), (-6,11,-3), (-6,-5,3)								
Quartz	(8,2,-6)	15.023	81.24	0.751	0.8	2.343	1.96	29.28	29.35
	Equiv. Refl.: (8,-10,6)								
Quartz	(2,8,6)	15.023	81.24	0.75	0.8	2.343	1.96	29.28	29.35
	Equiv. Refl.: (2,-10,-6)								
Quartz	(-10,2,6)	15.023	81.24	0.749	0.8	2.343	1.95	29.28	29.35
	Equiv. Refl.: (-10,8,-6)								
Sapph	(5,6,-1)	14.359	70.85	0.732	0.8	5.277	4.21	65.97	66.1
	Equiv. Refl.: (5,-11,1), (6,5,1), (6,-11,-1), (11,-5,1), (11,-6,-1), (-5,11,-1), (-5,-6,1), (-6,11,1), (-6,-5,-1) (-11,5,-1), (-11,6,1)								
LiNbO3	(1,9,13)	14.482	72.32	0.728	1.1	4.844	5.2	60.55	60.77
	Equiv. Refl.: (1,-10,-13), (9,1,-13), (9,-10,13), (10,-1,-13), (10,-9,13), (-1,10,13), (-1,-9,-13), (-9,10,-13), (-9,-1,13) (-10,1,13), (-10,9,-13)								
Quartz	(-9,1,-7)	14.813	77.05	0.716	0.7	3.496	2.62	43.7	43.78
	Equiv. Refl.: (-9,8,7)								
Sapph	(1,5,-25)	14.579	73.56	0.715	0.8	4.484	3.56	56.05	56.17
	Equiv. Refl.: (1,-6,25), (5,1,25), (5,-6,-25), (6,-1,25), (6,-5,-25), (-1,6,-25), (-1,-5,25), (-5,6,25), (-5,-1,-25) (-6,1,-25), (-6,5,25), (1,8,-7), (1,-9,7)								
Quartz	(8,1,7)	14.813	77.05	0.714	0.7	3.496	2.62	43.7	43.78
	Equiv. Refl.: (8,-9,-7)								
Quartz	(10,-1,5)	15.036	81.56	0.71	0.8	2.254	1.79	28.18	28.24
	Equiv. Refl.: (10,-9,-5)								
Quartz	(-1,10,-5)	15.036	81.56	0.709	0.8	2.254	1.79	28.18	28.24
	Equiv. Refl.: (-1,-9,5), (-9,-1,-5)								
Sapph	(4,4,21)	14.46	72.05	0.708	0.8	4.924	3.84	61.54	61.66
	Equiv. Refl.: (4,4,-21), (4,-8,21), (4,-8,-21), (8,-4,21), (8,-4,-21), (-4,8,21), (-4,8,-21), (-4,-4,21), (-4,-4,-21) (-8,4,21), (-8,4,-21), (-9,10,5)								

Ei = Cryst	15.2 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
LiNbO3	(1,5,29)	15.103	83.53	0.701	1.5	1.723	2.5	21.54	21.68
Equiv. Refl.: (1,-6,-29), (5,1,-29), (5,-6,29), (6,-1,-29), (6,-5,29), (-1,6,29), (-1,-5,-29), (-5,6,-29), (-5,-1,29), (-6,1,29), (-6,5,-29)									
Quartz	(3,7,6)	14.665	74.75	0.7	0.8	4.143	3.37	51.78	51.89
Quartz	(3,-10,-6)	14.665	74.75	0.699	0.8	4.143	3.37	51.78	51.89
Equiv. Refl.: (7,-10,6), (-10,3,6)									
Quartz	(7,3,-6)	14.665	74.75	0.698	0.8	4.143	3.37	51.78	51.89
Equiv. Refl.: (-10,7,-6)									
Quartz	(-7,1,-10)	14.928	79.14	0.69	0.7	2.915	2.08	36.43	36.49
Quartz	(-7,6,10)	14.928	79.14	0.689	0.7	2.915	2.08	36.43	36.49
Quartz	(1,6,-10)	14.928	79.14	0.688	0.7	2.915	2.07	36.43	36.49
Equiv. Refl.: (6,-7,-10)									
Quartz	(1,-7,10)	14.928	79.14	0.687	0.7	2.915	2.07	36.43	36.49
Equiv. Refl.: (6,1,10)									
Sapph	(2,3,-28)	14.886	78.34	0.684	0.8	3.137	2.52	39.21	39.29
Equiv. Refl.: (2,-5,28), (3,2,28), (3,-5,-28), (5,-2,28), (5,-3,-28), (-2,5,-28), (-2,-3,28), (-3,5,28), (-3,-2,-28), (-5,2,-28), (-5,3,28), (-8,10,-6), (-8,-2,6)									
Quartz	(-2,10,6)	15.023	81.24	0.683	0.8	2.343	1.96	29.28	29.35
Equiv. Refl.: (-2,-8,-6)									
Quartz	(10,-2,-6)	15.023	81.24	0.682	0.8	2.343	1.95	29.28	29.35
Equiv. Refl.: (10,-8,6)									
Sapph	(1,1,30)	14.554	73.23	0.662	0.7	4.579	3.39	57.24	57.34
Equiv. Refl.: (1,1,-30), (1,-2,30), (1,-2,-30), (2,-1,30), (2,-1,-30), (-1,2,30), (-1,2,-30), (-1,-1,30), (-1,-1,-30), (-2,1,30), (-2,1,-30)									
Quartz	(8,-1,-8)	14.325	70.46	0.654	0.7	5.394	3.62	67.42	67.52
Equiv. Refl.: (8,-7,8), (-1,-7,-8)									
Quartz	(-1,8,8)	14.325	70.46	0.653	0.7	5.394	3.61	67.42	67.52
Equiv. Refl.: (-7,8,-8), (-7,-1,8)									
Sapph	(4,6,-14)	14.719	75.55	0.638	0.7	3.916	2.87	48.95	49.03
Equiv. Refl.: (4,-10,14), (6,4,14), (6,-10,-14), (10,-4,14), (10,-6,-14), (-4,10,-14), (-4,-6,14), (-6,10,14), (-6,-4,-14), (-10,4,-14), (-10,6,14)									
Quartz	(9,-1,7)	14.813	77.05	0.636	0.7	3.496	2.62	43.7	43.78
Quartz	(9,-8,-7)	14.813	77.05	0.635	0.7	3.496	2.62	43.7	43.78
Equiv. Refl.: (-1,9,-7), (-1,-8,7)									
Quartz	(-2,10,5)	14.533	72.96	0.634	0.6	4.658	2.93	58.22	58.3
Equiv. Refl.: (-2,-8,-5), (-8,9,7), (-8,-1,-7)									
Quartz	(10,-2,-5)	14.533	72.96	0.633	0.6	4.658	2.93	58.22	58.3
Equiv. Refl.: (10,-8,5), (-8,10,-5), (-8,-2,5)									
Quartz	(1,9,-5)	15.036	81.56	0.629	0.8	2.254	1.79	28.18	28.24
Equiv. Refl.: (1,-10,5), (-10,1,-5), (-10,9,5)									
Quartz	(9,1,5)	15.036	81.56	0.628	0.8	2.254	1.79	28.18	28.24
Quartz	(9,-10,-5)	15.036	81.56	0.627	0.8	2.254	1.79	28.18	28.24
Quartz	(-1,10,-4)	14.636	74.35	0.626	0.7	4.258	2.84	53.23	53.31
Equiv. Refl.: (-1,-9,4), (-9,10,4), (-9,-1,-4)									
Quartz	(10,-1,4)	14.636	74.35	0.625	0.7	4.258	2.83	53.23	53.3
Equiv. Refl.: (10,-9,-4)									
Sapph	(1,9,-2)	14.383	71.13	0.622	0.7	5.196	3.6	64.95	65.04
Equiv. Refl.: (1,-10,2), (9,1,2), (9,-10,-2), (10,-1,2), (10,-9,-2), (-1,10,-2), (-1,-9,2), (-9,10,2), (-9,-1,-2), (-10,1,-2), (-10,9,2)									
Quartz	(-7,8,8)	14.325	70.46	0.604	0.6	5.394	3.43	67.42	67.51
Equiv. Refl.: (-7,-1,-8)									

Ei =	15.2	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(11,-4,-3)	14.466	72.12	0.603	0.7	4.904	3.2	61.29	61.38
	Equiv. Refl.: (11,-7,3), (-1,8,-8), (-1,-7,8), (-4,11,3), (-4,-7,-3), (-7,11,-3), (-7,-4,3)								
Quartz	(8,-1,8)	14.325	70.46	0.602	0.6	5.394	3.42	67.42	67.51
	Equiv. Refl.: (8,-7,-8)								
Quartz	(4,7,3)	14.466	72.12	0.6	0.7	4.904	3.21	61.29	61.38
	Equiv. Refl.: (4,-11,-3), (7,4,-3), (7,-11,3), (-11,4,3), (-11,7,-3)								
LiNbO3	(4,6,-17)	14.308	70.28	0.599	0.9	5.449	4.96	68.11	68.29
	Equiv. Refl.: (4,-10,17), (6,4,17), (6,-10,-17), (10,-4,17), (10,-6,-17), (-4,10,-17), (-4,-6,17), (-6,10,17), (-6,-4,-17), (-10,4,-17), (-10,6,17)								
Quartz	(-8,1,8)	14.325	70.46	0.597	0.7	5.394	3.62	67.42	67.52
Sapph	(3,8,-5)	15.008	80.88	0.596	0.8	2.441	1.84	30.51	30.56
	Equiv. Refl.: (3,-11,5), (8,3,5), (8,-11,-5), (11,-3,5), (11,-8,-5), (-3,11,-5), (-3,-8,5), (-8,11,5), (-8,-3,-5), (-11,3,-5), (-11,8,5), (1,7,8), (1,-8,-8), (-8,7,-8)								
Quartz	(7,1,-8)	14.325	70.46	0.595	0.7	5.394	3.61	67.42	67.52
	Equiv. Refl.: (7,-8,8)								
Quartz	(1,9,-4)	14.636	74.35	0.583	0.7	4.258	2.84	53.23	53.31
	Equiv. Refl.: (1,-10,4), (9,1,4), (9,-10,-4)								
Quartz	(-10,1,-4)	14.636	74.35	0.582	0.7	4.258	2.83	53.23	53.3
	Equiv. Refl.: (-10,9,4)								
LiNbO3	(1,10,3)	14.711	75.43	0.581	1	3.952	3.83	49.4	49.54
	Equiv. Refl.: (1,10,-3), (1,-11,3), (1,-11,-3), (10,1,3), (10,1,-3), (10,-11,3), (10,-11,-3), (11,-1,3), (11,-1,-3), (11,-10,3), (11,-10,-3), (-1,11,3), (-1,11,-3), (-1,-10,3), (-1,-10,-3), (-10,11,3), (-10,11,-3), (-10,-1,3), (-10,-1,-3), (-11,1,3), (-11,1,-3), (-11,10,3), (-11,10,-3)								
Quartz	(7,1,8)	14.325	70.46	0.576	0.6	5.394	3.43	67.42	67.51
	Equiv. Refl.: (7,-8,-8)								
Quartz	(1,7,-8)	14.325	70.46	0.575	0.6	5.394	3.43	67.42	67.51
	Equiv. Refl.: (1,-8,8)								
LiNbO3	(6,6,3)	14.513	72.7	0.574	0.9	4.734	4.33	59.17	59.33
	Equiv. Refl.: (6,6,-3), (6,-12,3), (6,-12,-3), (12,-6,3), (12,-6,-3), (-6,12,3), (-6,12,-3), (-6,-6,3), (-6,-6,-3), (-12,6,3), (-12,6,-3), (-8,1,-8), (-8,7,8)								
Quartz	(11,-3,0)	14.35	70.74	0.568	0.6	5.31	3.11	66.37	66.45
	Equiv. Refl.: (11,-8,0), (-3,11,0), (-3,-8,0), (-8,11,0), (-8,-3,0)								
LiNbO3	(4,5,23)	14.957	79.75	0.564	1.1	2.749	2.94	34.36	34.49
	Equiv. Refl.: (4,-9,-23), (5,4,-23), (5,-9,23), (9,-4,-23), (9,-5,23), (-4,9,23), (-4,-5,-23), (-5,9,-23), (-5,-4,23), (-9,4,23), (-9,5,-23)								
Quartz	(7,-1,10)	14.928	79.14	0.553	0.7	2.915	2.08	36.43	36.49
Quartz	(7,-6,-10)	14.928	79.14	0.552	0.7	2.915	2.08	36.43	36.49
Quartz	(-6,7,10)	14.928	79.14	0.551	0.7	2.915	2.07	36.43	36.49
Quartz	(-1,7,-10)	14.928	79.14	0.55	0.7	2.915	2.07	36.43	36.49
	Equiv. Refl.: (-1,-6,10), (-6,-1,-10)								
Sapph	(3,5,22)	14.871	78.07	0.544	0.7	3.213	2.14	40.16	40.22
	Equiv. Refl.: (3,-8,-22), (5,3,-22), (5,-8,22), (8,-3,-22), (8,-5,22), (-3,8,22), (-3,-5,-22), (-5,8,-22), (-5,-3,22), (-8,3,22), (-8,5,-22)								
Sapph	(2,7,-17)	14.747	75.98	0.539	0.6	3.796	2.43	47.45	47.51
	Equiv. Refl.: (2,-9,17), (7,2,17), (7,-9,-17), (9,-2,17), (9,-7,-17), (-2,9,-17), (-2,-7,17), (-7,9,17), (-7,-2,-17), (-9,2,-17), (-9,7,17)								
Quartz	(-9,10,-4)	14.636	74.35	0.537	0.6	4.258	2.5	53.23	53.29
Quartz	(10,-1,-4)	14.636	74.35	0.536	0.6	4.258	2.5	53.23	53.29
	Equiv. Refl.: (10,-9,4), (-1,10,4), (-1,-9,-4), (-9,-1,4)								

Ei = Cryst	15.2 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(11,-5,3)	14.318	70.39	0.533	0.6	5.415	3.11	67.69	67.76
	Equiv. Refl.: (11,-6,-3), (-6,11,3), (-6,-5,-3)								
Quartz	(-5,11,-3)	14.318	70.39	0.532	0.6	5.415	3.11	67.69	67.76
	Equiv. Refl.: (-5,-6,3)								
Quartz	(0,9,-6)	14.809	76.98	0.527	0.6	3.515	2.14	43.94	43.99
	Equiv. Refl.: (0,-9,6), (9,0,6), (9,-9,-6), (-1,0,13), (-1,1,-13), (-9,0,-6)								
Quartz	(1,0,-13)	14.982	80.29	0.526	0.6	2.601	1.65	32.51	32.55
	Equiv. Refl.: (1,-1,13), (-9,9,6)								
Quartz	(0,1,13)	14.982	80.29	0.525	0.6	2.601	1.65	32.51	32.55
	Equiv. Refl.: (0,-1,-13)								
Quartz	(2,8,5)	14.533	72.96	0.517	0.6	4.658	2.93	58.22	58.3
	Equiv. Refl.: (2,-10,-5), (-10,2,5), (-10,8,-5)								
Quartz	(6,5,3)	14.318	70.39	0.516	0.6	5.415	3.11	67.69	67.76
	Equiv. Refl.: (6,-11,-3), (8,2,-5), (8,-10,5), (-11,5,-3), (-11,6,3)								
Quartz	(5,6,-3)	14.318	70.39	0.515	0.6	5.415	3.11	67.69	67.76
	Equiv. Refl.: (5,-11,3)								
Quartz	(-1,6,11)	15	80.7	0.51	0.6	2.49	1.51	31.13	31.16
	Equiv. Refl.: (-1,-5,-11)								
Quartz	(9,1,-4)	14.636	74.35	0.509	0.6	4.258	2.5	53.23	53.29
	Equiv. Refl.: (9,-10,4), (-5,6,-11), (-5,-1,11)								
Quartz	(1,9,4)	14.636	74.35	0.508	0.6	4.258	2.5	53.23	53.29
	Equiv. Refl.: (1,-10,-4), (6,-1,-11), (6,-5,11), (-10,1,4), (-10,9,-4)								
LiNbO3	(1,3,31)	14.741	75.89	0.507	0.9	3.822	3.42	47.77	47.89
	Equiv. Refl.: (1,-4,-31), (3,1,-31), (3,-4,31), (4,-1,-31), (4,-3,31), (-1,4,31), (-1,-3,-31), (-3,4,-31), (-3,-1,31), (-4,1,31), (-4,3,-31)								
Quartz	(3,8,0)	14.35	70.74	0.503	0.6	5.31	3.11	66.37	66.45
	Equiv. Refl.: (3,-11,0), (8,3,0), (8,-11,0), (-11,3,0), (-11,8,0)								
LiNbO3	(2,9,11)	14.945	79.48	0.495	1	2.822	2.76	35.27	35.38
	Equiv. Refl.: (2,-11,-11), (9,2,-11), (9,-11,11), (11,-2,-11), (11,-9,11), (-2,11,11), (-2,-9,-11), (-9,11,-11), (-9,-2,11), (-11,2,11), (-11,9,-11)								
Quartz	(-5,10,7)	14.956	79.72	0.493	0.6	2.758	1.65	34.47	34.51
	Equiv. Refl.: (-5,-5,-7)								
Quartz	(-5,10,-7)	14.956	79.72	0.492	0.6	2.758	1.64	34.47	34.51
Quartz	(10,-5,7)	14.956	79.72	0.491	0.6	2.758	1.64	34.47	34.51
	Equiv. Refl.: (10,-5,-7), (-5,-5,7)								
Quartz	(5,5,7)	14.956	79.72	0.49	0.6	2.758	1.65	34.47	34.51
	Equiv. Refl.: (5,-10,-7)								
Quartz	(5,5,-7)	14.956	79.72	0.489	0.6	2.758	1.64	34.47	34.51
	Equiv. Refl.: (5,-10,7), (-10,5,-7)								
Quartz	(-10,5,7)	14.956	79.72	0.488	0.6	2.758	1.64	34.47	34.51
Quartz	(-3,8,9)	14.512	72.69	0.485	0.5	4.737	2.52	59.22	59.27
	Equiv. Refl.: (-3,-5,-9)								
Quartz	(8,-3,-9)	14.512	72.69	0.484	0.5	4.737	2.52	59.22	59.27
	Equiv. Refl.: (8,-5,9), (-5,8,-9), (-5,-3,9)								
Quartz	(4,7,-3)	14.466	72.12	0.48	0.5	4.904	2.54	61.29	61.35
	Equiv. Refl.: (4,-11,3), (7,4,3), (7,-11,-3), (-11,4,-3), (-11,7,3)								
Quartz	(-3,-3,-11)	14.714	75.48	0.473	0.5	3.938	2	49.22	49.26
Quartz	(-3,6,11)	14.714	75.48	0.472	0.5	3.938	2	49.22	49.26
Quartz	(6,-3,11)	14.714	75.48	0.471	0.5	3.938	1.99	49.22	49.26
	Equiv. Refl.: (6,-3,-11)								

Ei = Cryst	15.2 Refl (h,k,l)	keV EB [keV]	ΘB [°]	\int IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(1,5,11)	15	80.7	0.47	0.6	2.49	1.51	31.13	31.16
	Equiv. Refl.: (-3,6,-11), (-3,-3,11)								
Quartz	(1,-6,-11)	15	80.7	0.469	0.6	2.49	1.51	31.13	31.16
	Equiv. Refl.: (5,1,-11), (5,-6,11)								
Quartz	(-6,1,11)	15	80.7	0.468	0.6	2.49	1.5	31.13	31.16
	Equiv. Refl.: (-6,5,-11)								
LiNbO3	(3,7,-19)	14.998	80.64	0.462	1	2.505	2.45	31.31	31.41
	Equiv. Refl.: (3,-10,19), (7,3,19), (7,-10,-19), (10,-3,19), (10,-7,-19), (-3,10,-19), (-3,-7,19), (-7,10,19), (-7,-3,-19), (-10,3,-19), (-10,7,19), (3,5,9), (3,-8,-9)								
Quartz	(5,3,-9)	14.512	72.69	0.461	0.5	4.737	2.52	59.22	59.27
	Equiv. Refl.: (5,-8,9), (-8,3,9), (-8,5,-9)								
Sapph	(2,4,25)	14.344	70.68	0.454	0.5	5.329	2.82	66.61	66.67
	Equiv. Refl.: (2,-6,-25), (4,2,-25), (4,-6,25), (6,-2,-25), (6,-4,25), (-2,6,25), (-2,-4,-25), (-4,6,-25), (-4,-2,25), (-6,2,25), (-6,4,-25)								
Sapph	(3,8,1)	14.825	77.24	0.444	0.6	3.443	1.92	43.03	43.08
	Equiv. Refl.: (3,-11,-1), (8,3,-1), (8,-11,1), (11,-3,-1), (11,-8,1), (-3,11,1), (-3,-8,-1), (-8,11,-1), (-8,-3,1), (-11,3,1), (-11,8,-1)								
Quartz	(11,-4,3)	14.466	72.12	0.439	0.5	4.904	2.54	61.29	61.35
	Equiv. Refl.: (11,-7,-3), (-4,11,-3), (-4,-7,3), (-7,11,3)								
Quartz	(-7,-4,-3)	14.466	72.12	0.438	0.5	4.904	2.54	61.29	61.35
Quartz	(6,6,0)	15.141	84.97	0.437	0.6	1.338	0.81	16.73	16.75
	Equiv. Refl.: (6,-12,0), (-12,6,0)								
Sapph	(0,6,24)	14.584	73.63	0.436	0.5	4.464	2.34	55.8	55.85
	Equiv. Refl.: (0,6,-24), (0,-6,24), (0,-6,-24), (6,0,24), (6,0,-24), (6,-6,24), (6,-6,-24), (-6,0,24), (-6,0,-24), (-6,6,24), (-6,6,-24)								
Sapph	(4,7,3)	14.579	73.56	0.429	0.5	4.485	2.33	56.06	56.11
	Equiv. Refl.: (4,7,-3), (4,-11,3), (4,-11,-3), (7,4,3), (7,4,-3), (7,-11,3), (7,-11,-3), (11,-4,3), (11,-4,-3), (11,-7,3), (11,-7,-3), (-4,11,3), (-4,11,-3), (-4,-7,3), (-4,-7,-3), (-7,11,3), (-7,11,-3), (-7,-4,3), (-7,-4,-3), (-11,4,3), (-11,4,-3), (-11,7,3), (-11,7,-3)								
Quartz	(4,6,-6)	14.446	71.88	0.415	0.4	4.973	2.23	62.17	62.21
	Equiv. Refl.: (4,-10,6), (6,4,6), (6,-10,-6), (-10,4,-6), (-10,6,6)								
Quartz	(10,-4,-7)	15.027	81.34	0.414	0.5	2.315	1.23	28.94	28.97
	Equiv. Refl.: (10,-6,7)								
Quartz	(-6,10,-7)	15.027	81.34	0.413	0.5	2.315	1.22	28.94	28.97
	Equiv. Refl.: (-6,-4,7)								
Quartz	(-4,-6,-7)	15.027	81.34	0.411	0.5	2.315	1.22	28.94	28.97
Quartz	(-4,10,7)	15.027	81.34	0.41	0.5	2.315	1.22	28.94	28.97
Quartz	(3,3,11)	14.714	75.48	0.399	0.5	3.938	2	49.22	49.26
Quartz	(3,-6,-11)	14.714	75.48	0.398	0.5	3.938	2	49.22	49.26
Quartz	(3,3,-11)	14.714	75.48	0.397	0.5	3.938	1.99	49.22	49.26
	Equiv. Refl.: (3,-6,11), (-6,3,11), (-6,3,-11)								
Quartz	(-10,6,-7)	15.027	81.34	0.395	0.5	2.315	1.23	28.94	28.97
Quartz	(6,4,-7)	15.027	81.34	0.394	0.5	2.315	1.22	28.94	28.97
	Equiv. Refl.: (6,-10,7), (-10,4,7)								
Quartz	(4,6,7)	15.027	81.34	0.391	0.5	2.315	1.22	28.94	28.97
	Equiv. Refl.: (4,-10,-7)								
Sapph	(5,5,15)	14.866	77.97	0.378	0.5	3.239	1.61	40.49	40.52
	Equiv. Refl.: (5,5,-15), (5,-10,15), (5,-10,-15), (10,-5,15), (10,-5,-15), (-5,10,15), (-5,10,-15), (-5,-5,15), (-5,-5,-15), (-10,5,15), (-10,5,-15)								
Quartz	(12,-6,0)	15.141	84.97	0.367	0.6	1.338	0.81	16.73	16.75
	Equiv. Refl.: (-6,12,0), (-6,-6,0)								

Ei = Cryst	15.2 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(-6,10,6)	14.446	71.88	0.366	0.4	4.973	2.24	62.17	62.21
	Equiv. Refl.: (-6,-4,-6)								
Quartz	(10,-4,6)	14.446	71.88	0.365	0.4	4.973	2.23	62.17	62.21
	Equiv. Refl.: (10,-6,-6), (-4,10,-6), (-4,-6,6)								
Quartz	(1,3,-12)	14.733	75.75	0.34	0.4	3.859	1.42	48.24	48.26
	Equiv. Refl.: (1,-4,12), (-11,3,-4), (-11,8,4)								
Quartz	(-4,1,-12)	14.733	75.75	0.339	0.4	3.859	1.42	48.24	48.26
Quartz	(3,8,-4)	15.065	82.37	0.338	0.4	2.037	0.87	25.47	25.48
	Equiv. Refl.: (3,-11,4), (8,3,4), (8,-11,-4), (-4,3,12)								
Quartz	(3,-4,-12)	14.733	75.75	0.337	0.4	3.859	1.41	48.24	48.26
Quartz	(3,1,12)	14.733	75.75	0.336	0.4	3.859	1.41	48.24	48.26
Quartz	(5,6,4)	14.636	74.35	0.334	0.4	4.258	1.66	53.23	53.26
	Equiv. Refl.: (5,-11,-4), (-11,5,4), (-11,6,-4)								
Quartz	(6,5,-4)	14.636	74.35	0.333	0.4	4.258	1.66	53.23	53.26
	Equiv. Refl.: (6,-11,4)								
Quartz	(0,3,-12)	14.442	71.82	0.329	0.4	4.99	1.95	62.38	62.41
	Equiv. Refl.: (0,-3,12), (8,2,5), (8,-10,-5)								
Quartz	(2,8,-5)	14.533	72.96	0.328	0.4	4.658	1.74	58.22	58.25
	Equiv. Refl.: (2,-10,5), (3,0,12), (3,-3,-12), (-3,0,-12), (-10,2,-5), (-10,8,5)								
Quartz	(-3,3,12)	14.442	71.82	0.327	0.4	4.99	1.94	62.38	62.41
LiNbO3	(2,9,-7)	14.455	71.99	0.319	0.6	4.943	3.05	61.79	61.86
	Equiv. Refl.: (2,-11,7), (9,2,7), (9,-11,-7), (11,-2,7), (11,-9,-7), (-2,11,-7), (-2,-9,7), (-9,11,7), (-9,-2,-7), (-11,2,-7), (-11,9,7)								
LiNbO3	(5,7,7)	14.851	77.69	0.316	0.7	3.316	2.33	41.45	41.51
	Equiv. Refl.: (5,-12,-7), (7,5,-7), (7,-12,7), (12,-5,-7), (12,-7,7), (-5,12,7), (-5,-7,-7), (-7,12,-7), (-7,-5,7), (-12,5,7), (-12,7,-7)								
Quartz	(11,-5,-4)	14.636	74.35	0.304	0.4	4.258	1.66	53.23	53.26
	Equiv. Refl.: (11,-6,4), (-5,11,4), (-5,-6,-4)								
Quartz	(-6,11,-4)	14.636	74.35	0.303	0.4	4.258	1.65	53.23	53.26
	Equiv. Refl.: (-6,-5,4)								
LiNbO3	(2,9,5)	14.288	70.05	0.298	0.6	5.517	3.16	68.96	69.04
	Equiv. Refl.: (2,-11,-5), (9,2,-5), (9,-11,5), (11,-2,-5), (11,-9,5), (-2,11,5), (-2,-9,-5), (-9,11,-5), (-9,-2,5), (-11,2,5), (-11,9,-5)								
Sapph	(1,6,22)	14.408	71.42	0.296	0.4	5.11	1.93	63.87	63.9
	Equiv. Refl.: (1,-7,-22), (6,1,-22), (6,-7,22), (7,-1,-22), (7,-6,22), (-1,7,22), (-1,-6,-22), (-6,7,-22), (-6,-1,22), (-7,1,22), (-7,6,-22)								
Sapph	(1,6,-23)	14.759	76.17	0.294	0.4	3.743	1.5	46.79	46.81
	Equiv. Refl.: (1,-7,23), (6,1,23), (6,-7,-23), (7,-1,23), (7,-6,-23), (-1,7,-23), (-1,-6,23), (-6,7,23), (-6,-1,-23), (-7,1,-23), (-7,6,23), (4,5,8), (4,-9,-8), (5,4,-8), (5,-9,8)								
Quartz	(-9,4,8)	14.618	74.1	0.293	0.4	4.331	1.52	54.13	54.16
	Equiv. Refl.: (-9,5,-8)								
LiNbO3	(2,3,-31)	15.13	84.48	0.291	0.9	1.468	1.39	18.35	18.41
	Equiv. Refl.: (2,-5,31), (3,2,31), (3,-5,-31), (5,-2,31), (5,-3,-31), (-2,5,-31), (-2,-3,31), (-3,5,31), (-3,-2,-31), (-5,2,-31), (-5,3,31), (-8,10,5), (-8,-2,-5)								
Quartz	(10,-2,5)	14.533	72.96	0.29	0.4	4.658	1.74	58.22	58.25
	Equiv. Refl.: (10,-8,-5), (-2,10,-5), (-2,-8,5)								
LiNbO3	(2,6,-25)	15.017	81.11	0.289	0.8	2.378	1.81	29.73	29.78
	Equiv. Refl.: (2,-8,25), (6,2,25), (6,-8,-25), (8,-2,25), (8,-6,-25), (-2,8,-25), (-2,-6,25), (-6,8,25), (-6,-2,-25), (-8,2,-25), (-8,6,25)								

Ei = Cryst	15.2 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(2,6,9) Equiv. Refl.: (2,-8,-9)	14.729	75.7	0.277	0.3	3.873	1.23	48.41	48.43
Quartz	(6,2,-9) Equiv. Refl.: (6,-8,9), (-8,6,-9)	14.729	75.7	0.276	0.3	3.873	1.23	48.41	48.43
LiNbO3	(3,7,17) Equiv. Refl.: (3,-10,-17), (7,3,-17), (7,-10,17), (10,-3,-17), (10,-7,17), (-3,10,17), (-3,-7,-17), (-7,10,-17), (-7,-3,17), (-10,3,17), (-10,7,-17), (-8,2,9)	14.51	72.67	0.275	0.6	4.744	2.71	59.3	59.36
Sapph	(1,2,29) Equiv. Refl.: (1,-3,-29), (2,1,-29), (2,-3,29), (3,-1,-29), (3,-2,29), (-1,3,29), (-1,-2,-29), (-2,3,-29), (-2,-1,29), (-3,1,29), (-3,2,-29), (0,10,-2), (0,-10,2), (10,0,2), (10,-10,-2), (-10,0,-2), (-10,10,2)	14.402	71.36	0.272	0.4	5.128	1.81	64.1	64.13
LiNbO3	(5,7,-5) Equiv. Refl.: (5,-12,5), (7,5,5), (7,-12,-5), (12,-5,5), (12,-7,-5), (-5,12,-5), (-5,-7,5), (-7,12,5), (-7,-5,-5), (-12,5,-5), (-12,7,5)	14.688	75.09	0.27	0.6	4.047	2.41	50.59	50.65
Quartz	(-4,9,8) Equiv. Refl.: (-4,-5,-8), (-5,-4,8)	14.618	74.1	0.267	0.4	4.331	1.52	54.13	54.16
Quartz	(9,-4,-8) Equiv. Refl.: (9,-5,8), (-5,9,-8)	14.618	74.1	0.266	0.4	4.331	1.52	54.13	54.16
Sapph	(2,8,9) Equiv. Refl.: (2,8,-9), (2,-10,9), (2,-10,-9), (8,2,9), (8,2,-9), (8,-10,9), (8,-10,-9), (10,-2,9), (10,-2,-9), (10,-8,9), (10,-8,-9), (-2,10,9), (-2,10,-9), (-2,-8,9), (-2,-8,-9), (-8,10,9), (-8,10,-9), (-8,-2,9), (-8,-2,-9), (-10,2,9), (-10,2,-9), (-10,8,9), (-10,8,-9)	14.442	71.83	0.253	0.3	4.989	1.68	62.37	62.39
LiNbO3	(1,2,-31) Equiv. Refl.: (1,-3,31), (2,1,31), (2,-3,-31), (3,-1,31), (3,-2,-31), (-1,3,-31), (-1,-2,31), (-2,3,31), (-2,-1,-31), (-3,1,-31), (-3,2,31), (11,-3,4), (11,-8,-4)	14.342	70.66	0.249	0.5	5.335	2.76	66.68	66.74
Quartz	(-8,11,4) Equiv. Refl.: (-8,-3,-4)	15.065	82.37	0.248	0.4	2.037	0.87	25.47	25.48
Quartz	(-1,-3,12) Equiv. Refl.: (-3,11,-4), (-3,-8,4)	14.733	75.75	0.247	0.4	3.859	1.42	48.24	48.26
Sapph	(3,7,14) Equiv. Refl.: (3,-10,-14), (7,3,-14), (7,-10,14), (10,-3,-14), (10,-7,14), (-3,10,14), (-3,-7,-14), (-7,10,-14), (-7,-3,14), (-10,3,14), (-10,7,-14), (-1,4,-12)	14.948	79.56	0.246	0.4	2.802	1.05	35.02	35.03
Quartz	(4,-1,12) Equiv. Refl.: (4,-3,-12)	14.733	75.75	0.245	0.4	3.859	1.42	48.24	48.26
Quartz	(0,9,5) Equiv. Refl.: (0,-9,-5)	14.312	70.32	0.244	0.3	5.436	1.65	67.95	67.97
Quartz	(9,0,-5) Equiv. Refl.: (9,-9,5), (-3,4,12), (-3,-1,-12), (-9,0,5), (-9,9,-5)	14.312	70.32	0.243	0.3	5.436	1.64	67.95	67.97
LiNbO3	(5,7,1) Equiv. Refl.: (5,-12,-1), (7,5,-1), (7,-12,1), (12,-5,-1), (12,-7,1), (-5,12,1), (-5,-7,-1), (-7,12,-1), (-7,-5,1), (-12,5,1), (-12,7,-1)	14.524	72.85	0.242	0.5	4.691	2.49	58.64	58.69
LiNbO3	(5,6,-13) Equiv. Refl.: (5,-11,13), (6,5,13), (6,-11,-13), (11,-5,13), (11,-6,-13), (-5,11,-13), (-5,-6,13), (-6,11,13), (-6,-5,-13), (-11,5,-13), (-11,6,13)	14.482	72.32	0.24	0.5	4.844	2.53	60.55	60.6
LiNbO3	(2,-7,27) Equiv. Refl.: (5,-7,27), (7,-2,27), (7,-5,27), (-2,7,-27), (-5,7,-27), (-7,2,-27), (-7,5,-27)	14.872	78.08	0.234	0.6	3.209	1.92	40.11	40.16
LiNbO3	(2,5,27) Equiv. Refl.: (2,5,-27), (2,-7,-27), (5,2,27), (5,2,-27), (5,-7,-27), (7,-2,-27), (7,-5,-27), (-2,7,27), (-2,-5,27), (-2,-5,-27), (-5,7,27), (-5,-2,27), (-5,-2,-27), (-7,2,27), (-7,5,27)	14.872	78.08	0.233	0.6	3.209	1.92	40.11	40.16
Sapph	(1,3,-29) Equiv. Refl.: (1,-4,29), (3,1,29), (3,-4,-29), (4,-1,29), (4,-3,-29), (-1,4,-29), (-1,-3,29), (-3,4,29), (-3,-1,-29), (-4,1,-29), (-4,3,29)	14.866	77.97	0.229	0.3	3.238	1.12	40.48	40.49
Quartz	(0,3,12)	14.442	71.82	0.222	0.3	4.99	1.42	62.38	62.4

	Equiv. Refl.: (0,-3,-12)								
Quartz	(3,0,-12)	14.442	71.82	0.219	0.3	4.99	1.41	62.38	62.4
	Equiv. Refl.: (3,-3,12), (-3,0,12), (-3,3,-12)								
Quartz	(1,3,12)	14.733	75.75	0.212	0.3	3.859	1.04	48.24	48.25
	Equiv. Refl.: (1,-4,-12), (3,1,-12), (3,-4,12)								
Quartz	(-4,1,12)	14.733	75.75	0.211	0.3	3.859	1.03	48.24	48.25
	Equiv. Refl.: (-4,3,-12)								
Quartz	(0,10,1)	14.615	74.05	0.21	0.3	4.344	1.22	54.3	54.31
	Equiv. Refl.: (0,-10,-1), (10,0,-1), (10,-10,1), (-10,0,1), (-10,10,-1)								
Quartz	(-2,8,9)	14.729	75.7	0.208	0.3	3.873	1.23	48.41	48.43
	Equiv. Refl.: (-2,-6,-9), (-6,-2,9)								
Quartz	(8,-2,-9)	14.729	75.7	0.207	0.3	3.873	1.23	48.41	48.43
	Equiv. Refl.: (8,-6,9), (-6,8,-9)								
LiNbO3	(3,6,21)	14.491	72.43	0.203	0.5	4.812	2.29	60.15	60.19
	Equiv. Refl.: (3,6,-21), (3,-9,21), (3,-9,-21), (6,3,21), (6,3,-21), (6,-9,21), (6,-9,-21), (9,-3,21), (9,-3,-21), (9,-6,21), (9,-6,-21), (-3,9,21), (-3,9,-21), (-3,-6,21), (-3,-6,-21), (-6,9,21), (-6,9,-21), (-6,-3,21), (-6,-3,-21), (-9,3,21), (-9,3,-21), (-9,6,21), (-9,6,-21)								
LiNbO3	(2,8,15)	14.401	71.35	0.182	0.4	5.131	2.24	64.14	64.18
	Equiv. Refl.: (2,8,-15), (2,-10,15), (2,-10,-15), (8,2,15), (8,2,-15), (8,-10,15), (8,-10,-15), (10,-2,15), (10,-2,-15), (10,-8,15), (10,-8,-15), (-2,10,15), (-2,10,-15), (-2,-8,15), (-2,-8,-15), (-8,10,15), (-8,10,-15), (-8,-2,15), (-8,-2,-15), (-10,2,15), (-10,2,-15), (-10,8,15), (-10,8,-15)								
Quartz	(0,10,0)	14.57	73.44	0.18	0.2	4.519	1.12	56.48	56.49
	Equiv. Refl.: (0,-10,0), (10,0,0), (10,-10,0), (-10,0,0), (-10,10,0)								
Quartz	(-1,4,12)	14.733	75.75	0.174	0.3	3.859	1.04	48.24	48.25
	Equiv. Refl.: (-1,-3,-12), (-3,4,-12), (-3,-1,12)								
Quartz	(4,-1,-12)	14.733	75.75	0.173	0.3	3.859	1.03	48.24	48.25
	Equiv. Refl.: (4,-3,12)								
LiNbO3	(2,6,23)	14.364	70.91	0.154	0.4	5.261	2.07	65.76	65.8
	Equiv. Refl.: (2,-8,-23), (6,2,-23), (6,-8,23), (8,-2,-23), (8,-6,23), (-2,8,23), (-2,-6,-23), (-6,8,-23), (-6,-2,23), (-8,2,23), (-8,6,-23)								
Sapph	(1,9,7)	14.735	75.79	0.152	0.2	3.849	0.96	48.11	48.12
	Equiv. Refl.: (1,-10,-7), (9,1,-7), (9,-10,7), (10,-1,-7), (10,-9,7), (-1,10,7), (-1,-9,-7), (-9,10,-7), (-9,-1,7), (-10,1,7), (-10,9,-7)								
Sapph	(1,9,-5)	14.548	73.16	0.134	0.2	4.6	1	57.5	57.51
	Equiv. Refl.: (1,-10,5), (9,1,5), (9,-10,-5), (10,-1,5), (10,-9,-5), (-1,10,-5), (-1,-9,5), (-9,10,5), (-9,-1,-5), (-10,1,-5), (-10,9,5)								
Sapph	(1,9,1)	14.359	70.85	0.124	0.2	5.277	1.05	65.97	65.97
	Equiv. Refl.: (1,-10,-1), (9,1,-1), (9,-10,1), (10,-1,-1), (10,-9,1), (-1,10,1), (-1,-9,-1), (-9,10,-1), (-9,-1,1), (-10,1,1), (-10,9,-1)								
Sapph	(3,4,-25)	15.037	81.61	0.118	0.3	2.242	0.57	28.02	28.03
	Equiv. Refl.: (3,-7,25), (4,3,25), (4,-7,-25), (7,-3,25), (7,-4,-25), (-3,7,-25), (-3,-4,25), (-4,7,25), (-4,-3,-25), (-7,3,-25), (-7,4,25)								
LiNbO3	(3,5,25)	14.823	77.21	0.115	0.4	3.45	1.37	43.13	43.15
	Equiv. Refl.: (3,8,13), (3,-8,-25), (3,-11,-13), (5,3,-25), (5,-8,25), (8,3,-13), (8,-3,-25), (8,-5,25), (8,-11,13), (11,-3,-13), (11,-8,13), (-3,8,25), (-3,11,13), (-3,-5,-25), (-3,-8,-13), (-5,8,-25), (-5,-3,25), (-8,3,25), (-8,5,-25), (-8,11,-13), (-8,-3,13), (-11,3,13), (-11,8,-13)								
Sapph	(2,8,12)	14.93	79.19	0.108	0.2	2.901	0.64	36.26	36.27
	Equiv. Refl.: (2,8,-12), (2,-10,12), (2,-10,-12), (8,2,12), (8,2,-12), (8,-10,12), (8,-10,-12), (10,-2,12), (10,-2,-12), (10,-8,12), (10,-8,-12), (-2,10,12), (-2,10,-12), (-2,-8,12), (-2,-8,-12), (-8,10,12), (-8,10,-12), (-8,-2,12), (-8,-2,-12), (-10,2,12), (-10,2,-12), (-10,8,12), (-10,8,-12)								
LiNbO3	(2,3,29)	14.315	70.35	0.098	0.3	5.428	1.64	67.85	67.87
	Equiv. Refl.: (2,-5,-29), (3,2,-29), (3,-5,29), (5,-2,-29), (5,-3,29), (-2,5,29), (-2,-3,-29), (-3,5,-29), (-3,-2,29), (-5,2,29), (-5,3,-29)								
LiNbO3	(3,8,-11)	14.551	73.2	0.087	0.3	4.589	1.39	57.36	57.38
	Equiv. Refl.: (3,-11,11), (8,3,11), (8,-11,-11), (11,-3,11), (11,-8,-11), (-3,11,-11), (-3,-8,11), (-8,11,11), (-8,-3,-11), (-11,3,-11), (-11,8,11)								

LiNbO3	(1,8,-19)	14.606	73.93	0.076	0.3	4.379	1.26	54.74	54.76
	Equiv. Refl.: (1,-9,19), (8,1,19), (8,-9,-19), (9,-1,19), (9,-8,-19), (-1,9,-19), (-1,-8,19), (-8,9,19), (-8,-1,-19), (-9,1,-19), (-9,8,19)								
Sapph	(3,4,23)	14.292	70.09	0.061	0.1	5.505	0.69	68.81	68.81
	Equiv. Refl.: (3,-7,-23), (4,3,-23), (4,-7,23), (7,-3,-23), (7,-4,23), (-3,7,23), (-3,-4,-23), (-4,7,-23), (-4,-3,23), (-7,3,23), (-7,4,-23)								
Sapph	(4,6,13)	14.509	72.66	0.052	0.1	4.747	0.57	59.34	59.34
	Equiv. Refl.: (4,-10,-13), (6,4,-13), (6,-10,13), (10,-4,-13), (10,-6,13), (-4,10,13), (-4,-6,-13), (-6,10,-13), (-6,-4,13), (-10,4,13), (-10,6,-13)								
Sapph	(5,6,8)	14.851	77.69	0.044	0.1	3.317	0.4	41.46	41.46
	Equiv. Refl.: (5,-11,-8), (6,5,-8), (6,-11,8), (11,-5,-8), (11,-6,8), (-5,11,8), (-5,-6,-8), (-6,11,-8), (-6,-5,8), (-11,5,8), (-11,6,-8)								
Sapph	(5,6,2)	14.383	71.13	0.041	0.1	5.196	0.52	64.95	64.95
	Equiv. Refl.: (5,-11,-2), (6,5,-2), (6,-11,2), (11,-5,-2), (11,-6,2), (-5,11,2), (-5,-6,-2), (-6,11,-2), (-6,-5,2), (-11,5,2), (-11,6,-2)								
LiNbO3	(4,8,-7)	15.045	81.8	0.02	0.2	2.189	0.47	27.36	27.37
	Equiv. Refl.: (4,-12,7), (8,4,7), (8,-12,-7), (12,-4,7), (12,-8,-7), (-4,12,-7), (-4,-8,7), (-8,12,7), (-8,-4,-7), (-12,4,-7), (-12,8,7)								
LiNbO3	(4,8,5)	14.884	78.3	0.015	0.2	3.147	0.49	39.33	39.33
	Equiv. Refl.: (4,-12,-5), (8,4,-5), (8,-12,5), (12,-4,-5), (12,-8,5), (-4,12,5), (-4,-8,-5), (-8,12,-5), (-8,-4,5), (-12,4,5), (-12,8,-5)								
LiNbO3	(4,8,-1)	14.722	75.6	0.013	0.1	3.903	0.5	48.79	48.79
	Equiv. Refl.: (4,-12,1), (8,4,1), (8,-12,-1), (12,-4,1), (12,-8,-1), (-4,12,-1), (-4,-8,1), (-8,12,1), (-8,-4,-1), (-12,4,-1), (-12,8,1)								

Ei = Cryst	13.035 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Si	(0,8,8)	12.914	82.19	5.9856	5.05	1.7888	9.03	22.36	24.11
	Equiv. Refl.: (8,0,8), (8,8,0)								
Ge	(0,6,10)	12.779	78.62	3.3822	7.25	2.6228	19.03	32.79	37.91
	Equiv. Refl.: (0,10,6), (6,0,10), (6,6,8), (6,8,6), (6,10,0), (8,6,6), (10,0,6), (10,6,0)								
Si	(2,4,10)	12.504	73.59	2.9466	2.71	3.8393	10.41	47.99	49.11
	Equiv. Refl.: (2,10,4), (4,2,10), (4,10,2), (10,2,4), (10,4,2)								
Ge	(3,3,11)	12.919	82.35	2.5565	7.33	1.7503	12.84	21.88	25.37
	Equiv. Refl.: (3,7,9), (3,9,7), (3,11,3), (7,3,9), (7,9,3), (9,3,7), (9,7,3), (11,3,3)								
Ge	(0,8,8)	12.397	72	2.4698	5.11	4.2342	21.65	52.93	57.19
	Equiv. Refl.: (8,0,8), (8,8,0)								
Si	(1,1,11)	12.659	76.21	1.9733	2.18	3.1995	6.97	39.99	40.6
	Equiv. Refl.: (1,11,1), (5,7,7), (7,5,7), (7,7,5), (11,1,1)								
Ge	(1,3,11)	12.542	74.19	1.4437	3.95	3.6915	14.58	46.14	48.39
	Equiv. Refl.: (1,7,9), (1,9,7), (1,11,3), (3,1,11), (3,11,1), (5,5,9), (5,9,5), (7,1,9), (7,9,1), (9,1,7), (9,5,5), (9,7,1), (11,1,3), (11,3,1)								
LiNbO3	(2,8,6)	13.023	87.58	40.393	37.2	0.55	20.47	6.88	21.59
	Equiv. Refl.: (8,-10,6), (10,-8,6), (-2,10,6), (-8,-2,6), (-10,2,6)								
LiNbO3	(2,-10,-6)	13.023	87.58	38.686	37.2	0.55	20.47	6.88	21.59
	Equiv. Refl.: (8,2,-6), (10,-2,-6), (-2,-8,-6), (-8,10,-6), (-10,8,-6)								
LiNbO3	(2,-10,6)	13.023	87.58	35.771	34	0.55	18.72	6.88	19.94
	Equiv. Refl.: (8,2,6), (10,-2,6), (-2,-8,6)								
LiNbO3	(-8,10,6)	13.023	87.58	35.77	34	0.55	18.72	6.88	19.94
	Equiv. Refl.: (-10,8,6)								
LiNbO3	(2,8,-6)	13.023	87.58	35.44	34	0.55	18.72	6.88	19.94
	Equiv. Refl.: (-2,10,-6), (-8,-2,-6), (-10,2,-6)								
LiNbO3	(8,-10,-6)	13.023	87.58	35.439	34	0.55	18.72	6.88	19.94
	Equiv. Refl.: (10,-8,-6)								
LiNbO3	(4,-9,16)	13.005	86.12	31.043	28	0.885	24.75	11.06	27.11
	Equiv. Refl.: (5,4,16), (9,-4,16), (-4,-5,16), (-5,9,16), (-9,5,16)								
LiNbO3	(4,5,-16)	13.005	86.12	30.257	28	0.885	24.75	11.06	27.11
	Equiv. Refl.: (5,-9,-16), (9,-5,-16), (-4,9,-16), (-5,-4,-16), (-9,4,-16)								
LiNbO3	(2,7,-14)	12.99	85.23	24.9	22.2	1.088	24.16	13.6	27.72
	Equiv. Refl.: (-2,9,-14), (-7,-2,-14), (-9,2,-14)								
LiNbO3	(7,-9,-14)	12.99	85.23	24.899	22.2	1.088	24.16	13.6	27.72
	Equiv. Refl.: (9,-7,-14)								
Sapph	(1,2,26)	13.032	88.83	23.865	22.3	0.266	5.92	3.32	6.79
	Equiv. Refl.: (1,-3,-26), (2,1,-26), (2,-3,26), (3,-1,-26), (3,-2,26), (-1,3,26), (-1,-2,-26), (-2,3,-26), (-2,-1,26), (-3,1,26), (-3,2,-26)								
LiNbO3	(2,-9,14)	12.99	85.23	23.518	22.2	1.088	24.16	13.6	27.72
	Equiv. Refl.: (7,2,14), (9,-2,14), (-2,-7,14), (-7,9,14), (-9,7,14)								
LiNbO3	(3,4,-22)	12.974	84.45	18.262	16.7	1.267	21.21	15.83	26.47
	Equiv. Refl.: (-3,7,-22), (-4,-3,-22), (-7,3,-22)								
LiNbO3	(4,-7,-22)	12.974	84.45	18.261	16.7	1.267	21.21	15.83	26.47
	Equiv. Refl.: (7,-4,-22)								
Sapph	(5,5,0)	13.029	88.21	17.638	16.1	0.407	6.55	5.08	8.29
	Equiv. Refl.: (5,-10,0), (10,-5,0), (-5,10,0), (-5,-5,0), (-10,5,0)								
LiNbO3	(3,-7,22)	12.974	84.45	17.497	16.7	1.267	21.21	15.83	26.47
	Equiv. Refl.: (4,3,22), (7,-3,22), (-3,-4,22), (-4,7,22), (-7,4,22)								

Ei = Cryst	13.035 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
LiNbO3	(-6,10,-10) Equiv. Refl.: (-10,6,-10)	12.921	82.4	16.26	14.6	1.739	25.42	21.74	33.45
LiNbO3	(4,-10,-10) Equiv. Refl.: (6,4,-10), (10,-4,-10), (-4,-6,-10)	12.921	82.4	16.259	14.6	1.739	25.42	21.74	33.45
LiNbO3	(4,6,10) Equiv. Refl.: (6,-10,10), (10,-6,10), (-4,10,10), (-6,-4,10), (-10,4,10)	12.921	82.4	15.824	14.6	1.739	25.42	21.74	33.45
Sapph	(1,8,-4) Equiv. Refl.: (1,-9,4), (8,1,4), (8,-9,-4), (9,-1,4), (9,-8,-4), (-1,9,-4), (-1,-8,4), (-8,9,4), (-8,-1,-4), (-9,1,-4), (-9,8,4)	12.995	85.5	13.535	11.5	1.026	11.76	12.83	17.4
Sapph	(3,5,16) Equiv. Refl.: (3,-8,-16), (5,3,-16), (5,-8,16), (8,-3,-16), (8,-5,16), (-3,8,16), (-3,-5,-16), (-5,8,-16), (-5,-3,16), (-8,3,16), (-8,5,-16)	13.008	86.34	13.289	11.3	0.833	9.41	10.42	14.04
LiNbO3	(3,7,8) Equiv. Refl.: (7,-10,8), (10,-7,8), (-3,10,8), (-7,-3,8), (-10,3,8)	12.866	80.77	12.915	11.7	2.118	24.78	26.47	36.27
LiNbO3	(3,3,-24) Equiv. Refl.: (3,-6,-24), (6,-3,-24), (-3,6,-24), (-3,-3,-24), (-6,3,-24)	12.938	83	12.899	12.1	1.602	19.31	20.02	27.81
Quartz	(8,0,-5) Equiv. Refl.: (8,-8,5), (-8,0,5)	12.99	85.26	12.883	10.6	1.081	11.51	13.51	17.75
Quartz	(-8,8,-5)	12.99	85.26	12.882	10.6	1.081	11.51	13.51	17.75
Quartz	(0,8,5) Equiv. Refl.: (0,-8,-5)	12.99	85.26	12.879	10.6	1.081	11.5	13.51	17.74
LiNbO3	(3,-10,-8) Equiv. Refl.: (7,3,-8), (10,-3,-8), (-3,-7,-8), (-7,10,-8), (-10,7,-8)	12.866	80.77	12.64	11.7	2.118	24.78	26.47	36.27
LiNbO3	(3,3,24) Equiv. Refl.: (3,-6,24), (6,-3,24), (-3,6,24), (-3,-3,24), (-6,3,24)	12.938	83	12.401	12.1	1.602	19.31	20.02	27.81
LiNbO3	(0,-9,6) Equiv. Refl.: (9,0,6), (-9,9,6)	12.799	79.08	11.869	10.7	2.516	26.97	31.45	41.43
LiNbO3	(0,9,-6) Equiv. Refl.: (9,-9,-6), (-9,0,-6)	12.799	79.08	11.799	10.7	2.516	26.97	31.45	41.43
LiNbO3	(0,-8,14) Equiv. Refl.: (8,0,14), (-8,8,14)	12.765	78.31	11.189	9.7	2.697	26.17	33.72	42.68
LiNbO3	(1,-7,20) Equiv. Refl.: (6,1,20), (7,-1,20), (-1,-6,20)	12.772	78.47	11.152	10	2.659	26.61	33.23	42.58
LiNbO3	(-6,7,20) Equiv. Refl.: (-7,6,20)	12.772	78.47	11.151	10	2.659	26.61	33.23	42.58
LiNbO3	(8,2,0) Equiv. Refl.: (-2,-8,0)	12.744	77.87	11.03	9.9	2.801	27.72	35.02	44.66
LiNbO3	(2,-10,0) Equiv. Refl.: (10,-2,0), (-8,10,0), (-10,8,0)	12.744	77.87	11.029	9.9	2.801	27.72	35.02	44.66
LiNbO3	(1,6,-20) Equiv. Refl.: (6,-7,-20), (7,-6,-20), (-1,7,-20), (-6,-1,-20), (-7,1,-20)	12.772	78.47	10.896	10	2.659	26.61	33.23	42.58
LiNbO3	(2,8,0) Equiv. Refl.: (8,-10,0), (10,-8,0), (-2,10,0), (-8,-2,0), (-10,2,0)	12.744	77.87	10.875	9.9	2.801	27.72	35.02	44.66
LiNbO3	(0,4,26) Equiv. Refl.: (4,-4,26), (-4,0,26)	12.888	81.4	10.671	9.8	1.971	19.27	24.64	31.28
LiNbO3	(0,-9,-6) Equiv. Refl.: (9,0,-6), (-9,9,-6)	12.799	79.08	10.473	9.2	2.516	23.04	31.45	38.98
LiNbO3	(0,-4,-26) Equiv. Refl.: (4,0,-26), (-4,4,-26)	12.888	81.4	10.235	9.8	1.971	19.27	24.64	31.28

Ei = Cryst	13.035 Refl (h,k,l)	keV EB [keV]	ΘB [°]	IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
LiNbO3	(0,8,-14)	12.765	78.31	10.119	9.7	2.697	26.17	33.72	42.68
	Equiv. Refl.: (-8,0,-14)								
LiNbO3	(8,-8,-14)	12.765	78.31	10.118	9.7	2.697	26.17	33.72	42.68
LiNbO3	(0,9,6)	12.799	79.08	9.76	9.2	2.516	23.04	31.45	38.98
	Equiv. Refl.: (9,-9,6), (-9,0,6)								
LiNbO3	(0,-2,-28)	12.826	79.73	9.423	8.7	2.362	20.54	29.53	35.97
	Equiv. Refl.: (2,0,-28), (-2,2,-28)								
LiNbO3	(0,2,28)	12.826	79.73	9.366	8.7	2.362	20.54	29.53	35.97
	Equiv. Refl.: (2,-2,28), (-2,0,28)								
Quartz	(2,-7,8)	12.923	82.47	8.899	7	1.724	11.99	21.55	24.66
Quartz	(2,5,-8)	12.923	82.47	8.898	7	1.724	11.99	21.55	24.66
Quartz	(-7,2,-8)	12.923	82.47	8.896	7	1.724	11.98	21.55	24.65
	Equiv. Refl.: (-7,5,8)								
Quartz	(5,2,8)	12.923	82.47	8.893	7	1.724	11.98	21.55	24.65
	Equiv. Refl.: (5,-7,-8)								
Quartz	(-2,7,-8)	12.923	82.47	8.891	7	1.724	11.99	21.55	24.66
Quartz	(-2,-5,8)	12.923	82.47	8.89	7	1.724	11.99	21.55	24.66
Quartz	(7,-2,8)	12.923	82.47	8.888	7	1.724	11.98	21.55	24.65
	Equiv. Refl.: (7,-5,-8)								
Quartz	(-5,7,8)	12.923	82.47	8.885	7	1.724	11.98	21.55	24.65
	Equiv. Refl.: (-5,-2,-8)								
LiNbO3	(5,4,-14)	12.535	74.08	8.836	7.6	3.717	28.31	46.46	54.41
	Equiv. Refl.: (-4,-5,-14), (-5,9,-14), (-9,5,-14)								
LiNbO3	(4,-9,-14)	12.535	74.08	8.835	7.6	3.717	28.31	46.46	54.41
	Equiv. Refl.: (9,-4,-14)								
LiNbO3	(0,1,-28)	12.598	75.12	8.704	7.7	3.463	26.69	43.29	50.86
	Equiv. Refl.: (1,-1,-28), (-1,0,-28)								
LiNbO3	(0,-1,28)	12.598	75.12	8.687	7.7	3.463	26.69	43.29	50.86
	Equiv. Refl.: (1,0,28), (-1,1,28)								
LiNbO3	(1,8,-10)	12.694	76.87	8.629	7.7	3.041	23.32	38.02	44.6
	Equiv. Refl.: (8,-9,-10), (9,-8,-10), (-1,9,-10), (-8,-1,-10), (-9,1,-10)								
LiNbO3	(4,5,14)	12.535	74.08	8.503	7.6	3.717	28.31	46.46	54.41
	Equiv. Refl.: (5,-9,14), (9,-5,14), (-4,9,14), (-5,-4,14), (-9,4,14)								
LiNbO3	(4,-10,8)	12.639	75.84	8.46	7.4	3.289	24.39	41.11	47.8
	Equiv. Refl.: (6,4,8), (10,-4,8), (-4,-6,8), (-6,10,8), (-10,6,8)								
LiNbO3	(1,-9,10)	12.694	76.87	8.301	7.7	3.041	23.32	38.02	44.6
	Equiv. Refl.: (8,1,10), (9,-1,10), (-1,-8,10), (-8,9,10), (-9,8,10)								
LiNbO3	(1,4,-24)	12.481	73.24	8.281	7.3	3.925	28.55	49.07	56.77
	Equiv. Refl.: (4,-5,-24), (5,-4,-24), (-1,5,-24), (-4,-1,-24), (-5,1,-24)								
LiNbO3	(1,-5,24)	12.481	73.24	8.274	7.3	3.925	28.55	49.07	56.77
	Equiv. Refl.: (4,1,24), (5,-1,24), (-1,-4,24), (-4,5,24), (-5,4,24)								
LiNbO3	(1,4,24)	12.481	73.24	8.232	7.2	3.925	28.35	49.07	56.67
	Equiv. Refl.: (4,-5,24), (5,-4,24), (-1,5,24), (-4,-1,24), (-5,1,24)								
LiNbO3	(1,-5,-24)	12.481	73.24	8.188	7.2	3.925	28.35	49.07	56.67
	Equiv. Refl.: (4,1,-24), (5,-1,-24), (-1,-4,-24), (-4,5,-24), (-5,4,-24)								
LiNbO3	(4,6,-8)	12.639	75.84	8.024	7.4	3.289	24.39	41.11	47.8
	Equiv. Refl.: (-4,10,-8), (-6,-4,-8), (-10,4,-8)								
LiNbO3	(6,-10,-8)	12.639	75.84	8.023	7.4	3.289	24.39	41.11	47.8
	Equiv. Refl.: (10,-6,-8)								
Quartz	(8,0,5)	12.99	85.26	7.845	6.7	1.081	7.24	13.51	15.33
	Equiv. Refl.: (-8,0,-5)								

Ei = Cryst	13.035 Refl (h,k,l)	keV EB [keV]	Θ B [$^\circ$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(8,-8,-5) Equiv. Refl.: (-8,8,5)	12.99	85.26	7.844	6.7	1.081	7.24	13.51	15.33
Quartz	(0,8,-5) Equiv. Refl.: (0,-8,5)	12.99	85.26	7.841	6.7	1.081	7.24	13.51	15.33
LiNbO3	(3,4,20) Equiv. Refl.: (4,-7,20), (7,-4,20), (-3,7,20), (-4,-3,20), (-7,3,20)	12.31	70.79	7.554	6.6	4.541	30	56.76	64.2
LiNbO3	(3,-7,-20) Equiv. Refl.: (4,3,-20), (7,-3,-20), (-3,-4,-20), (-4,7,-20), (-7,4,-20)	12.31	70.79	7.543	6.6	4.541	30	56.76	64.2
LiNbO3	(4,4,-18) Equiv. Refl.: (-4,8,-18), (-4,-4,-18), (-8,4,-18)	12.554	74.38	7.437	6.6	3.644	24.16	45.55	51.56
LiNbO3	(4,-8,-18) Equiv. Refl.: (8,-4,-18)	12.554	74.38	7.436	6.6	3.644	24.16	45.55	51.56
LiNbO3	(1,-6,22) Equiv. Refl.: (5,1,22), (6,-1,22), (-1,-5,22), (-5,6,22), (-6,5,22)	12.519	73.82	7.274	6.5	3.782	24.48	47.27	53.23
LiNbO3	(3,7,-4) Equiv. Refl.: (7,-10,-4), (10,-7,-4), (-3,10,-4), (-7,-3,-4), (-10,3,-4)	12.488	73.34	7.249	6.4	3.901	25.16	48.77	54.87
LiNbO3	(4,4,18) Equiv. Refl.: (4,-8,18), (8,-4,18), (-4,8,18), (-4,-4,18), (-8,4,18)	12.554	74.38	7.234	6.6	3.644	24.16	45.55	51.56
LiNbO3	(0,9,0) Equiv. Refl.: (9,-9,0), (-9,0,0)	12.514	73.75	7.114	6.3	3.799	23.87	47.49	53.15
LiNbO3	(3,-10,4) Equiv. Refl.: (7,3,4), (10,-3,4), (-3,-7,4), (-7,10,4), (-10,7,4)	12.488	73.34	7.101	6.4	3.901	25.16	48.77	54.87
LiNbO3	(1,5,-22) Equiv. Refl.: (-1,6,-22), (-5,-1,-22), (-6,1,-22)	12.519	73.82	7.07	6.5	3.782	24.48	47.27	53.23
LiNbO3	(5,-6,-22) Equiv. Refl.: (6,-5,-22)	12.519	73.82	7.069	6.5	3.782	24.48	47.27	53.23
Quartz	(8,-7,-6)	12.975	84.52	7.056	5.8	1.25	7.24	15.62	17.22
Quartz	(8,-1,6)	12.975	84.52	7.055	5.8	1.25	7.24	15.62	17.22
Quartz	(-7,-1,-6)	12.975	84.52	7.053	5.8	1.25	7.24	15.62	17.22
Quartz	(-7,8,6)	12.975	84.52	7.052	5.8	1.25	7.24	15.62	17.22
Quartz	(-1,8,-6) Equiv. Refl.: (-1,-7,6)	12.975	84.52	7.049	5.8	1.25	7.23	15.62	17.22
Quartz	(-8,5,-7)	12.98	84.74	6.99	6	1.2	7.15	14.99	16.61
Quartz	(-8,3,7)	12.98	84.74	6.989	6	1.2	7.15	14.99	16.61
Quartz	(3,5,7) Equiv. Refl.: (3,-8,-7)	12.98	84.74	6.986	6	1.2	7.15	14.99	16.61
Quartz	(5,3,-7) Equiv. Refl.: (5,-8,7)	12.98	84.74	6.979	6	1.2	7.14	14.99	16.61
LiNbO3	(1,-4,26) Equiv. Refl.: (3,1,26), (4,-1,26), (-1,-3,26), (-3,4,26), (-4,3,26)	12.661	76.25	6.949	6.4	3.19	20.44	39.87	44.8
Quartz	(8,-3,-7) Equiv. Refl.: (8,-5,7)	12.98	84.74	6.939	6	1.2	7.15	14.99	16.61
Quartz	(-3,-5,-7)	12.98	84.74	6.936	6	1.2	7.15	14.99	16.61
Quartz	(-3,8,7)	12.98	84.74	6.935	6	1.2	7.14	14.99	16.61
Quartz	(-5,8,-7) Equiv. Refl.: (-5,-3,7)	12.98	84.74	6.928	6	1.2	7.14	14.99	16.61
LiNbO3	(1,3,-26) Equiv. Refl.: (3,-4,-26), (4,-3,-26), (-1,4,-26), (-3,-1,-26), (-4,1,-26)	12.661	76.25	6.815	6.4	3.19	20.44	39.87	44.8
LiNbO3	(0,-9,0) Equiv. Refl.: (9,0,0), (-9,9,0)	12.514	73.75	6.742	6.3	3.799	23.87	47.49	53.15

Ei = Cryst	13.035 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
LiNbO3	(3,6,12)	12.272	70.3	6.725	5.9	4.667	27.63	58.34	64.55
	Equiv. Refl.: (6,-9,12), (9,-6,12), (-6,-3,12)								
LiNbO3	(-3,9,12)	12.272	70.3	6.724	5.9	4.667	27.63	58.34	64.55
	Equiv. Refl.: (-9,3,12)								
Quartz	(-8,7,6)	12.975	84.52	6.719	5.8	1.25	7.24	15.62	17.22
Quartz	(-8,1,-6)	12.975	84.52	6.718	5.8	1.25	7.24	15.62	17.22
Quartz	(7,1,6)	12.975	84.52	6.716	5.8	1.25	7.24	15.62	17.22
Quartz	(7,-8,-6)	12.975	84.52	6.715	5.8	1.25	7.24	15.62	17.22
Quartz	(1,7,-6)	12.975	84.52	6.713	5.8	1.25	7.23	15.62	17.22
	Equiv. Refl.: (1,-8,6)								
LiNbO3	(3,-9,-12)	12.272	70.3	6.595	5.9	4.667	27.63	58.34	64.55
	Equiv. Refl.: (6,3,-12), (9,-3,-12), (-3,-6,-12), (-6,9,-12), (-9,6,-12)								
LiNbO3	(3,-10,-2)	12.391	71.92	6.465	5.8	4.256	24.49	53.2	58.57
	Equiv. Refl.: (7,3,-2), (10,-3,-2), (-3,-7,-2), (-7,10,-2), (-10,7,-2)								
Quartz	(5,5,0)	12.618	75.47	6.377	4.8	3.379	16.31	42.24	45.28
	Equiv. Refl.: (5,-10,0), (-10,5,0)								
Quartz	(10,-5,0)	12.618	75.47	6.371	4.8	3.379	16.31	42.24	45.28
	Equiv. Refl.: (-5,10,0), (-5,-5,0)								
LiNbO3	(2,6,-16)	12.318	70.91	6.346	5.6	4.512	25.25	56.4	61.8
	Equiv. Refl.: (6,-8,-16), (8,-6,-16), (-2,8,-16), (-6,-2,-16), (-8,2,-16)								
LiNbO3	(3,7,2)	12.391	71.92	6.24	5.8	4.256	24.49	53.2	58.57
	Equiv. Refl.: (7,-10,2), (10,-7,2), (-3,10,2), (-7,-3,2), (-10,3,2)								
Quartz	(-6,4,-9)	12.884	81.28	6.212	5	1.999	9.93	24.99	26.89
Quartz	(-6,2,9)	12.884	81.28	6.211	5	1.999	9.93	24.99	26.89
Quartz	(2,4,9)	12.884	81.28	6.21	5	1.999	9.93	24.99	26.89
	Equiv. Refl.: (2,-6,-9)								
Quartz	(4,2,-9)	12.884	81.28	6.209	5	1.999	9.93	24.99	26.89
	Equiv. Refl.: (4,-6,9)								
LiNbO3	(1,8,8)	12.407	72.15	6.135	5.6	4.199	23.39	52.48	57.46
	Equiv. Refl.: (8,-9,8), (9,-8,8), (-1,9,8), (-8,-1,8), (-9,1,8)								
Quartz	(1,-8,-6)	12.975	84.52	6.094	5	1.25	6.31	15.62	16.85
Quartz	(1,7,6)	12.975	84.52	6.092	5	1.25	6.31	15.62	16.85
	Equiv. Refl.: (-8,7,-6)								
Quartz	(-8,1,6)	12.975	84.52	6.091	5	1.25	6.31	15.62	16.85
Quartz	(7,1,-6)	12.975	84.52	6.089	5	1.25	6.3	15.62	16.85
	Equiv. Refl.: (7,-8,6)								
LiNbO3	(-8,9,-8)	12.407	72.15	6.058	5.6	4.199	23.39	52.48	57.46
	Equiv. Refl.: (-9,8,-8)								
LiNbO3	(1,-9,-8)	12.407	72.15	6.057	5.6	4.199	23.39	52.48	57.46
	Equiv. Refl.: (8,1,-8), (9,-1,-8), (-1,-8,-8)								
LiNbO3	(2,-8,16)	12.318	70.91	6.056	5.6	4.512	25.25	56.4	61.8
	Equiv. Refl.: (6,2,16), (8,-2,16), (-2,-6,16), (-6,8,16), (-8,6,16)								
Quartz	(0,2,11)	12.949	83.43	6.019	5.1	1.502	7.66	18.77	20.28
	Equiv. Refl.: (0,-2,-11)								
Quartz	(6,-4,9)	12.884	81.28	6.011	5	1.999	9.93	24.99	26.89
Quartz	(2,0,-11)	12.949	83.43	6.009	5.1	1.502	7.65	18.77	20.27
	Equiv. Refl.: (6,-2,-9), (-2,0,11)								
Quartz	(-2,6,9)	12.884	81.28	6.008	5	1.999	9.93	24.99	26.89
	Equiv. Refl.: (-2,-4,-9), (-4,6,-9), (-4,-2,9)								

Ei =	13.035	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(2,-2,11)	12.949	83.43	6.007	5.1	1.502	7.65	18.77	20.27
	Equiv. Refl.: (-2,2,-11)								
LiNbO3	(3,-9,12)	12.272	70.3	5.791	5.2	4.667	24.39	58.34	63.23
	Equiv. Refl.: (6,3,12), (9,-3,12), (-3,-6,12), (-6,9,12), (-9,6,12)								
Sapph	(2,6,14)	12.741	77.81	5.739	4.7	2.815	13.12	35.19	37.55
	Equiv. Refl.: (2,-8,-14), (6,2,-14), (6,-8,14), (8,-2,-14), (8,-6,14), (-2,8,14), (-2,-6,-14), (-6,8,-14), (-6,-2,14), (-8,2,14), (-8,6,-14)								
LiNbO3	(5,5,-6)	12.337	71.17	5.72	5	4.445	22.41	55.57	59.92
	Equiv. Refl.: (-5,10,-6), (-5,-5,-6), (-10,5,-6)								
LiNbO3	(5,-10,-6)	12.337	71.17	5.719	5	4.445	22.41	55.57	59.92
	Equiv. Refl.: (10,-5,-6)								
LiNbO3	(3,6,-12)	12.272	70.3	5.694	5.2	4.667	24.39	58.34	63.23
	Equiv. Refl.: (6,-9,-12), (9,-6,-12), (-3,9,-12), (-6,-3,-12), (-9,3,-12)								
Quartz	(-1,8,6)	12.975	84.52	5.638	5	1.25	6.31	15.62	16.85
Quartz	(8,-1,-6)	12.975	84.52	5.636	5	1.25	6.31	15.62	16.85
	Equiv. Refl.: (8,-7,6), (-1,-7,-6)								
Quartz	(-7,-1,6)	12.975	84.52	5.634	5	1.25	6.3	15.62	16.85
Quartz	(-7,8,-6)	12.975	84.52	5.633	5	1.25	6.3	15.62	16.85
LiNbO3	(4,6,4)	12.253	70.06	5.588	5.1	4.73	24.08	59.12	63.84
	Equiv. Refl.: (6,-10,4), (10,-6,4), (-4,10,4), (-6,-4,4), (-10,4,4)								
LiNbO3	(5,5,6)	12.337	71.17	5.571	5	4.445	22.41	55.57	59.92
	Equiv. Refl.: (5,-10,6), (10,-5,6), (-5,10,6), (-5,-5,6), (-10,5,6)								
LiNbO3	(4,-10,-4)	12.253	70.06	5.565	5.1	4.73	24.08	59.12	63.84
	Equiv. Refl.: (6,4,-4), (10,-4,-4), (-4,-6,-4), (-6,10,-4), (-10,6,-4)								
LiNbO3	(2,-6,-22)	12.285	70.47	5.472	5	4.624	23.21	57.8	62.28
	Equiv. Refl.: (4,2,-22), (6,-2,-22), (-2,-4,-22), (-4,6,-22), (-6,4,-22)								
LiNbO3	(2,4,22)	12.285	70.47	5.454	5	4.624	23.21	57.8	62.28
	Equiv. Refl.: (4,-6,22), (6,-4,22), (-2,6,22), (-4,-2,22), (-6,2,22)								
Sapph	(0,8,10)	12.947	83.35	5.428	4.6	1.52	7.02	19	20.26
	Equiv. Refl.: (0,-8,-10), (8,0,-10), (8,-8,10), (-8,0,10), (-8,8,-10)								
Quartz	(-3,9,5)	12.908	82.01	5.349	4.2	1.83	7.66	22.87	24.12
	Equiv. Refl.: (-3,-6,-5), (-6,9,-5)								
Quartz	(-6,-3,5)	12.908	82.01	5.348	4.2	1.83	7.66	22.87	24.12
Quartz	(9,-3,-5)	12.908	82.01	5.344	4.2	1.83	7.66	22.87	24.12
	Equiv. Refl.: (9,-6,5)								
Quartz	(3,7,0)	12.95	83.45	5.343	4.2	1.496	6.35	18.7	19.75
	Equiv. Refl.: (3,-10,0), (7,3,0), (7,-10,0), (-10,3,0), (-10,7,0)								
Sapph	(2,2,24)	12.585	74.9	5.265	4.2	3.518	14.85	43.97	46.41
	Equiv. Refl.: (2,2,-24), (2,-4,24), (2,-4,-24), (4,-2,24), (4,-2,-24), (-2,4,24), (-2,4,-24), (-2,-2,24), (-2,-2,-24), (-4,2,24), (-4,2,-24)								
Quartz	(-1,-1,11)	12.867	80.79	5.161	4.2	2.113	8.94	26.41	27.88
Quartz	(-1,2,-11)	12.867	80.79	5.16	4.2	2.113	8.94	26.41	27.88
	Equiv. Refl.: (-1,-1,-11)								
Quartz	(-1,2,11)	12.867	80.79	5.159	4.2	2.113	8.94	26.41	27.88
Quartz	(2,-1,11)	12.867	80.79	5.157	4.2	2.113	8.93	26.41	27.88
Quartz	(2,-1,-11)	12.867	80.79	5.156	4.2	2.113	8.93	26.41	27.88
Quartz	(1,1,11)	12.867	80.79	5.11	4.2	2.113	8.94	26.41	27.88
	Equiv. Refl.: (1,1,-11)								
Quartz	(1,-2,11)	12.867	80.79	5.109	4.2	2.113	8.94	26.41	27.88
Quartz	(1,-2,-11)	12.867	80.79	5.108	4.2	2.113	8.94	26.41	27.88

Ei = Cryst	13.035 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(-2,1,11) Equiv. Refl.: (-2,1,-11)	12.867	80.79	5.106	4.2	2.113	8.93	26.41	27.88
Quartz	(3,6,5) Equiv. Refl.: (3,-9,-5), (6,-9,5)	12.908	82.01	5.089	4.2	1.83	7.66	22.87	24.12
Quartz	(6,3,-5)	12.908	82.01	5.088	4.2	1.83	7.66	22.87	24.12
Quartz	(-9,3,5) Equiv. Refl.: (-9,6,-5)	12.908	82.01	5.084	4.2	1.83	7.66	22.87	24.12
Quartz	(10,-3,0) Equiv. Refl.: (10,-7,0), (-3,10,0), (-3,-7,0), (-7,10,0), (-7,-3,0)	12.95	83.45	5.02	4.2	1.496	6.35	18.7	19.75
Quartz	(9,-4,-5) Equiv. Refl.: (9,-5,5)	12.743	77.85	4.957	4	2.807	11.22	35.08	36.83
Quartz	(-4,9,5) Equiv. Refl.: (-4,-5,-5), (-5,9,-5), (-5,-4,5)	12.743	77.85	4.956	4	2.807	11.22	35.08	36.83
Quartz	(-9,4,5)	12.743	77.85	4.94	4	2.807	11.22	35.08	36.83
Quartz	(-9,5,-5)	12.743	77.85	4.939	4	2.807	11.22	35.08	36.83
Quartz	(4,5,5) Equiv. Refl.: (4,-9,-5), (5,4,-5), (5,-9,5)	12.743	77.85	4.938	4	2.807	11.22	35.08	36.83
Quartz	(10,-4,1) Equiv. Refl.: (10,-6,-1), (-6,10,1)	12.753	78.07	4.894	3.8	2.754	10.53	34.43	36
Quartz	(-4,10,-1) Equiv. Refl.: (-4,-6,1), (-6,-4,-1)	12.753	78.07	4.893	3.8	2.754	10.53	34.43	36
Quartz	(2,4,-9) Equiv. Refl.: (2,-6,9)	12.884	81.28	4.885	3.9	1.999	7.8	24.99	26.18
Quartz	(-6,2,-9)	12.884	81.28	4.88	3.9	1.999	7.79	24.99	26.18
Quartz	(4,2,9) Equiv. Refl.: (-6,4,9)	12.884	81.28	4.879	3.9	1.999	7.79	24.99	26.18
Quartz	(4,-6,-9)	12.884	81.28	4.878	3.9	1.999	7.79	24.99	26.18
Quartz	(-2,6,-9) Equiv. Refl.: (-2,-4,9)	12.884	81.28	4.87	3.9	1.999	7.8	24.99	26.18
Quartz	(6,-2,9) Equiv. Refl.: (-4,-2,-9)	12.884	81.28	4.865	3.9	1.999	7.79	24.99	26.18
Quartz	(6,-4,-9) Equiv. Refl.: (-4,6,9)	12.884	81.28	4.864	3.9	1.999	7.79	24.99	26.18
Quartz	(6,4,1) Equiv. Refl.: (6,-10,-1), (-10,4,-1), (-10,6,1)	12.753	78.07	4.814	3.8	2.754	10.53	34.43	36
Quartz	(4,6,-1) Equiv. Refl.: (4,-10,1)	12.753	78.07	4.813	3.8	2.754	10.53	34.43	36
Sapph	(3,5,-14) Equiv. Refl.: (3,-8,14), (5,3,14), (5,-8,-14), (8,-3,14), (8,-5,-14), (-3,8,-14), (-3,-5,14), (-5,8,14), (-5,-3,-14), (-8,3,-14), (-8,5,14)	12.472	73.1	4.496	3.5	3.961	13.77	49.51	51.39
Quartz	(-5,8,-6) Equiv. Refl.: (-5,-3,6)	12.304	70.72	4.324	3.2	4.561	14.55	57.01	58.83
Quartz	(8,-3,-6) Equiv. Refl.: (8,-5,6), (-3,8,6), (-3,-5,-6)	12.304	70.72	4.323	3.2	4.561	14.55	57.01	58.83
Quartz	(5,3,-6) Equiv. Refl.: (5,-8,6)	12.304	70.72	4.294	3.2	4.561	14.55	57.01	58.83
Quartz	(3,5,6) Equiv. Refl.: (3,-8,-6), (-8,3,6), (-8,5,-6)	12.304	70.72	4.293	3.2	4.561	14.54	57.01	58.83
Sapph	(0,6,18) Equiv. Refl.: (0,6,-18), (0,-6,18), (0,-6,-18), (6,0,18), (6,0,-18), (6,-6,18), (6,-6,-18), (-6,0,18), (-6,0,-18), (-6,6,18), (-6,6,-18)	12.461	72.94	4.121	3.2	4	12.94	50	51.65

Ei =	13.035	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(0,8,-4)	12.526	73.94	4.096	3.1	3.752	11.63	46.9	48.32
	Equiv. Refl.: (0,-8,4)								
Quartz	(8,-8,-4)	12.526	73.94	4.095	3.1	3.752	11.63	46.9	48.32
	Equiv. Refl.: (-8,0,-4), (-8,8,4)								
Quartz	(8,0,4)	12.526	73.94	4.094	3.1	3.752	11.63	46.9	48.32
Quartz	(4,-4,-10)	12.866	80.76	4.058	3.3	2.121	7.03	26.51	27.42
Quartz	(4,0,10)	12.866	80.76	4.057	3.3	2.121	7.03	26.51	27.42
	Equiv. Refl.: (-4,4,10)								
Quartz	(0,4,-10)	12.866	80.76	4.056	3.3	2.121	7.03	26.51	27.42
	Equiv. Refl.: (0,-4,10), (-4,0,-10)								
Quartz	(-2,9,4)	12.778	78.6	4.004	3.1	2.627	8.17	32.84	33.84
	Equiv. Refl.: (-2,-7,-4), (-7,9,-4), (-7,-2,4)								
Quartz	(9,-2,-4)	12.778	78.6	4.001	3.1	2.627	8.17	32.84	33.84
	Equiv. Refl.: (9,-7,4)								
Quartz	(7,-4,-8)	12.757	78.15	3.999	3.2	2.735	8.64	34.19	35.26
	Equiv. Refl.: (-4,7,8), (-4,-3,-8)								
Quartz	(7,-3,8)	12.757	78.15	3.998	3.2	2.735	8.64	34.19	35.26
	Equiv. Refl.: (-3,7,-8), (-3,-4,8)								
Quartz	(-4,-6,-2)	12.907	81.97	3.952	3.2	1.839	5.84	22.98	23.71
Quartz	(4,3,8)	12.757	78.15	3.951	3.2	2.735	8.64	34.19	35.26
	Equiv. Refl.: (4,-7,-8), (10,-4,-2), (10,-6,2), (-4,10,2), (-6,10,-2), (-7,4,8)								
Quartz	(3,4,-8)	12.757	78.15	3.95	3.2	2.735	8.64	34.19	35.26
	Equiv. Refl.: (3,-7,8), (-6,-4,2), (-7,3,-8)								
Quartz	(4,-8,-7)	12.898	81.69	3.93	3.3	1.904	6.22	23.8	24.6
	Equiv. Refl.: (-8,4,7), (-8,4,-7)								
Quartz	(4,4,7)	12.898	81.69	3.929	3.3	1.904	6.21	23.8	24.6
Quartz	(4,-8,7)	12.898	81.69	3.928	3.3	1.904	6.21	23.8	24.6
Quartz	(4,4,-7)	12.898	81.69	3.927	3.3	1.904	6.21	23.8	24.6
Quartz	(8,-4,7)	12.898	81.69	3.916	3.3	1.904	6.22	23.8	24.6
	Equiv. Refl.: (8,-4,-7), (-4,8,7)								
Quartz	(-4,-4,-7)	12.898	81.69	3.915	3.3	1.904	6.21	23.8	24.6
Quartz	(-4,8,-7)	12.898	81.69	3.914	3.3	1.904	6.21	23.8	24.6
	Equiv. Refl.: (-4,-4,7)								
Quartz	(2,7,4)	12.778	78.6	3.864	3.1	2.627	8.18	32.84	33.84
	Equiv. Refl.: (7,2,-4), (7,-9,4)								
Quartz	(2,-9,-4)	12.778	78.6	3.863	3.1	2.627	8.17	32.84	33.84
Quartz	(-9,2,4)	12.778	78.6	3.861	3.1	2.627	8.17	32.84	33.84
	Equiv. Refl.: (-9,7,-4)								
LiNbO3	(2,2,27)	12.999	85.75	3.733	5.9	0.969	5.69	12.11	13.38
	Equiv. Refl.: (2,2,-27), (2,-4,27), (2,-4,-27), (4,-2,27), (4,-2,-27), (-2,4,27), (-2,4,-27), (-2,-2,27), (-2,-2,-27), (-4,2,27), (-4,2,-27)								
Sapph	(1,8,-1)	12.863	80.67	3.652	3.2	2.141	6.78	26.76	27.61
	Equiv. Refl.: (1,-9,1), (8,1,1), (8,-9,-1), (9,-1,1), (9,-8,-1), (-1,9,-1), (-1,-8,1), (-8,9,1), (-8,-1,-1), (-9,1,-1), (-9,8,1)								
Quartz	(7,-6,-7)	12.48	73.22	3.631	2.7	3.931	10.8	49.14	50.31
Quartz	(7,-1,7)	12.48	73.22	3.63	2.7	3.931	10.8	49.14	50.31
Quartz	(-6,-1,-7)	12.48	73.22	3.629	2.7	3.931	10.8	49.14	50.31
Quartz	(-1,7,-7)	12.48	73.22	3.628	2.7	3.931	10.8	49.14	50.31
	Equiv. Refl.: (-1,-6,7), (-6,7,7)								

Ei = Cryst	13.035 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(4,6,2)	12.907	81.97	3.598	3.2	1.839	5.84	22.98	23.71
	Equiv. Refl.: (4,-10,-2), (6,-10,2), (-10,4,2), (-10,6,-2)								
Quartz	(6,4,-2)	12.907	81.97	3.597	3.2	1.839	5.83	22.98	23.71
Quartz	(-7,6,7)	12.48	73.22	3.484	2.7	3.931	10.8	49.14	50.31
Quartz	(-7,1,-7)	12.48	73.22	3.483	2.7	3.931	10.8	49.14	50.31
Quartz	(6,1,7)	12.48	73.22	3.482	2.7	3.931	10.8	49.14	50.31
Quartz	(1,6,-7)	12.48	73.22	3.481	2.7	3.931	10.8	49.14	50.31
	Equiv. Refl.: (1,-7,7), (6,-7,-7)								
Quartz	(9,-8,-2)	12.658	76.19	3.38	2.7	3.205	8.59	40.06	40.97
	Equiv. Refl.: (-1,9,-2), (-1,-8,2), (-8,9,2), (-8,-1,-2)								
Quartz	(9,-1,2)	12.658	76.19	3.379	2.7	3.205	8.59	40.06	40.97
Quartz	(8,1,2)	12.658	76.19	3.367	2.7	3.205	8.59	40.06	40.97
	Equiv. Refl.: (8,-9,-2)								
Quartz	(1,8,-2)	12.658	76.19	3.366	2.7	3.205	8.59	40.06	40.97
	Equiv. Refl.: (1,-9,2), (-9,1,-2), (-9,8,2)								
Sapph	(0,2,-26)	12.769	78.41	3.356	2.7	2.674	7.28	33.42	34.21
	Equiv. Refl.: (0,-2,26), (2,0,26), (2,-2,-26), (-2,0,-26), (-2,2,26)								
Quartz	(-3,6,9)	12.802	79.14	3.29	2.9	2.5	7.37	31.25	32.11
Quartz	(6,-3,9)	12.802	79.14	3.289	2.9	2.5	7.37	31.25	32.11
	Equiv. Refl.: (6,-3,-9), (-3,6,-9), (-3,-3,9), (-3,-3,-9)								
Quartz	(-6,3,9)	12.802	79.14	3.275	2.9	2.5	7.37	31.25	32.11
Quartz	(3,3,9)	12.802	79.14	3.274	2.9	2.5	7.37	31.25	32.11
	Equiv. Refl.: (3,3,-9), (3,-6,9), (3,-6,-9), (-6,3,-9)								
Quartz	(6,-9,-5)	12.908	82.01	3.273	2.7	1.83	4.93	22.87	23.4
Quartz	(6,3,5)	12.908	82.01	3.272	2.7	1.83	4.93	22.87	23.4
Quartz	(-9,3,-5)	12.908	82.01	3.271	2.7	1.83	4.93	22.87	23.4
	Equiv. Refl.: (-9,6,5)								
Quartz	(3,6,-5)	12.908	82.01	3.27	2.7	1.83	4.92	22.87	23.4
	Equiv. Refl.: (3,-9,5)								
Quartz	(-6,9,5)	12.908	82.01	3.246	2.7	1.83	4.93	22.87	23.4
	Equiv. Refl.: (-6,-3,-5)								
Quartz	(9,-6,-5)	12.908	82.01	3.245	2.7	1.83	4.93	22.87	23.4
Quartz	(9,-3,5)	12.908	82.01	3.244	2.7	1.83	4.93	22.87	23.4
	Equiv. Refl.: (-3,9,-5), (-3,-6,5)								
Quartz	(-7,10,-1)	13.001	85.84	3.241	3.1	0.948	2.9	11.85	12.2
	Equiv. Refl.: (-7,-3,1)								
Quartz	(-3,10,1)	13.001	85.84	3.24	3.1	0.948	2.9	11.85	12.2
	Equiv. Refl.: (-3,-7,-1)								
Quartz	(10,-3,-1)	13.001	85.84	3.239	3.1	0.948	2.9	11.85	12.2
	Equiv. Refl.: (10,-7,1)								
Quartz	(9,-3,4)	12.441	72.64	3.204	2.4	4.075	9.98	50.93	51.9
	Equiv. Refl.: (9,-6,-4)								
Quartz	(-3,9,-4)	12.441	72.64	3.202	2.4	4.075	9.98	50.93	51.9
	Equiv. Refl.: (-3,-6,4), (-6,9,4), (-6,-3,-4)								
Sapph	(2,7,4)	12.461	72.94	3.175	2.5	4.001	9.82	50.01	50.96
	Equiv. Refl.: (2,-9,-4), (7,2,-4), (7,-9,4), (9,-2,-4), (9,-7,4), (-2,9,4), (-2,-7,-4), (-7,9,-4), (-7,-2,4), (-9,2,4), (-9,7,-4)								
Quartz	(9,-1,1)	12.501	73.55	3.164	2.3	3.85	8.94	48.12	48.94
	Equiv. Refl.: (9,-8,-1), (-1,9,-1), (-1,-8,1), (-8,9,1), (-8,-1,-1)								
Quartz	(7,3,-1)	13.001	85.84	3.14	3.1	0.948	2.9	11.85	12.2
	Equiv. Refl.: (7,-10,1)								

Ei =	13.035	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[°]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Quartz	(3,7,1)	13.001	85.84	3.139	3.1	0.948	2.9	11.85	12.2
	Equiv. Refl.: (3,-10,-1)								
Quartz	(-10,3,1)	13.001	85.84	3.138	3.1	0.948	2.9	11.85	12.2
	Equiv. Refl.: (-10,7,-1)								
Quartz	(-9,3,-4)	12.441	72.64	3.069	2.4	4.075	9.98	50.93	51.9
	Equiv. Refl.: (-9,6,4)								
Quartz	(3,6,-4)	12.441	72.64	3.067	2.4	4.075	9.98	50.93	51.9
	Equiv. Refl.: (3,-9,4), (6,3,4), (6,-9,-4)								
Quartz	(1,8,3)	12.915	82.23	3.062	2.5	1.779	4.37	22.23	22.66
	Equiv. Refl.: (1,-9,-3), (-9,1,3), (-9,8,-3)								
Quartz	(8,1,-3)	12.915	82.23	3.061	2.5	1.779	4.37	22.23	22.66
Quartz	(8,-9,3)	12.915	82.23	3.06	2.5	1.779	4.37	22.23	22.66
Quartz	(0,8,4)	12.526	73.94	3.059	2.4	3.752	9.11	46.9	47.78
	Equiv. Refl.: (0,-8,-4)								
Quartz	(8,-8,4)	12.526	73.94	3.058	2.4	3.752	9.1	46.9	47.78
	Equiv. Refl.: (-8,8,-4)								
Quartz	(8,0,-4)	12.526	73.94	3.057	2.4	3.752	9.1	46.9	47.78
	Equiv. Refl.: (-8,0,4)								
Quartz	(-1,4,10)	12.616	75.43	3.004	2.2	3.388	7.62	42.34	43.02
	Equiv. Refl.: (-1,-3,-10)								
Quartz	(-3,4,-10)	12.616	75.43	3.003	2.2	3.388	7.61	42.34	43.02
Quartz	(-3,-1,10)	12.616	75.43	3.002	2.2	3.388	7.61	42.34	43.02
Quartz	(4,-1,-10)	12.616	75.43	2.999	2.2	3.388	7.6	42.34	43.02
	Equiv. Refl.: (4,-3,10)								
Quartz	(1,8,-1)	12.501	73.55	2.991	2.3	3.85	8.94	48.12	48.94
	Equiv. Refl.: (1,-9,1), (8,1,1), (8,-9,-1), (-9,1,-1), (-9,8,1)								
Quartz	(-4,-5,4)	12.27	70.27	2.946	2.2	4.676	10.22	58.45	59.33
	Equiv. Refl.: (-5,9,4), (-5,-4,-4)								
Quartz	(9,-4,4)	12.27	70.27	2.945	2.2	4.676	10.22	58.45	59.33
	Equiv. Refl.: (9,-5,-4), (-4,9,-4)								
Quartz	(-3,7,8)	12.757	78.15	2.94	2.6	2.735	7.18	34.19	34.93
	Equiv. Refl.: (-3,-4,-8)								
Quartz	(-4,7,-8)	12.757	78.15	2.939	2.6	2.735	7.17	34.19	34.93
Quartz	(-4,-3,8)	12.757	78.15	2.938	2.6	2.735	7.17	34.19	34.93
Quartz	(7,-3,-8)	12.757	78.15	2.937	2.6	2.735	7.17	34.19	34.93
	Equiv. Refl.: (7,-4,8)								
Quartz	(7,2,-3)	12.412	72.22	2.93	2.2	4.18	9.16	52.25	53.05
Quartz	(2,7,3)	12.412	72.22	2.929	2.2	4.18	9.16	52.25	53.05
	Equiv. Refl.: (2,-9,-3), (4,5,-4), (4,-9,4), (5,4,4), (5,-9,-4), (7,-9,3), (-9,2,3), (-9,7,-3)								
Quartz	(-9,4,-4)	12.27	70.27	2.928	2.2	4.676	10.22	58.45	59.33
	Equiv. Refl.: (-9,5,4)								
Quartz	(3,4,8)	12.757	78.15	2.908	2.6	2.735	7.18	34.19	34.93
	Equiv. Refl.: (3,-7,-8)								
Quartz	(4,-7,8)	12.757	78.15	2.906	2.6	2.735	7.17	34.19	34.93
Quartz	(4,3,-8)	12.757	78.15	2.905	2.6	2.735	7.17	34.19	34.93
	Equiv. Refl.: (-7,3,8), (-7,4,-8)								
Quartz	(9,-1,0)	12.448	72.75	2.902	2.2	4.048	8.78	50.6	51.36
	Equiv. Refl.: (9,-8,0), (-1,9,0), (-1,-8,0), (-8,9,0), (-8,-1,0)								

Ei =	13.035	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(2,4,-20)	12.43	72.47	2.894	2.6	4.118	10.68	51.47	52.57
	Equiv. Refl.: (2,-6,20), (4,2,20), (4,-6,-20), (6,-2,20), (6,-4,-20), (-2,6,-20), (-2,-4,20), (-4,6,20), (-4,-2,-20), (-6,2,-20), (-6,4,20)								
Quartz	(-7,-2,3)	12.412	72.22	2.887	2.2	4.18	9.16	52.25	53.05
Quartz	(9,-2,-3)	12.412	72.22	2.886	2.2	4.18	9.16	52.25	53.05
	Equiv. Refl.: (9,-7,3), (-2,-9,3), (-2,-7,-3), (-7,9,-3)								
Quartz	(6,-8,6)	12.56	74.48	2.853	2.2	3.619	7.83	45.24	45.91
Quartz	(6,2,-6)	12.56	74.48	2.852	2.2	3.619	7.83	45.24	45.91
	Equiv. Refl.: (-8,2,6), (-8,6,-6)								
Quartz	(2,6,6)	12.56	74.48	2.849	2.2	3.619	7.82	45.24	45.91
	Equiv. Refl.: (2,-8,-6)								
Quartz	(0,-7,-7)	12.98	84.74	2.842	2.8	1.2	3.36	14.99	15.37
Quartz	(0,7,7)	12.98	84.74	2.841	2.8	1.2	3.36	14.99	15.37
Quartz	(1,8,0)	12.448	72.75	2.835	2.2	4.048	8.78	50.6	51.36
	Equiv. Refl.: (1,-9,0), (7,-7,7), (8,1,0), (8,-9,0), (-7,0,7), (-7,7,-7), (-9,1,0), (-9,8,0)								
Quartz	(7,0,-7)	12.98	84.74	2.834	2.8	1.2	3.36	14.99	15.37
Quartz	(1,3,10)	12.616	75.43	2.831	2.2	3.388	7.62	42.34	43.02
	Equiv. Refl.: (1,-4,-10), (3,-4,10)								
Quartz	(3,1,-10)	12.616	75.43	2.829	2.2	3.388	7.61	42.34	43.02
Quartz	(-4,1,10)	12.616	75.43	2.826	2.2	3.388	7.6	42.34	43.02
	Equiv. Refl.: (-4,3,-10)								
Sapph	(4,5,-10)	12.682	76.64	2.791	2.6	3.095	7.97	38.69	39.51
	Equiv. Refl.: (4,-9,10), (5,4,10), (5,-9,-10), (9,-4,10), (9,-5,-10), (-4,9,-10), (-4,-5,10), (-5,9,10), (-5,-4,-10), (-9,4,-10), (-9,5,10)								
Quartz	(8,-6,6)	12.56	74.48	2.785	2.2	3.619	7.83	45.24	45.91
	Equiv. Refl.: (-6,8,-6), (-6,-2,6)								
Quartz	(8,-2,-6)	12.56	74.48	2.784	2.2	3.619	7.83	45.24	45.91
Quartz	(-2,8,6)	12.56	74.48	2.782	2.2	3.619	7.82	45.24	45.91
	Equiv. Refl.: (-2,-6,-6)								
Quartz	(10,-4,-1)	12.753	78.07	2.74	2.2	2.754	5.97	34.43	34.94
	Equiv. Refl.: (10,-6,1), (-4,10,1), (-4,-6,-1), (-6,10,-1), (-6,-4,1)								
Quartz	(6,0,-8)	12.674	76.48	2.731	2.1	3.135	6.7	39.18	39.75
Quartz	(0,6,8)	12.674	76.48	2.73	2.1	3.135	6.7	39.18	39.75
	Equiv. Refl.: (0,-6,-8), (6,-6,8), (-6,0,8), (-6,6,-8)								
Sapph	(1,5,20)	12.7	76.98	2.698	2.5	3.015	7.57	37.68	38.44
	Equiv. Refl.: (1,-6,-20), (5,1,-20), (5,-6,20), (6,-1,-20), (6,-5,20), (-1,6,20), (-1,-5,-20), (-5,6,-20), (-5,-1,20), (-6,1,20), (-6,5,-20)								
Quartz	(8,-3,7)	12.98	84.74	2.655	2.6	1.2	3.16	14.99	15.32
Quartz	(8,-5,-7)	12.98	84.74	2.654	2.6	1.2	3.16	14.99	15.32
	Equiv. Refl.: (-3,8,-7)								
Quartz	(-3,-5,7)	12.98	84.74	2.652	2.6	1.2	3.16	14.99	15.32
Sapph	(4,5,11)	12.87	80.86	2.651	2.6	2.097	5.39	26.21	26.76
	Equiv. Refl.: (4,-9,-11), (5,4,-11), (5,-9,11), (9,-4,-11), (9,-5,11), (-4,9,11), (-4,-5,-11), (-5,9,-11), (-5,-4,11), (-9,4,11), (-9,5,-11)								
Quartz	(-5,8,7)	12.98	84.74	2.643	2.6	1.2	3.15	14.99	15.32
	Equiv. Refl.: (-5,-3,-7)								
Quartz	(0,3,10)	12.275	70.34	2.597	2.2	4.658	10.47	58.23	59.16
	Equiv. Refl.: (0,-3,-10), (3,0,-10), (3,-3,10), (-3,0,10), (-3,3,-10)								
Quartz	(3,-8,7)	12.98	84.74	2.586	2.6	1.2	3.16	14.99	15.32
	Equiv. Refl.: (-8,3,-7), (-8,5,7)								
Quartz	(3,5,-7)	12.98	84.74	2.584	2.6	1.2	3.16	14.99	15.32

Ei = Cryst	13.035 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(5,3,7)	12.98	84.74	2.575	2.6	1.2	3.15	14.99	15.32
	Equiv. Refl.: (5,-8,-7)								
Quartz	(9,-1,-3)	12.915	82.23	2.511	2.5	1.779	4.37	22.23	22.66
	Equiv. Refl.: (9,-8,3), (-1,9,3), (-1,-8,-3)								
Quartz	(-8,-1,3)	12.915	82.23	2.51	2.5	1.779	4.37	22.23	22.66
Quartz	(-8,9,-3)	12.915	82.23	2.509	2.5	1.779	4.37	22.23	22.66
Quartz	(-8,9,3)	12.915	82.23	2.484	2.3	1.779	4.07	22.23	22.6
	Equiv. Refl.: (-8,-1,-3)								
Quartz	(-1,9,-3)	12.915	82.23	2.483	2.3	1.779	4.07	22.23	22.6
	Equiv. Refl.: (-1,-8,3)								
Quartz	(9,-1,3)	12.915	82.23	2.482	2.3	1.779	4.07	22.23	22.6
	Equiv. Refl.: (9,-8,-3)								
Quartz	(8,1,3)	12.915	82.23	2.443	2.3	1.779	4.07	22.23	22.6
	Equiv. Refl.: (8,-9,-3)								
Quartz	(1,-9,3)	12.915	82.23	2.442	2.3	1.779	4.07	22.23	22.6
Quartz	(1,8,-3)	12.915	82.23	2.441	2.3	1.779	4.07	22.23	22.6
	Equiv. Refl.: (-9,1,-3), (-9,8,3)								
Quartz	(6,-10,1)	12.753	78.07	2.427	2.2	2.754	5.97	34.43	34.94
Quartz	(4,6,1)	12.753	78.07	2.426	2.2	2.754	5.97	34.43	34.94
	Equiv. Refl.: (4,-10,-1), (6,4,-1), (-10,4,1), (-10,6,-1)								
Quartz	(7,1,-5)	12.405	72.12	2.328	2	4.206	8.3	52.57	53.22
	Equiv. Refl.: (7,-8,5), (-8,7,-5)								
Quartz	(1,7,5)	12.405	72.12	2.327	2	4.206	8.29	52.57	53.22
	Equiv. Refl.: (1,-8,-5), (-8,1,5)								
Quartz	(-7,8,-5)	12.405	72.12	2.264	2	4.206	8.3	52.57	53.22
	Equiv. Refl.: (-7,-1,5)								
Quartz	(8,-1,-5)	12.405	72.12	2.263	2	4.206	8.29	52.57	53.22
	Equiv. Refl.: (8,-7,5)								
Quartz	(-1,8,5)	12.405	72.12	2.262	2	4.206	8.29	52.57	53.22
	Equiv. Refl.: (-1,-7,-5)								
Quartz	(10,-3,1)	13.001	85.84	1.877	2.3	0.948	2.17	11.85	12.04
	Equiv. Refl.: (10,-7,-1)								
Quartz	(-3,10,-1)	13.001	85.84	1.876	2.3	0.948	2.17	11.85	12.04
	Equiv. Refl.: (-3,-7,1), (-7,10,1), (-7,-3,-1)								
Quartz	(1,7,-5)	12.405	72.12	1.867	1.9	4.206	8.03	52.57	53.18
	Equiv. Refl.: (1,-8,5), (-8,1,-5), (-8,7,5)								
Quartz	(7,1,5)	12.405	72.12	1.866	1.9	4.206	8.03	52.57	53.18
	Equiv. Refl.: (7,-8,-5)								
Quartz	(8,-1,5)	12.405	72.12	1.829	1.9	4.206	8.03	52.57	53.18
	Equiv. Refl.: (8,-7,-5), (-1,8,-5), (-1,-7,5)								
Quartz	(-7,8,5)	12.405	72.12	1.828	1.9	4.206	8.03	52.57	53.18
	Equiv. Refl.: (-7,-1,-5)								
Quartz	(4,-2,10)	12.532	74.02	1.799	1.9	3.732	7.01	46.65	47.17
	Equiv. Refl.: (4,-2,-10)								
Quartz	(-2,4,-10)	12.532	74.02	1.797	1.9	3.732	7	46.65	47.17
	Equiv. Refl.: (-2,-2,10)								
Quartz	(-2,4,10)	12.532	74.02	1.796	1.9	3.732	7	46.65	47.17
	Equiv. Refl.: (-2,-2,-10)								
Quartz	(3,6,4)	12.441	72.64	1.795	1.9	4.075	7.59	50.93	51.49
	Equiv. Refl.: (3,-9,-4), (-4,2,10), (-4,2,-10), (-9,3,4)								

Ei = Cryst	13.035 Refl (h,k,l)	keV EB [keV]	Θ B [°]	IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(6,3,-4)	12.441	72.64	1.794	1.9	4.075	7.59	50.93	51.49
	Equiv. Refl.: (6,-9,4), (9,-3,-4), (9,-6,4), (-3,9,4), (-3,-6,-4), (-9,6,-4)								
Quartz	(2,2,-10)	12.532	74.02	1.793	1.9	3.732	7	46.65	47.17
	Equiv. Refl.: (2,-4,10), (2,-4,-10), (-6,9,-4), (-6,-3,4)								
Quartz	(2,2,10)	12.532	74.02	1.792	1.9	3.732	7	46.65	47.17
Quartz	(9,-4,5)	12.743	77.85	1.758	1.9	2.807	5.26	35.08	35.48
	Equiv. Refl.: (9,-5,-5), (-5,9,5), (-5,-4,-5)								
Quartz	(-4,9,-5)	12.743	77.85	1.757	1.9	2.807	5.26	35.08	35.48
	Equiv. Refl.: (-4,-5,5)								
Quartz	(1,8,2)	12.658	76.19	1.742	1.8	3.205	5.66	40.06	40.45
	Equiv. Refl.: (1,-9,-2), (8,1,-2), (8,-9,2)								
Quartz	(-9,1,2)	12.658	76.19	1.741	1.8	3.205	5.66	40.06	40.45
	Equiv. Refl.: (-9,8,-2)								
Quartz	(4,5,-5)	12.743	77.85	1.734	1.9	2.807	5.26	35.08	35.48
	Equiv. Refl.: (4,-9,5), (5,4,5), (5,-9,-5), (-9,4,-5), (-9,5,5)								
Quartz	(-10,3,-1)	13.001	85.84	1.732	2.3	0.948	2.17	11.85	12.04
	Equiv. Refl.: (-10,7,1)								
Quartz	(3,7,-1)	13.001	85.84	1.731	2.3	0.948	2.17	11.85	12.04
	Equiv. Refl.: (3,-10,1)								
Quartz	(7,3,1)	13.001	85.84	1.73	2.3	0.948	2.17	11.85	12.04
	Equiv. Refl.: (7,-10,-1)								
Quartz	(2,5,8)	12.923	82.47	1.709	1.9	1.724	3.32	21.55	21.8
Quartz	(2,-7,-8)	12.923	82.47	1.708	1.9	1.724	3.32	21.55	21.8
	Equiv. Refl.: (-7,5,-8)								
Quartz	(-7,2,8)	12.923	82.47	1.707	1.9	1.724	3.32	21.55	21.8
Quartz	(5,2,-8)	12.923	82.47	1.705	1.9	1.724	3.31	21.55	21.8
	Equiv. Refl.: (5,-7,8)								
LiNbO3	(2,7,13)	12.78	78.65	1.699	2.6	2.615	6.83	32.69	33.4
	Equiv. Refl.: (2,-9,-13), (7,2,-13), (7,-9,13), (9,-2,-13), (9,-7,13), (-2,9,13), (-2,-7,-13), (-7,9,-13), (-7,-2,13), (-9,2,13), (-9,7,-13)								
Sapph	(2,7,-8)	12.893	81.52	1.646	2	1.943	3.79	24.28	24.58
	Equiv. Refl.: (2,-9,8), (7,2,8), (7,-9,-8), (9,-2,8), (9,-7,-8), (-2,9,-8), (-2,-7,8), (-7,9,8), (-7,-2,-8), (-9,2,-8), (-9,7,8)								
Quartz	(7,-5,8)	12.923	82.47	1.639	1.9	1.724	3.32	21.55	21.8
	Equiv. Refl.: (-2,7,8), (-2,-5,-8)								
Quartz	(7,-2,-8)	12.923	82.47	1.638	1.9	1.724	3.32	21.55	21.8
Quartz	(-5,7,-8)	12.923	82.47	1.635	1.9	1.724	3.31	21.55	21.8
	Equiv. Refl.: (-5,-2,8)								
Quartz	(-8,-1,2)	12.658	76.19	1.574	1.8	3.205	5.66	40.06	40.45
Quartz	(9,-1,-2)	12.658	76.19	1.573	1.8	3.205	5.66	40.06	40.45
	Equiv. Refl.: (9,-8,2), (-1,9,2), (-1,-8,-2), (-8,9,-2)								
Sapph	(4,4,15)	12.645	75.95	1.466	1.6	3.263	5.35	40.78	41.13
	Equiv. Refl.: (4,4,-15), (4,-8,15), (4,-8,-15), (8,-4,15), (8,-4,-15), (-4,8,15), (-4,8,-15), (-4,-4,15), (-4,-4,-15), (-8,4,15), (-8,4,-15)								
Sapph	(2,6,-13)	12.498	73.49	1.423	1.6	3.864	6.05	48.29	48.67
	Equiv. Refl.: (2,-8,13), (6,2,13), (6,-8,-13), (8,-2,13), (8,-6,-13), (-2,8,-13), (-2,-6,13), (-6,8,13), (-6,-2,-13), (-8,2,-13), (-8,6,13)								
LiNbO3	(1,6,19)	12.463	72.96	1.352	2	3.994	7.95	49.93	50.56
	Equiv. Refl.: (1,-7,-19), (6,1,-19), (6,-7,19), (7,-1,-19), (7,-6,19), (-1,7,19), (-1,-6,-19), (-6,7,-19), (-6,-1,19), (-7,1,19), (-7,6,-19)								

Cryst	Ei = Refl (h,k,l)	keV EB [keV]	Θ_B [$^\circ$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	ΔE [meV]	ΔE_g 2m, 50 μ m [meV]	ΔE_t 2m, 50 μ m [meV]
Quartz	(0,6,-8) Equiv. Refl.: (0,-6,8), (6,0,8), (6,-6,-8), (-6,0,-8), (-6,6,8)	12.674	76.48	1.34	1.5	3.135	4.6	39.18	39.45
Quartz	(0,4,10) Equiv. Refl.: (0,-4,-10)	12.866	80.76	1.305	1.5	2.121	3.21	26.51	26.7
Quartz	(4,0,-10) Equiv. Refl.: (4,-4,10), (-4,0,10), (-4,4,-10)	12.866	80.76	1.3	1.5	2.121	3.2	26.51	26.7
LiNbO3	(1,1,27) Equiv. Refl.: (1,1,-27), (1,-2,27), (1,-2,-27), (2,-1,27), (2,-1,-27), (-1,2,27), (-1,2,-27), (-1,-1,27), (-1,-1,-27), (-2,1,27), (-2,1,-27)	12.312	70.82	1.282	1.9	4.534	8.44	56.67	57.29
LiNbO3	(2,4,-23) Equiv. Refl.: (2,-6,23), (4,2,23), (4,-6,-23), (6,-2,23), (6,-4,-23), (-2,6,-23), (-2,-4,23), (-4,6,23), (-4,-2,-23), (-6,2,-23), (-6,4,23)	12.646	75.97	1.253	2	3.258	6.49	40.73	41.24
Quartz	(0,1,-11) Equiv. Refl.: (0,-1,11)	12.701	77	1.225	1.4	3.009	4.1	37.61	37.83
Quartz	(1,-1,-11)	12.701	77	1.224	1.4	3.009	4.1	37.61	37.83
Quartz	(1,0,11) Equiv. Refl.: (-1,1,11)	12.701	77	1.223	1.4	3.009	4.1	37.61	37.83
Quartz	(-1,0,-11)	12.701	77	1.222	1.4	3.009	4.1	37.61	37.83
Sapph	(0,5,22) Equiv. Refl.: (0,-5,-22), (5,0,-22), (5,-5,22), (-5,0,22), (-5,5,-22)	12.917	82.27	1.215	1.6	1.768	2.76	22.1	22.28
Sapph	(0,1,26) Equiv. Refl.: (0,-1,-26), (1,0,-26), (1,-1,26), (-1,0,26), (-1,1,-26)	12.5	73.53	1.174	1.3	3.853	5.11	48.16	48.43
LiNbO3	(2,7,-11) Equiv. Refl.: (2,-9,11), (7,2,11), (7,-9,-11), (9,-2,11), (9,-7,-11), (-2,9,-11), (-2,-7,11), (-7,9,11), (-7,-2,-11), (-9,2,-11), (-9,7,11)	12.399	72.03	1.172	1.8	4.228	7.51	52.85	53.38
Quartz	(-6,8,6) Equiv. Refl.: (-6,-2,-6)	12.56	74.48	1.162	1.2	3.619	4.38	45.24	45.45
Quartz	(8,-2,6) Equiv. Refl.: (8,-6,-6), (-2,8,-6)	12.56	74.48	1.161	1.2	3.619	4.38	45.24	45.45
Quartz	(-2,-6,6)	12.56	74.48	1.16	1.2	3.619	4.37	45.24	45.45
Quartz	(4,5,4) Equiv. Refl.: (4,-9,-4), (-9,4,4), (-9,5,-4)	12.27	70.27	1.155	1.2	4.676	5.75	58.45	58.73
Quartz	(5,4,-4) Equiv. Refl.: (5,-9,4)	12.27	70.27	1.154	1.2	4.676	5.74	58.45	58.73
Quartz	(9,-5,4) Equiv. Refl.: (-4,9,4), (-4,-5,-4)	12.27	70.27	1.138	1.2	4.676	5.75	58.45	58.73
Quartz	(9,-4,-4) Equiv. Refl.: (-5,9,-4), (-5,-4,4)	12.27	70.27	1.137	1.2	4.676	5.75	58.45	58.73
Sapph	(1,5,-19) Equiv. Refl.: (1,-6,19), (5,1,19), (5,-6,-19), (6,-1,19), (6,-5,-19), (-1,6,-19), (-1,-5,19), (-5,6,19), (-5,-1,-19), (-6,1,-19), (-6,5,19)	12.345	71.27	1.126	1.3	4.419	5.57	55.23	55.51
Quartz	(10,-4,0) Equiv. Refl.: (10,-6,0), (-4,10,0), (-4,-6,0), (-6,10,0), (-6,-4,0)	12.702	77.02	1.115	1.3	3.006	3.78	37.57	37.76
Quartz	(4,6,0) Equiv. Refl.: (4,-10,0), (6,4,0), (6,-10,0), (-10,4,0), (-10,6,0)	12.702	77.02	1.11	1.3	3.006	3.78	37.57	37.76
Sapph	(2,7,7) Equiv. Refl.: (2,-9,-7), (7,2,-7), (7,-9,7), (9,-2,-7), (9,-7,7), (-2,9,7), (-2,-7,-7), (-7,9,-7), (-7,-2,7), (-9,2,7), (-9,7,-7)	12.759	78.2	1.069	1.3	2.724	3.53	34.05	34.23
LiNbO3	(4,6,7) Equiv. Refl.: (4,-10,-7), (6,4,-7), (6,-10,7), (10,-4,-7), (10,-6,7), (-4,10,7), (-4,-6,-7), (-6,10,-7), (-6,-4,7), (-10,4,7), (-10,6,-7)	12.52	73.83	1.054	1.7	3.778	6.42	47.23	47.67

Ei = Cryst	13.035 Refl (h,k,l)	keV EB [keV]	ΘB [°]	IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Sapph	(1,6,16)	12.476	73.15	1.048	1.2	3.947	4.74	49.34	49.57
	Equiv. Refl.: (1,-7,-16), (6,1,-16), (6,-7,16), (7,-1,-16), (7,-6,16), (-1,7,16), (-1,-6,-16), (-6,7,-16), (-6,-1,16), (-7,1,16), (-7,6,-16)								
Quartz	(6,2,6)	12.56	74.48	1.026	1.2	3.619	4.38	45.24	45.45
	Equiv. Refl.: (6,-8,-6), (-8,6,6)								
Quartz	(2,6,-6)	12.56	74.48	1.025	1.2	3.619	4.37	45.24	45.45
	Equiv. Refl.: (2,-8,6), (-8,2,-6)								
Quartz	(-2,9,-4)	12.778	78.6	0.978	1.1	2.627	2.9	32.84	32.97
Quartz	(-2,-7,4)	12.778	78.6	0.977	1.1	2.627	2.9	32.84	32.97
	Equiv. Refl.: (-7,9,4), (-7,-2,-4)								
Quartz	(9,-2,4)	12.778	78.6	0.976	1.1	2.627	2.9	32.84	32.97
	Equiv. Refl.: (9,-7,-4)								
LiNbO3	(4,6,-5)	12.326	71.02	0.94	1.5	4.483	6.74	56.03	56.44
	Equiv. Refl.: (4,-10,5), (6,4,5), (6,-10,-5), (10,-4,5), (10,-6,-5), (-4,10,-5), (-4,-6,5), (-6,10,5), (-6,-4,-5), (-10,4,-5), (-10,6,5)								
Quartz	(0,2,-11)	12.949	83.43	0.929	1.2	1.502	1.86	18.77	18.87
	Equiv. Refl.: (0,-2,11), (10,-5,1), (10,-5,-1), (-5,10,1), (-5,10,-1), (-5,-5,1), (-5,-5,-1)								
Quartz	(5,5,1)	12.67	76.41	0.926	1.1	3.152	3.38	39.4	39.54
	Equiv. Refl.: (5,5,-1), (5,-10,1), (5,-10,-1), (-10,5,1), (-10,5,-1)								
Quartz	(2,-2,-11)	12.949	83.43	0.919	1.2	1.502	1.84	18.77	18.86
	Equiv. Refl.: (-2,2,11)								
Quartz	(2,0,11)	12.949	83.43	0.918	1.2	1.502	1.84	18.77	18.86
	Equiv. Refl.: (-2,0,-11)								
Sapph	(2,3,23)	12.787	78.81	0.885	1.1	2.579	2.9	32.23	32.36
	Equiv. Refl.: (2,-5,-23), (3,2,-23), (3,-5,23), (5,-2,-23), (5,-3,23), (-2,5,23), (-2,-3,-23), (-3,5,-23), (-3,-2,23), (-5,2,23), (-5,3,-23)								
Quartz	(6,1,-7)	12.48	73.22	0.884	1	3.931	3.83	49.14	49.28
	Equiv. Refl.: (6,-7,7)								
Quartz	(2,-9,4)	12.778	78.6	0.883	1.1	2.627	2.9	32.84	32.97
Quartz	(1,6,7)	12.48	73.22	0.882	1	3.931	3.82	49.14	49.28
	Equiv. Refl.: (1,-7,-7), (2,7,-4), (7,2,4), (7,-9,-4)								
Quartz	(-7,1,7)	12.48	73.22	0.881	1	3.931	3.82	49.14	49.28
	Equiv. Refl.: (-7,6,-7), (-9,2,-4), (-9,7,4)								
Quartz	(0,7,-7)	12.98	84.74	0.859	1.2	1.2	1.48	14.99	15.07
	Equiv. Refl.: (0,-7,7)								
Quartz	(7,0,7)	12.98	84.74	0.858	1.2	1.2	1.48	14.99	15.07
	Equiv. Refl.: (7,-7,-7), (-7,0,-7), (-7,7,7)								
Quartz	(3,-4,-10)	12.616	75.43	0.848	0.9	3.388	3.05	42.34	42.45
Quartz	(3,1,10)	12.616	75.43	0.847	0.9	3.388	3.05	42.34	42.45
Sapph	(2,7,-5)	12.543	74.21	0.845	1	3.685	3.75	46.07	46.22
	Equiv. Refl.: (2,-9,5), (7,2,5), (7,-9,-5), (9,-2,5), (9,-7,-5), (-2,9,-5), (-2,-7,5), (-7,9,5), (-7,-2,-5), (-9,2,-5), (-9,7,5), (1,3,-10), (-4,1,-10)								
Quartz	(1,-4,10)	12.616	75.43	0.844	0.9	3.388	3.04	42.34	42.45
	Equiv. Refl.: (-4,3,10)								
Quartz	(5,3,6)	12.304	70.72	0.841	0.9	4.561	4.04	57.01	57.15
	Equiv. Refl.: (5,-8,-6), (-8,3,-6), (-8,5,6)								
Quartz	(3,5,-6)	12.304	70.72	0.84	0.9	4.561	4.04	57.01	57.15
Quartz	(3,-8,6)	12.304	70.72	0.839	0.9	4.561	4.03	57.01	57.15
Quartz	(-6,7,-7)	12.48	73.22	0.834	1	3.931	3.83	49.14	49.28
	Equiv. Refl.: (-6,-1,7)								

Ei = Cryst	13.035 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(-1,7,7)	12.48	73.22	0.832	1	3.931	3.82	49.14	49.28
	Equiv. Refl.: (-1,-6,-7)								
Quartz	(7,-1,-7)	12.48	73.22	0.831	1	3.931	3.82	49.14	49.28
	Equiv. Refl.: (7,-6,7)								
Quartz	(1,4,9)	12.294	70.59	0.807	0.9	4.593	4.12	57.41	57.56
	Equiv. Refl.: (1,-5,-9)								
Quartz	(4,1,-9)	12.294	70.59	0.806	0.9	4.593	4.11	57.41	57.56
	Equiv. Refl.: (4,-5,9), (-5,1,9), (-5,4,-9)								
Quartz	(-1,-4,-9)	12.294	70.59	0.785	0.9	4.593	4.12	57.41	57.56
Quartz	(5,-1,-9)	12.294	70.59	0.784	0.9	4.593	4.11	57.41	57.56
	Equiv. Refl.: (5,-4,9), (-1,5,9), (-4,5,-9), (-4,-1,9)								
LiNbO3	(1,5,23)	12.873	80.96	0.757	1.7	2.073	3.5	25.91	26.15
	Equiv. Refl.: (1,-6,-23), (5,1,-23), (5,-6,23), (6,-1,-23), (6,-5,23), (-1,6,23), (-1,-5,-23), (-5,6,-23), (-5,-1,23), (-6,1,23), (-6,5,-23)								
Sapph	(2,7,1)	12.323	70.98	0.743	0.9	4.493	3.99	56.16	56.3
	Equiv. Refl.: (2,-9,-1), (7,2,-1), (7,-9,1), (9,-2,-1), (9,-7,1), (-2,9,1), (-2,-7,-1), (-7,9,-1), (-7,-2,1), (-9,2,1), (-9,7,-1)								
Quartz	(-5,8,6)	12.304	70.72	0.734	0.9	4.561	4.04	57.01	57.15
Quartz	(8,-3,6)	12.304	70.72	0.733	0.9	4.561	4.04	57.01	57.15
	Equiv. Refl.: (8,-5,-6), (-3,-5,6), (-5,-3,-6)								
Quartz	(-3,8,-6)	12.304	70.72	0.732	0.9	4.561	4.03	57.01	57.15
Sapph	(3,6,6)	12.28	70.4	0.703	0.8	4.642	3.91	58.03	58.16
	Equiv. Refl.: (3,6,-6), (3,-9,6), (3,-9,-6), (6,3,6), (6,3,-6), (6,-9,6), (6,-9,-6), (9,-3,6), (9,-3,-6), (9,-6,6), (9,-6,-6), (-3,9,6), (-3,9,-6), (-3,-6,6), (-3,-6,-6), (-6,9,6), (-6,9,-6), (-6,-3,6), (-6,-3,-6), (-9,3,6), (-9,3,-6), (-9,6,6), (-9,6,-6)								
Quartz	(-3,4,10)	12.616	75.43	0.686	0.9	3.388	3.05	42.34	42.45
	Equiv. Refl.: (-3,-1,-10)								
Quartz	(4,-1,10)	12.616	75.43	0.684	0.9	3.388	3.04	42.34	42.45
	Equiv. Refl.: (-1,-3,10)								
Quartz	(4,-3,-10)	12.616	75.43	0.683	0.9	3.388	3.04	42.34	42.45
	Equiv. Refl.: (-1,4,-10)								
LiNbO3	(3,6,15)	12.915	82.22	0.599	1.6	1.78	2.79	22.25	22.43
	Equiv. Refl.: (3,6,-15), (3,-9,15), (3,-9,-15), (6,3,15), (6,3,-15), (6,-9,15), (6,-9,-15), (9,-3,15), (9,-3,-15), (9,-6,15), (9,-6,-15), (-3,9,15), (-3,9,-15), (-3,-6,15), (-3,-6,-15), (-6,9,15), (-6,9,-15), (-6,-3,15), (-6,-3,-15), (-9,3,15), (-9,3,-15), (-9,6,15), (-9,6,-15)								
LiNbO3	(1,3,25)	12.252	70.04	0.594	1.1	4.734	5.19	59.17	59.4
	Equiv. Refl.: (1,-4,-25), (3,1,-25), (3,-4,25), (4,-1,-25), (4,-3,25), (-1,4,25), (-1,-3,-25), (-3,4,-25), (-3,-1,25), (-4,1,25), (-4,3,-25)								
Sapph	(1,6,-17)	12.773	78.5	0.583	0.8	2.652	2.17	33.15	33.22
	Equiv. Refl.: (1,-7,17), (6,1,17), (6,-7,-17), (7,-1,17), (7,-6,-17), (-1,7,-17), (-1,-6,17), (-6,7,17), (-6,-1,-17), (-7,1,-17), (-7,6,17)								
LiNbO3	(3,7,-7)	12.749	77.98	0.547	1.2	2.776	3.46	34.7	34.87
	Equiv. Refl.: (3,-10,7), (7,3,7), (7,-10,-7), (10,-3,7), (10,-7,-7), (-3,10,-7), (-3,-7,7), (-7,10,7), (-7,-3,-7), (-10,3,-7), (-10,7,7)								
Sapph	(1,2,-25)	12.579	74.79	0.535	0.7	3.543	2.54	44.29	44.36
	Equiv. Refl.: (1,-3,25), (2,1,25), (2,-3,-25), (3,-1,25), (3,-2,-25), (-1,3,-25), (-1,-2,25), (-2,3,25), (-2,-1,-25), (-3,1,-25), (-3,2,25)								
Sapph	(2,7,-2)	12.351	71.36	0.518	0.7	4.397	2.94	54.97	55.04
	Equiv. Refl.: (2,-9,2), (7,2,2), (7,-9,-2), (9,-2,2), (9,-7,-2), (-2,9,-2), (-2,-7,2), (-7,9,2), (-7,-2,-2), (-9,2,-2), (-9,7,2)								

Ei = Cryst	13.035 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Sapph	(2,3,-22)	12.38	71.76	0.517	0.7	4.296	2.89	53.71	53.78
Equiv. Refl.: (2,-5,22), (3,2,22), (3,-5,-22), (5,-2,22), (5,-3,-22), (-2,5,-22), (-2,-3,22), (-3,5,22), (-3,-2,-22), (-5,2,-22), (-5,3,22)									
LiNbO3	(4,5,-13)	12.318	70.91	0.513	1	4.511	4.58	56.39	56.58
Equiv. Refl.: (4,-9,13), (5,4,13), (5,-9,-13), (9,-4,13), (9,-5,-13), (-4,9,-13), (-4,-5,13), (-5,9,13), (-5,-4,-13), (-9,4,-13), (-9,5,13)									
Sapph	(0,7,14)	12.472	73.1	0.511	0.7	3.961	2.66	49.51	49.58
Equiv. Refl.: (0,-7,-14), (7,0,-14), (7,-7,14), (-7,0,14), (-7,7,-14)									
Sapph	(2,5,18)	12.731	77.6	0.499	0.7	2.866	2.04	35.82	35.88
Equiv. Refl.: (2,5,-18), (2,-7,18), (2,-7,-18), (5,2,18), (5,2,-18), (5,-7,18), (5,-7,-18), (7,-2,18), (7,-2,-18), (7,-5,18), (7,-5,-18), (-2,7,18), (-2,7,-18), (-2,-5,18), (-2,-5,-18), (-5,7,18), (-5,7,-18), (-5,-2,18), (-5,-2,-18), (-7,2,18), (-7,2,-18), (-7,5,18), (-7,5,-18)									
LiNbO3	(3,7,5)	12.56	74.48	0.445	1	3.62	3.62	45.26	45.4
Equiv. Refl.: (3,-10,-5), (7,3,-5), (7,-10,5), (10,-3,-5), (10,-7,5), (-3,10,5), (-3,-7,-5), (-7,10,-5), (-7,-3,-5), (-10,3,5), (-10,7,-5)									
LiNbO3	(2,8,3)	12.814	79.45	0.421	1.1	2.429	2.75	30.36	30.48
Equiv. Refl.: (2,8,-3), (2,-10,3), (2,-10,-3), (8,2,3), (8,2,-3), (8,-10,3), (8,-10,-3), (10,-2,3), (10,-2,-3), (10,-8,3), (10,-8,-3), (-2,10,3), (-2,10,-3), (-2,-8,3), (-2,-8,-3), (-8,10,3), (-8,10,-3), (-8,-2,3), (-8,-2,-3), (-10,2,3), (-10,2,-3), (-10,8,3), (-10,8,-3)									
Quartz	(0,3,-10)	12.275	70.34	0.413	0.5	4.658	2.44	58.23	58.28
Equiv. Refl.: (0,-3,10)									
Quartz	(3,-3,-10)	12.275	70.34	0.41	0.5	4.658	2.42	58.23	58.28
Equiv. Refl.: (-3,0,-10), (-3,3,10)									
Quartz	(3,0,10)	12.275	70.34	0.409	0.5	4.658	2.42	58.23	58.28
LiNbO3	(3,7,-1)	12.367	71.58	0.394	0.9	4.342	3.8	54.27	54.4
Equiv. Refl.: (3,-10,1), (7,3,1), (7,-10,-1), (10,-3,1), (10,-7,-1), (-3,10,-1), (-3,-7,1), (-7,10,1), (-7,-3,-1), (-10,3,-1), (-10,7,1)									
LiNbO3	(2,5,21)	12.79	78.88	0.363	1	2.562	2.61	32.03	32.13
Equiv. Refl.: (2,5,-21), (2,-7,21), (2,-7,-21), (5,2,21), (5,2,-21), (5,-7,21), (5,-7,-21), (7,-2,21), (7,-2,-21), (7,-5,21), (7,-5,-21), (-2,7,21), (-2,7,-21), (-2,-5,21), (-2,-5,-21), (-5,7,21), (-5,7,-21), (-5,-2,21), (-5,-2,-21), (-7,2,21), (-7,2,-21), (-7,5,21), (-7,5,-21)									
Quartz	(1,8,1)	12.501	73.55	0.36	0.4	3.85	1.66	48.12	48.15
Equiv. Refl.: (1,-9,-1), (8,1,-1), (8,-9,1), (-9,1,1), (-9,8,-1)									
Quartz	(-5,1,-9)	12.294	70.59	0.337	0.4	4.593	2.03	57.41	57.45
Quartz	(1,4,-9)	12.294	70.59	0.336	0.4	4.593	2.03	57.41	57.45
Equiv. Refl.: (1,-5,9), (-5,4,9)									
Quartz	(4,1,9)	12.294	70.59	0.335	0.4	4.593	2.03	57.41	57.45
Equiv. Refl.: (4,-5,-9)									
Quartz	(5,-1,9)	12.294	70.59	0.328	0.4	4.593	2.03	57.41	57.45
Equiv. Refl.: (5,-4,-9), (-1,-4,9)									
Quartz	(-1,5,-9)	12.294	70.59	0.327	0.4	4.593	2.03	57.41	57.45
Quartz	(-4,5,9)	12.294	70.59	0.326	0.4	4.593	2.03	57.41	57.45
Equiv. Refl.: (-4,-1,-9)									
Sapph	(4,5,8)	12.355	71.41	0.324	0.5	4.385	2.07	54.81	54.85
Equiv. Refl.: (4,-9,-8), (5,4,-8), (5,-9,8), (9,-4,-8), (9,-5,8), (-4,9,8), (-4,-5,-8), (-5,9,-8), (-5,-4,8), (-9,4,8), (-9,5,-8)									
Sapph	(0,8,-8)	12.627	75.62	0.277	0.5	3.342	1.51	41.78	41.81
Equiv. Refl.: (0,-8,8), (8,0,8), (8,-8,-8), (-8,0,-8), (-8,8,8)									
LiNbO3	(2,6,17)	12.583	74.87	0.267	0.8	3.525	2.67	44.07	44.15
Equiv. Refl.: (2,-8,-17), (6,2,-17), (6,-8,17), (8,-2,-17), (8,-6,17), (-2,8,17), (-2,-6,-17), (-6,8,-17), (-6,-2,17), (-8,2,17), (-8,6,-17)									
LiNbO3	(3,5,19)	12.92	82.38	0.264	1	1.743	1.78	21.78	21.86

Equiv. Refl.: (3,-8,-19), (5,3,-19), (5,-8,19), (8,-3,-19), (8,-5,19), (-3,8,19), (-3,-5,-19), (-5,8,-19), (-5,-3,19)
(-8,3,19), (-8,5,-19)

Quartz	(-2,9,-3)	12.412	72.22	0.26	0.3	4.18	1.46	52.25	52.27
	Equiv. Refl.: (-2,-7,3)								
Quartz	(9,-2,3)	12.412	72.22	0.259	0.3	4.18	1.45	52.25	52.27
	Equiv. Refl.: (9,-7,-3), (-7,-2,-3)								
Quartz	(-7,9,3)	12.412	72.22	0.258	0.3	4.18	1.45	52.25	52.27
Quartz	(9,-1,-1)	12.501	73.55	0.257	0.4	3.85	1.66	48.12	48.15
	Equiv. Refl.: (9,-8,1), (-1,9,1), (-1,-8,-1), (-8,9,-1), (-8,-1,1)								
Sapph	(1,8,2)	12.889	81.42	0.233	0.5	1.966	0.96	24.58	24.6
	Equiv. Refl.: (1,-9,-2), (8,1,-2), (8,-9,2), (9,-1,-2), (9,-8,2), (-1,9,2), (-1,-8,-2), (-8,9,-2), (-8,-1,2) (-9,1,2), (-9,8,-2)								
Sapph	(0,3,24)	12.312	70.83	0.221	0.4	4.532	1.6	56.65	56.67
	Equiv. Refl.: (0,3,-24), (0,-3,24), (0,-3,-24), (3,0,24), (3,0,-24), (3,-3,24), (3,-3,-24), (-3,0,24), (-3,0,-24) (-3,3,24), (-3,3,-24)								
Quartz	(2,7,-3)	12.412	72.22	0.207	0.3	4.18	1.46	52.25	52.27
	Equiv. Refl.: (2,-9,3)								
Quartz	(7,2,3)	12.412	72.22	0.206	0.3	4.18	1.45	52.25	52.27
	Equiv. Refl.: (7,-9,-3), (-9,2,-3), (-9,7,3)								
LiNbO3	(2,3,-25)	12.717	77.31	0.196	0.7	2.935	2.03	36.68	36.74
	Equiv. Refl.: (2,-5,25), (3,2,25), (3,-5,-25), (5,-2,25), (5,-3,-25), (-2,5,-25), (-2,-3,25), (-3,5,25), (-3,-2,-25) (-5,2,-25), (-5,3,25)								
Quartz	(0,5,9)	12.635	75.77	0.194	0.3	3.307	1.09	41.33	41.35
	Equiv. Refl.: (0,-5,-9)								
Quartz	(5,0,-9)	12.635	75.77	0.191	0.3	3.307	1.08	41.33	41.35
	Equiv. Refl.: (5,-5,9), (-5,0,9), (-5,5,-9)								
Sapph	(3,4,-19)	12.883	81.25	0.19	0.4	2.006	0.86	25.08	25.09
	Equiv. Refl.: (3,-7,19), (4,3,19), (4,-7,-19), (7,-3,19), (7,-4,-19), (-3,7,-19), (-3,-4,19), (-4,7,19), (-4,-3,-19) (-7,3,-19), (-7,4,19)								
Sapph	(3,6,9)	12.69	76.79	0.179	0.4	3.06	1.08	38.24	38.26
	Equiv. Refl.: (3,6,-9), (3,-9,9), (3,-9,-9), (6,3,9), (6,3,-9), (6,-9,9), (6,-9,-9), (9,-3,9), (9,-3,-9) (9,-6,9), (9,-6,-9), (-3,9,9), (-3,9,-9), (-3,-6,9), (-3,-6,-9), (-6,9,9), (-6,9,-9), (-6,-3,9) (-6,-3,-9), (-9,3,9), (-9,3,-9), (-9,6,9), (-9,6,-9)								
LiNbO3	(1,8,11)	12.858	80.56	0.171	0.7	2.168	1.6	27.1	27.15
	Equiv. Refl.: (1,-9,-11), (8,1,-11), (8,-9,11), (9,-1,-11), (9,-8,11), (-1,9,11), (-1,-8,-11), (-8,9,-11), (-8,-1,11) (-9,1,11), (-9,8,-11)								
LiNbO3	(1,7,15)	12.458	72.89	0.163	0.6	4.013	2.21	50.17	50.21
	Equiv. Refl.: (1,7,-15), (1,-8,15), (1,-8,-15), (7,1,15), (7,1,-15), (7,-8,15), (7,-8,-15), (8,-1,15), (8,-1,-15) (8,-7,15), (8,-7,-15), (-1,8,15), (-1,8,-15), (-1,-7,15), (-1,-7,-15), (-7,8,15), (-7,8,-15), (-7,-1,15) (-7,-1,-15), (-8,1,15), (-8,1,-15), (-8,7,15), (-8,7,-15)								
LiNbO3	(3,5,-17)	12.35	71.35	0.126	0.5	4.4	2.05	55	55.04
	Equiv. Refl.: (3,-8,17), (5,3,17), (5,-8,-17), (8,-3,17), (8,-5,-17), (-3,8,-17), (-3,-5,17), (-5,8,17), (-5,-3,-17) (-8,3,-17), (-8,5,17)								
LiNbO3	(1,8,-7)	12.286	70.48	0.097	0.4	4.621	1.85	57.76	57.79
	Equiv. Refl.: (1,-9,7), (8,1,7), (8,-9,-7), (9,-1,7), (9,-8,-7), (-1,9,-7), (-1,-8,7), (-8,9,7), (-8,-1,-7) (-9,1,-7), (-9,8,7)								
Sapph	(1,7,12)	12.721	77.39	0.066	0.2	2.916	0.59	36.46	36.46
	Equiv. Refl.: (1,7,-12), (1,-8,12), (1,-8,-12), (7,1,12), (7,1,-12), (7,-8,12), (7,-8,-12), (8,-1,12), (8,-1,-12) (8,-7,12), (8,-7,-12), (-1,8,12), (-1,8,-12), (-1,-7,12), (-1,-7,-12), (-7,8,12), (-7,8,-12), (-7,-1,12) (-7,-1,-12), (-8,1,12), (-8,1,-12), (-8,7,12), (-8,7,-12)								
LiNbO3	(5,5,9)	12.697	76.92	0.009	0.2	3.029	0.49	37.86	37.87
	Equiv. Refl.: (5,5,-9), (5,-10,9), (5,-10,-9), (10,-5,9), (10,-5,-9), (-5,10,9), (-5,10,-9), (-5,-5,9), (-5,-5,-9) (-10,5,9), (-10,5,-9)								

Ei =	16.388	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(2,4,14)	16.105	79.33	1.3135	3.17	3.0879	9.77	38.6	39.82
	Equiv. Refl.: (2,14,4), (4,2,14), (4,10,10), (4,14,2), (6,6,12), (6,12,6), (10,4,10), (10,10,4), (12,6,6) (14,2,4), (14,4,2)								
Si	(0,2,14)	16.142	80.07	1.2852	1.39	2.8692	3.98	35.86	36.09
	Equiv. Refl.: (0,10,10), (0,14,2), (2,0,14), (2,14,0), (6,8,10), (6,10,8), (8,6,10), (8,10,6), (10,0,10) (10,6,8), (10,8,6), (10,10,0), (14,0,2), (14,2,0)								
Si	(1,9,11)	16.263	82.92	1.1667	1.34	2.0351	2.72	25.44	25.58
	Equiv. Refl.: (1,11,9), (3,5,13), (3,13,5), (5,3,13), (5,13,3), (9,1,11), (9,11,1), (11,1,9), (11,9,1) (13,3,5), (13,5,3)								
Ge	(0,8,12)	15.804	74.65	1.0182	2.37	4.4979	10.67	56.22	57.23
	Equiv. Refl.: (0,12,8), (8,0,12), (8,12,0), (12,0,8), (12,8,0)								
Si	(8,8,8)	15.816	74.82	0.9209	0.99	4.4458	4.39	55.57	55.75
Ge	(0,2,14)	15.497	71.02	0.9189	2.07	5.6377	11.67	70.47	71.43
	Equiv. Refl.: (0,10,10), (0,14,2), (2,0,14), (2,14,0), (6,8,10), (6,10,8), (8,6,10), (8,10,6), (10,0,10) (10,6,8), (10,8,6), (10,10,0), (14,0,2), (14,2,0)								
Ge	(1,7,13)	16.216	81.69	0.8548	2.8	2.3928	6.69	29.91	30.65
	Equiv. Refl.: (1,13,7), (5,5,13), (5,13,5), (7,1,13), (7,7,11), (7,11,7), (7,13,1), (11,7,7), (13,1,7) (13,5,5), (13,7,1)								
Si	(2,6,12)	15.483	70.87	0.8025	0.85	5.6835	4.86	71.04	71.21
	Equiv. Refl.: (2,12,6), (6,2,12), (6,12,2), (12,2,6), (12,6,2)								
Si	(1,5,13)	15.939	76.56	0.6745	0.76	3.9153	2.99	48.94	49.03
	Equiv. Refl.: (1,13,5), (5,1,13), (5,7,11), (5,11,7), (5,13,1), (7,5,11), (7,11,5), (11,5,7), (11,7,5) (13,1,5), (13,5,1)								
Ge	(3,9,11)	15.917	76.23	0.5794	1.82	4.0156	7.3	50.2	50.72
	Equiv. Refl.: (3,11,9), (7,9,9), (9,3,11), (9,7,9), (9,9,7), (9,11,3), (11,3,9), (11,9,3)								
Si	(3,3,13)	15.609	72.26	0.5621	0.63	5.2417	3.3	65.52	65.6
	Equiv. Refl.: (3,13,3), (5,9,9), (9,5,9), (9,9,5), (13,3,3)								
Ge	(1,9,11)	15.612	72.3	0.5069	1.52	5.2292	7.97	65.37	65.85
	Equiv. Refl.: (1,11,9), (3,5,13), (3,13,5), (5,3,13), (5,13,3), (9,1,11), (9,11,1), (11,1,9), (11,9,1) (13,3,5), (13,5,3)								
Quartz	(1,10,-5)	16.387	89.27	25.504	21.6	0.209	4.5	2.61	5.2
Quartz	(1,-11,5)	16.387	89.27	25.502	21.5	0.209	4.5	2.61	5.2
Quartz	(10,1,5)	16.387	89.27	25.5	21.5	0.209	4.5	2.61	5.2
	Equiv. Refl.: (10,-11,-5)								
Quartz	(-11,10,5)	16.387	89.27	25.496	21.5	0.209	4.5	2.61	5.2
Quartz	(-11,1,-5)	16.387	89.27	25.493	21.5	0.209	4.5	2.61	5.2
Quartz	(-1,-10,5)	16.387	89.27	25.49	21.6	0.209	4.5	2.61	5.2
Quartz	(-1,11,-5)	16.387	89.27	25.488	21.5	0.209	4.5	2.61	5.2
Quartz	(-10,11,5)	16.387	89.27	25.486	21.5	0.209	4.5	2.61	5.2
	Equiv. Refl.: (-10,-1,-5)								
Quartz	(11,-10,-5)	16.387	89.27	25.482	21.5	0.209	4.5	2.61	5.2
Quartz	(11,-1,5)	16.387	89.27	25.48	21.5	0.209	4.5	2.61	5.2
LiNbO3	(2,3,-34)	16.368	87.14	18.871	16.7	0.819	13.71	10.24	17.11
	Equiv. Refl.: (-2,5,-34), (-3,-2,-34), (-5,2,-34)								
LiNbO3	(3,-5,-34)	16.368	87.14	18.87	16.7	0.819	13.71	10.24	17.11
	Equiv. Refl.: (5,-3,-34)								
LiNbO3	(2,-5,34)	16.368	87.14	18.06	16.7	0.819	13.71	10.24	17.11
	Equiv. Refl.: (5,-2,34)								

Ei = Cryst	16.388 RefI (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
LiNbO3	(3,2,34)	16.368	87.14	18.059	16.7	0.819	13.71	10.24	17.11
	Equiv. Refl.: (-2,-3,34), (-3,5,34), (-5,3,34)								
LiNbO3	(4,-12,16)	16.363	86.82	16.993	15.2	0.911	13.86	11.39	17.94
	Equiv. Refl.: (8,4,16), (12,-4,16), (-4,-8,16)								
LiNbO3	(-8,12,16)	16.363	86.82	16.992	15.2	0.911	13.86	11.39	17.94
	Equiv. Refl.: (-12,8,16)								
LiNbO3	(4,8,-16)	16.363	86.82	16.633	15.2	0.911	13.86	11.39	17.94
	Equiv. Refl.: (-4,12,-16), (-8,-4,-16), (-12,4,-16)								
LiNbO3	(8,-12,-16)	16.363	86.82	16.632	15.2	0.911	13.86	11.39	17.94
	Equiv. Refl.: (12,-8,-16)								
LiNbO3	(3,8,-20)	16.356	86.44	10.845	9.5	1.019	9.71	12.74	16.02
	Equiv. Refl.: (8,-11,-20), (11,-8,-20), (-3,11,-20), (-8,-3,-20), (-11,3,-20)								
Quartz	(-2,12,2)	16.386	89.04	9.672	8.4	0.275	2.32	3.44	4.15
	Equiv. Refl.: (-2,-10,-2)								
Quartz	(12,-2,-2)	16.386	89.04	9.667	8.4	0.275	2.32	3.44	4.15
	Equiv. Refl.: (12,-10,2)								
Quartz	(-10,12,-2)	16.386	89.04	9.666	8.4	0.275	2.31	3.44	4.15
	Equiv. Refl.: (-10,-2,2)								
LiNbO3	(3,-11,20)	16.356	86.44	9.43	9.5	1.019	9.71	12.74	16.02
	Equiv. Refl.: (8,3,20), (11,-3,20), (-3,-8,20)								
LiNbO3	(-8,11,20)	16.356	86.44	9.429	9.5	1.019	9.71	12.74	16.02
	Equiv. Refl.: (-11,8,20)								
Quartz	(2,10,2)	16.386	89.04	9.214	8.4	0.275	2.32	3.44	4.15
Quartz	(2,-12,-2)	16.386	89.04	9.213	8.4	0.275	2.32	3.44	4.15
Quartz	(-12,2,2)	16.386	89.04	9.209	8.4	0.275	2.32	3.44	4.15
	Equiv. Refl.: (-12,10,-2)								
Quartz	(10,2,-2)	16.386	89.04	9.208	8.4	0.275	2.31	3.44	4.15
	Equiv. Refl.: (10,-12,2)								
Quartz	(11,-1,-5)	16.387	89.27	8.735	8.1	0.209	1.7	2.61	3.11
	Equiv. Refl.: (11,-10,5)								
Quartz	(-1,-10,-5)	16.387	89.27	8.726	8.1	0.209	1.7	2.61	3.11
	Equiv. Refl.: (-10,11,-5)								
Quartz	(-1,11,5)	16.387	89.27	8.725	8.1	0.209	1.7	2.61	3.11
Quartz	(-10,-1,5)	16.387	89.27	8.721	8.1	0.209	1.7	2.61	3.11
LiNbO3	(1,1,-36)	16.278	83.34	8.174	7.1	1.913	13.5	23.91	27.46
	Equiv. Refl.: (1,-2,-36), (2,-1,-36), (-1,2,-36), (-1,-1,-36), (-2,1,-36)								
LiNbO3	(6,-13,10)	16.296	83.91	7.979	7.1	1.748	12.44	21.85	25.14
	Equiv. Refl.: (7,6,10), (13,-6,10), (-6,-7,10), (-7,13,10), (-13,7,10)								
LiNbO3	(6,7,-10)	16.296	83.91	7.89	7.1	1.748	12.44	21.85	25.14
	Equiv. Refl.: (7,-13,-10), (13,-7,-10), (-6,13,-10), (-7,-6,-10), (-13,6,-10)								
LiNbO3	(1,1,36)	16.278	83.34	7.79	7.1	1.913	13.5	23.91	27.46
	Equiv. Refl.: (1,-2,36), (2,-1,36), (-1,2,36), (-1,-1,36), (-2,1,36)								
Quartz	(-11,1,5)	16.387	89.27	7.755	8.1	0.209	1.7	2.61	3.11
Quartz	(-11,10,-5)	16.387	89.27	7.754	8.1	0.209	1.7	2.61	3.11
Quartz	(1,10,5)	16.387	89.27	7.745	8.1	0.209	1.7	2.61	3.11
Quartz	(1,-11,-5)	16.387	89.27	7.744	8.1	0.209	1.7	2.61	3.11
	Equiv. Refl.: (10,-11,5)								
Quartz	(10,1,-5)	16.387	89.27	7.74	8.1	0.209	1.7	2.61	3.11
LiNbO3	(5,-6,32)	16.27	83.11	7.291	6.4	1.98	12.76	24.75	27.85
	Equiv. Refl.: (6,-5,32)								

Ei = Cryst	16.388 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
LiNbO3	(1,5,32) Equiv. Refl.: (-1,6,32), (-5,-1,32), (-6,1,32)	16.27	83.11	7.29	6.4	1.98	12.76	24.75	27.85
LiNbO3	(1,-6,-32) Equiv. Refl.: (5,1,-32), (6,-1,-32), (-1,-5,-32), (-5,6,-32), (-6,5,-32)	16.27	83.11	7.142	6.4	1.98	12.76	24.75	27.85
Quartz	(5,5,-9) Equiv. Refl.: (5,-10,9)	16.303	84.15	6.748	5.1	1.679	8.54	20.98	22.65
Quartz	(-10,5,9)	16.303	84.15	6.746	5.1	1.679	8.53	20.98	22.65
Quartz	(-10,5,-9)	16.303	84.15	6.745	5.1	1.679	8.53	20.98	22.65
Quartz	(5,5,9) Equiv. Refl.: (5,-10,-9), (-5,10,-9), (-5,-5,9)	16.303	84.15	6.743	5.1	1.679	8.53	20.98	22.65
Quartz	(10,-5,9) Equiv. Refl.: (10,-5,-9)	16.303	84.15	6.74	5.1	1.679	8.53	20.98	22.65
Quartz	(-5,10,9) Equiv. Refl.: (-5,-5,-9)	16.303	84.15	6.737	5.1	1.679	8.53	20.98	22.65
Quartz	(8,-8,-10) Equiv. Refl.: (-8,8,10)	16.353	86.26	6.701	5.3	1.071	5.68	13.38	14.54
Quartz	(0,8,-10) Equiv. Refl.: (0,-8,10), (8,0,10), (-8,0,-10)	16.353	86.26	6.7	5.3	1.071	5.68	13.38	14.54
Sapph	(3,3,30) Equiv. Refl.: (3,3,-30), (3,-6,30), (3,-6,-30), (6,-3,30), (6,-3,-30), (-3,6,30), (-3,6,-30), (-3,-3,30), (-3,-3,-30), (-6,3,30), (-6,3,-30)	16.314	84.54	6.677	5.3	1.566	8.28	19.58	21.26
LiNbO3	(0,-8,26) Equiv. Refl.: (8,0,26)	16.091	79.07	6.618	5.6	3.163	17.67	39.54	43.31
LiNbO3	(-8,8,26)	16.091	79.07	6.617	5.6	3.163	17.67	39.54	43.31
LiNbO3	(0,8,-26) Equiv. Refl.: (8,-8,-26), (-8,0,-26)	16.091	79.07	6.542	5.6	3.163	17.67	39.54	43.31
LiNbO3	(5,7,16) Equiv. Refl.: (7,-12,16), (12,-7,16), (-5,12,16), (-7,-5,16), (-12,5,16)	16.185	80.96	6.261	5.4	2.607	14.16	32.59	35.53
LiNbO3	(7,5,-16) Equiv. Refl.: (-5,-7,-16), (-7,12,-16), (-12,7,-16)	16.185	80.96	6.108	5.4	2.607	14.16	32.59	35.53
LiNbO3	(5,-12,-16) Equiv. Refl.: (12,-5,-16)	16.185	80.96	6.107	5.4	2.607	14.16	32.59	35.53
Quartz	(7,-3,12) Equiv. Refl.: (7,-4,-12), (-3,7,-12)	16.371	87.36	5.753	4.9	0.755	3.69	9.44	10.13
Quartz	(-3,-4,12)	16.371	87.36	5.751	4.9	0.755	3.69	9.44	10.13
Quartz	(3,-7,12)	16.371	87.36	5.749	4.9	0.755	3.69	9.44	10.13
Quartz	(-7,3,-12) Equiv. Refl.: (-7,4,12)	16.371	87.36	5.748	4.9	0.755	3.69	9.44	10.13
Quartz	(3,4,-12)	16.371	87.36	5.747	4.9	0.755	3.69	9.44	10.13
Quartz	(-4,7,12)	16.371	87.36	5.735	4.9	0.755	3.68	9.44	10.13
Quartz	(-4,-3,-12)	16.371	87.36	5.733	4.9	0.755	3.68	9.44	10.13
Quartz	(4,-7,-12)	16.371	87.36	5.731	4.9	0.755	3.68	9.44	10.13
Quartz	(4,3,12)	16.371	87.36	5.729	4.9	0.755	3.68	9.44	10.13
LiNbO3	(2,7,-26) Equiv. Refl.: (7,-9,-26), (9,-7,-26), (-2,9,-26), (-7,-2,-26), (-9,2,-26)	16.27	83.13	5.455	4.7	1.976	9.37	24.7	26.42
Quartz	(12,-2,2) Equiv. Refl.: (12,-10,-2), (-10,-2,-2)	16.386	89.04	5.353	5.2	0.275	1.42	3.44	3.72
Quartz	(-2,12,-2) Equiv. Refl.: (-2,-10,2), (-10,12,2)	16.386	89.04	5.352	5.2	0.275	1.42	3.44	3.72

Ei = Cryst	16.388 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μrad]	Width [μrad]	Ei cot Θ [meV/μrad]	Δ E [meV]	Δ Eg 2m, 50μm [meV]	Δ Et 2m, 50μm [meV]
LiNbO3	(2,4,-32)	16.09	79.07	5.34	4.6	3.166	14.71	39.58	42.22
Equiv. Refl.: (4,-6,-32), (6,-4,-32), (-2,6,-32), (-4,-2,-32), (-6,2,-32)									
LiNbO3	(2,-6,32)	16.09	79.07	5.281	4.6	3.166	14.71	39.58	42.22
Equiv. Refl.: (4,2,32), (6,-2,32), (-2,-4,32), (-4,6,32), (-6,4,32)									
LiNbO3	(2,-9,26)	16.27	83.13	5.258	4.7	1.976	9.37	24.7	26.42
Equiv. Refl.: (7,2,26), (9,-2,26), (-2,-7,26), (-7,9,26), (-9,7,26)									
LiNbO3	(2,-12,-10)	16.117	79.56	5.238	4.3	3.02	12.88	37.75	39.89
Equiv. Refl.: (10,2,-10), (12,-2,-10), (-2,-10,-10), (-10,12,-10), (-12,10,-10)									
LiNbO3	(1,-12,-2)	16.061	78.53	5.185	4.3	3.325	14.16	41.56	43.9
Equiv. Refl.: (11,1,-2), (12,-1,-2), (-1,-11,-2), (-11,12,-2), (-12,11,-2)									
LiNbO3	(4,-12,-14)	15.992	77.38	5.172	4.1	3.67	15.12	45.88	48.3
Equiv. Refl.: (8,4,-14), (12,-4,-14), (-4,-8,-14), (-8,12,-14), (-12,8,-14)									
LiNbO3	(5,7,-17)	16.387	89.4	5.018	10.9	0.171	1.87	2.14	2.84
Equiv. Refl.: (5,-12,17), (7,5,17), (12,-5,17), (-5,12,-17), (-5,-7,17), (-7,-5,-17), (-12,5,-17)									
LiNbO3	(7,-12,-17)	16.387	89.4	5.017	10.9	0.171	1.87	2.14	2.84
Equiv. Refl.: (12,-7,-17), (-7,12,17), (-12,7,17)									
LiNbO3	(10,-12,10)	16.117	79.56	4.978	4.3	3.02	12.88	37.75	39.89
Equiv. Refl.: (12,-10,10)									
LiNbO3	(2,10,10)	16.117	79.56	4.977	4.3	3.02	12.88	37.75	39.89
Equiv. Refl.: (-2,12,10), (-10,-2,10), (-12,2,10)									
LiNbO3	(4,8,14)	15.992	77.38	4.975	4.1	3.67	15.12	45.88	48.3
Equiv. Refl.: (8,-12,14), (12,-8,14), (-4,12,14), (-8,-4,14), (-12,4,14)									
Quartz	(-12,2,-2)	16.386	89.04	4.949	5.2	0.275	1.42	3.44	3.72
Quartz	(10,2,2)	16.386	89.04	4.948	5.2	0.275	1.42	3.44	3.72
Equiv. Refl.: (-12,10,2)									
Quartz	(2,10,-2)	16.386	89.04	4.947	5.2	0.275	1.42	3.44	3.72
Equiv. Refl.: (2,-12,2), (10,-12,-2)									
LiNbO3	(6,7,8)	16.073	78.75	4.945	4.1	3.259	13.3	40.74	42.86
Equiv. Refl.: (7,-13,8), (13,-7,8), (-6,13,8), (-7,-6,8), (-13,6,8)									
LiNbO3	(1,-10,20)	15.998	77.47	4.928	4	3.641	14.48	45.52	47.76
Equiv. Refl.: (9,1,20), (10,-1,20), (-1,-9,20)									
LiNbO3	(-9,10,20)	15.998	77.47	4.927	4	3.641	14.48	45.52	47.76
Equiv. Refl.: (-10,9,20)									
LiNbO3	(6,-13,-8)	16.073	78.75	4.907	4.1	3.259	13.29	40.74	42.86
Equiv. Refl.: (7,6,-8), (13,-6,-8), (-6,-7,-8), (-7,13,-8), (-13,7,-8)									
LiNbO3	(4,9,-2)	16.061	78.53	4.855	4	3.325	13.2	41.56	43.61
Equiv. Refl.: (9,-13,-2), (13,-9,-2), (-4,13,-2), (-9,-4,-2), (-13,4,-2)									
LiNbO3	(1,11,2)	16.061	78.53	4.85	4.3	3.325	14.16	41.56	43.9
Equiv. Refl.: (11,-12,2), (12,-11,2), (-1,12,2), (-11,-1,2), (-12,1,2)									
LiNbO3	(3,9,12)	15.969	77.02	4.836	3.9	3.779	14.55	47.23	49.42
Equiv. Refl.: (9,-12,12), (12,-9,12), (-3,12,12), (-9,-3,12), (-12,3,12)									
LiNbO3	(1,9,-20)	15.998	77.47	4.81	4	3.641	14.48	45.52	47.76
Equiv. Refl.: (9,-10,-20), (10,-9,-20), (-1,10,-20), (-9,-1,-20), (-10,1,-20)									
LiNbO3	(1,-12,4)	16.135	79.93	4.783	4	2.911	11.55	36.39	38.18
Equiv. Refl.: (11,1,4), (12,-1,4), (-1,-11,4), (-11,12,4), (-12,11,4)									
LiNbO3	(4,-13,2)	16.061	78.53	4.716	4	3.325	13.2	41.56	43.61
Equiv. Refl.: (9,4,2), (13,-4,2), (-4,-9,2), (-9,13,2), (-13,9,2)									
LiNbO3	(5,-13,0)	15.793	74.51	4.699	4	4.541	18.11	56.76	59.58
Equiv. Refl.: (8,5,0), (13,-5,0), (-5,-8,0), (-8,13,0), (-13,8,0)									
LiNbO3	(5,8,0)	15.793	74.51	4.676	4	4.541	18.11	56.76	59.58
Equiv. Refl.: (8,-13,0), (13,-8,0), (-5,13,0), (-8,-5,0), (-13,5,0)									

Ei = Cryst	16.388 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
LiNbO3	(3,-12,-12)	15.969	77.02	4.559	3.9	3.779	14.55	47.23	49.42
Equiv. Refl.: (9,3,-12), (12,-3,-12), (-3,-9,-12), (-9,12,-12), (-12,9,-12)									
LiNbO3	(1,11,-4)	16.135	79.93	4.516	4	2.911	11.55	36.39	38.18
Equiv. Refl.: (11,-12,-4), (12,-11,-4), (-1,12,-4), (-11,-1,-4), (-12,1,-4)									
LiNbO3	(4,9,4)	16.135	79.93	4.505	3.9	2.911	11.22	36.39	38.08
Equiv. Refl.: (9,-13,4), (13,-9,4), (-4,13,4), (-9,-4,4), (-13,4,4)									
LiNbO3	(4,-13,-4)	16.135	79.93	4.502	3.9	2.911	11.22	36.39	38.08
Equiv. Refl.: (9,4,-4), (13,-4,-4), (-4,-9,-4), (-9,13,-4), (-13,9,-4)									
Quartz	(6,-6,12)	16.306	84.25	4.457	3.4	1.649	5.6	20.61	21.36
Equiv. Refl.: (-6,6,-12)									
Quartz	(6,0,-12)	16.306	84.25	4.456	3.4	1.649	5.6	20.61	21.36
Equiv. Refl.: (-6,0,12)									
Quartz	(0,6,12)	16.306	84.25	4.449	3.4	1.649	5.59	20.61	21.36
Equiv. Refl.: (0,-6,-12)									
LiNbO3	(0,0,36)	16.098	79.21	4.447	3.6	3.123	11.15	39.03	40.6
LiNbO3	(0,-4,34)	16.189	81.07	4.427	3.8	2.575	9.88	32.18	33.67
Equiv. Refl.: (4,0,34), (-4,4,34)									
LiNbO3	(5,7,-14)	15.809	74.73	4.334	3.5	4.474	15.45	55.92	58.02
Equiv. Refl.: (7,-12,-14), (12,-7,-14), (-5,12,-14), (-7,-5,-14), (-12,5,-14)									
LiNbO3	(0,4,-34)	16.189	81.07	4.325	3.8	2.575	9.88	32.18	33.67
Equiv. Refl.: (4,-4,-34), (-4,0,-34)									
Sapph	(4,6,-20)	16.221	81.82	4.264	3.2	2.355	7.62	29.44	30.41
Equiv. Refl.: (4,-10,20), (6,4,20), (6,-10,-20), (10,-4,20), (10,-6,-20), (-4,10,-20), (-4,-6,20), (-6,10,20), (-6,-4,-20), (-10,4,-20), (-10,6,20)									
LiNbO3	(0,-7,28)	15.859	75.4	4.18	3.4	4.267	14.44	53.34	55.26
Equiv. Refl.: (7,0,28), (-7,7,28)									
LiNbO3	(5,-12,14)	15.809	74.73	4.162	3.5	4.474	15.45	55.92	58.02
Equiv. Refl.: (7,5,14), (12,-5,14), (-5,-7,14), (-7,12,14), (-12,7,14)									
LiNbO3	(2,-7,30)	15.98	77.2	4.105	3.4	3.725	12.75	46.56	48.27
Equiv. Refl.: (5,2,30), (7,-2,30), (-2,-5,30), (-5,7,30), (-7,5,30)									
LiNbO3	(0,11,-8)	15.708	73.44	4.078	3.2	4.873	15.73	60.92	62.92
Equiv. Refl.: (11,-11,-8), (-11,0,-8)									
LiNbO3	(2,5,-30)	15.98	77.2	4.077	3.4	3.725	12.75	46.56	48.27
Equiv. Refl.: (-2,7,-30), (-5,-2,-30), (-7,2,-30)									
LiNbO3	(5,-7,-30)	15.98	77.2	4.076	3.4	3.725	12.75	46.56	48.27
Equiv. Refl.: (7,-5,-30)									
LiNbO3	(0,7,-28)	15.859	75.4	4.061	3.4	4.267	14.44	53.34	55.26
Equiv. Refl.: (7,-7,-28), (-7,0,-28)									
LiNbO3	(2,-7,-30)	15.98	77.2	4.023	3.4	3.725	12.52	46.56	48.21
Equiv. Refl.: (5,2,-30), (7,-2,-30), (-2,-5,-30), (-5,7,-30), (-7,5,-30)									
LiNbO3	(0,6,30)	15.798	74.58	4.02	3.3	4.521	14.8	56.51	58.41
Equiv. Refl.: (6,-6,30), (-6,0,30)									
LiNbO3	(0,-6,-30)	15.798	74.58	3.995	3.3	4.521	14.8	56.51	58.41
Equiv. Refl.: (6,0,-30), (-6,6,-30)									
LiNbO3	(2,5,30)	15.98	77.2	3.986	3.4	3.725	12.52	46.56	48.21
Equiv. Refl.: (5,-7,30), (7,-5,30), (-2,7,30), (-5,-2,30), (-7,2,30)									
LiNbO3	(5,-11,-20)	15.998	77.47	3.959	3.3	3.641	11.84	45.52	47.03
Equiv. Refl.: (6,5,-20), (11,-5,-20), (-5,-6,-20), (-6,11,-20), (-11,6,-20)									
LiNbO3	(5,5,-24)	16.13	79.83	3.927	3.4	2.94	9.9	36.76	38.07
Equiv. Refl.: (-5,10,-24), (-5,-5,-24), (-10,5,-24)									

Ei = Cryst	16.388 Refl (h,k,l)	keV EB [keV]	ΘB [°]	\int IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
LiNbO3	(5,-10,-24)	16.13	79.83	3.926	3.4	2.94	9.9	36.76	38.07
	Equiv. Refl.: (10,-5,-24)								
LiNbO3	(1,-7,-28)	15.489	70.94	3.885	3.1	5.664	17.56	70.79	72.94
	Equiv. Refl.: (6,1,-28), (7,-1,-28), (-1,-6,-28), (-6,7,-28), (-7,6,-28)								
LiNbO3	(1,6,28)	15.489	70.94	3.875	3.1	5.664	17.56	70.79	72.94
	Equiv. Refl.: (6,-7,28), (7,-6,28), (-6,-1,28)								
LiNbO3	(-1,7,28)	15.489	70.94	3.874	3.1	5.664	17.56	70.79	72.94
	Equiv. Refl.: (-7,1,28)								
LiNbO3	(0,6,-30)	15.798	74.58	3.871	3.1	4.521	14.2	56.51	58.27
	Equiv. Refl.: (6,-6,-30), (-6,0,-30)								
LiNbO3	(3,7,-22)	15.796	74.56	3.862	3.2	4.527	14.28	56.59	58.36
	Equiv. Refl.: (7,-10,-22), (10,-7,-22), (-3,10,-22), (-7,-3,-22), (-10,3,-22)								
Sapph	(3,9,0)	16.273	83.2	3.859	3	1.954	5.9	24.42	25.12
	Equiv. Refl.: (3,-12,0), (9,3,0), (9,-12,0), (12,-3,0), (12,-9,0), (-3,12,0), (-3,-9,0), (-9,12,0), (-9,-3,0), (-12,3,0), (-12,9,0)								
LiNbO3	(0,-11,8)	15.708	73.44	3.853	3.2	4.873	15.73	60.92	62.92
	Equiv. Refl.: (11,0,8), (-11,11,8)								
LiNbO3	(3,-10,22)	15.796	74.56	3.803	3.2	4.527	14.28	56.59	58.36
	Equiv. Refl.: (7,3,22), (10,-3,22), (-3,-7,22), (-7,10,22), (-10,7,22)								
Quartz	(10,-4,9)	16.368	87.15	3.756	3.2	0.817	2.61	10.21	10.54
	Equiv. Refl.: (10,-6,-9)								
LiNbO3	(0,-6,30)	15.798	74.58	3.751	3.1	4.521	14.2	56.51	58.27
	Equiv. Refl.: (6,0,30), (-6,6,30), (8,2,-8), (8,-10,8)								
Quartz	(-10,2,8)	16.202	81.37	3.75	2.8	2.488	6.88	31.1	31.85
	Equiv. Refl.: (-10,8,-8)								
Quartz	(2,8,8)	16.202	81.37	3.749	2.8	2.488	6.88	31.1	31.85
	Equiv. Refl.: (2,-10,-8)								
Quartz	(-8,10,-8)	16.202	81.37	3.747	2.8	2.488	6.88	31.1	31.85
	Equiv. Refl.: (-8,-2,8)								
Quartz	(10,-2,-8)	16.202	81.37	3.746	2.8	2.488	6.88	31.1	31.85
	Equiv. Refl.: (10,-8,8)								
Quartz	(-2,-8,-8)	16.202	81.37	3.745	2.8	2.488	6.88	31.1	31.85
Quartz	(-2,10,8)	16.202	81.37	3.744	2.8	2.488	6.88	31.1	31.85
	Equiv. Refl.: (-4,10,-9), (-4,-6,9)								
Quartz	(-6,-4,-9)	16.368	87.15	3.739	3.2	0.817	2.6	10.21	10.53
Quartz	(-6,10,9)	16.368	87.15	3.738	3.2	0.817	2.6	10.21	10.53
LiNbO3	(2,6,-28)	16.041	78.19	3.731	3.2	3.427	10.99	42.84	44.23
	Equiv. Refl.: (6,-8,-28), (8,-6,-28), (-2,8,-28), (-6,-2,-28), (-8,2,-28)								
LiNbO3	(5,-10,24)	16.13	79.83	3.726	3.4	2.94	9.9	36.76	38.07
	Equiv. Refl.: (10,-5,24)								
LiNbO3	(5,5,24)	16.13	79.83	3.725	3.4	2.94	9.9	36.76	38.07
	Equiv. Refl.: (-5,10,24), (-5,-5,24), (-10,5,24)								
LiNbO3	(2,-8,28)	16.041	78.19	3.717	3.2	3.427	10.99	42.84	44.23
	Equiv. Refl.: (6,2,28), (8,-2,28), (-2,-6,28), (-6,8,28), (-8,6,28)								
Quartz	(-10,4,-9)	16.368	87.15	3.666	3.2	0.817	2.61	10.21	10.54
	Equiv. Refl.: (-10,6,9)								
LiNbO3	(5,6,20)	15.998	77.47	3.654	3.3	3.641	11.84	45.52	47.03
	Equiv. Refl.: (6,-11,20), (11,-6,20), (-5,11,20), (-6,-5,20), (-11,5,20), (4,6,-9), (4,-10,9)								
Quartz	(6,4,9)	16.368	87.15	3.649	3.2	0.817	2.6	10.21	10.53
Quartz	(6,-10,-9)	16.368	87.15	3.648	3.2	0.817	2.6	10.21	10.53

Ei = Cryst	16.388 Refl (h,k,l)	keV EB [keV]	ΘB [°]	IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
LiNbO3	(6,7,-4)	15.772	74.24	3.612	3	4.626	13.76	57.82	59.44
	Equiv. Refl.: (7,-13,-4), (13,-7,-4), (-6,13,-4), (-7,-6,-4), (-13,6,-4)								
Sapph	(3,8,-14)	16.254	82.66	3.582	2.8	2.11	5.92	26.37	27.03
	Equiv. Refl.: (3,-11,14), (8,3,14), (8,-11,-14), (11,-3,14), (11,-8,-14), (-3,11,-14), (-3,-8,14), (-8,11,14), (-8,-3,-14), (-11,3,-14), (-11,8,14)								
LiNbO3	(6,-13,4)	15.772	74.24	3.562	3	4.626	13.76	57.82	59.44
	Equiv. Refl.: (7,6,4), (13,-6,4), (-6,-7,4), (-7,13,4), (-13,7,4)								
LiNbO3	(1,3,34)	16.009	77.66	3.552	3	3.586	10.82	44.82	46.11
	Equiv. Refl.: (3,-4,34), (4,-3,34), (-1,4,34), (-3,-1,34), (-4,1,34)								
LiNbO3	(1,-11,12)	15.602	72.18	3.542	2.9	5.269	15.22	65.86	67.59
	Equiv. Refl.: (10,1,12), (11,-1,12), (-1,-10,12), (-10,11,12), (-11,10,12)								
LiNbO3	(1,10,-12)	15.602	72.18	3.532	2.9	5.269	15.22	65.86	67.59
	Equiv. Refl.: (10,-11,-12), (11,-10,-12), (-1,11,-12), (-10,-1,-12), (-11,1,-12)								
LiNbO3	(2,10,-2)	15.51	71.16	3.464	2.8	5.593	15.75	69.91	71.66
	Equiv. Refl.: (10,-12,-2), (12,-10,-2), (-2,12,-2), (-10,-2,-2), (-12,2,-2)								
LiNbO3	(0,0,-36)	16.098	79.21	3.452	3.6	3.123	11.15	39.03	40.6
Quartz	(-7,4,-12)	16.371	87.36	3.399	2.8	0.755	2.12	9.44	9.67
Quartz	(-7,3,12)	16.371	87.36	3.398	2.8	0.755	2.12	9.44	9.67
Quartz	(4,3,-12)	16.371	87.36	3.397	2.8	0.755	2.12	9.44	9.67
Quartz	(4,-7,12)	16.371	87.36	3.395	2.8	0.755	2.12	9.44	9.67
Quartz	(3,-7,-12)	16.371	87.36	3.385	2.8	0.755	2.11	9.44	9.67
Quartz	(3,4,12)	16.371	87.36	3.384	2.8	0.755	2.11	9.44	9.67
LiNbO3	(0,11,10)	15.936	76.51	3.364	2.9	3.932	11.53	49.15	50.49
	Equiv. Refl.: (11,-11,10), (-11,0,10)								
Sapph	(0,1,-34)	16.297	83.98	3.256	2.6	1.729	4.57	21.62	22.1
	Equiv. Refl.: (0,-1,34), (1,0,34), (1,-1,-34), (-1,0,-34), (-1,1,34)								
LiNbO3	(1,-4,-34)	16.009	77.66	3.242	3	3.586	10.82	44.82	46.11
	Equiv. Refl.: (3,1,-34), (4,-1,-34), (-1,-3,-34), (-3,4,-34), (-4,3,-34)								
LiNbO3	(2,-12,2)	15.51	71.16	3.218	2.8	5.593	15.75	69.91	71.66
	Equiv. Refl.: (10,2,2), (12,-2,2), (-2,-10,2), (-10,12,2), (-12,10,2), (0,10,-10), (0,-10,10), (10,0,10), (10,-10,-10), (-10,0,-10), (-10,10,10)								
LiNbO3	(0,-2,-34)	15.456	70.59	3.206	2.8	5.775	15.96	72.19	73.94
	Equiv. Refl.: (2,0,-34), (-2,2,-34)								
LiNbO3	(2,-12,8)	15.892	75.86	3.197	2.8	4.128	11.69	51.59	52.9
	Equiv. Refl.: (10,2,8), (12,-2,8), (-2,-10,8), (-10,12,8), (-12,10,8)								
LiNbO3	(2,-11,16)	15.822	74.9	3.179	2.8	4.422	12.55	55.28	56.68
	Equiv. Refl.: (9,2,16), (11,-2,16), (-2,-9,16)								
LiNbO3	(-9,11,16)	15.822	74.9	3.178	2.8	4.422	12.55	55.28	56.68
	Equiv. Refl.: (-11,9,16)								
LiNbO3	(5,8,6)	16.019	77.82	3.172	2.8	3.537	9.89	44.21	45.3
	Equiv. Refl.: (8,-13,6), (13,-8,6), (-5,13,6), (-8,-5,6), (-13,5,6)								
Quartz	(7,-3,-12)	16.371	87.36	3.16	2.8	0.755	2.12	9.44	9.67
	Equiv. Refl.: (7,-4,12), (-4,-3,12)								
Quartz	(-4,7,-12)	16.371	87.36	3.157	2.8	0.755	2.12	9.44	9.67
LiNbO3	(2,9,-16)	15.822	74.9	3.156	2.8	4.422	12.55	55.28	56.68
	Equiv. Refl.: (9,-11,-16), (11,-9,-16), (-2,11,-16), (-9,-2,-16), (-11,2,-16)								
Quartz	(-3,7,12)	16.371	87.36	3.147	2.8	0.755	2.11	9.44	9.67
Quartz	(-3,-4,-12)	16.371	87.36	3.146	2.8	0.755	2.11	9.44	9.67

Ei = Cryst	16.388 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μrad]	Width [μrad]	Ei cot Θ [meV/μrad]	Δ E [meV]	Δ Eg 2m, 50μm [meV]	Δ Et 2m, 50μm [meV]
Sapph	(5,6,-16)	16.257	82.74	3.145	2.5	2.088	5.25	26.1	26.62
Equiv. Refl.: (5,-11,16), (6,5,16), (6,-11,-16), (11,-5,16), (11,-6,-16), (-5,11,-16), (-5,-6,16), (-6,11,16), (-6,-5,-16) (-11,5,-16), (-11,6,16)									
Quartz	(1,-1,14)	16.124	79.71	3.128	2.3	2.976	6.96	37.21	37.85
Equiv. Refl.: (-1,1,-14)									
Quartz	(1,0,-14)	16.124	79.71	3.127	2.3	2.976	6.95	37.21	37.85
Equiv. Refl.: (-1,0,14)									
Quartz	(0,1,14)	16.124	79.71	3.122	2.3	2.976	6.94	37.21	37.85
Equiv. Refl.: (0,-1,-14)									
LiNbO3	(4,-11,-18)	15.64	72.62	3.112	2.7	5.13	13.94	64.12	65.62
Equiv. Refl.: (7,4,-18), (11,-4,-18), (-4,-7,-18), (-7,11,-18), (-11,7,-18), (5,-1,13), (5,-4,-13)									
Quartz	(-4,-1,-13)	16.338	85.51	3.11	2.8	1.286	3.54	16.07	16.45
Quartz	(-4,5,13)	16.338	85.51	3.109	2.8	1.286	3.54	16.07	16.45
Quartz	(-1,5,-13)	16.338	85.51	3.108	2.8	1.286	3.54	16.07	16.45
Equiv. Refl.: (-1,-4,13)									
LiNbO3	(0,2,34)	15.456	70.59	3.102	2.8	5.775	15.96	72.19	73.94
Equiv. Refl.: (2,-2,34), (-2,0,34)									
LiNbO3	(3,-12,12)	15.969	77.02	3.068	2.7	3.779	10.29	47.23	48.34
Equiv. Refl.: (9,3,12), (12,-3,12), (-3,-9,12), (-9,12,12), (-12,9,12), (3,4,-28), (3,-7,28), (4,3,28), (4,-7,-28) (7,-3,28), (7,-4,-28), (-3,7,-28), (-3,-4,28), (-4,7,28), (-4,-3,-28), (-7,3,-28), (-7,4,28)									
LiNbO3	(5,4,-26)	15.91	76.12	3.067	2.7	4.049	11.04	50.61	51.8
Equiv. Refl.: (-4,-5,-26), (-5,9,-26), (-9,5,-26)									
LiNbO3	(4,-9,-26)	15.91	76.12	3.066	2.7	4.049	11.04	50.61	51.8
Equiv. Refl.: (9,-4,-26)									
LiNbO3	(2,10,-8)	15.892	75.86	3.053	2.8	4.128	11.69	51.59	52.9
Equiv. Refl.: (10,-12,-8), (12,-10,-8), (-2,12,-8), (-10,-2,-8), (-12,2,-8)									
LiNbO3	(0,-11,-10)	15.936	76.51	3.05	2.9	3.932	11.53	49.15	50.49
Equiv. Refl.: (11,0,-10), (-11,11,-10)									
Sapph	(3,5,-26)	16.276	83.29	3.032	2.4	1.928	4.53	24.11	24.53
Equiv. Refl.: (3,-8,26), (5,3,26), (5,-8,-26), (8,-3,26), (8,-5,-26), (-3,8,-26), (-3,-5,26), (-5,8,26), (-5,-3,-26) (-8,3,-26), (-8,5,26)									
LiNbO3	(1,2,-34)	15.643	72.65	3.03	2.7	5.119	13.76	63.98	65.45
Equiv. Refl.: (2,-3,-34), (3,-2,-34), (-1,3,-34), (-2,-1,-34), (-3,1,-34)									
LiNbO3	(1,-3,34)	15.643	72.65	3.028	2.7	5.119	13.76	63.98	65.45
Equiv. Refl.: (2,1,34), (3,-1,34), (-1,-2,34), (-2,3,34), (-3,2,34)									
LiNbO3	(4,7,18)	15.64	72.62	3	2.7	5.13	13.94	64.12	65.62
Equiv. Refl.: (7,-11,18), (11,-7,18), (-4,11,18), (-7,-4,18), (-11,4,18)									
Quartz	(-5,1,-13)	16.338	85.51	2.998	2.8	1.286	3.54	16.07	16.45
Equiv. Refl.: (-5,4,13)									
Quartz	(1,4,-13)	16.338	85.51	2.995	2.8	1.286	3.54	16.07	16.45
Equiv. Refl.: (4,1,13)									
Quartz	(1,-5,13)	16.338	85.51	2.994	2.8	1.286	3.54	16.07	16.45
Equiv. Refl.: (4,-5,-13)									
LiNbO3	(5,-13,6)	16.019	77.82	2.958	2.6	3.537	9.34	44.21	45.18
Equiv. Refl.: (8,5,6), (13,-5,6), (-5,-8,6), (-8,13,6), (-13,8,6)									
Quartz	(2,10,-1)	16.265	82.97	2.936	2.5	2.021	5.02	25.26	25.75
Equiv. Refl.: (2,-12,1), (10,2,1), (10,-12,-1), (-12,2,-1), (-12,10,1)									
LiNbO3	(4,5,26)	15.91	76.12	2.902	2.7	4.049	11.04	50.61	51.8
Equiv. Refl.: (5,-9,26), (9,-5,26), (-4,9,26), (-5,-4,26), (-9,4,26)									
LiNbO3	(6,-13,-2)	15.696	73.28	2.892	2.6	4.922	12.65	61.52	62.81
Equiv. Refl.: (7,6,-2), (13,-6,-2), (-6,-7,-2), (-7,13,-2), (-13,7,-2)									

Ei =	16.388	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(4,-10,-22)	15.612	72.29	2.864	2.5	5.232	13.17	65.4	66.71
	Equiv. Refl.: (6,4,-22), (10,-4,-22), (-4,-6,-22), (-6,10,-22), (-10,6,-22)								
Sapph	(1,7,24)	16.131	79.85	2.858	2.1	2.934	6.22	36.68	37.2
	Equiv. Refl.: (1,7,-24), (1,-8,24), (1,-8,-24), (7,1,24), (7,1,-24), (7,-8,24), (7,-8,-24), (8,-1,24), (8,-1,-24) (8,-7,24), (8,-7,-24), (-1,8,24), (-1,8,-24), (-1,-7,24), (-1,-7,-24), (-7,8,24), (-7,8,-24), (-7,-1,24) (-7,-1,-24), (-8,1,24), (-8,1,-24), (-8,7,24), (-8,7,-24)								
LiNbO3	(6,7,2)	15.696	73.28	2.835	2.6	4.922	12.65	61.52	62.81
	Equiv. Refl.: (7,-13,2), (13,-7,2), (-6,13,2), (-7,-6,2), (-13,6,2)								
Quartz	(12,-2,1)	16.265	82.97	2.82	2.5	2.021	5.02	25.26	25.75
	Equiv. Refl.: (12,-10,-1), (-2,12,-1), (-2,-10,1), (-10,12,1), (-10,-2,-1)								
LiNbO3	(3,9,-12)	15.969	77.02	2.811	2.7	3.779	10.29	47.23	48.34
	Equiv. Refl.: (9,-12,-12), (12,-9,-12), (-3,12,-12), (-9,-3,-12), (-12,3,-12)								
LiNbO3	(5,-13,-6)	16.019	77.82	2.808	2.8	3.537	9.89	44.21	45.3
	Equiv. Refl.: (8,5,-6), (13,-5,-6), (-5,-8,-6), (-8,13,-6), (-13,8,-6)								
LiNbO3	(4,7,-18)	15.64	72.62	2.775	2.5	5.13	12.66	64.12	65.36
	Equiv. Refl.: (7,-11,-18), (11,-7,-18), (-4,11,-18), (-7,-4,-18), (-11,4,-18)								
LiNbO3	(2,-11,-14)	15.438	70.4	2.767	2.4	5.836	14.29	72.95	74.34
	Equiv. Refl.: (9,2,-14), (11,-2,-14), (-2,-9,-14), (-9,11,-14), (-11,9,-14)								
LiNbO3	(4,6,22)	15.612	72.29	2.754	2.5	5.232	13.17	65.4	66.71
	Equiv. Refl.: (6,-10,22), (10,-6,22), (-4,10,22), (-6,-4,22), (-10,4,22)								
LiNbO3	(2,10,4)	15.587	72.01	2.753	2.4	5.322	12.9	66.52	67.76
	Equiv. Refl.: (10,-12,4), (12,-10,4), (-2,12,4), (-10,-2,4), (-12,2,4)								
LiNbO3	(2,9,14)	15.438	70.4	2.75	2.4	5.836	14.29	72.95	74.34
	Equiv. Refl.: (9,-11,14), (11,-9,14), (-2,11,14), (-9,-2,14), (-11,2,14)								
LiNbO3	(0,-5,32)	15.909	76.12	2.749	2.4	4.051	9.81	50.63	51.58
	Equiv. Refl.: (5,0,32), (-5,5,32)								
LiNbO3	(6,6,12)	15.415	70.15	2.743	2.4	5.915	14.06	73.94	75.27
	Equiv. Refl.: (6,-12,12), (12,-6,12), (-6,-6,12)								
LiNbO3	(-6,12,12)	15.415	70.15	2.742	2.4	5.915	14.06	73.94	75.27
	Equiv. Refl.: (-12,6,12)								
Quartz	(2,3,13)	16.207	81.48	2.737	2.3	2.454	5.67	30.67	31.19
	Equiv. Refl.: (2,-5,-13)								
Quartz	(3,2,-13)	16.207	81.48	2.735	2.3	2.454	5.67	30.67	31.19
	Equiv. Refl.: (-5,2,13), (-5,3,-13)								
Quartz	(3,-5,13)	16.207	81.48	2.734	2.3	2.454	5.67	30.67	31.19
LiNbO3	(4,-11,18)	15.64	72.62	2.71	2.5	5.13	12.66	64.12	65.36
	Equiv. Refl.: (7,4,18), (11,-4,18), (-4,-7,18), (-7,11,18), (-11,7,18)								
Quartz	(-2,5,13)	16.207	81.48	2.681	2.3	2.454	5.67	30.67	31.19
	Equiv. Refl.: (-2,-3,-13)								
Quartz	(5,-2,-13)	16.207	81.48	2.679	2.3	2.454	5.67	30.67	31.19
	Equiv. Refl.: (5,-3,13), (-3,5,-13), (-3,-2,13)								
LiNbO3	(5,8,-6)	16.019	77.82	2.647	2.6	3.537	9.34	44.21	45.18
	Equiv. Refl.: (8,-13,-6), (13,-8,-6), (-5,13,-6), (-8,-5,-6), (-13,5,-6)								
LiNbO3	(2,-12,-4)	15.587	72.01	2.638	2.4	5.322	12.9	66.52	67.76
	Equiv. Refl.: (10,2,-4), (12,-2,-4), (-2,-10,-4), (-10,12,-4), (-12,10,-4)								
LiNbO3	(3,-11,-16)	15.451	70.53	2.617	2.3	5.793	13.06	72.41	73.58
	Equiv. Refl.: (8,3,-16), (11,-3,-16), (-3,-8,-16), (-8,11,-16), (-11,8,-16)								
LiNbO3	(0,10,-16)	15.638	72.6	2.592	2.3	5.137	11.79	64.21	65.29
	Equiv. Refl.: (10,-10,-16), (-10,0,-16)								
LiNbO3	(6,6,-12)	15.415	70.15	2.572	2.4	5.915	14.06	73.94	75.27
	Equiv. Refl.: (6,-12,-12), (12,-6,-12), (-6,12,-12), (-6,-6,-12), (-12,6,-12)								

Ei =	16.388	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,-11,-12)	15.602	72.18	2.566	2.3	5.269	12.15	65.86	66.97
	Equiv. Refl.: (10,1,-12), (11,-1,-12), (-1,-10,-12), (-10,11,-12), (-11,10,-12)								
LiNbO3	(2,3,32)	15.54	71.49	2.549	2.2	5.486	12.29	68.58	69.67
	Equiv. Refl.: (3,-5,32), (5,-3,32), (-2,5,32), (-3,-2,32), (-5,2,32)								
LiNbO3	(1,10,12)	15.602	72.18	2.536	2.3	5.269	12.15	65.86	66.97
	Equiv. Refl.: (10,-11,12), (11,-10,12), (-1,11,12), (-10,-1,12), (-11,1,12)								
LiNbO3	(1,-9,22)	15.425	70.26	2.514	2.2	5.881	13.12	73.51	74.67
	Equiv. Refl.: (8,1,22), (9,-1,22), (-1,-8,22), (-8,9,22), (-9,8,22)								
LiNbO3	(1,8,-22)	15.425	70.26	2.45	2.2	5.881	13.12	73.51	74.67
	Equiv. Refl.: (8,-9,-22), (9,-8,-22), (-1,9,-22), (-8,-1,-22), (-9,1,-22)								
Quartz	(6,0,12)	16.306	84.25	2.332	2	1.649	3.33	20.61	20.88
	Equiv. Refl.: (-6,0,-12)								
Quartz	(6,-6,-12)	16.306	84.25	2.331	2	1.649	3.33	20.61	20.88
	Equiv. Refl.: (-6,6,12)								
Quartz	(0,6,-12)	16.306	84.25	2.33	2	1.649	3.32	20.61	20.88
	Equiv. Refl.: (0,-6,12)								
Sapph	(4,8,-4)	16.035	78.09	2.324	1.9	3.456	6.69	43.2	43.71
	Equiv. Refl.: (4,-12,4), (8,4,4), (8,-12,-4), (12,-4,4), (12,-8,-4), (-4,12,-4), (-4,-8,4), (-8,12,4), (-8,-4,-4), (-12,4,-4), (-12,8,4)								
Quartz	(8,4,4)	16.087	79.01	2.292	1.8	3.183	5.86	39.78	40.21
	Equiv. Refl.: (8,-12,-4), (-12,4,-4), (-12,8,4)								
Quartz	(4,8,-4)	16.087	79.01	2.291	1.8	3.183	5.85	39.78	40.21
	Equiv. Refl.: (4,-12,4)								
LiNbO3	(4,-11,21)	16.371	87.36	2.277	3.8	0.756	2.89	9.45	9.88
	Equiv. Refl.: (7,-11,21), (11,-4,21), (11,-7,21), (-4,11,-21), (-7,11,-21), (-11,4,-21), (-11,7,-21)								
LiNbO3	(4,7,21)	16.371	87.36	2.276	3.8	0.756	2.89	9.45	9.88
	Equiv. Refl.: (4,7,-21), (4,-11,-21), (7,4,21), (7,4,-21), (7,-11,-21), (11,-4,-21), (11,-7,-21), (-4,11,21), (-4,-7,21), (-4,-7,-21), (-7,11,21), (-7,-4,21), (-7,-4,-21), (-11,4,21), (-11,7,21)								
Quartz	(12,-2,0)	16.224	81.9	2.271	1.9	2.334	4.49	29.17	29.52
	Equiv. Refl.: (12,-10,0), (-2,12,0), (-2,-10,0), (-10,12,0), (-10,-2,0)								
Quartz	(2,10,0)	16.224	81.9	2.246	1.9	2.334	4.49	29.17	29.52
	Equiv. Refl.: (2,-12,0), (10,2,0), (10,-12,0), (-12,2,0), (-12,10,0)								
LiNbO3	(0,-10,16)	15.638	72.6	2.007	2.3	5.137	11.79	64.21	65.29
	Equiv. Refl.: (10,0,16), (-10,10,16)								
LiNbO3	(0,5,-32)	15.909	76.12	1.982	2.4	4.051	9.81	50.63	51.58
	Equiv. Refl.: (5,-5,-32), (-5,0,-32)								
LiNbO3	(2,-5,-32)	15.54	71.49	1.957	2.2	5.486	12.29	68.58	69.67
	Equiv. Refl.: (3,2,-32), (5,-2,-32), (-2,-3,-32), (-3,5,-32), (-5,3,-32)								
LiNbO3	(3,8,16)	15.451	70.53	1.936	2.3	5.793	13.06	72.41	73.58
	Equiv. Refl.: (8,-11,16), (11,-8,16), (-3,11,16), (-8,-3,16), (-11,3,16)								
Quartz	(4,5,-10)	16.157	80.37	1.843	1.9	2.78	5.16	34.75	35.13
	Equiv. Refl.: (4,-9,10), (5,4,10), (5,-9,-10)								
Quartz	(-9,4,-10)	16.157	80.37	1.842	1.9	2.78	5.16	34.75	35.13
	Equiv. Refl.: (-9,5,10)								
Quartz	(-4,-5,10)	16.157	80.37	1.841	1.9	2.78	5.16	34.75	35.13
Quartz	(-4,9,-10)	16.157	80.37	1.84	1.9	2.78	5.16	34.75	35.13
	Equiv. Refl.: (-5,9,10), (-5,-4,-10)								
Quartz	(9,-4,10)	16.157	80.37	1.839	1.9	2.78	5.16	34.75	35.13
	Equiv. Refl.: (9,-5,-10)								

Ei = Cryst	16.388 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(-8,12,4) Equiv. Refl.: (-8,-4,-4)	16.087	79.01	1.799	1.8	3.183	5.86	39.78	40.21
Quartz	(12,-4,4) Equiv. Refl.: (12,-8,-4), (-4,12,-4), (-4,-8,4)	16.087	79.01	1.798	1.8	3.183	5.85	39.78	40.21
LiNbO3	(3,5,28) Equiv. Refl.: (5,-8,28), (8,-5,28), (-3,8,28), (-5,-3,28), (-8,3,28)	15.859	75.4	1.796	2.1	4.267	8.77	53.34	54.06
Quartz	(4,6,9) Equiv. Refl.: (-1,9,-9)	16.368	87.15	1.773	2	0.817	1.63	10.21	10.34
Quartz	(4,-10,-9) Equiv. Refl.: (-1,-8,9)	16.368	87.15	1.772	2	0.817	1.63	10.21	10.34
Quartz	(6,4,-9) Equiv. Refl.: (6,-10,9), (9,-1,9), (9,-8,-9), (-8,9,9), (-8,-1,-9)	16.368	87.15	1.77	2	0.817	1.62	10.21	10.34
Quartz	(-10,6,-9)	16.368	87.15	1.769	2	0.817	1.62	10.21	10.34
Quartz	(-10,4,9)	16.368	87.15	1.767	2	0.817	1.62	10.21	10.34
Quartz	(4,4,-11)	16.158	80.39	1.761	1.8	2.773	4.91	34.67	35.01
Quartz	(4,-8,11)	16.158	80.39	1.76	1.8	2.773	4.9	34.67	35.01
Quartz	(4,4,11) Equiv. Refl.: (4,-8,-11)	16.158	80.39	1.759	1.8	2.773	4.9	34.67	35.01
Quartz	(-8,4,11) Equiv. Refl.: (-8,4,-11)	16.158	80.39	1.758	1.8	2.773	4.9	34.67	35.01
Quartz	(12,-6,5) Equiv. Refl.: (12,-6,-5)	16.191	81.11	1.742	1.7	2.563	4.41	32.04	32.34
Quartz	(-6,12,-5) Equiv. Refl.: (-6,-6,-5)	16.191	81.11	1.741	1.7	2.563	4.41	32.04	32.34
Quartz	(-6,12,5) Equiv. Refl.: (-6,-6,5)	16.191	81.11	1.74	1.7	2.563	4.4	32.04	32.34
LiNbO3	(5,3,-28) Equiv. Refl.: (-3,-5,-28), (-5,8,-28), (-8,5,-28)	15.859	75.4	1.737	2.1	4.267	8.77	53.34	54.06
LiNbO3	(3,-8,-28) Equiv. Refl.: (8,-3,-28), (-4,-4,11)	15.859	75.4	1.736	2.1	4.267	8.77	53.34	54.06
Quartz	(-4,8,-11) Equiv. Refl.: (-4,-4,-11)	16.158	80.39	1.735	1.8	2.773	4.9	34.67	35.01
Quartz	(-4,8,11)	16.158	80.39	1.734	1.8	2.773	4.9	34.67	35.01
Quartz	(8,-4,11) Equiv. Refl.: (8,-4,-11)	16.158	80.39	1.733	1.8	2.773	4.9	34.67	35.01
Quartz	(1,-9,9)	16.172	80.69	1.722	1.8	2.688	4.76	33.59	33.93
Quartz	(1,8,-9)	16.172	80.69	1.721	1.8	2.688	4.76	33.59	33.93
Quartz	(8,1,9) Equiv. Refl.: (8,-9,-9), (-9,1,-9), (-9,8,9)	16.172	80.69	1.719	1.8	2.688	4.75	33.59	33.93
Quartz	(-4,-6,-9)	16.368	87.15	1.689	2	0.817	1.63	10.21	10.34
Quartz	(-4,10,9)	16.368	87.15	1.688	2	0.817	1.63	10.21	10.34
Quartz	(-6,10,-9)	16.368	87.15	1.687	2	0.817	1.62	10.21	10.34
Quartz	(-6,-4,9)	16.368	87.15	1.686	2	0.817	1.62	10.21	10.34
Quartz	(10,-6,9)	16.368	87.15	1.685	2	0.817	1.62	10.21	10.34
Quartz	(10,-4,-9)	16.368	87.15	1.683	2	0.817	1.62	10.21	10.34
Quartz	(9,3,3) Equiv. Refl.: (9,-12,-3), (12,-3,3), (12,-9,-3), (-3,12,-3), (-3,-9,3), (-9,12,3), (-9,-3,-3), (-12,3,-3), (-12,9,3)	16.131	79.84	1.668	1.7	2.937	4.95	36.71	37.04
Quartz	(3,9,-3) Equiv. Refl.: (3,-12,3)	16.131	79.84	1.667	1.7	2.937	4.95	36.71	37.04
Quartz	(6,-1,12) Equiv. Refl.: (6,-5,-12), (-5,6,12), (-5,-1,-12)	15.977	77.14	1.651	1.6	3.742	6.12	46.77	47.17

Ei = Cryst	16.388 Refl (h,k,l)	keV EB [keV]	Θ B [$^{\circ}$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(-1,6,-12) Equiv. Refl.: (-1,-5,12)	15.977	77.14	1.65	1.6	3.742	6.12	46.77	47.17
Sapph	(4,8,-7) Equiv. Refl.: (4,-12,7), (8,4,7), (8,-12,-7), (12,-4,7), (12,-8,-7), (-4,12,-7), (-4,-8,7), (-8,12,7), (-8,-4,-7), (-12,4,-7), (-12,8,7)	16.268	83.06	1.648	1.8	1.994	3.51	24.92	25.17
Quartz	(-12,6,5) Equiv. Refl.: (-12,6,-5)	16.191	81.11	1.635	1.7	2.563	4.41	32.04	32.34
Quartz	(6,6,5) Equiv. Refl.: (6,6,-5), (6,-12,5), (6,-12,-5)	16.191	81.11	1.634	1.7	2.563	4.41	32.04	32.34
Sapph	(5,6,14) Equiv. Refl.: (5,-11,-14), (6,5,-14), (6,-11,14), (11,-5,-14), (11,-6,14), (-5,11,14), (-5,-6,-14), (-6,11,-14), (-6,-5,14), (-11,5,14), (-11,6,-14)	15.831	75.01	1.63	1.6	4.387	7.2	54.84	55.31
Quartz	(5,1,12) Equiv. Refl.: (5,-6,-12), (-6,5,12)	15.977	77.14	1.626	1.6	3.742	6.13	46.77	47.17
Quartz	(1,5,-12) Equiv. Refl.: (1,-6,12), (-6,1,-12)	15.977	77.14	1.625	1.6	3.742	6.12	46.77	47.17
Quartz	(-8,9,-9) Equiv. Refl.: (-8,-1,9)	16.172	80.69	1.579	1.6	2.688	4.3	33.59	33.87
Quartz	(9,-1,-9) Equiv. Refl.: (9,-8,9), (-1,-8,-9)	16.172	80.69	1.577	1.6	2.688	4.3	33.59	33.87
Quartz	(-1,9,9)	16.172	80.69	1.576	1.6	2.688	4.3	33.59	33.87
Quartz	(-5,9,-10)	16.157	80.37	1.566	1.6	2.78	4.37	34.75	35.02
Quartz	(-5,-4,10)	16.157	80.37	1.565	1.6	2.78	4.37	34.75	35.02
Quartz	(-4,9,10) Equiv. Refl.: (-4,-5,-10)	16.157	80.37	1.563	1.6	2.78	4.37	34.75	35.02
Quartz	(9,-4,-10) Equiv. Refl.: (9,-5,10)	16.157	80.37	1.561	1.6	2.78	4.36	34.75	35.02
Quartz	(8,1,-9) Equiv. Refl.: (8,-9,9)	16.172	80.69	1.559	1.6	2.688	4.3	33.59	33.87
Quartz	(1,8,9) Equiv. Refl.: (-9,1,9), (-9,8,-9)	16.172	80.69	1.557	1.6	2.688	4.3	33.59	33.87
Quartz	(1,-9,-9)	16.172	80.69	1.556	1.6	2.688	4.3	33.59	33.87
Quartz	(11,-4,7) Equiv. Refl.: (11,-7,-7), (-7,11,7), (-7,-4,-7)	16.183	80.93	1.524	1.5	2.617	4.05	32.71	32.96
Quartz	(-4,11,-7) Equiv. Refl.: (-4,-7,7)	16.183	80.93	1.523	1.5	2.617	4.04	32.71	32.96
Quartz	(5,4,-10) Equiv. Refl.: (5,-9,10)	16.157	80.37	1.52	1.6	2.78	4.37	34.75	35.02
Quartz	(11,0,-1) Equiv. Refl.: (11,-11,1), (-11,0,1), (-11,11,-1)	16.068	78.66	1.518	1.5	3.288	5.04	41.1	41.4
Quartz	(0,11,1) Equiv. Refl.: (0,-11,-1), (4,5,10), (4,-9,-10)	16.068	78.66	1.517	1.5	3.288	5.04	41.1	41.4
Quartz	(-9,4,10) Equiv. Refl.: (-9,5,-10)	16.157	80.37	1.516	1.6	2.78	4.36	34.75	35.02
Quartz	(7,4,7) Equiv. Refl.: (7,-11,-7), (-11,4,-7), (-11,7,7)	16.183	80.93	1.489	1.5	2.617	4.04	32.71	32.96
Quartz	(4,7,-7) Equiv. Refl.: (4,-11,7)	16.183	80.93	1.488	1.5	2.617	4.04	32.71	32.96
Quartz	(8,2,7) Equiv. Refl.: (8,-10,-7), (-10,2,-7), (-10,8,7)	15.581	71.95	1.455	1.4	5.341	7.6	66.76	67.19

Ei = Cryst	16.388 Refl (h,k,l)	keV EB [keV]	Θ B [$^\circ$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(2,8,-7) Equiv. Refl.: (2,-10,7)	15.581	71.95	1.454	1.4	5.341	7.6	66.76	67.19
Quartz	(5,7,-3) Equiv. Refl.: (5,-12,3), (7,5,3), (7,-12,-3), (-12,5,-3), (-12,7,3)	15.596	72.11	1.448	1.4	5.29	7.59	66.12	66.55
Quartz	(12,-5,3) Equiv. Refl.: (12,-7,-3), (-5,12,-3), (-5,-7,3), (-7,12,3), (-7,-5,-3)	15.596	72.11	1.447	1.4	5.29	7.59	66.12	66.55
Quartz	(12,-3,-3) Equiv. Refl.: (12,-9,3), (-3,12,3), (-3,-9,-3), (-9,12,-3), (-9,-3,3)	16.131	79.84	1.445	1.4	2.937	4.16	36.71	36.95
Quartz	(-7,11,-7) Equiv. Refl.: (-7,-4,7)	16.183	80.93	1.438	1.4	2.617	3.75	32.71	32.93
Quartz	(-4,-7,-7)	16.183	80.93	1.437	1.4	2.617	3.75	32.71	32.93
Quartz	(11,-4,-7) Equiv. Refl.: (11,-7,7), (-4,11,7)	16.183	80.93	1.436	1.4	2.617	3.75	32.71	32.93
Sapph	(0,10,8) Equiv. Refl.: (0,-10,-8), (10,0,-8), (10,-10,8), (-10,0,8), (-10,10,-8)	15.521	71.28	1.432	1.4	5.553	7.98	69.41	69.87
Quartz	(-8,10,7)	15.581	71.95	1.418	1.4	5.341	7.6	66.76	67.19
Quartz	(10,-2,7) Equiv. Refl.: (10,-8,-7), (-2,10,-7), (-2,-8,7), (-8,-2,-7)	15.581	71.95	1.417	1.4	5.341	7.6	66.76	67.19
Quartz	(5,3,-11) Equiv. Refl.: (5,-8,11), (-5,8,-11), (-5,-3,11)	16.224	81.88	1.414	1.5	2.338	3.44	29.22	29.42
Quartz	(-8,5,-11)	16.224	81.88	1.41	1.5	2.338	3.43	29.22	29.42
Quartz	(3,5,11) Equiv. Refl.: (8,-3,-11), (8,-5,11), (-8,3,11)	16.224	81.88	1.409	1.5	2.338	3.43	29.22	29.42
Quartz	(3,-8,-11) Equiv. Refl.: (-3,8,11), (-3,-5,-11)	16.224	81.88	1.408	1.5	2.338	3.43	29.22	29.42
Quartz	(7,-1,-11) Equiv. Refl.: (7,-6,11), (-6,7,-11), (-6,-1,11)	15.826	74.96	1.401	1.4	4.404	6.11	55.06	55.39
Quartz	(-1,7,11) Equiv. Refl.: (-1,-6,-11)	15.826	74.96	1.4	1.4	4.404	6.11	55.06	55.39
Sapph	(5,7,4) Equiv. Refl.: (5,-12,-4), (7,5,-4), (7,-12,4), (12,-5,-4), (12,-7,4), (-5,12,4), (-5,-7,-4), (-7,12,-4), (-7,-5,4), (-12,5,4), (-12,7,-4)	15.822	74.9	1.393	1.4	4.422	6.26	55.27	55.62
Quartz	(6,-7,11) Equiv. Refl.: (-7,1,11), (-7,6,-11)	15.826	74.96	1.373	1.4	4.404	6.11	55.06	55.39
Quartz	(1,6,11) Equiv. Refl.: (1,-7,-11), (6,1,-11)	15.826	74.96	1.372	1.4	4.404	6.11	55.06	55.39
Sapph	(6,6,0) Equiv. Refl.: (6,-12,0), (12,-6,0), (-6,12,0), (-6,-6,0), (-12,6,0)	15.634	72.56	1.364	1.4	5.149	7.09	64.37	64.75
Quartz	(1,9,7) Equiv. Refl.: (1,-10,-7), (9,1,-7), (9,-10,7)	16.051	78.36	1.349	1.4	3.375	4.6	42.18	42.43
Quartz	(-10,1,7) Equiv. Refl.: (-10,9,-7)	16.051	78.36	1.348	1.4	3.375	4.6	42.18	42.43
Quartz	(7,4,-7) Equiv. Refl.: (7,-11,7)	16.183	80.93	1.342	1.4	2.617	3.75	32.71	32.93
Quartz	(4,7,7) Equiv. Refl.: (4,-11,-7), (-11,4,7)	16.183	80.93	1.341	1.4	2.617	3.75	32.71	32.93
Quartz	(-11,7,-7)	16.183	80.93	1.34	1.4	2.617	3.75	32.71	32.93
Quartz	(-1,10,7) Equiv. Refl.: (-1,-9,-7), (-9,10,-7), (-9,-1,7)	16.051	78.36	1.33	1.4	3.375	4.6	42.18	42.43

Ei = Cryst	16.388 Ref (h,k,l)	keV EB [keV]	ΘB [°]	 IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(10,-1,-7)	16.051	78.36	1.329	1.4	3.375	4.6	42.18	42.43
	Equiv. Refl.: (10,-9,7)								
Quartz	(3,9,3)	16.131	79.84	1.327	1.4	2.937	4.17	36.71	36.95
	Equiv. Refl.: (3,-12,-3), (9,3,-3), (9,-12,3), (-12,3,3), (-12,9,-3)								
Quartz	(4,6,8)	15.67	72.97	1.326	1.3	5.019	6.57	62.74	63.08
	Equiv. Refl.: (4,-10,-8), (6,4,-8), (6,-10,8), (-10,6,-8)								
Quartz	(-10,4,8)	15.67	72.97	1.325	1.3	5.019	6.56	62.74	63.08
Sapph	(0,9,18)	16.035	78.09	1.321	1.4	3.455	4.74	43.19	43.45
	Equiv. Refl.: (0,9,-18), (0,-9,18), (0,-9,-18), (9,0,18), (9,0,-18), (9,-9,18), (9,-9,-18), (-9,0,18), (-9,0,-18), (-9,9,18), (-9,9,-18)								
Sapph	(1,10,6)	16.107	79.37	1.312	1.4	3.076	4.23	38.45	38.69
	Equiv. Refl.: (1,10,-6), (1,-11,6), (1,-11,-6), (10,1,6), (10,1,-6), (10,-11,6), (10,-11,-6), (11,-1,6), (11,-1,-6), (11,-10,6), (11,-10,-6), (-1,11,6), (-1,11,-6), (-1,-10,6), (-1,-10,-6), (-10,11,6), (-10,11,-6), (-10,-1,6), (-10,-1,-6), (-11,1,6), (-11,1,-6), (-11,10,6), (-11,10,-6)								
Sapph	(2,9,11)	16.146	80.13	1.306	1.4	2.85	3.93	35.62	35.84
	Equiv. Refl.: (2,-11,-11), (9,2,-11), (9,-11,11), (11,-2,-11), (11,-9,11), (-2,11,11), (-2,-9,-11), (-9,11,-11), (-9,-2,11), (-11,2,11), (-11,9,-11)								
Quartz	(-4,10,8)	15.67	72.97	1.297	1.3	5.019	6.57	62.74	63.08
	Equiv. Refl.: (-4,-6,-8)								
Quartz	(10,-4,-8)	15.67	72.97	1.296	1.3	5.019	6.56	62.74	63.08
	Equiv. Refl.: (10,-6,8), (-6,10,-8), (-6,-4,8)								
Quartz	(-1,6,12)	15.977	77.14	1.293	1.3	3.742	4.84	46.77	47.02
	Equiv. Refl.: (-1,-5,-12)								
Quartz	(6,-1,-12)	15.977	77.14	1.291	1.3	3.742	4.83	46.77	47.02
	Equiv. Refl.: (6,-5,12), (-5,6,-12), (-5,-1,12)								
Quartz	(-5,8,11)	16.224	81.88	1.288	1.4	2.338	3.16	29.22	29.39
	Equiv. Refl.: (-5,-3,-11)								
Quartz	(5,3,11)	16.224	81.88	1.287	1.4	2.338	3.16	29.22	29.39
	Equiv. Refl.: (5,-8,-11)								
Quartz	(8,-3,11)	16.224	81.88	1.285	1.3	2.338	3.15	29.22	29.39
	Equiv. Refl.: (8,-5,-11), (-3,8,-11)								
Quartz	(3,5,-11)	16.224	81.88	1.284	1.3	2.338	3.15	29.22	29.39
	Equiv. Refl.: (3,-8,11), (-3,-5,11), (-8,3,-11), (-8,5,11)								
Quartz	(-6,12,4)	15.821	74.89	1.265	1.2	4.425	5.51	55.32	55.59
	Equiv. Refl.: (-6,12,-4), (-6,-6,4), (-6,-6,-4)								
Quartz	(12,-6,4)	15.821	74.89	1.264	1.2	4.425	5.5	55.32	55.59
	Equiv. Refl.: (12,-6,-4)								
Quartz	(1,5,12)	15.977	77.14	1.258	1.3	3.742	4.84	46.77	47.02
	Equiv. Refl.: (1,-6,-12)								
Quartz	(5,1,-12)	15.977	77.14	1.257	1.3	3.742	4.83	46.77	47.02
	Equiv. Refl.: (5,-6,12), (-6,1,12)								
Quartz	(-6,5,-12)	15.977	77.14	1.256	1.3	3.742	4.83	46.77	47.02
Sapph	(4,4,24)	15.487	70.92	1.25	1.3	5.67	7.16	70.88	71.24
	Equiv. Refl.: (4,4,-24), (4,-8,24), (4,-8,-24), (8,-4,24), (8,-4,-24), (-4,8,24), (-4,8,-24), (-4,-4,24), (-4,-4,-24), (-8,4,24), (-8,4,-24)								
Sapph	(1,10,0)	15.85	75.28	1.246	1.3	4.306	5.5	53.82	54.1
	Equiv. Refl.: (1,-11,0), (10,1,0), (10,-11,0), (11,-1,0), (11,-10,0), (-1,11,0), (-1,-10,0), (-10,11,0), (-10,-1,0), (-11,1,0), (-11,10,0)								
Quartz	(1,10,-3)	15.731	73.72	1.239	1.2	4.785	5.93	59.81	60.1
	Equiv. Refl.: (1,-11,3)								

Ei =	16.388	keV						ΔE_g	ΔE_t
Cryst	Ref	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Quartz	(10,1,3)	15.731	73.72	1.238	1.2	4.785	5.92	59.81	60.1
	Equiv. Refl.: (10,-11,-3), (-11,1,-3), (-11,10,3)								
Quartz	(-1,11,-3)	15.731	73.72	1.232	1.2	4.785	5.93	59.81	60.1
	Equiv. Refl.: (-1,-10,3)								
Quartz	(11,-1,3)	15.731	73.72	1.231	1.2	4.785	5.93	59.81	60.1
	Equiv. Refl.: (11,-10,-3), (-10,11,3), (-10,-1,-3)								
Quartz	(6,6,-4)	15.821	74.89	1.208	1.2	4.425	5.51	55.32	55.59
	Equiv. Refl.: (6,-12,4)								
Quartz	(6,6,4)	15.821	74.89	1.207	1.2	4.425	5.51	55.32	55.59
	Equiv. Refl.: (6,-12,-4), (-12,6,4), (-12,6,-4)								
Quartz	(2,-1,14)	16.255	82.7	1.198	1.2	2.098	2.59	26.22	26.35
	Equiv. Refl.: (2,-1,-14)								
Quartz	(-1,-1,-14)	16.255	82.7	1.197	1.2	2.098	2.59	26.22	26.35
Quartz	(-1,2,14)	16.255	82.7	1.196	1.2	2.098	2.59	26.22	26.35
Quartz	(-1,2,-14)	16.255	82.7	1.194	1.2	2.098	2.59	26.22	26.35
	Equiv. Refl.: (-1,-1,14)								
Quartz	(9,2,-6)	16.31	84.4	1.182	1.3	1.606	2.09	20.07	20.18
Quartz	(2,9,6)	16.31	84.4	1.181	1.3	1.606	2.09	20.07	20.18
	Equiv. Refl.: (2,-11,-6), (9,-11,6)								
Quartz	(-11,2,6)	16.31	84.4	1.18	1.3	1.606	2.08	20.07	20.18
	Equiv. Refl.: (-11,9,-6)								
Quartz	(-9,-2,6)	16.31	84.4	1.174	1.3	1.606	2.09	20.07	20.18
Quartz	(-2,11,6)	16.31	84.4	1.173	1.3	1.606	2.09	20.07	20.18
	Equiv. Refl.: (-2,-9,-6), (-9,11,-6)								
Quartz	(11,-2,-6)	16.31	84.4	1.172	1.3	1.606	2.08	20.07	20.18
	Equiv. Refl.: (11,-9,6)								
Quartz	(12,-8,-3)	15.799	74.59	1.17	1.2	4.518	5.3	56.48	56.72
	Equiv. Refl.: (-4,12,-3), (-4,-8,3), (-8,12,3), (-8,-4,-3)								
Quartz	(12,-4,3)	15.799	74.59	1.169	1.2	4.518	5.3	56.48	56.72
Quartz	(4,8,-3)	15.799	74.59	1.153	1.2	4.518	5.3	56.48	56.72
	Equiv. Refl.: (4,-12,3), (8,4,3), (8,-12,-3), (-12,8,3)								
Quartz	(-12,4,-3)	15.799	74.59	1.152	1.2	4.518	5.3	56.48	56.72
Quartz	(8,-1,-10)	15.892	75.87	1.145	1.2	4.125	4.79	51.56	51.78
	Equiv. Refl.: (8,-7,10)								
Quartz	(-1,8,10)	15.892	75.87	1.144	1.2	4.125	4.79	51.56	51.78
	Equiv. Refl.: (-1,-7,-10), (-7,8,-10), (-7,-1,10)								
Quartz	(-8,1,10)	15.892	75.87	1.143	1.2	4.125	4.79	51.56	51.78
	Equiv. Refl.: (-8,7,-10)								
Quartz	(1,7,10)	15.892	75.87	1.142	1.2	4.125	4.79	51.56	51.78
	Equiv. Refl.: (1,-8,-10), (7,1,-10), (7,-8,10)								
Quartz	(1,10,4)	16.021	77.86	1.131	1.1	3.526	4.03	44.08	44.26
	Equiv. Refl.: (1,-11,-4), (5,-2,13), (5,-3,-13), (10,1,-4), (10,-11,4), (-11,1,4), (-11,10,-4)								
Quartz	(-2,5,-13)	16.207	81.48	1.126	1.2	2.454	2.91	30.67	30.81
	Equiv. Refl.: (-2,-3,13)								
Quartz	(-3,-2,-13)	16.207	81.48	1.125	1.2	2.454	2.91	30.67	30.81
Quartz	(-3,5,13)	16.207	81.48	1.124	1.2	2.454	2.91	30.67	30.81
Quartz	(-5,2,-13)	16.207	81.48	1.121	1.2	2.454	2.92	30.67	30.81
	Equiv. Refl.: (-5,3,13)								
Quartz	(2,3,-13)	16.207	81.48	1.116	1.2	2.454	2.91	30.67	30.81
Quartz	(2,-5,13)	16.207	81.48	1.115	1.2	2.454	2.91	30.67	30.81
	Equiv. Refl.: (3,2,13)								

Ei = Cryst	16.388 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μrad]	Width [μrad]	Ei cot Θ [meV/μrad]	Δ E [meV]	Δ Eg 2m, 50μm [meV]	Δ Et 2m, 50μm [meV]
Quartz	(3,-5,-13)	16.207	81.48	1.114	1.2	2.454	2.91	30.67	30.81
	Equiv. Refl.: (6,3,10), (6,-9,-10), (-9,3,-10)								
Quartz	(-9,6,10)	16.288	83.67	1.113	1.2	1.818	2.11	22.72	22.82
Quartz	(3,6,-10)	16.288	83.67	1.111	1.2	1.818	2.11	22.72	22.82
	Equiv. Refl.: (3,-9,10)								
Quartz	(-2,1,14)	16.255	82.7	1.11	1.2	2.098	2.59	26.22	26.35
	Equiv. Refl.: (-2,1,-14)								
Quartz	(1,1,14)	16.255	82.7	1.109	1.2	2.098	2.59	26.22	26.35
Quartz	(1,-2,-14)	16.255	82.7	1.107	1.2	2.098	2.59	26.22	26.35
Quartz	(1,1,-14)	16.255	82.7	1.106	1.2	2.098	2.59	26.22	26.35
	Equiv. Refl.: (1,-2,14)								
Quartz	(3,9,0)	15.76	74.08	1.099	1.1	4.673	5.07	58.42	58.64
	Equiv. Refl.: (3,-12,0), (9,3,0), (9,-12,0), (-12,3,0), (-12,9,0)								
Sapph	(4,8,5)	16.099	79.23	1.098	1.2	3.118	3.65	38.98	39.15
	Equiv. Refl.: (4,-12,-5), (8,4,-5), (8,-12,5), (12,-4,-5), (12,-8,5), (-4,12,5), (-4,-8,-5), (-8,12,-5), (-8,-4,5), (-12,4,5), (-12,8,-5)								
Quartz	(11,-1,-4)	16.021	77.86	1.095	1.1	3.526	4.03	44.08	44.26
	Equiv. Refl.: (11,-10,4), (-1,11,4), (-1,-10,-4), (-10,11,-4), (-10,-1,4)								
Sapph	(1,1,33)	15.965	76.95	1.093	1.1	3.799	4.35	47.48	47.68
	Equiv. Refl.: (1,1,-33), (1,-2,33), (1,-2,-33), (2,-1,33), (2,-1,-33), (-1,2,33), (-1,2,-33), (-1,-1,33), (-1,-1,-33), (-2,1,33), (-2,1,-33)								
Quartz	(5,6,7)	16.051	78.36	1.079	1.1	3.375	3.72	42.18	42.35
	Equiv. Refl.: (5,-11,-7), (6,5,-7), (6,-11,7), (-11,5,7), (-11,6,-7)								
LiNbO3	(1,11,-7)	16.339	85.55	1.071	2	1.276	2.49	15.95	16.14
	Equiv. Refl.: (1,-12,7), (11,1,7), (11,-12,-7), (12,-1,7), (12,-11,-7), (-1,12,-7), (-1,-11,7), (-11,12,7), (-11,-1,-7), (-12,1,-7), (-12,11,7)								
Quartz	(-5,11,7)	16.051	78.36	1.052	1.1	3.375	3.72	42.18	42.35
	Equiv. Refl.: (-5,-6,-7), (-6,-5,7)								
Quartz	(11,-5,-7)	16.051	78.36	1.051	1.1	3.375	3.72	42.18	42.34
	Equiv. Refl.: (11,-6,7), (-6,11,-7)								
Quartz	(12,-3,0)	15.76	74.08	1.043	1.1	4.673	5.07	58.42	58.64
	Equiv. Refl.: (12,-9,0), (-3,12,0), (-3,-9,0), (-9,12,0), (-9,-3,0)								
Sapph	(1,9,16)	16.257	82.74	1.031	1.2	2.088	2.42	26.1	26.21
	Equiv. Refl.: (1,-10,-16), (9,1,-16), (9,-10,16), (10,-1,-16), (10,-9,16), (-1,10,16), (-1,-9,-16), (-9,10,-16), (-9,-1,16), (-10,1,16), (-10,9,-16)								
Sapph	(2,7,-20)	15.581	71.94	1.027	1.1	5.343	5.64	66.79	67.02
	Equiv. Refl.: (2,-9,20), (7,2,20), (7,-9,-20), (9,-2,20), (9,-7,-20), (-2,9,-20), (-2,-7,20), (-7,9,20), (-7,-2,-20), (-9,2,-20), (-9,7,20), (0,7,-11), (0,-7,11), (7,0,11), (7,-7,-11), (-7,0,-11), (-7,7,11)								
Quartz	(10,0,6)	16.113	79.5	1.019	1.1	3.038	3.25	37.97	38.11
	Equiv. Refl.: (10,-10,-6), (-10,0,-6), (-10,10,6)								
Quartz	(0,10,-6)	16.113	79.5	1.017	1.1	3.038	3.24	37.97	38.11
	Equiv. Refl.: (0,-10,6)								
Quartz	(1,9,-6)	15.509	71.15	1.012	1	5.594	5.69	69.93	70.16
	Equiv. Refl.: (1,-10,6), (9,1,6), (9,-10,-6), (-10,1,-6), (-10,9,6)								
Quartz	(-1,-9,6)	15.509	71.15	1.007	1	5.594	5.69	69.93	70.16
Quartz	(10,-1,6)	15.509	71.15	1.006	1	5.594	5.68	69.93	70.16
	Equiv. Refl.: (10,-9,-6), (-1,10,-6), (-3,11,-6), (-9,10,6), (-9,-1,-6)								
Quartz	(11,-3,6)	15.915	76.2	1.005	1	4.027	4.14	50.33	50.5
	Equiv. Refl.: (11,-8,-6), (-3,-8,6)								

Ei =	16.388	keV					ΔEg	ΔEt	
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-8,11,6)	15.915	76.2	1.004	1	4.027	4.13	50.33	50.5
	Equiv. Refl.: (-8,-3,-6)								
Quartz	(7,-2,-11)	15.556	71.66	1.002	1	5.432	5.49	67.9	68.12
	Equiv. Refl.: (7,-5,11)								
Quartz	(-2,7,11)	15.556	71.66	1.001	1	5.432	5.48	67.9	68.12
	Equiv. Refl.: (-2,-5,-11), (-5,7,-11), (-5,-2,11)								
Quartz	(9,-3,10)	16.288	83.67	1	1.2	1.818	2.11	22.72	22.82
	Equiv. Refl.: (-6,9,10), (-6,-3,-10)								
Quartz	(9,-6,-10)	16.288	83.67	0.999	1.2	1.818	2.11	22.72	22.82
	Equiv. Refl.: (-7,2,11)								
Quartz	(2,5,11)	15.556	71.66	0.998	1	5.432	5.48	67.9	68.12
	Equiv. Refl.: (2,-7,-11), (-7,5,-11)								
Quartz	(5,2,-11)	15.556	71.66	0.997	1	5.432	5.48	67.9	68.12
	Equiv. Refl.: (5,-7,11), (-1,1,14), (-3,9,-10), (-3,-6,10)								
Quartz	(0,1,-14)	16.124	79.71	0.996	1	2.976	3.12	37.21	37.34
	Equiv. Refl.: (0,-1,14), (1,0,14), (1,-1,-14), (3,-11,6), (-1,0,-14)								
Quartz	(3,8,-6)	15.915	76.2	0.995	1	4.027	4.14	50.33	50.5
	Equiv. Refl.: (-11,3,-6), (-11,8,6)								
Quartz	(8,3,6)	15.915	76.2	0.994	1	4.027	4.13	50.33	50.5
	Equiv. Refl.: (8,-11,-6)								
Quartz	(-2,8,10)	15.555	71.65	0.981	1	5.435	5.34	67.94	68.15
	Equiv. Refl.: (-2,-6,-10)								
Quartz	(8,-2,-10)	15.555	71.65	0.98	1	5.435	5.34	67.94	68.15
	Equiv. Refl.: (8,-6,10), (-6,8,-10), (-6,-2,10)								
Quartz	(1,3,-13)	15.81	74.73	0.978	1	4.474	4.45	55.92	56.1
	Equiv. Refl.: (1,-4,13), (-4,1,-13), (-4,3,13)								
Quartz	(3,1,13)	15.81	74.73	0.976	1	4.474	4.45	55.92	56.1
	Equiv. Refl.: (3,-4,-13)								
Quartz	(4,-1,13)	15.81	74.73	0.971	1	4.474	4.45	55.92	56.1
	Equiv. Refl.: (4,-3,-13), (-1,4,-13), (-1,-3,13)								
Quartz	(-3,4,13)	15.81	74.73	0.969	1	4.474	4.45	55.92	56.1
	Equiv. Refl.: (-3,-1,-13)								
Quartz	(2,6,10)	15.555	71.65	0.964	1	5.435	5.34	67.94	68.15
	Equiv. Refl.: (2,-8,-10)								
Quartz	(6,2,-10)	15.555	71.65	0.963	1	5.435	5.34	67.94	68.15
	Equiv. Refl.: (6,-8,10), (-8,2,10), (-8,6,-10)								
Quartz	(3,-7,-11)	15.419	70.2	0.961	1	5.901	5.61	73.77	73.98
	Equiv. Refl.: (-7,3,11), (-7,4,-11)								
Quartz	(3,4,11)	15.419	70.2	0.96	1	5.901	5.61	73.77	73.98
	Equiv. Refl.: (4,3,-11), (4,-7,11)								
Quartz	(11,-9,-5)	15.86	75.42	0.941	0.9	4.264	3.93	53.3	53.44
	Equiv. Refl.: (-2,11,-5), (-2,-9,5), (-9,11,5), (-9,-2,-5)								
Quartz	(11,-2,5)	15.86	75.42	0.94	0.9	4.264	3.92	53.3	53.44
Sapph	(2,6,-25)	16.127	79.75	0.927	1	2.962	3	37.03	37.15
	Equiv. Refl.: (2,-8,25), (6,2,25), (6,-8,-25), (8,-2,25), (8,-6,-25), (-2,-8,-25), (-2,-6,25), (-6,8,25), (-6,-2,-25), (-8,2,-25), (-8,6,25)								
Quartz	(7,-3,-11)	15.419	70.2	0.925	1	5.901	5.61	73.77	73.98
	Equiv. Refl.: (7,-4,11)								
Quartz	(0,10,5)	15.658	72.83	0.924	0.9	5.062	4.76	63.28	63.46
	Equiv. Refl.: (0,-10,-5), (10,0,-5), (10,-10,5), (-3,7,11), (-3,-4,-11), (-4,7,-11), (-4,-3,11), (-10,0,5), (-10,10,-5)								

Ei = Cryst	16.388 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(6,5,6)	15.509	71.15	0.914	0.9	5.594	5.16	69.93	70.12
Equiv. Refl.: (6,-11,-6), (-11,5,-6), (-11,6,6)									
Quartz	(5,6,-6)	15.509	71.15	0.913	0.9	5.594	5.16	69.93	70.12
Equiv. Refl.: (5,-11,6)									
Quartz	(11,-5,6)	15.509	71.15	0.906	0.9	5.594	5.16	69.93	70.12
Quartz	(11,-6,-6)	15.509	71.15	0.905	0.9	5.594	5.16	69.93	70.12
Equiv. Refl.: (-5,11,-6), (-5,-6,6), (-6,11,6), (-6,-5,-6)									
Sapph	(4,8,-1)	15.928	76.4	0.901	1	3.965	3.8	49.56	49.71
Equiv. Refl.: (4,-12,1), (8,4,1), (8,-12,-1), (12,-4,1), (12,-8,-1), (-4,12,-1), (-4,-8,1), (-8,12,1), (-8,-4,-1), (-12,4,-1), (-12,8,1)									
Quartz	(0,11,-2)	16.19	81.09	0.892	1	2.57	2.48	32.12	32.21
Equiv. Refl.: (0,-11,2), (11,0,2), (11,-11,-2), (-11,0,-2), (-11,11,2)									
Quartz	(5,7,3)	15.596	72.11	0.888	0.9	5.29	4.72	66.12	66.29
Equiv. Refl.: (5,-12,-3)									
Quartz	(7,5,-3)	15.596	72.11	0.887	0.9	5.29	4.71	66.12	66.29
Equiv. Refl.: (7,-12,3), (-12,5,3), (-12,7,-3)									
Sapph	(1,5,29)	16.179	80.83	0.885	1	2.645	2.61	33.06	33.17
Equiv. Refl.: (1,-6,-29), (5,1,-29), (5,-6,29), (6,-1,-29), (6,-5,29), (-1,6,29), (-1,-5,-29), (-5,6,-29), (-5,-1,29), (-6,1,29), (-6,5,-29)									
Sapph	(1,9,-14)	15.831	75.01	0.881	0.9	4.387	4.08	54.84	54.99
Equiv. Refl.: (1,-10,14), (9,1,14), (9,-10,-14), (10,-1,14), (10,-9,-14), (-1,10,-14), (-1,-9,14), (-9,10,14), (-9,-1,-14), (-10,1,-14), (-10,9,14), (3,-1,13), (3,-2,-13), (-2,3,13), (-2,-1,-13)									
Quartz	(-1,3,-13)	15.401	70.02	0.88	0.9	5.959	5.25	74.49	74.67
Equiv. Refl.: (-1,-2,13)									
LiNbO3	(4,9,7)	16.339	85.55	0.876	1.7	1.276	2.2	15.95	16.1
Equiv. Refl.: (4,-13,-7), (9,4,-7), (9,-13,7), (13,-4,-7), (13,-9,7), (-4,13,7), (-4,-9,-7), (-9,13,-7), (-9,-4,7), (-13,4,7), (-13,9,-7)									
Quartz	(0,9,-8)	16.005	77.58	0.864	0.9	3.608	3.27	45.1	45.22
Equiv. Refl.: (0,-9,8)									
Quartz	(9,0,8)	16.005	77.58	0.863	0.9	3.608	3.26	45.1	45.22
Equiv. Refl.: (9,-9,-8), (-9,0,-8), (-9,9,8)									
Quartz	(12,-5,-3)	15.596	72.11	0.862	0.9	5.29	4.71	66.12	66.29
Equiv. Refl.: (12,-7,3), (-5,12,3), (-5,-7,-3), (-7,12,-3), (-7,-5,3)									
Quartz	(2,1,13)	15.401	70.02	0.86	0.9	5.959	5.26	74.49	74.67
Equiv. Refl.: (2,-3,-13), (-3,1,-13), (-3,2,13)									
Quartz	(1,2,-13)	15.401	70.02	0.859	0.9	5.959	5.25	74.49	74.67
Equiv. Refl.: (1,-3,13)									
Sapph	(4,5,23)	16.08	78.88	0.852	0.9	3.222	3	40.28	40.39
Equiv. Refl.: (4,-9,-23), (5,4,-23), (5,-9,23), (9,-4,-23), (9,-5,23), (-4,9,23), (-4,-5,-23), (-5,9,-23), (-5,-4,23), (-9,4,23), (-9,5,-23)									
Quartz	(2,9,-5)	15.86	75.42	0.846	0.9	4.264	3.93	53.3	53.44
Equiv. Refl.: (2,-11,5), (9,2,5), (9,-11,-5), (-11,2,-5), (-11,9,5)									
Quartz	(1,10,2)	15.521	71.28	0.84	0.9	5.554	4.73	69.43	69.59
Equiv. Refl.: (1,-11,-2), (-11,1,2), (-11,10,-2)									
Quartz	(10,1,-2)	15.521	71.28	0.839	0.9	5.554	4.73	69.43	69.59
Equiv. Refl.: (10,-11,2), (-1,9,8), (-1,-8,-8), (-8,9,-8), (-8,-1,8)									
Quartz	(9,-1,-8)	15.465	70.68	0.838	0.8	5.746	4.78	71.82	71.98
Equiv. Refl.: (9,-8,8)									
Quartz	(11,-1,-2)	15.521	71.28	0.83	0.9	5.554	4.73	69.43	69.59
Equiv. Refl.: (11,-10,2), (-1,11,2), (-1,-10,-2)									

Ei =	16.388	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(-10,11,-2)	15.521	71.28	0.829	0.9	5.554	4.73	69.43	69.59
	Equiv. Refl.: (-10,-1,2)								
Sapph	(2,9,-7)	15.629	72.5	0.818	0.9	5.167	4.44	64.59	64.74
	Equiv. Refl.: (2,-11,7), (9,2,7), (9,-11,-7), (11,-2,7), (11,-9,-7), (-2,11,-7), (-2,-9,7), (-9,11,7), (-9,-2,-7), (-11,2,-7), (-11,9,7)								
Sapph	(3,8,10)	15.567	71.78	0.812	0.9	5.394	4.58	67.42	67.58
	Equiv. Refl.: (3,-11,-10), (8,3,-10), (8,-11,10), (11,-3,-10), (11,-8,10), (-3,11,10), (-3,-8,-10), (-8,11,-10), (-8,-3,10), (-11,3,10), (-11,8,-10)								
Quartz	(12,-4,-2)	15.589	72.04	0.811	0.8	5.314	4.41	66.42	66.57
	Equiv. Refl.: (12,-8,2), (-4,12,2), (-4,-8,-2), (-8,12,-2), (-8,-4,2)								
Quartz	(4,8,2)	15.589	72.04	0.809	0.8	5.314	4.41	66.42	66.57
	Equiv. Refl.: (4,-12,-2), (8,4,-2), (8,-12,2), (-12,4,2), (-12,8,-2)								
Sapph	(1,8,-19)	15.731	73.72	0.807	0.9	4.786	4.08	59.83	59.97
	Equiv. Refl.: (1,-9,19), (8,1,19), (8,-9,-19), (9,-1,19), (9,-8,-19), (-1,9,-19), (-1,-8,19), (-8,9,19), (-8,-1,-19), (-9,1,-19), (-9,8,19)								
Quartz	(-9,11,6)	16.31	84.4	0.806	0.9	1.606	1.5	20.07	20.13
LiNbO3	(1,6,-29)	15.853	75.32	0.805	1.1	4.294	4.79	53.68	53.89
	Equiv. Refl.: (1,-7,29), (6,1,29), (6,-7,-29), (7,-1,29), (7,-6,-29), (-1,7,-29), (-1,-6,29), (-6,7,29), (-6,-1,-29), (-7,1,-29), (-7,6,29), (-2,11,-6), (-2,-9,6), (-9,-2,-6)								
Sapph	(1,8,20)	16.011	77.68	0.803	0.9	3.579	3.13	44.73	44.84
	Equiv. Refl.: (1,-9,-20), (8,1,-20), (8,-9,20), (9,-1,-20), (9,-8,20), (-1,9,20), (-1,-8,-20), (-8,9,-20), (-8,-1,20), (-9,1,20), (-9,8,-20), (11,-2,6), (11,-9,-6)								
LiNbO3	(2,7,25)	15.954	76.78	0.794	1.1	3.85	4.37	48.12	48.32
	Equiv. Refl.: (2,-9,-25), (7,2,-25), (7,-9,25), (9,-2,-25), (9,-7,25), (-2,9,25), (-2,-7,-25), (-7,9,-25), (-7,-2,25), (-9,2,25), (-9,7,-25)								
Quartz	(8,-9,8)	15.465	70.68	0.793	0.8	5.746	4.78	71.82	71.98
	Equiv. Refl.: (9,2,6), (9,-11,-6)								
Quartz	(1,8,8)	15.465	70.68	0.792	0.8	5.746	4.78	71.82	71.98
	Equiv. Refl.: (1,-9,-8), (2,9,-6), (2,-11,6), (8,1,-8), (-9,1,8), (-9,8,-8)								
Quartz	(-11,2,-6)	16.31	84.4	0.791	0.9	1.606	1.5	20.07	20.13
	Equiv. Refl.: (-11,9,6)								
Quartz	(-1,8,-10)	15.892	75.87	0.785	0.8	4.125	3.34	51.56	51.67
	Equiv. Refl.: (-1,-7,10)								
Quartz	(8,-1,10)	15.892	75.87	0.783	0.8	4.125	3.33	51.56	51.67
	Equiv. Refl.: (8,-7,-10), (-7,8,10), (-7,-1,-10)								
Quartz	(6,3,9)	15.502	71.07	0.78	0.8	5.62	4.37	70.25	70.39
	Equiv. Refl.: (6,-9,-9)								
Quartz	(3,6,-9)	15.502	71.07	0.779	0.8	5.62	4.37	70.25	70.39
	Equiv. Refl.: (3,-9,9), (-9,3,-9), (-9,6,9)								
Sapph	(2,9,-10)	15.997	77.46	0.766	0.8	3.646	3.05	45.58	45.68
	Equiv. Refl.: (2,-11,10), (9,2,10), (9,-11,-10), (11,-2,10), (11,-9,-10), (-2,11,-10), (-2,-9,10), (-9,11,10), (-9,-2,-10), (-11,2,-10), (-11,9,10)								
Sapph	(2,9,5)	15.454	70.56	0.764	0.8	5.785	4.63	72.31	72.45
	Equiv. Refl.: (2,-11,-5), (9,2,-5), (9,-11,5), (11,-2,-5), (11,-9,5), (-2,11,5), (-2,-9,-5), (-9,11,-5), (-9,-2,5), (-11,2,5), (-11,9,-5)								
Quartz	(1,7,-10)	15.892	75.87	0.761	0.8	4.125	3.34	51.56	51.67
	Equiv. Refl.: (1,-8,10)								
Quartz	(7,1,10)	15.892	75.87	0.759	0.8	4.125	3.33	51.56	51.67
	Equiv. Refl.: (7,-8,-10)								
Quartz	(-8,1,-10)	15.892	75.87	0.758	0.8	4.125	3.33	51.56	51.67
	Equiv. Refl.: (-8,7,10)								

Ei = Cryst	16.388 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(7,-2,11)	15.556	71.66	0.757	0.8	5.432	4.15	67.9	68.02
	Equiv. Refl.: (7,-5,-11)								
Quartz	(-5,-2,-11)	15.556	71.66	0.756	0.8	5.432	4.15	67.9	68.02
Quartz	(-2,7,-11)	15.556	71.66	0.755	0.8	5.432	4.15	67.9	68.02
	Equiv. Refl.: (-2,-5,11), (-5,7,11)								
LiNbO3	(2,10,-11)	16.246	82.46	0.754	1.3	2.169	2.81	27.11	27.25
	Equiv. Refl.: (2,-12,11), (10,2,11), (10,-12,-11), (12,-2,11), (12,-10,-11), (-2,12,-11), (-2,-10,11), (-10,12,11), (-10,-2,-12,2,-11), (-12,10,11)								
Quartz	(-4,12,-1)	15.462	70.65	0.746	0.7	5.756	4.25	71.95	72.08
	Equiv. Refl.: (-4,-8,1), (-8,12,1), (-8,-4,-1)								
Quartz	(12,-4,1)	15.462	70.65	0.745	0.7	5.756	4.25	71.95	72.08
	Equiv. Refl.: (12,-8,-1)								
LiNbO3	(3,6,27)	16.358	86.53	0.744	1.7	0.993	1.71	12.42	12.53
	Equiv. Refl.: (3,6,-27), (3,-9,27), (3,-9,-27), (6,3,27), (6,3,-27), (6,-9,27), (6,-9,-27), (9,-3,27), (9,-3,-27), (9,-6,27), (9,-6,-27), (-3,9,27), (-3,9,-27), (-3,-6,27), (-3,-6,-27), (-6,9,27), (-6,9,-27), (-6,-3,27), (-6,-3,-27), (-9,3,27), (-9,3,-27), (-9,6,27), (-9,6,-27)								
Quartz	(-6,9,9)	15.502	71.07	0.736	0.8	5.62	4.37	70.25	70.39
	Equiv. Refl.: (-6,-3,-9)								
Quartz	(9,-3,9)	15.502	71.07	0.735	0.8	5.62	4.37	70.25	70.39
	Equiv. Refl.: (9,-6,-9), (-3,9,-9), (-3,-6,9)								
Quartz	(2,10,1)	16.265	82.97	0.73	0.8	2.021	1.68	25.26	25.32
	Equiv. Refl.: (2,-12,-1), (10,2,-1), (10,-12,1), (-12,2,1), (-12,10,-1)								
Quartz	(0,8,9)	15.57	71.82	0.729	0.8	5.381	4.05	67.27	67.39
	Equiv. Refl.: (0,-8,9), (-7,2,-11), (-7,5,11)								
Quartz	(2,5,-11)	15.556	71.66	0.728	0.8	5.432	4.15	67.9	68.02
	Equiv. Refl.: (2,-7,11), (5,2,11), (5,-7,-11), (12,-4,2), (12,-8,-2), (-4,-8,2), (-8,12,2), (-8,-4,-2)								
Quartz	(8,0,9)	15.57	71.82	0.727	0.8	5.381	4.04	67.27	67.39
	Equiv. Refl.: (8,-8,-9), (-4,12,-2), (-8,0,-9), (-8,8,9)								
Quartz	(12,-2,-1)	16.265	82.97	0.724	0.8	2.021	1.68	25.26	25.32
	Equiv. Refl.: (12,-10,1), (-2,12,1), (-2,-10,-1)								
Quartz	(-10,12,-1)	16.265	82.97	0.723	0.8	2.021	1.68	25.26	25.32
	Equiv. Refl.: (-10,-2,1)								
Sapph	(6,6,6)	15.895	75.9	0.721	0.8	4.115	3.22	51.44	51.54
	Equiv. Refl.: (6,6,-6), (6,-12,6), (6,-12,-6), (12,-6,6), (12,-6,-6), (-6,12,6), (-6,12,-6), (-6,-6,6), (-6,-6,-6), (-12,6,6), (-12,6,-6)								
Quartz	(4,8,-2)	15.589	72.04	0.703	0.7	5.314	3.93	66.42	66.54
	Equiv. Refl.: (4,-12,2), (8,4,2), (8,-12,-2), (-12,4,-2), (-12,8,2)								
LiNbO3	(3,4,-31)	16.239	82.27	0.696	1.2	2.225	2.71	27.81	27.94
	Equiv. Refl.: (3,-7,31), (4,3,31), (4,-7,-31), (7,-3,31), (7,-4,-31), (-3,7,-31), (-3,-4,31), (-4,7,31), (-4,-3,-31), (-7,3,-31), (-7,4,31)								
Quartz	(4,0,13)	16.01	77.66	0.695	0.7	3.584	2.67	44.8	44.88
	Equiv. Refl.: (4,-4,-13), (-4,0,-13), (-4,4,13)								
Quartz	(0,4,-13)	16.01	77.66	0.694	0.7	3.584	2.67	44.8	44.88
	Equiv. Refl.: (0,-4,13)								
Quartz	(11,-2,-4)	15.482	70.86	0.691	0.7	5.687	3.9	71.09	71.2
	Equiv. Refl.: (11,-9,4), (-9,11,-4)								
Quartz	(-2,11,4)	15.482	70.86	0.69	0.7	5.687	3.9	71.09	71.2
	Equiv. Refl.: (-2,-9,-4), (-9,-2,4)								

Ei = Cryst	16.388 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Sapph	(1,4,30)	15.892	75.87	0.689	0.8	4.126	3.1	51.58	51.67
	Equiv. Refl.: (1,4,-30), (1,-5,30), (1,-5,-30), (4,1,30), (4,1,-30), (4,-5,30), (4,-5,-30), (5,-1,30), (5,-1,-30), (5,-4,30), (5,-4,-30), (-1,5,30), (-1,5,-30), (-1,-4,30), (-1,-4,-30), (-4,5,30), (-4,5,-30), (-4,-1,30), (-4,-1,-30), (-5,1,30), (-5,1,-30), (-5,4,30), (-5,4,-30), (4,8,-1), (4,-12,1), (8,4,1), (8,-12,-1), (-12,4,-1), (-12,8,1)								
Quartz	(-11,8,5)	15.453	70.56	0.665	0.7	5.786	3.93	72.32	72.43
Sapph	(5,7,7)	16.058	78.48	0.664	0.7	3.339	2.5	41.74	41.82
	Equiv. Refl.: (5,-12,-7), (7,5,-7), (7,-12,7), (12,-5,-7), (12,-7,7), (-5,12,7), (-5,-7,-7), (-7,12,-7), (-7,-5,7), (-12,5,7), (-12,7,-7), (3,8,-5), (3,9,2), (3,-11,5), (3,-12,-2), (8,3,5), (8,-11,-5), (9,3,-2), (9,-12,2), (-11,3,-5), (-12,3,2), (-12,9,-2)								
Quartz	(3,3,12)	15.709	73.45	0.663	0.7	4.871	3.37	60.88	60.98
	Equiv. Refl.: (3,-6,-12), (-6,3,12), (-6,3,-12)								
Quartz	(3,3,-12)	15.709	73.45	0.662	0.7	4.871	3.37	60.88	60.98
	Equiv. Refl.: (3,-6,12)								
Sapph	(2,5,27)	15.948	76.69	0.658	0.7	3.876	2.82	48.45	48.53
	Equiv. Refl.: (2,5,-27), (2,-7,27), (2,-7,-27), (5,2,27), (5,2,-27), (5,-7,27), (5,-7,-27), (7,-2,27), (7,-2,-27), (7,-5,27), (7,-5,-27), (-2,7,27), (-2,7,-27), (-2,-5,27), (-2,-5,-27), (-5,7,27), (-5,7,-27), (-5,-2,27), (-5,-2,-27), (-7,2,27), (-7,2,-27), (-7,5,27), (-7,5,-27), (6,-3,12), (6,-3,-12), (-3,6,12), (-3,-3,12), (-3,-3,-12)								
Quartz	(-3,6,-12)	15.709	73.45	0.657	0.7	4.871	3.37	60.88	60.98
Quartz	(10,-2,-7)	15.581	71.95	0.654	0.7	5.341	3.62	66.76	66.86
	Equiv. Refl.: (10,-8,7), (-2,10,7), (-2,-8,-7), (-8,10,-7), (-8,-2,7)								
Sapph	(2,4,28)	15.555	71.66	0.65	0.7	5.433	3.78	67.91	68.02
	Equiv. Refl.: (2,-6,-28), (4,2,-28), (4,-6,28), (6,-2,-28), (6,-4,28), (-2,6,28), (-2,-4,-28), (-4,6,-28), (-4,-2,28), (-6,2,28), (-6,4,-28), (1,-4,-13), (3,1,-13), (3,-4,13)								
Quartz	(1,3,13)	15.81	74.73	0.649	0.7	4.474	2.96	55.92	56
Quartz	(-4,1,13)	15.81	74.73	0.648	0.7	4.474	2.95	55.92	56
	Equiv. Refl.: (-4,3,-13)								
Quartz	(11,-3,5)	15.453	70.56	0.646	0.7	5.786	3.93	72.32	72.43
	Equiv. Refl.: (11,-8,-5), (-3,11,-5), (-3,-8,5), (-8,11,5), (-8,-3,-5)								
Quartz	(8,2,-7)	15.581	71.95	0.644	0.7	5.341	3.62	66.76	66.86
	Equiv. Refl.: (8,-10,7), (-10,2,7), (-10,8,-7)								
Quartz	(2,8,7)	15.581	71.95	0.643	0.7	5.341	3.61	66.76	66.86
	Equiv. Refl.: (2,-10,-7)								
LiNbO3	(1,9,19)	15.752	73.99	0.64	0.9	4.703	4.35	58.79	58.95
	Equiv. Refl.: (1,-10,-19), (9,1,-19), (9,-10,19), (10,-1,-19), (10,-9,19), (-1,10,19), (-1,-9,-19), (-9,10,-19), (-9,-1,19), (-10,1,19), (-10,9,-19)								
Quartz	(2,9,4)	15.482	70.86	0.634	0.7	5.687	3.9	71.09	71.2
	Equiv. Refl.: (9,2,-4), (9,-11,4), (-4,6,12), (-4,-2,-12), (-11,2,4), (-11,9,-4)								
Quartz	(2,-11,-4)	15.482	70.86	0.633	0.7	5.687	3.9	71.09	71.2
	Equiv. Refl.: (6,-2,12), (6,-4,-12)								
LiNbO3	(4,6,-23)	15.897	75.94	0.632	0.9	4.103	3.89	51.29	51.43
	Equiv. Refl.: (4,-10,23), (6,4,23), (6,-10,-23), (10,-4,23), (10,-6,-23), (-4,10,-23), (-4,-6,23), (-6,10,23), (-6,-4,-23), (-10,4,-23), (-10,6,23), (-2,6,-12), (-2,-4,12)								
LiNbO3	(1,10,15)	16.112	79.48	0.631	1	3.045	3.14	38.06	38.19
	Equiv. Refl.: (1,10,-15), (1,-11,15), (1,-11,-15), (10,1,15), (10,1,-15), (10,-11,15), (10,-11,-15), (11,-1,15), (11,-1,-15), (11,-10,15), (11,-10,-15), (-1,11,15), (-1,11,-15), (-1,-10,15), (-1,-10,-15), (-10,11,15), (-10,11,-15), (-10,-1,15), (-10,-1,-15), (-11,1,15), (-11,1,-15), (-11,10,15), (-11,10,-15)								
Quartz	(1,-10,-6)	15.509	71.15	0.629	0.6	5.594	3.61	69.93	70.02
Quartz	(1,9,6)	15.509	71.15	0.628	0.6	5.594	3.61	69.93	70.02
	Equiv. Refl.: (9,1,-6), (9,-10,6), (-9,12,-2), (-9,-3,2), (-10,1,6), (-10,9,-6)								

Ei =	16.388	keV							ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm	
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]	
Quartz	(12,-3,-2)	15.926	76.36	0.627	0.7	3.977	2.75	49.71	49.79	
	Equiv. Refl.: (12,-9,2), (-3,12,2), (-3,-9,-2)									
Quartz	(0,9,8)	16.005	77.58	0.609	0.7	3.608	2.39	45.1	45.17	
	Equiv. Refl.: (0,-9,-8), (9,0,-8), (9,-9,8), (-9,0,8), (-9,9,-8)									
Quartz	(-1,10,6)	15.509	71.15	0.607	0.6	5.594	3.61	69.93	70.02	
Quartz	(10,-1,-6)	15.509	71.15	0.606	0.6	5.594	3.61	69.93	70.02	
	Equiv. Refl.: (10,-9,6), (-1,-9,-6), (-9,10,-6), (-9,-1,6)									
Quartz	(-3,4,-13)	15.81	74.73	0.597	0.7	4.474	2.96	55.92	56	
	Equiv. Refl.: (-3,-1,13)									
Quartz	(-1,4,13)	15.81	74.73	0.596	0.7	4.474	2.96	55.92	56	
	Equiv. Refl.: (-1,-3,-13)									
Quartz	(4,-3,13)	15.81	74.73	0.595	0.7	4.474	2.95	55.92	56	
Quartz	(4,-1,-13)	15.81	74.73	0.594	0.7	4.474	2.95	55.92	56	
Sapph	(5,6,-13)	15.635	72.57	0.593	0.6	5.146	3.31	64.33	64.42	
	Equiv. Refl.: (5,-11,13), (6,5,13), (6,-11,-13), (11,-5,13), (11,-6,-13), (-5,11,-13), (-5,-6,13), (-6,11,13), (-6,-5,-13), (-11,5,-13), (-11,6,13)									
LiNbO3	(2,4,31)	15.694	73.27	0.583	0.9	4.927	4.22	61.59	61.73	
	Equiv. Refl.: (2,-6,-31), (4,2,-31), (4,-6,31), (6,-2,-31), (6,-4,31), (-2,6,31), (-2,-4,-31), (-4,6,-31), (-4,-2,31), (-6,2,31), (-6,4,-31)									
Quartz	(0,3,-13)	15.539	71.47	0.581	0.6	5.492	3.36	68.65	68.73	
	Equiv. Refl.: (0,-3,13)									
Quartz	(-9,3,9)	15.502	71.07	0.58	0.6	5.62	3.3	70.25	70.33	
	Equiv. Refl.: (-9,6,-9)									
Quartz	(3,6,9)	15.502	71.07	0.579	0.6	5.62	3.3	70.25	70.33	
	Equiv. Refl.: (3,-9,-9), (6,3,-9), (6,-9,9)									
Quartz	(3,0,13)	15.539	71.47	0.578	0.6	5.492	3.34	68.65	68.73	
	Equiv. Refl.: (3,-3,-13), (-3,0,-13), (-3,3,13)									
Quartz	(2,6,-10)	15.555	71.65	0.574	0.6	5.435	3.28	67.94	68.02	
	Equiv. Refl.: (2,-8,10), (6,2,10), (6,-8,-10), (8,-2,10), (8,-6,-10), (-8,2,-10), (-8,6,10)									
Quartz	(-2,8,-10)	15.555	71.65	0.573	0.6	5.435	3.29	67.94	68.02	
	Equiv. Refl.: (-2,-6,10), (-6,8,10), (-6,-2,-10)									
LiNbO3	(6,6,15)	15.931	76.44	0.571	0.9	3.952	3.53	49.4	49.53	
	Equiv. Refl.: (6,6,-15), (6,-12,15), (6,-12,-15), (12,-6,15), (12,-6,-15), (-6,12,15), (-6,12,-15), (-6,-6,15), (-6,-6,-15), (-12,6,15), (-12,6,-15)									
Quartz	(2,2,13)	15.742	73.86	0.565	0.6	4.742	2.8	59.27	59.34	
	Equiv. Refl.: (2,2,-13), (2,-4,13), (2,-4,-13)									
Quartz	(-4,2,13)	15.742	73.86	0.564	0.6	4.742	2.8	59.27	59.34	
	Equiv. Refl.: (-4,2,-13)									
Sapph	(2,6,23)	15.434	70.35	0.558	0.6	5.851	3.53	73.14	73.23	
	Equiv. Refl.: (2,-8,-23), (5,7,-5), (5,-12,5), (6,2,-23), (6,-8,23), (7,5,5), (7,-12,-5), (8,-2,-23), (8,-6,23), (12,-5,5), (12,-7,-5), (-2,8,23), (-2,-6,-23), (-5,12,-5), (-5,-7,5), (-6,8,-23), (-6,-2,23), (-7,12,5), (-7,-5,-5), (-8,2,23), (-8,6,-23), (-12,5,-5), (-12,7,5)									
Quartz	(-11,8,-6)	15.915	76.2	0.555	0.6	4.027	2.33	50.33	50.39	
Quartz	(3,8,6)	15.915	76.2	0.554	0.6	4.027	2.33	50.33	50.39	
	Equiv. Refl.: (3,-11,-6), (8,3,-6), (8,-11,6), (-11,3,6)									
Sapph	(2,8,18)	16.246	82.45	0.551	0.7	2.173	1.5	27.17	27.21	
	Equiv. Refl.: (2,8,-18), (2,-10,18), (2,-10,-18), (8,2,18), (8,2,-18), (8,-10,18), (8,-10,-18), (10,-2,18), (10,-2,-18), (10,-8,18), (10,-8,-18), (-2,10,18), (-2,10,-18), (-2,-8,18), (-2,-8,-18), (-8,10,18), (-8,10,-18), (-8,-2,18), (-8,-2,-18), (-10,2,18), (-10,2,-18), (-10,8,18), (-10,8,-18)									

Ei = Cryst	16.388 Refl (h,k,l)	keV EB [keV]	ΘB [$^\circ$]	$\int IR d\Theta$ [μrad]	Width [μrad]	Ei cot Θ [meV/ μrad]	ΔE [meV]	ΔE_g 2m, 50 μm [meV]	ΔE_t 2m, 50 μm [meV]
LiNbO3	(1,11,5)	16.191	81.11	0.55	1	2.564	2.56	32.05	32.15
Equiv. Refl.: (1,-12,-5), (11,1,-5), (11,-12,5), (12,-1,-5), (12,-11,5), (-1,12,5), (-1,-11,-5), (-11,12,-5), (-11,-1,5), (-12,1,5), (-12,11,-5)									
Quartz	(4,2,12)	15.776	74.3	0.547	0.6	4.608	2.89	57.59	57.67
Equiv. Refl.: (4,-6,-12), (-6,4,12)									
Quartz	(-6,2,-12)	15.776	74.3	0.546	0.6	4.608	2.89	57.59	57.67
Quartz	(2,4,-12)	15.776	74.3	0.545	0.6	4.608	2.88	57.59	57.67
Equiv. Refl.: (2,-6,12)									
Quartz	(-2,4,13)	15.742	73.86	0.54	0.6	4.742	2.8	59.27	59.34
Equiv. Refl.: (-2,4,-13), (-2,-2,13)									
Quartz	(4,-2,13)	15.742	73.86	0.539	0.6	4.742	2.8	59.27	59.34
Equiv. Refl.: (4,-2,-13), (-2,-2,-13)									
Quartz	(9,-3,-9)	15.502	71.07	0.535	0.6	5.62	3.3	70.25	70.33
Equiv. Refl.: (9,-6,9)									
Quartz	(-3,9,9)	15.502	71.07	0.534	0.6	5.62	3.3	70.25	70.33
Equiv. Refl.: (-3,-6,-9), (-6,9,-9), (-6,-3,9)									
Quartz	(4,0,-13)	16.01	77.66	0.533	0.6	3.584	2.12	44.8	44.85
Equiv. Refl.: (-4,0,13), (-4,4,-13), (-7,11,6), (-7,-4,-6)									
Quartz	(4,-4,13)	16.01	77.66	0.532	0.6	3.584	2.12	44.8	44.85
Equiv. Refl.: (11,-4,6), (11,-7,-6), (-4,11,-6), (-4,-7,6)									
Sapph	(4,7,15)	16.178	80.83	0.531	0.6	2.646	1.7	33.08	33.12
Equiv. Refl.: (4,7,-15), (4,-11,15), (4,-11,-15), (7,4,15), (7,4,-15), (7,-11,15), (7,-11,-15), (11,-4,15), (11,-4,-15), (11,-7,15), (11,-7,-15), (-4,11,15), (-4,11,-15), (-4,-7,15), (-4,-7,-15), (-7,11,15), (-7,11,-15), (-7,-4,15), (-7,-4,-15), (-11,4,15), (-11,4,-15), (-11,7,15), (-11,7,-15)									
Quartz	(0,4,13)	16.01	77.66	0.528	0.6	3.584	2.1	44.8	44.85
Equiv. Refl.: (0,-4,-13)									
Quartz	(1,4,13)	16.338	85.51	0.526	0.7	1.286	0.85	16.07	16.09
Equiv. Refl.: (9,1,7), (9,-10,-7), (-10,1,-7)									
Quartz	(1,9,-7)	16.051	78.36	0.525	0.6	3.375	1.91	42.18	42.22
Equiv. Refl.: (1,-5,-13), (1,-10,7), (-10,9,7)									
Quartz	(-5,4,-13)	16.338	85.51	0.524	0.7	1.286	0.84	16.07	16.09
Quartz	(4,1,-13)	16.338	85.51	0.522	0.7	1.286	0.84	16.07	16.09
Equiv. Refl.: (-5,1,13)									
Quartz	(4,-5,13)	16.338	85.51	0.521	0.7	1.286	0.84	16.07	16.09
Quartz	(7,4,6)	15.646	72.69	0.52	0.6	5.108	2.87	63.85	63.92
Equiv. Refl.: (7,-11,-6)									
Quartz	(4,7,-6)	15.646	72.69	0.519	0.6	5.108	2.87	63.85	63.92
Equiv. Refl.: (4,-11,6), (-11,4,-6), (-11,7,6)									
Quartz	(5,7,-4)	15.888	75.81	0.515	0.6	4.143	2.33	51.78	51.83
Equiv. Refl.: (5,-12,4), (7,5,4), (7,-12,-4), (-12,5,-4), (-12,7,4)									
Quartz	(12,-5,4)	15.888	75.81	0.512	0.6	4.143	2.33	51.78	51.83
Equiv. Refl.: (12,-7,-4), (-5,12,-4), (-5,-7,4), (-7,12,4), (-7,-5,-4)									
Quartz	(8,0,-9)	15.57	71.82	0.51	0.5	5.381	2.93	67.27	67.33
Equiv. Refl.: (8,-8,9), (-8,0,9), (-8,8,-9)									
Quartz	(0,8,9)	15.57	71.82	0.507	0.5	5.381	2.92	67.27	67.33
Equiv. Refl.: (0,-8,-9)									
Quartz	(11,-3,-6)	15.915	76.2	0.506	0.6	4.027	2.33	50.33	50.39
Equiv. Refl.: (11,-8,6), (-3,11,6), (-3,-8,-6), (-8,11,-6), (-8,-3,6)									
LiNbO3	(2,2,33)	15.523	71.3	0.504	0.8	5.546	4.16	69.33	69.46
Equiv. Refl.: (2,2,-33), (2,-4,33), (2,-4,-33), (4,-2,33), (4,-2,-33), (-2,4,33), (-2,4,-33), (-2,-2,33), (-2,-2,-33), (-4,2,33), (-4,2,-33)									

Ei = Cryst	16.388 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Sapph	(5,7,1)	15.714	73.51	0.499	0.6	4.852	2.71	60.64	60.71
Equiv. Refl.: (5,-12,-1), (7,5,-1), (7,-12,1), (12,-5,-1), (12,-7,1), (-5,12,1), (-5,-7,-1), (-7,12,-1), (-7,-5,1), (-12,5,1), (-12,7,-1)									
Sapph	(3,9,3)	16.336	85.42	0.493	0.7	1.313	0.94	16.41	16.44
Equiv. Refl.: (3,9,-3), (3,-12,3), (3,-12,-3), (9,3,3), (9,3,-3), (9,-12,3), (9,-12,-3), (12,-3,3), (12,-3,-3), (12,-9,3), (12,-9,-3), (-3,12,3), (-3,12,-3), (-3,-9,3), (-3,-9,-3), (-9,12,3), (-9,12,-3), (-9,-3,3), (-9,-3,-3), (-12,3,3), (-12,3,-3), (-12,9,3), (-12,9,-3)									
Quartz	(10,-1,7)	16.051	78.36	0.484	0.6	3.375	1.92	42.18	42.22
Equiv. Refl.: (-9,10,7), (-9,-1,-7)									
Quartz	(10,-9,-7)	16.051	78.36	0.483	0.6	3.375	1.91	42.18	42.22
Equiv. Refl.: (-1,10,-7)									
Quartz	(-1,-9,7)	16.051	78.36	0.482	0.6	3.375	1.91	42.18	42.22
Quartz	(12,-3,1)	15.801	74.62	0.476	0.5	4.507	2.32	56.33	56.38
Equiv. Refl.: (12,-9,-1), (-3,12,-1), (-3,-9,1), (-9,12,1), (-9,-3,-1)									
Sapph	(2,3,-31)	16.184	80.95	0.474	0.6	2.61	1.54	32.62	32.66
Equiv. Refl.: (2,-5,31), (3,2,31), (3,-5,-31), (5,-2,31), (5,-3,-31), (-2,5,-31), (-2,-3,31), (-3,5,31), (-3,-2,-31), (-5,2,-31), (-5,3,31), (0,11,-1), (0,-11,1), (11,0,1), (11,-11,-1), (-11,0,-1), (-11,11,1)									
Quartz	(10,-5,8)	15.602	72.18	0.472	0.5	5.268	2.68	65.85	65.91
Equiv. Refl.: (10,-5,-8), (-5,10,8), (-5,-5,-8)									
Quartz	(4,8,1)	15.462	70.65	0.471	0.5	5.756	2.88	71.95	72.01
Equiv. Refl.: (4,-12,-1), (5,5,8), (5,-10,-8), (8,4,-1), (8,-12,1), (-10,5,8), (-10,5,-8), (-12,4,1), (-12,8,-1)									
Quartz	(-5,10,-8)	15.602	72.18	0.47	0.5	5.268	2.67	65.85	65.91
Equiv. Refl.: (-5,-5,8)									
Quartz	(5,5,-8)	15.602	72.18	0.469	0.5	5.268	2.67	65.85	65.91
Equiv. Refl.: (5,-10,8)									
Quartz	(12,-4,-1)	15.462	70.65	0.463	0.5	5.756	2.88	71.95	72.01
Equiv. Refl.: (12,-8,1), (-4,12,1), (-4,-8,-1), (-8,12,-1), (-8,-4,1)									
Sapph	(2,4,-29)	15.967	76.99	0.462	0.5	3.786	2.05	47.33	47.37
Equiv. Refl.: (2,-6,29), (4,2,29), (4,-6,-29), (6,-2,29), (6,-4,-29), (-2,6,-29), (-2,-4,29), (-4,6,29), (-4,-2,-29), (-6,2,-29), (-6,4,29), (3,9,-1), (3,-12,1), (9,3,1), (9,-12,-1), (-12,3,-1), (-12,9,1)									
Quartz	(1,10,-2)	15.521	71.28	0.461	0.5	5.554	2.56	69.43	69.48
Equiv. Refl.: (1,-11,2), (10,1,2), (10,-11,-2), (-11,1,-2), (-11,10,2)									
Quartz	(-3,-7,-8)	15.871	75.58	0.451	0.5	4.215	2.06	52.69	52.73
Equiv. Refl.: (-7,10,-8), (-7,-3,8)									
LiNbO3	(4,9,-5)	16.191	81.11	0.45	0.9	2.564	2.26	32.05	32.13
Equiv. Refl.: (4,-13,5), (9,4,5), (9,-13,-5), (13,-4,5), (13,-9,-5), (-4,13,-5), (-4,-9,5), (-9,13,5), (-9,-4,-5), (-13,4,-5), (-13,9,5), (10,-3,-8), (10,-7,8), (-3,10,8), (-5,11,6), (-5,-6,-6)									
Quartz	(11,-5,-6)	15.509	71.15	0.449	0.5	5.594	2.67	69.93	69.98
Equiv. Refl.: (11,-6,6), (-6,11,-6), (-6,-5,6)									
Quartz	(12,-6,3)	15.528	71.35	0.447	0.5	5.531	2.66	69.14	69.19
Equiv. Refl.: (12,-6,-3), (-6,12,3), (-6,12,-3), (-6,-6,3), (-6,-6,-3)									
Quartz	(6,6,3)	15.528	71.35	0.443	0.5	5.531	2.66	69.14	69.19
Equiv. Refl.: (6,6,-3), (6,-12,3), (6,-12,-3), (-12,6,3), (-12,6,-3)									
Quartz	(1,6,-11)	15.826	74.96	0.44	0.5	4.404	2.07	55.06	55.09
Equiv. Refl.: (1,-7,11), (-1,5,13), (-1,-4,-13)									
Quartz	(5,-4,13)	16.338	85.51	0.439	0.7	1.286	0.84	16.07	16.09
Equiv. Refl.: (-7,1,-11), (-7,6,11)									
Quartz	(1,10,3)	15.731	73.72	0.438	0.5	4.785	2.27	59.81	59.85
Equiv. Refl.: (1,-11,-3), (10,1,-3), (10,-11,3), (-11,1,3), (-11,10,-3)									
Quartz	(5,-1,-13)	16.338	85.51	0.437	0.7	1.286	0.84	16.07	16.09
Equiv. Refl.: (6,1,11), (6,-7,-11)									

Ei =	16.388	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-4,5,-13)	16.338	85.51	0.436	0.7	1.286	0.84	16.07	16.09
	Equiv. Refl.: (-4,-1,13)								
Quartz	(5,6,6)	15.509	71.15	0.434	0.5	5.594	2.67	69.93	69.98
	Equiv. Refl.: (5,-11,-6)								
Quartz	(6,5,-6)	15.509	71.15	0.433	0.5	5.594	2.67	69.93	69.98
	Equiv. Refl.: (6,-11,6), (-11,5,6), (-11,6,-6)								
Sapph	(1,5,-28)	15.772	74.24	0.43	0.5	4.624	2.29	57.8	57.84
	Equiv. Refl.: (1,-6,28), (5,1,28), (5,-6,-28), (6,-1,28), (6,-5,-28), (-1,6,-28), (-1,-5,28), (-5,6,28), (-5,-1,-28), (-6,1,-28), (-6,5,28)								
Quartz	(3,7,8)	15.871	75.58	0.428	0.5	4.215	2.06	52.69	52.73
	Equiv. Refl.: (3,-10,-8), (7,3,-8), (7,-10,8), (-10,3,8)								
Quartz	(-10,7,-8)	15.871	75.58	0.427	0.5	4.215	2.06	52.69	52.73
LiNbO3	(1,11,-1)	16.042	78.21	0.426	0.8	3.421	2.63	42.77	42.85
	Equiv. Refl.: (1,-12,1), (11,1,1), (11,-12,-1), (12,-1,1), (12,-11,-1), (-1,12,-1), (-1,-11,1), (-11,12,1), (-11,-1,-1), (-12,1,-1), (-12,11,1)								
Quartz	(9,-2,9)	15.773	74.26	0.425	0.5	4.62	2.11	57.75	57.78
	Equiv. Refl.: (9,-7,-9), (-7,-2,-9)								
Quartz	(-2,9,-9)	15.773	74.26	0.424	0.5	4.62	2.11	57.75	57.78
	Equiv. Refl.: (-2,-7,9), (-7,9,9)								
LiNbO3	(1,4,33)	16.074	78.76	0.423	0.8	3.256	2.53	40.7	40.78
	Equiv. Refl.: (1,4,-33), (1,-5,33), (1,-5,-33), (4,1,33), (4,1,-33), (4,-5,33), (4,-5,-33), (5,-1,33), (5,-1,-33), (5,-4,33), (5,-4,-33), (-1,5,33), (-1,5,-33), (-1,-4,33), (-1,-4,-33), (-4,5,33), (-4,5,-33), (-4,-1,33), (-4,-1,-33), (-5,1,33), (-5,1,-33), (-5,4,33), (-5,4,-33), (11,-1,-3), (11,-10,3), (-1,11,3), (-1,-10,-3)								
Sapph	(6,6,9)	16.214	81.64	0.422	0.5	2.409	1.32	30.11	30.14
	Equiv. Refl.: (6,6,-9), (6,-12,9), (6,-12,-9), (12,-6,9), (12,-6,-9), (-6,12,9), (-6,12,-9), (-6,-6,9), (-6,-6,-9), (-12,6,9), (-12,6,-9), (-10,11,-3), (-10,-1,3)								
Quartz	(0,10,6)	16.113	79.5	0.418	0.5	3.038	1.5	37.97	38
	Equiv. Refl.: (0,-10,-6)								
Quartz	(10,0,-6)	16.113	79.5	0.416	0.5	3.038	1.49	37.97	38
	Equiv. Refl.: (10,-10,6), (-10,0,6), (-10,10,-6)								
Quartz	(0,2,-14)	16.321	84.8	0.414	0.6	1.492	0.85	18.65	18.67
	Equiv. Refl.: (0,-2,14)								
Quartz	(11,-1,4)	16.021	77.86	0.408	0.4	3.526	1.57	44.08	44.11
	Equiv. Refl.: (11,-10,-4), (-1,11,-4), (-1,-10,4), (-10,11,4), (-10,-1,-4)								
Quartz	(-7,12,5)	16.257	82.74	0.407	0.5	2.088	1.05	26.1	26.12
	Equiv. Refl.: (-7,-5,-5)								
Quartz	(-5,12,-5)	16.257	82.74	0.406	0.5	2.088	1.05	26.1	26.12
Quartz	(2,0,14)	16.321	84.8	0.405	0.6	1.492	0.83	18.65	18.67
	Equiv. Refl.: (12,-5,5), (12,-7,-5), (-2,0,-14), (-5,-7,5)								
Quartz	(2,-2,-14)	16.321	84.8	0.404	0.6	1.492	0.83	18.65	18.67
	Equiv. Refl.: (-1,7,-11), (-1,-6,11), (-2,2,14)								
Quartz	(7,-1,11)	15.826	74.96	0.403	0.5	4.404	2.07	55.06	55.09
	Equiv. Refl.: (7,-6,-11), (-12,5,5), (-12,7,-5)								
Quartz	(5,7,5)	16.257	82.74	0.402	0.5	2.088	1.04	26.1	26.12
	Equiv. Refl.: (5,-12,-5)								
Quartz	(7,5,-5)	16.257	82.74	0.401	0.5	2.088	1.03	26.1	26.12
	Equiv. Refl.: (7,-12,5), (-6,7,11), (-6,-1,-11)								

Ei =	16.388	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	\int IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(2,10,7)	15.797	74.57	0.399	0.7	4.524	3.05	56.55	56.64
	Equiv. Refl.: (2,-12,-7), (6,7,-7), (6,-13,7), (7,6,7), (7,-13,-7), (10,2,-7), (10,-12,7), (12,-2,-7), (12,-10,7), (13,-6,7), (13,-7,-7), (-2,12,7), (-2,-10,-7), (-6,13,-7), (-6,-7,7), (-7,13,7), (-7,-6,-7), (-10,12,-7), (-10,-2,7), (-12,2,7), (-12,10,-7), (-13,6,-7), (-13,7,7)								
Quartz	(7,2,9)	15.773	74.26	0.396	0.5	4.62	2.11	57.75	57.78
	Equiv. Refl.: (-9,2,-9), (-9,7,9)								
Quartz	(2,7,-9)	15.773	74.26	0.395	0.5	4.62	2.11	57.75	57.78
	Equiv. Refl.: (2,-9,9), (7,-9,-9)								
Quartz	(10,-4,8)	15.67	72.97	0.394	0.4	5.019	2.13	62.74	62.78
	Equiv. Refl.: (10,-6,-8), (-6,-4,-8)								
Quartz	(-4,10,-8)	15.67	72.97	0.393	0.4	5.019	2.13	62.74	62.78
	Equiv. Refl.: (-4,-6,8), (-6,10,8)								
Quartz	(0,11,0)	16.027	77.95	0.391	0.5	3.499	1.59	43.73	43.76
	Equiv. Refl.: (0,-11,0), (11,0,0), (11,-11,0), (-11,0,0), (-11,11,0)								
Quartz	(3,8,5)	15.453	70.56	0.389	0.4	5.786	2.35	72.32	72.36
	Equiv. Refl.: (3,-11,-5), (8,3,-5), (8,-11,5), (11,-1,2), (11,-10,-2), (-10,11,2), (-10,-1,-2), (-11,3,5), (-11,8,-5)								
Quartz	(-1,11,-2)	15.521	71.28	0.388	0.5	5.554	2.56	69.43	69.48
	Equiv. Refl.: (-1,-10,2)								
Quartz	(-2,6,12)	15.776	74.3	0.385	0.4	4.608	1.99	57.59	57.63
	Equiv. Refl.: (-2,-4,-12)								
Quartz	(0,10,-5)	15.658	72.83	0.384	0.4	5.062	2.16	63.28	63.32
	Equiv. Refl.: (0,-10,5), (6,-4,12), (10,0,5), (10,-10,-5), (-4,6,-12), (-10,0,-5), (-10,10,5)								
Quartz	(2,4,12)	15.776	74.3	0.383	0.4	4.608	1.99	57.59	57.63
	Equiv. Refl.: (2,-6,-12), (6,-2,-12), (-4,-2,12)								
Quartz	(4,2,-12)	15.776	74.3	0.382	0.4	4.608	1.98	57.59	57.63
	Equiv. Refl.: (4,-6,12), (-6,2,12), (-6,4,-12)								
Quartz	(7,5,5)	16.257	82.74	0.378	0.5	2.088	1.05	26.1	26.12
	Equiv. Refl.: (7,-12,-5)								
Quartz	(5,7,-5)	16.257	82.74	0.376	0.5	2.088	1.05	26.1	26.12
	Equiv. Refl.: (5,-12,5), (-12,5,-5), (-12,7,5)								
Sapph	(3,8,13)	16.064	78.58	0.371	0.5	3.31	1.54	41.38	41.41
	Equiv. Refl.: (3,-11,-13), (8,3,-13), (8,-11,13), (11,-3,-13), (11,-8,13), (-3,11,13), (-3,-8,-13), (-8,11,-13), (-8,-3,13), (-11,3,13), (-11,8,-13), (12,-5,-5), (12,-7,5)								
Quartz	(-5,12,5)	16.257	82.74	0.37	0.5	2.088	1.04	26.1	26.12
	Equiv. Refl.: (-5,-7,-5), (-7,-5,5)								
Quartz	(4,6,-8)	15.67	72.97	0.369	0.4	5.019	2.13	62.74	62.78
	Equiv. Refl.: (4,-10,8), (6,4,8), (6,-10,-8), (-7,12,-5), (-10,4,-8), (-10,6,8)								
LiNbO3	(2,10,-5)	15.644	72.67	0.365	0.6	5.112	3.14	63.91	63.98
	Equiv. Refl.: (2,-12,5), (10,2,5), (10,-12,-5), (12,-2,5), (12,-10,-5), (-2,12,-5), (-2,-10,5), (-10,12,5), (-10,-2,-5), (-12,2,-5), (-12,10,5)								
LiNbO3	(2,9,17)	16.029	77.99	0.364	0.7	3.487	2.41	43.58	43.65
	Equiv. Refl.: (2,-11,-17), (9,2,-17), (9,-11,17), (11,-2,-17), (11,-9,17), (-2,11,17), (-2,-9,-17), (-9,11,-17), (-9,-2,17), (-11,2,17), (-11,9,-17)								
Quartz	(2,-11,-5)	15.86	75.42	0.359	0.4	4.264	1.66	53.3	53.32
	Equiv. Refl.: (-11,2,5), (-11,9,-5)								
Quartz	(2,9,5)	15.86	75.42	0.358	0.4	4.264	1.66	53.3	53.32
	Equiv. Refl.: (9,2,-5), (9,-11,5)								
Quartz	(1,10,-4)	16.021	77.86	0.353	0.4	3.526	1.57	44.08	44.11
	Equiv. Refl.: (1,-11,4), (10,1,4), (10,-11,-4), (-11,1,-4), (-11,10,4)								
Sapph	(3,5,25)	15.915	76.2	0.352	0.4	4.026	1.73	50.33	50.36
	Equiv. Refl.: (3,-8,-25), (5,3,-25), (5,-8,25), (8,-3,-25), (8,-5,25), (-3,8,25), (-3,-5,-25), (-5,8,-25), (-5,-3,25), (-8,3,25), (-8,5,-25)								

Ei = Cryst	16.388 Ref (h,k,l)	keV EB [keV]	Θ B [$^{\circ}$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
LiNbO3	(6,7,5)	15.829	74.99	0.35	0.6	4.395	2.75	54.94	55
Equiv. Refl.: (6,-13,-5), (7,6,-5), (7,-13,5), (13,-6,-5), (13,-7,5), (-6,13,5), (-6,-7,-5), (-7,13,-5), (-7,-6,5), (-13,6,5), (-13,7,-5)									
LiNbO3	(4,9,1)	16.042	78.21	0.349	0.7	3.421	2.32	42.77	42.83
Equiv. Refl.: (4,-13,-1), (9,4,-1), (9,-13,1), (13,-4,-1), (13,-9,1), (-4,13,1), (-4,-9,-1), (-9,13,-1), (-9,-4,1), (-13,4,1), (-13,9,-1)									
Quartz	(11,-8,5)	15.453	70.56	0.347	0.4	5.786	2.34	72.32	72.36
Equiv. Refl.: (-3,11,5), (-3,-8,-5), (-8,11,-5), (-8,-3,5)									
Quartz	(11,-3,-5)	15.453	70.56	0.346	0.4	5.786	2.34	72.32	72.36
Quartz	(3,9,1)	15.801	74.62	0.344	0.4	4.507	1.74	56.33	56.36
Equiv. Refl.: (3,-12,-1), (9,3,-1), (9,-12,1), (-12,3,1), (-12,9,-1)									
LiNbO3	(2,10,1)	15.49	70.95	0.341	0.6	5.66	3.24	70.75	70.82
Equiv. Refl.: (2,-12,-1), (10,2,-1), (10,-12,1), (12,-2,-1), (12,-10,1), (-2,12,1), (-2,-10,-1), (-10,12,-1), (-10,-2,1), (-12,2,1), (-12,10,-1)									
Quartz	(4,-12,-4)	16.087	79.01	0.329	0.4	3.183	1.17	39.78	39.8
Sapph	(1,6,-26)	15.853	75.32	0.328	0.4	4.293	1.72	53.66	53.69
Equiv. Refl.: (1,-7,26), (6,1,26), (6,-7,-26), (7,-1,26), (7,-6,-26), (-1,7,-26), (-1,-6,26), (-6,7,26), (-6,-1,-26), (-7,1,-26), (-7,6,26), (4,8,4), (8,4,-4), (8,-12,4), (12,-3,-1), (12,-9,1), (-3,12,1), (-3,-9,-1), (-9,12,-1), (-9,-3,1), (-12,4,4), (-12,8,-4)									
LiNbO3	(3,7,23)	16.079	78.85	0.327	0.7	3.23	2.14	40.37	40.43
Equiv. Refl.: (3,-10,-23), (7,3,-23), (7,-10,23), (10,-3,-23), (10,-7,23), (-3,10,23), (-3,-7,-23), (-7,10,-23), (-7,-3,23), (-10,3,23), (-10,7,-23)									
Quartz	(4,7,6)	15.646	72.69	0.325	0.4	5.108	1.81	63.85	63.88
Equiv. Refl.: (4,-11,-6), (7,4,-6), (7,-11,6), (-11,4,6), (-11,7,-6)									
Quartz	(0,11,2)	16.19	81.09	0.324	0.4	2.57	1.06	32.12	32.14
Equiv. Refl.: (0,-11,-2), (11,0,-2), (11,-11,2), (-11,0,2), (-11,11,-2)									
LiNbO3	(3,4,29)	15.483	70.87	0.322	0.6	5.686	3.13	71.07	71.14
Equiv. Refl.: (3,-7,-29), (4,3,-29), (4,-7,29), (7,-3,-29), (7,-4,29), (-3,7,29), (-3,-4,-29), (-4,7,-29), (-4,-3,29), (-7,3,29), (-7,4,-29)									
Quartz	(-2,10,-8)	16.202	81.37	0.321	0.4	2.488	0.96	31.1	31.11
Equiv. Refl.: (-8,10,8), (-8,-2,-8)									
Quartz	(-2,-8,8)	16.202	81.37	0.32	0.4	2.488	0.95	31.1	31.11
LiNbO3	(6,7,-1)	15.676	73.05	0.319	0.6	4.994	2.83	62.42	62.48
Equiv. Refl.: (6,-13,1), (7,6,1), (7,-13,-1), (13,-6,1), (13,-7,-1), (-6,13,-1), (-6,-7,1), (-7,13,1), (-7,-6,-1), (-13,6,-1), (-13,7,1), (10,-2,8), (10,-8,-8)									
LiNbO3	(1,2,35)	16.078	78.83	0.318	0.7	3.235	2.11	40.44	40.49
Equiv. Refl.: (1,-3,-35), (2,1,-35), (2,-3,35), (3,-1,-35), (3,-2,35), (-1,3,35), (-1,-2,-35), (-2,3,-35), (-2,-1,35), (-3,1,35), (-3,2,-35)									
Sapph	(0,8,22)	15.972	77.06	0.315	0.4	3.764	1.5	47.05	47.07
Equiv. Refl.: (0,-8,-22), (8,0,-22), (8,-8,22), (-8,0,22), (-8,8,-22), (11,-2,-5), (11,-9,5), (-2,11,5), (-2,-9,-5), (-9,11,-5), (-9,-2,5)									
Quartz	(-4,11,6)	15.646	72.69	0.294	0.4	5.108	1.81	63.85	63.88
Equiv. Refl.: (-4,-7,-6), (-7,-4,6)									
Quartz	(11,-4,-6)	15.646	72.69	0.293	0.4	5.108	1.81	63.85	63.88
Equiv. Refl.: (11,-7,6), (-7,11,-6)									
LiNbO3	(4,5,-25)	15.586	72	0.292	0.5	5.325	2.8	66.56	66.62
Equiv. Refl.: (4,-9,25), (5,4,25), (5,-9,-25), (9,-4,25), (9,-5,-25), (-4,9,-25), (-4,-5,25), (-5,9,25), (-5,-4,-25), (-9,4,-25), (-9,5,25)									
Quartz	(3,7,-8)	15.871	75.58	0.288	0.3	4.215	1.44	52.69	52.71
Quartz	(3,-10,8)	15.871	75.58	0.287	0.3	4.215	1.44	52.69	52.71
Equiv. Refl.: (7,3,8), (7,-10,-8), (-10,3,-8), (-10,7,8)									

Ei = Cryst	16.388 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(-3,10,-8) Equiv. Refl.: (-3,-7,8)	15.871	75.58	0.284	0.3	4.215	1.44	52.69	52.71
Quartz	(10,-3,8) Equiv. Refl.: (10,-7,-8), (-7,10,8), (-7,-3,-8)	15.871	75.58	0.283	0.3	4.215	1.44	52.69	52.71
LiNbO3	(1,5,-31) Equiv. Refl.: (1,-6,31), (5,1,31), (5,-6,-31), (6,-1,31), (6,-5,-31), (-1,6,-31), (-1,-5,31), (-5,6,31), (-5,-1,-31), (-6,1,-31), (-6,5,31)	15.878	75.67	0.282	0.6	4.188	2.32	52.35	52.4
Sapph	(3,8,-11) Equiv. Refl.: (3,-11,11), (8,3,11), (8,-11,-11), (11,-3,11), (11,-8,-11), (-3,11,-11), (-3,-8,11), (-8,11,11), (-8,-3,-11), (-11,3,-11), (-11,8,11)	15.72	73.58	0.279	0.3	4.83	1.67	60.37	60.4
LiNbO3	(3,9,9) Equiv. Refl.: (3,9,-9), (3,-12,9), (3,-12,-9), (9,3,9), (9,3,-9), (9,-12,9), (9,-12,-9), (12,-3,9), (12,-3,-9), (12,-9,9), (12,-9,-9), (-3,12,9), (-3,12,-9), (-3,-9,9), (-3,-9,-9), (-9,12,9), (-9,12,-9), (-9,-3,9), (-9,-3,-9), (-12,3,9), (-12,3,-9), (-12,9,9), (-12,9,-9), (0,2,-32), (0,-2,32), (2,0,32), (2,-2,-32), (-2,0,-32), (-2,2,32)	15.57	71.82	0.266	0.5	5.383	2.66	67.29	67.34
Quartz	(8,2,8) Equiv. Refl.: (8,-10,-8)	16.202	81.37	0.264	0.4	2.488	0.96	31.1	31.11
Quartz	(2,8,-8) Equiv. Refl.: (2,-10,8)	16.202	81.37	0.263	0.4	2.488	0.95	31.1	31.11
Quartz	(12,-4,-4) Equiv. Refl.: (12,-8,4), (-4,12,4), (-4,-8,-4), (-8,12,-4), (-8,-4,4), (-10,2,-8), (-10,8,8)	16.087	79.01	0.262	0.4	3.183	1.17	39.78	39.8
Quartz	(12,-5,-4) Equiv. Refl.: (12,-7,4)	15.888	75.81	0.261	0.3	4.143	1.28	51.78	51.8
Quartz	(-5,12,4) Equiv. Refl.: (-5,-7,-4), (-7,12,-4), (-7,-5,4)	15.888	75.81	0.26	0.3	4.143	1.28	51.78	51.8
Quartz	(4,8,3) Equiv. Refl.: (4,-12,-3), (8,4,-3), (8,-12,3), (-12,4,3), (-12,8,-3)	15.799	74.59	0.25	0.3	4.518	1.3	56.48	56.49
Quartz	(0,7,11) Equiv. Refl.: (0,-7,-11)	16.224	81.88	0.247	0.3	2.338	0.81	29.22	29.23
Quartz	(5,7,4) Equiv. Refl.: (5,-12,-4), (7,0,-11), (7,5,-4), (7,-7,11), (7,-12,4), (-7,0,11), (-7,7,-11), (-12,5,4), (-12,7,-4)	15.888	75.81	0.243	0.3	4.143	1.28	51.78	51.8
Sapph	(0,7,26) Equiv. Refl.: (0,-7,-26), (7,0,-26), (7,-7,26), (-7,0,26), (-7,7,-26)	16.276	83.29	0.24	0.4	1.928	0.74	24.11	24.12
Sapph	(6,6,3) Equiv. Refl.: (6,6,-3), (6,-12,3), (6,-12,-3), (12,-6,3), (12,-6,-3), (-6,12,3), (-6,12,-3), (-6,-6,3), (-6,-6,-3), (-12,6,3), (-12,6,-3)	15.7	73.34	0.238	0.3	4.905	1.49	61.31	61.33
Quartz	(8,1,8) Equiv. Refl.: (8,-9,-8), (-9,1,-8), (-9,8,8)	15.465	70.68	0.237	0.3	5.746	1.51	71.82	71.84
Quartz	(1,8,-8) Equiv. Refl.: (1,-9,8)	15.465	70.68	0.236	0.3	5.746	1.51	71.82	71.84
Sapph	(4,5,-22) Equiv. Refl.: (4,-9,22), (5,4,22), (5,-9,-22), (9,-4,22), (9,-5,-22), (-4,9,-22), (-4,-5,22), (-5,9,22), (-5,-4,-22), (-9,4,-22), (-9,5,22)	15.758	74.06	0.222	0.3	4.68	1.36	58.5	58.51
Quartz	(12,-8,3) Equiv. Refl.: (-4,12,3), (-4,-8,-3), (-8,12,-3), (-8,-4,3)	15.799	74.59	0.221	0.3	4.518	1.3	56.48	56.49
Quartz	(12,-4,-3)	15.799	74.59	0.22	0.3	4.518	1.3	56.48	56.49
LiNbO3	(5,6,-19) Equiv. Refl.: (5,-11,19), (6,5,19), (6,-11,-19), (11,-5,19), (11,-6,-19), (-5,11,-19), (-5,-6,19), (-6,11,19), (-6,-5,-19), (-11,5,-19), (-11,6,19)	15.752	73.99	0.214	0.5	4.703	2.12	58.79	58.82

Ei =	16.388	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(9,-1,8)	15.465	70.68	0.204	0.3	5.746	1.51	71.82	71.84
	Equiv. Refl.: (9,-8,-8), (-8,9,8), (-8,-1,-8)								
Quartz	(-1,9,-8)	15.465	70.68	0.203	0.3	5.746	1.51	71.82	71.84
	Equiv. Refl.: (-1,-8,8)								
Sapph	(5,7,-8)	16.164	80.52	0.2	0.3	2.737	0.84	34.22	34.23
	Equiv. Refl.: (5,-12,8), (7,5,8), (7,-12,-8), (12,-5,8), (12,-7,-8), (-5,12,-8), (-5,-7,8), (-7,12,8), (-7,-5,-8) (-12,5,-8), (-12,7,8), (2,9,-4), (2,-11,4), (5,0,12), (5,-5,-12), (9,2,4), (9,-11,-4), (-5,0,-12) (-5,5,12), (-11,2,-4), (-11,9,4)								
LiNbO3	(5,7,13)	15.638	72.6	0.199	0.4	5.137	2.15	64.21	64.24
	Equiv. Refl.: (5,-12,-13), (7,5,-13), (7,-12,13), (12,-5,-13), (12,-7,13), (-5,12,13), (-5,-7,-13), (-7,12,-13), (-7,-5,13) (-12,5,13), (-12,7,-13)								
LiNbO3	(5,8,9)	16.298	83.98	0.198	0.6	1.728	1.12	21.6	21.63
	Equiv. Refl.: (5,8,-9), (5,-13,9), (5,-13,-9), (8,5,9), (8,5,-9), (8,-13,9), (8,-13,-9), (13,-5,9), (13,-5,-9) (13,-8,9), (13,-8,-9), (-5,13,9), (-5,13,-9), (-5,-8,9), (-5,-8,-9), (-8,13,9), (-8,13,-9), (-8,-5,9) (-8,-5,-9), (-13,5,9), (-13,5,-9), (-13,8,9), (-13,8,-9), (0,5,-12), (0,-5,12)								
Sapph	(2,8,15)	15.536	71.45	0.191	0.3	5.501	1.38	68.76	68.77
	Equiv. Refl.: (2,8,-15), (2,-10,15), (2,-10,-15), (8,2,15), (8,2,-15), (8,-10,15), (8,-10,-15), (10,-2,15), (10,-2,-15) (10,-8,15), (10,-8,-15), (-2,10,15), (-2,10,-15), (-2,-8,15), (-2,-8,-15), (-8,10,15), (-8,10,-15), (-8,-2,15) (-8,-2,-15), (-10,2,15), (-10,2,-15), (-10,8,15), (-10,8,-15)								
Quartz	(-2,9,9)	15.773	74.26	0.19	0.2	4.62	1.11	57.75	57.76
	Equiv. Refl.: (-2,-7,-9)								
Quartz	(9,-2,-9)	15.773	74.26	0.189	0.2	4.62	1.11	57.75	57.76
	Equiv. Refl.: (9,-7,9)								
Quartz	(-7,9,-9)	15.773	74.26	0.188	0.2	4.62	1.1	57.75	57.76
	Equiv. Refl.: (-7,-2,9)								
Quartz	(-9,11,4)	15.482	70.86	0.187	0.2	5.687	1.35	71.09	71.1
	Equiv. Refl.: (-9,-2,-4)								
Quartz	(11,-2,4)	15.482	70.86	0.186	0.2	5.687	1.35	71.09	71.1
	Equiv. Refl.: (11,-9,-4), (-2,11,-4), (-2,-9,4)								
Quartz	(2,7,9)	15.773	74.26	0.185	0.2	4.62	1.11	57.75	57.76
	Equiv. Refl.: (2,-9,-9), (-9,2,9)								
Quartz	(7,2,-9)	15.773	74.26	0.184	0.2	4.62	1.1	57.75	57.76
	Equiv. Refl.: (7,-9,9), (-9,7,-9)								
Sapph	(1,2,32)	15.783	74.39	0.183	0.3	4.579	1.16	57.24	57.25
	Equiv. Refl.: (1,-3,-32), (2,1,-32), (2,-3,32), (3,-1,-32), (3,-2,32), (-1,3,32), (-1,-2,-32), (-2,3,-32), (-2,-1,32) (-3,1,32), (-3,2,-32)								
Quartz	(0,-3,-13)	15.539	71.47	0.181	0.2	5.492	1.24	68.65	68.66
Sapph	(5,5,18)	15.606	72.23	0.18	0.2	5.252	1.27	65.65	65.66
	Equiv. Refl.: (5,5,-18), (5,-10,18), (5,-10,-18), (10,-5,18), (10,-5,-18), (-5,10,18), (-5,10,-18), (-5,-5,18), (-5,-5,-18) (-10,5,18), (-10,5,-18), (0,3,13), (3,0,-13), (3,-3,13), (-3,0,13), (-3,3,-13)								
Sapph	(1,6,25)	15.482	70.86	0.179	0.2	5.687	1.35	71.09	71.1
	Equiv. Refl.: (1,-7,-25), (6,1,-25), (6,-7,25), (7,-1,-25), (7,-6,25), (-1,7,25), (-1,-6,-25), (-6,7,-25), (-6,-1,25) (-7,1,25), (-7,6,-25)								
LiNbO3	(2,8,21)	15.83	75.01	0.178	0.4	4.389	1.81	54.86	54.89
	Equiv. Refl.: (2,8,-21), (2,-10,21), (2,-10,-21), (8,2,21), (8,2,-21), (8,-10,21), (8,-10,-21), (10,-2,21), (10,-2,-21) (10,-8,21), (10,-8,-21), (-2,10,21), (-2,10,-21), (-2,-8,21), (-2,-8,-21), (-8,10,21), (-8,10,-21), (-8,-2,21) (-8,-2,-21), (-10,2,21), (-10,2,-21), (-10,8,21), (-10,8,-21), (1,10,3), (1,10,-3), (1,-11,3), (1,-11,-3) (10,1,3), (10,1,-3), (10,-11,3), (10,-11,-3), (11,-1,3), (11,-1,-3), (11,-10,3), (11,-10,-3), (-1,11,3) (-1,11,-3), (-1,-10,3), (-1,-10,-3), (-10,11,3), (-10,11,-3), (-10,-1,3), (-10,-1,-3), (-11,1,3), (-11,1,-3) (-11,10,3), (-11,10,-3)								
LiNbO3	(1,8,-25)	16.313	84.52	0.168	0.6	1.571	0.98	19.63	19.66
	Equiv. Refl.: (1,-9,25), (8,1,25), (8,-9,-25), (9,-1,25), (9,-8,-25), (-1,9,-25), (-1,-8,25), (-8,9,25), (-8,-1,-25)								

Ei = Cryst	15.711 Refl (h,k,l)	keV EB [keV]	ØB [°]	IR dØ [µrad]	Width [µrad]	Ei cotØ [meV/µrad]	ΔE [meV]	ΔEg 2m, 50µm [meV]	ΔEt 2m, 50µm [meV]
Ge	(0,2,14)	15.497	80.53	1.7868	4.21	2.6221	11.04	32.78	34.58
Equiv. Refl.: (0,10,10), (0,14,2), (2,0,14), (2,14,0), (6,8,10), (6,10,8), (8,6,10), (8,10,6), (10,0,10) (10,6,8), (10,8,6), (10,10,0), (14,0,2), (14,2,0)									
Si	(2,6,12)	15.483	80.23	1.606	1.73	2.7043	4.67	33.8	34.12
Equiv. Refl.: (2,12,6), (6,2,12), (6,12,2), (12,2,6), (12,6,2)									
Si	(3,3,13)	15.609	83.47	1.5531	1.77	1.7989	3.18	22.49	22.71
Equiv. Refl.: (3,13,3), (5,9,9), (9,5,9), (9,9,5), (13,3,3)									
Ge	(1,9,11)	15.612	83.58	1.3384	4.27	1.768	7.54	22.1	23.35
Equiv. Refl.: (1,11,9), (3,5,13), (3,13,5), (5,3,13), (5,13,3), (9,1,11), (9,11,1), (11,1,9), (11,9,1) (13,3,5), (13,5,3)									
Ge	(8,8,8)	15.184	75.11	1.2729	2.9	4.1769	12.1	52.21	53.6
Ge	(2,6,12)	14.864	71.1	1.1242	2.47	5.3793	13.31	67.24	68.55
Equiv. Refl.: (2,12,6), (6,2,12), (6,12,2), (12,2,6), (12,6,2)									
Si	(4,4,12)	15.143	74.55	1.1185	1.19	4.3434	5.18	54.29	54.54
Equiv. Refl.: (4,12,4), (12,4,4)									
Si	(2,8,10)	14.795	70.34	0.9717	1.03	5.6141	5.78	70.18	70.41
Equiv. Refl.: (2,10,8), (8,2,10), (8,10,2), (10,2,8), (10,8,2)									
Si	(1,3,13)	15.271	76.42	0.8244	0.93	3.7963	3.52	47.45	47.58
Equiv. Refl.: (1,13,3), (3,1,13), (3,7,11), (3,11,7), (3,13,1), (7,3,11), (7,7,9), (7,9,7), (7,11,3) (9,7,7), (11,3,7), (11,7,3), (13,1,3), (13,3,1)									
Ge	(1,5,13)	15.302	76.89	0.7397	2.26	3.6579	8.27	45.72	46.47
Equiv. Refl.: (1,13,5), (5,1,13), (5,7,11), (5,11,7), (5,13,1), (7,5,11), (7,11,5), (11,5,7), (11,7,5) (13,1,5), (13,5,1)									
Si	(1,1,13)	14.926	71.82	0.682	0.76	5.1608	3.92	64.51	64.63
Equiv. Refl.: (1,7,11), (1,11,7), (1,13,1), (3,9,9), (5,5,11), (5,11,5), (7,1,11), (7,11,1), (9,3,9) (9,9,3), (11,1,7), (11,5,5), (11,7,1), (13,1,1)									
Ge	(3,3,13)	14.985	72.51	0.6264	1.83	4.951	9.08	61.89	62.55
Equiv. Refl.: (3,13,3), (5,9,9), (9,5,9), (9,9,5), (13,3,3)									
LiNbO3	(0,11,-8)	15.708	88.91	58.471	51.5	0.299	15.4	3.74	15.85
Equiv. Refl.: (-11,0,-8)									
LiNbO3	(11,-11,-8)	15.708	88.91	58.47	51.5	0.299	15.4	3.74	15.85
LiNbO3	(0,-11,8)	15.708	88.91	55.147	51.5	0.299	15.4	3.74	15.85
Equiv. Refl.: (11,0,8)									
LiNbO3	(-11,11,8)	15.708	88.91	55.146	51.5	0.299	15.4	3.74	15.85
LiNbO3	(6,-13,-2)	15.696	87.45	19.216	17.8	0.698	12.45	8.73	15.21
Equiv. Refl.: (7,6,-2), (13,-6,-2), (-6,-7,-2), (-7,13,-2), (-13,7,-2)									
LiNbO3	(6,7,2)	15.696	87.45	18.831	17.8	0.698	12.45	8.73	15.21
Equiv. Refl.: (7,-13,2), (13,-7,2), (-6,13,2), (-7,-6,2), (-13,6,2)									
Quartz	(3,-6,-12)	15.709	89.06	14.583	12.6	0.257	3.25	3.21	4.57
Quartz	(-6,3,12)	15.709	89.06	14.581	12.6	0.257	3.25	3.21	4.57
Quartz	(3,3,12)	15.709	89.06	14.58	12.6	0.257	3.25	3.21	4.57
Quartz	(-6,3,-12)	15.709	89.06	14.576	12.6	0.257	3.24	3.21	4.56
Quartz	(3,3,-12)	15.709	89.06	14.569	12.6	0.257	3.24	3.21	4.56
Quartz	(3,-6,12)	15.709	89.06	14.566	12.6	0.257	3.24	3.21	4.56
Quartz	(-3,6,12)	15.709	89.06	14.459	12.6	0.257	3.25	3.21	4.57
Quartz	(6,-3,-12)	15.709	89.06	14.456	12.6	0.257	3.25	3.21	4.57
Equiv. Refl.: (-3,-3,-12)									
Quartz	(-3,-3,12)	15.709	89.06	14.453	12.6	0.257	3.24	3.21	4.56

Ei = Cryst	15.711 Refl (h,k,l)	keV EB [keV]	Θ B [$^{\circ}$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(6,-3,12)	15.709	89.06	14.451	12.6	0.257	3.24	3.21	4.56
Quartz	(-3,6,-12)	15.709	89.06	14.45	12.6	0.257	3.24	3.21	4.56
LiNbO3	(4,-11,-18) Equiv. Refl.: (7,4,-18), (11,-4,-18), (-4,-7,-18), (-7,11,-18), (-11,7,-18)	15.64	84.54	10.309	9.1	1.502	13.68	18.77	23.23
LiNbO3	(1,2,-34) Equiv. Refl.: (2,-3,-34), (3,-2,-34), (-1,3,-34), (-2,-1,-34), (-3,1,-34)	15.643	84.66	10.202	9.2	1.469	13.52	18.36	22.8
LiNbO3	(1,-3,34) Equiv. Refl.: (2,1,34), (3,-1,34), (-1,-2,34), (-2,3,34), (-3,2,34)	15.643	84.66	10.195	9.2	1.469	13.52	18.36	22.8
LiNbO3	(4,7,18) Equiv. Refl.: (7,-11,18), (11,-7,18), (-4,11,18), (-7,-4,18), (-11,4,18)	15.64	84.54	9.928	9.1	1.502	13.68	18.77	23.23
LiNbO3	(4,7,-18) Equiv. Refl.: (7,-11,-18), (11,-7,-18), (-4,11,-18), (-7,-4,-18), (-11,4,-18)	15.64	84.54	9.157	8.3	1.502	12.46	18.77	22.53
LiNbO3	(1,-11,12) Equiv. Refl.: (10,1,12), (11,-1,12), (-1,-10,12), (-10,11,12), (-11,10,12)	15.602	83.23	9.036	8	1.864	14.92	23.3	27.67
LiNbO3	(1,10,-12) Equiv. Refl.: (10,-11,-12), (11,-10,-12), (-1,11,-12), (-10,-1,-12), (-11,1,-12)	15.602	83.23	9.009	8	1.864	14.92	23.3	27.67
LiNbO3	(4,-11,18) Equiv. Refl.: (7,4,18), (11,-4,18), (-4,-7,18), (-7,11,18), (-11,7,18)	15.64	84.54	8.938	8.3	1.502	12.46	18.77	22.53
LiNbO3	(0,10,-16) Equiv. Refl.: (10,-10,-16), (-10,0,-16)	15.638	84.46	8.442	7.6	1.523	11.62	19.04	22.31
LiNbO3	(4,-10,-22) Equiv. Refl.: (6,4,-22), (10,-4,-22), (-4,-6,-22), (-6,10,-22), (-10,6,-22)	15.612	83.56	8.174	7.3	1.774	12.95	22.18	25.68
LiNbO3	(0,-10,16) Equiv. Refl.: (10,0,16), (-10,10,16)	15.638	84.46	7.971	7.6	1.523	11.62	19.04	22.31
LiNbO3	(4,6,22) Equiv. Refl.: (6,-10,22), (10,-6,22), (-4,10,22), (-6,-4,22), (-10,4,22)	15.612	83.56	7.852	7.3	1.774	12.95	22.18	25.68
LiNbO3	(1,-7,-28) Equiv. Refl.: (6,1,-28), (7,-1,-28), (-1,-6,-28), (-6,7,-28), (-7,6,-28)	15.489	80.36	7.421	6.4	2.669	17.17	33.36	37.52
LiNbO3	(6,-7,28) Equiv. Refl.: (7,-6,28)	15.489	80.36	7.4	6.4	2.669	17.17	33.36	37.52
LiNbO3	(1,6,28) Equiv. Refl.: (-1,7,28), (-6,-1,28), (-7,1,28)	15.489	80.36	7.399	6.4	2.669	17.17	33.36	37.52
LiNbO3	(2,10,4) Equiv. Refl.: (10,-12,4), (12,-10,4), (-2,12,4), (-10,-2,4), (-12,2,4)	15.587	82.79	7.134	6.4	1.987	12.69	24.84	27.9
Quartz	(4,6,8) Equiv. Refl.: (4,-10,-8)	15.67	85.84	6.99	5.5	1.143	6.31	14.29	15.62
Quartz	(6,4,-8)	15.67	85.84	6.989	5.5	1.143	6.31	14.29	15.62
LiNbO3	(1,-11,-12) Equiv. Refl.: (10,1,-12), (11,-1,-12), (-1,-10,-12), (-10,11,-12), (-11,10,-12), (6,-10,8)	15.602	83.23	6.987	6.4	1.864	11.98	23.3	26.2
Quartz	(-10,6,-8)	15.67	85.84	6.986	5.5	1.143	6.31	14.29	15.62
Quartz	(-10,4,8)	15.67	85.84	6.985	5.5	1.143	6.31	14.29	15.62
LiNbO3	(1,10,12) Equiv. Refl.: (10,-11,12), (11,-10,12), (-1,11,12), (-10,-1,12), (-11,1,12)	15.602	83.23	6.904	6.4	1.864	11.98	23.3	26.2
LiNbO3	(2,10,-2) Equiv. Refl.: (10,-12,-2), (12,-10,-2), (-2,12,-2), (-10,-2,-2), (-12,2,-2)	15.51	80.82	6.882	6.1	2.54	15.44	31.75	35.3
LiNbO3	(2,-12,2) Equiv. Refl.: (10,2,2), (12,-2,2), (-2,-10,2), (-10,12,2), (-12,10,2)	15.51	80.82	6.873	6.1	2.54	15.44	31.75	35.3
LiNbO3	(2,-12,-4) Equiv. Refl.: (10,2,-4), (12,-2,-4), (-2,-10,-4), (-10,12,-4), (-12,10,-4)	15.587	82.79	6.83	6.4	1.987	12.69	24.84	27.9

Ei = Cryst	15.711 Refl (h,k,l)	keV EB [keV]	Θ B [$^{\circ}$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(-4,10,8)	15.67	85.84	6.821	5.5	1.143	6.31	14.29	15.62
	Equiv. Refl.: (-4,-6,-8)								
Quartz	(-6,-4,8)	15.67	85.84	6.82	5.5	1.143	6.31	14.29	15.62
Quartz	(-6,10,-8)	15.67	85.84	6.818	5.5	1.143	6.31	14.29	15.62
Quartz	(10,-4,-8)	15.67	85.84	6.816	5.5	1.143	6.31	14.29	15.62
	Equiv. Refl.: (10,-6,8)								
LiNbO3	(0,-11,-4)	15.4	78.57	6.751	5.8	3.175	18.31	39.69	43.71
	Equiv. Refl.: (11,0,-4), (-11,11,-4)								
LiNbO3	(0,11,4)	15.4	78.57	6.649	5.8	3.175	18.31	39.69	43.71
	Equiv. Refl.: (11,-11,4), (-11,0,4)								
LiNbO3	(0,-2,-34)	15.456	79.67	6.287	5.5	2.864	15.63	35.8	39.07
	Equiv. Refl.: (2,0,-34), (-2,2,-34)								
LiNbO3	(0,2,34)	15.456	79.67	6.078	5.5	2.864	15.63	35.8	39.07
	Equiv. Refl.: (2,-2,34), (-2,0,34)								
LiNbO3	(2,3,32)	15.54	81.55	5.805	5.2	2.335	12.11	29.19	31.6
	Equiv. Refl.: (3,-5,32), (5,-3,32), (-2,5,32), (-3,-2,32), (-5,2,32)								
LiNbO3	(2,-5,-32)	15.54	81.55	5.785	5.2	2.335	12.11	29.19	31.6
	Equiv. Refl.: (3,2,-32), (5,-2,-32), (-2,-3,-32), (-3,5,-32), (-5,3,-32)								
LiNbO3	(3,-8,26)	15.163	74.82	5.534	4.7	4.262	19.99	53.27	56.9
	Equiv. Refl.: (5,3,26), (8,-3,26), (-3,-5,26), (-5,8,26), (-8,5,26)								
LiNbO3	(3,9,-6)	15.278	76.52	5.527	4.8	3.768	17.99	47.09	50.41
	Equiv. Refl.: (9,-12,-6), (12,-9,-6), (-3,12,-6), (-9,-3,-6), (-12,3,-6)								
LiNbO3	(3,-12,6)	15.278	76.52	5.51	4.8	3.768	17.99	47.09	50.41
	Equiv. Refl.: (9,3,6), (12,-3,6), (-3,-9,6), (-9,12,6), (-12,9,6)								
LiNbO3	(3,5,-26)	15.163	74.82	5.468	4.7	4.262	19.99	53.27	56.9
	Equiv. Refl.: (5,-8,-26), (8,-5,-26), (-3,8,-26), (-5,-3,-26), (-8,3,-26)								
LiNbO3	(6,6,12)	15.415	78.85	5.452	4.5	3.096	13.81	38.7	41.09
	Equiv. Refl.: (6,-12,12), (12,-6,12), (-6,12,12), (-6,-6,12), (-12,6,12)								
LiNbO3	(3,-11,-16)	15.451	79.56	5.446	4.4	2.894	12.84	36.17	38.38
	Equiv. Refl.: (8,3,-16), (11,-3,-16), (-3,-8,-16), (-8,11,-16), (-11,8,-16)								
LiNbO3	(0,-4,-32)	15.353	77.74	5.442	4.7	3.415	16.04	42.68	45.6
	Equiv. Refl.: (4,0,-32), (-4,4,-32)								
LiNbO3	(2,6,26)	15.353	77.75	5.44	4.8	3.412	16.27	42.65	45.65
	Equiv. Refl.: (6,-8,26), (8,-6,26), (-2,8,26), (-6,-2,26), (-8,2,26)								
LiNbO3	(3,-9,-24)	15.394	78.48	5.431	4.8	3.202	15.26	40.03	42.84
	Equiv. Refl.: (6,3,-24), (9,-3,-24), (-3,-6,-24), (-6,9,-24), (-9,6,-24)								
LiNbO3	(6,2,-26)	15.353	77.75	5.413	4.8	3.412	16.27	42.65	45.65
	Equiv. Refl.: (-2,-6,-26), (-6,8,-26), (-8,6,-26)								
LiNbO3	(2,-8,-26)	15.353	77.75	5.412	4.8	3.412	16.27	42.65	45.65
	Equiv. Refl.: (8,-2,-26)								
Sapph	(6,6,0)	15.634	84.34	5.347	4.4	1.557	6.81	19.46	20.62
	Equiv. Refl.: (6,-12,0), (12,-6,0), (-6,12,0), (-6,-6,0), (-12,6,0)								
LiNbO3	(3,6,24)	15.394	78.48	5.304	4.8	3.202	15.26	40.03	42.84
	Equiv. Refl.: (6,-9,24), (9,-6,24), (-3,9,24), (-6,-3,24), (-9,3,24)								
LiNbO3	(2,-11,-14)	15.438	79.31	5.27	4.7	2.966	14.04	37.08	39.65
	Equiv. Refl.: (9,2,-14), (11,-2,-14), (-2,-9,-14), (-9,11,-14), (-11,9,-14)								
LiNbO3	(2,9,14)	15.438	79.31	5.237	4.7	2.966	14.04	37.08	39.65
	Equiv. Refl.: (9,-11,14), (11,-9,14), (-2,11,14), (-9,-2,14), (-11,2,14)								
LiNbO3	(0,4,32)	15.353	77.74	5.224	4.7	3.415	16.04	42.68	45.6
	Equiv. Refl.: (4,-4,32), (-4,0,32)								

Ei =	15.711	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(0,8,22)	14.85	70.94	5.138	4.1	5.427	22.21	67.83	71.38
Equiv. Refl.: (3,-9,24), (6,3,24), (8,-8,22), (9,-3,24), (-3,-6,24), (-6,9,24), (-8,0,22), (-9,6,24)									
LiNbO3	(3,-12,-6)	15.278	76.52	5.111	4.1	3.768	15.42	47.09	49.56
Equiv. Refl.: (9,3,-6), (12,-3,-6), (-3,-9,-6), (-9,12,-6), (-12,9,-6)									
LiNbO3	(6,6,-12)	15.415	78.85	5.105	4.5	3.096	13.81	38.7	41.09
Equiv. Refl.: (6,-12,-12), (12,-6,-12), (-6,12,-12), (-6,-6,-12), (-12,6,-12)									
LiNbO3	(3,6,-24)	15.394	78.48	5.051	4.6	3.202	14.6	40.03	42.61
Equiv. Refl.: (6,-9,-24), (9,-6,-24), (-3,9,-24), (-6,-3,-24), (-9,3,-24)									
LiNbO3	(4,8,-10)	15.38	78.22	5.044	4.1	3.277	13.53	40.96	43.14
Equiv. Refl.: (8,-12,-10), (12,-8,-10), (-4,12,-10), (-8,-4,-10), (-12,4,-10)									
LiNbO3	(1,-9,22)	15.425	79.05	5.042	4.2	3.04	12.91	38	40.14
Equiv. Refl.: (8,1,22), (9,-1,22), (-1,-8,22), (-8,9,22), (-9,8,22)									
LiNbO3	(3,-7,28)	15.11	74.1	5.006	4	4.475	17.96	55.94	58.75
Equiv. Refl.: (4,3,28), (7,-3,28), (-3,-4,28), (-4,7,28), (-7,4,28)									
LiNbO3	(1,3,-32)	15.162	74.82	4.995	4	4.264	17.11	53.3	55.98
Equiv. Refl.: (3,-4,-32), (4,-3,-32), (-1,4,-32), (-3,-1,-32), (-4,1,-32)									
LiNbO3	(3,3,-30)	15.237	75.89	4.969	4.3	3.948	17.01	49.35	52.2
Equiv. Refl.: (-3,6,-30), (-3,-3,-30), (-6,3,-30)									
LiNbO3	(3,-6,-30)	15.237	75.89	4.968	4.3	3.948	17.01	49.35	52.2
Equiv. Refl.: (6,-3,-30)									
LiNbO3	(3,4,-28)	15.11	74.1	4.934	4	4.475	17.96	55.94	58.75
Equiv. Refl.: (4,-7,-28), (7,-4,-28), (-3,7,-28), (-4,-3,-28), (-7,3,-28)									
LiNbO3	(3,-10,-20)	15.255	76.17	4.927	4	3.868	15.51	48.35	50.78
Equiv. Refl.: (7,3,-20), (10,-3,-20), (-3,-7,-20), (-7,10,-20), (-10,7,-20)									
LiNbO3	(0,-8,-22)	14.85	70.94	4.925	4.1	5.427	22.21	67.83	71.38
Equiv. Refl.: (8,0,-22), (-8,8,-22)									
LiNbO3	(1,8,-22)	15.425	79.05	4.911	4.2	3.04	12.91	38	40.14
Equiv. Refl.: (8,-9,-22), (9,-8,-22), (-1,9,-22), (-8,-1,-22), (-9,1,-22)									
Quartz	(5,7,-3)	15.596	83.06	4.906	3.8	1.914	7.29	23.92	25.01
Equiv. Refl.: (5,-12,3)									
Quartz	(7,5,3)	15.596	83.06	4.905	3.8	1.914	7.29	23.92	25.01
Equiv. Refl.: (7,-12,-3), (-12,5,-3), (-12,7,3)									
Quartz	(-5,12,-3)	15.596	83.06	4.903	3.8	1.914	7.29	23.92	25.01
Equiv. Refl.: (-5,-7,3)									
Quartz	(12,-5,3)	15.596	83.06	4.901	3.8	1.914	7.29	23.92	25.01
Equiv. Refl.: (12,-7,-3), (-7,12,3), (-7,-5,-3)									
LiNbO3	(3,3,30)	15.237	75.89	4.887	4.3	3.948	17.01	49.35	52.2
Equiv. Refl.: (3,-6,30), (6,-3,30), (-3,6,30), (-3,-3,30), (-6,3,30)									
LiNbO3	(1,-4,32)	15.162	74.82	4.86	4	4.264	17.11	53.3	55.98
Equiv. Refl.: (3,1,32), (4,-1,32), (-1,-3,32), (-3,4,32), (-4,3,32)									
LiNbO3	(2,8,18)	15.073	73.62	4.84	3.9	4.619	17.85	57.73	60.43
Equiv. Refl.: (8,-10,18), (10,-8,18), (-2,10,18), (-8,-2,18), (-10,2,18)									
LiNbO3	(3,8,16)	15.451	79.56	4.834	4.4	2.894	12.84	36.17	38.38
Equiv. Refl.: (8,-11,16), (11,-8,16), (-3,11,16), (-8,-3,16), (-11,3,16)									
LiNbO3	(3,7,20)	15.255	76.17	4.776	4	3.868	15.52	48.35	50.78
Equiv. Refl.: (7,-10,20), (10,-7,20), (-3,10,20), (-7,-3,20), (-10,3,20)									
LiNbO3	(3,9,6)	15.278	76.52	4.723	4.1	3.768	15.43	47.09	49.56
Equiv. Refl.: (9,-12,6), (12,-9,6), (-3,12,6), (-9,-3,6), (-12,3,6)									
LiNbO3	(-8,10,-18)	15.073	73.62	4.704	3.9	4.619	17.85	57.73	60.43
Equiv. Refl.: (-10,8,-18)									

Ei = Cryst	15.711 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
LiNbO3	(2,-10,-18) Equiv. Refl.: (8,2,-18), (10,-2,-18), (-2,-8,-18)	15.073	73.62	4.703	3.9	4.619	17.85	57.73	60.43
Quartz	(8,-10,-7)	15.581	82.64	4.661	3.6	2.03	7.3	25.37	26.4
Quartz	(8,2,7) Equiv. Refl.: (-10,2,-7)	15.581	82.64	4.66	3.6	2.03	7.3	25.37	26.4
Quartz	(-10,8,7)	15.581	82.64	4.659	3.6	2.03	7.3	25.37	26.4
Quartz	(2,8,-7) Equiv. Refl.: (2,-10,7)	15.581	82.64	4.658	3.6	2.03	7.3	25.37	26.4
LiNbO3	(4,-12,10) Equiv. Refl.: (8,4,10), (12,-4,10), (-4,-8,10), (-8,12,10), (-12,8,10)	15.38	78.22	4.656	4.1	3.277	13.53	40.96	43.14
LiNbO3	(4,-10,20) Equiv. Refl.: (6,4,20), (10,-4,20), (-4,-6,20), (-6,10,20), (-10,6,20)	15.064	73.5	4.58	3.7	4.653	17.31	58.16	60.69
LiNbO3	(4,6,-20) Equiv. Refl.: (6,-10,-20), (10,-6,-20), (-4,10,-20), (-6,-4,-20), (-10,4,-20)	15.064	73.5	4.57	3.7	4.653	17.31	58.16	60.69
Quartz	(-8,10,7)	15.581	82.64	4.531	3.6	2.03	7.3	25.37	26.4
Quartz	(-8,-2,-7)	15.581	82.64	4.53	3.6	2.03	7.3	25.37	26.4
Quartz	(10,-2,7) Equiv. Refl.: (10,-8,-7)	15.581	82.64	4.529	3.6	2.03	7.3	25.37	26.4
Quartz	(-2,10,-7) Equiv. Refl.: (-2,-8,7)	15.581	82.64	4.528	3.6	2.03	7.3	25.37	26.4
Quartz	(0,10,5) Equiv. Refl.: (0,-10,-5), (10,0,-5), (10,-10,5), (-10,0,5), (-10,10,-5)	15.658	85.29	4.517	3.5	1.294	4.58	16.18	16.81
LiNbO3	(0,10,14) Equiv. Refl.: (10,-10,14), (-10,0,14)	15.249	76.07	4.437	3.6	3.896	14.2	48.69	50.72
LiNbO3	(3,-11,14) Equiv. Refl.: (8,3,14), (11,-3,14), (-3,-8,14), (-8,11,14), (-11,8,14)	15.058	73.42	4.41	3.5	4.677	16.41	58.47	60.73
LiNbO3	(2,-10,18) Equiv. Refl.: (8,2,18), (10,-2,18), (-2,-8,18), (-8,10,18), (-10,8,18)	15.073	73.62	4.4	3.5	4.619	16.34	57.73	60
LiNbO3	(7,5,-10) Equiv. Refl.: (-5,-7,-10), (-7,12,-10), (-12,7,-10)	15.19	75.21	4.275	3.5	4.149	14.44	51.86	53.84
LiNbO3	(5,-12,-10) Equiv. Refl.: (12,-5,-10)	15.19	75.21	4.274	3.5	4.149	14.44	51.86	53.84
LiNbO3	(0,9,-18) Equiv. Refl.: (9,-9,-18), (-9,0,-18)	14.879	71.28	4.237	3.4	5.325	18	66.57	68.96
LiNbO3	(0,-1,34) Equiv. Refl.: (1,0,34), (-1,1,34)	15.267	76.35	4.232	3.6	3.814	13.62	47.68	49.59
LiNbO3	(0,-10,-14) Equiv. Refl.: (10,0,-14), (-10,10,-14)	15.249	76.07	4.206	3.6	3.896	14.2	48.69	50.72
LiNbO3	(1,7,-24) Equiv. Refl.: (7,-8,-24), (8,-7,-24), (-1,8,-24), (-7,-1,-24), (-8,1,-24)	15.013	72.86	4.203	3.4	4.846	16.58	60.58	62.81
LiNbO3	(0,1,-34) Equiv. Refl.: (1,-1,-34), (-1,0,-34)	15.267	76.35	4.201	3.6	3.814	13.62	47.68	49.59
LiNbO3	(1,9,16) Equiv. Refl.: (2,8,-18), (9,-10,16), (10,-9,16), (-1,10,16), (-2,10,-18), (-8,-2,-18), (-9,-1,16), (-10,1,16), (-10,2,-18)	15.071	73.59	4.173	3.4	4.627	15.63	57.84	59.91
LiNbO3	(8,-10,-18) Equiv. Refl.: (10,-8,-18)	15.073	73.62	4.172	3.5	4.619	16.34	57.73	60
LiNbO3	(1,-8,24) Equiv. Refl.: (7,1,24), (8,-1,24), (-1,-7,24), (-7,8,24), (-8,7,24)	15.013	72.86	4.123	3.4	4.846	16.58	60.58	62.81
LiNbO3	(0,-9,18) Equiv. Refl.: (9,0,18), (-9,9,18)	14.879	71.28	4.072	3.4	5.325	18	66.57	68.96

Ei = Cryst	15.711 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
LiNbO3	(3,8,-14)	15.058	73.42	4.047	3.5	4.677	16.41	58.47	60.73
Equiv. Refl.: (8,-11,-14), (11,-8,-14), (-3,11,-14), (-8,-3,-14), (-11,3,-14)									
LiNbO3	(1,7,24)	15.013	72.86	4.017	3.3	4.846	16	60.58	62.66
Equiv. Refl.: (7,-8,24), (8,-7,24), (-1,8,24), (-7,-1,24), (-8,1,24)									
Sapph	(0,10,8)	15.521	81.09	4.011	3.1	2.464	7.66	30.81	31.74
Equiv. Refl.: (0,-10,-8), (10,0,-8), (10,-10,8), (-10,0,8), (-10,10,-8)									
LiNbO3	(0,7,26)	15.163	74.82	3.972	3.3	4.262	13.98	53.27	55.08
Equiv. Refl.: (7,-7,26), (-7,0,26)									
LiNbO3	(5,7,10)	15.19	75.21	3.97	3.5	4.149	14.44	51.86	53.84
Equiv. Refl.: (7,-12,10), (12,-7,10), (-5,12,10), (-7,-5,10), (-12,5,10)									
LiNbO3	(1,-8,-24)	15.013	72.86	3.969	3.3	4.846	16	60.58	62.66
Equiv. Refl.: (7,1,-24), (8,-1,-24), (-1,-7,-24), (-7,8,-24), (-8,7,-24)									
LiNbO3	(1,-10,-16)	15.071	73.59	3.951	3.4	4.627	15.63	57.84	59.91
Equiv. Refl.: (9,1,-16), (10,-1,-16), (-1,-9,-16), (-9,10,-16), (-10,9,-16)									
LiNbO3	(1,10,6)	14.893	71.43	3.907	3.2	5.277	16.78	65.96	68.06
Equiv. Refl.: (10,-11,6), (11,-10,6), (-1,11,6), (-10,-1,6), (-11,1,6)									
LiNbO3	(2,4,31)	15.694	87.34	3.882	5.6	0.729	4.05	9.11	9.97
Equiv. Refl.: (2,-6,-31), (4,2,-31), (4,-6,31), (6,-2,-31), (6,-4,31), (-2,6,31), (-2,-4,-31), (-4,6,-31), (-4,-2,31), (-6,2,31), (-6,4,-31)									
LiNbO3	(1,-11,-6)	14.893	71.43	3.825	3.2	5.277	16.78	65.96	68.06
Equiv. Refl.: (10,1,-6), (11,-1,-6), (-1,-10,-6), (-10,11,-6), (-11,10,-6)									
LiNbO3	(-7,7,-26)	15.163	74.82	3.772	3.3	4.262	13.98	53.27	55.08
LiNbO3	(0,-7,-26)	15.163	74.82	3.771	3.3	4.262	13.98	53.27	55.08
Equiv. Refl.: (7,0,-26)									
LiNbO3	(2,9,-10)	14.803	70.43	3.754	3.1	5.585	17.15	69.81	71.89
Equiv. Refl.: (9,-11,-10), (11,-9,-10), (-2,11,-10), (-9,-2,-10), (-11,2,-10)									
LiNbO3	(2,-11,10)	14.803	70.43	3.727	3.1	5.585	17.15	69.81	71.89
Equiv. Refl.: (9,2,10), (11,-2,10), (-2,-9,10), (-9,11,10), (-11,9,10)									
LiNbO3	(1,2,32)	14.775	70.12	3.681	3	5.68	17.11	71	73.04
Equiv. Refl.: (2,-3,32), (3,-2,32), (-1,3,32), (-2,-1,32), (-3,1,32)									
LiNbO3	(1,-3,-32)	14.775	70.12	3.65	3	5.68	17.11	71	73.04
Equiv. Refl.: (2,1,-32), (3,-1,-32), (-1,-2,-32), (-2,3,-32), (-3,2,-32)									
LiNbO3	(4,-12,4)	14.824	70.65	3.641	2.9	5.516	16.18	68.95	70.83
Equiv. Refl.: (8,4,4), (12,-4,4), (-4,-8,4), (-8,12,4), (-12,8,4)									
LiNbO3	(1,8,20)	14.87	71.17	3.561	2.9	5.357	15.69	66.96	68.77
Equiv. Refl.: (8,-9,20), (9,-8,20), (-1,9,20), (-8,-1,20), (-9,1,20)									
LiNbO3	(5,6,-16)	15.071	73.59	3.306	2.9	4.627	13.46	57.84	59.38
Equiv. Refl.: (6,-11,-16), (11,-6,-16), (-5,11,-16), (-6,-5,-16), (-11,5,-16)									
Sapph	(2,7,-20)	15.581	82.62	3.298	2.7	2.035	5.42	25.44	26.01
Equiv. Refl.: (2,-9,20), (7,2,20), (7,-9,-20), (9,-2,20), (9,-7,-20), (-2,9,-20), (-2,-7,20), (-7,9,20), (-7,-2,-20), (-9,2,-20), (-9,7,20)									
Sapph	(2,9,-7)	15.629	84.16	3.297	2.7	1.607	4.26	20.09	20.53
Equiv. Refl.: (2,-11,7), (9,2,7), (9,-11,-7), (11,-2,7), (11,-9,-7), (-2,11,-7), (-2,-9,7), (-9,11,7), (-9,-2,-7), (-11,2,-7), (-11,9,7)									
Sapph	(0,3,30)	15.013	72.86	3.295	2.4	4.845	11.81	60.57	61.71
Equiv. Refl.: (0,3,-30), (0,-3,30), (0,-3,-30), (3,0,30), (3,0,-30), (3,-3,30), (3,-3,-30), (-3,0,30), (-3,0,-30), (-3,3,30), (-3,3,-30)									
Sapph	(4,4,24)	15.487	80.32	3.286	2.6	2.68	6.88	33.5	34.2
Equiv. Refl.: (4,4,-24), (4,-8,24), (4,-8,-24), (8,-4,24), (8,-4,-24), (-4,8,24), (-4,8,-24), (-4,-4,24), (-4,-4,-24), (-8,4,24), (-8,4,-24)									

Ei = Cryst	15.711 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
LiNbO3	(1,-9,-20)	14.87	71.17	3.246	2.9	5.357	15.69	66.96	68.77
	Equiv. Refl.: (8,1,-20), (9,-1,-20), (-1,-8,-20), (-8,9,-20), (-9,8,-20)								
LiNbO3	(0,-11,2)	15.321	77.22	3.238	3	3.565	10.52	44.56	45.79
	Equiv. Refl.: (11,0,2), (-11,11,2)								
LiNbO3	(3,9,0)	15.04	73.2	3.234	2.8	4.744	13.5	59.29	60.81
	Equiv. Refl.: (9,-12,0), (12,-9,0), (-3,12,0), (-9,-3,0), (-12,3,0)								
LiNbO3	(4,8,-4)	14.824	70.65	3.166	2.9	5.516	16.18	68.95	70.83
	Equiv. Refl.: (8,-12,-4), (12,-8,-4), (-4,12,-4), (-8,-4,-4), (-12,4,-4)								
LiNbO3	(1,10,-6)	14.893	71.43	3.13	2.8	5.277	14.59	65.96	67.56
	Equiv. Refl.: (10,-11,-6), (11,-10,-6), (-1,11,-6), (-10,-1,-6), (-11,1,-6)								
Sapph	(2,9,-4)	15.387	78.35	3.111	2.4	3.241	7.78	40.51	41.25
	Equiv. Refl.: (2,-11,4), (9,2,4), (9,-11,-4), (11,-2,4), (11,-9,-4), (-2,11,-4), (-2,-9,4), (-9,11,4), (-9,-2,-4), (-11,2,-4), (-11,9,4)								
Quartz	(-2,8,10)	15.555	81.91	3.108	2.3	2.232	5.13	27.9	28.37
Quartz	(-2,-6,-10)	15.555	81.91	3.107	2.3	2.232	5.13	27.9	28.37
Quartz	(-6,8,-10)	15.555	81.91	3.105	2.3	2.232	5.13	27.9	28.37
	Equiv. Refl.: (-6,-2,10)								
Quartz	(8,-2,-10)	15.555	81.91	3.104	2.3	2.232	5.13	27.9	28.37
	Equiv. Refl.: (8,-6,10)								
LiNbO3	(5,-11,16)	15.071	73.59	3.097	2.9	4.627	13.46	57.84	59.38
	Equiv. Refl.: (6,5,16), (11,-5,16), (-5,-6,16), (-6,11,16), (-11,6,16)								
LiNbO3	(0,11,-2)	15.321	77.22	3.058	3	3.565	10.52	44.56	45.79
	Equiv. Refl.: (11,-11,-2), (-11,0,-2)								
LiNbO3	(4,8,8)	15.144	74.56	3.049	2.8	4.339	12.03	54.23	55.55
	Equiv. Refl.: (8,-12,8), (12,-8,8), (-4,12,8), (-8,-4,8), (-12,4,8), (2,6,10), (2,-8,-10)								
Quartz	(6,2,-10)	15.555	81.91	3.046	2.3	2.232	5.13	27.9	28.37
	Equiv. Refl.: (6,-8,10)								
Quartz	(-8,2,10)	15.555	81.91	3.045	2.3	2.232	5.13	27.9	28.37
	Equiv. Refl.: (-8,6,-10)								
Quartz	(7,-2,-11)	15.556	81.94	3.02	2.4	2.225	5.27	27.81	28.3
LiNbO3	(3,-12,0)	15.04	73.2	3.019	2.8	4.744	13.5	59.29	60.81
	Equiv. Refl.: (9,3,0), (12,-3,0), (-3,-9,0), (-9,12,0), (-12,9,0), (7,-5,11)								
LiNbO3	(1,-11,6)	14.893	71.43	3.018	2.8	5.277	14.59	65.96	67.56
	Equiv. Refl.: (10,1,6), (11,-1,6), (-1,-10,6), (-10,11,6), (-11,10,6)								
Quartz	(-2,7,11)	15.556	81.94	3.017	2.4	2.225	5.26	27.81	28.3
Quartz	(-2,-5,-11)	15.556	81.94	3.016	2.4	2.225	5.26	27.81	28.3
Quartz	(-5,7,-11)	15.556	81.94	3.014	2.4	2.225	5.26	27.81	28.3
	Equiv. Refl.: (-5,-2,11)								
Quartz	(-7,2,11)	15.556	81.94	3.008	2.4	2.225	5.27	27.81	28.3
Quartz	(-7,5,-11)	15.556	81.94	3.007	2.4	2.225	5.27	27.81	28.3
Quartz	(2,5,11)	15.556	81.94	3.005	2.4	2.225	5.26	27.81	28.3
	Equiv. Refl.: (2,-7,-11)								
Quartz	(5,2,-11)	15.556	81.94	3.003	2.4	2.225	5.26	27.81	28.3
	Equiv. Refl.: (5,-7,11)								
LiNbO3	(4,-12,-8)	15.144	74.56	2.982	2.8	4.339	12.03	54.23	55.55
	Equiv. Refl.: (8,4,-8), (12,-4,-8), (-4,-8,-8), (-8,12,-8), (-12,8,-8)								
Quartz	(1,9,-6)	15.509	80.81	2.917	2.2	2.542	5.47	31.77	32.24
	Equiv. Refl.: (1,-10,6), (9,1,6)								
Quartz	(9,-10,-6)	15.509	80.81	2.916	2.1	2.542	5.46	31.77	32.24
	Equiv. Refl.: (-10,9,6)								
Quartz	(-10,1,-6)	15.509	80.81	2.915	2.1	2.542	5.46	31.77	32.24

Ei =	15.711	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
LiNbO3	(2,-9,-22)	15.044	73.25	2.901	2.6	4.73	12.47	59.12	60.42
	Equiv. Refl.: (7,2,-22), (9,-2,-22), (-2,-7,-22), (-7,9,-22), (-9,7,-22)								
Quartz	(-1,10,-6)	15.509	80.81	2.9	2.2	2.542	5.47	31.77	32.24
	Equiv. Refl.: (-1,-9,6)								
Quartz	(-9,10,6)	15.509	80.81	2.899	2.1	2.542	5.46	31.77	32.24
	Equiv. Refl.: (-9,-1,-6)								
Quartz	(10,-1,6)	15.509	80.81	2.898	2.1	2.542	5.46	31.77	32.24
	Equiv. Refl.: (10,-9,-6)								
LiNbO3	(1,-5,30)	14.852	70.96	2.866	2.6	5.421	13.88	67.77	69.17
	Equiv. Refl.: (4,1,30), (5,-1,30), (-1,-4,30), (-4,5,30), (-5,4,30)								
LiNbO3	(2,7,22)	15.044	73.25	2.855	2.6	4.73	12.47	59.12	60.42
	Equiv. Refl.: (7,-9,22), (9,-7,22), (-2,9,22), (-7,-2,22), (-9,2,22)								
LiNbO3	(1,4,30)	14.852	70.96	2.809	2.5	5.421	13.69	67.77	69.13
	Equiv. Refl.: (4,-5,30), (5,-4,30), (-1,5,30), (-4,-1,30), (-5,1,30)								
LiNbO3	(5,-12,8)	14.951	72.11	2.807	2.5	5.071	12.83	63.39	64.68
	Equiv. Refl.: (7,5,8), (12,-5,8), (-5,-7,8), (-7,12,8), (-12,7,8)								
LiNbO3	(1,4,-30)	14.852	70.96	2.787	2.6	5.421	13.88	67.77	69.17
	Equiv. Refl.: (4,-5,-30), (5,-4,-30), (-1,5,-30), (-4,-1,-30), (-5,1,-30)								
LiNbO3	(0,9,18)	14.879	71.28	2.774	2.5	5.325	13.41	66.57	67.9
	Equiv. Refl.: (9,-9,18), (-9,0,18)								
LiNbO3	(1,-5,-30)	14.852	70.96	2.761	2.5	5.421	13.69	67.77	69.13
	Equiv. Refl.: (4,1,-30), (5,-1,-30), (-1,-4,-30), (-4,5,-30), (-5,4,-30)								
LiNbO3	(0,-9,-18)	14.879	71.28	2.76	2.5	5.325	13.41	66.57	67.9
	Equiv. Refl.: (9,0,-18), (-9,9,-18)								
Quartz	(5,7,3)	15.596	83.06	2.747	2.4	1.914	4.54	23.92	24.35
	Equiv. Refl.: (5,-12,-3)								
Quartz	(7,5,-3)	15.596	83.06	2.745	2.4	1.914	4.53	23.92	24.35
	Equiv. Refl.: (7,-12,3), (-12,5,3), (-12,7,-3)								
LiNbO3	(5,7,-8)	14.951	72.11	2.725	2.5	5.071	12.83	63.39	64.68
	Equiv. Refl.: (7,-12,-8), (12,-7,-8), (-5,12,-8), (-7,-5,-8), (-12,5,-8)								
Quartz	(-4,-1,12)	15.298	76.84	2.688	1.9	3.675	7.13	45.93	46.48
Quartz	(-4,5,-12)	15.298	76.84	2.687	1.9	3.675	7.13	45.93	46.48
Quartz	(4,1,-12)	15.298	76.84	2.686	1.9	3.675	7.13	45.93	46.48
	Equiv. Refl.: (4,-5,12), (-1,-4,-12)								
Quartz	(-1,5,12)	15.298	76.84	2.685	1.9	3.675	7.12	45.93	46.48
Quartz	(1,4,12)	15.298	76.84	2.684	1.9	3.675	7.12	45.93	46.48
	Equiv. Refl.: (5,-1,-12), (5,-4,12)								
Quartz	(1,-5,-12)	15.298	76.84	2.683	1.9	3.675	7.12	45.93	46.48
Quartz	(-5,1,12)	15.298	76.84	2.682	1.9	3.675	7.12	45.93	46.48
	Equiv. Refl.: (-5,4,-12)								
Quartz	(-1,11,1)	15.393	78.45	2.668	1.9	3.209	6.14	40.12	40.59
	Equiv. Refl.: (-1,-10,-1), (-10,11,-1), (-10,-1,1)								
Quartz	(11,-1,-1)	15.393	78.45	2.667	1.9	3.209	6.14	40.12	40.59
	Equiv. Refl.: (11,-10,1)								
Quartz	(-5,12,3)	15.596	83.06	2.661	2.4	1.914	4.54	23.92	24.35
	Equiv. Refl.: (-5,-7,-3)								
Quartz	(12,-7,3)	15.596	83.06	2.66	2.4	1.914	4.53	23.92	24.35
	Equiv. Refl.: (-7,12,-3), (-7,-5,3)								
Quartz	(12,-5,-3)	15.596	83.06	2.659	2.4	1.914	4.53	23.92	24.35

Ei =	15.711	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(1,-7,26)	14.776	70.13	2.507	2.3	5.678	12.95	70.98	72.15
	Equiv. Refl.: (6,1,26), (7,-1,26), (-1,-6,26), (-6,7,26), (-7,6,26)								
Quartz	(0,7,10)	15.349	77.67	2.474	2.1	3.434	7.17	42.92	43.52
	Equiv. Refl.: (0,-7,-10), (7,0,-10), (7,-7,10), (-7,0,10), (-7,7,-10)								
Quartz	(-4,12,2)	15.589	82.86	2.419	2.2	1.969	4.24	24.62	24.98
	Equiv. Refl.: (-4,-8,-2), (-8,12,-2), (-8,-4,2)								
Quartz	(12,-4,-2)	15.589	82.86	2.418	2.2	1.969	4.24	24.62	24.98
	Equiv. Refl.: (12,-8,2)								
Quartz	(8,4,-2)	15.589	82.86	2.414	2.2	1.969	4.24	24.62	24.98
	Equiv. Refl.: (8,-12,2)								
Quartz	(4,8,2)	15.589	82.86	2.413	2.2	1.969	4.24	24.62	24.98
	Equiv. Refl.: (4,-12,-2), (-12,4,2), (-12,8,-2)								
Sapph	(3,8,10)	15.567	82.23	2.352	2.1	2.145	4.41	26.81	27.17
	Equiv. Refl.: (3,-11,-10), (8,3,-10), (8,-11,10), (11,-3,-10), (11,-8,10), (-3,11,10), (-3,-8,-10), (-8,11,-10), (-8,-3,10), (-11,3,10), (-11,8,-10)								
Quartz	(-11,5,-6)	15.509	80.81	2.303	1.9	2.542	4.96	31.77	32.16
	Equiv. Refl.: (-11,6,6)								
Quartz	(6,5,6)	15.509	80.81	2.302	1.9	2.542	4.95	31.77	32.16
	Equiv. Refl.: (6,-11,-6)								
Quartz	(5,6,-6)	15.509	80.81	2.301	1.9	2.542	4.95	31.77	32.16
	Equiv. Refl.: (5,-11,6)								
Quartz	(11,-5,6)	15.509	80.81	2.279	1.9	2.542	4.96	31.77	32.16
	Equiv. Refl.: (11,-6,-6)								
Quartz	(-6,11,6)	15.509	80.81	2.278	1.9	2.542	4.95	31.77	32.16
	Equiv. Refl.: (-6,-5,-6)								
Quartz	(-5,11,-6)	15.509	80.81	2.277	1.9	2.542	4.95	31.77	32.16
	Equiv. Refl.: (-5,-6,6)								
Quartz	(1,10,1)	15.393	78.45	2.268	1.9	3.209	6.14	40.12	40.59
	Equiv. Refl.: (1,-11,-1), (10,1,-1), (10,-11,1), (-11,1,1), (-11,10,-1)								
Quartz	(0,10,-4)	15.275	76.47	2.218	1.9	3.78	7.08	47.25	47.77
	Equiv. Refl.: (0,-10,4), (10,0,4), (10,-10,-4), (-10,0,-4), (-10,10,4)								
LiNbO3	(1,6,-26)	14.776	70.13	2.019	2.3	5.678	12.95	70.98	72.15
	Equiv. Refl.: (6,-7,-26), (7,-6,-26), (-1,7,-26), (-6,-1,-26), (-7,1,-26)								
Quartz	(12,-4,2)	15.589	82.86	1.874	1.9	1.969	3.78	24.62	24.91
	Equiv. Refl.: (12,-8,-2), (-4,12,-2), (-4,-8,2), (-8,12,2), (-8,-4,-2)								
Sapph	(5,6,-13)	15.635	84.37	1.866	2.1	1.549	3.18	19.37	19.63
	Equiv. Refl.: (5,-11,13), (6,5,13), (6,-11,-13), (11,-5,13), (11,-6,-13), (-5,11,-13), (-5,-6,13), (-6,11,13), (-6,-5,-13), (-11,5,-13), (-11,6,13)								
Sapph	(6,6,3)	15.7	87.84	1.839	2.4	0.593	1.43	7.41	7.55
	Equiv. Refl.: (6,6,-3), (6,-12,3), (6,-12,-3), (12,-6,3), (12,-6,-3), (-6,12,3), (-6,12,-3), (-6,-6,3), (-6,-6,-3), (-12,6,3), (-12,6,-3)								
Quartz	(4,8,-2)	15.589	82.86	1.806	1.9	1.969	3.78	24.62	24.91
	Equiv. Refl.: (4,-12,2), (8,4,2), (8,-12,-2), (-12,4,-2), (-12,8,2)								
Quartz	(-11,1,2)	15.521	81.07	1.805	1.8	2.467	4.54	30.84	31.17
	Equiv. Refl.: (-11,10,-2)								
Quartz	(1,10,2)	15.521	81.07	1.804	1.8	2.467	4.54	30.84	31.17
	Equiv. Refl.: (1,-11,-2), (10,1,-2), (10,-11,2)								
Quartz	(-7,11,6)	15.646	84.77	1.801	1.9	1.438	2.76	17.98	18.19
	Equiv. Refl.: (-7,-4,-6)								
Quartz	(11,-4,6)	15.646	84.77	1.799	1.9	1.438	2.76	17.98	18.19
	Equiv. Refl.: (11,-7,-6), (-4,11,-6)								

Ei = Cryst	15.711 Refl (h,k,l)	keV EB [keV]	ΘB $[\text{^\circ}]$	$\int IR d\Theta$ [μrad]	Width [μrad]	Ei cot Θ [meV/ μrad]	ΔE [meV]	ΔE_g 2m, 50 μm [meV]	ΔE_t 2m, 50 μm [meV]
Quartz	(-4,-7,6)	15.646	84.77	1.798	1.9	1.438	2.76	17.98	18.19
Quartz	(11,-1,-2) Equiv. Refl.: (11,-10,2)	15.521	81.07	1.782	1.8	2.467	4.54	30.84	31.17
Quartz	(-1,11,2) Equiv. Refl.: (-1,-10,-2), (-10,11,-2), (-10,-1,2)	15.521	81.07	1.781	1.8	2.467	4.54	30.84	31.17
Quartz	(7,-2,11) Equiv. Refl.: (7,-5,-11)	15.556	81.94	1.767	1.8	2.225	4	27.81	28.1
Quartz	(3,-7,-11) Equiv. Refl.: (-7,3,11), (-7,4,-11)	15.419	78.93	1.766	1.8	3.073	5.39	38.42	38.79
Quartz	(3,4,11) Equiv. Refl.: (4,3,-11), (4,-7,11)	15.419	78.93	1.765	1.8	3.073	5.39	38.42	38.79
Quartz	(0,8,-9) Equiv. Refl.: (0,-8,9), (-2,7,-11), (-2,-5,11), (-5,7,11), (-5,-2,-11)	15.57	82.32	1.764	1.8	2.119	3.89	26.48	26.77
Quartz	(8,0,9) Equiv. Refl.: (-8,0,-9)	15.57	82.32	1.761	1.8	2.119	3.88	26.48	26.76
Quartz	(8,-8,-9) Equiv. Refl.: (-8,8,9)	15.57	82.32	1.76	1.8	2.119	3.88	26.48	26.76
Quartz	(7,4,6) Equiv. Refl.: (7,-11,-6)	15.646	84.77	1.753	1.9	1.438	2.76	17.98	18.19
Quartz	(4,7,-6) Equiv. Refl.: (4,-11,6), (-11,4,-6), (-11,7,6)	15.646	84.77	1.751	1.9	1.438	2.76	17.98	18.19
Sapph	(1,9,10) Equiv. Refl.: (1,-10,-10), (9,1,-10), (9,-10,10), (10,-1,-10), (10,-9,10), (-1,10,10), (-1,-9,-10), (-9,10,-10), (-9,-1,10), (-10,1,10), (-10,9,-10)	15.124	74.29	1.721	1.7	4.419	7.69	55.24	55.77
Quartz	(-7,2,-11) Equiv. Refl.: (-7,5,11)	15.556	81.94	1.697	1.8	2.225	4	27.81	28.1
Quartz	(2,-7,11) Equiv. Refl.: (5,2,11), (7,-4,11)	15.556	81.94	1.695	1.8	2.225	3.99	27.81	28.09
Quartz	(2,5,-11) Equiv. Refl.: (5,-7,-11), (7,-3,-11), (-3,7,11), (-3,-4,-11)	15.556	81.94	1.694	1.8	2.225	3.99	27.81	28.09
Quartz	(-4,7,-11) Equiv. Refl.: (-4,-3,11)	15.419	78.93	1.693	1.8	3.073	5.39	38.42	38.79
Sapph	(2,5,24) Equiv. Refl.: (2,5,-24), (2,-7,24), (2,-7,-24), (5,2,24), (5,2,-24), (5,-7,24), (5,-7,-24), (7,-2,24), (7,-2,-24), (7,-5,24), (7,-5,-24), (-2,7,24), (-2,7,-24), (-2,-5,24), (-2,-5,-24), (-5,7,24), (-5,7,-24), (-5,-2,24), (-5,-2,-24), (-7,2,24), (-7,2,-24), (-7,5,24), (-7,5,-24)	14.815	70.56	1.647	1.7	5.546	9.16	69.33	69.93
Sapph	(0,10,2) Equiv. Refl.: (0,-10,-2), (10,0,-2), (10,-10,2), (-10,0,2), (-10,10,-2), (10,-4,8), (10,-6,-8), (-6,-4,-8)	15.074	73.63	1.644	1.7	4.614	7.68	57.67	58.18
Quartz	(-4,10,-8) Equiv. Refl.: (-4,-6,8), (-6,10,8)	15.67	85.84	1.643	1.8	1.143	2.05	14.29	14.44
Quartz	(10,-2,-7) Equiv. Refl.: (10,-8,7), (-8,10,-7), (-8,-2,7)	15.581	82.64	1.64	1.7	2.03	3.47	25.37	25.61
Quartz	(-2,10,7) Equiv. Refl.: (-2,-8,-7), (-8,9,-8)	15.581	82.64	1.639	1.7	2.03	3.47	25.37	25.61
Quartz	(-1,9,8) Equiv. Refl.: (-1,-8,-8), (-8,-1,8)	15.465	79.85	1.638	1.6	2.813	4.59	35.17	35.46
Quartz	(9,-1,-8) Equiv. Refl.: (9,-8,8)	15.465	79.85	1.637	1.6	2.813	4.59	35.17	35.46
Quartz	(6,-9,-9) Equiv. Refl.: (7,-11,-5)	15.502	80.64	1.618	1.6	2.59	4.2	32.38	32.65

Ei = Cryst	15.711 Refl (h,k,l)	keV EB [keV]	Θ B [$^\circ$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(4,7,-5)	15.176	75.01	1.617	1.6	4.208	6.67	52.6	53.02
	Equiv. Refl.: (4,-11,5), (6,3,9), (7,4,5), (-11,4,-5), (-11,7,5)								
Quartz	(3,6,-9)	15.502	80.64	1.616	1.6	2.59	4.2	32.38	32.65
	Equiv. Refl.: (3,-9,9)								
Quartz	(-9,3,-9)	15.502	80.64	1.615	1.6	2.59	4.19	32.38	32.65
	Equiv. Refl.: (-9,6,9)								
Quartz	(8,2,-7)	15.581	82.64	1.612	1.7	2.03	3.47	25.37	25.61
	Equiv. Refl.: (8,-10,7), (-10,2,7), (-10,8,-7)								
Quartz	(2,8,7)	15.581	82.64	1.611	1.7	2.03	3.47	25.37	25.61
	Equiv. Refl.: (2,-10,-7)								
Quartz	(0,9,6)	14.809	70.49	1.593	1.6	5.566	8.79	69.57	70.13
	Equiv. Refl.: (0,-9,-6), (9,0,-6), (9,-9,6), (-9,0,6), (-9,9,-6)								
Quartz	(3,-2,-13)	15.401	78.61	1.587	1.6	3.166	5.05	39.57	39.89
Quartz	(3,-1,13)	15.401	78.61	1.586	1.6	3.166	5.05	39.57	39.89
	Equiv. Refl.: (-2,3,13), (-2,-1,-13)								
Quartz	(-1,-2,13)	15.401	78.61	1.585	1.6	3.166	5.05	39.57	39.89
Quartz	(-1,3,-13)	15.401	78.61	1.584	1.6	3.166	5.05	39.57	39.89
Quartz	(2,9,-2)	14.964	72.26	1.568	1.5	5.027	7.71	62.84	63.31
	Equiv. Refl.: (2,-11,2), (9,2,2), (9,-11,-2), (-11,2,-2), (-11,9,2)								
Quartz	(2,1,13)	15.401	78.61	1.545	1.6	3.166	5.05	39.57	39.89
	Equiv. Refl.: (2,-3,-13), (-3,1,-13), (-3,2,13)								
Quartz	(1,2,-13)	15.401	78.61	1.544	1.6	3.166	5.05	39.57	39.89
	Equiv. Refl.: (-7,11,5), (-7,-4,-5)								
Quartz	(1,-3,13)	15.401	78.61	1.543	1.6	3.166	5.05	39.57	39.89
	Equiv. Refl.: (11,-4,5), (11,-7,-5), (-4,11,-5), (-4,-7,5)								
Quartz	(8,-9,8)	15.465	79.85	1.541	1.6	2.813	4.59	35.17	35.46
Quartz	(1,8,8)	15.465	79.85	1.54	1.6	2.813	4.59	35.17	35.46
	Equiv. Refl.: (1,-9,-8), (8,1,-8)								
Quartz	(-9,1,8)	15.465	79.85	1.539	1.6	2.813	4.59	35.17	35.46
	Equiv. Refl.: (-9,8,-8)								
Quartz	(6,4,8)	15.67	85.84	1.535	1.8	1.143	2.05	14.29	14.44
	Equiv. Refl.: (-10,4,-8), (-10,6,8)								
Quartz	(6,-10,-8)	15.67	85.84	1.534	1.8	1.143	2.05	14.29	14.44
Quartz	(4,6,-8)	15.67	85.84	1.533	1.8	1.143	2.05	14.29	14.44
	Equiv. Refl.: (4,-10,8)								
Quartz	(-6,9,9)	15.502	80.64	1.519	1.6	2.59	4.2	32.38	32.65
Quartz	(-6,-3,-9)	15.502	80.64	1.518	1.6	2.59	4.2	32.38	32.65
Quartz	(-3,9,-9)	15.502	80.64	1.517	1.6	2.59	4.19	32.38	32.65
	Equiv. Refl.: (-3,-6,9)								
Quartz	(9,-3,9)	15.502	80.64	1.516	1.6	2.59	4.19	32.38	32.65
	Equiv. Refl.: (9,-6,-9)								
Quartz	(11,-2,2)	14.964	72.26	1.512	1.5	5.027	7.71	62.84	63.31
	Equiv. Refl.: (11,-9,-2), (-2,11,-2), (-2,-9,2), (-9,11,2), (-9,-2,-2)								
Sapph	(2,4,28)	15.555	81.93	1.508	1.6	2.227	3.63	27.84	28.08
	Equiv. Refl.: (2,-6,-28), (4,2,-28), (4,-6,28), (6,-2,-28), (6,-4,28), (-2,6,28), (-2,-4,-28), (-4,6,-28), (-4,-2,28), (-6,2,28), (-6,4,-28), (-1,2,13), (-1,2,-13), (-1,-1,-13)								
Quartz	(2,-1,13)	15.123	74.28	1.507	1.5	4.422	6.6	55.28	55.67
	Equiv. Refl.: (2,-1,-13), (-1,-1,13)								
Quartz	(4,7,4)	14.781	70.19	1.502	1.5	5.661	8.29	70.76	71.25
	Equiv. Refl.: (4,-11,-4), (-11,4,4), (-11,7,-4)								

Ei = Cryst	15.711 Refl (h,k,l)	keV EB [keV]	ΘB [$^{\circ}$]	\int IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(7,4,-4) Equiv. Refl.: (7,-11,4)	14.781	70.19	1.501	1.5	5.661	8.28	70.76	71.25
Quartz	(6,6,2) Equiv. Refl.: (6,6,-2), (6,-12,2), (6,-12,-2), (-12,6,2), (-12,6,-2)	15.314	77.1	1.495	1.5	3.599	5.4	44.99	45.32
Quartz	(1,1,13) Equiv. Refl.: (1,-2,13), (1,-2,-13)	15.123	74.28	1.467	1.5	4.422	6.6	55.28	55.67
Quartz	(1,1,-13) Equiv. Refl.: (-2,1,13), (-2,1,-13)	15.123	74.28	1.466	1.5	4.422	6.6	55.28	55.67
Quartz	(12,-5,-2) Equiv. Refl.: (12,-7,2), (-5,12,2), (-5,-7,-2), (-7,12,-2), (-7,-5,2)	15.383	78.28	1.465	1.5	3.26	4.86	40.75	41.03
Quartz	(12,-6,2) Equiv. Refl.: (12,-6,-2), (-6,12,2), (-6,12,-2), (-6,-6,2), (-6,-6,-2)	15.314	77.1	1.462	1.5	3.599	5.4	44.99	45.32
Sapph	(2,9,5) Equiv. Refl.: (2,-11,-5), (9,2,-5), (9,-11,5), (11,-2,-5), (11,-9,5), (-2,11,5), (-2,-9,-5), (-9,11,-5), (-9,-2,5), (-11,2,5), (-11,9,-5)	15.454	79.61	1.459	1.5	2.88	4.44	35.99	36.27
Quartz	(5,7,2) Equiv. Refl.: (5,-12,-2), (7,5,-2), (7,-12,2), (-12,5,2), (-12,7,-2)	15.383	78.28	1.453	1.5	3.26	4.86	40.75	41.03
Quartz	(12,-4,1) Equiv. Refl.: (12,-8,-1), (-4,12,-1), (-4,-8,1), (-8,12,1), (-8,-4,-1)	15.462	79.78	1.451	1.4	2.832	4.08	35.39	35.63
Quartz	(11,-4,-4) Equiv. Refl.: (11,-7,4), (-4,11,4), (-4,-7,-4), (-7,-4,4)	14.781	70.19	1.444	1.5	5.661	8.28	70.76	71.25
Quartz	(-7,11,-4)	14.781	70.19	1.443	1.5	5.661	8.28	70.76	71.25
Quartz	(10,0,5) Equiv. Refl.: (10,-10,-5), (-10,0,-5), (-10,10,5)	15.658	85.29	1.423	1.6	1.294	2.08	16.18	16.31
Quartz	(0,10,-5) Equiv. Refl.: (0,-10,5)	15.658	85.29	1.422	1.6	1.294	2.08	16.18	16.31
Sapph	(3,8,4) Equiv. Refl.: (3,-11,-4), (8,3,-4), (8,-11,4), (11,-3,-4), (11,-8,4), (-3,11,4), (-3,-8,-4), (-8,11,-4), (-8,-3,4), (-11,3,4), (-11,8,-4)	14.939	71.97	1.409	1.4	5.115	7.32	63.93	64.35
LiNbO3	(6,7,-1) Equiv. Refl.: (6,-13,1), (7,6,1), (7,-13,-1), (13,-6,1), (13,-7,-1), (-6,13,-1), (-6,-7,1), (-7,13,1), (-7,-6,-1), (-13,6,-1), (-13,7,1)	15.676	86.2	1.402	2.6	1.045	2.71	13.06	13.34
Quartz	(11,-2,-4) Equiv. Refl.: (11,-9,4), (-2,-9,-4), (-9,11,-4), (-9,-2,4)	15.482	80.21	1.386	1.4	2.711	3.75	33.88	34.09
Quartz	(-2,11,4)	15.482	80.21	1.385	1.4	2.711	3.75	33.88	34.09
Sapph	(1,8,-16) Equiv. Refl.: (1,-9,16), (8,1,16), (8,-9,-16), (9,-1,16), (9,-8,-16), (-1,9,-16), (-1,-8,16), (-8,9,16), (-8,-1,-16), (-9,1,-16), (-9,8,16)	14.951	72.11	1.38	1.4	5.072	7.13	63.4	63.8
Quartz	(4,8,-1) Equiv. Refl.: (4,-12,1), (8,4,1), (8,-12,-1), (-8,6,10), (-12,4,-1), (-12,8,1)	15.462	79.78	1.333	1.4	2.832	4.08	35.39	35.63
Quartz	(2,6,-10) Equiv. Refl.: (2,-8,10), (6,2,10), (6,-8,-10), (8,-2,10), (8,-6,-10), (-8,2,-10)	15.555	81.91	1.332	1.4	2.232	3.16	27.9	28.08
Quartz	(-2,8,-10) Equiv. Refl.: (-2,-6,10), (-6,8,10)	15.555	81.91	1.331	1.4	2.232	3.16	27.9	28.08
Quartz	(-6,-2,-10)	15.555	81.91	1.33	1.4	2.232	3.16	27.9	28.08
Quartz	(1,9,6) Equiv. Refl.: (1,-10,-6), (-10,1,6), (-10,9,-6)	15.509	80.81	1.321	1.4	2.542	3.47	31.77	31.96
Quartz	(9,1,-6) Equiv. Refl.: (9,-10,6)	15.509	80.81	1.32	1.4	2.542	3.47	31.77	31.96

Ei =	15.711	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	ΘB	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(-1,8,9)	15.085	73.78	1.301	1.3	4.572	5.92	57.14	57.45
	Equiv. Refl.: (-1,-7,-9), (-7,8,-9), (-7,-1,9)								
Quartz	(8,-1,-9)	15.085	73.78	1.3	1.3	4.572	5.92	57.14	57.45
	Equiv. Refl.: (8,-7,9)								
Quartz	(0,3,-13)	15.539	81.51	1.294	1.4	2.346	3.22	29.33	29.51
	Equiv. Refl.: (0,-3,13)								
Quartz	(3,0,13)	15.539	81.51	1.288	1.4	2.346	3.21	29.33	29.5
	Equiv. Refl.: (-3,0,-13)								
Quartz	(3,-3,-13)	15.539	81.51	1.287	1.4	2.346	3.21	29.33	29.5
	Equiv. Refl.: (-3,3,13)								
Quartz	(3,8,-5)	15.453	79.61	1.274	1.3	2.881	3.78	36.02	36.21
	Equiv. Refl.: (3,-11,5), (8,3,5), (8,-11,-5), (-11,3,-5), (-11,8,5)								
Quartz	(10,-1,-6)	15.509	80.81	1.271	1.4	2.542	3.47	31.77	31.96
	Equiv. Refl.: (10,-9,6), (-1,10,6), (-1,-9,-6)								
Quartz	(-9,10,-6)	15.509	80.81	1.27	1.4	2.542	3.47	31.77	31.96
	Equiv. Refl.: (-9,-1,6)								
Quartz	(10,-5,8)	15.602	83.24	1.267	1.4	1.863	2.57	23.29	23.43
	Equiv. Refl.: (10,-5,-8), (-5,-5,-8)								
Quartz	(-5,10,8)	15.602	83.24	1.266	1.4	1.863	2.57	23.29	23.43
Quartz	(-11,2,4)	15.482	80.21	1.264	1.4	2.711	3.75	33.88	34.09
	Equiv. Refl.: (-11,9,-4)								
Quartz	(2,9,4)	15.482	80.21	1.263	1.4	2.711	3.75	33.88	34.09
	Equiv. Refl.: (2,-11,-4), (5,5,8), (9,2,-4), (9,-11,4), (-5,10,-8), (-10,5,8), (-10,5,-8)								
Quartz	(1,7,9)	15.085	73.78	1.262	1.3	4.572	5.92	57.14	57.45
	Equiv. Refl.: (1,-8,-9), (5,-10,-8), (-5,-5,8)								
Quartz	(7,1,-9)	15.085	73.78	1.261	1.3	4.572	5.92	57.14	57.45
	Equiv. Refl.: (7,-8,9), (-8,1,9), (-8,7,-9)								
Quartz	(5,5,-8)	15.602	83.24	1.259	1.4	1.863	2.57	23.29	23.43
	Equiv. Refl.: (5,-10,8)								
Quartz	(0,4,-12)	14.947	72.06	1.255	1.3	5.086	6.43	63.58	63.9
	Equiv. Refl.: (0,-4,12)								
Quartz	(4,0,12)	14.947	72.06	1.252	1.3	5.086	6.41	63.58	63.9
	Equiv. Refl.: (4,-4,-12), (-4,0,-12), (-4,4,12)								
Quartz	(11,-3,5)	15.453	79.61	1.237	1.3	2.881	3.78	36.02	36.21
	Equiv. Refl.: (11,-8,-5), (-3,11,-5), (-3,-8,5), (-8,11,5)								
Quartz	(-8,-3,-5)	15.453	79.61	1.236	1.3	2.881	3.78	36.02	36.21
Quartz	(8,-8,9)	15.57	82.32	1.232	1.3	2.119	2.82	26.48	26.63
	Equiv. Refl.: (-8,8,-9)								
Quartz	(8,0,-9)	15.57	82.32	1.231	1.3	2.119	2.82	26.48	26.63
	Equiv. Refl.: (-8,0,9)								
Quartz	(6,5,-5)	15.036	73.14	1.23	1.2	4.762	5.92	59.53	59.82
	Equiv. Refl.: (6,-11,5), (-11,5,5), (-11,6,-5)								
Quartz	(5,6,5)	15.036	73.14	1.229	1.2	4.762	5.91	59.53	59.82
	Equiv. Refl.: (5,-11,-5)								
Quartz	(2,4,11)	14.786	70.24	1.228	1.2	5.643	6.93	70.54	70.87
	Equiv. Refl.: (2,-6,-11), (4,2,-11), (4,-6,11), (-6,2,11)								
Quartz	(-6,4,-11)	14.786	70.24	1.227	1.2	5.643	6.92	70.54	70.87
Quartz	(0,8,9)	15.57	82.32	1.226	1.3	2.119	2.8	26.48	26.63
	Equiv. Refl.: (0,-8,-9), (11,-5,-5), (11,-6,5), (-6,11,-5), (-6,-5,5)								
Quartz	(-5,11,5)	15.036	73.14	1.225	1.2	4.762	5.91	59.53	59.82
	Equiv. Refl.: (-5,-6,-5)								

Ei =	15.711	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(6,-2,-11)	14.786	70.24	1.218	1.2	5.643	6.93	70.54	70.87
	Equiv. Refl.: (6,-4,11), (-2,6,11), (-2,-4,-11), (-4,6,-11), (-4,-2,11)								
Quartz	(-9,3,9)	15.502	80.64	1.202	1.2	2.59	3.17	32.38	32.53
	Equiv. Refl.: (-9,6,-9)								
Quartz	(3,6,9)	15.502	80.64	1.199	1.2	2.59	3.16	32.38	32.53
	Equiv. Refl.: (3,-9,-9), (6,3,-9), (6,-9,9)								
LiNbO3	(2,10,-5)	15.644	84.72	1.187	2.1	1.451	3.02	18.14	18.39
	Equiv. Refl.: (2,-12,5), (10,2,5), (10,-12,-5), (12,-2,5), (12,-10,-5), (-2,12,-5), (-2,-10,5), (-10,12,5), (-10,-2,-5), (-12,2,-5), (-12,10,5)								
Sapph	(0,8,-20)	15.361	77.89	1.165	1.2	3.371	4.18	42.14	42.34
	Equiv. Refl.: (0,-8,20), (8,0,20), (8,-8,-20), (-8,0,-20), (-8,8,20)								
Sapph	(2,9,-1)	15.276	76.48	1.163	1.2	3.778	4.64	47.22	47.45
	Equiv. Refl.: (2,-11,1), (9,2,1), (9,-11,-1), (11,-2,1), (11,-9,-1), (-2,11,-1), (-2,-9,1), (-9,11,1), (-9,-2,-1), (-11,2,-1), (-11,9,1)								
Quartz	(7,2,8)	15.048	73.29	1.145	1.1	4.716	5.35	58.96	59.2
	Equiv. Refl.: (7,-9,-8)								
Quartz	(2,7,-8)	15.048	73.29	1.144	1.1	4.716	5.34	58.96	59.2
	Equiv. Refl.: (2,-9,8), (-9,2,-8), (-9,7,8)								
Quartz	(2,9,0)	14.787	70.25	1.132	1.1	5.641	6.44	70.51	70.8
	Equiv. Refl.: (2,-11,0), (9,2,0), (9,-11,0), (-11,2,0), (-11,9,0)								
Quartz	(11,-2,0)	14.787	70.25	1.131	1.1	5.641	6.44	70.51	70.8
	Equiv. Refl.: (11,-9,0), (-2,11,0), (-2,-9,0), (-9,11,0), (-9,-2,0)								
Quartz	(6,0,11)	15.35	77.69	1.128	1.2	3.429	4.02	42.86	43.05
	Equiv. Refl.: (6,-6,-11), (-6,0,-11), (-6,6,11)								
Quartz	(0,6,-11)	15.35	77.69	1.125	1.2	3.429	4.01	42.86	43.04
	Equiv. Refl.: (0,-6,11)								
Quartz	(7,1,9)	15.085	73.78	1.123	1.1	4.572	5.23	57.14	57.38
	Equiv. Refl.: (7,-8,-9)								
Quartz	(1,7,-9)	15.085	73.78	1.122	1.1	4.572	5.23	57.14	57.38
	Equiv. Refl.: (1,-8,9), (-8,1,-9), (-8,7,9)								
Quartz	(8,-1,9)	15.085	73.78	1.119	1.1	4.572	5.22	57.14	57.38
	Equiv. Refl.: (8,-7,-9), (-1,8,-9), (-1,-7,9), (-7,8,9), (-7,-1,-9)								
Quartz	(-9,2,8)	15.048	73.29	1.107	1.1	4.716	5.29	58.96	59.19
	Equiv. Refl.: (-9,7,-8)								
Quartz	(2,7,8)	15.048	73.29	1.105	1.1	4.716	5.29	58.96	59.19
	Equiv. Refl.: (2,-9,-8), (7,2,-8), (7,-9,8)								
Quartz	(9,-3,-9)	15.502	80.64	1.101	1.2	2.59	3.17	32.38	32.53
	Equiv. Refl.: (9,-6,9)								
Quartz	(-6,-3,9)	15.502	80.64	1.099	1.2	2.59	3.17	32.38	32.53
Quartz	(-3,9,9)	15.502	80.64	1.098	1.2	2.59	3.17	32.38	32.53
	Equiv. Refl.: (-3,-6,-9), (-6,9,-9)								
Quartz	(4,7,6)	15.646	84.77	1.097	1.2	1.438	1.74	17.98	18.06
	Equiv. Refl.: (4,-11,-6), (7,4,-6), (7,-11,6), (-11,4,6), (-11,7,-6)								
Quartz	(9,-2,-8)	15.048	73.29	1.095	1.1	4.716	5.29	58.96	59.19
	Equiv. Refl.: (9,-7,8)								
Quartz	(-2,9,8)	15.048	73.29	1.093	1.1	4.716	5.29	58.96	59.19
	Equiv. Refl.: (-2,-7,-8), (-7,9,-8), (-7,-2,8)								
Quartz	(2,-2,-13)	15.193	75.25	1.082	1.1	4.136	4.61	51.7	51.91
	Equiv. Refl.: (-2,2,13), (-7,9,8), (-7,-2,-8)								

Ei = Cryst	15.711 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(2,0,13)	15.193	75.25	1.081	1.1	4.136	4.6	51.7	51.91
	Equiv. Refl.: (9,-2,8), (9,-7,-8), (-2,0,-13), (-2,9,-8), (-2,-7,8)								
Quartz	(0,2,-13)	15.193	75.25	1.08	1.1	4.136	4.6	51.7	51.91
	Equiv. Refl.: (0,-2,13)								
LiNbO3	(2,2,33)	15.523	81.13	1.06	1.6	2.452	4	30.65	30.91
	Equiv. Refl.: (2,2,-33), (2,-4,33), (2,-4,-33), (4,-2,33), (4,-2,-33), (-2,4,33), (-2,4,-33), (-2,-2,33), (-2,-2,-33), (-4,2,33), (-4,2,-33)								
Quartz	(0,9,7)	15.376	78.14	1.053	1.1	3.299	3.64	41.23	41.39
	Equiv. Refl.: (0,-9,-7)								
Quartz	(9,0,-7)	15.376	78.14	1.051	1.1	3.299	3.64	41.23	41.39
	Equiv. Refl.: (9,-9,7), (-9,0,7), (-9,9,-7)								
Sapph	(1,5,26)	14.972	72.36	1.037	1.1	4.997	5.4	62.46	62.7
	Equiv. Refl.: (1,-6,-26), (5,1,-26), (5,-6,26), (6,-1,-26), (6,-5,26), (-1,6,26), (-1,-5,-26), (-5,6,-26), (-5,-1,26), (-6,1,26), (-6,5,-26)								
Sapph	(2,6,23)	15.434	79.22	1.036	1.1	2.991	3.39	37.39	37.54
	Equiv. Refl.: (2,-8,-23), (6,2,-23), (6,-8,23), (8,-2,-23), (8,-6,23), (-2,8,23), (-2,-6,-23), (-6,8,-23), (-6,-2,23), (-8,2,23), (-8,6,-23)								
Sapph	(1,8,17)	15.201	75.35	1.021	1.1	4.106	4.45	51.32	51.51
	Equiv. Refl.: (1,-9,-17), (8,1,-17), (8,-9,17), (9,-1,-17), (9,-8,17), (-1,9,17), (-1,-8,-17), (-8,9,-17), (-8,-1,17), (-9,1,17), (-9,8,-17)								
Sapph	(4,5,20)	15.139	74.49	1.011	1.1	4.36	4.66	54.5	54.7
	Equiv. Refl.: (4,-9,-20), (5,4,-20), (5,-9,20), (9,-4,-20), (9,-5,20), (-4,9,20), (-4,-5,-20), (-5,9,-20), (-5,-4,20), (-9,4,20), (-9,5,-20)								
Quartz	(10,1,2)	15.521	81.07	0.993	1	2.467	2.46	30.84	30.94
	Equiv. Refl.: (10,-11,-2), (-11,1,-2), (-11,10,2)								
Quartz	(1,10,-2)	15.521	81.07	0.992	1	2.467	2.46	30.84	30.94
	Equiv. Refl.: (1,-11,2)								
Quartz	(-4,11,6)	15.646	84.77	0.982	1.2	1.438	1.74	17.98	18.06
	Equiv. Refl.: (-4,-7,-6), (-7,-4,6)								
Quartz	(11,-4,-6)	15.646	84.77	0.981	1.2	1.438	1.74	17.98	18.06
	Equiv. Refl.: (11,-7,6), (-7,11,-6)								
Quartz	(10,-6,-7)	15.027	73.03	0.977	1	4.795	4.71	59.94	60.13
	Equiv. Refl.: (-4,10,-7), (-6,10,7)								
Quartz	(10,-4,7)	15.027	73.03	0.976	1	4.795	4.71	59.94	60.13
	Equiv. Refl.: (-4,-6,7), (-6,-4,-7)								
Quartz	(-6,12,3)	15.528	81.24	0.97	1.1	2.422	2.56	30.28	30.39
	Equiv. Refl.: (-6,-6,-3)								
Quartz	(12,-6,3)	15.528	81.24	0.969	1.1	2.422	2.56	30.28	30.39
	Equiv. Refl.: (12,-6,-3), (-6,12,-3), (-6,-6,3)								
Quartz	(4,0,-12)	14.947	72.06	0.968	1	5.086	5.04	63.58	63.78
	Equiv. Refl.: (4,-4,12), (-4,4,-12)								
Quartz	(-4,0,12)	14.947	72.06	0.967	1	5.086	5.04	63.58	63.78
	Equiv. Refl.: (4,4,-12), (-4,-4,12)								
Quartz	(0,4,12)	14.947	72.06	0.966	1	5.086	5.03	63.58	63.78
	Equiv. Refl.: (0,-4,-12)								
Quartz	(6,6,3)	15.528	81.24	0.961	1.1	2.422	2.56	30.28	30.39
	Equiv. Refl.: (6,-12,-3)								
Quartz	(6,6,-3)	15.528	81.24	0.96	1.1	2.422	2.56	30.28	30.39
	Equiv. Refl.: (6,-12,3), (-12,6,3), (-12,6,-3)								
Quartz	(5,7,-1)	15.255	76.16	0.955	1	3.872	3.85	48.4	48.55
	Equiv. Refl.: (5,-12,1), (7,5,1), (7,-12,-1), (-12,5,-1), (-12,7,1)								

Ei =	15.711	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(12,-5,1)	15.255	76.16	0.946	1	3.872	3.85	48.4	48.55
	Equiv. Refl.: (12,-7,-1), (-5,12,-1), (-5,-7,1), (-7,12,1), (-7,-5,-1)								
Quartz	(-9,1,7)	14.813	70.54	0.945	1	5.552	5.35	69.4	69.61
	Equiv. Refl.: (-9,8,-7)								
Quartz	(1,8,7)	14.813	70.54	0.944	1	5.552	5.35	69.4	69.61
	Equiv. Refl.: (1,-9,-7), (8,1,-7), (8,-9,7)								
Quartz	(9,-1,-7)	14.813	70.54	0.943	1	5.552	5.35	69.4	69.61
	Equiv. Refl.: (9,-8,7), (-1,9,7), (-1,-8,-7)								
Quartz	(-8,9,-7)	14.813	70.54	0.942	1	5.552	5.35	69.4	69.61
	Equiv. Refl.: (-8,-1,7)								
Quartz	(-5,11,6)	15.509	80.81	0.939	1	2.542	2.56	31.77	31.88
	Equiv. Refl.: (-5,-6,-6)								
Quartz	(-6,11,-6)	15.509	80.81	0.938	1	2.542	2.56	31.77	31.88
	Equiv. Refl.: (-6,-5,6)								
LiNbO3	(2,7,-23)	15.34	77.53	0.937	1.4	3.475	4.72	43.44	43.69
	Equiv. Refl.: (2,-9,23), (7,2,23), (7,-9,-23), (9,-2,23), (9,-7,-23), (-2,9,-23), (-2,-7,23), (-7,9,23), (-7,-2,-23), (-9,2,-23), (-9,7,23), (11,-5,-6), (11,-6,6)								
Quartz	(4,-10,7)	15.027	73.03	0.934	1	4.795	4.71	59.94	60.13
Quartz	(4,6,-7)	15.027	73.03	0.933	1	4.795	4.71	59.94	60.13
	Equiv. Refl.: (6,4,7), (6,-10,-7), (-10,4,-7), (-10,6,7)								
Quartz	(4,8,1)	15.462	79.78	0.911	1	2.832	2.77	35.39	35.5
	Equiv. Refl.: (4,-12,-1), (8,4,-1), (8,-12,1), (-12,4,1), (-12,8,-1)								
Quartz	(5,6,6)	15.509	80.81	0.903	1	2.542	2.56	31.77	31.88
	Equiv. Refl.: (5,-11,-6)								
Quartz	(6,5,-6)	15.509	80.81	0.902	1	2.542	2.56	31.77	31.88
	Equiv. Refl.: (6,-11,6)								
Quartz	(-11,5,6)	15.509	80.81	0.901	1	2.542	2.56	31.77	31.88
	Equiv. Refl.: (-11,6,-6)								
Quartz	(12,-4,-1)	15.462	79.78	0.895	1	2.832	2.77	35.39	35.5
	Equiv. Refl.: (12,-8,1), (-4,12,1), (-4,-8,-1), (-8,12,-1), (-8,-4,1)								
Quartz	(12,-5,0)	15.211	75.51	0.893	0.9	4.06	3.72	50.75	50.88
	Equiv. Refl.: (12,-7,0), (-5,12,0), (-5,-7,0), (-7,12,0), (-7,-5,0)								
Quartz	(3,8,4)	15.065	73.52	0.882	0.9	4.649	4.24	58.11	58.27
	Equiv. Refl.: (3,-11,-4), (8,3,-4), (8,-11,4), (-11,3,4), (-11,8,-4)								
Sapph	(5,6,-10)	15.124	74.29	0.876	0.9	4.419	4.15	55.24	55.39
	Equiv. Refl.: (5,-11,10), (6,5,10), (6,-11,-10), (11,-5,10), (11,-6,-10), (-5,11,-10), (-5,-6,10), (-6,11,10), (-6,-5,-10), (-11,5,-10), (-11,6,10)								
Quartz	(11,-3,-4)	15.065	73.52	0.875	0.9	4.649	4.24	58.11	58.27
	Equiv. Refl.: (11,-8,4), (-8,11,-4), (-8,-3,4)								
Quartz	(-3,11,4)	15.065	73.52	0.874	0.9	4.649	4.24	58.11	58.27
	Equiv. Refl.: (-3,-8,-4)								
Sapph	(4,7,6)	14.788	70.26	0.87	0.9	5.637	5.15	70.46	70.65
	Equiv. Refl.: (4,7,-6), (4,-11,6), (4,-11,-6), (7,4,6), (7,4,-6), (7,-11,6), (7,-11,-6), (11,-4,6), (11,-4,-6), (11,-7,6), (11,-7,-6), (-4,11,6), (-4,11,-6), (-4,-7,6), (-4,-7,-6), (-7,11,6), (-7,11,-6), (-7,-4,6), (-7,-4,-6), (-11,4,6), (-11,4,-6), (-11,7,6), (-11,7,-6)								
Sapph	(0,7,-22)	14.871	71.18	0.862	0.9	5.353	4.87	66.92	67.09
	Equiv. Refl.: (0,-7,22), (7,0,22), (7,-7,-22), (-7,0,-22), (-7,7,22)								
Quartz	(5,7,0)	15.211	75.51	0.853	0.9	4.06	3.72	50.75	50.88
	Equiv. Refl.: (5,-12,0), (7,5,0), (7,-12,0), (-12,5,0), (-12,7,0)								

Ei = Cryst	15.711 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Sapph	(5,6,11)	15.281	76.57	0.843	0.9	3.751	3.46	46.89	47.02
	Equiv. Refl.: (5,-11,-11), (6,5,-11), (6,-11,11), (11,-5,-11), (11,-6,11), (-5,11,11), (-5,-6,-11), (-6,11,-11), (-6,-5,11), (-11,5,11), (-11,6,-11)								
LiNbO3	(1,9,-17)	15.288	76.68	0.834	1.2	3.72	4.57	46.49	46.72
	Equiv. Refl.: (1,-10,17), (9,1,17), (9,-10,-17), (10,-1,17), (10,-9,-17), (-1,10,-17), (-1,-9,17), (-9,10,17), (-9,-1,-17), (-10,1,-17), (-10,9,17)								
Quartz	(3,7,7)	15.237	75.89	0.833	0.9	3.949	3.43	49.36	49.48
	Equiv. Refl.: (3,-10,-7), (7,3,-7), (7,-10,7)								
Quartz	(-10,3,7)	15.237	75.89	0.832	0.9	3.949	3.43	49.36	49.48
	Equiv. Refl.: (-10,7,-7)								
Quartz	(11,-1,2)	15.521	81.07	0.825	1	2.467	2.46	30.84	30.94
	Equiv. Refl.: (11,-10,-2)								
Quartz	(-1,11,-2)	15.521	81.07	0.824	1	2.467	2.46	30.84	30.94
	Equiv. Refl.: (-1,-10,2), (-10,11,2), (-10,-1,-2)								
Quartz	(-2,11,2)	14.964	72.26	0.822	0.8	5.027	4.2	62.84	62.98
	Equiv. Refl.: (-2,-9,-2), (-9,11,-2), (-9,-2,2)								
Quartz	(11,-2,-2)	14.964	72.26	0.821	0.8	5.027	4.2	62.84	62.98
	Equiv. Refl.: (11,-9,2)								
Quartz	(0,1,-13)	14.982	72.48	0.819	0.9	4.959	4.22	61.99	62.14
	Equiv. Refl.: (0,-1,13)								
Quartz	(-1,0,-13)	14.982	72.48	0.818	0.9	4.959	4.22	61.99	62.14
Quartz	(1,0,13)	14.982	72.48	0.817	0.9	4.959	4.22	61.99	62.14
	Equiv. Refl.: (1,-1,-13), (-1,1,13)								
Quartz	(-3,10,7)	15.237	75.89	0.808	0.9	3.949	3.43	49.36	49.48
	Equiv. Refl.: (-3,-7,-7), (-7,-3,7)								
Quartz	(4,7,-4)	14.781	70.19	0.807	0.8	5.661	4.65	70.76	70.91
	Equiv. Refl.: (4,-11,4), (-7,10,-7)								
Quartz	(5,-1,12)	15.298	76.84	0.806	0.9	3.675	3.14	45.93	46.04
	Equiv. Refl.: (5,-4,-12), (7,4,4), (7,-11,-4), (10,-3,-7), (10,-7,7), (-1,5,-12), (-1,-4,12), (-4,5,12), (-4,-1,-12), (-11,4,-4), (-11,7,4)								
LiNbO3	(1,1,33)	14.952	72.12	0.798	1.1	5.069	5.6	63.36	63.61
	Equiv. Refl.: (1,1,-33), (1,-2,33), (1,-2,-33), (2,-1,33), (2,-1,-33), (-1,2,33), (-1,2,-33), (-1,-1,33), (-1,-1,-33), (-2,1,33), (-2,1,-33)								
Quartz	(1,-5,12)	15.298	76.84	0.793	0.9	3.675	3.14	45.93	46.04
	Equiv. Refl.: (4,-5,-12)								
Quartz	(1,4,-12)	15.298	76.84	0.792	0.9	3.675	3.14	45.93	46.04
	Equiv. Refl.: (4,1,12), (-5,1,-12), (-5,4,12)								
Quartz	(2,9,2)	14.964	72.26	0.784	0.8	5.027	4.2	62.84	62.98
	Equiv. Refl.: (2,-11,-2), (9,2,-2), (9,-11,2), (-11,2,2), (-11,9,-2)								
Quartz	(11,-4,4)	14.781	70.19	0.781	0.8	5.661	4.64	70.76	70.91
	Equiv. Refl.: (11,-7,-4), (-4,11,-4), (-4,-7,4), (-7,11,4), (-7,-4,-4)								
Quartz	(0,10,3)	14.971	72.34	0.769	0.8	5.002	4.02	62.52	62.65
	Equiv. Refl.: (0,-10,-3)								
Quartz	(10,0,-3)	14.971	72.34	0.768	0.8	5.002	4.02	62.52	62.65
	Equiv. Refl.: (10,-10,3), (-10,0,3), (-10,10,-3)								
Quartz	(3,8,5)	15.453	79.61	0.745	0.8	2.881	2.25	36.02	36.09
	Equiv. Refl.: (3,-11,-5), (8,3,-5), (8,-11,5)								
Quartz	(-11,3,5)	15.453	79.61	0.744	0.8	2.881	2.25	36.02	36.09
	Equiv. Refl.: (-11,8,-5)								
Quartz	(7,4,-5)	15.176	75.01	0.733	0.8	4.208	3.2	52.6	52.7
	Equiv. Refl.: (7,-11,5)								

Ei =	15.711	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	ΘB	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(4,7,5)	15.176	75.01	0.732	0.8	4.208	3.19	52.6	52.7
	Equiv. Refl.: (4,-11,-5), (-11,4,5), (-11,7,-5)								
Quartz	(0,8,8)	14.834	70.77	0.728	0.8	5.48	4.16	68.5	68.63
	Equiv. Refl.: (0,-8,-8), (-8,0,8)								
Quartz	(8,0,-8)	14.834	70.77	0.727	0.8	5.48	4.16	68.5	68.63
	Equiv. Refl.: (8,-8,8), (-8,-8,-8)								
Quartz	(10,-2,6)	15.023	72.98	0.726	0.8	4.81	3.63	60.13	60.24
	Equiv. Refl.: (10,-8,-6), (-2,10,-6), (-2,-8,6)								
Quartz	(-8,10,6)	15.023	72.98	0.725	0.8	4.81	3.63	60.13	60.24
	Equiv. Refl.: (-8,-2,-6)								
Sapph	(1,9,-8)	14.851	70.95	0.721	0.8	5.425	4.2	67.82	67.95
	Equiv. Refl.: (1,-10,8), (9,1,8), (9,-10,-8), (10,-1,8), (10,-9,-8), (-1,10,-8), (-1,-9,8), (-9,10,8), (-9,-1,-8), (-10,1,-8), (-10,9,8)								
LiNbO3	(4,5,-25)	15.586	82.76	0.717	1.3	1.995	2.69	24.93	25.08
	Equiv. Refl.: (4,-9,25), (5,4,25), (5,-9,-25), (9,-4,25), (9,-5,-25), (-4,9,-25), (-4,-5,25), (-5,9,25), (-5,-4,-25), (-9,4,-25), (-9,5,25)								
Sapph	(2,2,30)	15.238	75.9	0.709	0.8	3.946	3.11	49.33	49.43
	Equiv. Refl.: (2,2,-30), (2,-4,30), (2,-4,-30), (4,-2,30), (4,-2,-30), (-2,4,30), (-2,4,-30), (-2,-2,30), (-2,-2,-30), (-4,2,30), (-4,2,-30)								
Quartz	(2,8,-6)	15.023	72.98	0.705	0.8	4.81	3.63	60.13	60.24
	Equiv. Refl.: (2,-10,6), (-10,2,-6), (-10,8,6)								
Quartz	(8,2,6)	15.023	72.98	0.704	0.8	4.81	3.63	60.13	60.24
	Equiv. Refl.: (8,-10,-6)								
Quartz	(5,7,1)	15.255	76.16	0.695	0.7	3.872	2.89	48.4	48.49
	Equiv. Refl.: (5,-12,-1), (7,5,-1), (7,-12,1), (-12,5,1), (-12,7,-1)								
Quartz	(11,-4,-5)	15.176	75.01	0.689	0.8	4.208	3.19	52.6	52.7
	Equiv. Refl.: (11,-7,5), (-4,11,5), (-4,-7,-5), (-7,11,-5), (-7,-4,5)								
Quartz	(12,-5,-1)	15.255	76.16	0.686	0.7	3.872	2.89	48.4	48.49
	Equiv. Refl.: (12,-7,1), (-5,12,1), (-5,-7,-1), (-7,12,-1), (-7,-5,1)								
LiNbO3	(2,10,1)	15.49	80.38	0.67	1.2	2.662	3.11	33.27	33.42
	Equiv. Refl.: (2,-12,-1), (10,2,-1), (10,-12,1), (12,-2,-1), (12,-10,1), (-2,12,1), (-2,-10,-1), (-10,12,-1), (-10,-2,1), (-12,2,1), (-12,10,-1)								
Quartz	(-3,11,5)	15.453	79.61	0.658	0.8	2.881	2.25	36.02	36.09
	Equiv. Refl.: (-3,-8,-5)								
Quartz	(11,-3,-5)	15.453	79.61	0.657	0.8	2.881	2.25	36.02	36.09
	Equiv. Refl.: (11,-8,5), (-8,11,-5), (-8,-3,5)								
Sapph	(4,5,-19)	14.842	70.86	0.654	0.7	5.453	3.87	68.16	68.27
	Equiv. Refl.: (4,-9,19), (5,4,19), (5,-9,-19), (9,-4,19), (9,-5,-19), (-4,9,-19), (-4,-5,19), (-5,9,19), (-5,-4,-19), (-9,4,-19), (-9,5,19)								
Quartz	(7,-7,-10)	15.349	77.67	0.64	0.7	3.434	2.43	42.92	42.99
	Equiv. Refl.: (-7,7,10)								
Quartz	(7,0,10)	15.349	77.67	0.639	0.7	3.434	2.43	42.92	42.99
	Equiv. Refl.: (-7,0,-10)								
Quartz	(0,7,-10)	15.349	77.67	0.637	0.7	3.434	2.42	42.92	42.99
	Equiv. Refl.: (0,-7,10)								
Sapph	(0,2,-32)	15.567	82.23	0.629	0.8	2.143	1.69	26.79	26.84
	Equiv. Refl.: (0,-2,32), (2,0,32), (2,-2,-32), (-2,0,-32), (-2,2,32)								
LiNbO3	(3,4,29)	15.483	80.22	0.624	1.1	2.709	3	33.86	33.99
	Equiv. Refl.: (3,-7,-29), (4,3,-29), (4,-7,29), (7,-3,-29), (7,-4,29), (-3,7,29), (-3,-4,-29), (-4,7,-29), (-4,-3,29), (-7,3,29), (-7,4,-29)								

Ei =	15.711	keV						ΔEg	ΔEt
Cryst	Ref	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(3,9,9)	15.57	82.31	0.62	1.2	2.122	2.55	26.53	26.65
	Equiv. Refl.: (3,9,-9), (3,-12,9), (3,-12,-9), (9,3,9), (9,3,-9), (9,-12,9), (9,-12,-9), (12,-3,9), (12,-3,-9), (12,-9,9), (12,-9,-9), (-3,12,9), (-3,12,-9), (-3,-9,9), (-3,-9,-9), (-9,12,9), (-9,12,-9), (-9,-3,9), (-9,-3,-9), (-12,3,9), (-12,3,-9), (-12,9,9), (-12,9,-9)								
LiNbO3	(5,7,13)	15.638	84.47	0.612	1.4	1.522	2.06	19.02	19.13
	Equiv. Refl.: (5,-12,-13), (7,5,-13), (7,-12,13), (12,-5,-13), (12,-7,13), (-5,12,13), (-5,-7,-13), (-7,12,-13), (-7,-5,13), (-12,5,13), (-12,7,-13)								
LiNbO3	(2,4,-29)	14.91	71.63	0.61	0.9	5.218	4.72	65.23	65.4
	Equiv. Refl.: (2,-6,29), (4,2,29), (4,-6,-29), (6,-2,29), (6,-4,-29), (-2,6,-29), (-2,-4,29), (-4,6,29), (-4,-2,-29), (-6,2,-29), (-6,4,29)								
Quartz	(6,-2,11)	14.786	70.24	0.601	0.6	5.643	3.48	70.54	70.62
	Equiv. Refl.: (6,-4,-11)								
Quartz	(-2,6,-11)	14.786	70.24	0.6	0.6	5.643	3.48	70.54	70.62
	Equiv. Refl.: (-2,-4,11)								
Quartz	(-4,6,11)	14.786	70.24	0.599	0.6	5.643	3.47	70.54	70.62
	Equiv. Refl.: (-4,-2,-11)								
Quartz	(7,-1,-10)	14.928	71.84	0.595	0.6	5.155	3.21	64.44	64.52
Quartz	(7,-6,10)	14.928	71.84	0.594	0.6	5.155	3.21	64.44	64.52
	Equiv. Refl.: (-1,7,10), (-1,-6,-10), (-6,7,-10), (-6,-1,10)								
Quartz	(-3,10,-7)	15.237	75.89	0.592	0.6	3.949	2.53	49.36	49.43
Quartz	(-3,-7,7)	15.237	75.89	0.591	0.6	3.949	2.53	49.36	49.43
	Equiv. Refl.: (-7,10,7), (-7,-3,-7)								
Quartz	(10,-3,7)	15.237	75.89	0.589	0.6	3.949	2.52	49.36	49.42
	Equiv. Refl.: (10,-7,-7)								
Quartz	(11,-2,-1)	14.831	70.73	0.586	0.6	5.491	3.36	68.64	68.72
	Equiv. Refl.: (11,-9,1), (-2,11,1), (-2,-9,-1), (-9,11,-1), (-9,-2,1)								
Sapph	(1,7,21)	15.148	74.62	0.581	0.7	4.322	2.84	54.03	54.1
	Equiv. Refl.: (1,7,-21), (1,-8,21), (1,-8,-21), (7,1,21), (7,1,-21), (7,-8,21), (7,-8,-21), (8,-1,21), (8,-1,-21), (8,-7,21), (8,-7,-21), (-1,8,21), (-1,8,-21), (-1,-7,21), (-1,-7,-21), (-7,8,21), (-7,8,-21), (-7,-1,21), (-7,-1,-21), (-8,1,21), (-8,1,-21), (-8,7,21), (-8,7,-21)								
Quartz	(10,-1,-5)	15.036	73.14	0.577	0.6	4.762	2.89	59.53	59.6
	Equiv. Refl.: (10,-9,5)								
Quartz	(-1,10,5)	15.036	73.14	0.576	0.6	4.762	2.89	59.53	59.6
	Equiv. Refl.: (-1,-9,-5), (-9,10,-5), (-9,-1,5)								
Quartz	(3,7,-7)	15.237	75.89	0.571	0.6	3.949	2.53	49.36	49.43
	Equiv. Refl.: (3,-10,7)								
Quartz	(7,3,7)	15.237	75.89	0.57	0.6	3.949	2.53	49.36	49.43
	Equiv. Refl.: (7,-10,-7)								
Quartz	(-10,3,-7)	15.237	75.89	0.569	0.6	3.949	2.52	49.36	49.42
	Equiv. Refl.: (-10,7,7)								
Quartz	(1,6,10)	14.928	71.84	0.567	0.6	5.155	3.21	64.44	64.52
	Equiv. Refl.: (1,-7,-10), (6,1,-10), (6,-7,10), (-7,1,10), (-7,6,-10)								
Quartz	(2,9,1)	14.831	70.73	0.559	0.6	5.491	3.36	68.64	68.72
	Equiv. Refl.: (2,-11,-1), (9,2,-1), (9,-11,1), (-11,2,1), (-11,9,-1)								
Quartz	(-6,2,-11)	14.786	70.24	0.558	0.6	5.643	3.48	70.54	70.62
	Equiv. Refl.: (-6,4,11)								
Quartz	(2,4,-11)	14.786	70.24	0.557	0.6	5.643	3.48	70.54	70.62
	Equiv. Refl.: (2,-6,11)								
Quartz	(4,2,11)	14.786	70.24	0.556	0.6	5.643	3.47	70.54	70.62
	Equiv. Refl.: (4,-6,-11)								

Ei =	15.711	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(4,6,19)	14.803	70.43	0.551	0.8	5.586	4.62	69.83	69.98
	Equiv. Refl.: (4,-10,-19), (6,4,-19), (6,-10,19), (10,-4,-19), (10,-6,19), (-4,10,19), (-4,-6,-19), (-6,10,-19), (-6,-4,19), (-10,4,19), (-10,6,-19)								
Quartz	(1,9,5)	15.036	73.14	0.542	0.6	4.762	2.89	59.53	59.6
	Equiv. Refl.: (1,-10,-5), (9,1,-5), (9,-10,5), (-10,1,5), (-10,9,-5)								
Quartz	(2,9,-1)	14.831	70.73	0.537	0.6	5.491	3.09	68.64	68.71
	Equiv. Refl.: (2,-11,1), (9,2,1), (9,-11,-1), (-11,2,-1), (-11,9,1)								
LiNbO3	(1,10,9)	15.192	75.24	0.527	0.9	4.14	3.59	51.75	51.87
	Equiv. Refl.: (1,10,-9), (1,-11,9), (1,-11,-9), (10,1,9), (10,1,-9), (10,-11,9), (10,-11,-9), (11,-1,9), (11,-1,-9), (11,-10,9), (11,-10,-9), (-1,11,9), (-1,11,-9), (-1,-10,9), (-1,-10,-9), (-10,11,9), (-10,11,-9), (-10,-1,9), (-10,-1,-9), (-11,1,9), (-11,1,-9), (-11,10,9), (-11,10,-9)								
LiNbO3	(6,6,9)	15	72.7	0.526	0.8	4.893	4.05	61.16	61.3
	Equiv. Refl.: (6,6,-9), (6,-12,9), (6,-12,-9), (12,-6,9), (12,-6,-9), (-6,12,9), (-6,12,-9), (-6,-6,9), (-6,-6,-9), (-12,6,9), (-12,6,-9)								
Quartz	(8,0,8)	14.834	70.77	0.525	0.6	5.48	3.1	68.5	68.57
	Equiv. Refl.: (8,-8,-8), (-8,0,-8), (-8,8,8)								
Quartz	(0,8,-8)	14.834	70.77	0.524	0.6	5.48	3.1	68.5	68.57
	Equiv. Refl.: (0,-8,8)								
Sapph	(0,5,28)	15.336	77.45	0.514	0.6	3.497	2.14	43.71	43.77
	Equiv. Refl.: (0,-5,-28), (5,0,-28), (5,-5,28), (-5,0,28), (-5,5,-28)								
Quartz	(11,-2,1)	14.831	70.73	0.506	0.6	5.491	3.09	68.64	68.71
	Equiv. Refl.: (11,-9,-1), (-2,11,-1), (-2,-9,1)								
Quartz	(-9,11,1)	14.831	70.73	0.505	0.6	5.491	3.09	68.64	68.71
	Equiv. Refl.: (-9,-2,-1)								
Sapph	(2,7,19)	15.293	76.76	0.501	0.6	3.698	2.2	46.23	46.28
	Equiv. Refl.: (2,-9,-19), (7,2,-19), (7,-9,19), (9,-2,-19), (9,-7,19), (-2,9,19), (-2,-7,-19), (-7,9,-19), (-7,-2,19), (-9,2,19), (-9,7,-19)								
Quartz	(-5,-1,-11)	15	72.7	0.495	0.5	4.894	2.65	61.18	61.24
Quartz	(-5,6,11)	15	72.7	0.494	0.5	4.894	2.65	61.18	61.24
Quartz	(6,-1,11)	15	72.7	0.493	0.5	4.894	2.65	61.18	61.24
	Equiv. Refl.: (6,-5,-11), (-1,6,-11), (-1,-5,11)								
Quartz	(5,1,11)	15	72.7	0.492	0.5	4.894	2.65	61.18	61.24
	Equiv. Refl.: (5,-6,-11)								
Quartz	(1,5,-11)	15	72.7	0.491	0.5	4.894	2.65	61.18	61.24
	Equiv. Refl.: (1,-6,11), (-6,1,-11), (-6,5,11)								
Sapph	(5,5,18)	15.606	83.38	0.485	0.7	1.823	1.22	22.79	22.82
	Equiv. Refl.: (5,5,-18), (5,-10,18), (5,-10,-18), (10,-5,18), (10,-5,-18), (-5,10,18), (-5,10,-18), (-5,-5,18), (-5,-5,-18), (-10,5,18), (-10,5,-18)								
Quartz	(5,0,12)	15.573	82.41	0.481	0.6	2.095	1.27	26.19	26.22
	Equiv. Refl.: (-5,0,-12)								
Quartz	(5,-5,-12)	15.573	82.41	0.48	0.6	2.095	1.27	26.19	26.22
	Equiv. Refl.: (6,6,1), (6,6,-1), (6,-12,1), (6,-12,-1), (-5,5,12), (-12,6,1), (-12,6,-1)								
Quartz	(0,5,-12)	15.573	82.41	0.477	0.6	2.095	1.26	26.19	26.22
	Equiv. Refl.: (0,-5,12)								
Quartz	(1,8,-7)	14.813	70.54	0.468	0.5	5.552	2.7	69.4	69.45
	Equiv. Refl.: (1,-9,7), (-9,1,-7), (-9,8,7)								
Quartz	(8,1,7)	14.813	70.54	0.467	0.5	5.552	2.7	69.4	69.45
	Equiv. Refl.: (8,-9,-7)								
Quartz	(8,-9,-8)	15.465	79.85	0.46	0.5	2.813	1.45	35.17	35.2
	Equiv. Refl.: (-9,1,-8), (-9,8,8)								
Quartz	(8,1,8)	15.465	79.85	0.459	0.5	2.813	1.45	35.17	35.2

Ei =	15.711	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	ΘB	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(1,8,-8)	15.465	79.85	0.458	0.5	2.813	1.45	35.17	35.2
	Equiv. Refl.: (1,-9,8)								
Quartz	(11,-1,0)	15.35	77.7	0.446	0.5	3.426	1.7	42.82	42.86
	Equiv. Refl.: (11,-10,0), (-1,11,0), (-1,-10,0), (-10,11,0), (-10,-1,0)								
Sapph	(2,6,-22)	15.098	73.94	0.441	0.5	4.522	2.35	56.53	56.58
	Equiv. Refl.: (2,-8,22), (6,2,22), (6,-8,-22), (8,-2,22), (8,-6,-22), (-2,8,-22), (-2,-6,22), (-6,8,22), (-6,-2,-22), (-8,2,-22), (-8,6,22)								
LiNbO3	(4,7,15)	14.993	72.62	0.439	0.7	4.918	3.6	61.48	61.59
	Equiv. Refl.: (4,7,-15), (4,-11,15), (4,-11,-15), (7,4,15), (7,4,-15), (7,-11,15), (7,-11,-15), (11,-4,15), (11,-4,-15), (11,-7,15), (11,-7,-15), (-4,11,15), (-4,11,-15), (-4,-7,15), (-4,-7,-15), (-7,11,15), (-7,11,-15), (-7,-4,15), (-7,-4,-15), (-11,4,15), (-11,4,-15), (-11,7,15), (-11,7,-15)								
Quartz	(11,-5,5)	15.036	73.14	0.435	0.5	4.762	2.3	59.53	59.57
	Equiv. Refl.: (11,-6,-5), (-5,11,-5), (-5,-6,5), (-6,11,5), (-6,-5,-5)								
Quartz	(5,6,-5)	15.036	73.14	0.424	0.5	4.762	2.3	59.53	59.57
	Equiv. Refl.: (5,-11,5), (6,5,5), (6,-11,-5), (-11,5,-5), (-11,6,5)								
Sapph	(2,3,-28)	14.886	71.35	0.422	0.5	5.301	2.59	66.27	66.32
	Equiv. Refl.: (2,-5,28), (3,2,28), (3,-5,-28), (5,-2,28), (5,-3,-28), (-2,5,-28), (-2,-3,28), (-3,5,28), (-3,-2,-28), (-5,2,-28), (-5,3,28)								
Quartz	(9,-1,7)	14.813	70.54	0.419	0.5	5.552	2.7	69.4	69.45
Quartz	(9,-8,-7)	14.813	70.54	0.418	0.5	5.552	2.7	69.4	69.45
	Equiv. Refl.: (-1,9,-7), (-1,-8,7)								
Quartz	(2,3,-12)	15.159	74.76	0.417	0.5	4.279	2.04	53.49	53.53
	Equiv. Refl.: (2,-5,12), (-2,5,-12), (-2,-3,12), (-8,9,7), (-8,-1,-7)								
Quartz	(3,2,12)	15.159	74.76	0.416	0.5	4.279	2.04	53.49	53.53
	Equiv. Refl.: (3,-5,-12), (-3,5,12), (-3,-2,-12)								
Sapph	(2,8,15)	15.536	81.44	0.415	0.6	2.364	1.33	29.55	29.58
	Equiv. Refl.: (2,8,-15), (2,-10,15), (2,-10,-15), (8,2,15), (8,2,-15), (8,-10,15), (8,-10,-15), (10,-2,15), (10,-2,-15), (10,-8,15), (10,-8,-15), (-2,10,15), (-2,10,-15), (-2,-8,15), (-2,-8,-15), (-8,10,15), (-8,10,-15), (-8,-2,15), (-8,-2,-15), (-10,2,15), (-10,2,-15), (-10,8,15), (-10,8,-15), (5,-2,12), (5,-3,-12), (-5,2,-12), (-5,3,12)								
Sapph	(2,3,29)	15.316	77.13	0.407	0.5	3.59	1.82	44.87	44.91
	Equiv. Refl.: (2,-5,-29), (3,2,-29), (3,-5,29), (5,-2,-29), (5,-3,29), (-2,5,29), (-2,-3,-29), (-3,5,-29), (-3,-2,29), (-5,2,29), (-5,3,-29)								
Quartz	(-7,1,-10)	14.928	71.84	0.405	0.4	5.155	2.14	64.44	64.47
Quartz	(-7,6,10)	14.928	71.84	0.404	0.4	5.155	2.14	64.44	64.47
Quartz	(1,6,-10)	14.928	71.84	0.403	0.4	5.155	2.14	64.44	64.47
	Equiv. Refl.: (1,-7,10), (6,1,10), (6,-7,-10)								
Quartz	(0,3,13)	15.539	81.51	0.401	0.5	2.346	1.2	29.33	29.35
	Equiv. Refl.: (0,-3,-13), (3,0,-13)								
Quartz	(3,-3,13)	15.539	81.51	0.4	0.5	2.346	1.2	29.33	29.35
	Equiv. Refl.: (-3,0,13), (-3,3,-13)								
Quartz	(9,2,4)	15.482	80.21	0.397	0.5	2.711	1.3	33.88	33.91
	Equiv. Refl.: (9,-11,-4)								
Sapph	(4,7,9)	15.131	74.38	0.396	0.5	4.393	2.1	54.91	54.95
	Equiv. Refl.: (4,7,-9), (4,-11,9), (4,-11,-9), (7,4,9), (7,4,-9), (7,-11,9), (7,-11,-9), (11,-4,9), (11,-4,-9), (11,-7,9), (11,-7,-9), (-4,11,9), (-4,11,-9), (-4,-7,9), (-4,-7,-9), (-7,11,9), (-7,11,-9), (-7,-4,9), (-7,-4,-9), (-11,4,9), (-11,4,-9), (-11,7,9), (-11,7,-9), (2,9,-4), (2,-11,4), (-11,2,-4), (-11,9,4)								
Sapph	(3,5,-23)	15.212	75.52	0.395	0.5	4.056	1.96	50.7	50.74
	Equiv. Refl.: (3,-8,23), (5,3,23), (5,-8,-23), (8,-3,23), (8,-5,-23), (-3,8,-23), (-3,-5,23), (-5,8,23), (-5,-3,-23), (-8,3,-23), (-8,5,23), (1,10,0), (1,-11,0), (10,1,0), (10,-11,0), (-6,12,1), (-11,1,0), (-11,10,0)								

Ei =	15.711	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(12,-6,1)	15.185	75.13	0.394	0.5	4.172	2.07	52.15	52.19
Equiv. Refl.: (12,-6,-1), (-6,12,-1), (-6,-6,1), (-6,-6,-1)									
Quartz	(9,-1,8)	15.465	79.85	0.391	0.5	2.813	1.45	35.17	35.2
Quartz	(9,-8,-8)	15.465	79.85	0.39	0.5	2.813	1.45	35.17	35.2
Equiv. Refl.: (-8,9,8), (-8,-1,-8)									
Quartz	(-1,9,-8)	15.465	79.85	0.389	0.5	2.813	1.45	35.17	35.2
Equiv. Refl.: (-1,-8,8)									
Quartz	(8,2,-6)	15.023	72.98	0.382	0.4	4.81	2.02	60.13	60.16
Equiv. Refl.: (8,-10,6)									
Quartz	(2,8,6)	15.023	72.98	0.381	0.4	4.81	2.02	60.13	60.16
Equiv. Refl.: (2,-10,-6), (-10,2,6), (-10,8,-6)									
Quartz	(0,10,4)	15.275	76.47	0.374	0.4	3.78	1.68	47.25	47.28
Equiv. Refl.: (0,-10,-4), (10,0,-4), (10,-10,4), (-10,0,4), (-10,10,-4)									
Quartz	(-2,-9,4)	15.482	80.21	0.368	0.5	2.711	1.3	33.88	33.91
Equiv. Refl.: (-9,11,4), (-9,-2,-4)									
Quartz	(11,-2,4)	15.482	80.21	0.367	0.5	2.711	1.3	33.88	33.91
Equiv. Refl.: (11,-9,-4), (-2,11,-4)									
Sapph	(4,7,12)	15.598	83.12	0.365	0.5	1.897	1.03	23.71	23.73
Equiv. Refl.: (4,7,-12), (4,-11,12), (4,-11,-12), (7,4,12), (7,4,-12), (7,-11,12), (7,-11,-12), (11,-4,12), (11,-4,-12), (11,-7,12), (11,-7,-12), (-4,11,12), (-4,11,-12), (-4,-7,12), (-4,-7,-12), (-7,11,12), (-7,11,-12), (-7,-4,12), (-7,-4,-12), (-11,4,12), (-11,4,-12), (-11,7,12), (-11,7,-12)									
LiNbO3	(2,9,-13)	15.262	76.28	0.361	0.7	3.837	2.68	47.96	48.04
Equiv. Refl.: (2,-11,13), (9,2,13), (9,-11,-13), (11,-2,13), (11,-9,-13), (-2,11,-13), (-2,-9,13), (-9,11,13), (-9,-2,-13), (-11,2,-13), (-11,9,13)									
Quartz	(5,-2,-12)	15.159	74.76	0.358	0.4	4.279	1.77	53.49	53.52
Equiv. Refl.: (5,-3,12)									
Quartz	(-2,-3,-12)	15.159	74.76	0.356	0.4	4.279	1.75	53.49	53.52
Equiv. Refl.: (-3,5,-12), (-3,-2,12)									
Quartz	(-2,5,12)	15.159	74.76	0.355	0.4	4.279	1.75	53.49	53.52
Quartz	(10,-1,5)	15.036	73.14	0.351	0.4	4.762	1.85	59.53	59.55
Equiv. Refl.: (10,-9,-5), (-1,10,-5), (-1,-9,5), (-9,10,5), (-9,-1,-5)									
Sapph	(1,6,25)	15.482	80.21	0.35	0.5	2.711	1.3	33.88	33.91
Equiv. Refl.: (1,-7,-25), (3,8,7), (3,-11,-7), (6,1,-25), (6,-7,25), (7,-1,-25), (7,-6,25), (8,3,-7), (8,-11,7), (11,-3,-7), (11,-8,7), (-1,7,25), (-1,-6,-25), (-3,11,7), (-3,-8,-7), (-6,7,-25), (-6,-1,25), (-7,1,25), (-7,6,-25), (-8,11,-7), (-8,-3,7), (-11,3,7), (-11,8,-7), (-8,10,-6), (-8,-2,6)									
Quartz	(0,9,-6)	14.809	70.49	0.349	0.4	5.566	2.21	69.57	69.61
Equiv. Refl.: (0,-9,6), (9,0,6), (9,-9,-6), (10,-2,-6), (10,-8,6), (-2,10,6), (-2,-8,-6), (-9,0,-6)									
Quartz	(-9,9,6)	14.809	70.49	0.348	0.4	5.566	2.21	69.57	69.61
Sapph	(3,5,22)	14.871	71.18	0.343	0.4	5.353	2.21	66.92	66.95
Equiv. Refl.: (3,-8,-22), (5,3,-22), (5,-8,22), (8,-3,-22), (8,-5,22), (-3,8,22), (-3,-5,-22), (-5,8,-22), (-5,-3,22), (-8,3,22), (-8,5,-22)									
Quartz	(-5,2,12)	15.159	74.76	0.342	0.4	4.279	1.77	53.49	53.52
Equiv. Refl.: (-5,3,-12)									
Quartz	(2,3,12)	15.159	74.76	0.339	0.4	4.279	1.75	53.49	53.52
Equiv. Refl.: (2,-5,-12), (3,2,-12), (3,-5,12), (-4,-4,-10)									
Quartz	(-4,8,10)	15.279	76.54	0.338	0.4	3.761	1.4	47.01	47.03
Equiv. Refl.: (-4,8,-10), (-4,-4,10)									
Quartz	(8,-4,10)	15.279	76.54	0.337	0.4	3.761	1.4	47.01	47.03
Equiv. Refl.: (8,-4,-10)									
Quartz	(0,6,11)	15.35	77.69	0.334	0.4	3.429	1.41	42.86	42.88
Equiv. Refl.: (0,-6,-11), (-6,0,11)									

Ei =	15.711	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(6,0,-11)	15.35	77.69	0.333	0.4	3.429	1.41	42.86	42.88
	Equiv. Refl.: (6,-6,11), (-6,6,-11)								
LiNbO3	(4,5,23)	14.957	72.18	0.328	0.6	5.05	3.04	63.12	63.19
	Equiv. Refl.: (4,-9,-23), (5,4,-23), (5,-9,23), (9,-4,-23), (9,-5,23), (-4,9,23), (-4,-5,-23), (-5,9,-23), (-5,-4,23), (-9,4,23), (-9,5,-23), (7,-1,10), (7,-6,-10)								
Quartz	(-1,7,-10)	14.928	71.84	0.327	0.4	5.155	2.14	64.44	64.47
	Equiv. Refl.: (-1,-6,10), (-6,7,10), (-6,-1,-10)								
LiNbO3	(3,9,3)	15.1	73.97	0.325	0.6	4.514	2.8	56.42	56.49
	Equiv. Refl.: (3,9,-3), (3,-12,3), (3,-12,-3), (9,3,3), (9,3,-3), (9,-12,3), (9,-12,-3), (12,-3,3), (12,-3,-3), (12,-9,3), (12,-9,-3), (-3,12,3), (-3,12,-3), (-3,-9,3), (-3,-9,-3), (-9,12,3), (-9,12,-3), (-9,-3,3), (-9,-3,-3), (-12,3,3), (-12,3,-3), (-12,9,3), (-12,9,-3)								
Sapph	(1,2,-31)	15.322	77.22	0.32	0.4	3.562	1.49	44.53	44.55
	Equiv. Refl.: (1,-3,31), (2,1,31), (2,-3,-31), (3,-1,31), (3,-2,-31), (-1,3,-31), (-1,-2,31), (-2,3,31), (-2,-1,-31), (-3,1,-31), (-3,2,31)								
Sapph	(3,8,-5)	15.008	72.79	0.314	0.4	4.866	1.9	60.82	60.85
	Equiv. Refl.: (3,-11,5), (8,3,5), (8,-11,-5), (11,-3,5), (11,-8,-5), (-3,11,-5), (-3,-8,5), (-8,11,5), (-8,-3,-5), (-11,3,-5), (-11,8,5), (1,9,-5), (1,-10,5), (-10,1,-5), (-10,9,5)								
Quartz	(9,1,5)	15.036	73.14	0.313	0.4	4.762	1.85	59.53	59.55
	Equiv. Refl.: (9,-10,-5)								
Sapph	(1,9,13)	15.635	84.37	0.308	0.5	1.549	0.79	19.37	19.38
	Equiv. Refl.: (1,-10,-13), (9,1,-13), (9,-10,13), (10,-1,-13), (10,-9,13), (-1,10,13), (-1,-9,-13), (-9,10,-13), (-9,-1,13), (-10,1,13), (-10,9,-13)								
Quartz	(1,10,-1)	15.393	78.45	0.3	0.4	3.209	1.19	40.12	40.14
	Equiv. Refl.: (1,-11,1), (10,1,1), (10,-11,-1), (-11,1,-1), (-11,10,1)								
LiNbO3	(2,9,11)	14.945	72.03	0.294	0.6	5.096	2.85	63.69	63.76
	Equiv. Refl.: (2,-11,-11), (9,2,-11), (9,-11,11), (11,-2,-11), (11,-9,11), (-2,11,11), (-2,-9,-11), (-9,11,-11), (-9,-2,11), (-11,2,11), (-11,9,-11)								
Sapph	(3,8,1)	14.825	70.66	0.292	0.4	5.514	1.98	68.92	68.95
	Equiv. Refl.: (3,-11,-1), (8,3,-1), (8,-11,1), (11,-3,-1), (11,-8,1), (-3,11,1), (-3,-8,-1), (-8,11,-1), (-8,-3,1), (-11,3,1), (-11,8,-1)								
LiNbO3	(1,5,29)	15.103	74.01	0.288	0.6	4.501	2.59	56.27	56.33
	Equiv. Refl.: (1,-6,-29), (5,1,-29), (5,-6,29), (6,-1,-29), (6,-5,29), (-1,6,29), (-1,-5,-29), (-5,6,-29), (-5,-1,29), (-6,1,29), (-6,5,-29), (1,0,-13), (1,-1,13), (-1,0,13), (-1,1,-13)								
Quartz	(0,1,13)	14.982	72.48	0.287	0.3	4.959	1.7	61.99	62.02
	Equiv. Refl.: (0,-1,-13)								
LiNbO3	(5,7,-11)	15.328	77.32	0.284	0.6	3.535	2.19	44.19	44.24
	Equiv. Refl.: (5,-12,11), (7,5,11), (7,-12,-11), (12,-5,11), (12,-7,-11), (-5,12,-11), (-5,-7,11), (-7,12,11), (-7,-5,-11), (-12,5,-11), (-12,7,11)								
Quartz	(-5,10,7)	14.956	72.16	0.282	0.3	5.055	1.7	63.19	63.21
	Equiv. Refl.: (-5,-5,-7)								
Quartz	(10,-5,7)	14.956	72.16	0.281	0.3	5.055	1.7	63.19	63.21
	Equiv. Refl.: (10,-5,-7), (-5,10,-7), (-5,-5,7)								
Quartz	(5,5,7)	14.956	72.16	0.28	0.3	5.055	1.7	63.19	63.21
	Equiv. Refl.: (5,-10,7), (5,-10,-7), (-10,5,-7)								
Quartz	(5,5,-7)	14.956	72.16	0.279	0.3	5.055	1.7	63.19	63.21
	Equiv. Refl.: (-10,5,7)								
LiNbO3	(5,6,17)	15.288	76.68	0.276	0.6	3.72	2.22	46.49	46.55
	Equiv. Refl.: (5,-11,-17), (6,5,-17), (6,-11,17), (11,-5,-17), (11,-6,17), (-5,11,17), (-5,-6,-17), (-6,11,-17), (-6,-5,17), (-11,5,17), (-11,6,-17)								

Ei =	15.711	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(5,4,-9)	15.364	77.94	0.274	0.3	3.357	1.15	41.96	41.98
	Equiv. Refl.: (5,-9,9), (11,-1,1), (11,-10,-1), (-1,11,-1), (-1,-10,1), (-10,11,1), (-10,-1,-1)								
Quartz	(4,5,9)	15.364	77.94	0.272	0.3	3.357	1.14	41.96	41.98
	Equiv. Refl.: (4,-9,-9), (-9,4,9)								
Quartz	(-1,6,11)	15	72.7	0.271	0.3	4.894	1.55	61.18	61.2
	Equiv. Refl.: (-1,-5,-11), (-9,5,-9)								
Quartz	(6,-1,-11)	15	72.7	0.27	0.3	4.894	1.55	61.18	61.2
	Equiv. Refl.: (6,-5,11), (-5,6,-11), (-5,-1,11)								
Quartz	(4,4,10)	15.279	76.54	0.268	0.4	3.761	1.4	47.01	47.03
	Equiv. Refl.: (4,-8,10), (4,-8,-10)								
Quartz	(4,4,-10)	15.279	76.54	0.267	0.4	3.761	1.4	47.01	47.03
	Equiv. Refl.: (-8,4,10)								
Quartz	(-8,4,-10)	15.279	76.54	0.266	0.4	3.761	1.4	47.01	47.03
LiNbO3	(3,8,-17)	15.663	85.53	0.265	0.9	1.228	1.15	15.36	15.4
	Equiv. Refl.: (3,-11,17), (8,3,17), (8,-11,-17), (11,-3,17), (11,-8,-17), (-3,11,-17), (-3,-8,17), (-8,11,17), (-8,-3,-17), (-11,3,-17), (-11,8,17)								
LiNbO3	(3,7,-19)	14.998	72.67	0.253	0.5	4.903	2.53	61.29	61.34
	Equiv. Refl.: (3,-10,19), (7,3,19), (7,-10,-19), (10,-3,19), (10,-7,-19), (-3,10,-19), (-3,-7,19), (-7,10,19), (-7,-3,-19), (-10,3,-19), (-10,7,19)								
Quartz	(1,5,11)	15	72.7	0.251	0.3	4.894	1.55	61.18	61.2
Quartz	(1,-6,-11)	15	72.7	0.25	0.3	4.894	1.55	61.18	61.2
	Equiv. Refl.: (5,1,-11), (5,-6,11), (-6,1,11), (-6,5,-11)								
Quartz	(4,8,0)	15.419	78.94	0.249	0.3	3.07	0.96	38.38	38.39
	Equiv. Refl.: (4,-12,0), (8,4,0), (8,-12,0), (-5,9,-9), (-5,-4,9), (-12,4,0), (-12,8,0)								
Quartz	(2,9,-3)	15.182	75.09	0.246	0.3	4.184	1.3	52.3	52.31
	Equiv. Refl.: (2,-11,3), (9,2,3), (9,-4,-9), (9,-5,9), (9,-11,-3), (-4,9,9), (-4,-5,-9), (-11,2,-3), (-11,9,3)								
Quartz	(11,-2,3)	15.182	75.09	0.243	0.3	4.184	1.3	52.3	52.31
	Equiv. Refl.: (11,-9,-3)								
Quartz	(-2,11,-3)	15.182	75.09	0.242	0.3	4.184	1.3	52.3	52.31
	Equiv. Refl.: (-2,-9,3), (-9,11,3), (-9,-2,-3)								
Quartz	(0,9,-7)	15.376	78.14	0.241	0.3	3.299	1.06	41.23	41.25
	Equiv. Refl.: (0,-9,7)								
Sapph	(5,5,15)	14.866	71.12	0.24	0.3	5.371	1.67	67.14	67.16
	Equiv. Refl.: (5,5,-15), (5,-10,15), (5,-10,-15), (10,-5,15), (10,-5,-15), (-5,10,15), (-5,10,-15), (-5,-5,15), (-5,-5,-15), (-10,5,15), (-10,5,-15)								
Quartz	(9,0,7)	15.376	78.14	0.239	0.3	3.299	1.06	41.23	41.25
	Equiv. Refl.: (9,-9,-7), (-9,0,-7), (-9,9,7)								
Quartz	(-2,3,-13)	15.401	78.61	0.237	0.3	3.166	0.98	39.57	39.58
	Equiv. Refl.: (-2,-1,13)								
Quartz	(3,-1,-13)	15.401	78.61	0.236	0.3	3.166	0.97	39.57	39.58
Quartz	(3,-2,13)	15.401	78.61	0.235	0.3	3.166	0.97	39.57	39.58
Quartz	(-1,3,13)	15.401	78.61	0.234	0.3	3.166	0.97	39.57	39.58
	Equiv. Refl.: (-1,-2,-13)								
Quartz	(2,1,-13)	15.401	78.61	0.213	0.3	3.166	0.98	39.57	39.58
	Equiv. Refl.: (2,-3,13)								
Quartz	(-3,1,13)	15.401	78.61	0.212	0.3	3.166	0.97	39.57	39.58
	Equiv. Refl.: (-3,2,-13)								
Quartz	(10,-4,-7)	15.027	73.03	0.211	0.3	4.795	1.27	59.94	59.95
	Equiv. Refl.: (10,-6,7), (-6,10,-7), (-6,-4,7)								
Quartz	(1,2,13)	15.401	78.61	0.21	0.3	3.166	0.97	39.57	39.58
	Equiv. Refl.: (1,-3,-13), (-4,-6,-7)								

Ei =	15.711	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Quartz	(-4,10,7)	15.027	73.03	0.209	0.3	4.795	1.26	59.94	59.95
LiNbO3	(5,7,7)	14.851	70.95	0.208	0.4	5.424	2.41	67.81	67.85
	Equiv. Refl.: (5,-12,-7), (7,5,-7), (7,-12,7), (12,-5,-7), (12,-7,7), (-5,12,7), (-5,-7,-7), (-7,12,-7), (-7,-5,7), (-12,5,7), (-12,7,-7)								
Sapph	(3,8,-8)	15.301	76.88	0.205	0.3	3.662	1.1	45.77	45.79
	Equiv. Refl.: (3,-11,8), (8,3,8), (8,-11,-8), (11,-3,8), (11,-8,-8), (-3,11,-8), (-3,-8,8), (-8,11,8), (-8,-3,-8), (-11,3,-8), (-11,8,8)								
Quartz	(12,-4,0)	15.419	78.94	0.204	0.3	3.07	0.96	38.38	38.39
	Equiv. Refl.: (12,-8,0), (-4,12,0), (-4,-8,0), (-8,12,0), (-8,-4,0)								
Quartz	(6,4,-7)	15.027	73.03	0.202	0.3	4.795	1.27	59.94	59.95
	Equiv. Refl.: (6,-10,7), (-10,4,7), (-10,6,-7)								
Quartz	(4,6,7)	15.027	73.03	0.2	0.3	4.795	1.26	59.94	59.95
	Equiv. Refl.: (4,-10,-7)								
Quartz	(3,5,10)	15.349	77.67	0.174	0.2	3.434	0.86	42.92	42.93
	Equiv. Refl.: (3,-8,-10)								
Quartz	(-8,3,10)	15.349	77.67	0.173	0.2	3.434	0.85	42.92	42.93
	Equiv. Refl.: (-8,5,-10)								
Quartz	(5,3,-10)	15.349	77.67	0.171	0.2	3.434	0.85	42.92	42.93
	Equiv. Refl.: (5,-8,10)								
Quartz	(8,-3,-10)	15.349	77.67	0.17	0.2	3.434	0.85	42.92	42.93
	Equiv. Refl.: (-3,8,10), (-3,-5,-10)								
Quartz	(8,-5,10)	15.349	77.67	0.169	0.2	3.434	0.85	42.92	42.93
Quartz	(-5,8,-10)	15.349	77.67	0.167	0.2	3.434	0.85	42.92	42.93
	Equiv. Refl.: (-5,-3,10)								
Sapph	(4,6,16)	15.177	75.01	0.166	0.2	4.206	1.05	52.58	52.59
	Equiv. Refl.: (4,-10,-16), (6,4,-16), (6,-10,16), (10,-4,-16), (10,-6,16), (-4,10,16), (-4,-6,-16), (-6,10,-16), (-6,-4,16), (-10,4,16), (-10,6,-16)								
Sapph	(2,9,2)	15.298	76.83	0.165	0.3	3.675	0.95	45.94	45.95
	Equiv. Refl.: (2,-11,-2), (9,2,-2), (9,-11,2), (11,-2,-2), (11,-9,2), (-2,11,2), (-2,-9,-2), (-9,11,-2), (-9,-2,2), (-11,2,2), (-11,9,-2)								
Sapph	(3,6,21)	15.59	82.89	0.163	0.3	1.961	0.62	24.51	24.52
	Equiv. Refl.: (3,6,-21), (3,-9,21), (3,-9,-21), (6,3,21), (6,3,-21), (6,-9,21), (6,-9,-21), (9,-3,21), (9,-3,-21), (9,-6,21), (9,-6,-21), (-3,9,21), (-3,9,-21), (-3,-6,21), (-3,-6,-21), (-6,9,21), (-6,9,-21), (-6,-3,21), (-6,-3,-21), (-9,3,21), (-9,3,-21), (-9,6,21), (-9,6,-21)								
Quartz	(-11,3,-4)	15.065	73.52	0.156	0.2	4.649	0.9	58.11	58.12
	Equiv. Refl.: (-11,8,4)								
Quartz	(3,8,-4)	15.065	73.52	0.155	0.2	4.649	0.9	58.11	58.12
	Equiv. Refl.: (3,-11,4), (8,3,4), (8,-11,-4)								
LiNbO3	(2,6,-25)	15.017	72.91	0.154	0.4	4.83	1.87	60.38	60.41
	Equiv. Refl.: (2,-8,25), (6,2,25), (6,-8,-25), (8,-2,25), (8,-6,-25), (-2,8,-25), (-2,-6,25), (-6,8,25), (-6,-2,-25), (-8,2,-25), (-8,6,25)								
LiNbO3	(2,5,27)	14.872	71.19	0.151	0.4	5.351	1.98	66.88	66.91
	Equiv. Refl.: (2,5,-27), (2,-7,27), (2,-7,-27), (5,2,27), (5,2,-27), (5,-7,27), (5,-7,-27), (7,-2,27), (7,-2,-27), (7,-5,27), (7,-5,-27), (-2,7,27), (-2,7,-27), (-2,-5,27), (-2,-5,-27), (-5,7,27), (-5,7,-27), (-5,-2,27), (-5,-2,-27), (-7,2,27), (-7,2,-27), (-7,5,27), (-7,5,-27)								
Sapph	(1,3,-29)	14.866	71.13	0.146	0.2	5.371	1.16	67.13	67.14
	Equiv. Refl.: (1,-4,29), (3,1,29), (3,-4,-29), (4,-1,29), (4,-3,-29), (-1,4,-29), (-1,-3,29), (-3,4,29), (-3,-1,-29), (-4,1,-29), (-4,3,29)								
Sapph	(3,7,14)	14.948	72.07	0.142	0.2	5.083	1.07	63.53	63.54
	Equiv. Refl.: (3,-10,-14), (7,3,-14), (7,-10,14), (10,-3,-14), (10,-7,14), (-3,10,14), (-3,-7,-14), (-7,10,-14), (-7,-3,14), (-10,3,14), (-10,7,-14), (6,6,0), (6,-12,0), (-12,6,0)								
Sapph	(1,9,-11)	15.281	76.57	0.141	0.2	3.751	0.87	46.89	46.9

	Equiv. Refl.: (1,-10,11), (9,1,11), (9,-10,-11), (10,-1,11), (10,-9,-11), (-1,10,-11), (-1,-9,11), (-9,10,11), (-9,-1,-11), (-10,1,-11), (-10,9,11)								
Quartz	(12,-6,0)	15.141	74.53	0.12	0.2	4.35	0.84	54.37	54.38
	Equiv. Refl.: (-6,12,0), (-6,-6,0)								
Quartz	(11,-3,4)	15.065	73.52	0.116	0.2	4.649	0.9	58.11	58.12
	Equiv. Refl.: (11,-8,-4), (-8,11,4), (-8,-3,-4)								
Quartz	(-3,11,-4)	15.065	73.52	0.115	0.2	4.649	0.9	58.11	58.12
	Equiv. Refl.: (-3,-8,4)								
LiNbO3	(2,3,-31)	15.13	74.36	0.106	0.3	4.397	1.44	54.97	54.99
	Equiv. Refl.: (2,-5,31), (3,2,31), (3,-5,-31), (5,-2,31), (5,-3,-31), (-2,5,-31), (-2,-3,31), (-3,5,31), (-3,-2,-31), (-5,2,-31), (-5,3,31)								
Sapph	(3,7,-16)	15.399	78.56	0.084	0.2	3.181	0.54	39.76	39.76
	Equiv. Refl.: (3,-10,16), (7,3,16), (7,-10,-16), (10,-3,16), (10,-7,-16), (-3,10,-16), (-3,-7,16), (-7,10,16), (-7,-3,-16), (-10,3,-16), (-10,7,16)								
LiNbO3	(3,5,25)	14.823	70.64	0.078	0.3	5.519	1.41	68.99	69.01
	Equiv. Refl.: (3,-8,-25), (5,3,-25), (5,-8,25), (8,-3,-25), (8,-5,25), (-3,8,25), (-3,-5,-25), (-5,8,-25), (-5,-3,25), (-8,3,25), (-8,5,-25)								
LiNbO3	(3,8,13)	14.877	71.25	0.075	0.3	5.332	1.34	66.65	66.67
	Equiv. Refl.: (3,-11,-13), (8,3,-13), (8,-11,13), (11,-3,-13), (11,-8,13), (-3,11,13), (-3,-8,-13), (-8,11,-13), (-8,-3,13), (-11,3,13), (-11,8,-13)								
Sapph	(2,8,12)	14.93	71.86	0.066	0.1	5.146	0.66	64.33	64.33
	Equiv. Refl.: (2,8,-12), (2,-10,12), (2,-10,-12), (8,2,12), (8,2,-12), (8,-10,12), (8,-10,-12), (10,-2,12), (10,-2,-12), (10,-8,12), (10,-8,-12), (-2,10,12), (-2,10,-12), (-2,-8,12), (-2,-8,-12), (-8,10,12), (-8,10,-12), (-8,-2,12), (-8,-2,-12), (-10,2,12), (-10,2,-12), (-10,8,12), (-10,8,-12)								
Sapph	(4,6,-17)	15.422	79	0.065	0.2	3.054	0.47	38.18	38.18
	Equiv. Refl.: (4,-10,17), (6,4,17), (6,-10,-17), (10,-4,17), (10,-6,-17), (-4,10,-17), (-4,-6,17), (-6,10,17), (-6,-4,-17), (-10,4,-17), (-10,6,17)								
Sapph	(3,4,-25)	15.037	73.16	0.06	0.1	4.755	0.59	59.44	59.44
	Equiv. Refl.: (3,-7,25), (4,3,25), (4,-7,-25), (7,-3,25), (7,-4,-25), (-3,7,-25), (-3,-4,25), (-4,7,25), (-4,-3,-25), (-7,3,-25), (-7,4,25)								
Sapph	(5,6,8)	14.851	70.95	0.029	0.1	5.425	0.41	67.82	67.82
	Equiv. Refl.: (5,-11,-8), (6,5,-8), (6,-11,8), (11,-5,-8), (11,-6,8), (-5,11,8), (-5,-6,-8), (-6,11,-8), (-6,-5,8), (-11,5,8), (-11,6,-8)								
LiNbO3	(4,8,11)	15.516	80.96	0.017	0.2	2.499	0.44	31.24	31.24
	Equiv. Refl.: (4,-12,-11), (8,4,-11), (8,-12,11), (12,-4,-11), (12,-8,11), (-4,12,11), (-4,-8,-11), (-8,12,-11), (-8,-4,11), (-12,4,11), (-12,8,-11)								
LiNbO3	(4,4,27)	15.446	79.46	0.011	0.1	2.922	0.39	36.53	36.53
	Equiv. Refl.: (4,4,-27), (4,8,-7), (4,-8,27), (4,-8,-27), (4,-12,7), (8,4,7), (8,-4,27), (8,-4,-27), (8,-12,-7), (12,-4,7), (12,-8,-7), (-4,8,27), (-4,8,-27), (-4,12,-7), (-4,-4,27), (-4,-4,-27), (-4,-8,7), (-8,4,27), (-8,4,-27), (-8,12,7), (-8,-4,-7), (-12,4,-7), (-12,8,7)								
LiNbO3	(4,8,5)	14.884	71.33	0.01	0.1	5.308	0.5	66.35	66.35
	Equiv. Refl.: (4,-12,-5), (8,4,-5), (8,-12,5), (12,-4,-5), (12,-8,5), (-4,12,5), (-4,-8,-5), (-8,12,-5), (-8,-4,5), (-12,4,5), (-12,8,-5)								
LiNbO3	(5,5,21)	15.271	76.4	0.006	0.1	3.8	0.33	47.5	47.5
	Equiv. Refl.: (5,5,-21), (5,-10,21), (5,-10,-21), (10,-5,21), (10,-5,-21), (-5,10,21), (-5,10,-21), (-5,-5,21), (-5,-5,-21), (-10,5,21), (-10,5,-21)								

Ei = Cryst	13.419 Refl (h,k,l)	keV EB [keV]	ΘB [°]	IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(10,-3,-3) Equiv. Refl.: (10,-7,3)	13.399	86.9	18.084	14.9	0.727	10.86	9.09	14.16
Quartz	(-7,10,-3) Equiv. Refl.: (-7,-3,3)	13.399	86.9	18.083	14.9	0.727	10.86	9.09	14.16
Quartz	(-3,10,3)	13.399	86.9	18.08	14.9	0.727	10.85	9.09	14.16
Quartz	(-3,-7,-3)	13.399	86.9	18.079	14.9	0.727	10.85	9.09	14.15
Sapph	(3,7,2) Equiv. Refl.: (3,-10,-2), (7,3,-2), (7,-10,2), (10,-3,-2), (10,-7,2), (-3,10,2), (-3,-7,-2), (-7,10,-2), (-7,-3,2), (-10,3,2), (-10,7,-2)	13.406	87.44	17.274	14.9	0.6	8.95	7.5	11.68
Quartz	(-2,10,-1)	13.403	87.17	16.685	13.9	0.663	9.18	8.28	12.36
Quartz	(10,-2,1) Equiv. Refl.: (10,-8,-1), (-2,-8,1)	13.403	87.17	16.684	13.9	0.663	9.18	8.28	12.36
Quartz	(-8,10,1) Equiv. Refl.: (-8,-2,-1)	13.403	87.17	16.683	13.9	0.663	9.18	8.28	12.36
Quartz	(2,8,-1) Equiv. Refl.: (2,-10,1), (-10,2,-1), (-10,8,1)	13.403	87.17	16.444	13.9	0.663	9.18	8.28	12.36
Quartz	(8,2,1) Equiv. Refl.: (8,-10,-1)	13.403	87.17	16.443	13.9	0.663	9.18	8.28	12.36
LiNbO3	(1,9,-2) Equiv. Refl.: (9,-10,-2), (10,-9,-2), (-1,10,-2), (-9,-1,-2), (-10,1,-2)	13.295	82.19	14.344	12.9	1.841	23.77	23.01	33.08
LiNbO3	(1,-10,2) Equiv. Refl.: (9,1,2), (10,-1,2), (-1,-9,2), (-9,10,2), (-10,9,2)	13.295	82.19	14.059	12.9	1.841	23.77	23.01	33.08
Sapph	(1,4,24) Equiv. Refl.: (1,4,-24), (1,-5,24), (1,-5,-24), (4,1,24), (4,1,-24), (4,-5,24), (4,-5,-24), (5,-1,24), (5,-1,-24), (5,-4,24), (5,-4,-24), (-1,5,24), (-1,5,-24), (-1,-4,24), (-1,-4,-24), (-4,5,24), (-4,5,-24), (-4,-1,24), (-4,-1,-24), (-5,1,24), (-5,1,-24), (-5,4,24), (-5,4,-24)	13.37	85.08	12.05	10.1	1.155	11.68	14.43	18.57
LiNbO3	(0,-7,-20) Equiv. Refl.: (7,0,-20), (-7,7,-20)	13.218	80.08	11.157	10.1	2.347	23.65	29.33	37.68
LiNbO3	(7,-7,20)	13.218	80.08	10.956	10.1	2.347	23.65	29.33	37.68
LiNbO3	(0,7,20) Equiv. Refl.: (-7,0,20)	13.218	80.08	10.955	10.1	2.347	23.65	29.33	37.68
LiNbO3	(1,-8,-18) Equiv. Refl.: (7,1,-18), (8,-1,-18), (-1,-7,-18), (-7,8,-18), (-8,7,-18)	13.229	80.34	10.803	9.9	2.285	22.53	28.56	36.38
LiNbO3	(1,7,18) Equiv. Refl.: (7,-8,18), (8,-7,18), (-1,8,18), (-7,-1,18), (-8,1,18)	13.229	80.34	10.672	9.9	2.285	22.53	28.56	36.38
LiNbO3	(0,-8,-16) Equiv. Refl.: (8,0,-16), (-8,8,-16)	13.226	80.28	10.198	8.7	2.299	20	28.74	35.02
LiNbO3	(5,5,-12) Equiv. Refl.: (5,-10,-12), (10,-5,-12), (-5,10,-12), (-5,-5,-12), (-10,5,-12)	13.183	79.25	9.998	8.7	2.548	22.24	31.85	38.84
LiNbO3	(1,-8,18) Equiv. Refl.: (7,1,18), (8,-1,18), (-1,-7,18), (-7,8,18), (-8,7,18)	13.229	80.34	9.974	9	2.285	20.66	28.56	35.25
LiNbO3	(1,7,-18) Equiv. Refl.: (-1,8,-18), (-7,-1,-18), (-8,1,-18)	13.229	80.34	9.93	9	2.285	20.66	28.56	35.25
LiNbO3	(7,-8,-18) Equiv. Refl.: (8,-7,-18)	13.229	80.34	9.929	9	2.285	20.66	28.56	35.25
LiNbO3	(5,-11,-2) Equiv. Refl.: (6,5,-2), (11,-5,-2), (-5,-6,-2), (-6,11,-2), (-11,6,-2)	13.295	82.19	9.923	9.3	1.841	17.07	23.01	28.65
LiNbO3	(2,3,26) Equiv. Refl.: (3,-5,26), (5,-3,26), (-2,5,26), (-3,-2,26), (-5,2,26)	13.112	77.71	9.911	8.9	2.923	26.04	36.54	44.87
LiNbO3	(-3,5,-26) Equiv. Refl.: (-5,3,-26)	13.112	77.71	9.868	8.9	2.923	26.05	36.54	44.87

Ei = Cryst	13.419 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
LiNbO3	(2,-5,-26)	13.112	77.71	9.867	8.9	2.923	26.04	36.54	44.87
	Equiv. Refl.: (3,2,-26), (5,-2,-26), (-2,-3,-26)								
LiNbO3	(3,-10,10)	13.143	78.36	9.785	8.6	2.764	23.91	34.55	42.02
	Equiv. Refl.: (7,3,10), (10,-3,10), (-3,-7,10), (-7,10,10), (-10,7,10)								
LiNbO3	(5,6,2)	13.295	82.19	9.75	9.3	1.841	17.07	23.01	28.65
	Equiv. Refl.: (6,-11,2), (11,-6,2), (-5,11,2), (-6,-5,2), (-11,5,2)								
LiNbO3	(3,7,-10)	13.143	78.36	9.727	8.6	2.764	23.91	34.55	42.02
	Equiv. Refl.: (7,-10,-10), (10,-7,-10), (-3,10,-10), (-7,-3,-10), (-10,3,-10)								
LiNbO3	(5,5,12)	13.183	79.25	9.457	8.7	2.548	22.24	31.85	38.84
	Equiv. Refl.: (5,-10,12), (10,-5,12), (-5,10,12), (-5,-5,12), (-10,5,12)								
Quartz	(-7,-3,-3)	13.399	86.9	8.989	7.4	0.727	5.37	9.09	10.55
Quartz	(10,-7,-3)	13.399	86.9	8.988	7.4	0.727	5.37	9.09	10.55
Quartz	(10,-3,3)	13.399	86.9	8.987	7.4	0.727	5.37	9.09	10.55
	Equiv. Refl.: (-7,10,3)								
Quartz	(-3,10,-3)	13.399	86.9	8.985	7.4	0.727	5.36	9.09	10.55
Quartz	(-3,-7,3)	13.399	86.9	8.984	7.4	0.727	5.36	9.09	10.55
LiNbO3	(0,8,16)	13.226	80.28	8.834	8.7	2.299	20	28.74	35.02
	Equiv. Refl.: (8,-8,16), (-8,0,16)								
LiNbO3	(4,-9,16)	13.005	75.73	8.538	7.4	3.412	25.34	42.66	49.62
	Equiv. Refl.: (5,4,16), (9,-4,16), (-4,-5,16), (-5,9,16), (-9,5,16)								
LiNbO3	(3,5,-20)	13.218	80.08	8.452	7.5	2.347	17.49	29.33	34.15
	Equiv. Refl.: (5,-8,-20), (8,-5,-20), (-3,8,-20), (-5,-3,-20), (-8,3,-20)								
LiNbO3	(4,5,-16)	13.005	75.73	8.33	7.4	3.412	25.34	42.66	49.62
	Equiv. Refl.: (5,-9,-16), (9,-5,-16), (-4,9,-16), (-5,-4,-16), (-9,4,-16)								
LiNbO3	(2,7,-14)	12.99	75.47	8.259	7.1	3.478	24.73	43.47	50.02
	Equiv. Refl.: (-2,9,-14), (-7,-2,-14), (-9,2,-14)								
LiNbO3	(7,-9,-14)	12.99	75.47	8.258	7.1	3.478	24.73	43.47	50.02
	Equiv. Refl.: (9,-7,-14)								
Quartz	(7,3,3)	13.399	86.9	8.053	7.4	0.727	5.37	9.09	10.55
	Equiv. Refl.: (-10,7,3)								
Quartz	(7,-10,-3)	13.399	86.9	8.052	7.4	0.727	5.37	9.09	10.55
	Equiv. Refl.: (-10,3,-3)								
Quartz	(3,-10,3)	13.399	86.9	8.05	7.4	0.727	5.36	9.09	10.55
Quartz	(3,7,-3)	13.399	86.9	8.049	7.4	0.727	5.36	9.09	10.55
LiNbO3	(1,2,-28)	13.05	76.54	8.024	7.1	3.213	22.95	40.16	46.25
	Equiv. Refl.: (2,-3,-28), (3,-2,-28), (-1,3,-28), (-2,-1,-28), (-3,1,-28)								
LiNbO3	(4,-10,-10)	12.921	74.33	7.976	6.9	3.763	26.03	47.04	53.76
	Equiv. Refl.: (6,4,-10), (10,-4,-10), (-4,-6,-10), (-6,10,-10), (-10,6,-10)								
LiNbO3	(1,-3,28)	13.05	76.54	7.933	7.1	3.213	22.95	40.16	46.25
	Equiv. Refl.: (2,1,28), (3,-1,28), (-1,-2,28), (-2,3,28), (-3,2,28)								
Sapph	(5,5,6)	13.34	83.77	7.861	6.6	1.466	9.63	18.32	20.7
	Equiv. Refl.: (5,5,-6), (5,-10,6), (5,-10,-6), (10,-5,6), (10,-5,-6), (-5,10,6), (-5,10,-6), (-5,-5,6), (-5,-5,-6), (-10,5,6), (-10,5,-6)								
LiNbO3	(2,-9,14)	12.99	75.47	7.817	7.1	3.478	24.73	43.47	50.02
	Equiv. Refl.: (7,2,14), (9,-2,14), (-2,-7,14), (-7,9,14), (-9,7,14)								
LiNbO3	(4,6,10)	12.921	74.33	7.771	6.9	3.763	26.03	47.04	53.76
	Equiv. Refl.: (6,-10,10), (10,-6,10), (-4,10,10), (-6,-4,10), (-10,4,10)								
LiNbO3	(0,-9,6)	12.799	72.51	7.508	6.5	4.228	27.62	52.85	59.63
	Equiv. Refl.: (9,0,6), (-9,9,6)								

Ei = Cryst	13.419 Refl (h,k,l)	keV EB [keV]	ΘB [°]	IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
LiNbO3	(0,9,-6)	12.799	72.51	7.466	6.5	4.228	27.62	52.85	59.63
	Equiv. Refl.: (9,-9,-6), (-9,0,-6)								
LiNbO3	(2,-10,0)	12.744	71.75	7.427	6.4	4.425	28.39	55.31	62.17
	Equiv. Refl.: (8,2,0), (10,-2,0), (-2,-8,0), (-8,10,0), (-10,8,0)								
LiNbO3	(3,-8,20)	13.218	80.08	7.411	7.5	2.347	17.49	29.33	34.15
	Equiv. Refl.: (5,3,20), (8,-3,20), (-3,-5,20), (-5,8,20), (-8,5,20)								
LiNbO3	(0,-8,14)	12.765	72.03	7.362	6.2	4.352	26.81	54.4	60.64
	Equiv. Refl.: (8,0,14), (-8,8,14)								
Sapph	(3,4,20)	13.224	80.21	7.33	5.9	2.315	13.55	28.94	31.96
	Equiv. Refl.: (3,-7,-20), (4,3,-20), (4,-7,20), (7,-3,-20), (7,-4,20), (-3,7,20), (-3,-4,-20), (-4,7,-20), (-4,-3,20), (-7,3,20), (-7,4,-20)								
LiNbO3	(2,8,0)	12.744	71.75	7.327	6.4	4.425	28.39	55.31	62.17
	Equiv. Refl.: (8,-10,0), (10,-8,0), (-2,10,0), (-8,-2,0), (-10,2,0)								
LiNbO3	(3,7,8)	12.866	73.5	7.297	6.4	3.975	25.38	49.69	55.8
	Equiv. Refl.: (7,-10,8), (10,-7,8), (-3,10,8), (-7,-3,8), (-10,3,8)								
LiNbO3	(1,-7,20)	12.772	72.14	7.282	6.3	4.325	27.26	54.06	60.54
	Equiv. Refl.: (6,1,20), (7,-1,20), (-1,-6,20), (-6,7,20), (-7,6,20)								
LiNbO3	(7,3,-8)	12.866	73.5	7.148	6.4	3.975	25.38	49.69	55.8
	Equiv. Refl.: (-3,-7,-8), (-7,10,-8), (-10,7,-8)								
LiNbO3	(3,-10,-8)	12.866	73.5	7.147	6.4	3.975	25.38	49.69	55.8
	Equiv. Refl.: (10,-3,-8)								
LiNbO3	(1,6,-20)	12.772	72.14	7.121	6.3	4.325	27.26	54.06	60.54
	Equiv. Refl.: (6,-7,-20), (7,-6,-20), (-1,7,-20), (-6,-1,-20), (-7,1,-20)								
LiNbO3	(2,8,6)	13.023	76.05	7.033	6.3	3.333	20.94	41.66	46.62
	Equiv. Refl.: (8,-10,6), (10,-8,6), (-2,10,6), (-8,-2,6), (-10,2,6)								
LiNbO3	(3,4,-22)	12.974	75.2	6.888	6.1	3.545	21.7	44.31	49.34
	Equiv. Refl.: (4,-7,-22), (7,-4,-22), (-3,7,-22), (-4,-3,-22), (-7,3,-22)								
LiNbO3	(8,2,-6)	13.023	76.05	6.747	6.3	3.333	20.94	41.66	46.62
	Equiv. Refl.: (-2,-8,-6), (-8,10,-6), (-10,8,-6)								
LiNbO3	(2,-10,-6)	13.023	76.05	6.746	6.3	3.333	20.94	41.66	46.62
	Equiv. Refl.: (10,-2,-6)								
LiNbO3	(0,8,-14)	12.765	72.03	6.684	6.2	4.352	26.81	54.4	60.64
	Equiv. Refl.: (8,-8,-14), (-8,0,-14)								
LiNbO3	(3,-7,22)	12.974	75.2	6.61	6.1	3.545	21.7	44.31	49.34
	Equiv. Refl.: (4,3,22), (7,-3,22), (-3,-4,22), (-4,7,22), (-7,4,22)								
LiNbO3	(0,-9,-6)	12.799	72.51	6.426	5.6	4.228	23.58	52.85	57.87
	Equiv. Refl.: (9,0,-6), (-9,9,-6)								
LiNbO3	(2,-10,6)	13.023	76.05	6.214	5.7	3.333	19.14	41.66	45.84
	Equiv. Refl.: (8,2,6), (10,-2,6), (-2,-8,6), (-8,10,6), (-10,8,6)								
LiNbO3	(2,8,-6)	13.023	76.05	6.158	5.7	3.333	19.14	41.66	45.84
	Equiv. Refl.: (8,-10,-6), (10,-8,-6), (-2,10,-6), (-8,-2,-6), (-10,2,-6)								
LiNbO3	(0,9,6)	12.799	72.51	6.004	5.6	4.228	23.58	52.85	57.87
	Equiv. Refl.: (9,-9,6), (-9,0,6)								
LiNbO3	(4,-10,8)	12.639	70.37	5.995	5.2	4.787	24.97	59.84	64.84
	Equiv. Refl.: (6,4,8), (10,-4,8), (-4,-6,8), (-6,10,8), (-10,6,8)								
LiNbO3	(1,8,-10)	12.694	71.08	5.886	5.2	4.599	23.87	57.49	62.25
	Equiv. Refl.: (3,3,-24), (3,-6,-24), (6,-3,-24), (8,-9,-10), (9,-8,-10), (-1,9,-10), (-3,6,-24), (-3,-3,-24), (-6,3,-24), (-8,-1,-10), (-9,1,-10)								
LiNbO3	(0,-4,-26)	12.888	73.84	5.734	5.1	3.89	19.71	48.62	52.46
	Equiv. Refl.: (4,0,-26), (-4,4,-26)								

Ei =	13.419	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
LiNbO3	(4,6,-8)	12.639	70.37	5.697	5.2	4.787	24.97	59.84	64.84
	Equiv. Refl.: (6,-10,-8), (10,-6,-8), (-4,10,-8), (-6,-4,-8), (-10,4,-8)								
LiNbO3	(1,-9,10)	12.694	71.08	5.671	5.2	4.599	23.87	57.49	62.25
	Equiv. Refl.: (8,1,10), (9,-1,10), (-1,-8,10), (-8,9,10), (-9,8,10)								
LiNbO3	(3,3,24)	12.938	74.61	5.667	5.3	3.694	19.74	46.18	50.22
	Equiv. Refl.: (3,-6,24), (6,-3,24), (-3,6,24), (-3,-3,24), (-6,3,24)								
LiNbO3	(0,4,26)	12.888	73.84	5.576	5.1	3.89	19.71	48.62	52.46
	Equiv. Refl.: (4,-4,26), (-4,0,26)								
Quartz	(3,-3,11)	13.353	84.31	5.57	4.8	1.337	6.39	16.71	17.9
	Equiv. Refl.: (-3,3,-11)								
Quartz	(3,0,-11)	13.353	84.31	5.568	4.8	1.337	6.39	16.71	17.89
	Equiv. Refl.: (-3,0,11)								
LiNbO3	(0,-2,-28)	12.826	72.9	5.566	5.1	4.127	21	51.59	55.7
	Equiv. Refl.: (2,0,-28), (-2,2,-28)								
Quartz	(0,3,11)	13.353	84.31	5.554	4.8	1.337	6.38	16.71	17.89
	Equiv. Refl.: (0,-3,-11)								
LiNbO3	(0,2,28)	12.826	72.9	5.534	5.1	4.127	21	51.59	55.7
	Equiv. Refl.: (2,-2,28), (-2,0,28)								
Sapph	(2,6,-16)	13.267	81.36	5.449	4.6	2.038	9.35	25.48	27.14
	Equiv. Refl.: (2,-8,16), (6,2,16), (6,-8,-16), (8,-2,16), (8,-6,-16), (-2,8,-16), (-2,-6,16), (-6,8,16), (-6,-2,-16), (-8,2,-16), (-8,6,16)								
Quartz	(4,1,10)	13.272	81.51	5.244	4.2	2.003	8.47	25.04	26.43
	Equiv. Refl.: (4,-5,-10)								
Quartz	(1,4,-10)	13.272	81.51	5.24	4.2	2.003	8.47	25.04	26.43
Quartz	(1,-5,10)	13.272	81.51	5.239	4.2	2.003	8.47	25.04	26.43
Quartz	(-5,1,-10)	13.272	81.51	5.235	4.2	2.003	8.46	25.04	26.43
	Equiv. Refl.: (-5,4,10)								
LiNbO3	(1,-4,26)	12.661	70.66	5.201	4.4	4.711	20.9	58.89	62.48
	Equiv. Refl.: (3,1,26), (4,-1,26), (-1,-3,26), (-3,4,26), (-4,3,26)								
Quartz	(-4,5,10)	13.272	81.51	5.126	4.2	2.003	8.47	25.04	26.43
	Equiv. Refl.: (-4,-1,-10)								
Quartz	(-1,-4,10)	13.272	81.51	5.123	4.2	2.003	8.47	25.04	26.43
Quartz	(-1,5,-10)	13.272	81.51	5.122	4.2	2.003	8.47	25.04	26.43
Quartz	(5,-1,10)	13.272	81.51	5.118	4.2	2.003	8.46	25.04	26.43
	Equiv. Refl.: (5,-4,-10)								
LiNbO3	(1,3,-26)	12.661	70.66	5.104	4.4	4.711	20.9	58.89	62.48
	Equiv. Refl.: (3,-4,-26), (4,-3,-26), (-1,4,-26), (-3,-1,-26), (-4,1,-26)								
Quartz	(-3,3,11)	13.353	84.31	5.008	4.1	1.337	5.52	16.71	17.6
Quartz	(0,3,-11)	13.353	84.31	5.007	4.1	1.337	5.52	16.71	17.6
	Equiv. Refl.: (0,-3,11), (3,-3,-11), (-3,0,-11)								
Quartz	(3,0,11)	13.353	84.31	5.006	4.1	1.337	5.52	16.71	17.6
Sapph	(2,7,10)	13.207	79.8	4.603	3.7	2.415	8.94	30.19	31.48
	Equiv. Refl.: (2,-9,-10), (7,2,-10), (7,-9,10), (9,-2,-10), (9,-7,10), (-2,9,10), (-2,-7,-10), (-7,9,-10), (-7,-2,10), (-9,2,10), (-9,7,-10)								
Quartz	(5,5,0)	12.618	70.1	4.578	3.5	4.857	16.77	60.71	62.99
	Equiv. Refl.: (5,-10,0), (-10,5,0)								
Quartz	(10,-5,0)	12.618	70.1	4.574	3.5	4.857	16.77	60.71	62.99
	Equiv. Refl.: (-5,10,0), (-5,-5,0)								
Quartz	(8,0,-5)	12.99	75.48	4.559	3.4	3.475	11.83	43.44	45.02
	Equiv. Refl.: (8,-8,5), (-8,0,5), (-8,8,-5)								

Ei = Cryst	13.419 Refl (h,k,l)	keV EB [keV]	Θ B [$^\circ$]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(0,8,5) Equiv. Refl.: (0,-8,-5)	12.99	75.48	4.557	3.4	3.475	11.82	43.44	45.02
Sapph	(1,8,-4) Equiv. Refl.: (1,-9,4), (8,1,4), (8,-9,-4), (9,-1,4), (9,-8,-4), (-1,9,-4), (-1,-8,4), (-8,9,4), (-8,-1,-4), (-9,1,-4), (-9,8,4)	12.995	75.55	4.502	3.5	3.457	12.08	43.21	44.87
Quartz	(-3,-2,10)	13.111	77.7	4.482	3.4	2.926	9.9	36.57	37.89
Quartz	(5,-2,-10) Equiv. Refl.: (5,-3,10), (-3,5,-10)	13.111	77.7	4.481	3.4	2.926	9.9	36.57	37.89
Quartz	(-2,5,10) Equiv. Refl.: (-2,-3,-10)	13.111	77.7	4.48	3.4	2.926	9.9	36.57	37.89
Quartz	(3,2,-10) Equiv. Refl.: (3,-5,10)	13.111	77.7	4.433	3.4	2.926	9.9	36.57	37.89
Quartz	(2,3,10) Equiv. Refl.: (-5,2,10), (-5,3,-10)	13.111	77.7	4.432	3.4	2.926	9.9	36.57	37.89
Quartz	(2,5,-8) Equiv. Refl.: (2,-5,-10), (2,-7,8)	12.923	74.37	4.431	3.3	3.755	12.32	46.94	48.53
Quartz	(-7,2,-8) Equiv. Refl.: (-7,5,8)	12.923	74.37	4.43	3.3	3.755	12.32	46.94	48.53
Quartz	(5,2,8) Equiv. Refl.: (5,-7,-8)	12.923	74.37	4.428	3.3	3.755	12.31	46.94	48.53
Quartz	(-2,7,-8) Equiv. Refl.: (-2,-5,8)	12.923	74.37	4.427	3.3	3.755	12.32	46.94	48.53
Quartz	(7,-2,8) Equiv. Refl.: (7,-5,-8)	12.923	74.37	4.426	3.3	3.755	12.32	46.94	48.53
Quartz	(-5,7,8)	12.923	74.37	4.425	3.3	3.755	12.31	46.94	48.53
Quartz	(-5,-2,-8)	12.923	74.37	4.424	3.3	3.755	12.31	46.94	48.53
Quartz	(9,-2,5) Equiv. Refl.: (9,-7,-5)	13.233	80.46	4.115	3.2	2.256	7.3	28.2	29.13
Quartz	(-2,9,-5) Equiv. Refl.: (-7,9,5), (-7,-2,-5)	13.233	80.46	4.112	3.2	2.256	7.3	28.2	29.13
Quartz	(-2,-7,5)	13.233	80.46	4.111	3.2	2.256	7.3	28.2	29.13
Quartz	(-9,2,-5) Equiv. Refl.: (-9,7,5)	13.233	80.46	4.065	3.2	2.256	7.3	28.2	29.13
Quartz	(2,-9,5) Equiv. Refl.: (7,2,5), (7,-9,-5)	13.233	80.46	4.062	3.2	2.256	7.3	28.2	29.13
Quartz	(2,7,-5)	13.233	80.46	4.061	3.2	2.256	7.3	28.2	29.13
Quartz	(9,0,2) Equiv. Refl.: (9,-9,-2), (-9,0,-2), (-9,9,2)	13.312	82.76	4.055	3.3	1.705	5.7	21.31	22.06
Quartz	(0,9,-2) Equiv. Refl.: (0,-9,2)	13.312	82.76	4.053	3.3	1.705	5.69	21.31	22.06
Sapph	(2,6,14) Equiv. Refl.: (2,-8,-14), (6,2,-14), (6,-8,14), (8,-2,-14), (8,-6,14), (-2,8,14), (-2,-6,-14), (-6,8,-14), (-6,-2,14), (-8,2,14), (-8,6,-14)	12.741	71.71	3.959	3	4.435	13.49	55.43	57.05
LiNbO3	(2,4,25) Equiv. Refl.: (2,-6,-25), (4,2,-25), (4,-6,25), (6,-2,-25), (6,-4,25), (-2,6,25), (-2,-4,-25), (-4,6,-25), (-4,-2,25), (-6,2,25), (-6,4,-25)	13.383	85.83	3.771	5.7	0.979	5.61	12.24	13.46
Sapph	(1,8,-7) Equiv. Refl.: (1,-9,7), (8,1,7), (8,-9,-7), (9,-1,7), (9,-8,-7), (-1,9,-7), (-1,-8,7), (-8,9,7), (-8,-1,-7), (-9,1,-7), (-9,8,7)	13.281	81.77	3.704	3.2	1.94	6.22	24.25	25.04

Ei =	13.419	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(3,5,16)	13.008	75.79	3.542	2.8	3.398	9.67	42.47	43.56
Equiv. Refl.: (3,-8,-16), (5,3,-16), (5,-8,16), (8,-3,-16), (8,-5,16), (-3,8,16), (-3,-5,-16), (-5,8,-16), (-5,-3,16), (-8,3,16), (-8,5,-16)									
Quartz	(2,8,0)	13.353	84.34	3.462	2.9	1.331	3.92	16.63	17.09
Equiv. Refl.: (2,-10,0), (8,2,0), (8,-10,0), (-10,2,0), (-10,8,0)									
Quartz	(-6,2,9)	12.884	73.77	3.455	2.6	3.906	10.21	48.82	49.88
Equiv. Refl.: (-6,4,-9)									
Quartz	(2,4,9)	12.884	73.77	3.454	2.6	3.906	10.21	48.82	49.88
Equiv. Refl.: (2,-6,-9), (4,2,-9), (4,-6,9)									
Quartz	(10,-2,0)	13.353	84.34	3.427	2.9	1.331	3.92	16.63	17.09
Equiv. Refl.: (10,-8,0), (-2,10,0), (-2,-8,0), (-8,10,0), (-8,-2,0)									
Quartz	(9,-4,-5)	12.743	71.74	3.424	2.6	4.429	11.54	55.36	56.55
Equiv. Refl.: (9,-5,5)									
Quartz	(-4,9,5)	12.743	71.74	3.423	2.6	4.429	11.53	55.36	56.55
Equiv. Refl.: (-4,-5,-5), (-5,9,-5), (-5,-4,5)									
Quartz	(-9,4,5)	12.743	71.74	3.412	2.6	4.429	11.54	55.36	56.55
Equiv. Refl.: (-9,5,-5)									
Quartz	(4,5,5)	12.743	71.74	3.411	2.6	4.429	11.53	55.36	56.55
Equiv. Refl.: (4,-9,-5), (5,4,-5), (5,-9,5)									
Quartz	(6,-4,9)	12.884	73.77	3.349	2.6	3.906	10.21	48.82	49.88
Quartz	(6,-2,-9)	12.884	73.77	3.348	2.6	3.906	10.21	48.82	49.88
Equiv. Refl.: (-2,6,9), (-2,-4,-9), (-4,6,-9), (-4,-2,9)									
Sapph	(4,6,-2)	13.15	78.51	3.334	2.7	2.728	7.27	34.11	34.87
Equiv. Refl.: (4,-10,2), (6,4,2), (6,-10,-2), (10,-4,2), (10,-6,-2), (-4,10,-2), (-4,-6,2), (-6,10,2), (-6,-4,-2), (-10,4,-2), (-10,6,2)									
Sapph	(1,1,27)	13.148	78.46	3.303	2.6	2.74	7.25	34.25	35.01
Equiv. Refl.: (1,1,-27), (1,-2,27), (1,-2,-27), (2,-1,27), (2,-1,-27), (-1,2,27), (-1,2,-27), (-1,-1,27), (-1,-1,-27), (-2,1,27), (-2,1,-27)									
Quartz	(3,-1,-11)	13.193	79.47	3.29	2.9	2.495	7.24	31.19	32.01
Equiv. Refl.: (3,-2,11), (-1,3,11), (-1,-2,-11), (-2,3,-11)									
Quartz	(-2,-1,11)	13.193	79.47	3.289	2.9	2.495	7.24	31.19	32.01
Quartz	(4,6,-1)	12.753	71.88	3.279	2.5	4.392	10.82	54.9	55.95
Equiv. Refl.: (4,-10,1), (6,4,1), (6,-10,-1), (-10,4,-1), (-10,6,1)									
Quartz	(-6,8,7)	13.223	80.2	3.268	2.9	2.318	6.71	28.97	29.74
Equiv. Refl.: (-6,-2,-7)									
Quartz	(-2,8,-7)	13.223	80.2	3.267	2.9	2.318	6.71	28.97	29.74
Equiv. Refl.: (-2,-6,7)									
Quartz	(8,-2,7)	13.223	80.2	3.265	2.9	2.318	6.71	28.97	29.74
Equiv. Refl.: (8,-6,-7)									
Sapph	(2,7,-11)	13.387	86.03	3.259	3.3	0.932	3.06	11.65	12.05
Equiv. Refl.: (2,-9,11), (7,2,11), (7,-9,-11), (9,-2,11), (9,-7,-11), (-2,9,-11), (-2,-7,11), (-7,9,11), (-7,-2,-11), (-9,2,-11), (-9,7,11)									
Quartz	(-3,1,11)	13.193	79.47	3.234	2.9	2.495	7.24	31.19	32.01
Quartz	(1,2,11)	13.193	79.47	3.233	2.9	2.495	7.24	31.19	32.01
Equiv. Refl.: (1,-3,-11), (-3,2,-11)									
Quartz	(2,1,-11)	13.193	79.47	3.232	2.9	2.495	7.24	31.19	32.01
Equiv. Refl.: (2,-3,11)									
Quartz	(10,-4,1)	12.753	71.88	3.179	2.5	4.392	10.82	54.9	55.95
Equiv. Refl.: (10,-6,-1), (-6,10,1), (-6,-4,-1)									
Quartz	(-4,10,-1)	12.753	71.88	3.178	2.5	4.392	10.82	54.9	55.95
Equiv. Refl.: (-4,-6,1)									

Ei =	13.419	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(2,-8,7)	13.223	80.2	3.167	2.9	2.318	6.71	28.97	29.74
	Equiv. Refl.: (6,2,7), (6,-8,-7)								
Quartz	(2,6,-7)	13.223	80.2	3.166	2.9	2.318	6.71	28.97	29.74
Quartz	(-8,6,7)	13.223	80.2	3.165	2.9	2.318	6.71	28.97	29.74
Quartz	(-8,2,-7)	13.223	80.2	3.164	2.9	2.318	6.71	28.97	29.74
Quartz	(8,1,4)	13.267	81.37	3.154	2.5	2.037	5.04	25.46	25.95
	Equiv. Refl.: (8,-9,-4)								
Quartz	(1,8,-4)	13.267	81.37	3.152	2.5	2.037	5.04	25.46	25.95
	Equiv. Refl.: (1,-9,4), (-9,1,-4), (-9,8,4)								
Quartz	(1,1,11)	12.867	73.51	3.103	2.3	3.972	9.19	49.65	50.5
	Equiv. Refl.: (1,1,-11), (1,-2,11)								
Quartz	(1,-2,-11)	12.867	73.51	3.102	2.3	3.972	9.19	49.65	50.5
Quartz	(-2,1,11)	12.867	73.51	3.101	2.3	3.972	9.18	49.65	50.49
	Equiv. Refl.: (-2,1,-11)								
Quartz	(-1,9,4)	13.267	81.37	3.03	2.4	2.037	4.94	25.46	25.93
	Equiv. Refl.: (-1,-8,-4)								
Quartz	(9,-1,-4)	13.267	81.37	3.029	2.4	2.037	4.94	25.46	25.93
	Equiv. Refl.: (-8,9,-4), (-8,-1,4)								
Quartz	(9,-8,4)	13.267	81.37	3.028	2.4	2.037	4.94	25.46	25.93
Sapph	(4,5,-13)	13.288	81.97	3.01	2.6	1.892	4.95	23.65	24.16
	Equiv. Refl.: (4,-9,13), (5,4,13), (5,-9,-13), (9,-4,13), (9,-5,-13), (-4,9,-13), (-4,-5,13), (-5,9,13), (-5,-4,-13), (-9,4,-13), (-9,5,13)								
Quartz	(-1,2,-11)	12.867	73.51	2.982	2.3	3.972	9.19	49.65	50.5
	Equiv. Refl.: (-1,-1,11), (-1,-1,-11)								
Quartz	(-1,2,11)	12.867	73.51	2.981	2.3	3.972	9.19	49.65	50.5
Quartz	(2,-1,11)	12.867	73.51	2.98	2.3	3.972	9.18	49.65	50.49
	Equiv. Refl.: (2,-1,-11)								
Quartz	(-8,9,4)	13.267	81.37	2.966	2.5	2.037	5.04	25.46	25.95
	Equiv. Refl.: (-8,-1,-4)								
Quartz	(9,-1,4)	13.267	81.37	2.964	2.5	2.037	5.04	25.46	25.95
	Equiv. Refl.: (9,-8,-4), (-1,9,-4), (-1,-8,4)								
Quartz	(1,8,4)	13.267	81.37	2.953	2.4	2.037	4.94	25.46	25.93
	Equiv. Refl.: (1,-9,-4), (8,1,-4), (8,-9,4)								
Quartz	(-9,1,4)	13.267	81.37	2.952	2.4	2.037	4.94	25.46	25.93
	Equiv. Refl.: (-9,8,-4)								
Quartz	(0,2,11)	12.949	74.8	2.852	2.2	3.647	7.88	45.59	46.26
	Equiv. Refl.: (0,-2,-11)								
Quartz	(2,0,-11)	12.949	74.8	2.847	2.2	3.647	7.87	45.59	46.26
	Equiv. Refl.: (-2,0,11)								
Quartz	(2,-2,11)	12.949	74.8	2.846	2.2	3.647	7.87	45.59	46.26
	Equiv. Refl.: (-2,2,-11)								
Quartz	(-10,3,-2)	13.152	78.54	2.833	2.2	2.72	6.01	34	34.52
	Equiv. Refl.: (-10,7,2)								
Quartz	(3,7,-2)	13.152	78.54	2.832	2.2	2.72	6.01	34	34.52
	Equiv. Refl.: (3,-10,2), (7,3,2), (7,-10,-2)								
Quartz	(8,0,5)	12.99	75.48	2.806	2.1	3.475	7.44	43.44	44.07
	Equiv. Refl.: (-8,0,-5)								
Quartz	(8,-8,-5)	12.99	75.48	2.805	2.1	3.475	7.44	43.44	44.07
	Equiv. Refl.: (-8,8,5)								
Quartz	(0,8,-5)	12.99	75.48	2.804	2.1	3.475	7.44	43.44	44.07
	Equiv. Refl.: (0,-8,5)								

Ei =	13.419	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-6,9,-5)	12.908	74.14	2.798	2.1	3.811	7.88	47.64	48.29
Quartz	(-3,9,5)	12.908	74.14	2.797	2.1	3.811	7.88	47.64	48.29
	Equiv. Refl.: (-3,-6,-5), (-6,-3,5)								
Quartz	(9,-3,-5)	12.908	74.14	2.795	2.1	3.811	7.87	47.64	48.29
	Equiv. Refl.: (9,-6,5)								
Quartz	(10,-3,2)	13.152	78.54	2.778	2.2	2.72	6.01	34	34.52
	Equiv. Refl.: (10,-7,-2)								
Quartz	(-3,10,-2)	13.152	78.54	2.777	2.2	2.72	6.01	34	34.52
	Equiv. Refl.: (-3,-7,2), (-7,10,2)								
Quartz	(-7,-3,-2)	13.152	78.54	2.776	2.2	2.72	6.01	34	34.52
Quartz	(-8,3,7)	12.98	75.31	2.74	2.1	3.519	7.35	43.98	44.59
	Equiv. Refl.: (-8,5,-7)								
Quartz	(3,5,7)	12.98	75.31	2.738	2.1	3.519	7.35	43.98	44.59
	Equiv. Refl.: (3,-8,-7)								
Quartz	(5,-8,7)	12.98	75.31	2.736	2.1	3.519	7.34	43.98	44.59
Quartz	(5,3,-7)	12.98	75.31	2.735	2.1	3.519	7.34	43.98	44.59
Quartz	(-4,7,8)	12.757	71.93	2.729	2	4.378	8.89	54.73	55.44
Quartz	(7,-3,8)	12.757	71.93	2.728	2	4.378	8.88	54.73	55.44
	Equiv. Refl.: (7,-4,-8), (-3,7,-8), (-3,-4,8), (-4,-3,-8)								
Quartz	(2,4,-9)	12.884	73.77	2.723	2.1	3.906	8.01	48.82	49.47
	Equiv. Refl.: (2,-6,9)								
Quartz	(4,2,9)	12.884	73.77	2.72	2	3.906	8.01	48.82	49.47
	Equiv. Refl.: (4,-6,-9), (-6,2,-9), (-6,4,9)								
Quartz	(-2,6,-9)	12.884	73.77	2.716	2.1	3.906	8.01	48.82	49.47
Quartz	(-2,-4,9)	12.884	73.77	2.715	2.1	3.906	8.01	48.82	49.47
Quartz	(6,-2,9)	12.884	73.77	2.713	2	3.906	8.01	48.82	49.47
Quartz	(6,-4,-9)	12.884	73.77	2.712	2	3.906	8	48.82	49.47
	Equiv. Refl.: (-4,6,9), (-4,-2,-9)								
Quartz	(4,-7,-8)	12.757	71.93	2.698	2	4.378	8.89	54.73	55.44
Quartz	(3,4,-8)	12.757	71.93	2.697	2	4.378	8.88	54.73	55.44
	Equiv. Refl.: (3,-7,8), (4,3,8), (-7,3,-8), (-7,4,8)								
Quartz	(3,6,5)	12.908	74.14	2.668	2.1	3.811	7.88	47.64	48.29
	Equiv. Refl.: (3,-9,-5), (6,3,-5), (6,-9,5)								
Quartz	(-9,3,5)	12.908	74.14	2.666	2.1	3.811	7.87	47.64	48.29
	Equiv. Refl.: (-9,6,-5)								
Sapph	(3,6,12)	13.244	80.72	2.591	2.5	2.192	5.38	27.4	27.92
	Equiv. Refl.: (3,6,-12), (3,-9,12), (3,-9,-12), (6,3,12), (6,3,-12), (6,-9,12), (6,-9,-12), (9,-3,12), (9,-3,-12), (9,-6,12), (9,-6,-12), (-3,9,12), (-3,9,-12), (-3,-6,12), (-3,-6,-12), (-6,9,12), (-6,9,-12), (-6,-3,12), (-6,-3,-12), (-9,3,12), (-9,3,-12), (-9,6,12), (-9,6,-12)								
Quartz	(8,-7,-6)	12.975	75.23	2.408	2.1	3.538	7.44	44.23	44.85
Quartz	(8,-1,6)	12.975	75.23	2.407	2.1	3.538	7.44	44.23	44.85
	Equiv. Refl.: (8,-3,-7), (8,-5,7), (9,0,-1), (9,-9,1), (-7,8,6), (-7,-1,-6), (-9,0,1), (-9,9,-1)								
Quartz	(0,9,1)	13.163	78.79	2.406	2.2	2.66	5.82	33.25	33.75
	Equiv. Refl.: (0,-9,-1), (-1,8,-6), (-1,-7,6), (-3,8,7), (-3,-5,-7)								
Quartz	(-5,8,-7)	12.98	75.31	2.404	2.1	3.519	7.34	43.98	44.59
	Equiv. Refl.: (-5,-3,7)								
Quartz	(-8,7,6)	12.975	75.23	2.299	2.1	3.538	7.44	44.23	44.85
Quartz	(7,1,6)	12.975	75.23	2.298	2.1	3.538	7.44	44.23	44.85
	Equiv. Refl.: (-8,1,-6)								

Ei =	13.419	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(1,7,-6)	12.975	75.23	2.297	2.1	3.538	7.43	44.23	44.85
	Equiv. Refl.: (1,-8,6), (7,-8,-6)								
Quartz	(2,7,4)	12.778	72.22	2.296	2	4.303	8.4	53.79	54.44
	Equiv. Refl.: (2,-9,-4), (7,2,-4), (7,-9,4)								
Sapph	(1,8,5)	13.073	76.97	2.295	2.1	3.106	6.58	38.82	39.37
	Equiv. Refl.: (1,-9,-5), (8,1,-5), (8,-9,5), (9,-1,-5), (9,-8,5), (-1,9,5), (-1,-8,-5), (-8,9,-5), (-8,-1,5), (-9,1,5), (-9,8,-5)								
Quartz	(-9,2,4)	12.778	72.22	2.294	2	4.303	8.39	53.79	54.44
	Equiv. Refl.: (-9,7,-4)								
Quartz	(-2,-7,-4)	12.778	72.22	2.258	2	4.303	8.4	53.79	54.44
	Equiv. Refl.: (-7,9,-4), (-7,-2,4)								
Quartz	(-2,9,4)	12.778	72.22	2.257	2	4.303	8.4	53.79	54.44
Quartz	(9,-2,-4)	12.778	72.22	2.256	2	4.303	8.39	53.79	54.44
	Equiv. Refl.: (9,-7,4)								
LiNbO3	(1,9,1)	13.272	81.51	1.92	3	2.003	6	25.04	25.75
	Equiv. Refl.: (1,-10,-1), (9,1,-1), (9,-10,1), (10,-1,-1), (10,-9,1), (-1,10,1), (-1,-9,-1), (-9,10,-1), (-9,-1,1), (-10,1,1), (-10,9,-1)								
Sapph	(5,5,0)	13.029	76.15	1.905	2	3.309	6.73	41.37	41.91
	Equiv. Refl.: (5,-10,0), (10,-5,0), (-5,10,0), (-5,-5,0), (-10,5,0)								
Sapph	(1,6,19)	13.4	86.95	1.863	2.6	0.715	1.88	8.94	9.14
	Equiv. Refl.: (1,-7,-19), (6,1,-19), (6,-7,19), (7,-1,-19), (7,-6,19), (-1,7,19), (-1,-6,-19), (-6,7,-19), (-6,-1,19), (-7,1,19), (-7,6,-19)								
Sapph	(0,8,10)	12.947	74.76	1.859	2	3.655	7.21	45.69	46.26
	Equiv. Refl.: (0,-8,-10), (8,0,-10), (8,-8,10), (-8,0,10), (-8,8,-10)								
Quartz	(9,-1,2)	12.658	70.61	1.838	1.9	4.722	8.83	59.03	59.68
	Equiv. Refl.: (9,-8,-2), (-1,9,-2), (-1,-8,2), (-8,9,2), (-8,-1,-2)								
Quartz	(1,8,-2)	12.658	70.61	1.831	1.9	4.722	8.83	59.03	59.68
	Equiv. Refl.: (1,-9,2), (8,1,2), (8,-9,-2), (-9,1,-2), (-9,8,2)								
Quartz	(1,7,6)	12.975	75.23	1.823	1.8	3.538	6.48	44.23	44.7
	Equiv. Refl.: (1,-8,-6), (-8,1,6), (-8,7,-6)								
Quartz	(7,1,-6)	12.975	75.23	1.822	1.8	3.538	6.48	44.23	44.7
	Equiv. Refl.: (7,-8,6)								
Quartz	(6,2,-7)	13.223	80.2	1.777	1.9	2.318	4.33	28.97	29.29
	Equiv. Refl.: (6,-8,7), (-8,2,7), (-8,6,-7)								
Quartz	(2,-8,-7)	13.223	80.2	1.775	1.9	2.318	4.32	28.97	29.29
Quartz	(2,6,7)	13.223	80.2	1.774	1.9	2.318	4.32	28.97	29.29
Quartz	(3,7,0)	12.95	74.81	1.77	1.8	3.644	6.52	45.55	46.02
	Equiv. Refl.: (3,-10,0), (7,3,0), (7,-10,0), (-10,3,0), (-10,7,0)								
Quartz	(4,-4,-10)	12.866	73.49	1.758	1.8	3.977	7.23	49.71	50.24
	Equiv. Refl.: (-4,4,10)								
Quartz	(0,4,-10)	12.866	73.49	1.757	1.8	3.977	7.22	49.71	50.23
	Equiv. Refl.: (0,-4,10), (4,0,10), (-4,0,-10)								
Quartz	(6,-3,9)	12.802	72.55	1.747	1.8	4.217	7.57	52.71	53.26
	Equiv. Refl.: (6,-3,-9), (-3,6,9), (-3,6,-9), (-3,-3,9), (-3,-3,-9)								
Quartz	(3,3,-9)	12.802	72.55	1.74	1.8	4.217	7.57	52.71	53.26
	Equiv. Refl.: (3,-6,9), (3,-6,-9), (-6,3,9)								
Quartz	(3,3,9)	12.802	72.55	1.739	1.8	4.217	7.57	52.71	53.26
	Equiv. Refl.: (-6,3,-9)								
Sapph	(1,2,26)	13.032	76.21	1.708	1.8	3.293	6.09	41.16	41.61
	Equiv. Refl.: (1,-3,-26), (2,1,-26), (2,-3,26), (3,-1,-26), (3,-2,26), (-1,3,26), (-1,-2,-26), (-2,3,-26), (-2,-1,26), (-3,1,26), (-3,2,-26)								

Ei =	13.419	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(4,5,-6)	13.299	82.32	1.701	1.9	1.809	3.4	22.62	22.87
	Equiv. Refl.: (4,-9,6), (-9,4,-6), (-9,5,6)								
Quartz	(5,4,6)	13.299	82.32	1.698	1.9	1.809	3.39	22.62	22.87
	Equiv. Refl.: (5,-9,-6)								
Quartz	(-1,8,6)	12.975	75.23	1.694	1.8	3.538	6.48	44.23	44.7
Quartz	(8,-1,-6)	12.975	75.23	1.693	1.8	3.538	6.48	44.23	44.7
	Equiv. Refl.: (8,-7,6), (-1,-7,-6)								
Quartz	(-7,8,-6)	12.975	75.23	1.692	1.8	3.538	6.48	44.23	44.7
	Equiv. Refl.: (-7,-1,6)								
Sapph	(4,5,-10)	12.682	70.93	1.679	1.8	4.64	8.19	58	58.57
	Equiv. Refl.: (4,-9,10), (5,4,10), (5,-9,-10), (9,-4,10), (9,-5,-10), (-4,9,-10), (-4,-5,10), (-5,9,10), (-5,-4,-10), (-9,4,-10), (-9,5,10)								
Quartz	(10,-3,0)	12.95	74.81	1.668	1.8	3.644	6.52	45.55	46.02
	Equiv. Refl.: (10,-7,0), (-3,10,0), (-3,-7,0), (-7,10,0), (-7,-3,0)								
Quartz	(-1,7,8)	13.247	80.82	1.661	1.8	2.17	3.81	27.12	27.39
	Equiv. Refl.: (-1,-6,-8)								
Quartz	(-6,7,-8)	13.247	80.82	1.66	1.8	2.17	3.81	27.12	27.39
Quartz	(-6,-1,8)	13.247	80.82	1.659	1.8	2.17	3.81	27.12	27.39
Quartz	(7,-1,-8)	13.247	80.82	1.658	1.8	2.17	3.81	27.12	27.39
	Equiv. Refl.: (7,-6,8)								
Quartz	(8,-2,-7)	13.223	80.2	1.655	1.9	2.318	4.33	28.97	29.29
	Equiv. Refl.: (8,-6,7), (-6,8,-7), (-6,-2,7)								
Quartz	(-2,8,7)	13.223	80.2	1.653	1.9	2.318	4.32	28.97	29.29
Quartz	(-2,-6,-7)	13.223	80.2	1.652	1.9	2.318	4.32	28.97	29.29
Quartz	(-3,7,8)	12.757	71.93	1.639	1.7	4.378	7.37	54.73	55.22
	Equiv. Refl.: (-3,-4,-8)								
Quartz	(-4,7,-8)	12.757	71.93	1.638	1.7	4.378	7.37	54.73	55.22
Sapph	(1,8,-1)	12.863	73.44	1.637	1.7	3.989	6.97	49.87	50.35
	Equiv. Refl.: (1,-9,1), (8,1,1), (8,-9,-1), (9,-1,1), (9,-8,-1), (-1,9,-1), (-1,-8,1), (-8,9,1), (-8,-1,-1), (-9,1,-1), (-9,8,1), (7,-3,-8), (7,-4,8), (-4,-3,8)								
Quartz	(9,-4,6)	13.299	82.32	1.63	1.9	1.809	3.4	22.62	22.87
	Equiv. Refl.: (9,-5,-6), (-4,9,-6), (-4,-5,6)								
Sapph	(0,2,-26)	12.769	72.1	1.628	1.7	4.335	7.48	54.19	54.71
	Equiv. Refl.: (0,-2,26), (2,0,26), (2,-2,-26), (-2,0,-26), (-2,2,26)								
Quartz	(-5,9,6)	13.299	82.32	1.627	1.9	1.809	3.39	22.62	22.87
	Equiv. Refl.: (-5,-4,-6)								
Quartz	(3,4,8)	12.757	71.93	1.622	1.7	4.378	7.37	54.73	55.22
	Equiv. Refl.: (3,-7,-8), (7,-6,-8)								
Quartz	(7,-1,8)	13.247	80.82	1.621	1.8	2.17	3.83	27.12	27.39
	Equiv. Refl.: (-1,7,-8), (-1,-6,8), (-6,7,8), (-6,-1,-8)								
Quartz	(4,3,-8)	12.757	71.93	1.62	1.7	4.378	7.37	54.73	55.22
	Equiv. Refl.: (4,-7,8), (-7,3,8), (-7,4,-8)								
Sapph	(1,5,20)	12.7	71.16	1.607	1.7	4.58	7.77	57.25	57.77
	Equiv. Refl.: (1,-6,-20), (5,1,-20), (5,-6,20), (6,-1,-20), (6,-5,20), (-1,6,20), (-1,-5,-20), (-5,6,-20), (-5,-1,20), (-6,1,20), (-6,5,-20), (-1,4,10), (-1,-3,-10), (-3,4,-10)								
Quartz	(-3,-1,10)	12.616	70.08	1.606	1.6	4.864	7.83	60.79	61.3
Quartz	(4,-1,-10)	12.616	70.08	1.605	1.6	4.864	7.82	60.79	61.3
	Equiv. Refl.: (4,-3,10)								
Quartz	(4,4,7)	12.898	73.98	1.589	1.7	3.852	6.39	48.15	48.57
	Equiv. Refl.: (4,-8,7), (4,-8,-7), (-8,4,7), (-8,4,-7)								

Ei =	13.419	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(4,4,-7)	12.898	73.98	1.588	1.7	3.852	6.38	48.15	48.57
Quartz	(8,-4,7)	12.898	73.98	1.584	1.7	3.852	6.39	48.15	48.57
	Equiv. Refl.: (8,-4,-7), (-4,8,7)								
Quartz	(-4,8,-7)	12.898	73.98	1.583	1.7	3.852	6.38	48.15	48.57
	Equiv. Refl.: (-4,-4,7), (-4,-4,-7)								
Quartz	(-7,6,8)	13.247	80.82	1.57	1.8	2.17	3.83	27.12	27.39
Quartz	(6,1,8)	13.247	80.82	1.569	1.8	2.17	3.83	27.12	27.39
	Equiv. Refl.: (6,-7,-8), (-7,1,-8)								
Quartz	(1,6,-8)	13.247	80.82	1.568	1.8	2.17	3.83	27.12	27.39
	Equiv. Refl.: (1,-7,8)								
Quartz	(10,-4,-2)	12.907	74.12	1.562	1.6	3.816	6	47.7	48.08
	Equiv. Refl.: (10,-6,2), (-4,10,2), (-4,-6,-2)								
Quartz	(-6,10,-2)	12.907	74.12	1.561	1.6	3.816	6	47.7	48.08
	Equiv. Refl.: (-6,-4,2)								
Quartz	(1,3,10)	12.616	70.08	1.52	1.6	4.864	7.83	60.79	61.3
	Equiv. Refl.: (1,-4,-10), (3,-4,10)								
Quartz	(3,1,-10)	12.616	70.08	1.519	1.6	4.864	7.83	60.79	61.3
Quartz	(-6,1,-9)	13.129	78.07	1.518	1.6	2.835	4.48	35.44	35.72
	Equiv. Refl.: (-6,5,9)								
Quartz	(5,-6,-9)	13.129	78.07	1.517	1.6	2.835	4.47	35.44	35.72
	Equiv. Refl.: (-4,1,10), (-4,3,-10)								
Quartz	(1,5,-9)	13.129	78.07	1.516	1.6	2.835	4.47	35.44	35.72
	Equiv. Refl.: (5,1,9)								
Quartz	(1,6,8)	13.247	80.82	1.515	1.8	2.17	3.81	27.12	27.39
	Equiv. Refl.: (1,-6,9), (1,-7,-8), (6,-7,8)								
Quartz	(6,1,-8)	13.247	80.82	1.514	1.8	2.17	3.81	27.12	27.39
Quartz	(-7,1,8)	13.247	80.82	1.513	1.8	2.17	3.81	27.12	27.39
	Equiv. Refl.: (-7,6,-8)								
Quartz	(4,6,2)	12.907	74.12	1.429	1.6	3.816	6	47.7	48.08
	Equiv. Refl.: (4,-10,-2), (6,4,-2), (6,-10,2), (-10,4,2), (-10,6,-2)								
Quartz	(10,-4,3)	13.16	78.72	1.427	1.5	2.678	4.1	33.47	33.72
	Equiv. Refl.: (10,-6,-3), (-4,10,-3), (-4,-6,3)								
Quartz	(-6,10,3)	13.16	78.72	1.426	1.5	2.678	4.1	33.47	33.72
	Equiv. Refl.: (-6,-4,-3)								
Quartz	(6,0,-8)	12.674	70.81	1.416	1.5	4.669	6.88	58.36	58.77
Quartz	(0,6,8)	12.674	70.81	1.415	1.5	4.669	6.88	58.36	58.77
	Equiv. Refl.: (0,-6,-8), (6,-6,8), (-6,0,8), (-6,6,-8)								
Quartz	(6,-1,9)	13.129	78.07	1.396	1.6	2.835	4.48	35.44	35.72
	Equiv. Refl.: (6,-5,-9)								
Quartz	(-1,-5,9)	13.129	78.07	1.395	1.6	2.835	4.47	35.44	35.72
	Equiv. Refl.: (-5,6,9), (-5,-1,-9)								
Quartz	(-1,6,-9)	13.129	78.07	1.394	1.6	2.835	4.47	35.44	35.72
Quartz	(4,6,-3)	13.16	78.72	1.364	1.5	2.678	4.1	33.47	33.72
	Equiv. Refl.: (4,-10,3), (-10,6,3)								
Quartz	(6,4,3)	13.16	78.72	1.363	1.5	2.678	4.1	33.47	33.72
	Equiv. Refl.: (6,-10,-3), (-10,4,-3)								
Quartz	(0,9,-1)	13.163	78.79	1.345	1.5	2.66	3.95	33.25	33.48
	Equiv. Refl.: (0,-9,1), (9,0,1), (9,-9,-1), (-9,0,-1), (-9,9,1)								
Quartz	(10,-4,-1)	12.753	71.88	1.341	1.4	4.392	6.13	54.9	55.24
	Equiv. Refl.: (10,-6,1), (-4,10,1), (-4,-6,-1), (-6,10,-1), (-6,-4,1)								

Ei =	13.419	keV						ΔEg	ΔEt
Cryst	Ref	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(4,6,1)	12.753	71.88	1.315	1.4	4.392	6.13	54.9	55.24
	Equiv. Refl.: (4,-10,-1), (6,4,-1), (6,-10,1), (-10,4,1), (-10,6,-1)								
Sapph	(4,6,4)	13.253	80.99	1.277	1.5	2.128	3.26	26.59	26.79
	Equiv. Refl.: (4,-10,-4), (6,4,-4), (6,-10,4), (10,-4,-4), (10,-6,4), (-4,10,4), (-4,-6,-4), (-6,10,-4), (-6,-4,4), (-10,4,4), (-10,6,-4)								
Sapph	(4,5,11)	12.87	73.55	1.272	1.4	3.963	5.55	49.54	49.85
	Equiv. Refl.: (4,-9,-11), (5,4,-11), (5,-9,11), (9,-4,-11), (9,-5,11), (-4,9,11), (-4,-5,-11), (-5,9,-11), (-5,-4,11), (-9,4,11), (-9,5,-11)								
LiNbO3	(3,4,23)	13.316	82.9	1.271	2.4	1.671	4.05	20.89	21.28
	Equiv. Refl.: (3,-7,-23), (4,3,-23), (4,-7,23), (7,-3,-23), (7,-4,23), (-3,7,23), (-3,-4,-23), (-4,7,-23), (-4,-3,23), (-7,3,23), (-7,4,-23)								
Quartz	(6,-9,-5)	12.908	74.14	1.244	1.3	3.811	5.06	47.64	47.91
Quartz	(3,6,-5)	12.908	74.14	1.243	1.3	3.811	5.06	47.64	47.91
	Equiv. Refl.: (3,-9,5), (6,3,5), (-9,3,-5), (-9,6,5)								
Quartz	(9,-6,-5)	12.908	74.14	1.234	1.3	3.811	5.06	47.64	47.91
	Equiv. Refl.: (-6,9,5), (-6,-3,-5)								
Quartz	(9,-3,5)	12.908	74.14	1.233	1.3	3.811	5.06	47.64	47.91
	Equiv. Refl.: (-3,9,-5), (-3,-6,5)								
Quartz	(1,8,2)	12.658	70.61	1.22	1.2	4.722	5.82	59.03	59.31
	Equiv. Refl.: (1,-9,-2), (8,1,-2), (8,-9,2), (-9,1,2), (-9,8,-2)								
Quartz	(10,-2,-1)	13.403	87.17	1.213	1.7	0.663	1.12	8.28	8.36
	Equiv. Refl.: (10,-8,1)								
Quartz	(-2,-8,-1)	13.403	87.17	1.211	1.7	0.663	1.12	8.28	8.36
	Equiv. Refl.: (-8,10,-1), (-8,-2,1)								
Quartz	(-2,10,1)	13.403	87.17	1.21	1.7	0.663	1.12	8.28	8.36
Quartz	(-4,9,6)	13.299	82.32	1.196	1.4	1.809	2.49	22.62	22.75
	Equiv. Refl.: (-4,-5,-6)								
Quartz	(9,-4,-6)	13.299	82.32	1.192	1.4	1.809	2.48	22.62	22.75
	Equiv. Refl.: (9,-5,6)								
Quartz	(-5,9,-6)	13.299	82.32	1.191	1.4	1.809	2.48	22.62	22.75
Quartz	(-5,-4,6)	13.299	82.32	1.19	1.4	1.809	2.48	22.62	22.75
Sapph	(3,5,-17)	13.294	82.18	1.183	1.5	1.843	2.74	23.03	23.2
	Equiv. Refl.: (3,-8,17), (5,3,17), (5,-8,-17), (8,-3,17), (8,-5,-17), (-3,8,-17), (-3,-5,17), (-5,8,17), (-5,-3,-17), (-8,3,-17), (-8,5,17)								
LiNbO3	(4,6,-11)	13.082	77.13	1.168	1.9	3.065	5.77	38.32	38.75
	Equiv. Refl.: (4,-10,11), (6,4,11), (6,-10,-11), (10,-4,11), (10,-6,-11), (-4,10,-11), (-4,-6,11), (-6,10,11), (-6,-4,-11), (-10,4,-11), (-10,6,11)								
Quartz	(9,-4,5)	12.743	71.74	1.151	1.2	4.429	5.4	55.36	55.62
	Equiv. Refl.: (9,-5,-5), (-4,9,-5), (-4,-5,5), (-5,9,5), (-5,-4,-5)								
Quartz	(1,8,3)	12.915	74.25	1.15	1.2	3.784	4.49	47.3	47.51
	Equiv. Refl.: (1,-9,-3), (-9,8,-3)								
Quartz	(8,1,-3)	12.915	74.25	1.149	1.2	3.784	4.49	47.3	47.51
	Equiv. Refl.: (8,-9,3), (-9,1,3)								
Quartz	(4,-9,5)	12.743	71.74	1.137	1.2	4.429	5.4	55.36	55.62
	Equiv. Refl.: (5,4,5), (5,-9,-5), (-9,4,-5), (-9,5,5)								
Quartz	(4,5,-5)	12.743	71.74	1.136	1.2	4.429	5.4	55.36	55.62
Quartz	(9,-1,-2)	12.658	70.61	1.108	1.2	4.722	5.82	59.03	59.31
	Equiv. Refl.: (9,-8,2), (-1,9,2), (-1,-8,-2), (-8,9,-2), (-8,-1,2)								
Quartz	(4,-9,-6)	13.299	82.32	1.101	1.4	1.809	2.49	22.62	22.75
Quartz	(4,5,6)	13.299	82.32	1.1	1.4	1.809	2.49	22.62	22.75

Ei =	13.419	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-9,4,6)	13.299	82.32	1.096	1.4	1.809	2.48	22.62	22.75
	Equiv. Refl.: (-9,5,-6)								
Quartz	(5,-9,6)	13.299	82.32	1.095	1.4	1.809	2.48	22.62	22.75
Quartz	(5,4,-6)	13.299	82.32	1.094	1.4	1.809	2.48	22.62	22.75
LiNbO3	(2,7,13)	12.78	72.25	1.088	1.6	4.295	7.03	53.69	54.15
	Equiv. Refl.: (2,-9,-13), (7,2,-13), (7,-9,13), (9,-2,-13), (9,-7,13), (-2,9,13), (-2,-7,-13), (-7,9,-13), (-7,-2,13), (-9,2,13), (-9,7,-13)								
LiNbO3	(2,2,27)	12.999	75.63	1.059	1.7	3.438	5.86	42.98	43.37
	Equiv. Refl.: (2,2,-27), (2,-4,27), (2,-4,-27), (4,-2,27), (4,-2,-27), (-2,4,27), (-2,4,-27), (-2,-2,27), (-2,-2,-27), (-4,2,27), (-4,2,-27)								
Sapph	(4,4,15)	12.645	70.44	1.042	1.2	4.767	5.5	59.58	59.84
	Equiv. Refl.: (4,4,-15), (4,-8,15), (4,-8,-15), (8,-4,15), (8,-4,-15), (-4,8,15), (-4,8,-15), (-4,-4,15), (-4,-4,-15), (-8,4,15), (-8,4,-15)								
Quartz	(9,-8,3)	12.915	74.25	1.035	1.2	3.784	4.5	47.3	47.51
	Equiv. Refl.: (-1,9,3), (-1,-8,-3)								
Quartz	(9,-1,-3)	12.915	74.25	1.034	1.2	3.784	4.49	47.3	47.51
	Equiv. Refl.: (-8,9,-3), (-8,-1,3)								
Quartz	(-1,9,-3)	12.915	74.25	1.013	1.1	3.784	4.18	47.3	47.48
	Equiv. Refl.: (-1,-8,3), (-8,9,3), (-8,-1,-3)								
Quartz	(9,-1,3)	12.915	74.25	1.012	1.1	3.784	4.18	47.3	47.48
	Equiv. Refl.: (9,-8,-3)								
Quartz	(2,-3,-11)	13.193	79.47	1.002	1.1	2.495	2.73	31.19	31.3
Quartz	(2,1,11)	13.193	79.47	1.001	1.1	2.495	2.73	31.19	31.3
Quartz	(-3,1,-11)	13.193	79.47	0.999	1.1	2.495	2.72	31.19	31.3
Quartz	(1,2,-11)	13.193	79.47	0.998	1.1	2.495	2.72	31.19	31.3
	Equiv. Refl.: (1,-3,11)								
Quartz	(1,8,-3)	12.915	74.25	0.997	1.1	3.784	4.18	47.3	47.48
	Equiv. Refl.: (1,-9,3), (8,1,3), (8,-9,-3), (-3,2,11), (-9,1,-3), (-9,8,3)								
Quartz	(-10,2,1)	13.403	87.17	0.981	1.7	0.663	1.12	8.28	8.36
	Equiv. Refl.: (-10,8,-1)								
Quartz	(8,2,-1)	13.403	87.17	0.98	1.7	0.663	1.12	8.28	8.36
	Equiv. Refl.: (8,-10,1)								
Quartz	(2,8,1)	13.403	87.17	0.979	1.7	0.663	1.12	8.28	8.36
	Equiv. Refl.: (2,-10,-1)								
Quartz	(-5,10,3)	13.079	77.07	0.942	1.1	3.081	3.28	38.51	38.65
	Equiv. Refl.: (-5,-5,-3)								
Quartz	(10,-5,3)	13.079	77.07	0.941	1.1	3.081	3.28	38.51	38.65
	Equiv. Refl.: (10,-5,-3), (-5,10,-3), (-5,-5,3)								
Quartz	(1,-6,-9)	13.129	78.07	0.935	1	2.835	2.82	35.44	35.55
Quartz	(1,5,9)	13.129	78.07	0.934	1	2.835	2.82	35.44	35.55
Quartz	(5,1,-9)	13.129	78.07	0.933	1	2.835	2.81	35.44	35.55
Quartz	(0,6,-8)	12.674	70.81	0.932	1	4.669	4.73	58.36	58.56
	Equiv. Refl.: (0,-6,8), (5,-6,9), (6,0,8), (6,-6,-8), (-6,0,-8), (-6,6,8)								
Quartz	(5,5,3)	13.079	77.07	0.931	1.1	3.081	3.28	38.51	38.65
	Equiv. Refl.: (5,-10,-3), (-10,5,3), (-10,5,-3)								
Quartz	(5,5,-3)	13.079	77.07	0.93	1.1	3.081	3.28	38.51	38.65
	Equiv. Refl.: (5,-10,3), (-6,1,9), (-6,5,-9)								
Quartz	(10,-3,-2)	13.152	78.54	0.921	1.1	2.72	2.89	34	34.12
	Equiv. Refl.: (10,-7,2)								

Ei =	13.419	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-3,10,2)	13.152	78.54	0.92	1.1	2.72	2.88	34	34.12
	Equiv. Refl.: (-3,-7,-2), (-7,10,-2), (-7,-3,2)								
LiNbO3	(2,4,-23)	12.646	70.46	0.902	1.4	4.763	6.67	59.54	59.91
	Equiv. Refl.: (2,-6,23), (4,2,23), (4,-6,-23), (6,-2,23), (6,-4,-23), (-2,6,-23), (-2,-4,23), (-4,6,23), (-4,-2,-23), (-6,2,-23), (-6,4,23)								
Quartz	(-10,3,2)	13.152	78.54	0.897	1.1	2.72	2.89	34	34.12
	Equiv. Refl.: (-10,7,-2)								
Quartz	(3,7,2)	13.152	78.54	0.896	1.1	2.72	2.88	34	34.12
	Equiv. Refl.: (3,-10,-2), (7,3,-2), (7,-10,2)								
Quartz	(-7,9,-5)	13.233	80.46	0.889	1	2.256	2.3	28.2	28.3
	Equiv. Refl.: (-7,-2,5)								
Quartz	(9,-2,-5)	13.233	80.46	0.888	1	2.256	2.3	28.2	28.29
	Equiv. Refl.: (9,-7,5), (-2,-7,-5)								
Quartz	(-2,9,5)	13.233	80.46	0.887	1	2.256	2.3	28.2	28.29
LiNbO3	(4,5,17)	13.256	81.07	0.884	1.8	2.108	3.75	26.36	26.62
	Equiv. Refl.: (4,-9,-17), (5,4,-17), (5,-9,17), (9,-4,-17), (9,-5,17), (-4,9,17), (-4,-5,-17), (-5,9,-17), (-5,-4,17), (-9,4,17), (-9,5,-17)								
Quartz	(0,7,7)	12.98	75.31	0.867	1	3.519	3.45	43.98	44.12
	Equiv. Refl.: (0,-7,-7)								
Quartz	(7,0,-7)	12.98	75.31	0.865	1	3.519	3.44	43.98	44.12
	Equiv. Refl.: (7,-7,7), (-7,0,7), (-7,7,-7)								
Quartz	(-2,3,11)	13.193	79.47	0.859	1.1	2.495	2.73	31.19	31.3
	Equiv. Refl.: (-2,-1,-11)								
Sapph	(2,7,-8)	12.893	73.9	0.858	1	3.874	3.89	48.42	48.58
	Equiv. Refl.: (2,-9,8), (7,2,8), (7,-9,-8), (9,-2,8), (9,-7,-8), (-2,9,-8), (-2,-7,8), (-7,9,8), (-7,-2,-8), (-9,2,-8), (-9,7,8)								
Quartz	(3,-1,11)	13.193	79.47	0.857	1.1	2.495	2.72	31.19	31.3
Quartz	(3,-2,-11)	13.193	79.47	0.855	1.1	2.495	2.72	31.19	31.3
	Equiv. Refl.: (-1,3,-11), (-1,-2,11)								
Quartz	(0,1,-11)	12.701	71.17	0.834	0.9	4.575	4.21	57.19	57.35
	Equiv. Refl.: (0,-1,11)								
Quartz	(1,0,11)	12.701	71.17	0.833	0.9	4.575	4.21	57.19	57.35
	Equiv. Refl.: (1,-1,-11), (-1,1,11)								
Quartz	(-1,0,-11)	12.701	71.17	0.832	0.9	4.575	4.21	57.19	57.35
Quartz	(2,5,8)	12.923	74.37	0.815	0.9	3.755	3.42	46.94	47.07
	Equiv. Refl.: (2,-7,-8), (8,-3,7), (8,-5,-7), (-3,8,-7), (-3,-5,7), (-7,5,-8)								
Quartz	(-7,2,8)	12.923	74.37	0.814	0.9	3.755	3.41	46.94	47.07
Quartz	(5,2,-8)	12.923	74.37	0.813	0.9	3.755	3.41	46.94	47.07
	Equiv. Refl.: (5,-7,8)								
Quartz	(-5,8,7)	12.98	75.31	0.812	0.9	3.519	3.24	43.98	44.1
	Equiv. Refl.: (-5,-3,-7)								
Quartz	(3,5,-7)	12.98	75.31	0.795	0.9	3.519	3.25	43.98	44.1
	Equiv. Refl.: (3,-8,7), (-8,3,-7), (-8,5,7)								
Quartz	(5,3,7)	12.98	75.31	0.792	0.9	3.519	3.24	43.98	44.1
	Equiv. Refl.: (5,-8,-7)								
Quartz	(7,-5,8)	12.923	74.37	0.784	0.9	3.755	3.42	46.94	47.07
	Equiv. Refl.: (-2,7,8), (-2,-5,-8)								
Quartz	(7,-2,-8)	12.923	74.37	0.783	0.9	3.755	3.41	46.94	47.07
Quartz	(-5,7,-8)	12.923	74.37	0.782	0.9	3.755	3.41	46.94	47.07
	Equiv. Refl.: (-5,-2,8)								

Ei =	13.419	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(7,2,-5)	13.233	80.46	0.776	1	2.256	2.3	28.2	28.3
	Equiv. Refl.: (7,-9,5), (-9,2,5), (-9,7,-5)								
Quartz	(2,7,5)	13.233	80.46	0.775	1	2.256	2.3	28.2	28.29
Quartz	(2,-9,-5)	13.233	80.46	0.774	1	2.256	2.3	28.2	28.29
LiNbO3	(3,7,11)	13.302	82.42	0.771	1.7	1.785	3.12	22.31	22.53
	Equiv. Refl.: (3,-10,-11), (7,3,-11), (7,-10,11), (10,-3,-11), (10,-7,11), (-3,10,11), (-3,-7,-11), (-7,10,-11), (-7,-3,11), (-10,3,11), (-10,7,-11)								
Quartz	(1,4,10)	13.272	81.51	0.769	1	2.003	1.94	25.04	25.12
	Equiv. Refl.: (1,-5,-10), (-1,6,9)								
Quartz	(4,1,-10)	13.272	81.51	0.768	1	2.003	1.94	25.04	25.12
	Equiv. Refl.: (4,-5,10), (-1,-5,-9)								
Quartz	(-5,6,-9)	13.129	78.07	0.767	1	2.835	2.81	35.44	35.55
	Equiv. Refl.: (-5,-1,9)								
LiNbO3	(2,8,9)	13.364	84.83	0.766	2	1.214	2.48	15.18	15.38
	Equiv. Refl.: (2,8,-9), (2,-10,9), (2,-10,-9), (8,2,9), (8,2,-9), (8,-10,9), (8,-10,-9), (10,-2,9), (10,-2,-9), (10,-8,9), (10,-8,-9), (-2,10,9), (-2,10,-9), (-2,-8,9), (-2,-8,-9), (-8,10,9), (-8,10,-9), (-8,-2,9), (-8,-2,-9), (-10,2,9), (-10,2,-9), (-10,8,9), (-10,8,-9)								
Quartz	(6,-1,-9)	13.129	78.07	0.765	1	2.835	2.81	35.44	35.55
	Equiv. Refl.: (6,-5,9)								
Quartz	(-5,1,10)	13.272	81.51	0.762	1	2.003	1.93	25.04	25.11
	Equiv. Refl.: (-5,4,-10)								
Quartz	(10,-4,0)	12.702	71.18	0.761	0.8	4.573	3.89	57.16	57.29
	Equiv. Refl.: (10,-6,0), (-4,10,0), (-4,-6,0), (-6,10,0), (-6,-4,0)								
Quartz	(10,-3,-1)	13.001	75.66	0.758	0.9	3.431	2.99	42.89	43
	Equiv. Refl.: (10,-7,1), (-3,10,1), (-3,-7,-1), (-7,10,-1), (-7,-3,-1)								
Quartz	(4,6,0)	12.702	71.18	0.757	0.8	4.573	3.89	57.16	57.29
	Equiv. Refl.: (4,-10,0), (6,4,0), (6,-10,0), (-10,4,0), (-10,6,0)								
Quartz	(-1,-4,-10)	13.272	81.51	0.746	1	2.003	1.94	25.04	25.12
Quartz	(-1,5,10)	13.272	81.51	0.745	1	2.003	1.94	25.04	25.12
	Equiv. Refl.: (-4,5,-10), (-4,-1,10)								
Quartz	(5,-4,10)	13.272	81.51	0.739	1	2.003	1.93	25.04	25.11
Quartz	(4,6,3)	13.16	78.72	0.738	0.8	2.678	2.25	33.47	33.55
	Equiv. Refl.: (4,-10,-3), (5,-1,-10), (-10,4,3), (-10,6,-3)								
Quartz	(6,4,-3)	13.16	78.72	0.737	0.8	2.678	2.25	33.47	33.55
	Equiv. Refl.: (6,-10,3)								
Quartz	(3,7,1)	13.001	75.66	0.736	0.9	3.431	2.99	42.89	43
	Equiv. Refl.: (3,-10,-1), (7,3,-1), (7,-10,1), (-10,3,1), (-10,7,-1)								
Quartz	(0,4,10)	12.866	73.49	0.723	0.8	3.977	3.3	49.71	49.82
	Equiv. Refl.: (0,-4,-10)								
Quartz	(4,0,-10)	12.866	73.49	0.72	0.8	3.977	3.29	49.71	49.82
	Equiv. Refl.: (4,-4,10), (-4,0,10), (-4,4,-10)								
Sapph	(2,7,7)	12.759	71.96	0.695	0.8	4.37	3.63	54.63	54.75
	Equiv. Refl.: (2,-9,-7), (7,2,-7), (7,-9,7), (9,-2,-7), (9,-7,7), (-2,9,7), (-2,-7,-7), (-7,9,-7), (-7,-2,7), (-9,2,7), (-9,7,-7)								
Quartz	(10,-5,1)	12.67	70.77	0.65	0.7	4.682	3.47	58.53	58.63
	Equiv. Refl.: (10,-5,-1), (-5,10,1), (-5,10,-1), (-5,-5,1), (-5,-5,-1)								
Quartz	(5,5,1)	12.67	70.77	0.648	0.7	4.682	3.47	58.53	58.63
	Equiv. Refl.: (5,5,-1), (5,-10,1), (5,-10,-1), (-10,5,1), (-10,5,-1)								
Quartz	(10,-4,-3)	13.16	78.72	0.626	0.8	2.678	2.25	33.47	33.55
	Equiv. Refl.: (10,-6,3)								

Ei =	13.419	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(-4,10,3)	13.16	78.72	0.625	0.8	2.678	2.25	33.47	33.55
	Equiv. Refl.: (-4,-6,-3), (-6,10,-3), (-6,-4,3)								
Quartz	(-2,9,-4)	12.778	72.22	0.621	0.7	4.303	2.99	53.79	53.87
Quartz	(9,-2,4)	12.778	72.22	0.62	0.7	4.303	2.98	53.79	53.87
	Equiv. Refl.: (9,-7,-4), (-2,-7,4), (-7,9,4), (-7,-2,-4)								
LiNbO3	(5,6,-1)	13.272	81.51	0.611	1.5	2.003	2.92	25.04	25.21
	Equiv. Refl.: (5,-11,1), (6,5,1), (6,-11,-1), (11,-5,1), (11,-6,-1), (-5,11,-1), (-5,-6,1), (-6,11,1), (-6,-5,-1), (-11,5,-1), (-11,6,1)								
Quartz	(3,1,10)	12.616	70.08	0.61	0.6	4.864	3.13	60.79	60.88
	Equiv. Refl.: (3,-4,-10)								
Quartz	(1,3,-10)	12.616	70.08	0.609	0.6	4.864	3.13	60.79	60.88
Quartz	(1,-4,10)	12.616	70.08	0.608	0.6	4.864	3.13	60.79	60.88
	Equiv. Refl.: (-4,1,-10), (-4,3,10)								
Sapph	(0,5,22)	12.917	74.27	0.595	0.8	3.779	2.84	47.23	47.32
	Equiv. Refl.: (0,-5,-22), (5,0,-22), (5,-5,22), (-5,0,22), (-5,5,-22)								
Sapph	(5,5,3)	13.107	77.62	0.569	0.8	2.945	2.25	36.81	36.88
	Equiv. Refl.: (5,5,-3), (5,-10,3), (5,-10,-3), (10,-5,3), (10,-5,-3), (-5,10,3), (-5,10,-3), (-5,-5,3), (-5,-5,-3), (-10,5,3), (-10,5,-3)								
Quartz	(2,7,-4)	12.778	72.22	0.563	0.7	4.303	2.99	53.79	53.87
	Equiv. Refl.: (2,-9,4), (7,2,4), (7,-9,-4), (-9,2,-4)								
Quartz	(-9,7,4)	12.778	72.22	0.562	0.7	4.303	2.98	53.79	53.87
Sapph	(2,3,23)	12.787	72.35	0.559	0.7	4.27	2.99	53.38	53.46
	Equiv. Refl.: (2,-5,-23), (3,2,-23), (3,-5,23), (5,-2,-23), (5,-3,23), (-2,5,23), (-2,-3,-23), (-3,5,-23), (-3,-2,23), (-5,2,23), (-5,3,-23)								
Quartz	(10,-3,1)	13.001	75.66	0.54	0.6	3.431	2.23	42.89	42.95
	Equiv. Refl.: (10,-7,-1), (-3,10,-1), (-3,-7,1), (-7,10,1), (-7,-3,-1)								
Quartz	(3,7,-1)	13.001	75.66	0.5	0.6	3.431	2.23	42.89	42.95
	Equiv. Refl.: (3,-10,1), (7,3,1), (7,-10,-1), (-3,4,10), (-10,3,-1), (-10,7,1)								
Quartz	(-3,-1,-10)	12.616	70.08	0.499	0.6	4.864	3.13	60.79	60.88
Quartz	(4,-1,10)	12.616	70.08	0.498	0.6	4.864	3.13	60.79	60.88
	Equiv. Refl.: (-1,-3,10)								
Quartz	(4,-3,-10)	12.616	70.08	0.497	0.6	4.864	3.12	60.79	60.88
	Equiv. Refl.: (-1,4,-10)								
LiNbO3	(1,5,23)	12.873	73.6	0.424	0.9	3.949	3.6	49.36	49.49
	Equiv. Refl.: (1,-6,-23), (5,1,-23), (5,-6,23), (6,-1,-23), (6,-5,23), (-1,6,23), (-1,-5,-23), (-5,6,-23), (-5,-1,23), (-6,1,23), (-6,5,-23)								
Quartz	(0,2,-11)	12.949	74.8	0.4	0.5	3.647	1.91	45.59	45.63
	Equiv. Refl.: (0,-2,11)								
Quartz	(2,-2,-11)	12.949	74.8	0.396	0.5	3.647	1.89	45.59	45.62
	Equiv. Refl.: (-2,0,-11), (-2,2,11)								
Quartz	(2,0,11)	12.949	74.8	0.395	0.5	3.647	1.89	45.59	45.62
Sapph	(1,6,-17)	12.773	72.15	0.376	0.5	4.32	2.23	54	54.05
	Equiv. Refl.: (1,-7,17), (6,1,17), (6,-7,-17), (7,-1,17), (7,-6,-17), (-1,7,-17), (-1,-6,17), (-6,7,17), (-6,-1,-17), (-7,1,-17), (-7,6,17)								
LiNbO3	(3,7,-7)	12.749	71.82	0.367	0.8	4.407	3.56	55.08	55.2
	Equiv. Refl.: (3,-10,7), (7,3,7), (7,-10,-7), (10,-3,7), (10,-7,-7), (-3,10,-7), (-3,-7,7), (-7,10,7), (-7,-3,-7), (-10,3,-7), (-10,7,7)								
Sapph	(1,3,25)	13.107	77.63	0.343	0.5	2.944	1.56	36.8	36.83
	Equiv. Refl.: (1,-4,-25), (3,1,-25), (3,-4,25), (4,-1,-25), (4,-3,25), (-1,4,25), (-1,-3,-25), (-3,4,-25), (-3,-1,25), (-4,1,25), (-4,3,-25)								
Quartz	(-3,-2,-10)	13.111	77.7	0.342	0.5	2.926	1.39	36.57	36.6

Ei =	13.419	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Quartz	(-2,5,-10)	13.111	77.7	0.341	0.5	2.926	1.39	36.57	36.6
	Equiv. Refl.: (-2,-3,10), (-3,5,10)								
Quartz	(5,-3,-10)	13.111	77.7	0.338	0.5	2.926	1.38	36.57	36.6
Quartz	(5,-2,10)	13.111	77.7	0.337	0.5	2.926	1.38	36.57	36.6
Sapph	(2,5,18)	12.731	71.57	0.335	0.5	4.471	2.09	55.89	55.93
	Equiv. Refl.: (2,5,-18), (2,-7,18), (2,-7,-18), (5,2,18), (5,2,-18), (5,-7,18), (5,-7,-18), (7,-2,18), (7,-2,-18), (7,-5,18), (7,-5,-18), (-2,7,18), (-2,7,-18), (-2,-5,18), (-2,-5,-18), (-5,7,18), (-5,7,-18), (-5,-2,18), (-5,-2,-18), (-7,2,18), (-7,2,-18), (-7,5,18), (-7,5,-18)								
Quartz	(2,3,-10)	13.111	77.7	0.315	0.5	2.926	1.39	36.57	36.6
	Equiv. Refl.: (2,-5,10), (3,2,10), (3,-5,-10)								
Quartz	(-5,3,10)	13.111	77.7	0.312	0.5	2.926	1.38	36.57	36.6
Quartz	(-5,2,-10)	13.111	77.7	0.311	0.5	2.926	1.38	36.57	36.6
Quartz	(0,7,-7)	12.98	75.31	0.308	0.4	3.519	1.53	43.98	44.01
	Equiv. Refl.: (0,-7,7), (7,0,7), (7,-7,-7), (-7,0,-7), (-7,7,7)								
LiNbO3	(2,6,-19)	13.143	78.35	0.307	0.9	2.767	2.4	34.58	34.67
	Equiv. Refl.: (2,-8,19), (6,2,19), (6,-8,-19), (8,-2,19), (8,-6,-19), (-2,8,-19), (-2,-6,19), (-6,8,19), (-6,-2,-19), (-8,2,-19), (-8,6,19)								
LiNbO3	(3,6,15)	12.915	74.25	0.301	0.8	3.785	2.87	47.31	47.4
	Equiv. Refl.: (3,6,-15), (3,-9,15), (3,-9,-15), (6,3,15), (6,3,-15), (6,-9,15), (6,-9,-15), (9,-3,15), (9,-3,-15), (9,-6,15), (9,-6,-15), (-3,9,15), (-3,9,-15), (-3,-6,15), (-3,-6,-15), (-6,9,15), (-6,9,-15), (-6,-3,15), (-6,-3,-15), (-9,3,15), (-9,3,-15), (-9,6,15), (-9,6,-15)								
LiNbO3	(2,8,3)	12.814	72.74	0.263	0.7	4.17	2.83	52.13	52.21
	Equiv. Refl.: (2,8,-3), (2,-10,3), (2,-10,-3), (8,2,3), (8,2,-3), (8,-10,3), (8,-10,-3), (10,-2,3), (10,-2,-3), (10,-8,3), (10,-8,-3), (-2,10,3), (-2,10,-3), (-2,-8,3), (-2,-8,-3), (-8,10,3), (-8,10,-3), (-8,-2,3), (-8,-2,-3), (-10,2,3), (-10,2,-3), (-10,8,3), (-10,8,-3)								
LiNbO3	(2,5,21)	12.79	72.39	0.234	0.6	4.259	2.69	53.24	53.31
	Equiv. Refl.: (2,5,-21), (2,-7,21), (2,-7,-21), (5,2,21), (5,2,-21), (5,-7,21), (5,-7,-21), (7,-2,21), (7,-2,-21), (7,-5,21), (7,-5,-21), (-2,7,21), (-2,7,-21), (-2,-5,21), (-2,-5,-21), (-5,7,21), (-5,7,-21), (-5,-2,21), (-5,-2,-21), (-7,2,21), (-7,2,-21), (-7,5,21), (-7,5,-21)								
Sapph	(0,8,-8)	12.627	70.21	0.201	0.3	4.828	1.55	60.35	60.37
	Equiv. Refl.: (0,-8,8), (8,0,8), (8,-8,-8), (-8,0,-8), (-8,8,8)								
Sapph	(4,6,-5)	13.331	83.42	0.176	0.4	1.548	0.68	19.35	19.36
	Equiv. Refl.: (4,-10,5), (6,4,5), (6,-10,-5), (10,-4,5), (10,-6,-5), (-4,10,-5), (-4,-6,5), (-6,10,5), (-6,-4,-5), (-10,4,-5), (-10,6,5)								
LiNbO3	(1,8,-13)	13.226	80.28	0.155	0.7	2.299	1.51	28.73	28.77
	Equiv. Refl.: (1,-9,13), (8,1,13), (8,-9,-13), (9,-1,13), (9,-8,-13), (-1,9,-13), (-1,-8,13), (-8,9,13), (-8,-1,-13), (-9,1,-13), (-9,8,13)								
Quartz	(0,5,9)	12.635	70.32	0.141	0.2	4.801	1.12	60.01	60.02
	Equiv. Refl.: (0,-5,-9)								
Quartz	(5,0,-9)	12.635	70.32	0.14	0.2	4.801	1.11	60.01	60.02
	Equiv. Refl.: (-5,0,9)								
Quartz	(5,-5,9)	12.635	70.32	0.139	0.2	4.801	1.11	60.01	60.02
	Equiv. Refl.: (-5,5,-9)								
LiNbO3	(2,3,-25)	12.717	71.38	0.137	0.5	4.521	2.09	56.51	56.55
	Equiv. Refl.: (2,-5,25), (3,2,25), (3,-5,-25), (5,-2,25), (5,-3,-25), (-2,5,-25), (-2,-3,25), (-3,5,25), (-3,-2,-25), (-5,2,-25), (-5,3,25)								
LiNbO3	(3,5,19)	12.92	74.33	0.132	0.5	3.765	1.83	47.07	47.1
	Equiv. Refl.: (3,-8,-19), (5,3,-19), (5,-8,19), (8,-3,-19), (8,-5,19), (-3,8,19), (-3,-5,-19), (-5,8,-19), (-5,-3,19), (-8,3,19), (-8,5,-19)								
Sapph	(1,8,2)	12.889	73.85	0.127	0.3	3.887	0.99	48.59	48.6
	Equiv. Refl.: (1,-9,-2), (8,1,-2), (8,-9,2), (9,-1,-2), (9,-8,2), (-1,9,2), (-1,-8,-2), (-8,9,-2), (-8,-1,2), (-9,1,2), (-9,8,-2)								

Sapph	(3,6,9)	12.69	71.03	0.126	0.2	4.613	1.11	57.66	57.67
Equiv. Refl.: (3,6,-9), (3,-9,9), (3,-9,-9), (6,3,9), (6,3,-9), (6,-9,9), (6,-9,-9), (9,-3,9), (9,-3,-9)									
(9,-6,9), (9,-6,-9), (-3,9,9), (-3,9,-9), (-3,-6,9), (-3,-6,-9), (-6,9,9), (-6,9,-9), (-6,-3,9)									
(-6,-3,-9), (-9,3,9), (-9,3,-9), (-9,6,9), (-9,6,-9)									
Sapph	(3,4,-19)	12.883	73.76	0.104	0.2	3.91	0.88	48.87	48.88
Equiv. Refl.: (3,-7,19), (4,3,19), (4,-7,-19), (7,-3,19), (7,-4,-19), (-3,7,-19), (-3,-4,19), (-4,7,19), (-4,-3,-19)									
(-7,3,-19), (-7,4,19)									
Sapph	(4,6,1)	13.124	77.96	0.102	0.3	2.862	0.72	35.77	35.78
Equiv. Refl.: (4,-10,-1), (6,4,-1), (6,-10,1), (10,-4,-1), (10,-6,1), (-4,10,1), (-4,-6,-1), (-6,10,-1), (-6,-4,1)									
(-10,4,1), (-10,6,-1)									
LiNbO3	(1,8,11)	12.858	73.38	0.1	0.4	4.005	1.65	50.07	50.1
Equiv. Refl.: (1,-9,-11), (8,1,-11), (8,-9,11), (9,-1,-11), (9,-8,11), (-1,9,11), (-1,-8,-11), (-8,9,-11), (-8,-1,11)									
(-9,1,11), (-9,8,-11)									
Sapph	(1,7,12)	12.721	71.43	0.046	0.1	4.508	0.61	56.35	56.35
Equiv. Refl.: (1,7,-12), (1,-8,12), (1,-8,-12), (7,1,12), (7,1,-12), (7,-8,12), (7,-8,-12), (8,-1,12), (8,-1,-12)									
(8,-7,12), (8,-7,-12), (-1,8,12), (-1,8,-12), (-1,-7,12), (-1,-7,-12), (-7,8,12), (-7,8,-12), (-7,-1,12)									
(-7,-1,-12), (-8,1,12), (-8,1,-12), (-8,7,12), (-8,7,-12)									
LiNbO3	(5,5,9)	12.697	71.12	0.006	0.1	4.59	0.5	57.38	57.38
Equiv. Refl.: (5,5,-9), (5,-10,9), (5,-10,-9), (10,-5,9), (10,-5,-9), (-5,10,9), (-5,10,-9), (-5,-5,9), (-5,-5,-9)									
(-10,5,9), (-10,5,-9)									

Ei =	5.483	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Ge	(2,2,4)	5.368	78.25	173.2176	164.39	1.14	187.4	14.25	187.94
	Equiv. Refl.: (2,4,2), (4,2,2)								
LiNbO3	(0,0,-12)	5.366	78.15	128.94	118.4	1.151	136.26	14.38	137.02
LiNbO3	(0,0,12)	5.366	78.15	97.581	118.4	1.151	136.26	14.38	137.02
LiNbO3	(1,3,4)	5.323	76.12	68.747	74.7	1.354	101.14	16.93	102.54
	Equiv. Refl.: (3,-4,4), (4,-3,4), (-1,4,4), (-3,-1,4), (-4,1,4)								
LiNbO3	(2,-2,10)	5.266	73.83	68.142	71.7	1.59	114.03	19.88	115.75
LiNbO3	(0,2,10)	5.266	73.83	68.141	71.7	1.59	114.03	19.88	115.75
	Equiv. Refl.: (-2,0,10)								
LiNbO3	(1,-4,-4)	5.323	76.12	62.936	74.7	1.354	101.14	16.93	102.54
	Equiv. Refl.: (3,1,-4), (4,-1,-4), (-1,-3,-4), (-3,4,-4), (-4,3,-4)								
Sapph	(2,2,3)	5.405	80.3	61.924	62.1	0.937	58.22	11.72	59.39
	Equiv. Refl.: (2,2,-3), (2,-4,3), (2,-4,-3), (4,-2,3), (4,-2,-3), (-2,4,3), (-2,4,-3), (-2,-2,3), (-2,-2,-3), (-4,2,3), (-4,2,-3)								
LiNbO3	(0,-2,-10)	5.266	73.83	61.776	71.7	1.59	114.03	19.88	115.75
	Equiv. Refl.: (2,0,-10), (-2,2,-10)								
Quartz	(-1,4,1)	5.377	78.72	46.342	43.1	1.094	47.21	13.68	49.15
	Equiv. Refl.: (-1,-3,-1)								
Quartz	(-3,4,-1)	5.377	78.72	46.341	43.1	1.094	47.21	13.68	49.15
Quartz	(-3,-1,1)	5.377	78.72	46.339	43.1	1.094	47.2	13.68	49.14
Quartz	(4,-1,-1)	5.377	78.72	46.333	43.1	1.094	47.2	13.68	49.14
	Equiv. Refl.: (4,-3,1)								
Quartz	(4,-1,0)	5.253	73.35	42.241	38.9	1.639	63.76	20.49	66.97
	Equiv. Refl.: (4,-3,0), (-1,4,0), (-1,-3,0), (-3,4,0), (-3,-1,0)								
Quartz	(1,3,1)	5.377	78.72	41.38	43.1	1.094	47.21	13.68	49.15
Quartz	(1,-4,-1)	5.377	78.72	41.379	43.1	1.094	47.21	13.68	49.15
	Equiv. Refl.: (3,-4,1)								
Quartz	(3,1,-1)	5.377	78.72	41.376	43.1	1.094	47.2	13.68	49.14
Quartz	(-4,1,1)	5.377	78.72	41.371	43.1	1.094	47.2	13.68	49.14
	Equiv. Refl.: (-4,3,-1)								
Quartz	(1,3,0)	5.253	73.35	41.291	38.9	1.639	63.76	20.49	66.97
	Equiv. Refl.: (1,-4,0), (3,1,0), (3,-4,0), (-4,1,0), (-4,3,0)								
Quartz	(-1,2,4)	5.236	72.75	38.121	34.7	1.703	59.03	21.28	62.75
Quartz	(-1,-1,-4)	5.236	72.75	38.12	34.7	1.703	59.03	21.28	62.75
Quartz	(-1,2,-4)	5.236	72.75	38.112	34.7	1.703	59.02	21.28	62.74
Quartz	(-1,-1,4)	5.236	72.75	38.106	34.7	1.703	59.02	21.28	62.74
Quartz	(2,-1,4)	5.236	72.75	38.098	34.7	1.703	59	21.28	62.73
	Equiv. Refl.: (2,-1,-4)								
Quartz	(-3,1,-3)	5.167	70.46	35.418	33	1.946	64.21	24.32	68.66
	Equiv. Refl.: (-3,2,3)								
Quartz	(2,-3,-3)	5.167	70.46	35.411	33	1.946	64.2	24.32	68.65
Quartz	(2,1,3)	5.167	70.46	35.409	33	1.946	64.19	24.32	68.65
Quartz	(1,-3,3)	5.167	70.46	35.407	33	1.946	64.19	24.32	68.64
Quartz	(1,2,-3)	5.167	70.46	35.406	33	1.946	64.19	24.32	68.64
Quartz	(1,1,4)	5.236	72.75	35.192	34.7	1.703	59.03	21.28	62.75
	Equiv. Refl.: (1,-2,-4)								
Quartz	(1,-2,4)	5.236	72.75	35.186	34.7	1.703	59.02	21.28	62.74
Quartz	(1,1,-4)	5.236	72.75	35.181	34.7	1.703	59.02	21.28	62.74

Ei =	5.483	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Quartz	(-2,1,4)	5.236	72.75	35.174	34.7	1.703	59.01	21.28	62.73
	Equiv. Refl.: (-2,1,-4)								
Quartz	(3,-1,3)	5.167	70.46	34.912	33	1.946	64.21	24.32	68.66
	Equiv. Refl.: (3,-2,-3)								
Quartz	(-2,3,3)	5.167	70.46	34.906	33	1.946	64.2	24.32	68.65
Quartz	(-2,-1,-3)	5.167	70.46	34.903	33	1.946	64.19	24.32	68.65
Quartz	(-1,3,-3)	5.167	70.46	34.901	33	1.946	64.19	24.32	68.64
Quartz	(-1,-2,3)	5.167	70.46	34.9	33	1.946	64.19	24.32	68.64
Quartz	(2,-2,-4)	5.435	82.43	34.843	39.2	0.729	28.57	9.11	29.99
Quartz	(-2,2,4)	5.435	82.43	34.841	39.2	0.729	28.57	9.11	29.99
Quartz	(0,2,-4)	5.435	82.43	34.838	39.2	0.729	28.57	9.11	29.98
	Equiv. Refl.: (0,-2,4)								
Quartz	(2,0,4)	5.435	82.43	34.837	39.2	0.729	28.57	9.11	29.98
Quartz	(-2,0,-4)	5.435	82.43	34.834	39.2	0.729	28.57	9.11	29.98
Sapph	(2,2,0)	5.211	71.89	26.841	27.9	1.793	50.03	22.41	54.82
	Equiv. Refl.: (2,-4,0), (4,-2,0), (-2,4,0), (-2,-2,0), (-4,2,0)								
Quartz	(-2,4,-1)	5.176	70.73	16.901	17.9	1.917	34.38	23.96	41.91
	Equiv. Refl.: (-2,-2,1)								
Quartz	(4,-2,1)	5.176	70.73	16.9	17.9	1.917	34.38	23.96	41.91
	Equiv. Refl.: (4,-2,-1)								
Quartz	(-2,4,1)	5.176	70.73	16.896	17.9	1.917	34.38	23.96	41.9
	Equiv. Refl.: (-2,-2,-1)								
Quartz	(-4,2,1)	5.176	70.73	16.056	17.9	1.917	34.38	23.96	41.91
Quartz	(2,2,-1)	5.176	70.73	16.055	17.9	1.917	34.38	23.96	41.91
	Equiv. Refl.: (2,-4,1), (-4,2,-1)								
Quartz	(2,-4,-1)	5.176	70.73	16.052	17.9	1.917	34.38	23.96	41.9
Quartz	(2,2,1)	5.176	70.73	16.051	17.9	1.917	34.38	23.96	41.9
Quartz	(3,-1,-3)	5.167	70.46	14.373	15.2	1.946	29.57	24.32	38.29
	Equiv. Refl.: (3,-2,3)								
Quartz	(-1,-2,-3)	5.167	70.46	14.359	15.2	1.946	29.55	24.32	38.27
Quartz	(-1,3,3)	5.167	70.46	14.357	15.2	1.946	29.55	24.32	38.27
	Equiv. Refl.: (-2,3,-3)								
Quartz	(-2,-1,3)	5.167	70.46	14.356	15.2	1.946	29.55	24.32	38.27
Quartz	(-3,1,3)	5.167	70.46	12.086	15.2	1.946	29.57	24.32	38.29
	Equiv. Refl.: (-3,2,-3)								
Quartz	(1,2,3)	5.167	70.46	12.073	15.2	1.946	29.55	24.32	38.27
Quartz	(1,-3,-3)	5.167	70.46	12.072	15.2	1.946	29.55	24.32	38.27
Quartz	(2,-3,3)	5.167	70.46	12.071	15.2	1.946	29.55	24.32	38.27
Quartz	(2,1,-3)	5.167	70.46	12.069	15.2	1.946	29.55	24.32	38.27
Sapph	(1,3,1)	5.445	83.27	10.822	20.7	0.647	13.39	8.09	15.64
	Equiv. Refl.: (1,-4,-1), (3,1,-1), (3,-4,1), (4,-1,-1), (4,-3,1), (-1,4,1), (-1,-3,-1), (-3,4,-1), (-3,-1,1), (-4,1,1), (-4,3,-1)								
Quartz	(3,-4,-1)	5.377	78.72	10.29	13	1.094	14.23	13.68	19.74
Quartz	(3,1,1)	5.377	78.72	10.289	13	1.094	14.23	13.68	19.73
Quartz	(-4,1,-1)	5.377	78.72	10.287	13	1.094	14.23	13.68	19.73
Quartz	(-4,3,1)	5.377	78.72	10.286	13	1.094	14.22	13.68	19.73
Quartz	(1,3,-1)	5.377	78.72	10.284	13	1.094	14.22	13.68	19.73
	Equiv. Refl.: (1,-4,1)								
Quartz	(2,-2,4)	5.435	82.43	9.293	16.1	0.729	11.71	9.11	14.83

Ei =	5.483	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(2,0,-4)	5.435	82.43	9.29	16.1	0.729	11.7	9.11	14.83
	Equiv. Refl.: (-2,2,-4)								
Quartz	(-2,0,4)	5.435	82.43	9.287	16.1	0.729	11.7	9.11	14.83
Quartz	(0,-2,-4)	5.435	82.43	9.273	16	0.729	11.69	9.11	14.82
Quartz	(0,2,4)	5.435	82.43	9.271	16	0.729	11.69	9.11	14.82
Sapph	(1,2,-7)	5.197	71.4	8.159	12	1.845	22.2	23.06	32.01
	Equiv. Refl.: (1,-3,7), (2,1,7), (2,-3,-7), (3,-1,7), (3,-2,-7), (-1,3,-7), (-1,-2,7), (-2,3,7), (-2,-1,-7), (-3,1,-7), (-3,2,7)								
Quartz	(-3,4,1)	5.377	78.72	7.322	13	1.094	14.23	13.68	19.74
Quartz	(-3,-1,-1)	5.377	78.72	7.321	13	1.094	14.23	13.68	19.73
Quartz	(4,-1,1)	5.377	78.72	7.318	13	1.094	14.23	13.68	19.73
Quartz	(4,-3,-1)	5.377	78.72	7.317	13	1.094	14.22	13.68	19.73
Quartz	(-1,4,-1)	5.377	78.72	7.316	13	1.094	14.22	13.68	19.73
	Equiv. Refl.: (-1,-3,1)								
Sapph	(0,3,6)	5.345	77.12	3.249	7.6	1.253	9.49	15.67	18.32
	Equiv. Refl.: (0,3,-6), (0,-3,6), (0,-3,-6), (3,0,6), (3,0,-6), (3,-3,6), (3,-3,-6), (-3,0,6), (-3,0,-6), (-3,3,6), (-3,3,-6)								

Ei =	5.723	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(3,3,3)	5.694	84.21	193	199.8	0.58	115.88	7.25	116.11
	Equiv. Refl.: (1,1,5)								
Si	(2,2,4)	5.592	77.71	71.5	66	1.246	82.24	15.58	83.7
LiNbO3	(0,-4,-2)	5.633	79.85	118.1	117.7	1.025	120.58	12.81	121.26
	Equiv. Refl.: (4,0,-2), (-4,4,-2)								
LiNbO3	(0,4,2)	5.633	79.85	107.7	117.7	1.025	120.58	12.81	121.26
	Equiv. Refl.: (4,-4,2), (-4,0,2)								
LiNbO3	(2,2,-6)	5.514	74.45	81.1	80.5	1.592	128.12	19.9	129.66
	Equiv. Refl.: (2,-4,-6), (4,-2,-6), (-2,4,-6), (-2,-2,-6), (-4,2,-6)								
LiNbO3	(2,2,6)	5.514	74.45	74	80.5	1.592	128.12	19.9	129.66
	Equiv. Refl.: (2,-4,6), (4,-2,6), (-2,4,6), (-2,-2,6), (-4,2,6)								
Sapph	(0,2,10)	5.642	80.36	66.5	63.2	0.972	61.43	12.15	62.62
	Equiv. Refl.: (0,-2,-10), (2,0,-10), (2,-2,10), (-2,0,10), (-2,-2,-10)								
Sapph	(2,2,3)	5.405	70.8	31.1	30.4	1.993	60.69	24.92	65.6
	Equiv. Refl.: (2,-2,-3), (2,-4,3), (2,-4,-3), (4,-2,3), (4,-2,-3), (-2,4,3), (-2,4,-3), (-2,-2,3), (-2,-2,-3), (-4,2,3), (-4,2,-3)								
Sapph	(1,3,-2)	5.508	74.23	22.5	24.5	1.616	39.56	20.2	44.42
	Equiv. Refl.: (1,-4,2), (3,1,2), (3,-4,-2), (4,-1,2), (4,-3,-2), (-1,4,-2), (-1,-3,2), (-3,4,2), (-3,-1,-2), (-4,1,-2), (-4,3,2)								
Quartz	(0,3,-3)	5.563	76.42	18.6	20.4	1.383	28.25	17.28	33.12
	Equiv. Refl.: (0,-3,3), (3,0,3), (3,-3,-3), (-3,0,-3), (-3,3,3)								
Quartz	(0,2,-4)	5.435	71.75	14.4	15.8	1.887	29.77	23.59	37.98
	Equiv. Refl.: (0,-2,4), (2,0,4), (2,-2,-4), (-2,0,-4), (-2,2,4)								
Sapph	(1,2,8)	5.516	74.53	13.6	16.9	1.584	26.77	19.8	33.29
	Equiv. Refl.: (1,-3,-8), (2,1,-8), (2,-3,8), (3,-1,-8), (3,-2,8), (-1,3,8), (-1,-2,-8), (-2,3,-8), (-2,-1,8), (-3,1,8), (-3,2,-8)								
Quartz	(0,3,3)	5.563	76.42	11	13.8	1.383	19.11	17.28	25.77
	Equiv. Refl.: (0,-3,-3), (3,0,-3), (3,-3,3), (-3,0,3), (-3,3,-3)								
Quartz	(4,-2,2)	5.544	75.63	8.7	11.1	1.466	16.31	18.32	24.53
	Equiv. Refl.: (4,-2,-2), (-2,4,2), (-2,4,-2), (-2,-2,2), (-2,-2,-2)								
Quartz	(2,2,2)	5.544	75.63	7.7	11.1	1.466	16.32	18.32	24.54
	Equiv. Refl.: (2,2,-2), (2,-4,2), (2,-4,-2), (-4,2,2), (-4,2,-2)								
LiNbO3	(1,3,-5)	5.489	73.58	7.2	18.2	1.687	30.65	21.09	37.2
	Equiv. Refl.: (1,-4,5), (3,1,5), (3,-4,-5), (4,-1,5), (4,-3,-5), (-1,4,-5), (-1,-3,5), (-3,4,5), (-3,-1,-5), (-4,1,-5), (-4,3,5)								
Sapph	(1,3,1)	5.445	72.08	4	7.5	1.851	13.96	23.14	27.02
	Equiv. Refl.: (1,-4,-1), (3,1,-1), (3,-4,1), (4,-1,-1), (4,-3,1), (-1,4,1), (-1,-3,-1), (-3,4,-1), (-3,-1,1), (-4,1,1), (-4,3,-1)								
Quartz	(0,2,4)	5.435	71.75	3.9	6.5	1.887	12.19	23.59	26.55
	Equiv. Refl.: (0,-2,-4), (2,0,-4), (2,-2,4), (-2,0,4), (-2,2,-4)								

Ei =	5.964	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Si	(3,3,3)	5.931	83.98	82	81.5	0.629	51.24	7.86	51.84
	Equiv. Refl.: (1,1,5)								
Ge	(3,3,3)	5.694	72.69	63.5	64.7	1.859	120.29	23.24	122.52
	Equiv. Refl.: (1,1,5)								
Sapph	(2,2,6)	5.946	85.61	191.6	171.5	0.458	78.6	5.73	78.81
	Equiv. Refl.: (2,2,-6), (2,-4,6), (2,-4,-6), (4,-2,6), (4,-2,-6), (-2,4,6), (-2,4,-6), (-2,-2,6), (-2,-2,-6), (-4,2,6), (-4,2,-6)								
Quartz	(0,4,-1)	5.94	84.83	111.4	101.2	0.54	54.58	6.74	54.99
	Equiv. Refl.: (0,-4,1), (4,0,1), (4,-4,-1), (-4,0,-1), (-4,4,1)								
LiNbO3	(1,1,12)	5.882	80.48	98.7	96.1	1.001	96.18	12.51	96.99
	Equiv. Refl.: (1,-2,12), (2,-1,12), (-1,2,12), (-1,-1,12), (-2,1,12)								
Quartz	(1,0,-5)	5.917	82.82	87.2	78.3	0.751	58.81	9.39	59.55
	Equiv. Refl.: (1,-1,5), (-1,0,5), (-1,1,-5)								
Quartz	(0,1,5)	5.917	82.82	87.1	78.3	0.751	58.78	9.39	59.52
	Equiv. Refl.: (0,-1,-5)								
LiNbO3	(1,1,-12)	5.882	80.48	80.5	96.1	1.001	96.18	12.51	96.99
	Equiv. Refl.: (1,-2,-12), (2,-1,-12), (-1,2,-12), (-1,-1,-12), (-2,1,-12)								
LiNbO3	(1,2,-10)	5.791	76.15	68.4	71	1.47	104.41	18.38	106.01
	Equiv. Refl.: (2,-3,-10), (3,-2,-10), (-1,3,-10), (-2,-1,-10), (-3,1,-10)								
LiNbO3	(1,-3,10)	5.791	76.15	65.7	71	1.47	104.41	18.38	106.01
	Equiv. Refl.: (2,1,10), (3,-1,10), (-1,-2,10), (-2,3,10), (-3,2,10)								
LiNbO3	(0,-4,4)	5.842	78.41	62.8	68.9	1.223	84.28	15.28	85.65
	Equiv. Refl.: (4,0,4), (-4,4,4)								
LiNbO3	(0,-4,-2)	5.633	70.83	61.6	60.6	2.073	125.61	25.91	128.25
	Equiv. Refl.: (4,0,-2), (-4,4,-2)								
LiNbO3	(0,4,-4)	5.842	78.41	60.8	68.9	1.223	84.28	15.28	85.65
	Equiv. Refl.: (4,-4,-4), (-4,0,-4)								
LiNbO3	(0,4,2)	5.633	70.83	56.5	60.6	2.073	125.61	25.91	128.25
	Equiv. Refl.: (4,-4,2), (-4,0,2)								
Sapph	(0,0,12)	5.727	73.81	51.3	46.5	1.732	80.48	21.64	83.34
	Equiv. Refl.: (0,0,-12)								
Quartz	(4,-1,-2)	5.732	73.98	36.1	32.2	1.713	55.08	21.41	59.09
	Equiv. Refl.: (4,-3,2), (-1,4,2), (-1,-3,-2), (-3,4,-2), (-3,-1,2)								
Quartz	(1,3,2)	5.732	73.98	34.3	32.2	1.713	55.07	21.41	59.09
	Equiv. Refl.: (1,-4,-2), (3,1,-2), (3,-4,2), (-4,1,2), (-4,3,-2)								
Sapph	(0,2,10)	5.642	71.09	33.4	31.3	2.043	63.89	25.54	68.8
	Equiv. Refl.: (0,-2,-10), (2,0,-10), (2,-2,10), (-2,0,10), (-2,2,-10)								
Sapph	(1,3,4)	5.75	74.62	28	28	1.64	45.91	20.51	50.28
	Equiv. Refl.: (1,-4,-4), (3,1,-4), (3,-4,4), (4,-1,-4), (4,-3,4), (-1,4,4), (-1,-3,-4), (-3,4,-4), (-3,-1,4), (-4,1,4), (-4,3,-4)								
Quartz	(0,1,-5)	5.917	82.82	24.6	27.8	0.751	20.91	9.39	22.92
	Equiv. Refl.: (0,-1,5), (1,0,5), (1,-1,-5), (-1,0,-5), (-1,1,5)								
Quartz	(1,3,-2)	5.732	73.98	22.3	20.7	1.713	35.52	21.41	41.47
	Equiv. Refl.: (1,-4,2), (3,1,2), (3,-4,-2), (-4,1,-2), (-4,3,2)								
Quartz	(0,4,0)	5.828	77.74	20.1	21.2	1.296	27.41	16.2	31.85
	Equiv. Refl.: (0,-4,0), (4,0,0), (4,-4,0), (-4,0,0), (-4,4,0)								
Quartz	(4,-1,2)	5.732	73.98	19.4	20.7	1.713	35.53	21.41	41.48
	Equiv. Refl.: (4,-3,-2), (-1,4,-2), (-1,-3,2), (-3,4,2), (-3,-1,-2)								

Ei =	5.964	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(0,4,1)	5.94	84.83	16.2	23	0.54	12.43	6.74	14.14
	Equiv. Refl.: (0,-4,-1), (4,0,-1), (4,-4,1), (-4,0,1), (-4,4,-1)								
LiNbO3	(1,3,7)	5.91	82.32	13	31.9	0.805	25.64	10.06	27.54
	Equiv. Refl.: (1,-4,-7), (3,1,-7), (3,-4,7), (4,-1,-7), (4,-3,7), (-1,4,7), (-1,-3,-7), (-3,4,-7), (-3,-1,7), (-4,1,7), (-4,3,-7)								
Sapph	(1,3,-5)	5.926	83.53	9.1	16.6	0.676	11.23	8.45	14.05
	Equiv. Refl.: (1,-4,5), (3,1,5), (3,-4,-5), (4,-1,5), (4,-3,-5), (-1,4,-5), (-1,-3,5), (-3,4,5), (-3,-1,-5), (-4,1,-5), (-4,3,5)								

Ei =	6.208	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(0,4,4)	6.199	86.86	425	399.7	0.341	136.21	4.26	136.27
Si	(3,3,3)	5.931	72.82	28.4	27.7	1.919	53.25	23.99	58.4
	Equiv. Refl.: (1,1,5)								
LiNbO3	(1,-4,8)	6.159	82.79	113.2	111.8	0.785	87.77	9.81	88.31
	Equiv. Refl.: (3,1,8), (4,-1,8), (-1,-3,8), (-3,4,8), (-4,3,8)								
LiNbO3	(1,3,-8)	6.159	82.79	96.8	111.8	0.785	87.77	9.81	88.31
	Equiv. Refl.: (3,-4,-8), (4,-3,-8), (-1,4,-8), (-3,-1,-8), (-4,1,-8)								
LiNbO3	(2,3,2)	6.127	80.71	60.8	66.7	1.015	67.76	12.69	68.94
	Equiv. Refl.: (3,-5,2), (5,-3,2), (-2,5,2), (-3,-2,2), (-5,2,2)								
LiNbO3	(2,-5,-2)	6.127	80.71	55.9	66.7	1.015	67.76	12.69	68.94
	Equiv. Refl.: (3,2,-2), (5,-2,-2), (-2,-3,-2), (-3,5,-2), (-5,3,-2)								
Sapph	(2,2,6)	5.946	73.31	49.7	43.9	1.861	81.68	23.27	84.92
	Equiv. Refl.: (2,2,-6), (2,-4,6), (2,-4,-6), (4,-2,6), (4,-2,-6), (-2,4,6), (-2,4,-6), (-2,-2,6), (-2,-2,-6), (-4,2,6), (-4,2,-6)								
LiNbO3	(1,1,12)	5.882	71.34	49.5	47.7	2.096	100.05	26.2	103.43
	Equiv. Refl.: (1,-2,12), (2,-1,12), (-1,2,12), (-1,-1,12), (-2,1,12)								
LiNbO3	(1,1,-12)	5.882	71.34	41	47.7	2.096	100.05	26.2	103.43
	Equiv. Refl.: (1,-2,-12), (2,-1,-12), (-1,2,-12), (-1,-1,-12), (-2,1,-12)								
Sapph	(0,4,2)	6.093	78.95	37.2	36.6	1.212	44.31	15.15	46.83
	Equiv. Refl.: (0,-4,-2), (4,0,-2), (4,-4,2), (-4,0,2), (-4,4,-2)								
LiNbO3	(0,-4,4)	5.842	70.24	36.5	39.3	2.23	87.68	27.87	92
	Equiv. Refl.: (4,0,4), (-4,4,4)								
LiNbO3	(0,4,-4)	5.842	70.24	35.5	39.3	2.23	87.68	27.87	92
	Equiv. Refl.: (4,-4,-4), (-4,0,-4)								
Quartz	(0,1,5)	5.917	72.4	35	31	1.97	61.09	24.62	65.87
	Equiv. Refl.: (0,-1,-5), (1,0,-5), (1,-1,5), (-1,0,5), (-1,1,-5)								
Quartz	(0,4,-1)	5.94	73.1	33.6	30.1	1.887	56.73	23.58	61.43
	Equiv. Refl.: (0,-4,1), (4,0,1), (4,-4,-1), (-4,0,-1), (-4,4,1)								
Quartz	(2,2,3)	6.109	79.73	33	30.8	1.125	34.58	14.06	37.33
	Equiv. Refl.: (2,2,-3), (2,-4,3), (2,-4,-3), (-4,2,3), (-4,2,-3)								
Quartz	(4,-2,3)	6.109	79.73	30.9	30.8	1.125	34.58	14.06	37.33
	Equiv. Refl.: (4,-2,-3), (-2,4,3), (-2,4,-3), (-2,-2,3), (-2,-2,-3)								
Quartz	(3,-1,4)	5.993	74.86	25.8	23.8	1.68	40.01	21	45.18
	Equiv. Refl.: (3,-2,-4), (-1,3,-4), (-1,-2,4), (-2,3,4), (-2,-1,-4)								
Quartz	(2,1,4)	5.993	74.86	24.7	23.8	1.68	40	21	45.18
	Equiv. Refl.: (2,-3,-4), (-3,1,-4), (-3,2,4)								
Quartz	(1,2,-4)	5.993	74.86	24.6	23.8	1.68	39.99	21	45.17
	Equiv. Refl.: (1,-3,4)								
Quartz	(0,1,-5)	5.917	72.4	10.1	11	1.97	21.72	24.62	32.84
	Equiv. Refl.: (0,-1,5), (1,0,5), (1,-1,-5), (-1,0,-5), (-1,1,5)								
Quartz	(3,-1,-4)	5.993	74.86	6.6	7.7	1.68	12.97	21	24.68
	Equiv. Refl.: (3,-2,4), (-1,3,4), (-1,-2,-4), (-2,3,-4), (-2,-1,4)								
LiNbO3	(1,2,11)	6.142	81.67	6.2	19.4	0.909	17.61	11.36	20.96
	Equiv. Refl.: (1,-3,-11), (2,1,-11), (2,-3,11), (3,-1,-11), (3,-2,11), (-1,3,11), (-1,-2,-11), (-2,3,-11), (-2,-1,11), (-3,1,11), (-3,2,-11)								
LiNbO3	(1,3,7)	5.91	72.19	5.6	13.4	1.995	26.66	24.93	36.5
	Equiv. Refl.: (1,-4,-7), (3,1,-7), (3,-4,7), (4,-1,-7), (4,-3,7), (-1,4,7), (-1,-3,-7), (-3,4,-7), (-3,-1,7), (-4,1,7), (-4,3,-7)								

Ei =	6.208	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(0,4,1)	5.94	73.1	5.1	6.8	1.887	12.92	23.58	26.89
	Equiv. Refl.: (0,-4,-1), (4,0,-1), (4,-4,1), (-4,0,1), (-4,4,-1)								
Quartz	(1,2,4)	5.993	74.86	5	7.7	1.68	12.97	21	24.68
	Equiv. Refl.: (1,-3,-4), (2,1,-4), (2,-3,4), (-3,1,4), (-3,2,-4)								
Sapph	(1,3,-5)	5.926	72.67	3.3	6	1.938	11.67	24.22	26.89
	Equiv. Refl.: (1,-4,5), (3,1,5), (3,-4,-5), (4,-1,5), (4,-3,-5), (-1,4,-5), (-1,-3,5), (-3,4,5), (-3,-1,-5), (-4,1,-5), (-4,3,5)								
LiNbO3	(2,3,-1)	6.077	78.23	1.6	8.3	1.294	10.76	16.17	19.42
	Equiv. Refl.: (2,-5,1), (3,2,1), (3,-5,-1), (5,-2,1), (5,-3,-1), (-2,5,-1), (-2,-3,1), (-3,5,1), (-3,-2,-1), (-5,2,-1), (-5,3,1)								

Ei =	6.459	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Si	(0,4,4)	6.457	88.57	414.9855	378.06	0.1613	61	2.02	61.03
	Equiv. Refl.: (4,0,4), (4,4,0)								
Ge	(0,4,4)	6.199	73.68	80.1905	74.6	1.8915	141.11	23.64	143.08
	Equiv. Refl.: (4,0,4), (4,4,0)								
Quartz	(5,-2,-1)	6.454	87.66	157.198	141.7	0.264	37.43	3.3	37.58
	Equiv. Refl.: (-2,-3,-1)								
Quartz	(5,-3,1)	6.454	87.66	157.196	141.7	0.264	37.43	3.3	37.58
Quartz	(-2,5,1)	6.454	87.66	157.195	141.7	0.264	37.43	3.3	37.58
Quartz	(-3,5,-1)	6.454	87.66	157.194	141.7	0.264	37.43	3.3	37.58
	Equiv. Refl.: (-3,-2,1)								
Quartz	(3,2,-1)	6.454	87.66	150.263	141.7	0.264	37.43	3.3	37.58
	Equiv. Refl.: (3,-5,1), (-5,2,1)								
Quartz	(-5,3,-1)	6.454	87.66	150.262	141.7	0.264	37.43	3.3	37.58
Quartz	(2,3,1)	6.454	87.66	150.26	141.7	0.264	37.43	3.3	37.58
Quartz	(2,-5,-1)	6.454	87.66	150.257	141.7	0.264	37.43	3.3	37.58
LiNbO3	(0,-1,-14)	6.413	83.16	114.047	115	0.775	89.07	9.68	89.59
	Equiv. Refl.: (1,0,-14), (-1,1,-14)								
LiNbO3	(1,-1,14)	6.413	83.16	108.494	115	0.775	89.07	9.68	89.59
LiNbO3	(0,1,14)	6.413	83.16	108.493	115	0.775	89.07	9.68	89.59
	Equiv. Refl.: (-1,0,14)								
LiNbO3	(2,3,-4)	6.319	78.07	85.913	84	1.365	114.61	17.06	115.88
	Equiv. Refl.: (3,-5,-4), (5,-3,-4), (-2,5,-4), (-3,-2,-4), (-5,2,-4)								
LiNbO3	(2,-5,4)	6.319	78.07	84.522	84	1.365	114.61	17.06	115.88
	Equiv. Refl.: (3,2,4), (5,-2,4), (-2,-3,4), (-3,5,4), (-5,3,4)								
LiNbO3	(1,-5,0)	6.372	80.59	69.257	73.6	1.071	78.79	13.39	79.92
	Equiv. Refl.: (4,1,0), (5,-1,0), (-1,-4,0), (-4,5,0), (-5,4,0)								
LiNbO3	(1,4,0)	6.372	80.59	68.419	73.6	1.071	78.79	13.39	79.92
	Equiv. Refl.: (4,-5,0), (5,-4,0), (-1,5,0), (-4,-1,0), (-5,1,0)								
LiNbO3	(1,-4,8)	6.159	72.47	45.84	44.7	2.041	91.22	25.51	94.72
	Equiv. Refl.: (3,1,8), (4,-1,8), (-1,-3,8)								
LiNbO3	(-3,4,8)	6.159	72.47	45.839	44.7	2.041	91.22	25.51	94.72
	Equiv. Refl.: (-4,3,8)								
LiNbO3	(1,3,-8)	6.159	72.47	39.537	44.7	2.041	91.22	25.51	94.72
	Equiv. Refl.: (3,-4,-8), (4,-3,-8), (-1,4,-8), (-3,-1,-8), (-4,1,-8)								
Sapph	(1,2,-10)	6.215	74.19	34.867	31.7	1.828	58.03	22.85	62.37
	Equiv. Refl.: (1,-3,10), (2,1,10), (2,-3,-10), (3,-1,10), (3,-2,-10), (-1,3,-10), (-1,-2,10), (-2,3,10), (-2,-1,-10), (-3,1,-10), (-3,2,10)								
Quartz	(2,3,0)	6.351	79.5	31.838	30	1.197	35.86	14.96	38.85
	Equiv. Refl.: (2,-5,0), (3,2,0), (3,-5,0), (-5,2,0), (-5,3,0)								
Quartz	(5,-2,0)	6.351	79.5	31.666	30	1.197	35.86	14.96	38.85
	Equiv. Refl.: (5,-3,0), (-2,5,0), (-2,-3,0), (-3,5,0), (-3,-2,0)								
LiNbO3	(2,3,2)	6.127	71.54	30.324	32.7	2.156	70.42	26.95	75.41
	Equiv. Refl.: (3,-5,2), (5,-3,2), (-2,5,2), (-3,-2,2), (-5,2,2)								
LiNbO3	(2,-5,-2)	6.127	71.54	28.038	32.7	2.156	70.42	26.95	75.41
	Equiv. Refl.: (3,2,-2), (5,-2,-2), (-2,-3,-2), (-3,5,-2), (-5,3,-2)								
Quartz	(2,-1,-5)	6.266	75.95	22.892	20.7	1.616	33.39	20.21	39.02
Quartz	(2,-1,5)	6.266	75.95	22.891	20.7	1.616	33.39	20.21	39.02
Quartz	(-1,-1,-5)	6.266	75.95	22.883	20.6	1.616	33.38	20.21	39.02

Ei =	6.459	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(-1,2,5)	6.266	75.95	22.878	20.6	1.616	33.37	20.21	39.01
Quartz	(-1,2,-5)	6.266	75.95	22.868	20.6	1.616	33.36	20.21	39
	Equiv. Refl.: (-1,-1,5)								
Sapph	(0,4,2)	6.093	70.62	21.155	20.3	2.272	46.03	28.4	54.09
	Equiv. Refl.: (0,-4,-2), (4,0,-2), (4,-4,2), (-4,0,2), (-4,4,-2)								
Quartz	(-2,1,5)	6.266	75.95	20.914	20.7	1.616	33.39	20.21	39.02
Quartz	(-2,1,-5)	6.266	75.95	20.913	20.7	1.616	33.39	20.21	39.02
Quartz	(1,1,5)	6.266	75.95	20.906	20.6	1.616	33.38	20.21	39.02
Quartz	(1,-2,-5)	6.266	75.95	20.9	20.6	1.616	33.37	20.21	39.01
Quartz	(1,1,-5)	6.266	75.95	20.893	20.6	1.616	33.36	20.21	39
	Equiv. Refl.: (1,-2,5)								
Sapph	(0,4,-4)	6.313	77.81	17.854	19	1.396	26.46	17.45	31.69
	Equiv. Refl.: (0,-4,4), (4,0,4), (4,-4,-4), (-4,0,-4), (-4,4,4)								
Quartz	(2,-4,-3)	6.109	71.04	17.569	16.2	2.219	35.92	27.74	45.38
Quartz	(2,2,3)	6.109	71.04	17.568	16.2	2.219	35.92	27.74	45.38
Quartz	(-4,2,-3)	6.109	71.04	17.567	16.2	2.219	35.92	27.74	45.38
Quartz	(-4,2,3)	6.109	71.04	17.565	16.2	2.219	35.92	27.74	45.38
Quartz	(2,2,-3)	6.109	71.04	17.563	16.2	2.219	35.91	27.74	45.37
	Equiv. Refl.: (2,-4,3)								
Quartz	(4,-2,3)	6.109	71.04	16.994	16.2	2.219	35.92	27.74	45.38
Quartz	(4,-2,-3)	6.109	71.04	16.993	16.2	2.219	35.92	27.74	45.38
	Equiv. Refl.: (-2,4,3)								
Quartz	(-2,-2,-3)	6.109	71.04	16.992	16.2	2.219	35.92	27.74	45.38
Quartz	(-2,4,-3)	6.109	71.04	16.988	16.2	2.219	35.91	27.74	45.37
	Equiv. Refl.: (-2,-2,3)								
Quartz	(0,4,2)	6.263	75.86	13.348	14	1.628	22.71	20.35	30.49
	Equiv. Refl.: (0,-4,-2)								
Quartz	(4,0,-2)	6.263	75.86	13.347	13.9	1.628	22.71	20.35	30.49
	Equiv. Refl.: (-4,0,2)								
Quartz	(4,-4,2)	6.263	75.86	13.346	13.9	1.628	22.7	20.35	30.49
	Equiv. Refl.: (-4,4,-2)								
LiNbO3	(2,2,9)	6.277	76.36	10.357	19.4	1.567	30.43	19.59	36.19
	Equiv. Refl.: (2,2,-9), (2,-4,9), (2,-4,-9), (4,-2,9), (4,-2,-9), (-2,4,9), (-2,4,-9), (-2,-2,9), (-2,-2,-9), (-4,2,9), (-4,2,-9)								
Quartz	(0,3,-4)	6.337	78.84	9.854	11.7	1.274	14.93	15.93	21.83
	Equiv. Refl.: (0,-3,4)								
Quartz	(-3,0,-4)	6.337	78.84	9.833	11.7	1.274	14.9	15.93	21.81
Quartz	(3,0,4)	6.337	78.84	9.832	11.7	1.274	14.9	15.93	21.81
Quartz	(-3,3,4)	6.337	78.84	9.83	11.7	1.274	14.9	15.93	21.81
Quartz	(3,-3,-4)	6.337	78.84	9.829	11.7	1.274	14.9	15.93	21.81
Sapph	(1,1,12)	6.292	76.96	9.718	12.1	1.496	18.12	18.7	26.04
	Equiv. Refl.: (1,1,-12), (1,-2,12), (1,-2,-12), (2,-1,12), (2,-1,-12), (-1,2,12), (-1,2,-12), (-1,-1,12), (-1,-1,-12), (-2,1,12), (-2,1,-12)								
Quartz	(0,2,-5)	6.433	84.85	9.388	14.6	0.582	8.52	7.28	11.2
Quartz	(0,-2,5)	6.433	84.85	9.387	14.6	0.582	8.52	7.28	11.2
Quartz	(-2,0,-5)	6.433	84.85	9.34	14.6	0.582	8.49	7.28	11.18
Quartz	(2,0,5)	6.433	84.85	9.339	14.6	0.582	8.49	7.28	11.18
Quartz	(-2,2,5)	6.433	84.85	9.336	14.6	0.582	8.49	7.28	11.18
Quartz	(2,-2,-5)	6.433	84.85	9.334	14.6	0.582	8.49	7.28	11.18
Quartz	(-2,0,5)	6.433	84.85	9.298	14.5	0.582	8.44	7.28	11.14

Ei =	6.459	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	ΘB	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(2,0,-5)	6.433	84.85	9.294	14.5	0.582	8.44	7.28	11.14
Quartz	(-2,2,-5)	6.433	84.85	9.291	14.5	0.582	8.43	7.28	11.14
Quartz	(2,-2,5)	6.433	84.85	9.287	14.5	0.582	8.43	7.28	11.14
Quartz	(0,2,5)	6.433	84.85	9.274	14.5	0.582	8.42	7.28	11.13
Equiv. Refl.: (0,-2,-5)									
Quartz	(-3,-1,3)	6.28	76.48	7.264	8.8	1.553	13.6	19.42	23.71
Quartz	(-3,4,-3)	6.28	76.48	7.263	8.8	1.553	13.6	19.42	23.71
Quartz	(4,-1,-3)	6.28	76.48	7.262	8.8	1.553	13.6	19.42	23.71
Quartz	(4,-3,3)	6.28	76.48	7.26	8.8	1.553	13.6	19.42	23.71
Quartz	(-1,4,3)	6.28	76.48	7.259	8.8	1.553	13.6	19.42	23.71
Quartz	(-1,-3,-3)	6.28	76.48	7.258	8.8	1.553	13.6	19.42	23.71
Quartz	(1,3,-3)	6.28	76.48	7.194	7.9	1.553	12.2	19.42	22.93
Quartz	(1,-4,3)	6.28	76.48	7.192	7.9	1.553	12.2	19.42	22.93
Quartz	(-4,1,-3)	6.28	76.48	7.183	7.8	1.553	12.19	19.42	22.93
Quartz	(-4,3,3)	6.28	76.48	7.182	7.8	1.553	12.18	19.42	22.92
Quartz	(3,-4,-3)	6.28	76.48	7.174	7.8	1.553	12.17	19.42	22.92
Quartz	(3,1,3)	6.28	76.48	7.172	7.8	1.553	12.17	19.42	22.92
Quartz	(1,-4,-3)	6.28	76.48	7.018	8.8	1.553	13.6	19.42	23.71
Equiv. Refl.: (3,1,-3), (3,-4,3)									
Quartz	(1,3,3)	6.28	76.48	7.017	8.8	1.553	13.6	19.42	23.71
Equiv. Refl.: (-4,1,3)									
Quartz	(-4,3,-3)	6.28	76.48	7.015	8.8	1.553	13.6	19.42	23.71
Quartz	(-1,-3,3)	6.28	76.48	5.163	7.9	1.553	12.2	19.42	22.93
Quartz	(-1,4,-3)	6.28	76.48	5.161	7.9	1.553	12.2	19.42	22.93
Quartz	(4,-1,3)	6.28	76.48	5.155	7.8	1.553	12.19	19.42	22.93
Quartz	(4,-3,-3)	6.28	76.48	5.154	7.8	1.553	12.18	19.42	22.92
Quartz	(-3,4,3)	6.28	76.48	5.147	7.8	1.553	12.17	19.42	22.92
Quartz	(-3,-1,-3)	6.28	76.48	5.145	7.8	1.553	12.17	19.42	22.92
Sapph	(1,3,7)	6.371	80.51	5.022	8.9	1.079	9.65	13.49	16.59
Equiv. Refl.: (1,-4,-7), (3,1,-7), (3,-4,7), (4,-1,-7), (4,-3,7), (-1,4,7), (-1,-3,-7), (-3,4,-7), (-3,-1,7), (-4,1,7), (-4,3,-7)									
Quartz	(-3,0,4)	6.337	78.84	3.66	6.1	1.274	7.83	15.93	17.75
Equiv. Refl.: (-3,3,-4)									
Quartz	(0,-3,-4)	6.337	78.84	3.659	6.1	1.274	7.83	15.93	17.75
Quartz	(0,3,4)	6.337	78.84	3.658	6.1	1.274	7.83	15.93	17.75
Quartz	(3,0,-4)	6.337	78.84	3.656	6.1	1.274	7.83	15.93	17.75
Quartz	(3,-3,4)	6.337	78.84	3.654	6.1	1.274	7.83	15.93	17.75
LiNbO3	(1,2,11)	6.142	71.99	2.953	8.7	2.1	18.3	26.25	32
Equiv. Refl.: (1,-3,-11), (2,1,-11), (2,-3,11), (3,-1,-11), (3,-2,11), (-1,3,11), (-1,-2,-11), (-2,3,-11), (-2,-1,11), (-3,1,11), (-3,2,-11)									
Quartz	(0,4,-2)	6.263	75.86	1.048	2.7	1.628	4.4	20.35	20.82
Equiv. Refl.: (0,-4,2)									
Quartz	(4,0,2)	6.263	75.86	1.047	2.7	1.628	4.4	20.35	20.82
Equiv. Refl.: (4,-4,-2), (-4,0,-2), (-4,4,2)									
LiNbO3	(2,3,-1)	6.077	70.21	1.006	4.8	2.324	11.18	29.05	31.13
Equiv. Refl.: (2,-5,1), (3,2,1), (3,-5,-1), (5,-2,1), (5,-3,-1), (-2,5,-1), (-2,-3,1), (-3,5,1), (-3,-2,-1), (-5,2,-1), (-5,3,1)									

Ei =	6.716	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(1,3,5)	6.483	74.85	49.0487	49.36	1.8178	89.72	22.72	92.55
	Equiv. Refl.: (1,5,3), (3,1,5), (3,5,1), (5,1,3), (5,3,1)								
Si	(0,4,4)	6.457	74.04	36.5596	32.95	1.9213	63.31	24.02	67.71
	Equiv. Refl.: (4,0,4), (4,4,0)								
LiNbO3	(0,4,8)	6.613	79.96	73.072	70.1	1.189	83.38	14.87	84.7
	Equiv. Refl.: (4,-4,8), (-4,0,8)								
LiNbO3	(0,-4,-8)	6.613	79.96	63.239	70.1	1.189	83.38	14.87	84.7
	Equiv. Refl.: (4,0,-8), (-4,4,-8)								
LiNbO3	(2,3,-4)	6.319	70.21	50.982	49.3	2.416	119.01	30.2	122.78
	Equiv. Refl.: (3,-5,-4), (5,-3,-4), (-2,5,-4), (-3,-2,-4), (-5,2,-4)								
LiNbO3	(2,-5,4)	6.319	70.21	50.205	49.3	2.416	119.01	30.2	122.78
	Equiv. Refl.: (3,2,4), (5,-2,4), (-2,-3,4), (-3,5,4), (-5,3,4)								
LiNbO3	(0,-1,-14)	6.413	72.72	44.473	44.3	2.089	92.48	26.11	96.1
	Equiv. Refl.: (1,0,-14), (-1,1,-14)								
LiNbO3	(0,1,14)	6.413	72.72	42.432	44.3	2.089	92.48	26.11	96.1
	Equiv. Refl.: (1,-1,14), (-1,0,14)								
LiNbO3	(1,-5,0)	6.372	71.58	35.025	36.6	2.236	81.81	27.95	86.45
	Equiv. Refl.: (4,1,0), (5,-1,0), (-1,-4,0), (-4,5,0), (-5,4,0)								
LiNbO3	(1,4,0)	6.372	71.58	34.626	36.6	2.236	81.81	27.95	86.45
	Equiv. Refl.: (-4,-1,0)								
LiNbO3	(4,-5,0)	6.372	71.58	34.625	36.6	2.236	81.81	27.95	86.45
	Equiv. Refl.: (5,-4,0), (-1,5,0), (-5,1,0)								
Sapph	(1,3,-8)	6.633	81.01	32.038	31.4	1.063	33.4	13.29	35.94
	Equiv. Refl.: (1,-4,8), (3,1,8), (3,-4,-8), (4,-1,8), (4,-3,-8), (-1,4,-8), (-1,-3,8), (-3,4,8), (-3,-1,-8), (-4,1,-8), (-4,3,8)								
Quartz	(5,-2,-1)	6.454	73.93	22.512	20.1	1.935	38.85	24.18	45.76
	Equiv. Refl.: (5,-3,1), (-2,5,1), (-2,-3,-1), (-3,5,-1), (-3,-2,1)								
Quartz	(-5,2,1)	6.454	73.93	21.584	20.1	1.935	38.85	24.18	45.76
Quartz	(2,3,1)	6.454	73.93	21.583	20.1	1.935	38.85	24.18	45.76
	Equiv. Refl.: (2,-5,-1), (3,2,-1), (3,-5,1), (-5,3,-1)								
Quartz	(2,3,0)	6.351	71.02	17.577	16.1	2.31	37.23	28.87	47.11
	Equiv. Refl.: (2,-5,0), (3,2,0), (3,-5,0), (-5,2,0), (-5,3,0)								
Quartz	(5,-2,0)	6.351	71.02	17.489	16.1	2.31	37.23	28.87	47.11
	Equiv. Refl.: (5,-3,0), (-2,5,0), (-2,-3,0), (-3,5,0), (-3,-2,0)								
Sapph	(0,4,-4)	6.313	70.06	10.829	11.3	2.437	27.44	30.46	40.99
	Equiv. Refl.: (0,-4,4), (4,0,4), (4,-4,-4), (-4,0,-4), (-4,4,4)								
Sapph	(2,3,-1)	6.575	78.24	9.056	11.3	1.399	15.85	17.48	23.6
	Equiv. Refl.: (2,-5,1), (3,2,1), (3,-5,-1), (5,-2,1), (5,-3,-1), (-2,5,-1), (-2,-3,1), (-3,5,1), (-3,-2,-1), (-5,2,-1), (-5,3,1)								
Sapph	(1,2,11)	6.588	78.82	7.099	9.8	1.328	12.98	16.6	21.07
	Equiv. Refl.: (1,-3,-11), (2,1,-11), (2,-3,11), (3,-1,-11), (3,-2,11), (-1,3,11), (-1,-2,-11), (-2,3,-11), (-2,-1,11), (-3,1,11), (-3,2,-11)								
Quartz	(0,3,-4)	6.337	70.66	5.696	6.6	2.358	15.49	29.47	33.3
	Equiv. Refl.: (0,-3,4)								
Quartz	(-3,0,-4)	6.337	70.66	5.684	6.6	2.358	15.47	29.47	33.29
Quartz	(3,0,4)	6.337	70.66	5.683	6.6	2.358	15.47	29.47	33.29
Quartz	(3,-3,-4)	6.337	70.66	5.682	6.6	2.358	15.47	29.47	33.28
	Equiv. Refl.: (-3,3,4)								

Ei =	6.716	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
LiNbO3	(1,4,3)	6.512	75.83	4.415	11.2	1.695	19.03	21.19	28.48
	Equiv. Refl.: (1,4,-3), (1,-5,3), (1,-5,-3), (4,1,3), (4,1,-3), (4,-5,3), (4,-5,-3), (5,-1,3), (5,-1,-3), (5,-4,3), (5,-4,-3), (-1,5,3), (-1,5,-3), (-1,-4,3), (-1,-4,-3), (-4,5,3), (-4,5,-3), (-4,-1,3), (-4,-1,-3), (-5,1,3), (-5,1,-3), (-5,4,3), (-5,4,-3)								
Quartz	(0,2,-5)	6.433	73.31	2.721	4.4	2.014	8.85	25.18	26.69
	Equiv. Refl.: (0,-2,5)								
Quartz	(2,0,5)	6.433	73.31	2.708	4.4	2.014	8.82	25.18	26.68
	Equiv. Refl.: (-2,0,-5)								
Quartz	(2,-2,-5)	6.433	73.31	2.707	4.4	2.014	8.82	25.18	26.68
	Equiv. Refl.: (-2,2,5)								
Quartz	(-2,0,5)	6.433	73.31	2.686	4.3	2.014	8.76	25.18	26.66
Quartz	(2,0,-5)	6.433	73.31	2.685	4.3	2.014	8.76	25.18	26.66
Quartz	(-2,2,-5)	6.433	73.31	2.684	4.3	2.014	8.75	25.18	26.66
Quartz	(2,-2,5)	6.433	73.31	2.683	4.3	2.014	8.75	25.18	26.66
Quartz	(0,2,5)	6.433	73.31	2.68	4.3	2.014	8.74	25.18	26.65
	Equiv. Refl.: (0,-2,-5)								
Sapph	(1,3,7)	6.371	71.55	2.527	4.5	2.241	10.02	28.01	29.75
	Equiv. Refl.: (1,-4,-7), (3,1,-7), (3,-4,7), (4,-1,-7), (4,-3,7), (-1,4,7), (-1,-3,-7), (-3,4,-7), (-3,-1,7), (-4,1,7), (-4,3,-7)								
Quartz	(0,-3,-4)	6.337	70.66	2.108	3.4	2.358	8.11	29.47	30.57
	Equiv. Refl.: (-3,0,4), (-3,3,-4)								
Quartz	(0,3,4)	6.337	70.66	2.107	3.4	2.358	8.11	29.47	30.57
Quartz	(3,0,-4)	6.337	70.66	2.106	3.4	2.358	8.11	29.47	30.57
Quartz	(3,-3,4)	6.337	70.66	2.105	3.4	2.358	8.11	29.47	30.57
Quartz	(1,4,0)	6.677	83.8	1.608	3.2	0.729	2.32	9.12	9.41
	Equiv. Refl.: (1,-5,0), (4,1,0), (4,-5,0), (-5,1,0), (-5,4,0)								
LiNbO3	(2,3,5)	6.46	74.14	1.056	5	1.908	9.63	23.85	25.72
	Equiv. Refl.: (2,-5,-5), (3,2,-5), (3,-5,5), (5,-2,-5), (5,-3,5), (-2,5,5), (-2,-3,-5), (-3,5,-5), (-3,-2,5), (-5,2,5), (-5,3,-5)								
Quartz	(5,-1,0)	6.677	83.8	0.486	3.2	0.729	2.32	9.12	9.41
	Equiv. Refl.: (5,-4,0), (-1,5,0), (-1,-4,0), (-4,5,0), (-4,-1,0)								
Sapph	(2,3,2)	6.627	80.65	0.099	1	1.106	1.06	13.83	13.87
	Equiv. Refl.: (2,-5,-2), (3,2,-2), (3,-5,2), (5,-2,-2), (5,-3,2), (-2,5,2), (-2,-3,-2), (-3,5,-2), (-3,-2,2), (-5,2,2), (-5,3,-2)								

Ei =	6.977	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	ΘB	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Ge	(0,2,6)	6.93	83.37	139.749	130.32	0.8112	105.71	10.14	106.19
	Equiv. Refl.: (0,6,2), (2,0,6), (2,6,0), (6,0,2), (6,2,0)								
Si	(1,3,5)	6.753	75.44	23.2821	22.36	1.8124	40.52	22.66	46.42
	Equiv. Refl.: (1,5,3), (3,1,5), (3,5,1), (5,1,3), (5,3,1)								
Quartz	(1,-4,4)	6.975	88.54	139.451	131.5	0.178	23.38	2.22	23.48
Quartz	(1,3,-4)	6.975	88.54	139.443	131.5	0.178	23.38	2.22	23.48
Quartz	(-4,1,-4)	6.975	88.54	139.437	131.5	0.178	23.38	2.22	23.48
Quartz	(3,-4,-4)	6.975	88.54	139.422	131.4	0.178	23.37	2.22	23.48
Quartz	(-4,3,4)	6.975	88.54	139.419	131.4	0.178	23.38	2.22	23.48
Quartz	(3,1,4)	6.975	88.54	139.41	131.4	0.178	23.37	2.22	23.48
Quartz	(4,-1,4)	6.975	88.54	130.966	131.5	0.178	23.38	2.22	23.48
Quartz	(-1,4,-4)	6.975	88.54	130.958	131.5	0.178	23.38	2.22	23.48
Quartz	(-1,-3,4)	6.975	88.54	130.952	131.5	0.178	23.38	2.22	23.48
Quartz	(4,-3,-4)	6.975	88.54	130.948	131.4	0.178	23.38	2.22	23.48
Quartz	(-3,4,4)	6.975	88.54	130.926	131.4	0.178	23.37	2.22	23.48
Quartz	(-3,-1,-4)	6.975	88.54	130.913	131.4	0.178	23.37	2.22	23.48
LiNbO3	(1,-5,-6)	6.914	82.29	94.334	91.2	0.945	86.15	11.81	86.96
	Equiv. Refl.: (4,1,-6), (5,-1,-6), (-1,-4,-6), (-4,5,-6), (-5,4,-6)								
LiNbO3	(1,4,-6)	6.914	82.29	93.192	89.8	0.945	84.86	11.81	85.68
	Equiv. Refl.: (4,-5,-6), (5,-4,-6), (-1,5,-6), (-4,-1,-6), (-5,1,-6)								
LiNbO3	(1,4,6)	6.914	82.29	88.762	91.2	0.945	86.15	11.81	86.96
	Equiv. Refl.: (4,-5,6), (5,-4,6), (-4,-1,6)								
LiNbO3	(-1,5,6)	6.914	82.29	88.761	91.2	0.945	86.15	11.81	86.96
	Equiv. Refl.: (-5,1,6)								
LiNbO3	(1,-5,6)	6.914	82.29	86.579	89.8	0.945	84.86	11.81	85.68
	Equiv. Refl.: (4,1,6), (5,-1,6), (-1,-4,6)								
LiNbO3	(-4,5,6)	6.914	82.29	86.578	89.8	0.945	84.86	11.81	85.68
	Equiv. Refl.: (-5,4,6)								
Quartz	(3,1,-4)	6.975	88.54	70.204	75.4	0.178	13.41	2.22	13.6
	Equiv. Refl.: (3,-4,4)								
Quartz	(1,-4,-4)	6.975	88.54	70.12	75.4	0.178	13.4	2.22	13.58
Quartz	(1,3,4)	6.975	88.54	70.107	75.3	0.178	13.4	2.22	13.58
Quartz	(-4,3,-4)	6.975	88.54	70.097	75.3	0.178	13.4	2.22	13.58
Quartz	(-4,1,4)	6.975	88.54	70.086	75.3	0.178	13.4	2.22	13.58
LiNbO3	(0,-2,14)	6.85	79.07	66.391	64	1.348	86.2	16.85	87.84
	Equiv. Refl.: (2,0,14), (-2,2,14)								
Quartz	(-3,4,-4)	6.975	88.54	62.442	75.4	0.178	13.41	2.22	13.6
	Equiv. Refl.: (-3,-1,4)								
Quartz	(-1,4,4)	6.975	88.54	62.36	75.4	0.178	13.4	2.22	13.58
Quartz	(4,-3,4)	6.975	88.54	62.348	75.3	0.178	13.4	2.22	13.58
Quartz	(-1,-3,-4)	6.975	88.54	62.347	75.3	0.178	13.4	2.22	13.58
Quartz	(4,-1,-4)	6.975	88.54	62.338	75.3	0.178	13.4	2.22	13.58
LiNbO3	(0,2,-14)	6.85	79.07	61.647	64	1.348	86.2	16.85	87.84
	Equiv. Refl.: (2,-2,-14), (-2,0,-14)								
LiNbO3	(-3,3,-12)	6.797	76.95	59.168	54.6	1.617	88.27	20.22	90.56
LiNbO3	(0,-3,-12)	6.797	76.95	59.167	54.6	1.617	88.27	20.22	90.56
	Equiv. Refl.: (3,0,-12)								

Ei = Cryst	6.977 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
LiNbO3	(0,3,-12)	6.797	76.95	58.093	53.6	1.617	86.7	20.22	89.03
	Equiv. Refl.: (3,-3,-12), (-3,0,-12)								
LiNbO3	(1,-4,-10)	6.718	74.34	50.877	48.4	1.956	94.58	24.45	97.69
	Equiv. Refl.: (3,1,-10), (4,-1,-10), (-1,-3,-10), (-3,4,-10), (-4,3,-10)								
LiNbO3	(3,-3,12)	6.797	76.95	50.196	54.6	1.617	88.27	20.22	90.56
LiNbO3	(0,3,12)	6.797	76.95	50.195	54.6	1.617	88.27	20.22	90.56
	Equiv. Refl.: (-3,0,12)								
LiNbO3	(0,-3,12)	6.797	76.95	48.912	53.6	1.617	86.7	20.22	89.03
	Equiv. Refl.: (3,0,12)								
LiNbO3	(-3,3,12)	6.797	76.95	48.911	53.6	1.617	86.7	20.22	89.03
LiNbO3	(1,3,10)	6.718	74.34	46.914	48.4	1.956	94.58	24.45	97.69
	Equiv. Refl.: (3,-4,10), (4,-3,10), (-1,4,10), (-3,-1,10), (-4,1,10)								
Sapph	(2,3,-4)	6.83	78.21	43.96	38.7	1.456	56.4	18.2	59.26
	Equiv. Refl.: (2,-5,4), (3,2,4), (3,-5,-4), (5,-2,4), (5,-3,-4), (-2,5,-4), (-2,-3,4), (-3,5,4), (-3,-2,-4), (-5,2,-4), (-5,3,4)								
LiNbO3	(0,4,8)	6.613	71.41	38.811	36.9	2.346	86.49	29.33	91.32
	Equiv. Refl.: (4,-4,8), (-4,0,8)								
LiNbO3	(0,-4,-8)	6.613	71.41	33.871	36.9	2.346	86.49	29.33	91.32
	Equiv. Refl.: (4,0,-8), (-4,4,-8)								
Sapph	(0,1,14)	6.849	79.02	33.1	30.5	1.353	41.33	16.92	44.66
	Equiv. Refl.: (0,-1,-14), (1,0,-14), (1,-1,14), (-1,0,14), (-1,1,-14)								
Quartz	(-1,3,5)	6.91	82.07	31.245	28.8	0.972	28.04	12.16	30.56
Quartz	(-1,-2,-5)	6.91	82.07	31.242	28.8	0.972	28.04	12.16	30.56
Quartz	(-2,3,-5)	6.91	82.07	31.228	28.8	0.972	28.03	12.16	30.55
Quartz	(-2,-1,5)	6.91	82.07	31.225	28.8	0.972	28.03	12.16	30.55
Quartz	(3,-1,-5)	6.91	82.07	31.224	28.8	0.972	28.02	12.16	30.55
Quartz	(3,-2,5)	6.91	82.07	31.221	28.8	0.972	28.02	12.16	30.54
Sapph	(1,4,0)	6.894	81.16	30.878	29.7	1.085	32.25	13.56	34.98
	Equiv. Refl.: (1,-5,0), (4,1,0), (4,-5,0), (5,-1,0), (5,-4,0), (-1,5,0), (-1,-4,0), (-4,5,0), (-4,-1,0), (-5,1,0), (-5,4,0)								
Quartz	(1,-3,-5)	6.91	82.07	30.274	28.8	0.972	28.04	12.16	30.56
Quartz	(1,2,5)	6.91	82.07	30.271	28.8	0.972	28.04	12.16	30.56
Quartz	(2,-3,5)	6.91	82.07	30.265	28.8	0.972	28.03	12.16	30.55
Quartz	(2,1,-5)	6.91	82.07	30.262	28.8	0.972	28.03	12.16	30.55
Quartz	(-3,1,5)	6.91	82.07	30.26	28.8	0.972	28.02	12.16	30.55
Quartz	(-3,2,-5)	6.91	82.07	30.257	28.8	0.972	28.02	12.16	30.54
Quartz	(0,4,-3)	6.768	75.94	25.338	22.6	1.747	39.5	21.84	45.14
	Equiv. Refl.: (0,-4,3)								
Quartz	(4,0,3)	6.768	75.94	25.329	22.6	1.747	39.49	21.84	45.13
	Equiv. Refl.: (-4,0,-3)								
Quartz	(4,-4,-3)	6.768	75.94	25.328	22.6	1.747	39.49	21.84	45.13
	Equiv. Refl.: (-4,4,3)								
Quartz	(4,1,1)	6.775	76.16	23.238	20.6	1.718	35.48	21.48	41.47
	Equiv. Refl.: (4,-5,-1)								
Quartz	(1,4,-1)	6.775	76.16	23.235	20.6	1.718	35.48	21.48	41.47
	Equiv. Refl.: (1,-5,1)								
Quartz	(-5,1,-1)	6.775	76.16	23.234	20.6	1.718	35.47	21.48	41.47
Quartz	(-5,4,1)	6.775	76.16	23.233	20.6	1.718	35.47	21.48	41.47
Quartz	(-4,5,1)	6.775	76.16	22.283	20.6	1.718	35.48	21.48	41.47
	Equiv. Refl.: (-4,-1,-1)								
Quartz	(-1,-4,1)	6.775	76.16	22.282	20.6	1.718	35.48	21.48	41.47

Ei =	6.977	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Quartz	(-1,5,-1)	6.775	76.16	22.281	20.6	1.718	35.47	21.48	41.47
Quartz	(5,-1,1)	6.775	76.16	22.28	20.6	1.718	35.47	21.48	41.47
Quartz	(5,-4,-1)	6.775	76.16	22.279	20.6	1.718	35.47	21.48	41.47
Quartz	(0,0,6)	6.882	80.54	22.23	21.3	1.163	24.73	14.53	28.69
Equiv. Refl.: (0,0,-6)									
Sapph	(2,2,9)	6.754	75.46	21.257	20.2	1.809	36.57	22.61	43
Equiv. Refl.: (2,2,-9), (2,-4,9), (2,-4,-9), (4,-2,9), (4,-2,-9), (-2,4,9), (-2,4,-9), (-2,-2,9), (-2,-2,-9), (-4,2,9), (-4,2,-9)									
Quartz	(2,-4,-4)	6.821	77.86	19.576	18.1	1.501	27.18	18.77	33.03
Quartz	(-4,2,4)	6.821	77.86	19.574	18.1	1.501	27.18	18.77	33.03
Quartz	(-4,2,-4)	6.821	77.86	19.573	18.1	1.501	27.18	18.77	33.03
Quartz	(2,2,4)	6.821	77.86	19.572	18.1	1.501	27.18	18.77	33.03
Equiv. Refl.: (2,2,-4), (2,-4,4)									
Quartz	(-2,4,4)	6.821	77.86	18.761	18.1	1.501	27.18	18.77	33.03
Quartz	(4,-2,-4)	6.821	77.86	18.759	18.1	1.501	27.18	18.77	33.03
Quartz	(4,-2,4)	6.821	77.86	18.758	18.1	1.501	27.18	18.77	33.03
Quartz	(-2,-2,-4)	6.821	77.86	18.757	18.1	1.501	27.18	18.77	33.03
Quartz	(-2,4,-4)	6.821	77.86	18.755	18.1	1.501	27.17	18.77	33.03
Equiv. Refl.: (-2,-2,4)									
Sapph	(1,3,-8)	6.633	71.94	15.796	15.2	2.274	34.64	28.43	44.81
Equiv. Refl.: (1,-4,8), (3,1,8), (3,-4,-8), (4,-1,8), (4,-3,-8), (-1,4,-8), (-1,-3,8), (-3,4,8), (-3,-1,-8), (-4,1,-8), (-4,3,8)									
Quartz	(4,-4,3)	6.768	75.94	15.59	14.6	1.747	25.57	21.84	33.63
Quartz	(4,0,-3)	6.768	75.94	15.589	14.6	1.747	25.57	21.84	33.63
Equiv. Refl.: (-4,4,-3)									
Quartz	(-4,0,3)	6.768	75.94	15.588	14.6	1.747	25.57	21.84	33.63
Quartz	(0,4,3)	6.768	75.94	15.583	14.6	1.747	25.57	21.84	33.62
Equiv. Refl.: (0,-4,-3)									
Quartz	(-2,-1,-5)	6.91	82.07	12.259	12.9	0.972	12.5	12.16	17.44
Quartz	(-2,3,5)	6.91	82.07	12.258	12.9	0.972	12.5	12.16	17.44
Quartz	(3,-2,-5)	6.91	82.07	12.256	12.9	0.972	12.5	12.16	17.44
Quartz	(3,-1,5)	6.91	82.07	12.25	12.8	0.972	12.5	12.16	17.43
Quartz	(-1,3,-5)	6.91	82.07	12.245	12.8	0.972	12.49	12.16	17.43
Quartz	(-1,-2,5)	6.91	82.07	12.242	12.8	0.972	12.49	12.16	17.43
Quartz	(2,1,5)	6.91	82.07	9.83	12.9	0.972	12.5	12.16	17.44
Quartz	(2,-3,-5)	6.91	82.07	9.829	12.9	0.972	12.5	12.16	17.44
Quartz	(-3,2,5)	6.91	82.07	9.828	12.9	0.972	12.5	12.16	17.44
Quartz	(-3,1,-5)	6.91	82.07	9.821	12.8	0.972	12.5	12.16	17.43
Quartz	(1,-3,5)	6.91	82.07	9.817	12.8	0.972	12.49	12.16	17.43
Quartz	(1,2,-5)	6.91	82.07	9.814	12.8	0.972	12.49	12.16	17.43
Quartz	(-1,-4,-1)	6.775	76.16	6.906	7.8	1.718	13.4	21.48	25.32
Equiv. Refl.: (-4,5,-1), (-4,-1,1)									
Quartz	(-1,5,1)	6.775	76.16	6.905	7.8	1.718	13.4	21.48	25.32
Quartz	(5,-1,-1)	6.775	76.16	6.903	7.8	1.718	13.4	21.48	25.32
Equiv. Refl.: (5,-4,1)									
Quartz	(1,4,1)	6.775	76.16	6.755	7.8	1.718	13.4	21.48	25.32
Equiv. Refl.: (1,-5,-1), (4,1,-1), (4,-5,1)									
Quartz	(-5,1,1)	6.775	76.16	6.753	7.8	1.718	13.4	21.48	25.32
Equiv. Refl.: (-5,4,-1)									
Quartz	(3,-5,-2)	6.752	75.43	6.504	7.1	1.814	12.84	22.68	26.06

Ei =	6.977	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(3,2,2)	6.752	75.43	6.503	7.1	1.814	12.84	22.68	26.06
Quartz	(-5,2,-2)	6.752	75.43	6.501	7.1	1.814	12.84	22.68	26.06
	Equiv. Refl.: (-5,3,2)								
Quartz	(2,3,-2)	6.752	75.43	6.5	7.1	1.814	12.84	22.68	26.06
	Equiv. Refl.: (2,-5,2)								
Quartz	(-3,5,2)	6.752	75.43	6.223	7.1	1.814	12.84	22.68	26.06
	Equiv. Refl.: (-3,-2,-2)								
Quartz	(5,-2,2)	6.752	75.43	6.221	7.1	1.814	12.84	22.68	26.06
	Equiv. Refl.: (5,-3,-2), (-2,5,-2)								
Quartz	(-2,-3,2)	6.752	75.43	6.22	7.1	1.814	12.84	22.68	26.06
Sapph	(2,3,-1)	6.575	70.45	5.483	6.6	2.477	16.45	30.96	35.06
	Equiv. Refl.: (2,-5,1), (3,2,1), (3,-5,-1), (5,-2,1), (5,-3,-1), (-2,5,-1), (-2,-3,1), (-3,5,1), (-3,-2,-1), (-5,2,-1), (-5,3,1)								
Sapph	(1,2,11)	6.588	70.79	4.252	5.5	2.431	13.47	30.39	33.24
	Equiv. Refl.: (1,-3,-11), (2,1,-11), (2,-3,11), (3,-1,-11), (3,-2,11), (-1,3,11), (-1,-2,-11), (-2,3,-11), (-2,-1,11), (-3,1,11), (-3,2,-11)								
LiNbO3	(1,2,-13)	6.88	80.41	4.007	11.8	1.178	13.86	14.73	20.23
	Equiv. Refl.: (1,-3,13), (2,1,13), (2,-3,-13), (3,-1,13), (3,-2,-13), (-1,3,-13), (-1,-2,13), (-2,3,13), (-2,-1,-13), (-3,1,-13), (-3,2,13)								
Quartz	(2,3,2)	6.752	75.43	2.227	3.5	1.814	6.39	22.68	23.56
	Equiv. Refl.: (2,-5,-2)								
Quartz	(-5,3,-2)	6.752	75.43	2.225	3.5	1.814	6.39	22.68	23.56
Quartz	(-5,2,2)	6.752	75.43	2.224	3.5	1.814	6.38	22.68	23.56
Quartz	(3,2,-2)	6.752	75.43	2.223	3.5	1.814	6.38	22.68	23.56
	Equiv. Refl.: (3,-5,2)								
Quartz	(-2,5,2)	6.752	75.43	1.751	3.5	1.814	6.39	22.68	23.56
	Equiv. Refl.: (-2,-3,-2)								
Quartz	(5,-3,2)	6.752	75.43	1.749	3.5	1.814	6.39	22.68	23.56
Quartz	(5,-2,-2)	6.752	75.43	1.748	3.5	1.814	6.38	22.68	23.56
	Equiv. Refl.: (-3,5,-2)								
Quartz	(-3,-2,2)	6.752	75.43	1.747	3.5	1.814	6.38	22.68	23.56
LiNbO3	(2,3,-7)	6.822	77.88	1.181	5.6	1.498	8.42	18.72	20.53
	Equiv. Refl.: (2,-5,7), (3,2,7), (3,-5,-7), (5,-2,7), (5,-3,-7), (-2,5,-7), (-2,-3,7), (-3,5,7), (-3,-2,-7), (-5,2,-7), (-5,3,7)								
Quartz	(1,4,0)	6.677	73.13	0.59	1.1	2.116	2.41	26.45	26.56
	Equiv. Refl.: (1,-5,0), (4,1,0), (4,-5,0), (-5,1,0), (-5,4,0)								
Quartz	(5,-1,0)	6.677	73.13	0.189	1.1	2.116	2.41	26.45	26.56
	Equiv. Refl.: (5,-4,0), (-1,5,0), (-1,-4,0), (-4,5,0), (-4,-1,0)								
Sapph	(2,3,2)	6.627	71.77	0.051	0.5	2.298	1.09	28.73	28.75
	Equiv. Refl.: (2,-5,-2), (3,2,-2), (3,-5,2), (5,-2,-2), (5,-3,2), (-2,5,2), (-2,-3,-2), (-3,5,-2), (-3,-2,2), (-5,2,2), (-5,3,-2)								

Ei =	7.243	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Si	(0,2,6)	7.219	85.35	90.8492	81.71	0.5895	48.17	7.37	48.73
	Equiv. Refl.: (0,6,2), (2,0,6), (2,6,0), (6,0,2), (6,2,0)								
Ge	(3,3,5)	7.186	82.78	73.8827	74.56	0.9181	68.45	11.48	69.4
	Equiv. Refl.: (3,5,3), (5,3,3)								
Ge	(0,2,6)	6.93	73.1	53.7438	49.62	2.2001	109.17	27.5	112.58
	Equiv. Refl.: (0,6,2), (2,0,6), (2,6,0), (6,0,2), (6,2,0)								
LiNbO3	(3,3,0)	7.225	85.98	179.852	173.9	0.509	88.52	6.36	88.74
	Equiv. Refl.: (3,-6,0), (6,-3,0), (-3,6,0), (-3,-3,0), (-6,3,0)								
Sapph	(1,3,10)	7.225	85.98	119.659	104.4	0.509	53.12	6.36	53.5
	Equiv. Refl.: (1,-4,-10), (3,1,-10), (3,-4,10), (4,-1,-10), (4,-3,10), (-1,4,10), (-1,-3,-10), (-3,4,-10), (-3,-1,10), (-4,1,10), (-4,3,-10)								
LiNbO3	(-5,5,-4)	7.179	82.37	111.542	103.8	0.97	100.74	12.13	101.47
LiNbO3	(0,-5,-4)	7.179	82.37	111.541	103.8	0.97	100.74	12.13	101.47
	Equiv. Refl.: (5,0,-4)								
LiNbO3	(0,5,4)	7.179	82.37	107.649	103.8	0.97	100.74	12.13	101.47
	Equiv. Refl.: (5,-5,4), (-5,0,4)								
LiNbO3	(2,-4,12)	7.211	84.6	103.32	100	0.684	68.47	8.56	69
	Equiv. Refl.: (4,-2,12)								
LiNbO3	(2,2,12)	7.211	84.6	103.319	100	0.684	68.47	8.56	69
	Equiv. Refl.: (-2,4,12), (-2,-2,12), (-4,2,12)								
LiNbO3	(2,2,-12)	7.211	84.6	92.744	100	0.684	68.47	8.56	69
	Equiv. Refl.: (-2,4,-12), (-2,-2,-12), (-4,2,-12)								
LiNbO3	(2,-4,-12)	7.211	84.6	92.743	100	0.684	68.47	8.56	69
	Equiv. Refl.: (4,-2,-12)								
LiNbO3	(0,4,-10)	7.137	80.17	73.153	69.2	1.255	86.85	15.69	88.25
	Equiv. Refl.: (4,-4,-10), (-4,0,-10)								
LiNbO3	(0,-4,10)	7.137	80.17	68.711	69.2	1.255	86.85	15.69	88.25
	Equiv. Refl.: (4,0,10), (-4,4,10)								
LiNbO3	(3,2,-8)	7.038	76.34	50.996	48.6	1.761	85.58	22.01	88.36
	Equiv. Refl.: (-2,-3,-8), (-3,5,-8), (-5,3,-8)								
LiNbO3	(2,-5,-8)	7.038	76.34	50.995	48.6	1.761	85.58	22.01	88.36
	Equiv. Refl.: (5,-2,-8)								
LiNbO3	(2,3,8)	7.038	76.34	47.706	48.6	1.761	85.58	22.01	88.36
	Equiv. Refl.: (3,-5,8), (5,-3,8), (-2,5,8), (-3,-2,8), (-5,2,8)								
LiNbO3	(1,-5,-6)	6.914	72.66	41.289	39.5	2.261	89.27	28.27	93.64
	Equiv. Refl.: (4,1,-6), (5,-1,-6), (-1,-4,-6), (-4,5,-6), (-5,4,-6)								
LiNbO3	(1,4,-6)	6.914	72.66	40.785	38.9	2.261	87.93	28.27	92.37
	Equiv. Refl.: (4,-5,-6), (5,-4,-6), (-1,5,-6), (-4,-1,-6), (-5,1,-6)								
LiNbO3	(1,4,6)	6.914	72.66	38.985	39.5	2.261	89.27	28.27	93.64
	Equiv. Refl.: (4,-5,6), (5,-4,6), (-1,5,6), (-4,-1,6), (-5,1,6)								
LiNbO3	(1,-5,6)	6.914	72.66	38.05	38.9	2.261	87.93	28.27	92.37
	Equiv. Refl.: (4,1,6), (5,-1,6), (-1,-4,6), (-4,5,6), (-5,4,6)								
LiNbO3	(0,-2,14)	6.85	71.05	37.644	35.9	2.487	89.33	31.09	94.59
	Equiv. Refl.: (2,0,14), (-2,2,14)								
LiNbO3	(0,2,-14)	6.85	71.05	35.102	35.9	2.487	89.33	31.09	94.59
	Equiv. Refl.: (2,-2,-14), (-2,0,-14)								
Sapph	(0,4,8)	7.127	79.73	30.719	28.4	1.313	37.34	16.41	40.78
	Equiv. Refl.: (0,-4,-8), (4,0,-8), (4,-4,8), (-4,0,8), (-4,4,-8)								

Ei =	7.243	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Sapph	(2,3,-4)	6.83	70.56	26.18	22.9	2.557	58.44	31.96	66.61
	Equiv. Refl.: (2,-5,4), (3,2,4), (3,-5,-4), (5,-2,4), (5,-3,-4), (-2,5,-4), (-2,-3,4), (-3,5,4), (-3,-2,-4), (-5,2,-4), (-5,3,4)								
LiNbO3	(0,-5,2)	7.01	75.42	22.155	23.9	1.884	44.99	23.55	50.78
	Equiv. Refl.: (5,0,2), (-5,5,2)								
LiNbO3	(0,5,-2)	7.01	75.42	19.462	23.9	1.884	44.99	23.55	50.78
	Equiv. Refl.: (5,-5,-2), (-5,0,-2)								
Sapph	(0,1,14)	6.849	71.02	18.849	17.2	2.491	42.82	31.13	52.94
	Equiv. Refl.: (0,-1,-14), (1,0,-14), (1,-1,14), (-1,0,14), (-1,1,-14)								
Sapph	(1,4,3)	7.041	76.44	18.203	17.5	1.746	30.63	21.83	37.61
	Equiv. Refl.: (1,4,-3), (1,-5,3), (1,-5,-3), (4,1,3), (4,1,-3), (4,-5,3), (4,-5,-3), (5,-1,3), (5,-1,-3), (5,-4,3), (5,-4,-3), (-1,5,3), (-1,5,-3), (-1,-4,3), (-1,-4,-3), (-4,5,3), (-4,5,-3), (-4,-1,3), (-4,-1,-3), (-5,1,3), (-5,1,-3), (-5,4,3), (-5,4,-3)								
Sapph	(1,4,0)	6.894	72.14	15.52	14.3	2.333	33.39	29.17	44.34
	Equiv. Refl.: (1,-5,0), (4,1,0), (4,-5,0), (5,-1,0), (5,-4,0), (-1,5,0), (-1,-4,0), (-4,5,0), (-4,-1,0), (-5,1,0), (-5,4,0)								
Quartz	(-1,3,5)	6.91	72.56	14.388	12.8	2.275	29.05	28.44	40.65
Quartz	(-1,-2,-5)	6.91	72.56	14.387	12.8	2.275	29.05	28.44	40.65
Quartz	(-2,3,-5)	6.91	72.56	14.38	12.8	2.275	29.04	28.44	40.64
Quartz	(-2,-1,5)	6.91	72.56	14.379	12.8	2.275	29.04	28.44	40.64
Quartz	(3,-1,-5)	6.91	72.56	14.378	12.8	2.275	29.04	28.44	40.64
Quartz	(3,-2,5)	6.91	72.56	14.377	12.8	2.275	29.04	28.44	40.64
Quartz	(1,0,6)	7.035	76.22	14.12	13.4	1.776	23.87	22.2	32.6
Quartz	(1,-1,-6)	7.035	76.22	14.119	13.4	1.776	23.87	22.2	32.6
	Equiv. Refl.: (-1,0,-6)								
Quartz	(-1,1,6)	7.035	76.22	14.118	13.4	1.776	23.87	22.2	32.6
Quartz	(0,-1,6)	7.035	76.22	14.102	13.4	1.776	23.84	22.2	32.58
Quartz	(0,1,-6)	7.035	76.22	14.101	13.4	1.776	23.84	22.2	32.58
Quartz	(1,-3,-5)	6.91	72.56	13.969	12.8	2.275	29.05	28.44	40.65
Quartz	(1,2,5)	6.91	72.56	13.968	12.8	2.275	29.05	28.44	40.65
Quartz	(2,-3,5)	6.91	72.56	13.964	12.8	2.275	29.04	28.44	40.64
Quartz	(2,1,-5)	6.91	72.56	13.963	12.8	2.275	29.04	28.44	40.64
Quartz	(-3,1,5)	6.91	72.56	13.962	12.8	2.275	29.04	28.44	40.64
Quartz	(-3,2,-5)	6.91	72.56	13.961	12.8	2.275	29.04	28.44	40.64
LiNbO3	(1,1,15)	7.127	79.73	13.883	21.8	1.313	28.58	16.41	32.95
	Equiv. Refl.: (1,1,-15), (1,-2,15), (1,-2,-15), (2,-1,15), (2,-1,-15), (-1,2,15), (-1,2,-15), (-1,-1,15), (-1,-1,-15), (-2,1,15), (-2,1,-15)								
Quartz	(1,-4,4)	6.975	74.36	13.057	11.9	2.028	24.23	25.35	35.07
Quartz	(1,3,-4)	6.975	74.36	13.056	11.9	2.028	24.22	25.35	35.06
	Equiv. Refl.: (-4,1,-4)								
Quartz	(3,-4,-4)	6.975	74.36	13.054	11.9	2.028	24.22	25.35	35.06
	Equiv. Refl.: (-4,3,4)								
Quartz	(3,1,4)	6.975	74.36	13.053	11.9	2.028	24.22	25.35	35.06
Quartz	(4,-1,4)	6.975	74.36	12.312	11.9	2.028	24.23	25.35	35.06
Quartz	(-1,4,-4)	6.975	74.36	12.311	11.9	2.028	24.23	25.35	35.07
Quartz	(4,-3,-4)	6.975	74.36	12.31	11.9	2.028	24.22	25.35	35.06
	Equiv. Refl.: (-1,-3,4)								
Quartz	(-3,4,4)	6.975	74.36	12.308	11.9	2.028	24.22	25.35	35.06
Quartz	(-3,-1,-4)	6.975	74.36	12.307	11.9	2.028	24.22	25.35	35.06
Quartz	(2,-4,-4)	6.821	70.34	11.935	10.9	2.587	28.18	32.34	42.89

Ei =	7.243	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Quartz	(3,1,-4)	6.975	74.36	6.671	6.9	2.028	13.9	25.35	28.91
	Equiv. Refl.: (3,-4,4)								
Quartz	(1,-4,-4)	6.975	74.36	6.662	6.8	2.028	13.89	25.35	28.91
Quartz	(1,3,4)	6.975	74.36	6.661	6.8	2.028	13.88	25.35	28.9
Quartz	(-4,3,-4)	6.975	74.36	6.66	6.8	2.028	13.88	25.35	28.9
Quartz	(-4,1,4)	6.975	74.36	6.659	6.8	2.028	13.88	25.35	28.9
Quartz	(-2,5,-3)	7.223	85.76	6.601	10.9	0.537	5.85	6.71	8.9
Quartz	(-3,5,3)	7.223	85.76	6.599	10.9	0.537	5.85	6.71	8.9
Quartz	(-2,-3,3)	7.223	85.76	6.598	10.9	0.537	5.85	6.71	8.9
Quartz	(-3,-2,-3)	7.223	85.76	6.595	10.9	0.537	5.85	6.71	8.9
Quartz	(5,-2,3)	7.223	85.76	6.594	10.9	0.537	5.85	6.71	8.9
	Equiv. Refl.: (5,-3,-3)								
Quartz	(-3,4,-4)	6.975	74.36	5.977	6.9	2.028	13.9	25.35	28.91
	Equiv. Refl.: (-3,-1,4)								
Quartz	(-1,4,4)	6.975	74.36	5.969	6.8	2.028	13.89	25.35	28.91
Quartz	(4,-3,4)	6.975	74.36	5.968	6.8	2.028	13.88	25.35	28.9
	Equiv. Refl.: (-1,-3,-4)								
Quartz	(4,-1,-4)	6.975	74.36	5.967	6.8	2.028	13.88	25.35	28.9
Quartz	(5,-2,-3)	7.223	85.76	5.844	8.9	0.537	4.77	6.71	8.23
	Equiv. Refl.: (5,-3,3)								
Quartz	(-2,-3,-3)	7.223	85.76	5.839	8.9	0.537	4.77	6.71	8.23
Quartz	(-2,5,3)	7.223	85.76	5.834	8.9	0.537	4.76	6.71	8.23
Quartz	(-3,5,-3)	7.223	85.76	5.823	8.9	0.537	4.76	6.71	8.23
Quartz	(-3,-2,3)	7.223	85.76	5.821	8.9	0.537	4.76	6.71	8.23
Sapph	(2,3,5)	6.978	74.46	5.735	7	2.014	14.02	25.17	28.81
	Equiv. Refl.: (2,-5,-5), (3,2,-5), (3,-5,5), (5,-2,-5), (5,-3,5), (-2,5,5), (-2,-3,-5), (-3,5,-5), (-3,-2,5), (-5,2,5), (-5,3,-5)								
Quartz	(-2,3,5)	6.91	72.56	5.68	5.7	2.275	12.97	28.44	31.25
	Equiv. Refl.: (-2,-1,-5)								
Quartz	(3,-2,-5)	6.91	72.56	5.679	5.7	2.275	12.97	28.44	31.25
Quartz	(3,-1,5)	6.91	72.56	5.676	5.7	2.275	12.96	28.44	31.25
Quartz	(-1,3,-5)	6.91	72.56	5.674	5.7	2.275	12.96	28.44	31.25
Quartz	(-1,-2,5)	6.91	72.56	5.673	5.7	2.275	12.95	28.44	31.25
Quartz	(2,1,5)	6.91	72.56	4.652	5.7	2.275	12.97	28.44	31.25
	Equiv. Refl.: (2,-3,-5)								
Quartz	(-3,2,5)	6.91	72.56	4.651	5.7	2.275	12.97	28.44	31.25
Quartz	(-3,1,-5)	6.91	72.56	4.648	5.7	2.275	12.96	28.44	31.25
Quartz	(1,-3,5)	6.91	72.56	4.646	5.7	2.275	12.96	28.44	31.25
Quartz	(1,2,-5)	6.91	72.56	4.645	5.7	2.275	12.95	28.44	31.25
LiNbO3	(1,3,-11)	7.024	75.86	4.394	9.9	1.824	18.12	22.81	29.13
	Equiv. Refl.: (1,-4,11), (3,1,11), (4,-1,11), (-1,4,-11), (-1,-3,11), (-3,-1,-11), (-4,1,-11)								
LiNbO3	(3,-4,-11)	7.024	75.86	4.393	9.9	1.824	18.12	22.81	29.13
	Equiv. Refl.: (4,-3,-11), (-3,4,11), (-4,3,11)								
Quartz	(-5,2,3)	7.223	85.76	3.899	8.9	0.537	4.77	6.71	8.23
	Equiv. Refl.: (-5,3,-3)								
Quartz	(2,3,3)	7.223	85.76	3.894	8.9	0.537	4.77	6.71	8.23
Quartz	(2,-5,-3)	7.223	85.76	3.89	8.9	0.537	4.76	6.71	8.23
Quartz	(3,-5,3)	7.223	85.76	3.882	8.9	0.537	4.76	6.71	8.23
Quartz	(3,2,-3)	7.223	85.76	3.881	8.9	0.537	4.76	6.71	8.23
Quartz	(3,-3,5)	7.211	84.6	2.897	6	0.685	4.12	8.56	9.5

Ei =	7.243	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	 IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(3,0,-5)	7.211	84.6	2.893	6	0.685	4.11	8.56	9.49
	Equiv. Refl.: (-3,3,-5)								
Quartz	(-3,0,5)	7.211	84.6	2.889	6	0.685	4.11	8.56	9.49
Quartz	(0,3,5)	7.211	84.6	2.88	6	0.685	4.1	8.56	9.49
	Equiv. Refl.: (0,-3,-5)								
LiNbO3	(1,2,-13)	6.88	71.77	2.165	6	2.385	14.37	29.81	33.1
	Equiv. Refl.: (1,-3,13), (2,1,13), (2,-3,-13), (3,-1,13), (3,-2,-13), (-1,3,-13), (-1,-2,13), (-2,3,13), (-2,-1,-13), (-3,1,-13), (-3,2,13)								
Quartz	(0,-1,-6)	7.035	76.22	1.491	2.8	1.776	5.03	22.2	22.76
Quartz	(0,1,6)	7.035	76.22	1.49	2.8	1.776	5.03	22.2	22.76
Quartz	(1,0,-6)	7.035	76.22	1.474	2.8	1.776	5	22.2	22.75
Quartz	(1,-1,6)	7.035	76.22	1.473	2.8	1.776	5	22.2	22.75
Quartz	(-1,0,6)	7.035	76.22	1.472	2.8	1.776	5	22.2	22.75
	Equiv. Refl.: (-1,1,-6)								
LiNbO3	(2,3,-7)	6.822	70.36	0.758	3.4	2.585	8.73	32.31	33.47
	Equiv. Refl.: (2,-5,7), (3,2,7), (3,-5,-7), (5,-2,7), (5,-3,-7), (-2,5,-7), (-2,-3,7), (-3,5,7), (-3,-2,-7), (-5,2,-7), (-5,3,7)								

Ei =	7.514	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Si	(3,3,5)	7.485	84.96	49.448	47.35	0.6626	31.38	8.28	32.45
	Equiv. Refl.: (3,5,3), (5,3,3)								
Ge	(3,3,5)	7.186	73	30.8749	30.73	2.2979	70.61	28.72	76.23
	Equiv. Refl.: (3,5,3), (5,3,3)								
Si	(0,2,6)	7.219	73.9	25.7992	22.99	2.1694	49.87	27.12	56.77
	Equiv. Refl.: (0,6,2), (2,0,6), (2,6,0), (6,0,2), (6,2,0)								
Quartz	(4,1,-3)	7.511	88.47	223.055	193.4	0.201	38.87	2.51	38.95
Quartz	(4,-5,3)	7.511	88.47	223.044	193.4	0.201	38.86	2.51	38.95
Quartz	(1,4,3)	7.511	88.47	223.012	193.3	0.201	38.86	2.51	38.94
Quartz	(1,-5,-3)	7.511	88.47	223.001	193.3	0.201	38.86	2.51	38.94
Quartz	(-5,1,3)	7.511	88.47	222.97	193.3	0.201	38.85	2.51	38.93
Quartz	(-5,4,-3)	7.511	88.47	222.969	193.3	0.201	38.85	2.51	38.93
Quartz	(-4,-1,3)	7.511	88.47	222.778	193.4	0.201	38.87	2.51	38.95
Quartz	(-4,5,-3)	7.511	88.47	222.766	193.4	0.201	38.86	2.51	38.95
Quartz	(-1,-4,-3)	7.511	88.47	222.735	193.3	0.201	38.86	2.51	38.94
Quartz	(-1,5,3)	7.511	88.47	222.726	193.3	0.201	38.86	2.51	38.94
Quartz	(5,-1,-3)	7.511	88.47	222.694	193.3	0.201	38.85	2.51	38.93
	Equiv. Refl.: (5,-4,3)								
Quartz	(2,-2,6)	7.474	84.06	66.851	57	0.782	44.6	9.78	45.66
Quartz	(2,0,-6)	7.474	84.06	66.848	57	0.782	44.6	9.78	45.66
	Equiv. Refl.: (-2,2,-6)								
Quartz	(-2,0,6)	7.474	84.06	66.846	57	0.782	44.6	9.78	45.66
Quartz	(0,2,6)	7.474	84.06	66.826	57	0.782	44.58	9.78	45.64
	Equiv. Refl.: (0,-2,-6)								
LiNbO3	(2,4,-2)	7.412	80.55	63.714	62.1	1.251	77.68	15.64	79.24
	Equiv. Refl.: (4,-6,-2), (6,-4,-2), (-2,6,-2), (-4,-2,-2), (-6,2,-2)								
LiNbO3	(2,-6,2)	7.412	80.55	63.404	62.1	1.251	77.68	15.64	79.24
	Equiv. Refl.: (4,2,2), (6,-2,2), (-2,-4,2), (-4,6,2), (-6,4,2)								
Sapph	(1,4,6)	7.465	83.47	60.572	53.3	0.86	45.83	10.75	47.07
	Equiv. Refl.: (1,4,-6), (1,-5,6), (1,-5,-6), (4,1,6), (4,1,-6), (4,-5,6), (4,-5,-6), (5,-1,6), (5,-1,-6), (5,-4,6), (5,-4,-6), (-1,5,6), (-1,5,-6), (-1,-4,6), (-1,-4,-6), (-4,5,6), (-4,5,-6), (-4,-1,6), (-4,-1,-6), (-5,1,6), (-5,1,-6), (-5,4,6), (-5,4,-6)								
LiNbO3	(0,-5,-4)	7.179	72.82	48.677	44.9	2.323	104.32	29.03	108.28
	Equiv. Refl.: (5,0,-4), (-5,5,-4)								
LiNbO3	(0,5,4)	7.179	72.82	47.073	44.9	2.323	104.32	29.03	108.28
	Equiv. Refl.: (5,-5,4), (-5,0,4)								
LiNbO3	(3,3,0)	7.225	74.06	44.604	42.7	2.146	91.65	26.82	95.5
	Equiv. Refl.: (3,-6,0), (6,-3,0), (-3,6,0), (-3,-3,0), (-6,3,0)								
LiNbO3	(1,-3,-14)	7.261	75.1	39.603	38.9	1.999	77.83	24.99	81.75
	Equiv. Refl.: (2,1,-14), (3,-1,-14), (-1,-2,-14), (-2,3,-14), (-3,2,-14)								
LiNbO3	(1,2,14)	7.261	75.1	39.357	38.9	1.999	77.83	24.99	81.75
	Equiv. Refl.: (2,-3,14), (3,-2,14), (-1,3,14), (-2,-1,14), (-3,1,14)								
LiNbO3	(0,4,-10)	7.137	71.77	38.737	36.3	2.476	89.92	30.94	95.1
	Equiv. Refl.: (4,-4,-10), (-4,0,-10)								
LiNbO3	(0,-1,16)	7.289	75.93	37.129	36.8	1.883	69.23	23.53	73.12
	Equiv. Refl.: (1,0,16), (-1,1,16)								
LiNbO3	(0,-4,10)	7.137	71.77	36.513	36.3	2.476	89.92	30.94	95.1
	Equiv. Refl.: (4,0,10), (-4,4,10)								

Ei = Cryst	7.514 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
LiNbO3	(0,1,-16)	7.289	75.93	35.826	36.8	1.883	69.23	23.53	73.12
	Equiv. Refl.: (1,-1,-16), (-1,0,-16)								
LiNbO3	(2,2,12)	7.211	73.67	33.568	32.2	2.202	70.87	27.52	76.03
	Equiv. Refl.: (2,-4,12), (4,-2,12), (-2,4,12), (-2,-2,12), (-4,2,12)								
Sapph	(0,2,-14)	7.328	77.23	31.282	27.5	1.702	46.76	21.28	51.37
	Equiv. Refl.: (0,-2,14), (2,0,14), (2,-2,-14), (-2,0,-14), (-2,2,14)								
LiNbO3	(2,2,-12)	7.211	73.67	30.311	32.2	2.202	70.87	27.52	76.03
	Equiv. Refl.: (2,-4,-12), (4,-2,-12), (-2,4,-12), (-2,-2,-12), (-4,2,-12)								
Sapph	(1,3,10)	7.225	74.06	29.706	25.6	2.146	55	26.82	61.19
	Equiv. Refl.: (1,-4,-10), (3,1,-10), (3,-4,10), (4,-1,-10), (4,-3,10), (-1,4,10), (-1,-3,-10), (-3,4,-10), (-3,-1,10), (-4,1,10), (-4,3,-10)								
Sapph	(0,3,12)	7.292	76.04	25.873	23.1	1.868	43.12	23.35	49.04
	Equiv. Refl.: (0,3,-12), (0,-3,12), (0,-3,-12), (3,0,12), (3,0,-12), (3,-3,12), (3,-3,-12), (-3,0,12), (-3,0,-12), (-3,3,12), (-3,3,-12)								
Quartz	(-4,5,3)	7.511	88.47	22.428	29.6	0.201	5.95	2.51	6.46
Quartz	(-4,-1,-3)	7.511	88.47	22.426	29.6	0.201	5.95	2.51	6.46
Quartz	(-1,5,-3)	7.511	88.47	22.411	29.6	0.201	5.95	2.51	6.46
Quartz	(5,-4,-3)	7.511	88.47	22.403	29.6	0.201	5.94	2.51	6.45
Quartz	(5,-1,3)	7.511	88.47	22.4	29.6	0.201	5.94	2.51	6.45
Quartz	(-1,-4,3)	7.511	88.47	22.398	29.6	0.201	5.94	2.51	6.45
Quartz	(4,-5,-3)	7.511	88.47	18.547	29.6	0.201	5.95	2.51	6.46
Quartz	(4,1,3)	7.511	88.47	18.543	29.6	0.201	5.95	2.51	6.46
Quartz	(1,-5,3)	7.511	88.47	18.537	29.6	0.201	5.95	2.51	6.46
Quartz	(1,4,-3)	7.511	88.47	18.526	29.6	0.201	5.94	2.51	6.45
Quartz	(-5,4,3)	7.511	88.47	18.521	29.6	0.201	5.94	2.51	6.45
Quartz	(-5,1,-3)	7.511	88.47	18.519	29.6	0.201	5.94	2.51	6.45
Sapph	(0,4,8)	7.127	71.53	17.099	15.4	2.51	38.67	31.38	49.8
	Equiv. Refl.: (0,-4,-8), (4,0,-8), (4,-4,8), (-4,0,8), (-4,4,-8)								
Quartz	(2,0,6)	7.474	84.06	15.21	16	0.782	12.5	9.78	15.87
Quartz	(2,-2,-6)	7.474	84.06	15.208	16	0.782	12.5	9.78	15.87
Quartz	(-2,0,-6)	7.474	84.06	15.202	16	0.782	12.5	9.78	15.87
Quartz	(-2,2,6)	7.474	84.06	15.198	16	0.782	12.5	9.78	15.87
Quartz	(0,2,-6)	7.474	84.06	15.185	16	0.782	12.49	9.78	15.86
Quartz	(0,-2,6)	7.474	84.06	15.184	16	0.782	12.49	9.78	15.86
Quartz	(-4,0,4)	7.417	80.79	11.518	12	1.218	14.61	15.22	21.1
	Equiv. Refl.: (-4,4,-4)								
Quartz	(4,0,-4)	7.417	80.79	11.517	12	1.218	14.61	15.22	21.1
	Equiv. Refl.: (4,-4,4)								
Quartz	(0,4,4)	7.417	80.79	11.494	12	1.218	14.59	15.22	21.08
	Equiv. Refl.: (0,-4,-4)								
Quartz	(-4,0,-4)	7.417	80.79	10.934	11.5	1.218	14.05	15.22	20.72
Quartz	(4,0,4)	7.417	80.79	10.933	11.5	1.218	14.05	15.22	20.72
Quartz	(4,-4,-4)	7.417	80.79	10.932	11.5	1.218	14.05	15.22	20.71
Quartz	(-4,4,4)	7.417	80.79	10.931	11.5	1.218	14.05	15.22	20.71
Quartz	(0,4,-4)	7.417	80.79	10.926	11.5	1.218	14.04	15.22	20.71
	Equiv. Refl.: (0,-4,4)								
LiNbO3	(2,4,1)	7.371	78.82	8.631	14.9	1.485	22.19	18.57	28.93
	Equiv. Refl.: (2,-6,-1), (4,2,-1), (4,-6,1), (6,-2,-1), (6,-4,1), (-2,6,1), (-2,-4,-1), (-4,6,-1), (-4,-2,1), (-6,2,1), (-6,4,-1)								
Quartz	(2,-1,-6)	7.33	77.3	7.864	8	1.693	13.58	21.16	25.15

Ei =	7.514	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(2,-1,6)	7.33	77.3	7.86	8	1.693	13.58	21.16	25.15
Quartz	(-1,2,6)	7.33	77.3	7.855	8	1.693	13.57	21.16	25.14
Quartz	(-1,-1,6)	7.33	77.3	7.854	8	1.693	13.57	21.16	25.14
	Equiv. Refl.: (-1,-1,-6)								
Quartz	(-1,2,-6)	7.33	77.3	7.853	8	1.693	13.57	21.16	25.14
LiNbO3	(1,1,15)	7.127	71.53	7.808	11.8	2.51	29.61	31.37	43.14
	Equiv. Refl.: (1,1,-15), (1,-2,15), (1,-2,-15), (2,-1,15), (2,-1,-15), (-1,2,15), (-1,2,-15), (-1,-1,15), (-1,-1,-15), (-2,1,15), (-2,1,-15)								
Quartz	(-2,1,6)	7.33	77.3	7.502	8	1.693	13.58	21.16	25.15
Quartz	(-2,1,-6)	7.33	77.3	7.499	8	1.693	13.58	21.16	25.15
Quartz	(1,-2,-6)	7.33	77.3	7.492	8	1.693	13.57	21.16	25.14
Quartz	(1,1,6)	7.33	77.3	7.491	8	1.693	13.57	21.16	25.14
	Equiv. Refl.: (1,1,-6)								
Quartz	(1,-2,6)	7.33	77.3	7.49	8	1.693	13.57	21.16	25.14
Sapph	(2,3,-7)	7.36	78.37	6.461	7.8	1.547	12.14	19.33	22.83
	Equiv. Refl.: (2,-5,7), (3,2,7), (3,-5,-7), (5,-2,7), (5,-3,-7), (-2,5,-7), (-2,-3,7), (-3,5,7), (-3,-2,-7), (-5,2,-7), (-5,3,7)								
Sapph	(1,2,-13)	7.372	78.83	5.131	6.7	1.483	9.95	18.54	21.04
	Equiv. Refl.: (1,-3,13), (2,1,13), (2,-3,-13), (3,-1,13), (3,-2,-13), (-1,3,-13), (-1,-2,13), (-2,3,13), (-2,-1,-13), (-3,1,-13), (-3,2,13)								
Quartz	(3,-3,-5)	7.211	73.67	3.694	4.4	2.202	9.6	27.52	29.14
Quartz	(3,0,5)	7.211	73.67	3.693	4.4	2.202	9.6	27.52	29.14
Quartz	(0,3,-5)	7.211	73.67	3.691	4.4	2.202	9.59	27.52	29.14
	Equiv. Refl.: (0,-3,5), (-3,3,5)								
Quartz	(-3,0,-5)	7.211	73.67	3.69	4.4	2.202	9.6	27.52	29.14
Quartz	(3,-5,-3)	7.223	74.01	1.794	2.8	2.154	6.07	26.92	27.6
Quartz	(2,3,-3)	7.223	74.01	1.793	2.8	2.154	6.07	26.92	27.6
	Equiv. Refl.: (2,-5,3), (3,2,3), (-5,2,-3), (-5,3,3)								
Quartz	(-2,5,-3)	7.223	74.01	1.635	2.8	2.154	6.07	26.92	27.6
Quartz	(-2,-3,3)	7.223	74.01	1.634	2.8	2.154	6.07	26.92	27.6
	Equiv. Refl.: (-3,5,3), (-3,-2,-3)								
Quartz	(5,-2,3)	7.223	74.01	1.633	2.8	2.154	6.06	26.92	27.59
	Equiv. Refl.: (5,-3,-3)								
Quartz	(5,-2,-3)	7.223	74.01	1.468	2.3	2.154	4.95	26.92	27.37
	Equiv. Refl.: (5,-3,3)								
Quartz	(-2,-3,-3)	7.223	74.01	1.467	2.3	2.154	4.94	26.92	27.37
Quartz	(-2,5,3)	7.223	74.01	1.466	2.3	2.154	4.94	26.92	27.37
Quartz	(-3,5,-3)	7.223	74.01	1.463	2.3	2.154	4.93	26.92	27.37
	Equiv. Refl.: (-3,-2,3)								
Quartz	(5,0,1)	7.375	78.95	1.096	2.4	1.467	3.55	18.34	18.68
	Equiv. Refl.: (5,-5,-1), (-5,0,-1), (-5,5,1)								
Quartz	(0,5,-1)	7.375	78.95	1.095	2.4	1.467	3.55	18.34	18.68
	Equiv. Refl.: (0,-5,1)								
Quartz	(-5,3,-3)	7.223	74.01	1.064	2.3	2.154	4.95	26.92	27.37
Quartz	(-5,2,3)	7.223	74.01	1.063	2.3	2.154	4.95	26.92	27.37
Quartz	(2,3,3)	7.223	74.01	1.062	2.3	2.154	4.94	26.92	27.37
Quartz	(2,-5,-3)	7.223	74.01	1.061	2.3	2.154	4.94	26.92	27.37
Quartz	(3,2,-3)	7.223	74.01	1.059	2.3	2.154	4.93	26.92	27.37
	Equiv. Refl.: (3,-5,3)								
Quartz	(3,-3,5)	7.211	73.67	0.972	1.9	2.202	4.26	27.52	27.85
Quartz	(3,0,-5)	7.211	73.67	0.971	1.9	2.202	4.26	27.52	27.85
	Equiv. Refl.: (-3,3,-5)								

Quartz	(-3,0,5)	7.211	73.67	0.969	1.9	2.202	4.26	27.52	27.85
Quartz	(0,3,5)	7.211	73.67	0.966	1.9	2.202	4.24	27.52	27.84
	Equiv. Refl.: (0,-3,-5)								
LiNbO3	(3,3,3)	7.349	77.96	0.355	2.8	1.603	4.41	20.04	20.51
	Equiv. Refl.: (3,3,-3), (3,-6,3), (3,-6,-3), (6,-3,3), (6,-3,-3), (-3,6,3), (-3,6,-3), (-3,-3,3), (-3,-3,-3)								
	(-6,3,3), (-6,3,-3)								
Quartz	(0,5,0)	7.285	75.82	0.256	1	1.899	1.86	23.74	23.81
	Equiv. Refl.: (0,-5,0), (5,0,0), (5,-5,0), (-5,0,0), (-5,5,0)								

Ei =	7.79	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(4,4,4)	7.592	77.05	51.4252	47.59	1.7917	85.28	22.4	88.17
Si	(3,3,5)	7.485	73.91	15.6173	14.45	2.2466	32.47	28.08	42.93
	Equiv. Refl.: (3,5,3), (5,3,3)								
Sapph	(1,2,14)	7.778	86.78	94.116	83.8	0.438	36.69	5.47	37.09
	Equiv. Refl.: (1,-3,-14), (2,1,-14), (2,-3,14), (3,-1,-14), (3,-2,14), (-1,3,14), (-1,-2,-14), (-2,3,-14), (-2,-1,14), (-3,1,14), (-3,2,-14)								
Sapph	(0,5,4)	7.761	85.02	71.605	62.6	0.679	42.52	8.48	43.36
	Equiv. Refl.: (0,-5,-4), (5,0,-4), (5,-5,4), (-5,0,4), (-5,5,-4)								
Sapph	(0,1,-16)	7.783	87.65	67.987	66.9	0.32	21.39	4	21.76
	Equiv. Refl.: (0,-1,16), (1,0,16), (1,-1,-16), (-1,0,-16), (-1,1,16)								
Sapph	(0,4,-10)	7.681	80.39	47.918	40.9	1.319	53.93	16.49	56.39
	Equiv. Refl.: (0,-4,10), (4,0,10), (4,-4,-10), (-4,0,-10), (-4,4,10)								
LiNbO3	(0,-2,-16)	7.676	80.2	47.586	45.7	1.346	61.51	16.82	63.77
	Equiv. Refl.: (2,0,-16), (-2,2,-16)								
LiNbO3	(3,3,6)	7.707	81.64	47.467	47.6	1.144	54.51	14.3	56.35
	Equiv. Refl.: (3,-6,6), (6,-3,6), (-3,6,6), (-3,-3,6), (-6,3,6)								
LiNbO3	(3,3,-6)	7.707	81.64	44.962	47.6	1.144	54.51	14.3	56.35
	Equiv. Refl.: (3,-6,-6), (6,-3,-6), (-3,6,-6), (-3,-3,-6), (-6,3,-6)								
LiNbO3	(0,2,16)	7.676	80.2	43.304	45.7	1.346	61.51	16.82	63.77
	Equiv. Refl.: (2,-2,16), (-2,0,16)								
Quartz	(-4,3,-5)	7.777	86.74	38.398	35.8	0.444	15.87	5.55	16.81
Quartz	(-4,1,5)	7.777	86.74	38.389	35.8	0.444	15.87	5.55	16.81
Quartz	(1,-4,-5)	7.777	86.74	38.373	35.8	0.444	15.87	5.55	16.81
Quartz	(1,3,5)	7.777	86.74	38.372	35.7	0.444	15.87	5.55	16.81
Quartz	(3,1,-5)	7.777	86.74	38.367	35.7	0.444	15.86	5.55	16.81
Quartz	(3,-4,5)	7.777	86.74	38.361	35.7	0.444	15.86	5.55	16.8
Quartz	(0,5,-2)	7.638	78.65	38.12	31.8	1.564	49.72	19.55	53.42
	Equiv. Refl.: (0,-5,2)								
Quartz	(5,0,2)	7.638	78.65	38.117	31.8	1.564	49.71	19.55	53.42
	Equiv. Refl.: (5,-5,-2), (-5,5,2)								
Quartz	(-5,0,-2)	7.638	78.65	38.116	31.8	1.564	49.71	19.55	53.42
LiNbO3	(2,4,4)	7.572	76.42	34.124	33	1.882	62.2	23.53	66.5
	Equiv. Refl.: (4,-6,4), (6,-4,4), (-2,6,4), (-4,-2,4), (-6,2,4)								
Quartz	(4,-3,5)	7.777	86.74	34.075	35.8	0.444	15.87	5.55	16.81
Quartz	(4,-1,-5)	7.777	86.74	34.066	35.8	0.444	15.87	5.55	16.81
Quartz	(-1,4,5)	7.777	86.74	34.059	35.8	0.444	15.87	5.55	16.81
Quartz	(-1,-3,-5)	7.777	86.74	34.058	35.7	0.444	15.87	5.55	16.81
Quartz	(-3,-1,5)	7.777	86.74	34.055	35.7	0.444	15.86	5.55	16.81
Quartz	(-3,4,-5)	7.777	86.74	34.048	35.7	0.444	15.86	5.55	16.8
LiNbO3	(2,4,-2)	7.412	72.08	33.059	31.9	2.52	80.36	31.5	86.31
	Equiv. Refl.: (4,-6,-2), (6,-4,-2), (-2,6,-2), (-4,-2,-2), (-6,2,-2)								
LiNbO3	(2,-6,2)	7.412	72.08	32.907	31.9	2.52	80.36	31.5	86.31
	Equiv. Refl.: (4,2,2), (6,-2,2), (-2,-4,2), (-4,6,2), (-6,4,2)								
LiNbO3	(2,-5,10)	7.532	75.22	31.708	30.6	2.056	62.99	25.7	68.03
	Equiv. Refl.: (3,2,10), (5,-2,10), (-2,-3,10), (-3,5,10), (-5,3,10)								
LiNbO3	(2,-6,-4)	7.572	76.42	31.324	33	1.882	62.2	23.53	66.5
	Equiv. Refl.: (4,2,-4), (6,-2,-4), (-2,-4,-4), (-4,6,-4), (-6,4,-4)								

Ei = Cryst	7.79 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(2,4,0)	7.71	81.76	30.289	26.4	1.128	29.72	14.1	32.89
	Equiv. Refl.: (2,-6,0), (4,2,0), (4,-6,0), (-6,2,0), (-6,4,0)								
Quartz	(6,-2,0)	7.71	81.76	29.376	26.4	1.128	29.72	14.1	32.89
	Equiv. Refl.: (6,-4,0), (-2,6,0), (-2,-4,0), (-4,6,0), (-4,-2,0)								
LiNbO3	(2,3,-10)	7.532	75.22	29.001	30.6	2.056	62.99	25.7	68.03
	Equiv. Refl.: (3,-5,-10), (5,-3,-10), (-2,5,-10), (-3,-2,-10), (-5,2,-10)								
Quartz	(2,-2,6)	7.474	73.61	23.892	20.2	2.291	46.16	28.63	54.32
Quartz	(2,0,-6)	7.474	73.61	23.891	20.2	2.291	46.16	28.63	54.32
	Equiv. Refl.: (-2,0,6), (-2,2,-6)								
Quartz	(0,2,6)	7.474	73.61	23.883	20.1	2.291	46.15	28.63	54.31
	Equiv. Refl.: (0,-2,-6)								
Quartz	(-1,-3,5)	7.777	86.74	23.552	24.9	0.444	11.05	5.55	12.36
Quartz	(-1,4,-5)	7.777	86.74	23.549	24.9	0.444	11.05	5.55	12.36
Quartz	(4,-1,5)	7.777	86.74	23.543	24.9	0.444	11.05	5.55	12.36
Quartz	(4,-3,-5)	7.777	86.74	23.541	24.9	0.444	11.05	5.55	12.36
Quartz	(-3,-1,-5)	7.777	86.74	23.527	24.9	0.444	11.04	5.55	12.36
Quartz	(-3,4,5)	7.777	86.74	23.517	24.9	0.444	11.04	5.55	12.35
Sapph	(1,4,6)	7.465	73.4	23.497	20.4	2.323	47.43	29.03	55.61
	Equiv. Refl.: (1,4,-6), (1,-5,6), (1,-5,-6), (4,1,6), (4,1,-6), (4,-5,6), (4,-5,-6), (5,-1,6), (5,-1,-6), (5,-4,6), (5,-4,-6), (-1,5,6), (-1,5,-6), (-1,-4,6), (-1,-4,-6), (-4,5,6), (-4,5,-6), (-4,-1,6), (-4,-1,-6), (-5,1,6), (-5,1,-6), (-5,4,6), (-5,4,-6)								
Quartz	(1,3,-5)	7.777	86.74	22.403	24.9	0.444	11.05	5.55	12.36
Quartz	(1,-4,5)	7.777	86.74	22.401	24.9	0.444	11.05	5.55	12.36
Quartz	(-4,1,-5)	7.777	86.74	22.395	24.9	0.444	11.05	5.55	12.36
Quartz	(-4,3,5)	7.777	86.74	22.393	24.9	0.444	11.05	5.55	12.36
Quartz	(3,1,5)	7.777	86.74	22.373	24.9	0.444	11.04	5.55	12.36
Quartz	(3,-4,-5)	7.777	86.74	22.363	24.9	0.444	11.04	5.55	12.35
Quartz	(4,1,-3)	7.511	74.63	21.955	18.8	2.142	40.24	26.77	48.33
Quartz	(4,-5,3)	7.511	74.63	21.954	18.8	2.142	40.23	26.77	48.33
Quartz	(1,4,3)	7.511	74.63	21.951	18.8	2.142	40.23	26.77	48.32
Quartz	(1,-5,-3)	7.511	74.63	21.95	18.8	2.142	40.23	26.77	48.32
Quartz	(-5,1,3)	7.511	74.63	21.947	18.8	2.142	40.22	26.77	48.32
	Equiv. Refl.: (-5,4,-3)								
Quartz	(-4,-1,3)	7.511	74.63	21.93	18.8	2.142	40.24	26.77	48.33
Quartz	(-4,5,-3)	7.511	74.63	21.929	18.8	2.142	40.23	26.77	48.33
Quartz	(-1,-4,-3)	7.511	74.63	21.926	18.8	2.142	40.23	26.77	48.32
Quartz	(-1,5,3)	7.511	74.63	21.925	18.8	2.142	40.23	26.77	48.32
Quartz	(5,-1,-3)	7.511	74.63	21.922	18.8	2.142	40.22	26.77	48.32
	Equiv. Refl.: (5,-4,3)								
Sapph	(0,2,-14)	7.328	70.17	19.796	17.2	2.809	48.39	35.11	59.78
	Equiv. Refl.: (0,-2,14), (2,0,14), (2,-2,-14), (-2,0,-14), (-2,2,14)								
Sapph	(1,1,15)	7.619	77.97	19.555	18	1.661	29.94	20.76	36.44
	Equiv. Refl.: (1,1,-15), (1,-2,15), (1,-2,-15), (2,-1,15), (2,-1,-15), (-1,2,15), (-1,2,-15), (-1,-1,15), (-1,-1,-15), (-2,1,15), (-2,1,-15)								
Quartz	(2,2,5)	7.64	78.73	18.998	16.7	1.553	26	19.41	32.44
	Equiv. Refl.: (2,-4,-5)								
Quartz	(2,2,-5)	7.64	78.73	18.995	16.7	1.553	25.99	19.41	32.44
Quartz	(2,-4,5)	7.64	78.73	18.992	16.7	1.553	25.99	19.41	32.44
Quartz	(-4,2,5)	7.64	78.73	18.99	16.7	1.553	25.99	19.41	32.44
Quartz	(-4,2,-5)	7.64	78.73	18.988	16.7	1.553	25.99	19.41	32.44

Ei = Cryst	7.79 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(-2,4,5)	7.64	78.73	18.525	16.7	1.553	26	19.41	32.44
	Equiv. Refl.: (-2,-2,-5)								
Quartz	(-2,-2,5)	7.64	78.73	18.522	16.7	1.553	25.99	19.41	32.44
Quartz	(-2,4,-5)	7.64	78.73	18.518	16.7	1.553	25.99	19.41	32.44
Quartz	(4,-2,-5)	7.64	78.73	18.516	16.7	1.553	25.99	19.41	32.44
Quartz	(4,-2,5)	7.64	78.73	18.515	16.7	1.553	25.99	19.41	32.44
Quartz	(-6,3,-1)	7.657	79.4	18.182	16.1	1.458	23.46	18.22	29.7
Quartz	(3,3,1)	7.657	79.4	18.181	16.1	1.458	23.46	18.22	29.7
	Equiv. Refl.: (3,-6,-1), (-6,3,1)								
Quartz	(3,3,-1)	7.657	79.4	18.179	16.1	1.458	23.46	18.22	29.7
	Equiv. Refl.: (3,-6,1)								
Quartz	(6,-3,1)	7.657	79.4	17.279	16.1	1.458	23.46	18.22	29.7
	Equiv. Refl.: (6,-3,-1), (-3,6,1), (-3,-3,-1)								
Quartz	(-3,6,-1)	7.657	79.4	17.276	16.1	1.458	23.46	18.22	29.7
	Equiv. Refl.: (-3,-3,1)								
Quartz	(6,-3,0)	7.571	76.37	15.332	13.5	1.888	25.49	23.61	34.74
	Equiv. Refl.: (-3,6,0), (-3,-3,0)								
Quartz	(3,3,0)	7.571	76.37	15.235	13.5	1.888	25.49	23.61	34.74
	Equiv. Refl.: (3,-6,0), (-6,3,0)								
LiNbO3	(2,4,-5)	7.69	80.81	9.231	15.9	1.26	20.01	15.76	25.47
	Equiv. Refl.: (2,-6,5), (4,2,5), (4,-6,-5), (6,-2,5), (6,-4,-5), (-2,6,-5), (-2,-4,5), (-4,6,5), (-4,-2,-5), (-6,2,-5), (-6,4,5)								
Sapph	(2,2,12)	7.744	83.74	8.932	11.3	0.854	9.66	10.67	14.4
	Equiv. Refl.: (2,2,-12), (2,-4,12), (2,-4,-12), (4,-2,12), (4,-2,-12), (-2,4,12), (-2,4,-12), (-2,-2,12), (-2,-2,-12), (-4,2,12), (-4,2,-12)								
Quartz	(-4,0,4)	7.417	72.2	6.092	6	2.501	15.12	31.26	34.72
Quartz	(4,0,-4)	7.417	72.2	6.091	6	2.501	15.12	31.26	34.72
	Equiv. Refl.: (4,-4,4), (-4,4,-4)								
Quartz	(0,4,4)	7.417	72.2	6.079	6	2.501	15.1	31.26	34.71
	Equiv. Refl.: (0,-4,-4)								
Quartz	(4,0,4)	7.417	72.2	5.797	5.8	2.501	14.56	31.26	34.48
	Equiv. Refl.: (-4,0,-4)								
Quartz	(4,-4,-4)	7.417	72.2	5.796	5.8	2.501	14.56	31.26	34.48
Quartz	(-4,4,4)	7.417	72.2	5.795	5.8	2.501	14.56	31.26	34.48
Quartz	(0,4,-4)	7.417	72.2	5.793	5.8	2.501	14.56	31.26	34.48
	Equiv. Refl.: (0,-4,4)								
Quartz	(2,0,6)	7.474	73.61	5.618	5.6	2.291	12.92	28.63	31.41
	Equiv. Refl.: (2,-2,-6)								
Quartz	(-2,0,-6)	7.474	73.61	5.615	5.6	2.291	12.92	28.63	31.41
Quartz	(-2,2,6)	7.474	73.61	5.614	5.6	2.291	12.92	28.63	31.41
Quartz	(0,2,-6)	7.474	73.61	5.609	5.6	2.291	12.91	28.63	31.41
	Equiv. Refl.: (0,-2,6)								
LiNbO3	(1,5,-1)	7.755	84.55	5.52	14.9	0.743	11.09	9.29	14.47
	Equiv. Refl.: (1,-6,1), (5,1,1), (5,-6,-1), (6,-1,1), (6,-5,-1), (-1,6,-1), (-1,-5,1), (-5,6,1), (-5,-1,-1), (-6,1,-1), (-6,5,1)								
LiNbO3	(2,4,1)	7.371	71.13	5.236	8.6	2.662	22.98	33.28	40.44
	Equiv. Refl.: (2,-6,-1), (4,2,-1), (4,-6,1), (6,-2,-1), (6,-4,1), (-2,6,1), (-2,-4,-1), (-4,6,-1), (-4,-2,1), (-6,2,1), (-6,4,-1)								
Quartz	(2,-1,-6)	7.33	70.22	5.02	5	2.802	14.06	35.03	37.74
Quartz	(2,-1,6)	7.33	70.22	5.018	5	2.802	14.05	35.03	37.74

Ei = Cryst	7.79 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(-1,2,6) Equiv. Refl.: (-1,-1,6)	7.33	70.22	5.015	5	2.802	14.04	35.03	37.74
Quartz	(-1,2,-6) Equiv. Refl.: (-1,-1,-6)	7.33	70.22	5.014	5	2.802	14.04	35.03	37.74
LiNbO3	(1,3,13) Equiv. Refl.: (1,-4,-13), (3,1,-13), (3,-4,13), (4,-1,-13), (4,-3,13), (-1,4,13), (-1,-3,-13), (-3,4,-13), (-3,-1,13), (-4,1,13), (-4,3,-13)	7.677	80.21	4.851	10.8	1.344	14.58	16.8	22.25
Quartz	(-2,1,6)	7.33	70.22	4.804	5	2.802	14.06	35.03	37.74
Quartz	(-2,1,-6)	7.33	70.22	4.802	5	2.802	14.05	35.03	37.74
Quartz	(1,-2,-6)	7.33	70.22	4.798	5	2.802	14.04	35.03	37.74
Quartz	(1,1,6) Equiv. Refl.: (1,1,-6)	7.33	70.22	4.797	5	2.802	14.04	35.03	37.74
Quartz	(1,-2,6)	7.33	70.22	4.796	5	2.802	14.04	35.03	37.74
Sapph	(2,3,-7) Equiv. Refl.: (2,-5,7), (3,2,7), (3,-5,-7), (5,-2,7), (5,-3,-7), (-2,5,-7), (-2,-3,7), (-3,5,7), (-3,-2,-7), (-5,2,-7), (-5,3,7)	7.36	70.87	4.048	4.7	2.703	12.57	33.78	36.05
Sapph	(1,2,-13) Equiv. Refl.: (1,-3,13), (2,1,13), (2,-3,-13), (3,-1,13), (3,-2,-13), (-1,3,-13), (-1,-2,13), (-2,3,13), (-2,-1,-13), (-3,1,-13), (-3,2,13)	7.372	71.14	2.903	3.9	2.661	10.31	33.26	34.83
LiNbO3	(1,4,9) Equiv. Refl.: (1,4,-9), (1,-5,9), (1,-5,-9), (4,1,9), (4,1,-9), (4,-5,9), (4,-5,-9), (5,-1,9), (5,-1,-9), (5,-4,9), (5,-4,-9), (-1,5,9), (-1,5,-9), (-1,-4,9), (-1,-4,-9), (-4,5,9), (-4,5,-9), (-4,-1,9), (-4,-1,-9), (-5,1,9), (-5,1,-9), (-5,4,9), (-5,4,-9)	7.537	75.35	2.829	6.8	2.037	13.78	25.46	28.95
Sapph	(2,3,8) Equiv. Refl.: (2,-5,-8), (3,2,-8), (3,-5,8), (5,-2,-8), (5,-3,8), (-2,5,8), (-2,-3,-8), (-3,5,-8), (-3,-2,8), (-5,2,8), (-5,3,-8)	7.588	76.93	2.046	3.5	1.808	6.36	22.6	23.48
Quartz	(-4,5,3) Equiv. Refl.: (-4,-1,-3)	7.511	74.63	2.045	2.9	2.142	6.15	26.77	27.47
Quartz	(5,-1,3) Equiv. Refl.: (5,-4,-3), (-1,5,-3)	7.511	74.63	2.043	2.9	2.142	6.14	26.77	27.47
Quartz	(-1,-4,3)	7.511	74.63	2.042	2.9	2.142	6.15	26.77	27.47
Quartz	(0,5,2) Equiv. Refl.: (0,-5,-2)	7.638	78.65	1.941	3.2	1.564	5.08	19.55	20.2
Sapph	(1,3,-11) Equiv. Refl.: (1,-4,11), (3,1,11), (3,-4,-11), (4,-1,11), (4,-3,-11), (-1,4,-11), (-1,-3,11), (-3,4,11), (-3,-1,-11), (-4,1,-11), (-4,3,11)	7.549	75.71	1.937	3.3	1.984	6.58	24.8	25.66
Quartz	(5,0,-2) Equiv. Refl.: (-5,0,2)	7.638	78.65	1.935	3.2	1.564	5.07	19.55	20.2
Quartz	(5,-5,2) Equiv. Refl.: (-5,5,-2)	7.638	78.65	1.934	3.2	1.564	5.07	19.55	20.2
Quartz	(4,1,3) Equiv. Refl.: (4,-5,-3)	7.511	74.63	1.702	2.9	2.142	6.15	26.77	27.47
Quartz	(1,-5,3)	7.511	74.63	1.701	2.9	2.142	6.15	26.77	27.47
Quartz	(1,4,-3) Equiv. Refl.: (-5,1,-3), (-5,4,3)	7.511	74.63	1.7	2.9	2.142	6.15	26.77	27.47
Quartz	(0,5,-1) Equiv. Refl.: (0,-5,1), (5,0,1), (5,-5,-1), (-5,0,-1), (-5,5,1)	7.375	71.21	0.658	1.4	2.651	3.67	33.14	33.34
LiNbO3	(3,3,3) Equiv. Refl.: (3,3,-3), (3,-6,3), (3,-6,-3), (6,-3,3), (6,-3,-3), (-3,6,3), (-3,6,-3), (-3,-3,3), (-3,-3,-3), (-6,3,3), (-6,3,-3)	7.349	70.62	0.231	1.7	2.74	4.57	34.25	34.55

Ei = Cryst	8.071 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Ge	(4,4,4)	7.592	70.16	32.8532	30.13	2.9126	87.76	36.41	95.01
Ge	(1,1,7)	7.825	75.83	27.4311	27.38	2.0378	55.8	25.47	61.34
	Equiv. Refl.: (1,5,5), (1,7,1), (5,1,5), (5,5,1), (7,1,1)								
Si	(4,4,4)	7.908	78.47	26.9978	24.02	1.6463	39.54	20.58	44.58
LiNbO3	(0,0,18)	8.049	85.79	149.797	132.8	0.595	78.99	7.43	79.34
LiNbO3	(0,0,-18)	8.049	85.79	133.631	132.8	0.595	78.99	7.43	79.34
LiNbO3	(-1,3,-16)	8.045	85.42	91.289	90.2	0.647	58.31	8.08	58.87
	Equiv. Refl.: (-3,1,-16)								
LiNbO3	(1,2,-16)	8.045	85.42	91.288	90.2	0.647	58.31	8.08	58.87
	Equiv. Refl.: (2,-3,-16), (3,-2,-16), (-2,-1,-16)								
LiNbO3	(1,-3,16)	8.045	85.42	90.62	90.2	0.647	58.31	8.08	58.87
	Equiv. Refl.: (2,1,16), (3,-1,16), (-1,-2,16)								
LiNbO3	(-2,3,16)	8.045	85.42	90.619	90.2	0.647	58.31	8.08	58.87
	Equiv. Refl.: (-3,2,16)								
LiNbO3	(1,3,-14)	8.021	83.59	70.293	66.7	0.907	60.51	11.34	61.56
	Equiv. Refl.: (3,-4,-14), (4,-3,-14), (-1,4,-14), (-3,-1,-14), (-4,1,-14)								
LiNbO3	(1,-4,14)	8.021	83.59	65.08	66.7	0.907	60.51	11.34	61.57
	Equiv. Refl.: (3,1,14), (4,-1,14), (-1,-3,14), (-3,4,14), (-4,3,14)								
LiNbO3	(1,-6,4)	7.946	79.9	47.497	45.4	1.438	65.28	17.98	67.71
	Equiv. Refl.: (5,1,4), (6,-1,4), (-1,-5,4)								
LiNbO3	(-5,6,4)	7.946	79.9	47.496	45.4	1.438	65.28	17.98	67.71
	Equiv. Refl.: (-6,5,4)								
LiNbO3	(1,5,-4)	7.946	79.9	45.604	45.4	1.438	65.28	17.98	67.71
	Equiv. Refl.: (-1,6,-4), (-5,-1,-4), (-6,1,-4)								
LiNbO3	(5,-6,-4)	7.946	79.9	45.603	45.4	1.438	65.28	17.98	67.71
	Equiv. Refl.: (6,-5,-4)								
Quartz	(4,2,-2)	8.044	85.29	43.99	38.6	0.665	25.72	8.32	27.03
Quartz	(4,-6,2)	8.044	85.29	43.988	38.6	0.665	25.71	8.32	27.03
Quartz	(-6,2,2)	8.044	85.29	43.986	38.6	0.665	25.71	8.32	27.03
Quartz	(-6,4,-2)	8.044	85.29	43.985	38.6	0.665	25.71	8.32	27.03
Quartz	(2,4,2)	8.044	85.29	43.984	38.6	0.665	25.71	8.32	27.03
	Equiv. Refl.: (2,-6,-2)								
Quartz	(-4,-2,2)	8.044	85.29	43.109	38.6	0.665	25.72	8.32	27.03
Quartz	(-4,6,-2)	8.044	85.29	43.106	38.6	0.665	25.71	8.32	27.03
Quartz	(6,-2,-2)	8.044	85.29	43.104	38.6	0.665	25.71	8.32	27.03
	Equiv. Refl.: (-2,6,2), (-2,-4,-2)								
Quartz	(6,-4,2)	8.044	85.29	43.103	38.6	0.665	25.71	8.32	27.03
LiNbO3	(0,5,-8)	7.819	75.64	42.068	38.3	2.066	79.08	25.83	83.19
	Equiv. Refl.: (-5,0,-8)								
LiNbO3	(5,-5,-8)	7.819	75.64	42.067	38.3	2.066	79.08	25.83	83.19
LiNbO3	(0,-5,8)	7.819	75.64	38.775	38.3	2.066	79.08	25.83	83.19
	Equiv. Refl.: (5,0,8), (-5,5,8)								
Sapph	(3,3,0)	7.817	75.59	37.004	30.7	2.073	63.71	25.92	68.78
	Equiv. Refl.: (3,-6,0), (6,-3,0), (-3,6,0), (-3,-3,0), (-6,3,0)								
LiNbO3	(1,5,2)	7.793	74.93	29.83	29.1	2.173	63.31	27.17	68.9
	Equiv. Refl.: (5,-6,2), (6,-5,2), (-1,6,2), (-5,-1,2), (-6,1,2)								
LiNbO3	(1,-6,-2)	7.793	74.93	29.133	29.1	2.173	63.31	27.17	68.9
	Equiv. Refl.: (5,1,-2), (6,-1,-2), (-1,-5,-2), (-5,6,-2), (-6,5,-2)								

Ei =	8.071	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
LiNbO3	(0,-2,-16)	7.676	72.01	25.493	24.2	2.621	63.57	32.77	71.51
	Equiv. Refl.: (2,0,-16), (-2,2,-16)								
Sapph	(0,4,-10)	7.681	72.11	25.37	21.4	2.605	55.78	32.57	64.59
	Equiv. Refl.: (0,-4,10), (4,0,10), (4,-4,-10), (-4,0,-10), (-4,4,10)								
LiNbO3	(0,2,16)	7.676	72.01	23.315	24.2	2.621	63.57	32.77	71.51
	Equiv. Refl.: (2,-2,16), (-2,0,16)								
LiNbO3	(3,3,6)	7.707	72.73	22.629	22.5	2.509	56.32	31.36	64.46
	Equiv. Refl.: (3,-6,6), (6,-3,6), (-3,6,6), (-3,-3,6), (-6,3,6)								
Quartz	(0,5,-2)	7.638	71.14	22.5	18.7	2.757	51.43	34.47	61.91
	Equiv. Refl.: (0,-5,2)								
Quartz	(5,0,2)	7.638	71.14	22.498	18.7	2.757	51.43	34.47	61.91
	Equiv. Refl.: (5,-5,-2), (-5,0,-2), (-5,5,2)								
Quartz	(2,3,4)	7.835	76.1	22.181	18.7	1.997	37.34	24.96	44.92
	Equiv. Refl.: (2,-5,-4)								
Quartz	(3,2,-4)	7.835	76.1	22.178	18.7	1.997	37.34	24.96	44.91
Quartz	(3,-5,4)	7.835	76.1	22.177	18.7	1.997	37.34	24.96	44.91
	Equiv. Refl.: (-5,2,4), (-5,3,-4)								
Sapph	(0,5,4)	7.761	74.06	22.054	19.1	2.305	43.98	28.82	52.58
	Equiv. Refl.: (0,-5,-4), (5,0,-4), (5,-5,4), (-5,0,4), (-5,5,-4)								
Quartz	(-2,-3,-4)	7.835	76.1	21.778	18.7	1.997	37.34	24.96	44.92
Quartz	(-2,5,4)	7.835	76.1	21.777	18.7	1.997	37.34	24.96	44.92
Quartz	(-3,-2,4)	7.835	76.1	21.776	18.7	1.997	37.34	24.96	44.91
Quartz	(-3,5,-4)	7.835	76.1	21.775	18.7	1.997	37.34	24.96	44.91
Quartz	(5,-2,-4)	7.835	76.1	21.774	18.7	1.997	37.34	24.96	44.91
	Equiv. Refl.: (5,-3,4)								
LiNbO3	(3,3,-6)	7.707	72.73	21.494	22.5	2.509	56.32	31.36	64.46
	Equiv. Refl.: (3,-6,-6), (6,-3,-6), (-3,6,-6), (-3,-3,-6), (-6,3,-6)								
Sapph	(1,2,14)	7.778	74.51	19.254	17	2.237	37.94	27.96	47.13
	Equiv. Refl.: (1,-3,-14), (2,1,-14), (2,-3,14), (3,-1,-14), (3,-2,14), (-1,3,14), (-1,-2,-14), (-2,3,-14), (-2,-1,14), (-3,1,14), (-3,2,-14)								
Quartz	(2,1,-6)	7.888	77.78	16.348	14.3	1.748	24.96	21.85	33.17
Quartz	(1,2,6)	7.888	77.78	16.346	14.3	1.748	24.96	21.85	33.17
Quartz	(2,-3,6)	7.888	77.78	16.345	14.3	1.748	24.96	21.85	33.17
Quartz	(1,-3,-6)	7.888	77.78	16.344	14.3	1.748	24.96	21.85	33.17
Quartz	(-3,1,6)	7.888	77.78	16.335	14.3	1.748	24.94	21.85	33.16
	Equiv. Refl.: (-3,2,-6)								
Quartz	(6,-4,-2)	8.044	85.29	16.184	16.2	0.665	10.78	8.32	13.61
Quartz	(6,-2,2)	8.044	85.29	16.183	16.2	0.665	10.78	8.32	13.61
	Equiv. Refl.: (-2,6,-2)								
Quartz	(-2,-4,2)	8.044	85.29	16.182	16.2	0.665	10.77	8.32	13.61
Quartz	(-4,-2,-2)	8.044	85.29	16.17	16.2	0.665	10.77	8.32	13.61
Quartz	(-4,6,2)	8.044	85.29	16.169	16.2	0.665	10.77	8.32	13.61
Quartz	(-2,-1,6)	7.888	77.78	15.999	14.3	1.748	24.96	21.85	33.17
Quartz	(-1,-2,-6)	7.888	77.78	15.997	14.3	1.748	24.96	21.85	33.17
Quartz	(-1,3,6)	7.888	77.78	15.995	14.3	1.748	24.96	21.85	33.17
	Equiv. Refl.: (-2,3,-6)								
Quartz	(3,-1,-6)	7.888	77.78	15.986	14.3	1.748	24.94	21.85	33.16
Quartz	(3,-2,6)	7.888	77.78	15.985	14.3	1.748	24.94	21.85	33.16
Quartz	(2,4,0)	7.71	72.79	14.648	12.3	2.5	30.74	31.25	43.84
	Equiv. Refl.: (2,-6,0), (4,2,0), (4,-6,0), (-6,2,0), (-6,4,0)								

Ei = Cryst	8.071 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Quartz	(-6,4,2)	8.044	85.29	14.293	16.2	0.665	10.78	8.32	13.61
Quartz	(2,-6,2) Equiv. Refl.: (-6,2,-2)	8.044	85.29	14.292	16.2	0.665	10.78	8.32	13.61
Quartz	(2,4,-2)	8.044	85.29	14.291	16.2	0.665	10.77	8.32	13.61
Quartz	(4,2,2)	8.044	85.29	14.281	16.2	0.665	10.77	8.32	13.61
Quartz	(4,-6,-2)	8.044	85.29	14.28	16.2	0.665	10.77	8.32	13.61
Quartz	(6,-2,0) Equiv. Refl.: (6,-4,0), (-2,6,0), (-2,-4,0), (-4,6,0), (-4,-2,0)	7.71	72.79	14.234	12.3	2.5	30.74	31.25	43.84
Sapph	(1,1,15) Equiv. Refl.: (1,1,-15), (1,-2,15), (1,-2,-15), (2,-1,15), (2,-1,-15), (-1,2,15), (-1,2,-15), (-1,-1,15), (-1,-1,-15), (-2,1,15), (-2,1,-15)	7.619	70.73	12.069	11	2.822	30.99	35.27	46.95
Quartz	(2,2,5) Equiv. Refl.: (2,-4,-5)	7.64	71.18	11.219	9.8	2.75	26.9	34.38	43.65
Quartz	(2,2,-5)	7.64	71.18	11.217	9.8	2.75	26.89	34.38	43.65
Quartz	(2,-4,5)	7.64	71.18	11.215	9.8	2.75	26.89	34.38	43.64
Quartz	(-4,2,5)	7.64	71.18	11.214	9.8	2.75	26.89	34.38	43.64
Quartz	(-4,2,-5)	7.64	71.18	11.213	9.8	2.75	26.89	34.38	43.64
Quartz	(-2,4,5) Equiv. Refl.: (-2,-2,-5)	7.64	71.18	10.956	9.8	2.75	26.9	34.38	43.65
Quartz	(-2,-2,5)	7.64	71.18	10.955	9.8	2.75	26.89	34.38	43.65
Quartz	(-2,4,-5)	7.64	71.18	10.953	9.8	2.75	26.89	34.38	43.64
Quartz	(4,-2,5) Equiv. Refl.: (4,-2,-5)	7.64	71.18	10.951	9.8	2.75	26.89	34.38	43.64
Sapph	(0,1,-16) Equiv. Refl.: (0,-1,16), (1,0,16), (1,-1,-16), (-1,0,-16), (-1,1,16)	7.783	74.66	10.463	10	2.214	22.11	27.68	35.42
Quartz	(3,3,1) Equiv. Refl.: (3,-6,-1), (-6,3,1), (-6,3,-1)	7.657	71.57	10.305	9	2.689	24.27	33.62	41.46
Quartz	(3,3,-1) Equiv. Refl.: (3,-6,1)	7.657	71.57	10.303	9	2.689	24.27	33.62	41.46
Quartz	(-5,0,-3)	8.057	86.59	10.044	13	0.48	6.24	6.01	8.66
Quartz	(5,0,3)	8.057	86.59	10.043	13	0.48	6.24	6.01	8.66
Quartz	(-5,5,3)	8.057	86.59	10.041	13	0.48	6.24	6.01	8.66
Quartz	(5,-5,-3)	8.057	86.59	10.04	13	0.48	6.24	6.01	8.66
Quartz	(0,5,-3) Equiv. Refl.: (0,-5,3)	8.057	86.59	10.021	13	0.48	6.23	6.01	8.66
Quartz	(6,-3,1) Equiv. Refl.: (6,-3,-1), (-3,6,1), (-3,-3,-1)	7.657	71.57	9.824	9	2.689	24.27	33.62	41.46
Quartz	(-3,6,-1) Equiv. Refl.: (-3,-3,1)	7.657	71.57	9.823	9	2.689	24.27	33.62	41.46
LiNbO3	(2,4,7) Equiv. Refl.: (2,-6,-7), (4,2,-7), (4,-6,7), (6,-2,-7), (6,-4,7), (-2,6,7), (-2,-4,-7), (-4,6,-7), (-4,-2,7), (-6,2,7), (-6,4,-7)	7.996	82.18	9.622	16.4	1.108	18.22	13.86	22.89
Quartz	(5,-2,4) Equiv. Refl.: (5,-3,-4)	7.835	76.1	9.132	8.7	1.997	17.28	24.96	30.36
Quartz	(-2,-3,4)	7.835	76.1	9.123	8.6	1.997	17.27	24.96	30.35
Quartz	(-2,5,-4)	7.835	76.1	9.122	8.6	1.997	17.27	24.96	30.35
Quartz	(-3,-2,-4)	7.835	76.1	9.12	8.6	1.997	17.26	24.96	30.35
Quartz	(-3,5,4)	7.835	76.1	9.119	8.6	1.997	17.26	24.96	30.35

Ei = Cryst	8.071 Refl (h,k,l)	keV EB [keV]	Θ B [°]	\int IR d Θ [μ rad]	Width [μ rad]	Ei cot Θ [meV/ μ rad]	Δ E [meV]	Δ Eg 2m, 50 μ m [meV]	Δ Et 2m, 50 μ m [meV]
Sapph	(2,4,1)	7.975	81.15	9.061	9.9	1.256	12.47	15.71	20.05
	Equiv. Refl.: (2,-6,-1), (4,2,-1), (4,-6,1), (6,-2,-1), (6,-4,1), (-2,6,1), (-2,-4,-1), (-4,6,-1), (-4,-2,1), (-6,2,1), (-6,4,-1)								
Quartz	(-5,2,-4)	7.835	76.1	8.978	8.7	1.997	17.28	24.96	30.36
	Equiv. Refl.: (-5,3,4)								
Quartz	(2,3,-4)	7.835	76.1	8.969	8.6	1.997	17.27	24.96	30.35
Quartz	(2,-5,4)	7.835	76.1	8.968	8.6	1.997	17.27	24.96	30.35
Quartz	(3,2,4)	7.835	76.1	8.965	8.6	1.997	17.26	24.96	30.35
Quartz	(3,-5,-4)	7.835	76.1	8.964	8.6	1.997	17.26	24.96	30.35
Quartz	(4,2,-1)	7.795	74.96	8.424	7.7	2.169	16.79	27.11	31.89
	Equiv. Refl.: (4,-6,1)								
Quartz	(2,4,1)	7.795	74.96	8.422	7.7	2.169	16.79	27.11	31.89
	Equiv. Refl.: (2,-6,-1), (-6,2,1), (-6,4,-1)								
LiNbO3	(1,5,5)	8.058	86.79	8.33	22.3	0.453	10.12	5.66	11.59
	Equiv. Refl.: (1,-6,-5), (5,1,-5), (5,-6,5), (6,-1,-5), (6,-5,5), (-1,6,5), (-1,-5,-5), (-5,6,-5), (-5,-1,5), (-6,1,5), (-6,5,-5)								
Quartz	(-4,3,-5)	7.777	74.5	8.072	7.3	2.239	16.42	27.98	32.44
Quartz	(-4,1,5)	7.777	74.5	8.07	7.3	2.239	16.41	27.98	32.44
Quartz	(1,-4,-5)	7.777	74.5	8.067	7.3	2.239	16.41	27.98	32.44
Quartz	(1,3,5)	7.777	74.5	8.066	7.3	2.239	16.41	27.98	32.44
Quartz	(3,1,-5)	7.777	74.5	8.065	7.3	2.239	16.41	27.98	32.44
Quartz	(3,-4,5)	7.777	74.5	8.064	7.3	2.239	16.4	27.98	32.44
Sapph	(2,4,-2)	8.018	83.41	7.879	9.8	0.932	9.11	11.66	14.79
	Equiv. Refl.: (2,-6,2), (4,2,2), (4,-6,-2), (6,-2,2), (6,-4,-2), (-2,6,-2), (-2,-4,2), (-4,6,2), (-4,-2,-2), (-6,2,-2), (-6,4,2)								
Quartz	(-4,6,-1)	7.795	74.96	7.675	7.7	2.169	16.79	27.11	31.89
	Equiv. Refl.: (-4,-2,1)								
Quartz	(6,-2,-1)	7.795	74.96	7.674	7.7	2.169	16.79	27.11	31.89
	Equiv. Refl.: (6,-4,1), (-2,6,1)								
Quartz	(-2,-4,-1)	7.795	74.96	7.673	7.7	2.169	16.79	27.11	31.89
Quartz	(4,-3,5)	7.777	74.5	7.439	7.3	2.239	16.42	27.98	32.44
Quartz	(4,-1,-5)	7.777	74.5	7.437	7.3	2.239	16.41	27.98	32.44
Quartz	(-1,4,5)	7.777	74.5	7.435	7.3	2.239	16.41	27.98	32.44
	Equiv. Refl.: (-1,-3,-5)								
Quartz	(-3,-1,5)	7.777	74.5	7.434	7.3	2.239	16.41	27.98	32.44
Quartz	(-3,4,-5)	7.777	74.5	7.433	7.3	2.239	16.4	27.98	32.44
Quartz	(-1,3,-6)	7.888	77.78	5.354	5.4	1.748	9.38	21.85	23.77
Quartz	(-1,-2,6)	7.888	77.78	5.353	5.4	1.748	9.37	21.85	23.77
Quartz	(-2,-1,-6)	7.888	77.78	5.35	5.4	1.748	9.37	21.85	23.77
Quartz	(-2,3,6)	7.888	77.78	5.346	5.4	1.748	9.37	21.85	23.77
Quartz	(3,-1,6)	7.888	77.78	5.343	5.4	1.748	9.36	21.85	23.77
	Equiv. Refl.: (3,-2,-6)								
Quartz	(-1,-3,5)	7.777	74.5	5.03	5.1	2.239	11.43	27.98	30.22
Quartz	(-1,4,-5)	7.777	74.5	5.029	5.1	2.239	11.42	27.98	30.22
Quartz	(4,-1,5)	7.777	74.5	5.028	5.1	2.239	11.42	27.98	30.22
Quartz	(4,-3,-5)	7.777	74.5	5.027	5.1	2.239	11.42	27.98	30.22
Quartz	(-3,-1,-5)	7.777	74.5	5.024	5.1	2.239	11.41	27.98	30.22
Quartz	(-3,4,5)	7.777	74.5	5.022	5.1	2.239	11.41	27.98	30.22
Quartz	(1,3,-5)	7.777	74.5	4.799	5.1	2.239	11.43	27.98	30.22
Quartz	(1,-4,5)	7.777	74.5	4.798	5.1	2.239	11.42	27.98	30.22
Quartz	(-4,1,-5)	7.777	74.5	4.797	5.1	2.239	11.42	27.98	30.22
	Equiv. Refl.: (-4,3,5)								

Ei = Cryst	8.071 Refl (h,k,l)	keV EB [keV]	ΘB [°]	∫ IR dΘ [μrad]	Width [μrad]	Ei cotΘ [meV/μrad]	ΔE [meV]	ΔEg 2m, 50μm [meV]	ΔEt 2m, 50μm [meV]
Quartz	(3,1,5)	7.777	74.5	4.792	5.1	2.239	11.41	27.98	30.22
Quartz	(3,-4,-5)	7.777	74.5	4.79	5.1	2.239	11.41	27.98	30.22
LiNbO3	(2,4,-5)	7.69	72.32	4.749	8.1	2.572	20.71	32.15	38.24
	Equiv. Refl.: (2,-6,5), (4,2,5), (4,-6,-5), (6,-2,5), (6,-4,-5), (-2,6,-5), (-2,-4,5), (-4,6,5), (-4,-2,-5), (-6,2,-5), (-6,4,5)								
Quartz	(1,-3,6)	7.888	77.78	4.525	5.4	1.748	9.38	21.85	23.77
Quartz	(1,2,-6)	7.888	77.78	4.523	5.4	1.748	9.37	21.85	23.77
Quartz	(2,1,6)	7.888	77.78	4.521	5.4	1.748	9.37	21.85	23.77
Quartz	(2,-3,-6)	7.888	77.78	4.517	5.4	1.748	9.37	21.85	23.77
Quartz	(-3,2,6)	7.888	77.78	4.514	5.4	1.748	9.36	21.85	23.77
Quartz	(-3,1,-6)	7.888	77.78	4.513	5.4	1.748	9.36	21.85	23.77
Sapph	(2,2,12)	7.744	73.62	3.304	4.2	2.372	10	29.64	31.29
	Equiv. Refl.: (2,2,-12), (2,-4,12), (2,-4,-12), (4,-2,12), (4,-2,-12), (-2,4,12), (-2,4,-12), (-2,-2,12), (-2,-2,-12), (-4,2,12), (-4,2,-12)								
LiNbO3	(1,3,13)	7.677	72.01	2.686	5.8	2.62	15.09	32.75	36.07
	Equiv. Refl.: (1,-4,-13), (3,1,-13), (3,-4,13), (4,-1,-13), (4,-3,13), (-1,4,13), (-1,-3,-13), (-3,4,-13), (-3,-1,13), (-4,1,13), (-4,3,-13)								
LiNbO3	(1,5,-1)	7.755	73.91	1.913	4.9	2.328	11.48	29.1	31.28
	Equiv. Refl.: (1,-6,1), (5,1,1), (5,-6,-1), (6,-1,1), (6,-5,-1), (-1,6,-1), (-1,-5,1), (-5,6,1), (-5,-1,-1), (-6,1,-1), (-6,5,1)								
Quartz	(-3,6,2)	7.911	78.56	1.797	2.6	1.633	4.27	20.42	20.86
	Equiv. Refl.: (-3,-3,-2)								
Quartz	(-3,6,-2)	7.911	78.56	1.795	2.6	1.633	4.27	20.42	20.86
	Equiv. Refl.: (-3,-3,2)								
Quartz	(6,-3,-2)	7.911	78.56	1.794	2.6	1.633	4.27	20.42	20.86
Quartz	(6,-3,2)	7.911	78.56	1.793	2.6	1.633	4.27	20.42	20.86
Sapph	(2,3,8)	7.588	70.08	1.35	2.2	2.924	6.56	36.55	37.14
	Equiv. Refl.: (2,-5,-8), (3,2,-8), (3,-5,8), (5,-2,-8), (5,-3,8), (-2,5,8), (-2,-3,-8), (-3,5,-8), (-3,-2,8), (-5,2,8), (-5,3,-8)								
Quartz	(3,3,2)	7.911	78.56	1.275	2.6	1.633	4.27	20.42	20.86
	Equiv. Refl.: (3,-6,-2)								
Quartz	(3,3,-2)	7.911	78.56	1.274	2.6	1.633	4.27	20.42	20.86
	Equiv. Refl.: (3,-6,2)								
Quartz	(-6,3,2)	7.911	78.56	1.273	2.6	1.633	4.27	20.42	20.86
Quartz	(-6,3,-2)	7.911	78.56	1.272	2.6	1.633	4.27	20.42	20.86
Quartz	(0,5,2)	7.638	71.14	1.179	1.9	2.757	5.26	34.47	34.87
	Equiv. Refl.: (0,-5,-2)								
Quartz	(5,0,-2)	7.638	71.14	1.175	1.9	2.757	5.25	34.47	34.86
	Equiv. Refl.: (5,-5,2), (-5,0,2), (-5,5,-2)								
Quartz	(6,-4,-1)	7.795	74.96	0.749	1.4	2.169	3	27.11	27.27
	Equiv. Refl.: (-2,6,-1), (-2,-4,1)								
Quartz	(6,-2,1)	7.795	74.96	0.748	1.4	2.169	3	27.11	27.27
	Equiv. Refl.: (-4,6,1), (-4,-2,-1)								
LiNbO3	(2,3,11)	7.806	75.27	0.678	3	2.121	6.27	26.52	27.25
	Equiv. Refl.: (2,-5,-11), (3,2,-11), (3,-5,11), (5,-2,-11), (5,-3,11), (-2,5,11), (-2,-3,-11), (-3,5,-11), (-3,-2,11), (-5,2,11), (-5,3,-11)								
Quartz	(2,4,-1)	7.795	74.96	0.591	1.4	2.169	3	27.11	27.27
	Equiv. Refl.: (2,-6,1), (4,2,1), (4,-6,-1), (-6,2,-1), (-6,4,1)								
Sapph	(3,3,3)	7.947	79.95	0.162	0.9	1.43	1.32	17.87	17.92
	Equiv. Refl.: (3,3,-3), (3,-6,3), (3,-6,-3), (6,-3,3), (6,-3,-3), (-3,6,3), (-3,6,-3), (-3,-3,3), (-3,-3,-3), (-6,3,3), (-6,3,-3)								

Ei =	8.358	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(2,4,6)	8.2	78.84	44.8487	41.61	1.6483	68.58	20.6	71.61
	Equiv. Refl.: (2,6,4), (4,2,6), (4,6,2), (6,2,4), (6,4,2)								
Si	(4,4,4)	7.908	71.12	16.2087	14.3	2.8589	40.87	35.74	54.29
Si	(1,1,7)	8.152	77.24	14.8976	13.76	1.893	26.06	23.66	35.2
	Equiv. Refl.: (1,5,5), (1,7,1), (5,1,5), (5,5,1), (7,1,1)								
LiNbO3	(0,6,0)	8.343	86.56	135.857	128.2	0.503	64.43	6.28	64.73
	Equiv. Refl.: (6,-6,0), (-6,0,0)								
LiNbO3	(0,-6,0)	8.343	86.56	132.781	128.2	0.503	64.43	6.28	64.73
	Equiv. Refl.: (6,0,0), (-6,6,0)								
LiNbO3	(1,-5,12)	8.331	85.35	84.466	80.1	0.679	54.38	8.49	55.03
	Equiv. Refl.: (4,1,12), (5,-1,12), (-1,-4,12)								
LiNbO3	(-4,5,12)	8.331	85.35	84.465	80.1	0.679	54.38	8.49	55.03
	Equiv. Refl.: (-5,4,12)								
LiNbO3	(1,4,12)	8.331	85.35	81.698	77.8	0.679	52.84	8.49	53.52
	Equiv. Refl.: (4,-5,12), (5,-4,12), (-1,5,12), (-4,-1,12), (-5,1,12)								
LiNbO3	(1,4,-12)	8.331	85.35	77.904	80.1	0.679	54.38	8.49	55.03
	Equiv. Refl.: (4,-5,-12), (5,-4,-12), (-1,5,-12), (-4,-1,-12), (-5,1,-12)								
LiNbO3	(-4,5,-12)	8.331	85.35	75.182	77.8	0.679	52.85	8.49	53.52
	Equiv. Refl.: (-5,4,-12)								
LiNbO3	(1,-5,-12)	8.331	85.35	75.181	77.8	0.679	52.84	8.49	53.52
	Equiv. Refl.: (4,1,-12), (5,-1,-12), (-1,-4,-12)								
LiNbO3	(5,-5,10)	8.266	81.51	45.237	41.9	1.248	52.26	15.6	54.53
LiNbO3	(0,5,10)	8.266	81.51	45.236	41.9	1.248	52.26	15.6	54.53
	Equiv. Refl.: (-5,0,10)								
LiNbO3	(0,0,18)	8.049	74.38	39.628	34.9	2.337	81.63	29.22	86.7
LiNbO3	(0,-5,-10)	8.266	81.51	38.609	41.9	1.248	52.26	15.6	54.53
	Equiv. Refl.: (5,0,-10), (-5,5,-10)								
LiNbO3	(0,0,-18)	8.049	74.38	35.57	34.9	2.337	81.63	29.22	86.7
LiNbO3	(2,-6,8)	8.181	78.2	30.792	29.7	1.746	51.84	21.83	56.25
	Equiv. Refl.: (4,2,8), (6,-2,8), (-2,-4,8), (-4,6,8), (-6,4,8)								
LiNbO3	(2,4,-8)	8.181	78.2	28.334	29.7	1.746	51.84	21.83	56.25
	Equiv. Refl.: (-2,6,-8), (-4,-2,-8), (-6,2,-8)								
LiNbO3	(4,-6,-8)	8.181	78.2	28.333	29.7	1.746	51.84	21.83	56.25
	Equiv. Refl.: (6,-4,-8)								
LiNbO3	(1,3,-14)	8.021	73.66	27.116	25.5	2.45	62.5	30.63	69.6
	Equiv. Refl.: (3,-4,-14), (4,-3,-14), (-1,4,-14), (-3,-1,-14), (-4,1,-14)								
LiNbO3	(1,2,-16)	8.045	74.28	26.191	25.6	2.353	60.22	29.41	67.02
	Equiv. Refl.: (2,-3,-16), (3,-2,-16), (-1,3,-16), (-2,-1,-16), (-3,1,-16)								
LiNbO3	(1,-6,4)	7.946	71.93	26.134	24.7	2.727	67.43	34.08	75.55
	Equiv. Refl.: (5,1,4), (6,-1,4), (-1,-5,4), (-5,6,4), (-6,5,4)								
LiNbO3	(1,-3,16)	8.045	74.28	26.009	25.6	2.353	60.22	29.41	67.02
	Equiv. Refl.: (2,1,16), (3,-1,16), (-1,-2,16), (-2,3,16), (-3,2,16)								
LiNbO3	(1,-4,14)	8.021	73.66	25.207	25.5	2.45	62.5	30.63	69.6
	Equiv. Refl.: (3,1,14), (4,-1,14), (-1,-3,14)								
LiNbO3	(-3,4,14)	8.021	73.66	25.206	25.5	2.45	62.5	30.63	69.6
	Equiv. Refl.: (-4,3,14)								
LiNbO3	(1,5,-4)	7.946	71.93	25.147	24.7	2.727	67.43	34.08	75.55
	Equiv. Refl.: (-1,6,-4), (-5,-1,-4), (-6,1,-4)								

Ei =	8.358	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
LiNbO3	(5,-6,-4)	7.946	71.93	25.146	24.7	2.727	67.43	34.08	75.55
	Equiv. Refl.: (6,-5,-4)								
Quartz	(-6,3,3)	8.316	84.26	20.305	19.1	0.841	16.02	10.51	19.16
Quartz	(3,-6,-3)	8.316	84.26	20.304	19.1	0.841	16.02	10.51	19.16
	Equiv. Refl.: (-6,3,-3)								
Quartz	(3,3,3)	8.316	84.26	20.303	19.1	0.841	16.02	10.51	19.16
Quartz	(3,3,-3)	8.316	84.26	20.301	19.1	0.841	16.02	10.51	19.16
Quartz	(3,-6,3)	8.316	84.26	20.3	19.1	0.841	16.02	10.51	19.16
Quartz	(-3,6,3)	8.316	84.26	20.182	19.1	0.841	16.02	10.51	19.16
Quartz	(6,-3,-3)	8.316	84.26	20.181	19.1	0.841	16.02	10.51	19.16
	Equiv. Refl.: (-3,-3,-3)								
Quartz	(-3,-3,3)	8.316	84.26	20.18	19.1	0.841	16.02	10.51	19.16
Quartz	(6,-3,3)	8.316	84.26	20.179	19.1	0.841	16.02	10.51	19.16
	Equiv. Refl.: (-3,6,-3)								
Sapph	(2,4,4)	8.186	78.37	18.985	17	1.72	29.29	21.5	36.34
	Equiv. Refl.: (2,-6,-4), (4,2,-4), (4,-6,4), (6,-2,-4), (6,-4,4), (-2,6,4), (-2,-4,-4), (-4,6,-4), (-4,-2,4), (-6,2,4), (-6,4,-4)								
Sapph	(0,2,16)	8.208	79.13	18.736	17	1.605	27.29	20.06	33.87
	Equiv. Refl.: (0,-2,-16), (2,0,-16), (2,-2,16), (-2,0,16), (-2,2,-16)								
Quartz	(1,5,-1)	8.193	78.59	18.02	15.7	1.687	26.53	21.08	33.89
	Equiv. Refl.: (1,-6,1)								
Quartz	(-6,1,-1)	8.193	78.59	18.019	15.7	1.687	26.53	21.08	33.89
	Equiv. Refl.: (-6,5,1)								
Quartz	(5,1,1)	8.193	78.59	18.017	15.7	1.687	26.53	21.08	33.89
	Equiv. Refl.: (5,-6,-1)								
Quartz	(-1,6,-1)	8.193	78.59	17.933	15.7	1.687	26.53	21.08	33.89
	Equiv. Refl.: (-1,-5,1)								
Quartz	(6,-1,1)	8.193	78.59	17.932	15.7	1.687	26.53	21.08	33.89
	Equiv. Refl.: (6,-5,-1)								
Quartz	(-5,6,1)	8.193	78.59	17.931	15.7	1.687	26.53	21.08	33.89
	Equiv. Refl.: (-5,-1,-1)								
Sapph	(2,3,-10)	8.111	76.03	13.944	12.4	2.08	25.78	26	36.61
	Equiv. Refl.: (2,-5,10), (3,2,10), (3,-5,-10), (5,-2,10), (5,-3,-10), (-2,5,-10), (-2,-3,10), (-3,5,10), (-3,-2,-10), (-5,2,-10), (-5,3,10)								
Quartz	(4,2,-2)	8.044	74.24	13.254	11.3	2.359	26.59	29.49	39.71
Quartz	(4,-6,2)	8.044	74.24	13.253	11.3	2.359	26.59	29.49	39.71
Quartz	(2,4,2)	8.044	74.24	13.252	11.3	2.359	26.59	29.49	39.7
	Equiv. Refl.: (2,-6,-2), (-6,2,2), (-6,4,-2)								
Quartz	(-4,-2,2)	8.044	74.24	13.004	11.3	2.359	26.59	29.49	39.71
Quartz	(6,-2,-2)	8.044	74.24	13.003	11.3	2.359	26.59	29.49	39.7
	Equiv. Refl.: (-2,6,2), (-2,-4,-2), (-4,6,-2)								
Quartz	(6,-4,2)	8.044	74.24	13.002	11.3	2.359	26.59	29.49	39.7
Quartz	(-1,-4,4)	8.101	75.76	12.412	10.7	2.121	22.7	26.51	34.91
Quartz	(5,-1,4)	8.101	75.76	12.411	10.7	2.121	22.7	26.51	34.91
	Equiv. Refl.: (5,-4,-4), (-1,5,-4), (-4,-1,-4)								
Quartz	(-4,5,4)	8.101	75.76	12.41	10.7	2.121	22.7	26.51	34.9
Quartz	(-1,0,7)	8.16	77.51	12.285	10.9	1.851	20.17	23.14	30.7
Quartz	(1,0,-7)	8.16	77.51	12.284	10.9	1.851	20.17	23.14	30.7
Quartz	(-1,1,-7)	8.16	77.51	12.283	10.9	1.851	20.17	23.14	30.7

Ei =	8.358	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(0,1,7)	8.16	77.51	12.282	10.9	1.851	20.17	23.14	30.69
	Equiv. Refl.: (0,-1,-7), (1,-1,7)								
Quartz	(1,4,-4)	8.101	75.76	12.185	10.7	2.121	22.7	26.51	34.91
	Equiv. Refl.: (1,-5,4), (-5,4,4)								
Quartz	(4,1,4)	8.101	75.76	12.184	10.7	2.121	22.7	26.51	34.91
	Equiv. Refl.: (-5,1,-4)								
Quartz	(4,-5,-4)	8.101	75.76	12.182	10.7	2.121	22.7	26.51	34.9
Sapph	(1,4,9)	8.123	76.38	11.223	10.6	2.025	21.55	25.32	33.25
	Equiv. Refl.: (1,4,-9), (1,-5,9), (1,-5,-9), (4,1,9), (4,1,-9), (4,-5,9), (4,-5,-9), (5,-1,9), (5,-1,-9), (5,-4,9), (5,-4,-9), (-1,5,9), (-1,5,-9), (-1,-4,9), (-1,-4,-9), (-4,5,9), (-4,5,-9), (-4,-1,9), (-4,-1,-9), (-5,1,9), (-5,1,-9), (-5,4,9), (-5,4,-9)								
Sapph	(2,4,-5)	8.311	83.9	11.121	12.5	0.893	11.16	11.17	15.79
	Equiv. Refl.: (2,-6,5), (4,2,5), (4,-6,-5), (6,-2,5), (6,-4,-5), (-2,6,-5), (-2,-4,5), (-4,6,5), (-4,-2,-5), (-6,2,-5), (-6,4,5)								
LiNbO3	(1,5,-7)	8.351	87.62	10.21	26.7	0.348	9.3	4.35	10.26
	Equiv. Refl.: (1,-6,7), (5,1,7), (5,-6,-7), (6,-1,7), (6,-5,-7), (-1,6,-7), (-1,-5,7), (-5,6,7), (-5,-1,-7), (-6,1,-7), (-6,5,7)								
Quartz	(2,1,-6)	7.888	70.7	10.198	8.8	2.927	25.81	36.59	44.78
Quartz	(1,2,6)	7.888	70.7	10.196	8.8	2.927	25.81	36.59	44.78
	Equiv. Refl.: (2,-3,6)								
Quartz	(1,-3,-6)	7.888	70.7	10.195	8.8	2.927	25.81	36.59	44.78
Quartz	(-3,1,6)	7.888	70.7	10.19	8.8	2.927	25.79	36.59	44.77
	Equiv. Refl.: (-3,2,-6)								
Quartz	(-2,-1,6)	7.888	70.7	9.993	8.8	2.927	25.81	36.59	44.78
Quartz	(-1,-2,-6)	7.888	70.7	9.992	8.8	2.927	25.81	36.59	44.78
Quartz	(-1,3,6)	7.888	70.7	9.991	8.8	2.927	25.81	36.59	44.78
	Equiv. Refl.: (-2,3,-6)								
Quartz	(3,-1,-6)	7.888	70.7	9.985	8.8	2.927	25.79	36.59	44.77
	Equiv. Refl.: (3,-2,6)								
Quartz	(0,3,6)	8.153	77.28	9.727	9.1	1.887	17.14	23.59	29.16
Quartz	(0,-3,-6)	8.153	77.28	9.726	9.1	1.887	17.14	23.59	29.16
Quartz	(-3,3,-6)	8.153	77.28	9.721	9.1	1.887	17.13	23.59	29.15
Quartz	(3,-3,6)	8.153	77.28	9.72	9.1	1.887	17.13	23.59	29.15
	Equiv. Refl.: (-3,0,6)								
Quartz	(3,0,-6)	8.153	77.28	9.719	9.1	1.887	17.13	23.59	29.15
Quartz	(0,4,-5)	8.177	78.04	7.567	7.3	1.77	12.9	22.13	25.62
	Equiv. Refl.: (0,-4,5)								
Quartz	(4,-4,-5)	8.177	78.04	7.555	7.3	1.77	12.89	22.13	25.61
Quartz	(4,0,5)	8.177	78.04	7.554	7.3	1.77	12.89	22.13	25.61
	Equiv. Refl.: (-4,0,-5), (-4,4,5)								
LiNbO3	(2,2,15)	8.258	81.13	7.186	12.4	1.305	16.18	16.31	22.98
	Equiv. Refl.: (2,2,-15), (2,-4,15), (2,-4,-15), (4,-2,15), (4,-2,-15), (-2,4,15), (-2,4,-15), (-2,-2,15), (-2,-2,-15), (-4,2,15), (-4,2,-15)								
Quartz	(1,5,0)	8.112	76.07	5.868	5.4	2.073	11.2	25.92	28.23
	Equiv. Refl.: (1,-6,0), (5,1,0), (5,-6,0), (-6,1,0), (-6,5,0)								
Quartz	(6,-1,0)	8.112	76.07	4.952	5.4	2.073	11.2	25.92	28.23
	Equiv. Refl.: (6,-5,0), (-1,6,0), (-1,-5,0), (-5,6,0), (-5,-1,0)								
Quartz	(6,-2,2)	8.044	74.24	4.925	4.7	2.359	11.14	29.49	31.52
	Equiv. Refl.: (6,-4,-2), (-2,6,-2)								
Quartz	(-2,-4,2)	8.044	74.24	4.924	4.7	2.359	11.14	29.49	31.52
Quartz	(-4,-2,-2)	8.044	74.24	4.921	4.7	2.359	11.13	29.49	31.52

Ei =	8.358	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(-4,6,2)	8.044	74.24	4.92	4.7	2.359	11.13	29.49	31.52
Sapph	(2,4,1)	7.975	72.59	4.605	4.9	2.621	12.89	32.77	35.21
	Equiv. Refl.: (2,-6,-1), (4,2,-1), (4,-6,1), (6,-2,-1), (6,-4,1), (-2,6,1), (-2,-4,-1), (-4,6,-1), (-4,-2,1), (-6,2,1), (-6,4,-1)								
LiNbO3	(2,4,7)	7.996	73.07	4.396	7.4	2.543	18.85	31.79	36.96
	Equiv. Refl.: (2,-6,-7), (4,2,-7), (4,-6,7), (6,-2,-7), (6,-4,7), (-2,6,7), (-2,-4,-7), (-4,6,-7), (-4,-2,7), (-6,2,7), (-6,4,-7)								
Quartz	(2,4,-2)	8.044	74.24	4.382	4.7	2.359	11.14	29.49	31.52
	Equiv. Refl.: (2,-6,2), (-6,2,-2), (-6,4,2)								
Quartz	(4,2,2)	8.044	74.24	4.379	4.7	2.359	11.13	29.49	31.52
Quartz	(4,-6,-2)	8.044	74.24	4.378	4.7	2.359	11.13	29.49	31.52
Quartz	(3,-3,-6)	8.153	77.28	4.107	4.4	1.887	8.36	23.59	25.02
	Equiv. Refl.: (-3,3,6)								
Quartz	(3,0,6)	8.153	77.28	4.106	4.4	1.887	8.36	23.59	25.02
	Equiv. Refl.: (-3,0,-6)								
Quartz	(0,3,-6)	8.153	77.28	4.092	4.4	1.887	8.34	23.59	25.02
Quartz	(0,-3,6)	8.153	77.28	4.091	4.4	1.887	8.34	23.59	25.02
Quartz	(0,4,5)	8.177	78.04	3.696	4.2	1.77	7.37	22.13	23.32
	Equiv. Refl.: (0,-4,-5)								
Quartz	(-4,4,-5)	8.177	78.04	3.693	4.2	1.77	7.36	22.13	23.32
Quartz	(4,-4,5)	8.177	78.04	3.692	4.2	1.77	7.36	22.13	23.32
Quartz	(4,0,-5)	8.177	78.04	3.691	4.2	1.77	7.36	22.13	23.32
	Equiv. Refl.: (-4,0,5)								
Quartz	(-1,3,-6)	7.888	70.7	3.484	3.3	2.927	9.7	36.59	37.86
Quartz	(-1,-2,6)	7.888	70.7	3.483	3.3	2.927	9.7	36.59	37.86
Quartz	(-2,-1,-6)	7.888	70.7	3.481	3.3	2.927	9.69	36.59	37.85
Quartz	(-2,3,6)	7.888	70.7	3.479	3.3	2.927	9.69	36.59	37.85
Quartz	(3,-2,-6)	7.888	70.7	3.477	3.3	2.927	9.68	36.59	37.85
Quartz	(3,-1,6)	7.888	70.7	3.476	3.3	2.927	9.68	36.59	37.85
Sapph	(2,4,-2)	8.018	73.59	3.115	3.8	2.461	9.41	30.76	32.17
	Equiv. Refl.: (2,-6,2), (4,2,2), (4,-6,-2), (6,-2,2), (6,-4,-2), (-2,6,-2), (-2,-4,2), (-4,6,2), (-4,-2,-2), (-6,2,-2), (-6,4,2)								
Quartz	(0,1,-7)	8.16	77.51	2.991	3.6	1.851	6.74	23.14	24.1
	Equiv. Refl.: (0,-1,7)								
Quartz	(1,-1,-7)	8.16	77.51	2.979	3.6	1.851	6.72	23.14	24.09
	Equiv. Refl.: (-1,1,7)								
Quartz	(-1,0,-7)	8.16	77.51	2.977	3.6	1.851	6.71	23.14	24.09
Quartz	(1,0,7)	8.16	77.51	2.976	3.6	1.851	6.71	23.14	24.09
Quartz	(1,2,-6)	7.888	70.7	2.677	3.3	2.927	9.7	36.59	37.86
	Equiv. Refl.: (1,-3,6)								
Quartz	(2,1,6)	7.888	70.7	2.675	3.3	2.927	9.69	36.59	37.85
Quartz	(2,-3,-6)	7.888	70.7	2.673	3.3	2.927	9.69	36.59	37.85
Quartz	(-3,1,-6)	7.888	70.7	2.671	3.3	2.927	9.68	36.59	37.85
	Equiv. Refl.: (-3,2,6)								
Sapph	(1,3,13)	8.241	80.42	2.158	3.7	1.41	5.19	17.63	18.38
	Equiv. Refl.: (1,-4,-13), (3,1,-13), (3,-4,13), (4,-1,-13), (4,-3,13), (-1,4,13), (-1,-3,-13), (-3,4,-13), (-3,-1,13), (-4,1,13), (-4,3,-13)								
Quartz	(5,0,3)	8.057	74.57	2.001	2.8	2.307	6.46	28.84	29.55
	Equiv. Refl.: (-5,0,-3)								

Ei =	8.358	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(5,-5,-3)	8.057	74.57	2	2.8	2.307	6.46	28.84	29.55
	Equiv. Refl.: (-5,5,3)								
Quartz	(0,5,-3)	8.057	74.57	1.997	2.8	2.307	6.45	28.84	29.55
	Equiv. Refl.: (0,-5,3)								
Sapph	(3,3,6)	8.325	84.93	1.995	4.2	0.742	3.13	9.28	9.79
	Equiv. Refl.: (3,3,-6), (3,-6,6), (3,-6,-6), (6,-3,6), (6,-3,-6), (-3,6,6), (-3,6,-6), (-3,-3,6), (-3,-3,-6), (-6,3,6), (-6,3,-6)								
LiNbO3	(1,5,5)	8.058	74.61	1.78	4.5	2.301	10.46	28.76	30.6
	Equiv. Refl.: (1,-6,-5), (5,1,-5), (5,-6,5), (6,-1,-5), (6,-5,5), (-1,6,5), (-1,-5,-5), (-5,6,-5), (-5,-1,5), (-6,1,5), (-6,5,-5)								
Quartz	(1,4,4)	8.101	75.76	1.619	2.2	2.121	4.72	26.51	26.93
	Equiv. Refl.: (1,-5,-4)								
Quartz	(-5,4,-4)	8.101	75.76	1.616	2.2	2.121	4.71	26.51	26.93
Quartz	(4,1,-4)	8.101	75.76	1.614	2.2	2.121	4.71	26.51	26.93
	Equiv. Refl.: (4,-5,4), (-5,1,4)								
Quartz	(-1,5,4)	8.101	75.76	1.216	2.2	2.121	4.72	26.51	26.93
	Equiv. Refl.: (-1,-4,-4)								
Quartz	(5,-4,4)	8.101	75.76	1.213	2.2	2.121	4.71	26.51	26.93
Quartz	(5,-1,-4)	8.101	75.76	1.211	2.2	2.121	4.71	26.51	26.93
	Equiv. Refl.: (-4,5,-4), (-4,-1,4)								
Quartz	(-3,6,2)	7.911	71.17	1.094	1.6	2.85	4.43	35.63	35.9
	Equiv. Refl.: (-3,-3,-2)								
Quartz	(-3,6,-2)	7.911	71.17	1.093	1.6	2.85	4.43	35.63	35.9
	Equiv. Refl.: (-3,-3,2)								
Quartz	(6,-3,2)	7.911	71.17	1.092	1.6	2.85	4.42	35.63	35.9
	Equiv. Refl.: (6,-3,-2)								
Quartz	(3,3,2)	7.911	71.17	0.794	1.6	2.85	4.43	35.63	35.9
	Equiv. Refl.: (3,-6,-2)								
Quartz	(3,3,-2)	7.911	71.17	0.793	1.6	2.85	4.43	35.63	35.9
	Equiv. Refl.: (3,-6,2)								
Quartz	(-6,3,2)	7.911	71.17	0.792	1.6	2.85	4.42	35.63	35.9
	Equiv. Refl.: (-6,3,-2)								
Quartz	(6,-1,-1)	8.193	78.59	0.453	0.9	1.687	1.58	21.08	21.14
	Equiv. Refl.: (6,-5,1), (-1,6,1), (-1,-5,-1), (-5,6,-1), (-5,-1,1)								
LiNbO3	(3,3,9)	8.27	81.7	0.365	2.7	1.219	3.32	15.24	15.6
	Equiv. Refl.: (3,3,-9), (3,-6,9), (3,-6,-9), (6,-3,9), (6,-3,-9), (-3,6,9), (-3,6,-9), (-3,-3,9), (-3,-3,-9), (-6,3,9), (-6,3,-9)								
Quartz	(5,-6,1)	8.193	78.59	0.18	0.9	1.687	1.58	21.08	21.14
Quartz	(1,5,1)	8.193	78.59	0.179	0.9	1.687	1.58	21.08	21.14
	Equiv. Refl.: (1,-6,-1), (5,1,-1), (-6,1,1), (-6,5,-1)								
Sapph	(3,3,3)	7.947	71.96	0.095	0.5	2.722	1.36	34.02	34.05
	Equiv. Refl.: (3,3,-3), (3,-6,3), (3,-6,-3), (6,-3,3), (6,-3,-3), (-3,6,3), (-3,6,-3), (-3,-3,3), (-3,-3,-3), (-6,3,3), (-6,3,-3)								

Ei =	8.648	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Si	(2,4,6)	8.542	81.01	26.5913	23.62	1.368	32.31	17.1	36.56
	Equiv. Refl.: (2,6,4), (4,2,6), (4,6,2), (6,2,4), (6,4,2)								
Ge	(2,4,6)	8.2	71.48	26.3946	24.28	2.8972	70.34	36.22	79.12
	Equiv. Refl.: (2,6,4), (4,2,6), (4,6,2), (6,2,4), (6,4,2)								
Ge	(1,3,7)	8.417	76.72	22.4753	22.15	2.0407	45.2	25.51	51.9
	Equiv. Refl.: (1,7,3), (3,1,7), (3,5,5), (3,7,1), (5,3,5), (5,5,3), (7,1,3), (7,3,1)								
Si	(1,1,7)	8.152	70.49	9.6229	8.78	3.0638	26.91	38.3	46.81
	Equiv. Refl.: (1,5,5), (1,7,1), (5,1,5), (5,5,1), (7,1,1)								
LiNbO3	(3,-7,4)	8.645	88.51	200.283	200.5	0.225	45.09	2.81	45.18
	Equiv. Refl.: (4,3,4), (7,-3,4), (-3,-4,4)								
LiNbO3	(-4,7,4)	8.645	88.51	200.282	200.5	0.225	45.09	2.81	45.18
	Equiv. Refl.: (-7,4,4)								
LiNbO3	(3,4,-4)	8.645	88.51	198.724	200.5	0.225	45.09	2.81	45.18
	Equiv. Refl.: (-3,7,-4), (-4,-3,-4), (-7,3,-4)								
LiNbO3	(4,-7,-4)	8.645	88.51	198.723	200.5	0.225	45.09	2.81	45.18
	Equiv. Refl.: (7,-4,-4)								
LiNbO3	(2,-6,-10)	8.61	84.63	73.664	68.4	0.813	55.6	10.16	56.52
	Equiv. Refl.: (4,2,-10), (6,-2,-10), (-2,-4,-10), (-4,6,-10), (-6,4,-10)								
LiNbO3	(2,4,10)	8.61	84.63	68.115	68.4	0.813	55.6	10.16	56.52
	Equiv. Refl.: (4,-6,10), (6,-4,10), (-2,6,10), (-4,-2,10), (-6,2,10)								
Sapph	(0,0,18)	8.591	83.43	49.278	41.9	0.996	41.71	12.45	43.53
	Equiv. Refl.: (0,0,-18)								
Quartz	(5,0,-4)	8.609	84.58	40.194	34.3	0.821	28.14	10.26	29.95
	Equiv. Refl.: (5,-5,4), (-5,0,4), (-5,5,-4)								
Quartz	(0,5,4)	8.609	84.58	40.19	34.3	0.821	28.14	10.26	29.95
	Equiv. Refl.: (0,-5,-4)								
LiNbO3	(3,-7,-2)	8.505	79.57	39.874	37.2	1.592	59.24	19.89	62.49
	Equiv. Refl.: (4,3,-2), (7,-3,-2), (-3,-4,-2), (-4,7,-2), (-7,4,-2)								
LiNbO3	(3,4,2)	8.505	79.57	37.796	37.2	1.592	59.24	19.89	62.49
	Equiv. Refl.: (4,-7,2), (7,-4,2), (-3,7,2), (-4,-3,2), (-7,3,2)								
Sapph	(1,5,-4)	8.591	83.42	36.749	32	0.997	31.9	12.46	34.25
	Equiv. Refl.: (1,-6,4), (5,1,4), (5,-6,-4), (6,-1,4), (6,-5,-4), (-1,6,-4), (-1,-5,4), (-5,6,4), (-5,-1,-4), (-6,1,-4), (-6,5,4)								
LiNbO3	(5,-6,8)	8.528	80.46	35.796	35.2	1.453	51.14	18.16	54.26
	Equiv. Refl.: (6,-5,8)								
LiNbO3	(1,5,8)	8.528	80.46	35.795	35.2	1.453	51.14	18.16	54.26
	Equiv. Refl.: (-1,6,8), (-5,-1,8), (-6,1,8)								
LiNbO3	(1,-6,-8)	8.528	80.46	35.682	35.2	1.453	51.14	18.16	54.26
	Equiv. Refl.: (5,1,-8), (6,-1,-8), (-1,-5,-8), (-5,6,-8), (-6,5,-8)								
Quartz	(-5,2,-5)	8.557	81.69	31.309	26.2	1.264	33.07	15.79	36.65
	Equiv. Refl.: (-5,3,5)								
Quartz	(3,-5,-5)	8.557	81.69	31.306	26.2	1.264	33.06	15.79	36.64
Quartz	(2,-5,5)	8.557	81.69	31.305	26.2	1.264	33.06	15.79	36.64
	Equiv. Refl.: (3,2,5)								
Quartz	(2,3,-5)	8.557	81.69	31.304	26.2	1.264	33.06	15.79	36.64
Quartz	(5,-2,5)	8.557	81.69	30.968	26.2	1.264	33.07	15.79	36.65
Quartz	(5,-3,-5)	8.557	81.69	30.967	26.2	1.264	33.07	15.79	36.65

Ei =	8.648	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	Θ_B	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(-2,5,-5)	8.557	81.69	30.964	26.2	1.264	33.06	15.79	36.64
	Equiv. Refl.: (-2,-3,5)								
Quartz	(-3,5,5)	8.557	81.69	30.963	26.2	1.264	33.06	15.79	36.64
Quartz	(-3,-2,-5)	8.557	81.69	30.962	26.2	1.264	33.06	15.79	36.64
LiNbO3	(0,6,0)	8.343	74.74	30.12	28.2	2.36	66.5	29.5	72.75
	Equiv. Refl.: (6,-6,0), (-6,0,0)								
LiNbO3	(0,-6,0)	8.343	74.74	29.473	28.2	2.36	66.5	29.5	72.75
	Equiv. Refl.: (6,0,0), (-6,6,0)								
Sapph	(1,2,-16)	8.612	84.75	29.203	27	0.795	21.46	9.93	23.65
	Equiv. Refl.: (1,-3,16), (2,1,16), (2,-3,-16), (3,-1,16), (3,-2,-16), (-1,3,-16), (-1,-2,16), (-2,3,16), (-2,-1,-16), (-3,1,-16), (-3,2,16)								
Sapph	(1,3,-14)	8.607	84.39	26.62	24.7	0.85	20.95	10.62	23.49
	Equiv. Refl.: (1,-4,14), (3,1,14), (3,-4,-14), (4,-1,14), (4,-3,-14), (-1,4,-14), (-1,-3,14), (-3,4,14), (-3,-1,-14), (-4,1,-14), (-4,3,14)								
LiNbO3	(1,1,-18)	8.402	76.29	26.586	25.2	2.109	53.12	26.36	59.3
	Equiv. Refl.: (1,-2,-18), (2,-1,-18), (-1,2,-18), (-1,-1,-18), (-2,1,-18)								
LiNbO3	(0,-4,-14)	8.374	75.55	25.936	24.5	2.229	54.6	27.86	61.3
	Equiv. Refl.: (4,0,-14), (-4,4,-14)								
LiNbO3	(1,-5,12)	8.331	74.43	24.766	23.3	2.41	56.11	30.13	63.68
	Equiv. Refl.: (4,1,12), (5,-1,12), (-1,-4,12), (-4,5,12), (-5,4,12)								
LiNbO3	(1,1,18)	8.402	76.29	24.629	25.2	2.109	53.12	26.36	59.3
	Equiv. Refl.: (1,-2,18), (2,-1,18), (-1,-1,18)								
LiNbO3	(-1,2,18)	8.402	76.29	24.628	25.2	2.109	53.12	26.36	59.3
	Equiv. Refl.: (-2,1,18)								
LiNbO3	(0,4,14)	8.374	75.55	24.069	24.5	2.229	54.6	27.86	61.3
	Equiv. Refl.: (4,-4,14), (-4,0,14)								
LiNbO3	(1,4,12)	8.331	74.43	23.958	22.6	2.41	54.52	30.13	62.29
	Equiv. Refl.: (4,-5,12), (5,-4,12), (-1,5,12), (-4,-1,12), (-5,1,12)								
LiNbO3	(1,4,-12)	8.331	74.43	22.936	23.3	2.41	56.11	30.13	63.68
	Equiv. Refl.: (4,-5,-12), (5,-4,-12), (-1,5,-12), (-4,-1,-12), (-5,1,-12)								
LiNbO3	(1,-5,-12)	8.331	74.43	22.14	22.6	2.41	54.52	30.13	62.29
	Equiv. Refl.: (4,1,-12), (5,-1,-12), (-1,-4,-12), (-4,5,-12), (-5,4,-12)								
LiNbO3	(0,5,10)	8.266	72.92	22.086	20.3	2.658	53.92	33.22	63.34
	Equiv. Refl.: (5,-5,10), (-5,0,10)								
LiNbO3	(0,-5,-10)	8.266	72.92	19.002	20.3	2.658	53.92	33.22	63.34
	Equiv. Refl.: (5,0,-10), (-5,5,-10)								
LiNbO3	(2,-6,8)	8.181	71.09	18.907	18.1	2.962	53.49	37.03	65.05
	Equiv. Refl.: (4,2,8), (6,-2,8), (-2,-4,8), (-4,6,8), (-6,4,8)								
Sapph	(2,4,7)	8.633	86.66	17.841	20	0.504	10.08	6.3	11.89
	Equiv. Refl.: (2,-6,-7), (4,2,-7), (4,-6,7), (6,-2,-7), (6,-4,7), (-2,6,7), (-2,-4,-7), (-4,6,-7), (-4,-2,7), (-6,2,7), (-6,4,-7)								
LiNbO3	(2,4,-8)	8.181	71.09	17.47	18.1	2.962	53.49	37.03	65.05
	Equiv. Refl.: (4,-6,-8), (6,-4,-8), (-2,6,-8), (-4,-2,-8), (-6,2,-8)								
Quartz	(2,2,6)	8.534	80.71	14.733	12.9	1.415	18.19	17.69	25.38
Quartz	(2,-4,-6)	8.534	80.71	14.732	12.9	1.415	18.19	17.69	25.38
Quartz	(2,-4,6)	8.534	80.71	14.731	12.9	1.415	18.19	17.69	25.38
Quartz	(2,2,-6)	8.534	80.71	14.73	12.9	1.415	18.19	17.69	25.38
Quartz	(-4,2,-6)	8.534	80.71	14.727	12.9	1.415	18.19	17.69	25.37
Quartz	(-4,2,6)	8.534	80.71	14.725	12.8	1.415	18.18	17.69	25.37
Quartz	(-2,4,6)	8.534	80.71	14.507	12.9	1.415	18.19	17.69	25.38
	Equiv. Refl.: (-2,-2,-6)								

Ei =	8.648	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	ΘB	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μm	2m, 50 μm
	(h,k,l)	[keV]	[$^\circ$]	[μrad]	[μrad]	[meV/ μrad]	[meV]	[meV]	[meV]
Quartz	(-2,4,-6)	8.534	80.71	14.506	12.9	1.415	18.19	17.69	25.38
Quartz	(-2,-2,6)	8.534	80.71	14.505	12.9	1.415	18.19	17.69	25.38
Quartz	(4,-2,6)	8.534	80.71	14.498	12.9	1.415	18.19	17.69	25.37
Quartz	(4,-2,-6)	8.534	80.71	14.496	12.8	1.415	18.18	17.69	25.37
Sapph	(2,4,4)	8.186	71.19	11.886	10.3	2.945	30.25	36.81	47.64
Equiv. Refl.: (2,-6,-4), (4,2,-4), (4,-6,4), (6,-2,-4), (6,-4,4), (-2,6,4), (-2,-4,-4), (-4,6,-4), (-4,-2,4), (-6,2,4), (-6,4,-4)									
Quartz	(-3,5,-5)	8.557	81.69	11.462	10.8	1.264	13.68	15.79	20.89
Quartz	(-3,-2,5)	8.557	81.69	11.461	10.8	1.264	13.68	15.79	20.89
Quartz	(-2,5,5)	8.557	81.69	11.456	10.8	1.264	13.67	15.79	20.89
Quartz	(-2,-3,-5)	8.557	81.69	11.455	10.8	1.264	13.67	15.79	20.89
Quartz	(5,-2,-5)	8.557	81.69	11.448	10.8	1.264	13.66	15.79	20.89
Equiv. Refl.: (5,-3,5)									
Quartz	(3,-5,5)	8.557	81.69	11.232	10.8	1.264	13.68	15.79	20.89
Quartz	(3,2,-5)	8.557	81.69	11.23	10.8	1.264	13.68	15.79	20.89
Quartz	(2,-5,-5)	8.557	81.69	11.225	10.8	1.264	13.67	15.79	20.89
Quartz	(2,3,5)	8.557	81.69	11.224	10.8	1.264	13.67	15.79	20.89
Quartz	(-5,2,5)	8.557	81.69	11.218	10.8	1.264	13.66	15.79	20.89
Quartz	(-5,3,-5)	8.557	81.69	11.217	10.8	1.264	13.66	15.79	20.88
Sapph	(0,2,16)	8.208	71.65	11.169	9.8	2.869	28.18	35.87	45.61
Equiv. Refl.: (0,-2,-16), (2,0,-16), (2,-2,16), (-2,0,16), (-2,2,-16)									
Quartz	(1,-6,1)	8.193	71.33	11.115	9.4	2.922	27.41	36.53	45.67
Quartz	(1,5,-1)	8.193	71.33	11.114	9.4	2.922	27.41	36.53	45.67
Equiv. Refl.: (-6,1,-1), (-6,5,1)									
Quartz	(5,1,1)	8.193	71.33	11.113	9.4	2.922	27.41	36.53	45.67
Equiv. Refl.: (5,-6,-1)									
Quartz	(6,-1,1)	8.193	71.33	11.064	9.4	2.922	27.41	36.53	45.67
Equiv. Refl.: (-1,6,-1), (-1,-5,1)									
Quartz	(6,-5,-1)	8.193	71.33	11.063	9.4	2.922	27.41	36.53	45.67
Equiv. Refl.: (-5,6,1), (-5,-1,-1)									
Quartz	(-2,1,-7)	8.416	76.71	10.255	9	2.043	18.35	25.54	31.44
Quartz	(-2,1,7)	8.416	76.71	10.254	9	2.043	18.35	25.54	31.44
Quartz	(1,-2,-7)	8.416	76.71	10.253	9	2.043	18.34	25.54	31.44
Quartz	(1,1,7)	8.416	76.71	10.251	9	2.043	18.34	25.54	31.44
Quartz	(1,-2,7)	8.416	76.71	10.249	9	2.043	18.34	25.54	31.44
Quartz	(1,1,-7)	8.416	76.71	10.248	9	2.043	18.34	25.54	31.44
Quartz	(2,-1,7)	8.416	76.71	9.841	9	2.043	18.35	25.54	31.44
Quartz	(2,-1,-7)	8.416	76.71	9.84	9	2.043	18.35	25.54	31.44
Quartz	(-1,2,7)	8.416	76.71	9.837	9	2.043	18.34	25.54	31.44
Quartz	(-1,-1,-7)	8.416	76.71	9.835	9	2.043	18.34	25.54	31.44
Quartz	(-1,2,-7)	8.416	76.71	9.834	9	2.043	18.34	25.54	31.44
Quartz	(-1,-1,7)	8.416	76.71	9.833	9	2.043	18.34	25.54	31.44
Quartz	(-2,2,7)	8.542	81	9.127	8.9	1.37	12.24	17.12	21.05
Quartz	(2,-2,-7)	8.542	81	9.126	8.9	1.37	12.24	17.12	21.05
Quartz	(-2,0,-7)	8.542	81	9.124	8.9	1.37	12.24	17.12	21.04
Quartz	(2,0,7)	8.542	81	9.123	8.9	1.37	12.24	17.12	21.04
Quartz	(0,2,-7)	8.542	81	9.108	8.9	1.37	12.22	17.12	21.03
Equiv. Refl.: (0,-2,7)									
Quartz	(-4,-2,-3)	8.443	77.49	8.689	7.5	1.919	14.47	23.98	28.01
Quartz	(-4,6,3)	8.443	77.49	8.688	7.5	1.919	14.47	23.98	28.01

Ei =	8.648	keV						ΔE_g	ΔE_t
Cryst	Refl	EB	ΘB	$\int IR d\Theta$	Width	Ei cot Θ	ΔE	2m, 50 μ m	2m, 50 μ m
	(h,k,l)	[keV]	[$^\circ$]	[μ rad]	[μ rad]	[meV/ μ rad]	[meV]	[meV]	[meV]
Quartz	(6,-4,-3)	8.443	77.49	8.685	7.5	1.919	14.47	23.98	28.01
Quartz	(6,-2,3)	8.443	77.49	8.684	7.5	1.919	14.47	23.98	28.01
Quartz	(-2,6,-3)	8.443	77.49	8.683	7.5	1.919	14.46	23.98	28.01
Quartz	(-2,-4,3)	8.443	77.49	8.682	7.5	1.919	14.46	23.98	28.01
Quartz	(2,4,3)	8.443	77.49	8.298	7.5	1.919	14.37	23.98	27.96
	Equiv. Refl.: (2,-6,-3)								
Quartz	(-6,4,-3)	8.443	77.49	8.296	7.5	1.919	14.37	23.98	27.96
Quartz	(-6,2,3)	8.443	77.49	8.295	7.5	1.919	14.37	23.98	27.96
Quartz	(4,2,-3)	8.443	77.49	8.293	7.5	1.919	14.37	23.98	27.96
	Equiv. Refl.: (4,-6,3)								
Quartz	(2,0,-7)	8.542	81	7.97	8	1.37	11	17.12	20.35
	Equiv. Refl.: (-2,0,7)								
Quartz	(2,-2,7)	8.542	81	7.968	8	1.37	10.99	17.12	20.35
	Equiv. Refl.: (-2,2,-7)								
Quartz	(0,2,7)	8.542	81	7.943	8	1.37	10.97	17.12	20.33
	Equiv. Refl.: (0,-2,-7)								
Quartz	(-1,0,7)	8.16	70.67	7.824	6.9	3.034	20.83	37.93	43.27
Quartz	(1,0,-7)	8.16	70.67	7.823	6.9	3.034	20.83	37.93	43.27
	Equiv. Refl.: (-1,1,-7)								
Quartz	(0,1,7)	8.16	70.67	7.822	6.9	3.034	20.83	37.93	43.27
	Equiv. Refl.: (0,-1,-7), (1,-1,7)								
Quartz	(-2,6,3)	8.443	77.49	7.72	7.5	1.919	14.37	23.98	27.96
	Equiv. Refl.: (-2,-4,-3)								
Quartz	(6,-4,3)	8.443	77.49	7.717	7.5	1.919	14.37	23.98	27.96
Quartz	(6,-2,-3)	8.443	77.49	7.716	7.5	1.919	14.37	23.98	27.96
Quartz	(-4,6,-3)	8.443	77.49	7.715	7.5	1.919	14.37	23.98	27.96
	Equiv. Refl.: (-4,-2,3)								
Quartz	(-6,3,3)	8.316	74.07	7.405	6.7	2.468	16.54	30.85	35
Quartz	(3,3,3)	8.316	74.07	7.404	6.7	2.468	16.54	30.85	35
	Equiv. Refl.: (3,-6,-3), (-6,3,-3)								
Quartz	(3,3,-3)	8.316	74.07	7.403	6.7	2.468	16.54	30.85	35
	Equiv. Refl.: (3,-6,3)								
Quartz	(6,-3,-3)	8.316	74.07	7.362	6.7	2.468	16.54	30.85	35
	Equiv. Refl.: (-3,6,3), (-3,-3,3), (-3,-3,-3)								
Quartz	(6,-3,3)	8.316	74.07	7.361	6.7	2.468	16.54	30.85	35
	Equiv. Refl.: (-3,6,-3)								
Quartz	(4,2,3)	8.443	77.49	7.326	7.5	1.919	14.47	23.98	28.01
Quartz	(4,-6,-3)	8.443	77.49	7.324	7.5	1.919	14.47	23.98	28.01
Quartz	(-6,4,3)	8.443	77.49	7.322	7.5	1.919	14.47	23.98	28.01
Quartz	(-6,2,-3)	8.443	77.49	7.321	7.5	1.919	14.47	23.98	28.01
Quartz	(2,-6,3)	8.443	77.49	7.32	7.5	1.919	14.46	23.98	28.01
Quartz	(2,4,-3)	8.443	77.49	7.319	7.5	1.919	14.46	23.98	28.01
Quartz	(-5,6,-2)	8.43	77.12	7.266	6.7	1.978	13.22	24.73	28.04
	Equiv. Refl.: (-5,-1,2)								
Quartz	(-1,-5,-2)	8.43	77.12	7.265	6.7	1.978	13.22	24.73	28.04
Quartz	(6,-5,2)	8.43	77.12	7.264	6.7	1.978	13.21	24.73	28.04
	Equiv. Refl.: (-1,6,2)								
Quartz	(6,-1,-2)	8.43	77.12	7.263	6.7	1.978	13.21	24.73	28.04
Quartz	(5,1,-2)	8.43	77.12	7.125	6.7	1.978	13.22	24.73	28.04
	Equiv. Refl.: (5,-6,2)								

Ei =	8.648	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(1,5,2)	8.43	77.12	7.124	6.7	1.978	13.22	24.73	28.04
	Equiv. Refl.: (1,-6,-2), (-6,5,-2)								
Quartz	(-6,1,2)	8.43	77.12	7.123	6.7	1.978	13.21	24.73	28.04
Sapph	(1,5,-1)	8.39	75.97	7.087	6.9	2.162	14.94	27.02	30.88
	Equiv. Refl.: (1,-6,1), (5,1,1), (5,-6,-1), (6,-1,1), (6,-5,-1), (-1,6,-1), (-1,-5,1), (-5,6,1), (-5,-1,-1), (-6,1,-1), (-6,5,1)								
Quartz	(0,3,6)	8.153	70.52	6.281	5.8	3.059	17.71	38.24	42.15
	Equiv. Refl.: (0,-3,-6)								
Quartz	(3,0,-6)	8.153	70.52	6.277	5.8	3.059	17.7	38.24	42.14
	Equiv. Refl.: (3,-3,6), (-3,0,6), (-3,3,-6)								
Quartz	(0,4,-5)	8.177	70.99	4.731	4.5	2.979	13.33	37.23	39.55
	Equiv. Refl.: (0,-4,5)								
Quartz	(4,0,5)	8.177	70.99	4.723	4.5	2.979	13.31	37.23	39.54
	Equiv. Refl.: (4,-4,-5), (-4,0,-5), (-4,4,5)								
Sapph	(2,4,-5)	8.311	73.94	4.49	4.6	2.489	11.53	31.11	33.18
	Equiv. Refl.: (2,-6,5), (4,2,5), (4,-6,-5), (6,-2,5), (6,-4,-5), (-2,6,-5), (-2,-4,5), (-4,6,5), (-4,-2,-5), (-6,2,-5), (-6,4,5)								
Quartz	(5,0,4)	8.609	84.58	3.845	5.5	0.821	4.49	10.26	11.19
	Equiv. Refl.: (-5,0,-4)								
Quartz	(5,-5,-4)	8.609	84.58	3.843	5.5	0.821	4.48	10.26	11.19
	Equiv. Refl.: (-5,5,4)								
Quartz	(0,5,-4)	8.609	84.58	3.83	5.5	0.821	4.47	10.26	11.19
	Equiv. Refl.: (0,-5,4)								
Sapph	(2,3,11)	8.4	76.26	3.629	4.2	2.115	8.79	26.44	27.86
	Equiv. Refl.: (2,-5,-11), (3,2,-11), (3,-5,11), (5,-2,-11), (5,-3,11), (-2,5,11), (-2,-3,-11), (-3,5,-11), (-3,-2,11), (-5,2,11), (-5,3,-11)								
LiNbO3	(2,2,15)	8.258	72.73	3.49	6.2	2.689	16.73	33.61	37.55
	Equiv. Refl.: (2,2,-15), (2,-4,15), (2,-4,-15), (4,-2,15), (4,-2,-15), (-2,4,15), (-2,4,-15), (-2,-2,15), (-2,-2,-15), (-4,2,15), (-4,2,-15)								
LiNbO3	(3,4,-1)	8.47	78.35	2.945	6.4	1.783	11.46	22.29	25.06
	Equiv. Refl.: (3,-7,1), (4,3,1), (4,-7,-1), (7,-3,1), (7,-4,-1), (-3,7,-1), (-3,-4,1), (-4,7,1), (-4,-3,-1), (-7,3,-1), (-7,4,1)								
Quartz	(3,-3,-6)	8.153	70.52	2.257	2.8	3.059	8.65	38.24	39.21
	Equiv. Refl.: (-3,3,6)								
Quartz	(3,0,6)	8.153	70.52	2.256	2.8	3.059	8.65	38.24	39.21
	Equiv. Refl.: (-3,0,-6)								
Quartz	(0,3,-6)	8.153	70.52	2.249	2.8	3.059	8.63	38.24	39.2
	Equiv. Refl.: (0,-3,6)								
Quartz	(-5,-1,-2)	8.43	77.12	2.106	2.8	1.978	5.58	24.73	25.35
Quartz	(6,-1,2)	8.43	77.12	2.105	2.8	1.978	5.58	24.73	25.35
	Equiv. Refl.: (6,-5,-2), (-5,6,2)								
Quartz	(-1,6,-2)	8.43	77.12	2.104	2.8	1.978	5.58	24.73	25.35
	Equiv. Refl.: (-1,-5,2)								
Quartz	(0,4,5)	8.177	70.99	1.977	2.6	2.979	7.62	37.23	38.01
	Equiv. Refl.: (0,-4,-5)								
Quartz	(4,-4,5)	8.177	70.99	1.975	2.6	2.979	7.62	37.23	38.01
	Equiv. Refl.: (-4,4,-5)								
Quartz	(4,0,-5)	8.177	70.99	1.974	2.6	2.979	7.62	37.23	38
	Equiv. Refl.: (-4,0,5)								

Ei =	8.648	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(5,1,2)	8.43	77.12	1.912	2.8	1.978	5.58	24.73	25.35
	Equiv. Refl.: (-6,1,-2), (-6,5,2)								
Quartz	(1,5,-2)	8.43	77.12	1.911	2.8	1.978	5.58	24.73	25.35
	Equiv. Refl.: (1,-6,2), (5,-6,-2)								
Quartz	(0,1,-7)	8.16	70.67	1.726	2.3	3.034	6.97	37.93	38.57
	Equiv. Refl.: (0,-1,7)								
Quartz	(1,-1,-7)	8.16	70.67	1.719	2.3	3.034	6.95	37.93	38.56
	Equiv. Refl.: (-1,0,-7), (-1,1,7)								
Quartz	(1,0,7)	8.16	70.67	1.718	2.3	3.034	6.95	37.93	38.56
LiNbO3	(1,2,17)	8.445	77.57	1.712	4.6	1.906	8.74	23.82	25.37
	Equiv. Refl.: (1,-3,-17), (2,1,-17), (2,-3,17), (3,-1,-17), (3,-2,17), (-1,3,17), (-1,-2,-17), (-2,3,-17), (-2,-1,17), (-3,1,17), (-3,2,-17)								
LiNbO3	(1,5,-7)	8.351	74.93	1.631	4.1	2.328	9.61	29.1	30.64
	Equiv. Refl.: (1,-6,7), (5,1,7), (5,-6,-7), (6,-1,7), (6,-5,-7), (-1,6,-7), (-1,-5,7), (-5,6,7), (-5,-1,-7), (-6,1,-7), (-6,5,7)								
Sapph	(0,5,-8)	8.436	77.28	1.186	2.2	1.952	4.2	24.4	24.76
	Equiv. Refl.: (0,-5,8), (5,0,8), (5,-5,-8), (-5,0,-8), (-5,5,8)								
Sapph	(1,3,13)	8.241	72.36	1.183	2	2.75	5.37	34.37	34.79
	Equiv. Refl.: (1,-4,-13), (3,1,-13), (3,-4,13), (4,-1,-13), (4,-3,13), (-1,4,13), (-1,-3,-13), (-3,4,-13), (-3,-1,13), (-4,1,13), (-4,3,-13)								
Sapph	(3,3,6)	8.325	74.3	0.644	1.3	2.431	3.21	30.39	30.56
	Equiv. Refl.: (3,3,-6), (3,-6,6), (3,-6,-6), (6,-3,6), (6,-3,-6), (-3,6,6), (-3,6,-6), (-3,-3,6), (-3,-3,-6), (-6,3,6), (-6,3,-6)								
LiNbO3	(2,3,-13)	8.398	76.2	0.582	2.5	2.125	5.27	26.56	27.08
	Equiv. Refl.: (2,-5,13), (3,2,13), (3,-5,-13), (5,-2,13), (5,-3,-13), (-2,5,-13), (-2,-3,13), (-3,5,13), (-3,-2,-13), (-5,2,-13), (-5,3,13)								
Quartz	(6,-1,-1)	8.193	71.33	0.28	0.6	2.922	1.64	36.53	36.57
	Equiv. Refl.: (6,-5,1), (-1,6,1), (-1,-5,-1), (-5,6,-1), (-5,-1,1)								
Sapph	(1,5,2)	8.43	77.12	0.21	0.8	1.977	1.56	24.71	24.76
	Equiv. Refl.: (1,-6,-2), (5,1,-2), (5,-6,2), (6,-1,-2), (6,-5,2), (-1,6,2), (-1,-5,-2), (-5,6,-2), (-5,-1,2), (-6,1,2), (-6,5,-2)								
LiNbO3	(3,3,9)	8.27	73.01	0.186	1.3	2.643	3.43	33.03	33.21
	Equiv. Refl.: (3,3,-9), (3,-6,9), (3,-6,-9), (6,-3,9), (6,-3,-9), (-3,6,9), (-3,6,-9), (-3,-3,9), (-3,-3,-9), (-6,3,9), (-6,3,-9)								
Quartz	(5,-6,1)	8.193	71.33	0.118	0.6	2.922	1.64	36.53	36.57
	Equiv. Refl.: (-6,1,1), (-6,5,-1)								
Quartz	(1,5,1)	8.193	71.33	0.117	0.6	2.922	1.64	36.53	36.57
	Equiv. Refl.: (1,-6,-1), (5,1,-1)								

Ei =	8.944	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Ge	(0,0,8)	8.766	78.56	33.355	31	1.81	56.19	22.63	60.57
Ge	(1,3,7)	8.417	70.23	14.778	14.4	3.215	46.27	40.18	61.28
	Equiv. Refl.: (3,5,5)								
Si	(2,4,6)	8.542	72.75	13.636	12	2.777	33.35	34.71	48.14
Si	(1,3,7)	8.768	78.6	12.913	11.9	1.803	21.48	22.54	31.13
	Equiv. Refl.: (3,5,5)								
LiNbO3	(1,5,-10)	8.941	88.41	198.5	190.8	0.248	47.27	3.1	47.37
	Equiv. Refl.: (-1,6,-10), (-5,-1,-10), (-6,1,-10)								
LiNbO3	(5,-6,-10)	8.941	88.41	198.4	190.8	0.248	47.27	3.1	47.37
	Equiv. Refl.: (6,-5,-10)								
LiNbO3	(1,-6,10)	8.941	88.41	192.6	190.8	0.248	47.27	3.1	47.37
	Equiv. Refl.: (5,1,10), (6,-1,10), (-1,-5,10), (-5,6,10), (-6,5,10)								
Quartz	(7,-3,-1)	8.936	87.64	51.2	46.2	0.369	17.01	4.61	17.63
	Equiv. Refl.: (7,-4,1), (-3,7,1), (-3,-4,-1), (-4,7,-1), (-4,-3,1)								
Quartz	(3,4,1)	8.936	87.64	50.7	46.2	0.369	17.01	4.61	17.62
	Equiv. Refl.: (3,-7,-1), (4,3,-1), (4,-7,1), (-7,3,1), (-7,4,-1)								
Quartz	(7,-3,1)	8.936	87.64	49.1	43.5	0.369	16.04	4.61	16.69
	Equiv. Refl.: (7,-4,-1), (-3,7,-1), (-3,-4,1), (-4,7,1), (-4,-3,-1)								
Quartz	(3,4,-1)	8.936	87.64	46.8	43.5	0.369	16.04	4.61	16.69
	Equiv. Refl.: (3,-7,1), (4,3,1), (4,-7,-1), (-7,3,-1), (-7,4,1)								
LiNbO3	(2,3,14)	8.714	76.97	30.4	27.9	2.07	57.77	25.87	63.3
	Equiv. Refl.: (3,-5,14), (5,-3,14), (-2,5,14), (-3,-2,14), (-5,2,14)								
LiNbO3	(2,-5,-14)	8.714	76.97	28.3	27.9	2.07	57.77	25.87	63.3
	Equiv. Refl.: (3,2,-14), (5,-2,-14), (-2,-3,-14), (-3,5,-14), (-5,3,-14)								
LiNbO3	(0,-6,6)	8.764	78.48	28.1	27	1.823	49.15	22.79	54.17
	Equiv. Refl.: (6,0,6), (-6,6,6)								
LiNbO3	(1,3,16)	8.737	77.63	28	26.3	1.961	51.49	24.51	57.03
	Equiv. Refl.: (3,-4,16), (4,-3,16), (-1,4,16), (-3,-1,16), (-4,1,16)								
LiNbO3	(0,6,-6)	8.764	78.48	27.1	27	1.823	49.15	22.79	54.17
	Equiv. Refl.: (6,-6,-6), (-6,0,-6)								
LiNbO3	(2,-7,0)	8.684	76.14	26.6	25.4	2.207	56.01	27.58	62.44
	Equiv. Refl.: (5,2,0), (7,-2,0), (-2,-5,0), (-5,7,0), (-7,5,0)								
LiNbO3	(2,5,0)	8.684	76.14	26.4	25.4	2.207	56.01	27.58	62.44
	Equiv. Refl.: (5,-7,0), (7,-5,0), (-2,7,0), (-5,-2,0), (-7,2,0)								
LiNbO3	(1,-4,-16)	8.737	77.63	26.2	26.3	1.961	51.49	24.51	57.03
	Equiv. Refl.: (3,1,-16), (4,-1,-16), (-1,-3,-16), (-3,4,-16), (-4,3,-16), (0,5,10), (0,-5,-10), (5,0,-10), (5,-5,10), (-5,0,10), (-5,5,-10)								
LiNbO3	(0,-6,-6)	8.764	78.48	24.8	24.5	1.823	44.72	22.79	50.19
	Equiv. Refl.: (6,0,-6), (-6,6,-6)								
LiNbO3	(2,-6,-10)	8.61	74.29	24.7	22.8	2.515	57.35	31.44	65.4
	Equiv. Refl.: (4,2,-10), (6,-2,-10), (-2,-4,-10), (-4,6,-10), (-6,4,-10)								
LiNbO3	(0,6,6)	8.764	78.48	24.5	24.5	1.823	44.72	22.79	50.19
	Equiv. Refl.: (6,-6,6), (-6,0,6)								
LiNbO3	(2,4,10)	8.61	74.29	23	22.8	2.515	57.35	31.44	65.4
	Equiv. Refl.: (4,-6,10), (6,-4,10), (-2,6,10), (-4,-2,10), (-6,2,10)								
LiNbO3	(3,-7,-2)	8.505	71.98	22.7	21	2.91	61.1	36.37	71.11
	Equiv. Refl.: (4,3,-2), (7,-3,-2), (-3,-4,-2), (-4,7,-2), (-7,4,-2)								

Ei =	8.944	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Quartz	(1,2,-7)	8.907	84.75	22.6	20.3	0.821	16.71	10.26	19.61
	Equiv. Refl.: (1,-3,7), (2,1,7), (2,-3,-7), (-3,1,-7), (-3,2,7)								
Quartz	(3,-2,-7)	8.907	84.75	22.5	20.3	0.821	16.7	10.26	19.6
	Equiv. Refl.: (-1,3,-7), (-1,-2,7), (-2,3,7), (-2,-1,-7)								
Quartz	(3,-1,7)	8.907	84.75	22.4	20.3	0.821	16.7	10.26	19.6
LiNbO3	(3,4,2)	8.505	71.98	21.6	21	2.91	61.1	36.37	71.11
	Equiv. Refl.: (4,-7,2), (7,-4,2), (-3,7,2), (-4,-3,2), (-7,3,2)								
Quartz	(1,2,7)	8.907	84.75	19.9	17.7	0.821	14.53	10.26	17.79
	Equiv. Refl.: (1,-3,-7)								
LiNbO3	(3,-7,4)	8.645	75.15	19.8	19.6	2.372	46.49	29.65	55.14
	Equiv. Refl.: (4,3,4), (7,-3,4), (-3,-4,4), (-4,7,4), (-7,4,4), (0,0,18), (0,0,-18), (2,1,-7), (2,-3,7), (-3,1,7), (-3,2,-7)								
LiNbO3	(3,4,-4)	8.645	75.15	19.6	19.6	2.372	46.49	29.65	55.14
	Equiv. Refl.: (4,-7,-4), (7,-4,-4), (-3,7,-4), (-4,-3,-4), (-7,3,-4)								
LiNbO3	(1,5,8)	8.528	72.47	19.2	18.7	2.826	52.73	35.32	63.47
	Equiv. Refl.: (5,-6,8), (6,-5,8), (-1,6,8), (-5,-1,8), (-6,1,8)								
LiNbO3	(1,-6,-8)	8.528	72.47	19.1	18.7	2.826	52.73	35.32	63.47
	Equiv. Refl.: (5,1,-8), (6,-1,-8), (-1,-5,-8), (-5,6,-8), (-6,5,-8)								
Quartz	(3,-2,7)	8.907	84.75	18.8	17.7	0.821	14.53	10.26	17.79
	Equiv. Refl.: (-1,3,7), (-1,-2,-7), (-2,3,-7), (-2,-1,7)								
Quartz	(3,-1,-7)	8.907	84.75	18.7	17.7	0.821	14.52	10.26	17.78
Quartz	(6,-1,3)	8.812	80.14	17.9	15.3	1.555	23.81	19.44	30.74
	Equiv. Refl.: (6,-5,-3), (-1,6,-3), (-1,-5,3), (-5,6,3), (-5,-1,-3)								
Quartz	(1,5,-3)	8.812	80.14	17.6	15.3	1.555	23.81	19.44	30.74
	Equiv. Refl.: (1,-6,3), (5,1,3), (5,-6,-3), (-6,1,-3), (-6,5,3)								
Sapph	(2,2,15)	8.855	81.92	15.4	14.4	1.269	18.28	15.87	24.2
	Equiv. Refl.: (2,2,-15), (2,-4,15), (2,-4,-15), (4,-2,15), (4,-2,-15), (-2,4,15), (-2,4,-15), (-2,-2,15), (-2,-2,-15), (-4,2,15), (-4,2,-15)								
Quartz	(2,3,-5)	8.557	73.09	15.1	12.6	2.72	34.14	34	48.18
	Equiv. Refl.: (2,-5,5), (3,2,5), (3,-5,-5), (-5,2,-5), (-5,3,5)								
Quartz	(1,4,5)	8.802	79.77	15	13.1	1.615	21.2	20.18	29.27
	Equiv. Refl.: (1,-5,-5), (4,1,-5), (4,-5,5), (5,-1,-5), (5,-2,5), (5,-3,-5), (5,-4,5), (-1,5,5), (-1,-4,-5), (-2,5,-5), (-2,-3,5), (-3,5,5), (-4,5,-5), (-4,-1,5), (-5,1,5), (-5,4,-5)								
Quartz	(-3,-2,-5)	8.557	73.09	14.9	12.6	2.72	34.14	34	48.18
Quartz	(0,6,-1)	8.817	80.33	14.8	12.8	1.524	19.48	19.06	27.25
	Equiv. Refl.: (0,-6,1), (6,0,1), (6,-6,-1), (-6,0,-1), (-6,6,1)								
Sapph	(1,5,-4)	8.591	73.85	14.7	12.7	2.59	32.93	32.37	46.18
	Equiv. Refl.: (1,-6,4), (5,1,4), (5,-6,-4), (6,-1,4), (6,-5,-4), (-1,6,-4), (-1,-5,4), (-5,6,4), (-5,-1,-4), (-6,1,-4), (-6,5,4)								
Quartz	(0,5,4)	8.609	74.28	13.6	11.5	2.518	29.05	31.47	42.83
	Equiv. Refl.: (0,-5,-4), (5,0,-4), (5,-5,4), (-5,0,4), (-5,5,-4)								
Quartz	(6,-3,4)	8.852	81.8	12.6	11.3	1.289	14.54	16.12	21.7
	Equiv. Refl.: (6,-3,-4), (-3,6,4), (-3,6,-4), (-3,-3,4), (-3,-3,-4)								
Quartz	(3,3,4)	8.852	81.8	11.9	11.3	1.289	14.53	16.12	21.7
	Equiv. Refl.: (3,3,-4), (3,-6,4), (3,-6,-4), (-6,3,4), (-6,3,-4)								
Quartz	(6,-1,-3)	8.812	80.14	11.3	9.9	1.555	15.47	19.44	24.84
	Equiv. Refl.: (6,-5,3), (-1,6,3), (-1,-5,-3), (-5,6,-3), (-5,-1,3)								
Quartz	(1,5,3)	8.812	80.14	10.9	10	1.555	15.47	19.44	24.85
	Equiv. Refl.: (1,-6,-3), (5,1,-3), (5,-6,3), (-6,1,3), (-6,5,-3)								

Ei =	8.944	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
Sapph	(1,2,-16)	8.612	74.33	9.8	8.8	2.508	22.15	31.36	38.39
	Equiv. Refl.: (1,-3,16), (2,1,16), (2,-3,-16), (3,-1,16), (3,-2,-16), (-1,3,-16), (-1,-2,16), (-2,3,16), (-2,-1,-16), (-3,1,-16), (-3,2,16)								
Sapph	(1,3,-14)	8.607	74.21	9.6	8.5	2.529	21.61	31.61	38.3
	Equiv. Refl.: (1,-4,14), (3,1,14), (3,-4,-14), (4,-1,14), (4,-3,-14), (-1,4,-14), (-1,-3,14), (-3,4,14), (-3,-1,-14), (-4,1,-14), (-4,3,14)								
Quartz	(2,2,6)	8.534	72.59	7.8	6.7	2.804	18.78	35.05	39.76
	Equiv. Refl.: (2,2,-6), (2,-4,6), (2,-4,-6)								
Quartz	(-4,2,6)	8.534	72.59	7.7	6.7	2.804	18.77	35.05	39.76
	Equiv. Refl.: (-4,2,-6)								
Quartz	(4,-2,6)	8.534	72.59	7.6	6.7	2.804	18.77	35.05	39.76
	Equiv. Refl.: (4,-2,-6), (-2,4,6), (-2,4,-6), (-2,-2,6), (-2,-2,-6)								
Sapph	(2,4,-8)	8.829	80.8	7.3	7.5	1.448	10.85	18.1	21.1
	Equiv. Refl.: (2,-6,8), (4,2,8), (4,-6,-8), (6,-2,8), (6,-4,-8), (-2,6,-8), (-2,-4,8), (-4,6,8), (-4,-2,-8), (-6,2,-8), (-6,4,8)								
Quartz	(1,1,7)	8.416	70.22	6.8	5.9	3.216	18.94	40.2	44.44
	Equiv. Refl.: (1,1,-7), (1,-2,7), (1,-2,-7), (-2,1,7), (-2,1,-7)								
LiNbO3	(2,4,-11)	8.851	81.71	6.7	11	1.303	14.36	16.29	21.71
	Equiv. Refl.: (2,-6,11), (4,2,11), (4,-6,-11), (6,-2,11), (6,-4,-11), (-2,6,-11), (-2,-4,11), (-4,6,11), (-4,-2,-11), (-6,2,-11), (-6,4,11), (1,5,5), (1,-6,-5), (5,1,-5), (5,-6,5), (6,-1,-5), (6,-5,5), (-1,6,5), (-1,-5,-5), (-5,6,-5), (-5,-1,5), (-6,1,5), (-6,5,-5)								
Quartz	(2,-1,7)	8.416	70.22	6.5	5.9	3.216	18.94	40.2	44.44
	Equiv. Refl.: (2,-1,-7), (-1,2,7), (-1,2,-7), (-1,-1,7), (-1,-1,-7)								
Quartz	(4,-1,6)	8.658	75.47	5.8	5.3	2.318	12.29	28.98	31.48
	Equiv. Refl.: (4,-3,-6), (5,-2,-5), (5,-3,5), (6,-2,3), (6,-4,-3), (-1,4,-6), (-1,-3,6), (-2,5,5), (-2,6,-3), (-2,-3,-5), (-2,-4,3), (-3,4,6), (-3,5,-5), (-3,-1,-6), (-3,-2,5), (-4,6,3), (-4,-2,-3)								
Quartz	(2,3,5)	8.557	73.09	5.7	5.2	2.72	14.12	34	36.81
	Equiv. Refl.: (2,-5,-5), (3,2,-5), (3,-5,5), (-5,2,5), (-5,3,-5)								
Quartz	(1,3,-6)	8.658	75.47	5.6	5.3	2.318	12.3	28.98	31.48
	Equiv. Refl.: (1,-4,6), (3,1,6), (3,-4,-6), (-4,1,-6), (-4,3,6)								
Quartz	(2,4,3)	8.443	70.73	5.5	4.7	3.128	14.84	39.09	41.81
	Equiv. Refl.: (2,-6,-3), (4,2,-3), (4,-6,3), (-6,2,3), (-6,4,-3)								
Quartz	(6,-2,-3)	8.443	70.73	5.1	4.7	3.128	14.83	39.09	41.81
	Equiv. Refl.: (6,-4,3), (-2,6,3), (-2,-4,-3), (-4,6,-3), (-4,-2,3)								
Quartz	(0,2,-7)	8.542	72.75	4.9	4.5	2.778	12.62	34.72	36.94
	Equiv. Refl.: (0,-2,7), (2,0,7), (2,4,-3), (2,-2,-7), (2,-6,3), (4,2,3), (4,-6,-3), (-2,0,-7), (-2,2,7), (-6,2,-3), (-6,4,3)								
Quartz	(6,-1,-2)	8.43	70.49	4.8	4.3	3.17	13.64	39.62	41.9
	Equiv. Refl.: (6,-5,2), (-1,6,2), (-1,-5,-2), (-5,6,-2), (-5,-1,2)								
Quartz	(1,5,2)	8.43	70.49	4.7	4.3	3.17	13.64	39.62	41.9
	Equiv. Refl.: (1,-6,-2), (5,1,-2), (5,-6,2), (-6,1,2), (-6,5,-2)								
Quartz	(0,2,7)	8.542	72.75	4.3	4.1	2.778	11.33	34.72	36.52
	Equiv. Refl.: (0,-2,-7), (1,3,6), (1,-4,-6), (2,0,-7), (2,-2,7), (3,1,-6), (3,-4,6), (-2,0,7), (-2,2,-7), (-4,1,6), (-4,3,-6)								
Sapph	(2,4,7)	8.633	74.85	4.2	4.3	2.421	10.41	30.26	32
	Equiv. Refl.: (2,-6,-7), (4,2,-7), (4,-6,7), (6,-2,-7), (6,-4,7), (-2,6,7), (-2,-4,-7), (-4,6,-7), (-4,-2,7), (-6,2,7), (-6,4,-7)								
Quartz	(4,-1,-6)	8.658	75.47	3.9	4.1	2.318	9.41	28.98	30.47
	Equiv. Refl.: (4,-3,6), (-1,4,6), (-1,-3,-6), (-3,4,-6), (-3,-1,6)								
Quartz	(7,-3,0)	8.862	82.26	3.3	3.9	1.216	4.73	15.2	15.92
	Equiv. Refl.: (7,-4,0), (-3,7,0), (-3,-4,0), (-4,7,0), (-4,-3,0)								

Ei =	8.944	keV						ΔEg	ΔEt
Cryst	Refl	EB	ΘB	∫ IR dΘ	Width	Ei cotΘ	ΔE	2m, 50μm	2m, 50μm
	(h,k,l)	[keV]	[°]	[μrad]	[μrad]	[meV/μrad]	[meV]	[meV]	[meV]
LiNbO3	(3,4,5)	8.749	78	2.6	5.6	1.901	10.63	23.76	26.03
	Equiv. Refl.: (3,-7,-5), (4,3,-5), (4,-7,5), (7,-3,-5), (7,-4,5), (-3,7,5), (-3,-4,-5), (-4,7,-5), (-4,-3,5), (-7,3,5), (-7,4,-5)								
Quartz	(3,4,0)	8.862	82.26	2.5	3.9	1.216	4.73	15.2	15.92
	Equiv. Refl.: (3,-7,0), (4,3,0), (4,-7,0), (-7,3,0), (-7,4,0)								
Quartz	(0,6,1)	8.817	80.33	2.2	3.2	1.524	4.83	19.06	19.66
	Equiv. Refl.: (0,-6,-1), (6,0,-1), (6,-6,1), (-6,0,1), (-6,6,-1)								
LiNbO3	(3,4,-1)	8.47	71.26	1.9	3.9	3.034	11.84	37.93	39.73
	Equiv. Refl.: (3,-7,1), (4,3,1), (4,-7,-1), (7,-3,1), (7,-4,-1), (-3,7,-1), (-3,-4,1), (-4,7,1), (-4,-3,-1), (-7,3,-1), (-7,4,1), (1,4,-5), (1,-5,5), (4,1,5), (4,-5,-5), (-5,1,-5), (-5,4,5)								
Quartz	(0,6,0)	8.742	77.8	1.8	2.5	1.934	4.89	24.18	24.67
	Equiv. Refl.: (0,-6,0), (6,0,0), (6,-6,0), (-6,0,0), (-6,6,0)								
Quartz	(5,-1,5)	8.802	79.77	1.4	2.5	1.615	4.06	20.18	20.59
	Equiv. Refl.: (5,-4,-5), (6,-1,2), (6,-5,-2), (-1,5,-5), (-1,6,-2), (-1,-4,5), (-1,-5,2), (-4,5,5), (-4,-1,-5), (-5,6,2), (-5,-1,-2)								
Quartz	(1,5,-2)	8.43	70.49	1.3	1.8	3.17	5.76	39.62	40.04
	Equiv. Refl.: (1,-6,2), (5,1,2), (5,-6,-2), (-6,1,-2), (-6,5,2)								
Quartz	(0,5,-4)	8.609	74.28	1.2	1.8	2.518	4.62	31.47	31.81
	Equiv. Refl.: (0,-5,4), (5,0,4), (5,-5,-4), (-5,0,-4), (-5,5,4)								
LiNbO3	(1,2,17)	8.445	70.78	1.1	2.9	3.118	9.03	38.98	40.01
	Equiv. Refl.: (1,-3,-17), (2,1,-17), (2,5,3), (2,5,-3), (2,-3,17), (2,-7,3), (2,-7,-3), (3,-1,-17), (3,-2,17), (5,2,3), (5,2,-3), (5,-7,3), (5,-7,-3), (7,-2,3), (7,-2,-3), (7,-5,3), (7,-5,-3), (-1,3,17), (-1,-2,-17), (-2,3,-17), (-2,7,3), (-2,7,-3), (-2,-1,17), (-2,-5,3), (-2,-5,-3), (-3,1,17), (-3,2,-17), (-5,7,3), (-5,7,-3), (-5,-2,3), (-5,-2,-3), (-7,2,3), (-7,2,-3), (-7,5,3), (-7,5,-3)								
Sapph	(0,5,-8)	8.436	70.59	0.8	1.4	3.151	4.33	39.39	39.63
	Equiv. Refl.: (0,-5,8), (5,0,8), (5,-5,-8), (-5,0,-8), (-5,5,8)								
Sapph	(3,3,9)	8.92	85.78	0.3	1.5	0.661	0.97	8.26	8.32
	Equiv. Refl.: (3,3,-9), (3,-6,9), (3,-6,-9), (6,-3,9), (6,-3,-9), (-3,6,9), (-3,6,-9), (-3,-3,9), (-3,-3,-9), (-6,3,9), (-6,3,-9)								
Sapph	(1,5,2)	8.43	70.49	0.1	0.5	3.169	1.6	39.61	39.64
	Equiv. Refl.: (1,-6,-2), (5,1,-2), (5,-6,2), (6,-1,-2), (6,-5,2), (-1,6,2), (-1,-5,-2), (-5,6,-2), (-5,-1,2), (-6,1,2), (-6,5,-2)								