Supplementary Materials for:

Pathways for Neoarchean pyrite formation constrained by mass-independent sulfur isotopes

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Analytical procedure

Sample preparation

Samples were cut from core remnants using a diamond wafering saw and cast along with the in-house standard Son-3 in epoxy mounts. Samples were ground flat and polished to 1 μm before imaging and coating with 30 nm of gold.

Sulfide S-isotope analysis

Analytical procedure

Sulfur 4-isotope ratios ($^{x}S/^{32}S$) were determined using a Cameca IMS 1280 ion microprobe in multicollection mode at the Centre for Microscopy, Characterisation and

Analysis (CMCA) at the University of Western Australia. In all cases NMR regulation was used and ^{32}S, ^{33}S, and ^{34}S were measured using Faraday cup detectors (FC). ^{36}S was measured using an electron multiplier (EM). Two different analytical conditions were used depending on the size of the sulfide target available. When sulfide grains were of sufficient size, a rastered beam approach was used. A 3.5 – 4 nA focused primary beam was used to presputter the analysis area using a 30 µm × 30 µm beam for 30 seconds followed by automated secondary centering in the field aperture (FA) and entrance slit (ES) and analysis using a 20 µm × 20 µm raster employing dynamic transfer for 45 × 4 second integrations. This strategy optimized conditions for a stable signal for ^{36}S on the EM, thus minimizing artifacts due to nonlinearity of the EM response at high count rates during the course of a single analysis. Unknowns were bracketed with standards of known composition. Other conditions include a 133 × magnification between sample stage and FA, 70 µm entrance slit, 4000 µm FA, 400 µm contrast aperture, a 40 eV energy window with a 5 eV offset to the high energy side, and 500 µm exit slits. These conditions do not allow for complete resolution of the $^{32}SH^-$ and $^{33}S^-$ peaks. However, we employed the common method of offsetting the m/z 33 trolley to the low mass side. Abundance sensitivity under the analytical conditions presented here is sufficient to exclude tailing of the $^{32}SH^-$ peak. For example, we have found that under these conditions, analyses of standard grains in a radius of 6 mm from the centre of the sample provide no evidence of degraded abundance sensitivity which would be exhibited as poor external precision of the $^{33}S/^{32}S$ measurements and a positive $\Delta^{33}S$ signature ($\delta^{33}S$-σ_{ext} = 0.04‰, $\Delta^{33}S$ = 0.006 ± 0.01 ‰, 1σ_{ext}). Average external precision (1 SD) for standard analyses were as follows $\delta^{33}S$ =0.05‰ , $\delta^{34}S$ =0.05‰ ,$\delta^{36}S$=0.15‰ ,$\Delta^{33}S$ =0.03‰, and $\Delta^{36}S$ = 0.13‰ .

In many cases, targets were analyzed with length scales of between 10 µm and 20 µm. For these targets, a static ~10 µm beam was used after presputtering. Because IMF changed

dramatically as a function of depth (see Table S1 below) IMF was calculated every 15 cycles. Thus, each analysis consisted of 45× 4-second cycles but used a different IMF factors for cycles 1-15, 16-30, and 31-45 and data reported here consist of the average of the IMF corrected δ values (or calculated Δ values) and uncertainties are the SD_{mean} of the three values for each analysis. Each analysis spot was pre-sputtered for 30 seconds with a raster of 10 μm before a static beam was employed. Other analytical conditions were identical to that employed with a rastered beam (see above). Regardless of whether a rastered or static beam was used for analysis, a normal incidence electron gun was used for charge compensation. Despite the fact that the analyses were performed with the Cameca automatic EM drift correction module, drift correction was often needed for ^{36}S. Average external precision for standard analyses were as follows $\delta^{33}S$ = 0.07‰, $\delta^{34}S$ =0.11‰ , $\delta^{36}S$=0.30‰ ,$\Delta^{33}S$ =0.04‰, and $\Delta^{36}S$ =0.25‰.

Table S1. Representative IMF data for $^{33}S/^{32}S$, $^{34}S/^{32}S$, and $^{36}S/^{32}S$ for a single analysis session using the static analysis beam approach. Individual $\delta^{x}S$ values for each analysis were obtained by averaging the values obtained using equation 4 with three different IMF values for each third of the analysis.

	$^{33}S/^{32}S$		$^{34}S/^{32}S$		$^{36}S/^{32}S$	
Anal. cycle	IMF[a]	1σ[b]		1σ		1σ
1-15	1.001818	0.000026	1.002405	0.000037	0.975313	0.00010
16-30	0.999882	0.000030	0.998679	0.000034	0.968699	0.00011
31-45	0.997991	0.000023	0.994973	0.000028	0.961573	0.00008

[a]Instrumental mass fractionation (α) defined by (equation 3 above).
[b] 1 SD_{mean} n = 12.

Data processing

calibration

Detector yield and background corrected $^{x}S/^{32}S$ raw ratios (R_{raw}) were drift corrected where deemed necessary using a linear regression:

$$R_{drift} = R_{raw} - mx \quad (1)$$

where *m* is the slope of the regression and *x* is the analysis number between bracketing standards, scaled to ensure that the intercept (*c*) crosses the *x*-axis at *x* = 0. The drift corrected ratios were expressed as raw delta values (VCDT) using:

$$\delta^{x}S_{drift} = 1000\left(\frac{R_{drift}}{{}^{x}R_{VCDT}} - 1\right). \quad (2)$$

We used 0.00787766 for $^{33}R_{VCDT}$, 0.04417586 for $^{34}R_{VCDT}$, and 0.00015368 for $^{36}R_{VCDT.}$ mass fractionation (α) was then calculated as the infit and outfit corrected σ_{drift}^{-2} (see below) weighted average of all estimates α_i of the $\delta^{x}S_{drift}$ values for the bracketing standards using:

$$\alpha_i = \frac{1+\left(\frac{\delta^{x}S_{drift}}{1000}\right)}{1+\left(\frac{\delta^{x}S_{std}}{1000}\right)} \quad (3)$$

where $\delta^{x}S_{std}$ is the $\delta^{x}S$ value of the bracketing working standard used in the analyses relative to VCDT. The $\delta^{x}S$ estimate relative to VCDT for each sample spot was obtained by using:

$$\delta^{x}S_{sample} = 1000\left\{\left[1+\left(\frac{\delta^{x}S_{drift}}{1000}\right)\right]\Big/\alpha - 1\right\} \quad (4)$$

The Laser Fluorination values for our primary pyrite standard Son-3 relative to VCDT are $\delta^{33}S$= 0.83±0.03, $\delta^{34}S$ = 1.61±0.08, and $\delta^{36}S$= 3.25±0.03 (mean ±SD_{mean} n=3)

Propagation of uncertainty

We use the law of propagation of uncertainty to obtain expanded uncertainty estimates for individual analyses including a covariance term for linear regression associated with drift correction when used. The propagated error to include the uncertainty associated with drift correction is given by:

$$\sigma_{R_{drift}} = \sqrt{\sigma_i^2 + \sigma_{reg}^2}\,, \tag{5}$$

where σ_i is the internal precision (SD_{mean} of the 15 analysis blocks (for static analyses) or 45 analysis blocks (for rastered analyses) of a single analysis *i* and σ_{reg} is the standard error of the estimate of the linear regression used to model drift, given by:

$$\sigma_{reg} = \sqrt{x^2\sigma_m^2 + \sigma_c^2 + 2x\rho\sigma_m\sigma_c}\,. \tag{6}$$

σ_m and σ_c are the standard errors associated with the estimation of slope and intercept respectively and ρ is the correlation coefficient for the regression. The uncertainty of $\delta^{x}S_{drift}$ is given by:

$$\sigma_{drift} = \sqrt{\left(\frac{1000}{{}^{x}R_{VCDT}} \cdot \sigma_{R_{drift}}\right)^2}\,. \tag{7}$$

The uncertainty of individual α_i estimates is given by:

$$\sigma_{\alpha i} = \sqrt{\left[\frac{1}{\left(1000 + \delta^{x}S_{std}\right)} \cdot \sigma_{drift}\right]^2 + \left\{-\sigma_{std}\left[\frac{1000 + \delta^{x}S_{drift}}{\left(1000 + \delta^{x}S_{std}\right)^2}\right]\right\}^2} \tag{8}$$

where σ_{std} is the uncertainty of the reference value of the appropriate working standard. The uncertainty associated with α (σ_α) is the weighted mean standard error of the individual estimates α_i obtained from the drift corrected standards that have been scaled for underfit or overfit using

$$\sigma_\alpha * \frac{1}{(n-1)} * \sum_{i=1}^{n} \frac{(\alpha_i - \overline{\alpha})^2}{\sigma_{\alpha i}^2} \tag{9}$$

. The propagated uncertainty for the $\delta^{18}O$ value of each sample spot is given by:

115 $$ {}^{x}\sigma_{sample} = \sqrt{\left(\frac{1}{\alpha}\cdot\sigma_{drift}\right)^2 + \left[\sigma_{\alpha}\left(-\frac{1000+\delta^{x}S_{sample}}{\alpha^2}\right)\right]^2} \quad . \qquad (10) $$

116 $$ {}^{\Delta 33}\sigma = \sqrt{\left(\delta 33\sigma_{sample}\right)^2 + \left[\delta 34\sigma * 0.515\left(1+\frac{\delta^{34}S}{1000}\right)^{-0.485} - 1\right]^2} \qquad (11) $$

117

and

118 $$ {}^{\Delta 36}\sigma = \sqrt{\left(\delta 36\sigma_{sample}\right)^2 + \left[\delta 34\sigma * 1.9\left(1+\frac{\delta^{34}S}{1000}\right)^{0.9} - 1\right]^2} \quad . \qquad (12) $$

119

120

121 **Evaluation of uncertainty introduced by partial overlap with nonsulfide phases**

122

123 The placement of the primary beam on pyrite grains for one session (Mount 2-sample
124 GKF01-834.6m) was offset by about 10 microns from where we thought the beam was
125 aimed. Since the grains were only 20-30 microns across, this yielded analyses of spots with
126 variable amounts of overlap with nonsulfide phases. The grains in this sample are
127 disseminated pyrite and appear to possess a homogenous $\Delta^{33}S$ and $\Delta^{36}S$ values. The $\delta^{34}S$
128 values appear to be variable, and it is unclear whether this is real heterogeneity or an artifact
129 of grain overlap. A plot of $\Delta^{33}S$ versus count rate (^{32}S) is presented in Figure S1. SEM and
130 BSE images and data for these spots are presented below in Figure S2 and Table S2.

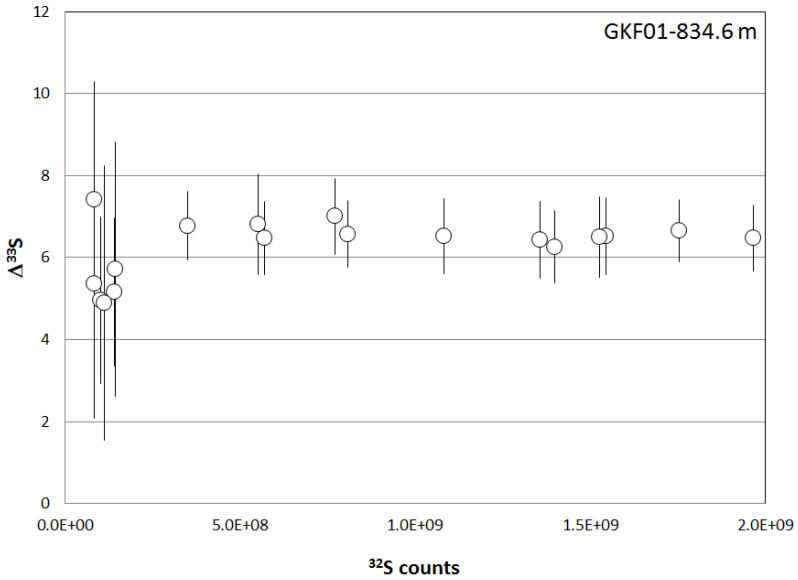
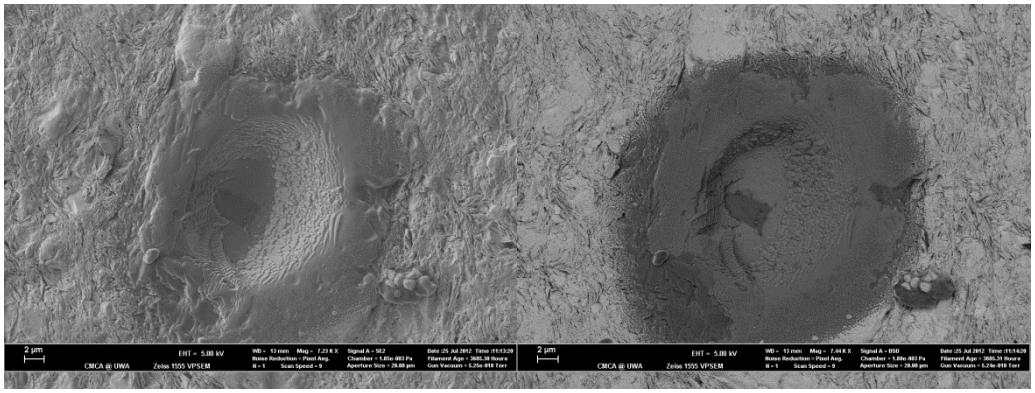
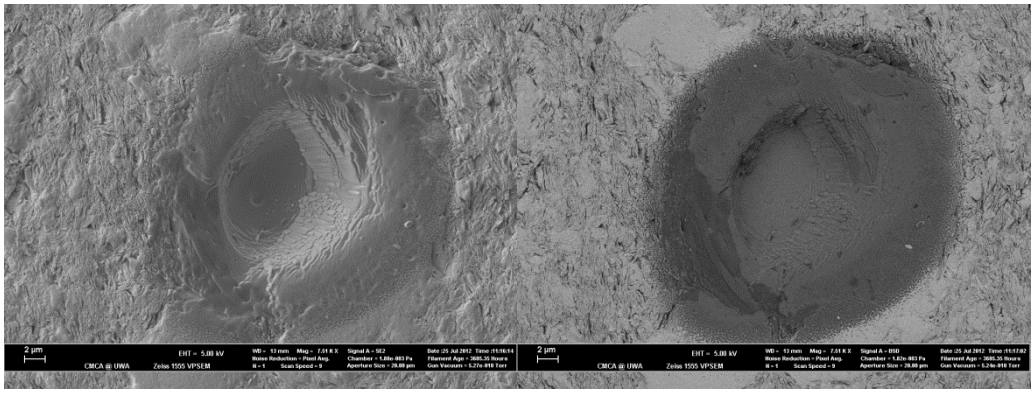


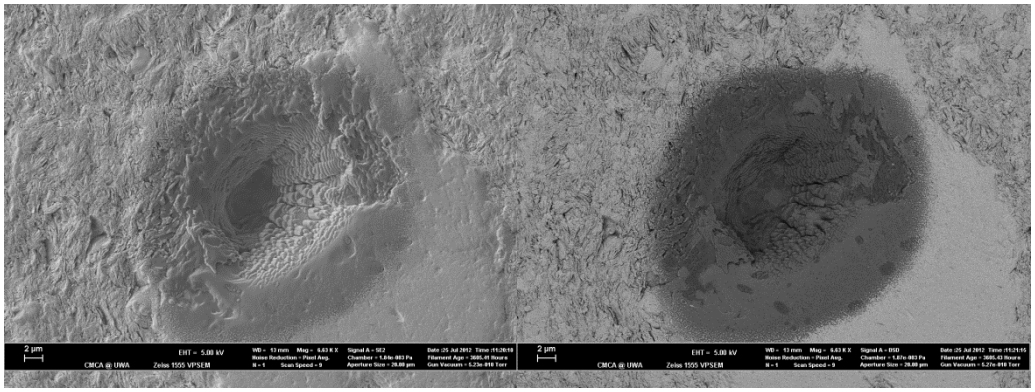
Figure S1: Plot of $\Delta^{33}S$ versus count rate (^{32}S). Error bars are 2 times the SIMS uncertainty.



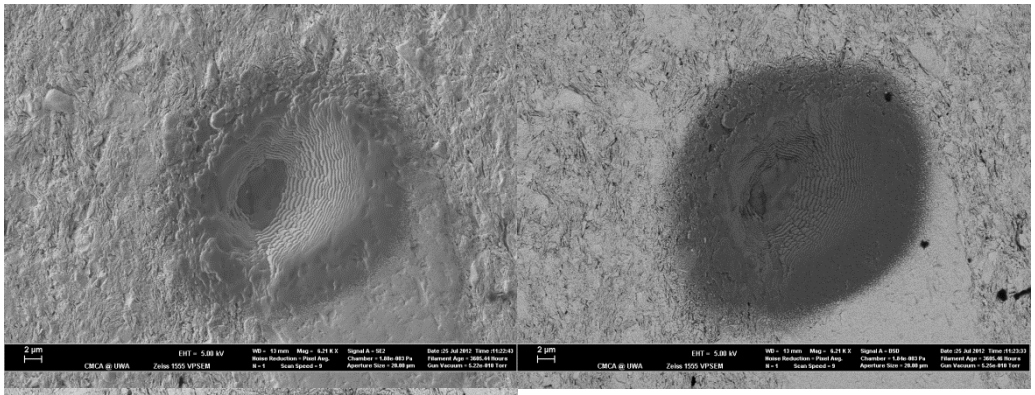
Mount 2 Grain 1

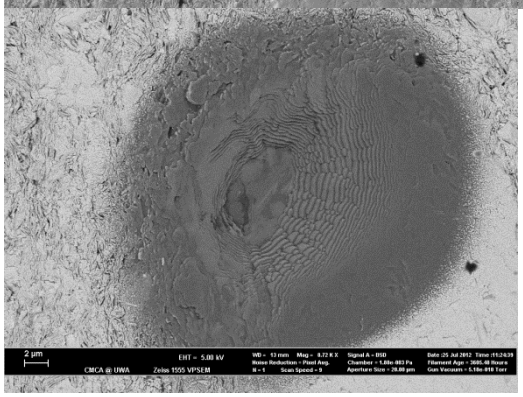


MOUNT 2 GRAIN 2

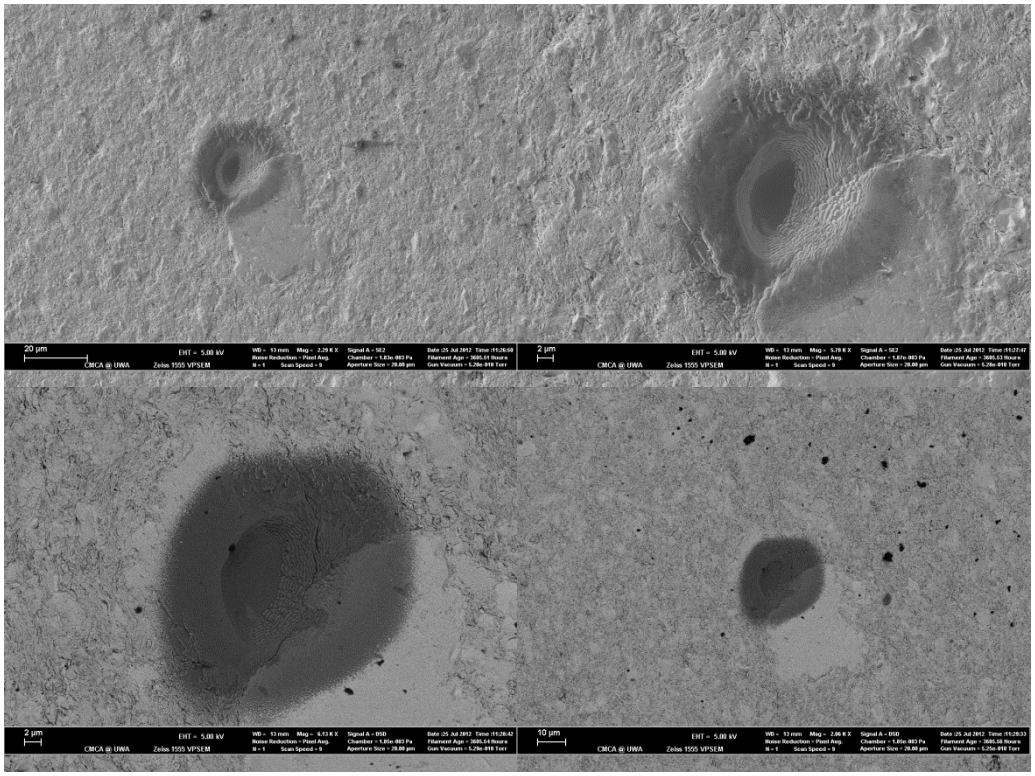


MOUNT 2 GRAIN 3

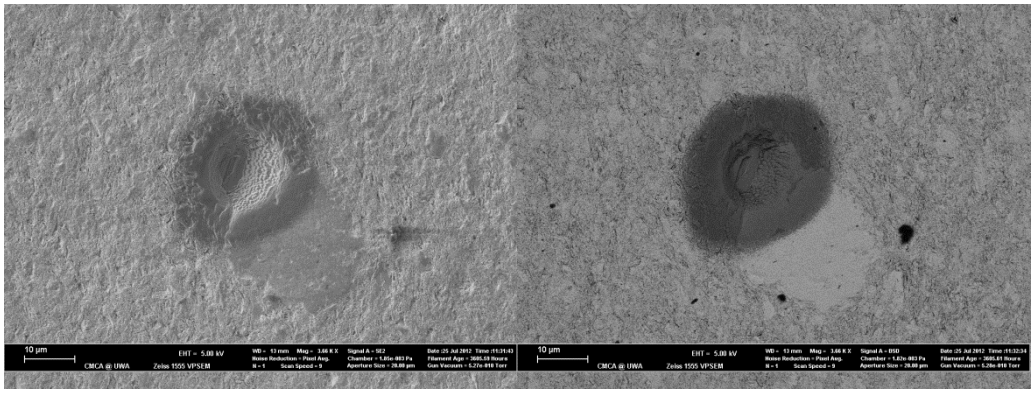




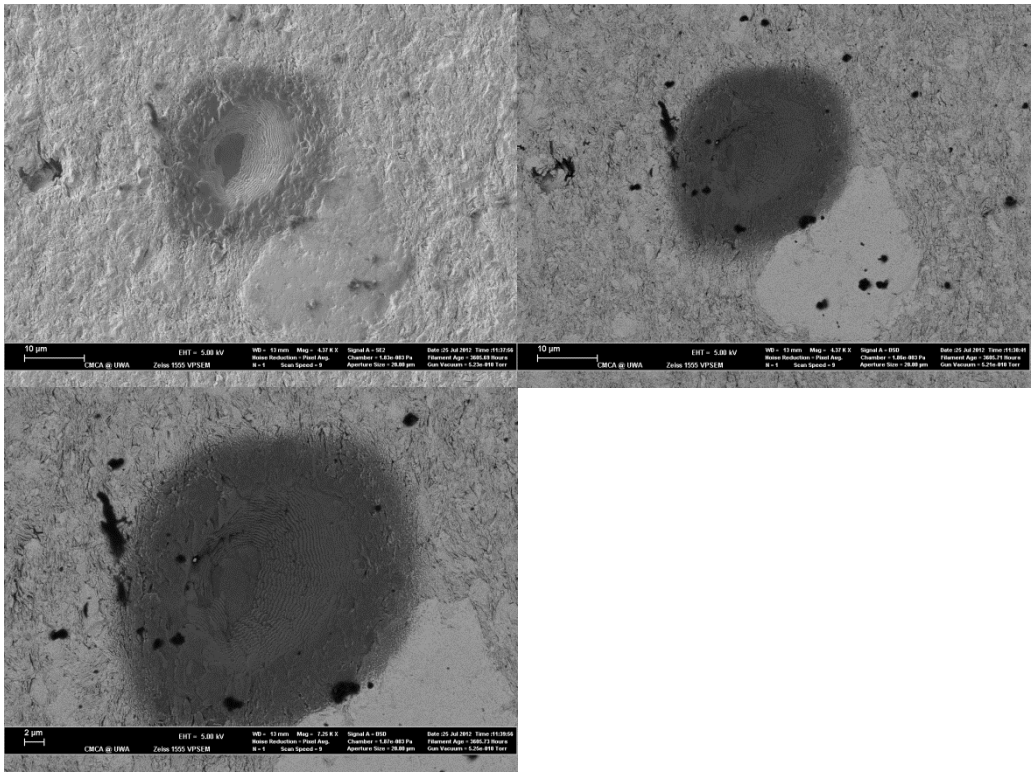
MOUNT 2 GRAIN 4



MOUNT 2 GRAIN 5



MOUNT 2 GRAIN 6



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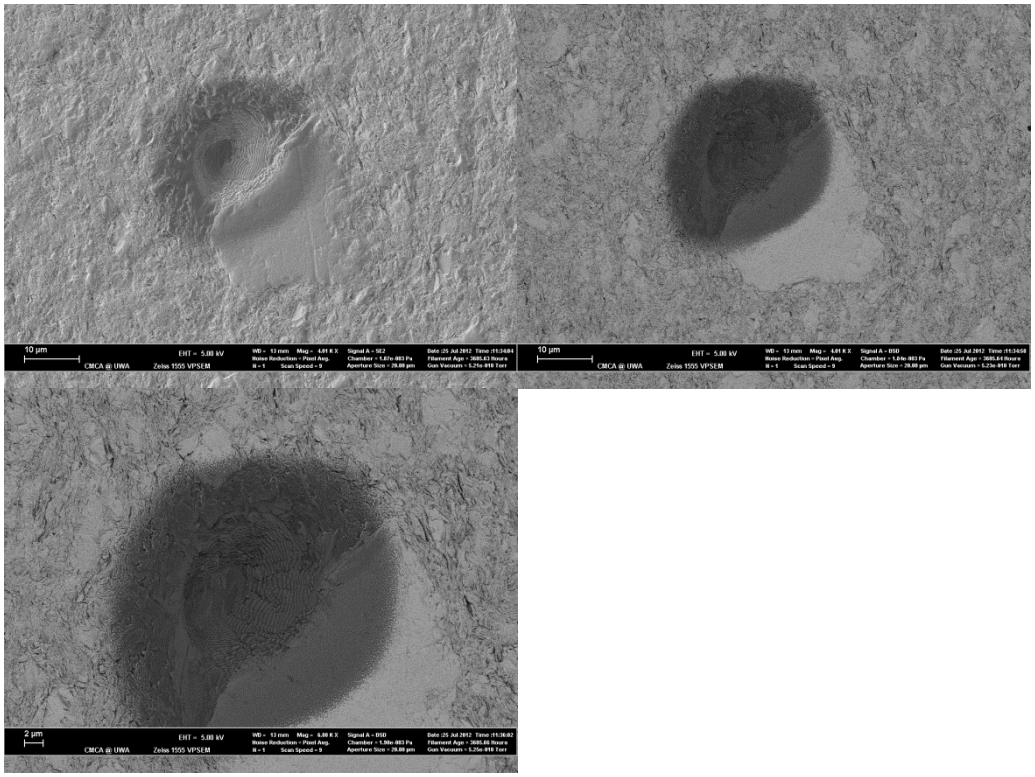


MOUNT 2 GRAIN 8

Figure S2: SEM and BSE images of SIMS pits for sample Mount 2 GKF01-834.6m. Each SIMS pit was occupied for three successive analyses (@1, @2, @3).

Table S2

Analysis	$^{32}S_{counts}$	$\delta^{33}S_{VCDT}$	unc	$\delta^{34}S_{VCDT}$	unc	$\delta^{36}S_{VCDT}$	unc	$\Delta^{33}S_{VCDT}$	unc	$\Delta^{36}S_{VCDT}$	unc
#2-1@1	1.4E+09	9.46	0.21	6.22	0.13	3.18	0.41	6.26	0.44	-8.66	0.41
#2-1@2	1.54E+09	10.37	0.18	7.49	0.31	5.51	0.66	6.52	0.47	-8.76	0.66
#2-1@3	1.75E+09	11.84	0.17	10.10	0.16	11.22	0.35	6.65	0.38	-8.06	0.35
#2-2@1	1.36E+09	9.14	0.22	5.24	0.17	1.19	0.50	6.44	0.47	-8.80	0.50
#2-2@2	1.53E+09	9.85	0.18	6.52	0.32	3.25	0.73	6.50	0.49	-9.17	0.73
#2-2@3	1.97E+09	9.74	0.17	6.34	0.20	3.90	0.48	6.47	0.40	-8.19	0.48
#2-3@1	5.7E+08	9.10	0.22	5.10	0.07	0.54	0.49	6.48	0.45	-9.16	0.49
#2-3@2	7.71E+08	10.75	0.17	7.29	0.29	3.82	0.76	7.00	0.46	-10.08	0.76
#2-3@3	3.49E+08	12.70	0.19	11.54	0.16	12.74	0.61	6.78	0.42	-9.31	0.61
#2-5@1	1.02E+08	7.64	0.50	5.21	0.11	1.82	1.09	4.96	1.02	-8.10	1.09
#2-5@2	1.4E+08	8.64	0.43	6.78	0.29	5.53	1.06	5.16	0.91	-7.39	1.06
#2-5@3	1.13E+08	10.79	0.83	11.48	0.21	14.94	1.03	4.89	1.67	-6.99	1.03
#2-6@1	8.07E+08	9.12	0.20	4.95	0.09	0.45	0.42	6.57	0.41	-8.98	0.42
#2-6@2	1.08E+09	10.67	0.18	8.07	0.29	6.55	0.65	6.52	0.46	-8.83	0.65
#2-6@3	5.5E+08	13.02	0.26	12.10	0.32	14.80	0.56	6.81	0.62	-8.31	0.56
#2-8@1	1.42E+08	8.20	0.77	4.84	0.12	-1.35	1.30	5.71	1.55	-10.57	1.30
#2-8@2	83249610	10.01	0.81	9.04	0.33	9.12	1.29	5.37	1.65	-8.13	1.29
#2-8@3	82869510	13.79	0.71	12.40	0.24	16.60	1.19	7.42	1.44	-7.09	1.19

Sample Analysis and Sample Data

The three epoxy mounts studied here were photographed (Figure S3) and representative images of SIMS pits are presented following. SIMS data for all sessions (and data used in plotting) is included in Table S3 and S4.

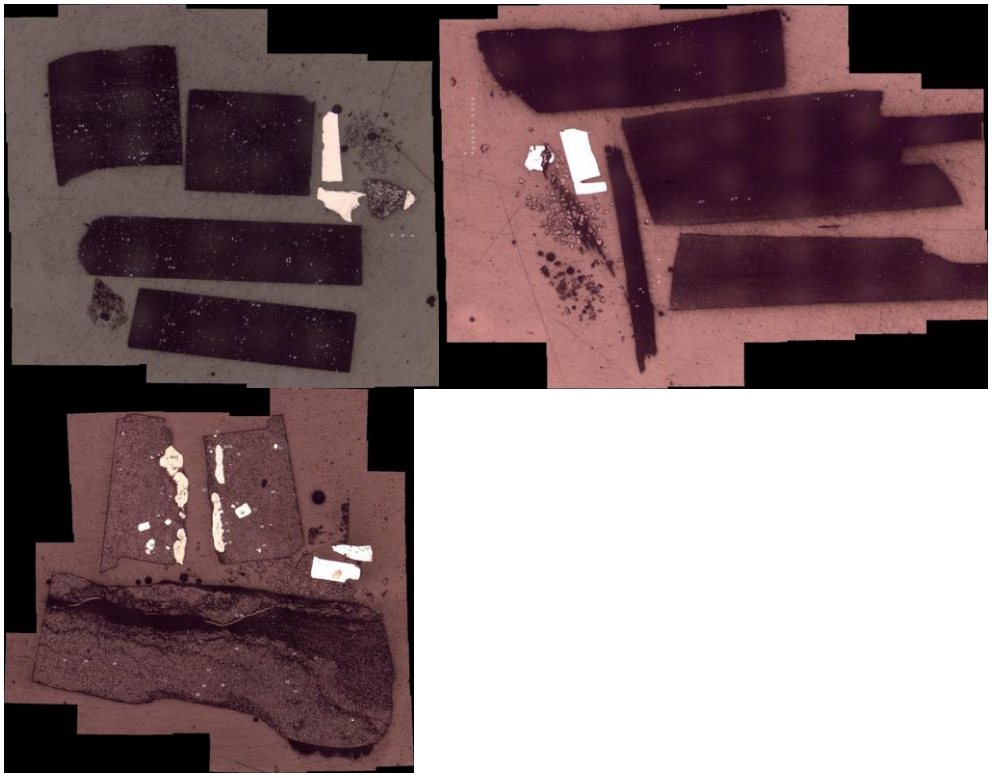
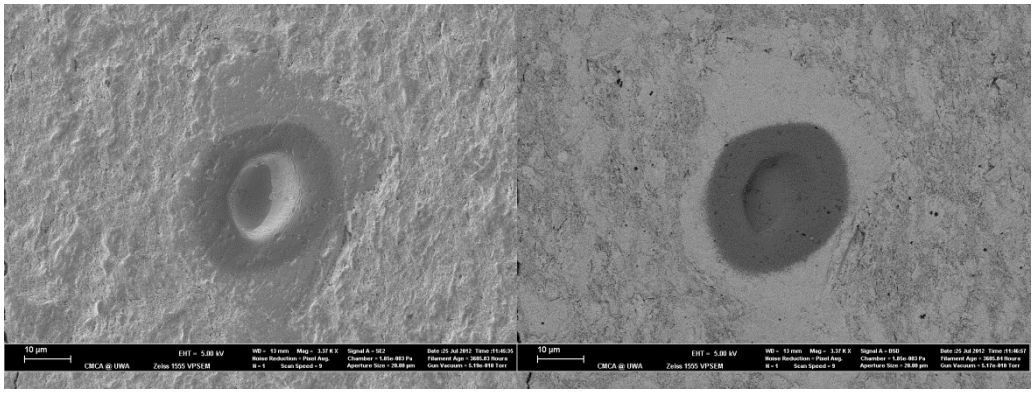
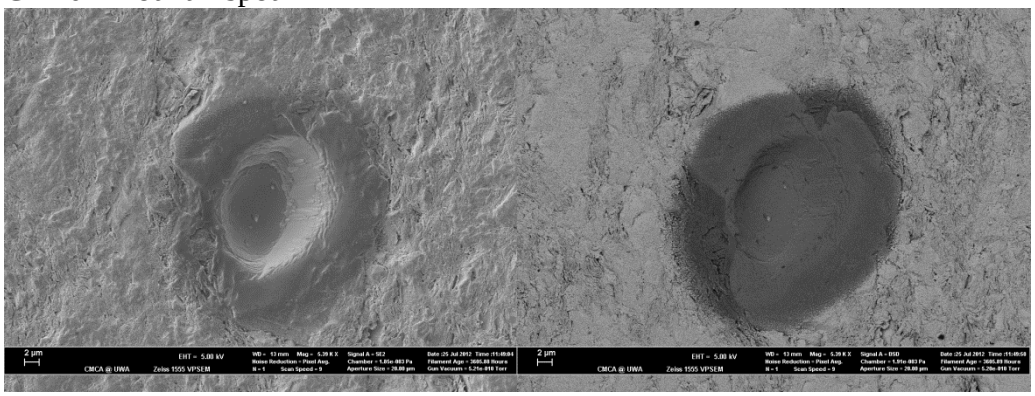


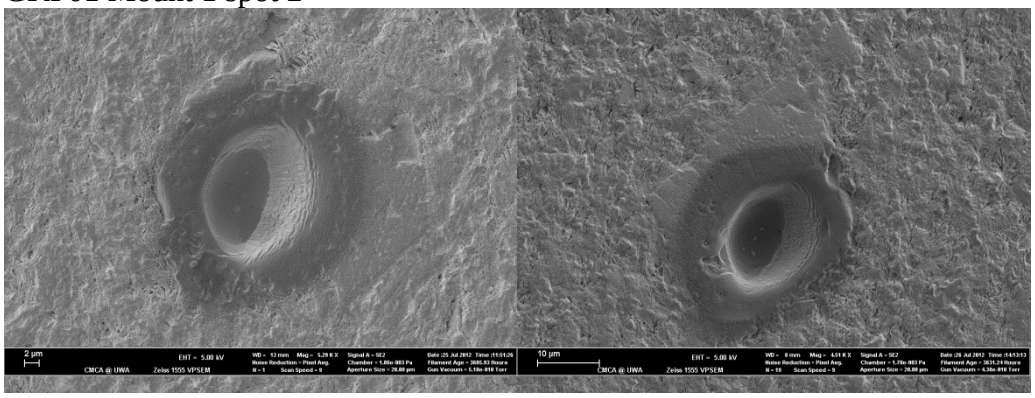
Figure S3. Photomosaics of epoxy mounts studied here. Sample mount 1 (upper left) includes two equant pieces of 729.5 (top) and two long pieces of 829.5 (bottom). Sample mount 2 (upper right) includes one piece of 835.6 (top) and three pieces of 1404 (lower right). Sample mount 4 (lower left) includes two pieces of sample 1102.6 (top) and one large piece of 888.3 (bottom).



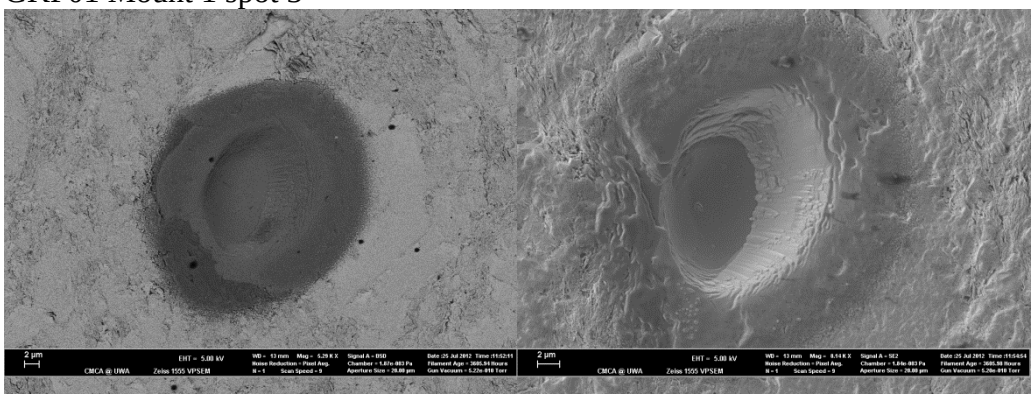
GKF01 Mount 1 spot 1



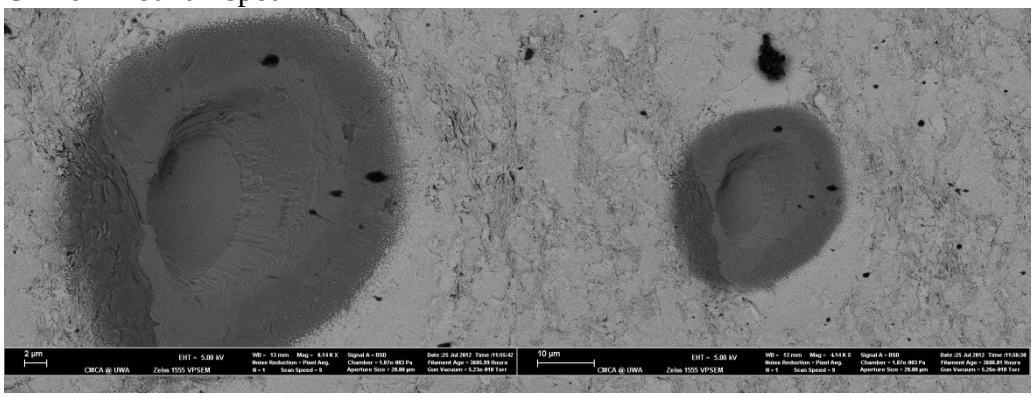
GKF01 Mount 1 spot 2



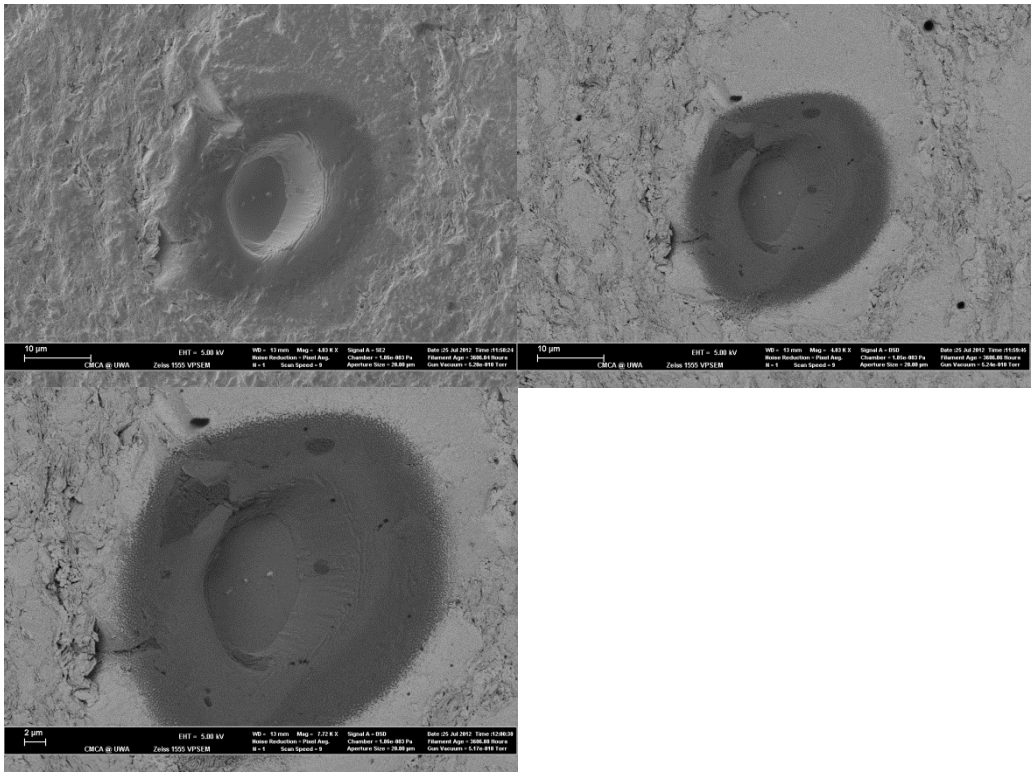
GKF01 Mount 1 spot 3



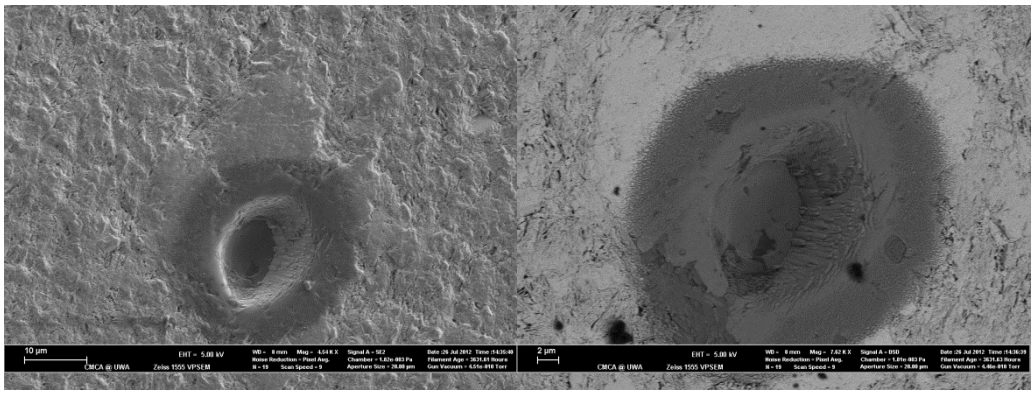
GKF01 Mount 1 spot4



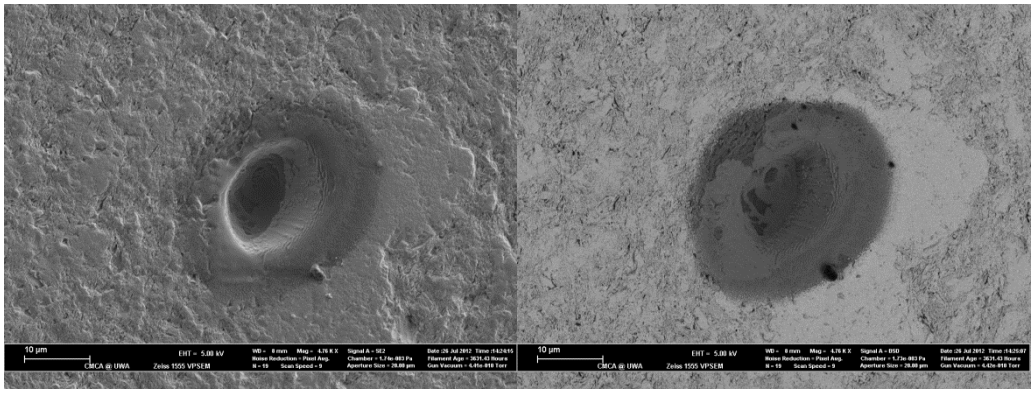
GKF01 Mount 1 spot 5



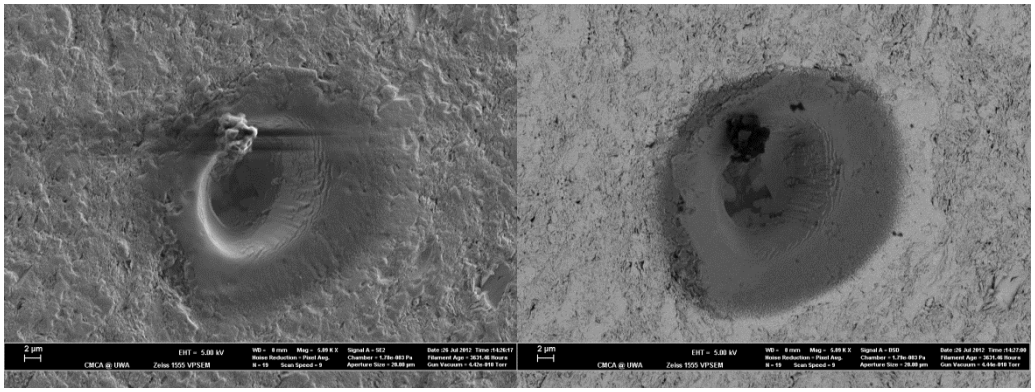
GKF01 Mount 1 spot 6



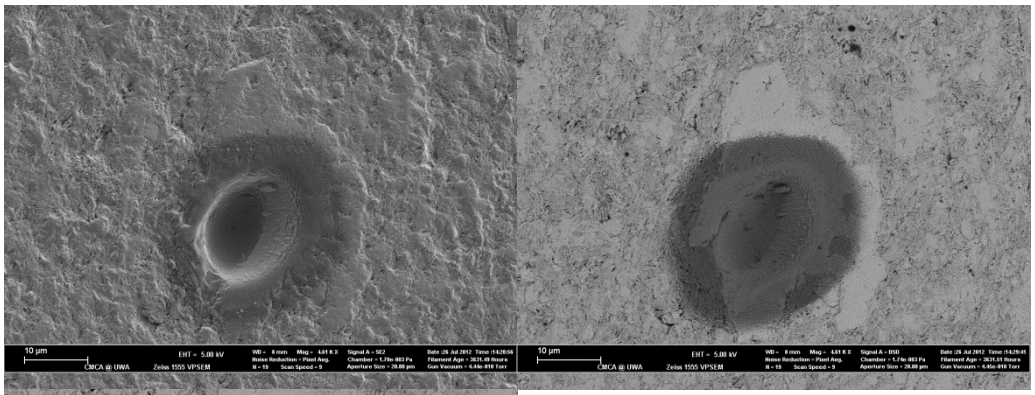
GKF01 Mount 1 spot 7



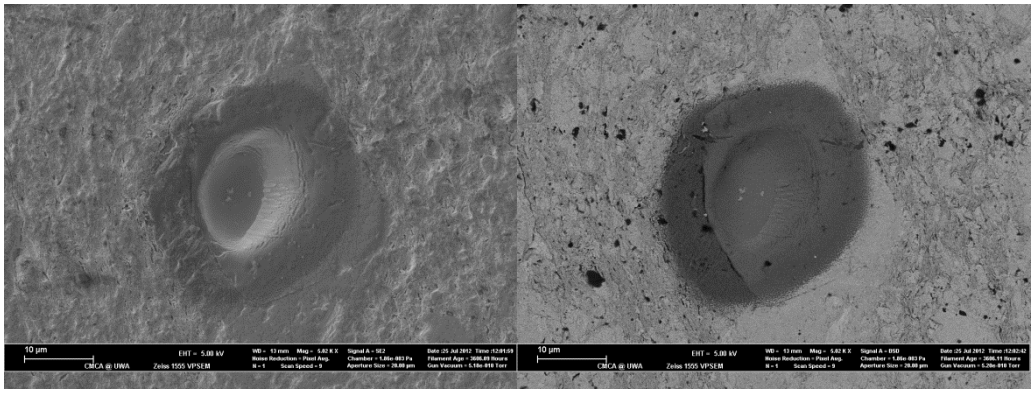
GKF01 Mount 1 spot 8



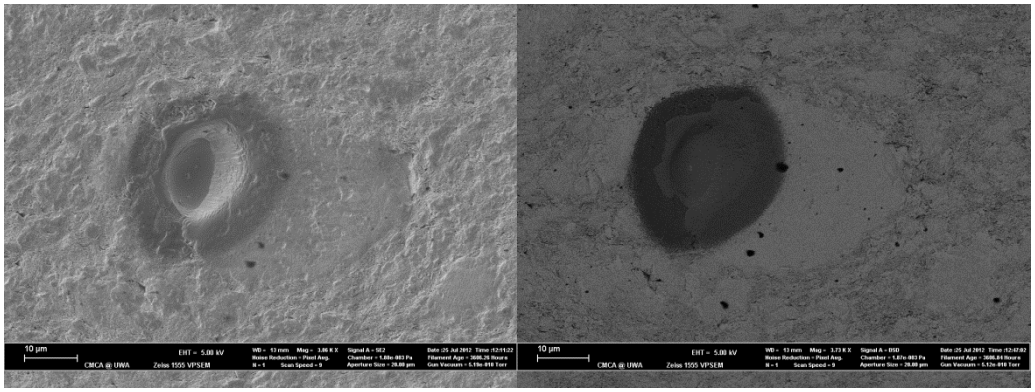
GKF01 Mount 1 spot 9



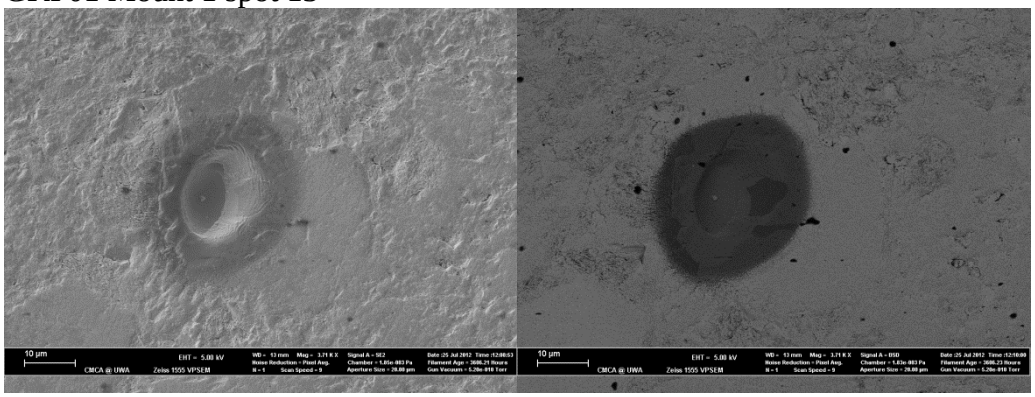
GKF01 Mount 1 spot 10



GKF01 Mount 1 spot 11



GKF01 Mount 1 spot 13



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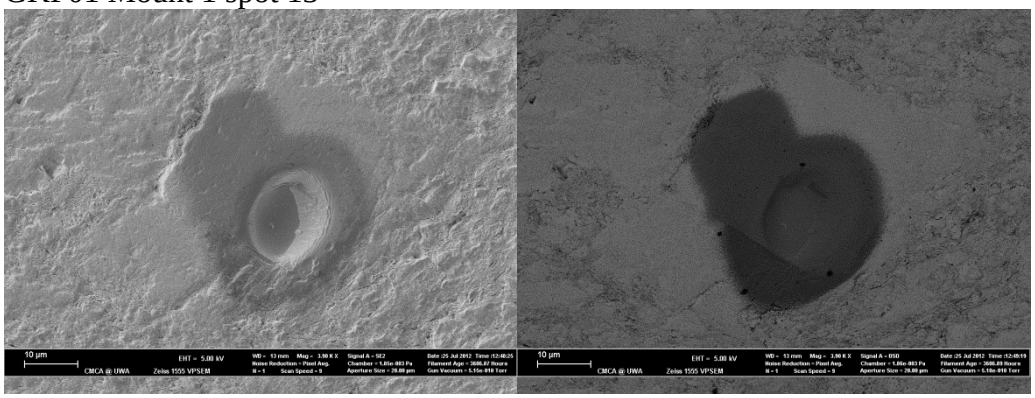
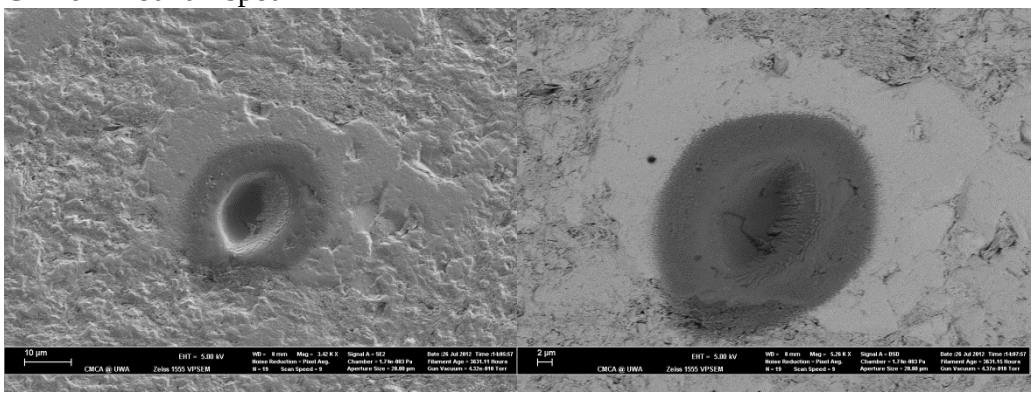
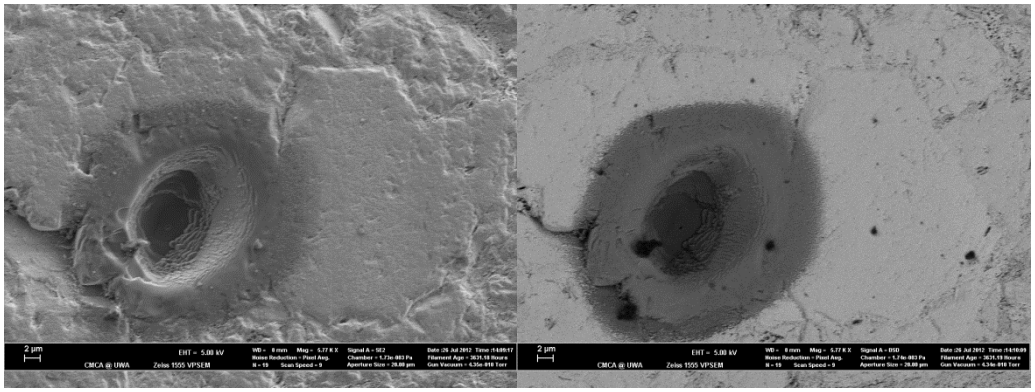


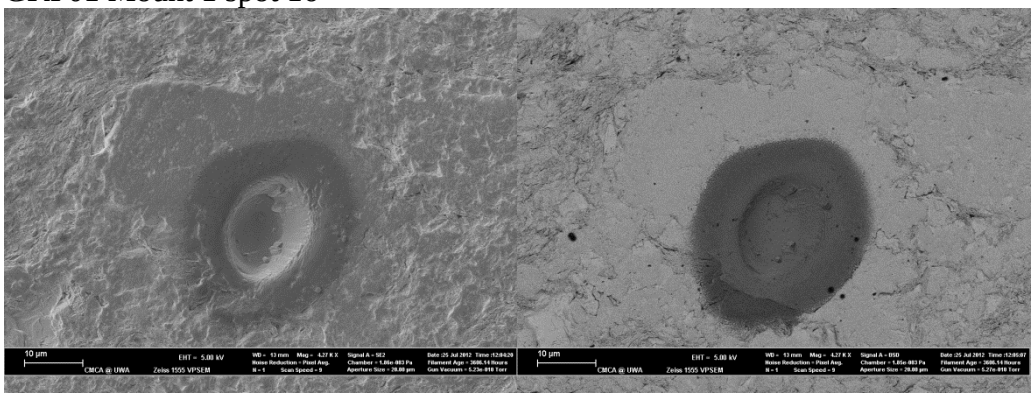
GKF01 Mount 1 spot 14



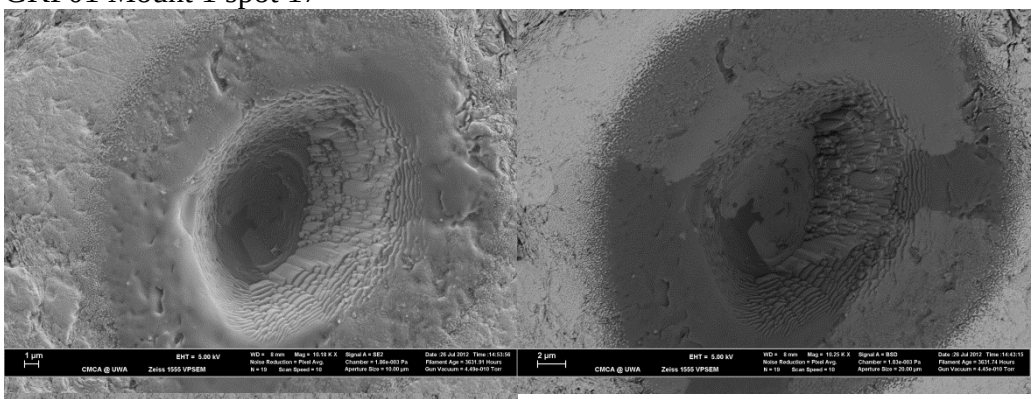
GKF01 Mount 1 spot 15



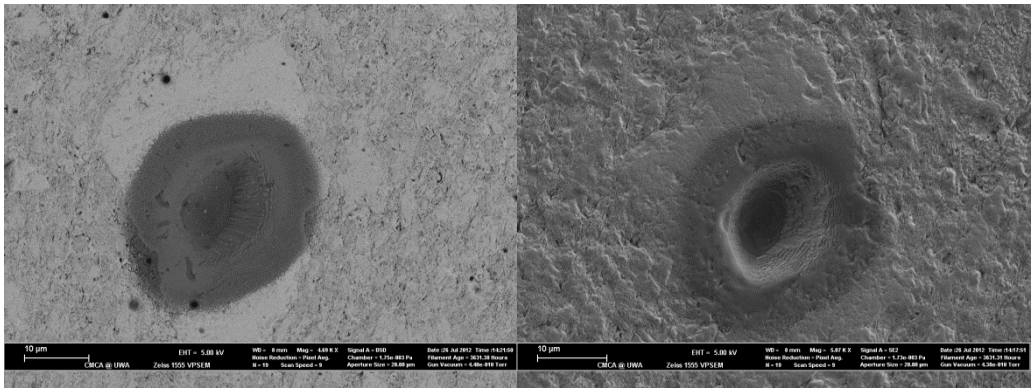
GKF01 Mount 1 spot 16



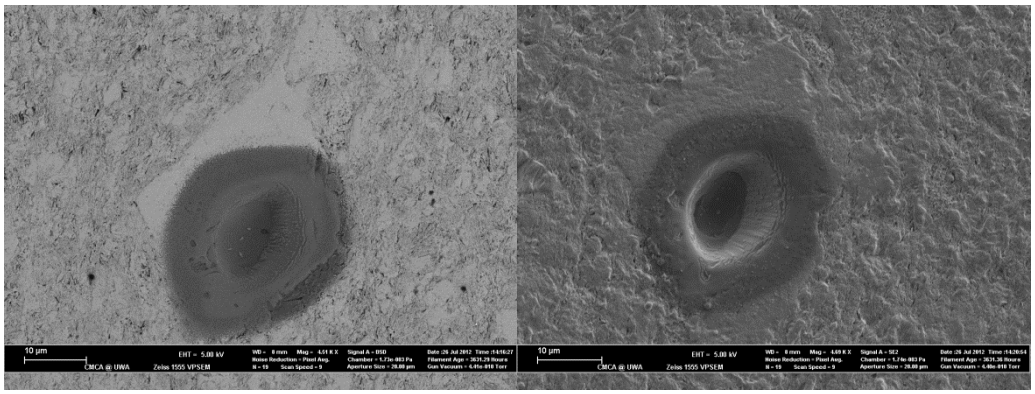
GKF01 Mount 1 spot 17



GKF01 Mount 1 spot 18

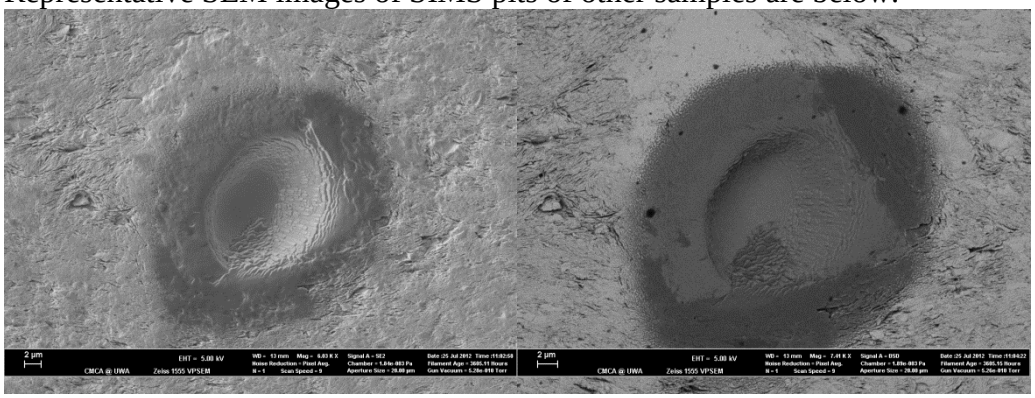


GKF01 Mount 1 spot 20 or 21

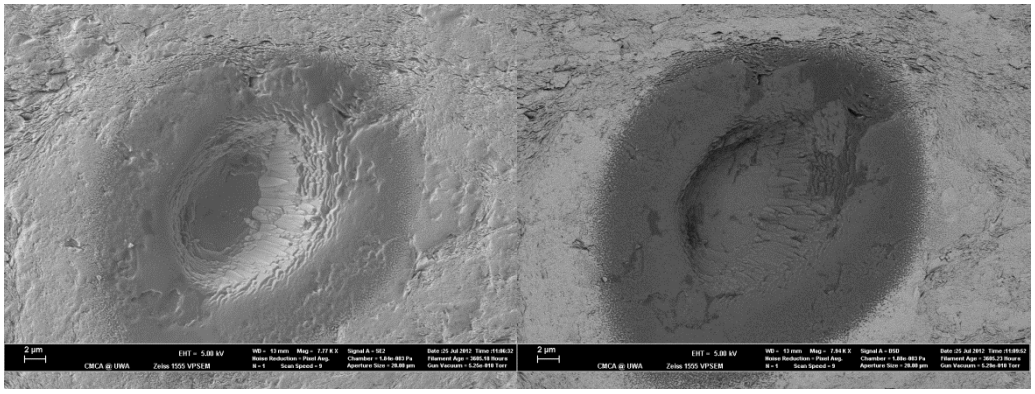


GKF01 Mount 1 spot 19

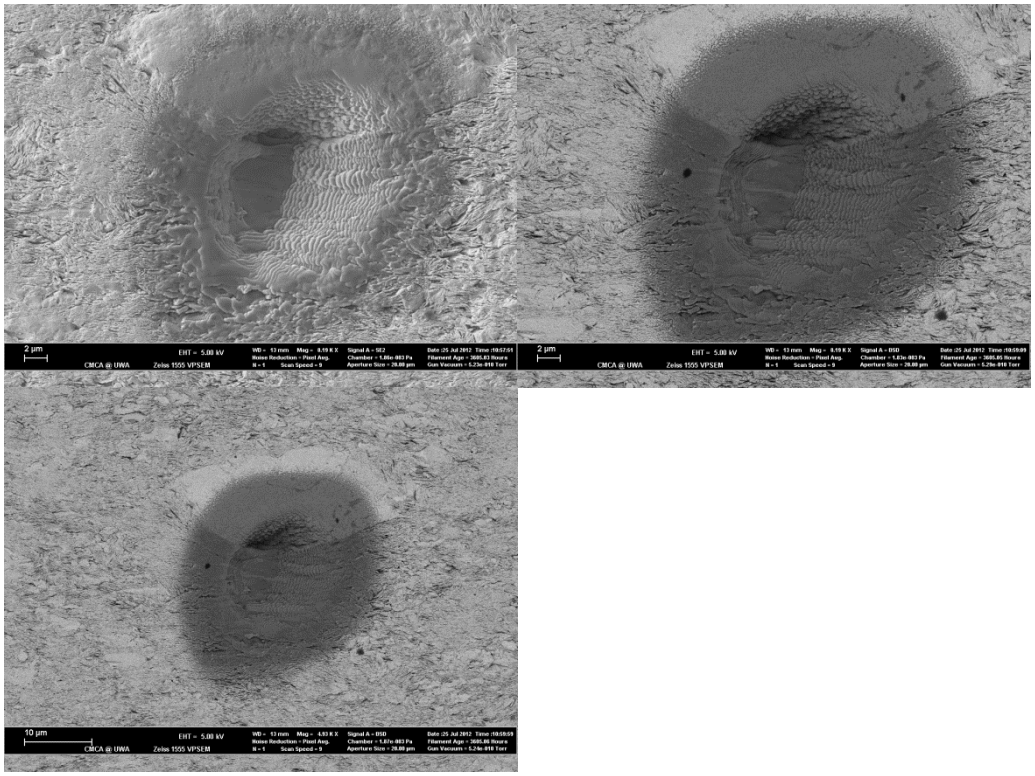
Representative SEM images of SIMS pits of other samples are below:



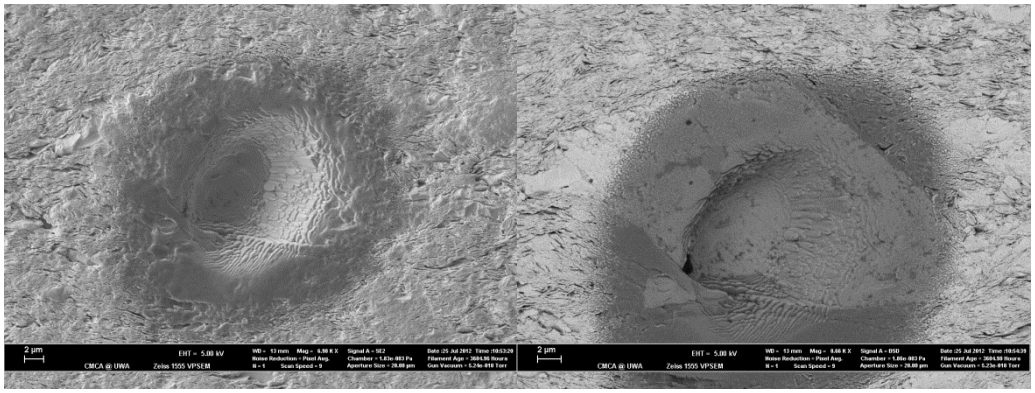
MOUNT 2 GRAIN 9



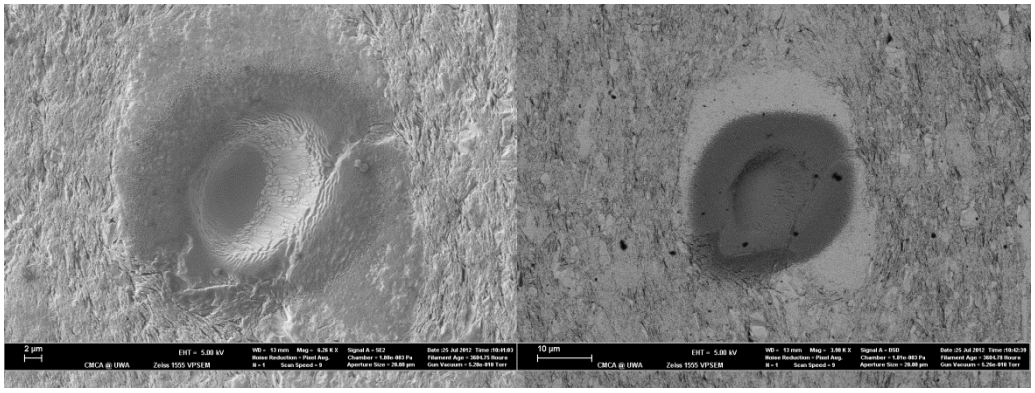
MOUNT 2 GRAIN 10



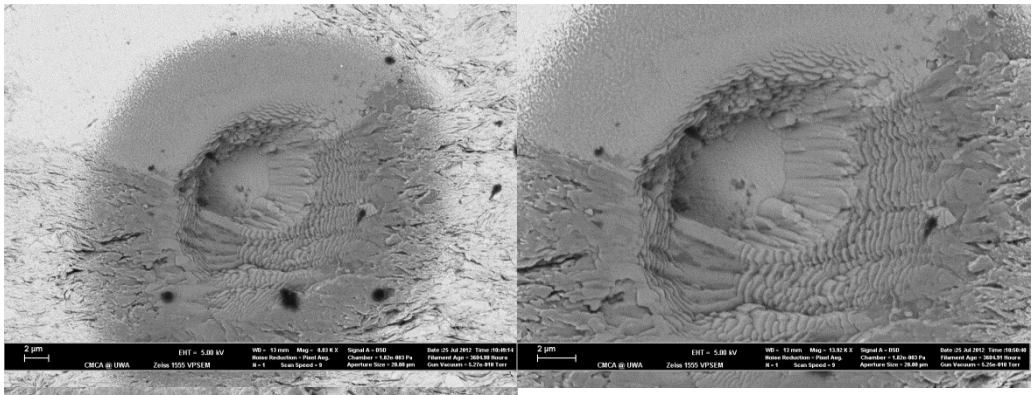
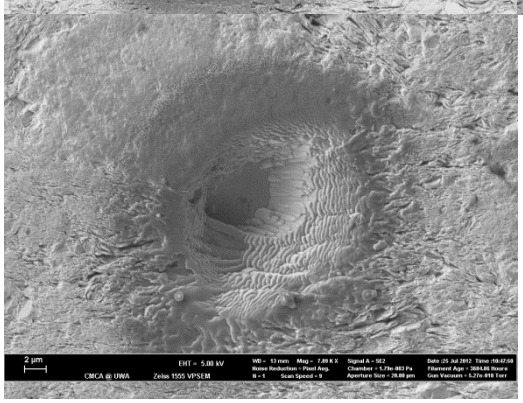
MOUNT 2 GRAIN 11



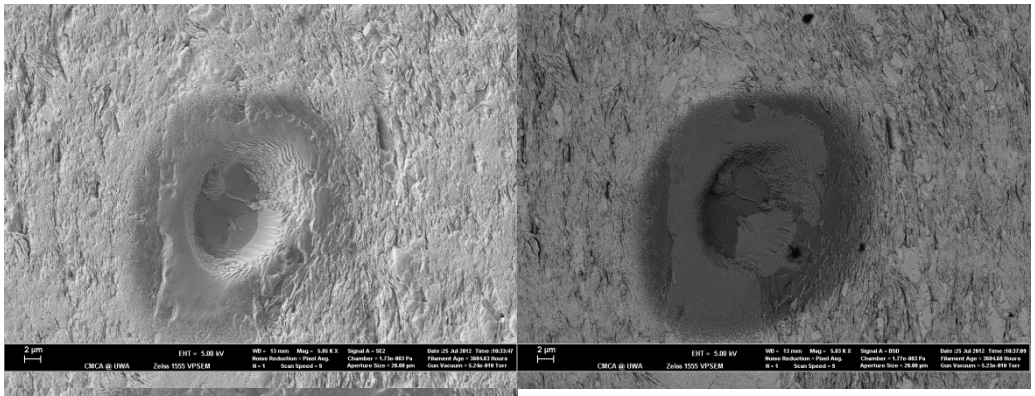
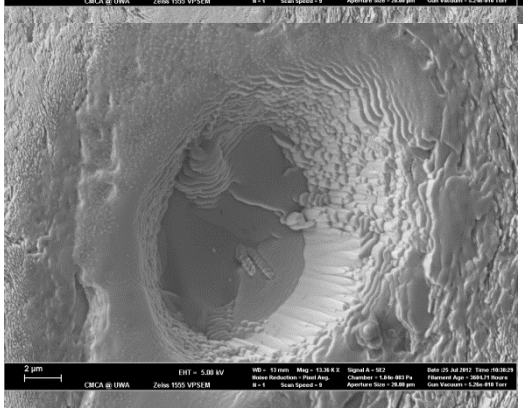
Mount 2 GRAIN 12



MOUNT 2 GRAIN 13

MOUNT 2 GRAIN 14

MOUNT 2 GRAIN 15

Table S3 Data:

GKF01-mount4-grain1

Analysis	$^{32}S_{counts}$	$\delta^{33}S_{VCDT}$	unc	$\delta^{34}S_{VCDT}$	unc	$\delta^{36}S_{VCDT}$	unc	$\Delta^{33}S_{VCDT}$	unc	$\Delta^{36}S_{VCDT}$	unc
Son@1	2.23E+09	0.71	0.04	1.56	0.02	3.06	0.16	-0.09	0.09	0.09	0.16
Son@02	2.17E+09	0.76	0.04	1.58	0.02	3.18	0.17	-0.06	0.09	0.19	0.17
Son@03	2.10E+09	0.82	0.04	1.67	0.02	3.53	0.16	-0.04	0.09	0.37	0.16
Son@04	2.07E+09	0.85	0.05	1.69	0.02	3.28	0.17	-0.02	0.10	0.06	0.17
Son@05	2.06E+09	0.73	0.04	1.42	0.02	3.14	0.16	0.00	0.09	0.44	0.16
GKF01_mount4_1102_grain-1@1	1.96E+09	-10.57	0.05	-18.83	0.02	-33.58	0.16	-0.83	0.10	1.89	0.16
GKF01_mount4_1102_grain-1@2	2.00E+09	-11.39	0.04	-20.13	0.02	-35.78	0.16	-0.97	0.09	2.13	0.16
GKF01_mount4_1102_grain-1@3	1.99E+09	-11.63	0.04	-20.61	0.02	-36.94	0.16	-0.96	0.09	1.86	0.16
GKF01_mount4_1102_grain-1@4	1.91E+09	-7.10	0.05	-13.31	0.02	-24.08	0.19	-0.22	0.10	1.06	0.19
GKF01_mount4_1102_grain-1@5	1.92E+09	-8.83	0.05	-16.04	0.02	-28.98	0.16	-0.54	0.10	1.27	0.16
GKF01_mount4_1102_grain-1@6	1.97E+09	-10.66	0.05	-19.02	0.03	-33.92	0.18	-0.82	0.09	1.91	0.18
Son@06	2.02E+09	0.85	0.05	1.67	0.02	3.36	0.16	-0.01	0.10	0.19	0.16
Son@07	2.00E+09	0.79	0.05	1.56	0.02	3.51	0.16	-0.01	0.09	0.55	0.16
GKF01_mount4_1102_grain-1@7	1.95E+09	-11.35	0.05	-20.35	0.02	-36.52	0.18	-0.81	0.09	1.79	0.18
GKF01_mount4_1102_grain-1@8	1.92E+09	-11.57	0.05	-20.79	0.02	-37.63	0.16	-0.81	0.10	1.49	0.16
GKF01_mount4_1102_grain-1@9	1.99E+09	-10.66	0.05	-18.94	0.02	-33.55	0.16	-0.86	0.09	2.14	0.16
GKF01_mount4_1102_grain-1@10	1.94E+09	-11.06	0.04	-19.68	0.02	-35.36	0.17	-0.87	0.09	1.71	0.17
GKF01_mount4_1102_grain-1@11	1.98E+09	-11.70	0.04	-20.86	0.02	-37.66	0.16	-0.90	0.09	1.61	0.16
GKF01_mount4_1102_grain-1@12	2.05E+09	-11.55	0.04	-20.64	0.02	-37.33	0.17	-0.87	0.09	1.52	0.17
Son@08	2.08E+09	0.86	0.04	1.62	0.02	3.01	0.16	0.02	0.09	-0.07	0.16
Son@09	2.10E+09	0.88	0.04	1.64	0.02	3.54	0.16	0.03	0.09	0.42	0.16
GKF01_mount4_1102_grain-1@13	2.09E+09	-11.02	0.05	-19.69	0.02	-35.15	0.16	-0.84	0.09	1.93	0.16
GKF01_mount4_1102_grain-1@14	2.09E+09	-11.18	0.04	-20.02	0.02	-36.13	0.16	-0.82	0.09	1.56	0.16

GKF01_mount4_1102_grain-1@15	2.10E+09	-11.16	0.04	-19.79	0.02	-35.45	0.16	-0.91	0.09	1.81	0.16
GKF01_mount4_1102_grain-1@16	2.10E+09	-11.18	0.05	-19.88	0.02	-35.40	0.16	-0.89	0.10	2.03	0.16
GKF01_mount4_1102_grain-1@17	2.07E+09	-9.56	0.05	-17.27	0.03	-31.22	0.16	-0.62	0.10	1.34	0.16
GKF01_mount4_1102_grain-1@18	2.09E+09	-10.63	0.04	-19.04	0.02	-34.19	0.16	-0.78	0.09	1.68	0.16
Son@10	2.12E+09	0.90	0.04	1.66	0.02	3.31	0.17	0.04	0.09	0.16	0.17
Son@11	2.11E+09	0.92	0.04	1.69	0.02	3.40	0.17	0.05	0.09	0.19	0.17
Son@12	2.11E+09	0.75	0.05	1.52	0.02	2.81	0.16	-0.03	0.10	-0.09	0.16
Son@13	2.14E+09	0.88	0.04	1.65	0.02	3.34	0.16	0.03	0.09	0.21	0.16
Son@14	2.10E+09	0.91	0.04	1.69	0.02	3.22	0.16	0.04	0.09	0.01	0.16
Son@15	2.08E+09	0.84	0.04	1.55	0.02	3.04	0.17	0.04	0.09	0.10	0.17
son@1	2.43E+09	0.80	0.03	1.64	0.02	3.34	0.16	-0.05	0.06	0.22	0.16
son@02	2.39E+09	0.84	0.03	1.63	0.02	3.37	0.17	0.00	0.05	0.26	0.17
son@03	2.39E+09	0.80	0.02	1.60	0.02	3.17	0.16	-0.02	0.05	0.13	0.16
son@04	2.38E+09	0.73	0.03	1.46	0.02	2.83	0.16	-0.03	0.06	0.05	0.16
son@05	2.38E+09	0.82	0.02	1.62	0.02	3.50	0.16	-0.02	0.05	0.42	0.16
GKF01_mount4_1102_grain-1@19	2.35E+09	-11.31	0.03	-20.10	0.02	-35.93	0.15	-0.91	0.06	1.92	0.15
GKF01_mount4_1102_grain-1@20	2.32E+09	-12.08	0.02	-21.55	0.02	-38.74	0.15	-0.92	0.05	1.81	0.15
GKF01_mount4_1102_grain-1@21	2.37E+09	-10.72	0.03	-19.01	0.02	-33.84	0.15	-0.89	0.06	1.97	0.15
GKF01_mount4_1102_grain-1@22	2.36E+09	-10.41	0.02	-18.32	0.02	-32.51	0.15	-0.94	0.05	2.00	0.15
GKF01_mount4_1102_grain-1@23	2.38E+09	-11.67	0.03	-20.80	0.02	-37.29	0.16	-0.91	0.06	1.85	0.16
GKF01_mount4_1102_grain-1@24	2.37E+09	-11.05	0.03	-19.71	0.02	-35.57	0.15	-0.85	0.06	1.55	0.15
son@06	2.44E+09	0.81	0.03	1.59	0.02	3.24	0.16	-0.01	0.05	0.21	0.16
son@07	2.42E+09	0.84	0.02	1.65	0.02	3.29	0.16	-0.01	0.05	0.16	0.16
GKF01_mount4_1102_grain-1@25	2.39E+09	-10.41	0.03	-18.55	0.02	-33.37	0.16	-0.81	0.06	1.58	0.16
GKF01_mount4_1102_grain-1@26	2.41E+09	-11.40	0.03	-20.38	0.02	-36.43	0.16	-0.85	0.05	1.94	0.16
GKF01_mount4_1102_grain-1@27	2.39E+09	-8.99	0.03	-16.20	0.02	-28.93	0.16	-0.62	0.06	1.62	0.16
GKF01_mount4_1102_grain-1@28	2.41E+09	-11.02	0.03	-19.62	0.02	-35.10	0.17	-0.87	0.06	1.85	0.17
GKF01_mount4_1102_grain-1@29	2.44E+09	-11.10	0.03	-19.78	0.02	-35.40	0.17	-0.87	0.05	1.85	0.17
GKF01_mount4_1102_grain-1@30	2.43E+09	-11.10	0.02	-19.82	0.02	-35.86	0.17	-0.85	0.05	1.46	0.17

son@08	2.45E+09	0.85	0.03	1.55	0.02	3.16	0.17	0.05	0.06	0.22	0.17
son@09	2.47E+09	0.88	0.03	1.69	0.02	3.32	0.17	0.01	0.06	0.12	0.17
GKF01_mount4_1102_grain-1@31	2.35E+09	-8.40	0.03	-15.12	0.02	-27.08	0.18	-0.58	0.06	1.44	0.18
GKF01_mount4_1102_grain-1@32	2.43E+09	-9.57	0.02	-17.10	0.02	-30.84	0.19	-0.73	0.05	1.40	0.19
GKF01_mount4_1102_grain-1@33	2.35E+09	-11.32	0.03	-20.17	0.02	-36.46	0.19	-0.88	0.06	1.52	0.19
GKF01_mount4_1102_grain-1@34	2.42E+09	-11.57	0.02	-20.63	0.02	-37.09	0.18	-0.90	0.05	1.74	0.18
GKF01_mount4_1102_grain-1@35	2.41E+09	-10.81	0.03	-19.29	0.02	-34.41	0.19	-0.83	0.06	1.92	0.19
GKF01_mount4_1102_grain-1@36	2.39E+09	-10.78	0.03	-19.34	0.02	-34.69	0.19	-0.78	0.06	1.74	0.19
son@10	2.46E+09	0.89	0.03	1.71	0.02	3.65	0.19	0.01	0.05	0.40	0.19
son@11	2.48E+09	0.81	0.03	1.56	0.02	2.86	0.22	0.01	0.06	-0.10	0.22
son@12	2.47E+09	0.87	0.02	1.59	0.02	3.19	0.22	0.05	0.05	0.17	0.22
son@13	2.47E+09	0.86	0.03	1.65	0.02	3.31	0.21	0.01	0.05	0.18	0.21
son@14	2.46E+09	0.82	0.02	1.63	0.01	3.21	0.13	-0.02	0.04	0.11	0.13
son@15	2.45E+09	0.82	0.02	1.62	0.01	3.17	0.13	-0.01	0.04	0.08	0.13
son@16	2.44E+09	0.88	0.02	1.64	0.01	3.21	0.13	0.03	0.04	0.08	0.13
son@17	2.45E+09	0.83	0.02	1.60	0.01	3.31	0.13	0.01	0.04	0.26	0.13
son@18	2.45E+09	0.87	0.02	1.61	0.01	3.22	0.14	0.04	0.04	0.15	0.14
GKF01_mount4_1102_grain-1@37	2.39E+09	-11.59	0.02	-20.75	0.01	-37.16	0.13	-0.85	0.04	1.89	0.13
GKF01_mount4_1102_grain-1@38	2.36E+09	-10.08	0.02	-18.09	0.01	-32.29	0.13	-0.73	0.05	1.80	0.13
GKF01_mount4_1102_grain-1@39	2.34E+09	-9.87	0.02	-17.90	0.01	-32.04	0.13	-0.62	0.04	1.68	0.13
GKF01_mount4_1102_grain-1@40	1.88E+09	-7.65	0.03	-14.18	0.01	-26.20	0.14	-0.33	0.05	0.56	0.14
GKF01_mount4_1102_grain-1@41	2.39E+09	-11.46	0.02	-20.45	0.01	-36.53	0.13	-0.88	0.05	1.97	0.13
GKF01_mount4_1102_grain-1@42	2.39E+09	-11.23	0.02	-19.97	0.01	-35.39	0.13	-0.90	0.05	2.20	0.13
son@19	2.44E+09	0.85	0.02	1.62	0.01	3.24	0.13	0.02	0.05	0.17	0.13
son@20	2.45E+09	0.83	0.02	1.63	0.01	3.32	0.14	-0.01	0.04	0.22	0.14
GKF01_mount4_1102_grain-1@43	2.38E+09	-8.56	0.02	-15.36	0.01	-27.57	0.13	-0.62	0.04	1.42	0.13
GKF01_mount4_1102_grain-1@44	2.38E+09	-7.33	0.02	-13.43	0.02	-24.09	0.13	-0.39	0.05	1.28	0.13
GKF01_mount4_1102_grain-1@45	2.41E+09	-11.48	0.02	-20.50	0.01	-36.68	0.16	-0.87	0.05	1.91	0.16
GKF01_mount4_1102_grain-1@46	2.38E+09	-11.34	0.02	-20.28	0.01	-36.39	0.15	-0.85	0.05	1.79	0.15
GKF01_mount4_1102_grain-1@47	2.37E+09	-11.45	0.02	-20.48	0.01	-36.75	0.15	-0.85	0.05	1.80	0.15

GKF01_mount4_1102_grain-1@48	2.37E+09	-11.03	0.03	-19.46	0.01	-34.62	0.15	-0.96	0.05	2.02	0.15
son@21	2.42E+09	0.80	0.03	1.62	0.01	3.39	0.16	-0.04	0.05	0.31	0.16
son@22	2.41E+09	0.84	0.02	1.67	0.01	3.50	0.15	-0.02	0.04	0.33	0.15
GKF01_mount4_1102_grain-1@49	2.38E+09	-11.32	0.03	-20.41	0.01	-36.45	0.14	-0.75	0.05	1.98	0.14
GKF01_mount4_1102_grain-1@50	2.25E+09	-11.20	0.02	-20.39	0.01	-36.89	0.15	-0.65	0.04	1.49	0.15
GKF01_mount4_1102_grain-1@51	2.37E+09	-11.10	0.02	-19.91	0.01	-35.65	0.15	-0.80	0.04	1.84	0.15
GKF01_mount4_1102_grain-1@52	2.41E+09	-10.97	0.02	-19.53	0.01	-34.92	0.14	-0.86	0.04	1.85	0.14
GKF01_mount4_1102_grain-1@53	2.38E+09	-11.45	0.02	-20.32	0.01	-36.48	0.15	-0.93	0.05	1.78	0.15
GKF01_mount4_1102_grain-1@54	2.34E+09	-11.21	0.02	-20.16	0.01	-36.21	0.16	-0.78	0.04	1.75	0.16
son@23	2.41E+09	0.78	0.02	1.55	0.01	3.08	0.15	-0.02	0.05	0.13	0.15
son@24	2.41E+09	0.82	0.02	1.53	0.01	3.34	0.15	0.03	0.04	0.43	0.15
son@25	2.41E+09	0.81	0.02	1.59	0.01	3.05	0.16	-0.01	0.04	0.03	0.16
son@26	2.39E+09	0.78	0.02	1.58	0.02	3.26	0.13	-0.03	0.05	0.26	0.13
son@27	2.39E+09	0.82	0.02	1.59	0.02	3.23	0.13	0.00	0.05	0.20	0.13
son@28	2.38E+09	0.82	0.02	1.60	0.02	3.14	0.13	0.00	0.05	0.10	0.13
son@29	2.38E+09	0.91	0.02	1.67	0.02	3.35	0.13	0.05	0.05	0.17	0.13
GKF01_mount4_1102_grain-1@55	2.35E+09	-10.26	0.03	-18.33	0.02	-32.94	0.13	-0.78	0.05	1.60	0.13
GKF01_mount4_1102_grain-1@56	2.29E+09	-11.07	0.03	-19.93	0.01	-35.67	0.13	-0.76	0.06	1.86	0.13
GKF01_mount4_1102_grain-1@57	2.32E+09	-10.88	0.03	-19.71	0.02	-35.50	0.14	-0.68	0.06	1.62	0.14
GKF01_mount4_1102_grain-1@58	2.31E+09	-11.35	0.02	-20.39	0.02	-36.54	0.13	-0.80	0.05	1.85	0.13
GKF01_mount4_1102_grain-1@59	2.32E+09	-11.05	0.02	-19.55	0.02	-34.84	0.14	-0.94	0.05	1.98	0.14
GKF01_mount4_1102_grain-1@60	2.20E+09	-10.71	0.03	-19.54	0.02	-35.03	0.13	-0.60	0.06	1.76	0.13
son@30	2.36E+09	0.88	0.02	1.62	0.02	3.52	0.15	0.04	0.05	0.44	0.15
son@31	2.38E+09	0.81	0.02	1.58	0.02	3.19	0.13	0.00	0.05	0.19	0.13
GKF01_mount4_1102_grain-1@61	2.30E+09	-11.29	0.03	-20.26	0.02	-36.51	0.14	-0.80	0.05	1.63	0.14
GKF01_mount4_1102_grain-1@62	2.29E+09	-9.83	0.02	-17.67	0.03	-31.49	0.15	-0.69	0.06	1.82	0.15
GKF01_mount4_1102_grain-1@63	2.30E+09	-11.37	0.02	-20.40	0.02	-36.44	0.13	-0.81	0.05	1.96	0.13
GKF01_mount4_1102_grain-1@64	2.25E+09	-10.26	0.02	-18.50	0.02	-33.31	0.14	-0.69	0.05	1.56	0.14
GKF01_mount4_1102_grain-1@65	2.28E+09	-10.29	0.02	-18.53	0.02	-33.81	0.15	-0.71	0.05	1.10	0.15
GKF01_mount4_1102_grain-1@66	2.27E+09	-10.65	0.02	-19.06	0.02	-34.62	0.13	-0.79	0.05	1.27	0.13

son@32	2.35E+09	0.84	0.03	1.64	0.02	3.30	0.13	-0.01	0.06	0.18	0.13
son@33	2.35E+09	0.79	0.02	1.59	0.02	3.18	0.13	-0.03	0.05	0.16	0.13
GKF01_mount4_1102_grain-1@67	2.29E+09	-9.17	0.02	-16.42	0.02	-29.54	0.13	-0.67	0.05	1.44	0.13
GKF01_mount4_1102_grain-1@68	2.29E+09	-11.33	0.03	-20.34	0.02	-36.40	0.13	-0.80	0.06	1.89	0.13
GKF01_mount4_1102_grain-1@69	2.24E+09	-10.78	0.02	-19.53	0.02	-35.06	0.13	-0.68	0.05	1.72	0.13
GKF01_mount4_1102_grain-1@70	2.27E+09	-10.53	0.02	-19.25	0.02	-34.47	0.13	-0.57	0.05	1.78	0.13
GKF01_mount4_1102_grain-1@71	2.26E+09	-10.68	0.03	-19.07	0.02	-34.01	0.13	-0.81	0.06	1.91	0.13
GKF01_mount4_1102_grain-1@72	2.32E+09	-11.62	0.03	-20.65	0.02	-36.82	0.13	-0.93	0.05	2.05	0.13
GKF01_mount4_1102_grain-1@73	2.26E+09	-10.40	0.03	-18.71	0.02	-33.64	0.18	-0.72	0.06	1.60	0.18
son@34	2.34E+09	0.82	0.02	1.62	0.02	3.08	0.16	-0.01	0.05	0.01	0.16
son@35	2.33E+09	0.82	0.02	1.58	0.02	3.34	0.13	0.01	0.05	0.33	0.13
son@36	2.33E+09	0.85	0.02	1.63	0.02	3.29	0.15	0.02	0.05	0.20	0.15
son@37	2.33E+09	0.82	0.02	1.63	0.02	3.16	0.13	-0.02	0.05	0.06	0.13

GKF01_mount4_Grain3 and disseminated											
son@28	2.36E+09	0.76	0.02	1.54	0.01	2.96	0.14	-0.03	0.05	0.03	0.14
son@29	2.33E+09	0.84	0.02	1.61	0.01	3.49	0.15	0.01	0.05	0.42	0.15
son@30	2.27E+09	0.85	0.02	1.63	0.01	3.16	0.14	0.02	0.04	0.06	0.14
son@31	2.24E+09	0.87	0.02	1.67	0.01	3.36	0.15	0.01	0.05	0.18	0.15
freo@3	2.22E+09	-2.26	0.03	-4.50	0.01	-8.61	0.14	0.06	0.05	-0.09	0.14
#4@1	2.12E+09	11.73	0.02	11.86	0.01	16.44	0.15	5.64	0.05	-6.21	0.15
#4@2	2.12E+09	11.69	0.02	11.79	0.01	16.31	0.16	5.63	0.05	-6.21	0.16
#4@3	2.23E+09	17.42	0.02	17.12	0.01	22.67	0.14	8.64	0.05	-10.10	0.14
#4@4	2.21E+09	17.49	0.02	16.97	0.01	22.19	0.15	8.79	0.05	-10.31	0.15
#4@5	2.20E+09	14.32	0.04	12.54	0.05	15.01	0.15	7.88	0.10	-8.94	0.15
#4@6	2.14E+09	15.80	0.03	15.46	0.01	20.52	0.15	7.87	0.06	-9.06	0.15
#4@7	2.16E+09	13.69	0.03	14.21	0.01	19.96	0.15	6.40	0.05	-7.22	0.15
freo@4	2.24E+09	0.78	0.02	1.52	0.01	3.00	0.14	0.00	0.05	0.10	0.14

#4@8	2.22E+09	14.09	0.03	14.48	0.01	20.37	0.16	6.66	0.06	-7.32	0.16
#4@9	2.20E+09	14.94	0.02	15.16	0.01	20.95	0.14	7.16	0.05	-8.04	0.14
#4@10	2.14E+09	20.97	0.03	21.58	0.01	29.13	0.15	9.91	0.05	-12.27	0.15
#4@11	2.22E+09	13.80	0.02	13.78	0.01	18.63	0.15	6.73	0.04	-7.71	0.15
#4@12	2.19E+09	13.85	0.02	13.77	0.01	18.71	0.15	6.78	0.05	-7.61	0.15
#4@13	2.06E+09	15.54	0.04	14.64	0.03	18.69	0.17	8.02	0.08	-9.32	0.17
son@34	2.22E+09	0.82	0.02	1.55	0.01	3.28	0.14	0.02	0.05	0.32	0.14
son@35	2.22E+09	0.84	0.02	1.58	0.01	3.14	0.14	0.02	0.05	0.13	0.14
#4@14	2.17E+09	16.23	0.02	14.75	0.01	17.98	0.15	8.66	0.05	-10.24	0.15
#4@15	2.20E+09	12.98	0.02	13.05	0.01	18.02	0.15	6.28	0.05	-6.93	0.15
#4@16	2.08E+09	14.11	0.03	11.93	0.02	13.88	0.15	7.98	0.06	-8.90	0.15
#4@17	2.20E+09	13.60	0.03	13.69	0.01	18.87	0.15	6.57	0.06	-7.30	0.15
#4@18	2.23E+09	14.66	0.02	14.82	0.01	20.74	0.15	7.05	0.04	-7.62	0.15
#4@19	2.16E+09	11.67	0.02	11.45	0.01	15.67	0.16	5.79	0.05	-6.19	0.16
#4@20	2.05E+09	13.48	0.03	12.23	0.01	15.40	0.15	7.20	0.06	-7.97	0.15
son@36	2.21E+09	0.81	0.02	1.58	0.01	3.35	0.16	0.00	0.05	0.34	0.16
son@37	2.22E+09	0.80	0.02	1.59	0.01	3.47	0.15	-0.02	0.05	0.45	0.15
#4@21	2.17E+09	8.26	0.03	6.26	0.01	6.66	0.15	5.04	0.05	-5.27	0.15
#4@22	2.22E+09	14.75	0.02	14.88	0.01	20.33	0.15	7.11	0.05	-8.13	0.15
#4@23	2.13E+09	-10.33	0.03	-19.04	0.01	-33.79	0.15	-0.48	0.06	2.07	0.15
#4@24	2.17E+09	12.70	0.02	12.93	0.01	18.68	0.15	6.06	0.05	-6.03	0.15
#4@25	1.63E+08	10.85	0.13	10.10	0.05	5.72	0.50	5.66	0.27	-13.56	0.50
son@38	2.12E+09	0.76	0.02	1.56	0.01	3.30	0.18	-0.04	0.05	0.33	0.18
son@39	2.15E+09	0.80	0.03	1.62	0.01	3.00	0.17	-0.03	0.07	-0.09	0.17
#4@26	2.08E+09	-10.53	0.02	-19.29	0.02	-34.83	0.16	-0.55	0.05	1.51	0.16
#4@27	2.07E+09	-10.80	0.03	-19.72	0.02	-35.58	0.19	-0.59	0.06	1.54	0.19
#4@28	2.04E+09	-9.22	0.03	-17.52	0.02	-31.88	0.16	-0.16	0.06	1.15	0.16
#4@29	2.07E+09	-9.34	0.03	-17.59	0.01	-32.04	0.16	-0.25	0.06	1.11	0.16
#4@30	2.07E+09	-9.69	0.03	-17.88	0.01	-32.45	0.20	-0.44	0.05	1.25	0.20
#4@31	2.11E+09	-10.87	0.02	-19.77	0.01	-35.58	0.16	-0.63	0.05	1.65	0.16

#4@32	2.14E+09	-11.01	0.03	-19.72	0.01	-35.40	0.16	-0.81	0.06	1.74	0.16
#4@33	2.14E+09	-9.65	0.02	-17.33	0.02	-31.03	0.16	-0.69	0.05	1.63	0.16
son@40	2.19E+09	0.85	0.03	1.67	0.01	3.39	0.17	-0.01	0.06	0.21	0.17
son@41	2.20E+09	0.86	0.02	1.62	0.01	3.15	0.17	0.02	0.05	0.06	0.17
son@42	2.18E+09	0.87	0.03	1.66	0.01	3.29	0.18	0.01	0.05	0.13	0.18
son@43	2.20E+09	0.86	0.03	1.68	0.01	3.32	0.17	0.00	0.06	0.13	0.17
son@47	2.17E+09	0.85	0.03	1.57	0.01	3.10	0.17	0.04	0.05	0.12	0.17

Mount2_gkf01

son-3@1	1.61E+09	0.65	0.20	1.52	0.13	3.06	0.39	-0.14	0.42	0.17	0.39
son-3@2	1.61E+09	0.73	0.18	1.54	0.34	2.99	0.73	-0.07	0.51	0.06	0.73
son-3@3	1.92E+09	0.81	0.18	1.52	0.20	2.98	0.32	0.03	0.41	0.08	0.32
son4@1	1.59E+09	0.92	0.20	1.70	0.13	3.27	0.44	0.04	0.42	0.03	0.44
son4@2	1.61E+09	0.79	0.19	1.63	0.34	2.74	0.71	-0.05	0.52	-0.36	0.71
son4@3	1.91E+09	0.75	0.19	1.37	0.21	3.11	0.32	0.04	0.43	0.50	0.32
son5@1	1.58E+09	0.74	0.20	1.62	0.13	2.92	0.44	-0.09	0.42	-0.16	0.44
son5@2	1.59E+09	0.81	0.19	1.63	0.34	3.45	0.75	-0.03	0.51	0.36	0.75
son5@3	1.87E+09	0.81	0.17	1.57	0.20	3.42	0.50	0.01	0.40	0.44	0.50
Freo1@1	1.59E+09	1.22	0.20	2.67	0.13	5.21	0.43	-0.15	0.42	0.12	0.43
Freo1@2	1.60E+09	1.29	0.19	2.62	0.34	5.26	0.73	-0.06	0.51	0.28	0.73
Freo1@3	1.89E+09	1.37	0.17	2.59	0.20	5.85	0.40	0.04	0.40	0.92	0.40
Freo2@1	1.56E+09	1.46	0.20	2.73	0.14	5.62	0.54	0.05	0.42	0.42	0.54
Freo2@2	1.59E+09	1.35	0.19	2.72	0.34	5.45	0.69	-0.05	0.51	0.27	0.69
Freo2@3	1.89E+09	1.49	0.18	2.76	0.20	6.63	0.40	0.07	0.41	1.38	0.40
#2-1@1	1.40E+09	9.46	0.21	6.22	0.13	3.18	0.41	6.26	0.44	-8.66	0.41
#2-1@2	1.54E+09	10.37	0.18	7.49	0.31	5.51	0.66	6.52	0.47	-8.76	0.66
#2-1@3	1.75E+09	11.84	0.17	10.10	0.16	11.22	0.35	6.65	0.38	-8.06	0.35

#2-2@1	1.36E+09	9.14	0.22	5.24	0.17	1.19	0.50	6.44	0.47	-8.80	0.50
#2-2@2	1.53E+09	9.85	0.18	6.52	0.32	3.25	0.73	6.50	0.49	-9.17	0.73
#2-2@3	1.97E+09	9.74	0.17	6.34	0.20	3.90	0.48	6.47	0.40	-8.19	0.48
#2-3@1	5.70E+08	9.10	0.22	5.10	0.07	0.54	0.49	6.48	0.45	-9.16	0.49
#2-3@2	7.71E+08	10.75	0.17	7.29	0.29	3.82	0.76	7.00	0.46	-10.08	0.76
#2-3@3	3.49E+08	12.70	0.19	11.54	0.16	12.74	0.61	6.78	0.42	-9.31	0.61
#2-4@1	3.71E+06										
#2-4@2	3.75E+05										
#2-4@3	8.47E+05										
son6@1	1.57E+09	0.80	0.20	1.71	0.14	3.08	0.49	-0.08	0.43	-0.18	0.49
son6@2	1.59E+09	0.96	0.21	1.63	0.34	3.87	0.82	0.13	0.54	0.78	0.82
son6@3	1.90E+09	0.82	0.17	1.64	0.20	3.45	0.43	-0.03	0.40	0.33	0.43
son7@1	1.58E+09	0.80	0.20	1.64	0.14	3.54	0.37	-0.05	0.43	0.42	0.37
son7@2	1.62E+09	0.85	0.19	1.71	0.34	3.35	0.68	-0.03	0.51	0.10	0.68
son7@3	1.90E+09	0.90	0.18	1.74	0.20	3.37	0.44	0.01	0.41	0.07	0.44
#2-5@1	1.02E+08	7.64	0.50	5.21	0.11	1.82	1.09	4.96	1.02	-8.10	1.09
#2-5@2	1.40E+08	8.64	0.43	6.78	0.29	5.53	1.06	5.16	0.91	-7.39	1.06
#2-5@3	1.13E+08	10.79	0.83	11.48	0.21	14.94	1.03	4.89	1.67	-6.99	1.03
#2-6@1	8.07E+08	9.12	0.20	4.95	0.09	0.45	0.42	6.57	0.41	-8.98	0.42
#2-6@2	1.08E+09	10.67	0.18	8.07	0.29	6.55	0.65	6.52	0.46	-8.83	0.65
#2-6@3	5.50E+08	13.02	0.26	12.10	0.32	14.80	0.56	6.81	0.62	-8.31	0.56
#2-7@1	4.11E+05										
#2-7@2	4.14E+05										
#2-7@3	3.72E+05										
#2-8@1	1.42E+08	8.20	0.77	4.84	0.12	-1.35	1.30	5.71	1.55	-10.57	1.30
#2-8@2	8.32E+07	10.01	0.81	9.04	0.33	9.12	1.29	5.37	1.65	-8.13	1.29
#2-8@3	8.29E+07	13.79	0.71	12.40	0.24	16.60	1.19	7.42	1.44	-7.09	1.19
son8@1	1.55E+09	0.82	0.20	1.59	0.13	3.48	0.42	0.00	0.42	0.46	0.42
son8@2	1.58E+09	0.97	0.18	1.85	0.35	4.20	0.73	0.02	0.51	0.67	0.73
son8@3	1.85E+09	0.82	0.17	1.74	0.21	3.81	0.45	-0.08	0.40	0.49	0.45

son9@1	1.54E+09	0.91	0.21	1.70	0.13	3.66	0.33	0.04	0.44	0.43	0.33
son9@2	1.56E+09	0.84	0.19	1.67	0.34	3.64	0.68	-0.02	0.52	0.47	0.68
son9@3	1.85E+09	0.81	0.17	1.52	0.20	3.02	0.43	0.03	0.41	0.14	0.43
#2-9@1	1.39E+09	14.12	0.20	14.27	0.16	18.96	0.45	6.80	0.43	-8.33	0.45
#2-9@2	1.44E+09	13.75	0.21	13.54	0.36	17.96	0.78	6.80	0.55	-7.91	0.78
#2-9@3	1.89E+09	14.13	0.17	14.07	0.17	19.06	0.32	6.91	0.38	-7.85	0.32
#2-10@1	1.41E+09	14.10	0.21	14.01	0.17	18.61	0.51	6.91	0.46	-8.16	0.51
#2-10@2	1.60E+09	14.33	0.19	14.09	0.34	18.59	0.67	7.10	0.52	-8.36	0.67
#2-10@3	2.04E+09	14.46	0.18	14.47	0.21	19.70	0.43	7.04	0.41	-7.97	0.43
#2-11@1	2.78E+08	12.62	0.23	11.98	0.17	14.01	0.75	6.47	0.49	-8.89	0.75
#2-11@2	4.33E+08	14.03	0.18	13.62	0.29	18.06	0.76	7.04	0.46	-7.97	0.76
#2-11@3	4.32E+08	15.81	0.24	17.47	0.16	25.92	0.56	6.85	0.50	-7.54	0.56
#2-12@1	1.13E+09	13.75	0.21	13.42	0.16	18.03	0.47	6.87	0.45	-7.63	0.47
#2-12@2	1.40E+09	13.76	0.19	13.45	0.34	18.03	0.71	6.85	0.52	-7.68	0.71
#2-12@3	1.88E+09	13.88	0.17	13.47	0.18	17.97	0.35	6.96	0.38	-7.78	0.35
son10@1	1.55E+09	0.84	0.20	1.55	0.15	3.14	0.35	0.04	0.44	0.20	0.35
son10@2	1.54E+09	0.87	0.20	1.55	0.35	2.76	0.75	0.07	0.54	-0.19	0.75
son10@3	1.85E+09	0.90	0.18	1.67	0.20	3.11	0.49	0.04	0.41	-0.06	0.49
son11@1	1.55E+09	0.83	0.20	1.56	0.14	3.18	0.34	0.03	0.42	0.22	0.34
son11@2	1.56E+09	0.78	0.19	1.68	0.34	3.59	0.71	-0.08	0.52	0.39	0.71
son11@3	1.83E+09	0.93	0.18	1.59	0.21	3.33	0.36	0.11	0.41	0.31	0.36
#2-13@1	5.93E+08	12.92	0.24	12.06	0.22	15.37	0.81	6.73	0.52	-7.66	0.81
#2-13@2	1.06E+09	12.73	0.18	11.83	0.30	15.56	0.69	6.65	0.48	-7.04	0.69
#2-13@3	1.58E+09	13.74	0.17	13.32	0.18	17.21	0.37	6.90	0.39	-8.26	0.37
#2-14@1	1.47E+09	14.17	0.21	14.34	0.17	19.09	0.42	6.81	0.46	-8.34	0.42
#2-14@2	1.54E+09	13.82	0.20	13.69	0.35	18.95	0.87	6.79	0.54	-7.22	0.87
#2-14@3	1.97E+09	13.49	0.18	12.96	0.20	16.15	0.43	6.83	0.41	-8.60	0.43
#2-15@1	1.12E+09	9.10	0.36	8.35	0.43	10.31	0.79	4.81	0.85	-5.62	0.79
#2-15@2	1.38E+09	4.91	0.21	3.61	0.37	3.63	0.72	3.06	0.56	-3.24	0.72
#2-15@3	1.31E+09	5.72	0.17	5.58	0.16	7.18	0.38	2.85	0.38	-3.45	0.38

son12@1	1.55E+09	0.84	0.20	1.59	0.15	3.24	0.32	0.02	0.43	0.21	0.32
son12@2	1.57E+09	0.70	0.18	1.36	0.34	2.71	0.67	0.00	0.51	0.13	0.67
son12@3	1.87E+09	0.77	0.17	1.63	0.19	3.42	0.38	-0.07	0.40	0.32	0.38
son13@1	1.54E+09	0.85	0.20	1.52	0.14	2.82	0.43	0.06	0.43	-0.06	0.43
son13@2	1.56E+09	0.66	0.19	1.31	0.33	2.51	0.64	-0.02	0.51	0.02	0.64
son13@3	1.89E+09	0.88	0.17	1.60	0.20	3.29	0.45	0.05	0.40	0.26	0.45
son14@1	1.57E+09	0.89	0.21	1.64	0.14	3.12	0.51	0.04	0.44	-0.01	0.51
son14@2	1.57E+09	0.80	0.19	1.59	0.34	3.45	0.68	-0.01	0.51	0.43	0.68
son14@3	1.87E+09	0.69	0.18	1.58	0.21	3.10	0.41	-0.12	0.42	0.11	0.41
son15@1	1.55E+09	0.90	0.21	1.59	0.14	3.30	0.52	0.09	0.43	0.28	0.52
son15@2	1.57E+09	1.02	0.20	1.77	0.33	3.89	0.74	0.11	0.53	0.52	0.74
son15@3	1.84E+09	0.89	0.17	1.77	0.20	3.38	0.40	-0.02	0.41	0.01	0.40

Mount1gkf01

	32Scounts	d33S VCDT	unc	d34S VCDT	unc	d36S VCDT	unc	D33S VCDT	unc	D36S VCDT	Unc
son2@1	1.91E+09	0.59	0.10	1.31	0.12	2.53	0.30	-0.08	0.11	0.04	0.30
son2@2	1.97E+09	0.71	0.11	1.52	0.17	2.93	0.38	-0.07	0.14	0.05	0.38
son2@3	2.33E+09	0.71	0.10	1.51	0.14	3.26	0.29	-0.07	0.12	0.39	0.29
son3@1	1.89E+09	0.81	0.11	1.64	0.12	3.61	0.33	-0.03	0.13	0.49	0.33
son3@2	1.94E+09	0.90	0.11	1.74	0.17	3.72	0.42	0.00	0.14	0.40	0.42
son3@3	2.34E+09	0.86	0.09	1.62	0.15	3.37	0.35	0.03	0.12	0.29	0.35
son4@1	1.88E+09	0.76	0.11	1.55	0.14	3.18	0.32	-0.03	0.13	0.23	0.32
son4@2	1.91E+09	0.85	0.11	1.75	0.19	3.51	0.50	-0.05	0.15	0.17	0.50
son4@3	2.32E+09	0.92	0.08	1.73	0.14	3.82	0.36	0.02	0.10	0.52	0.36
son5@1	1.88E+09	0.78	0.10	1.63	0.14	3.41	0.32	-0.06	0.12	0.31	0.32
son5@2	1.93E+09	0.72	0.11	1.59	0.18	3.37	0.47	-0.10	0.14	0.35	0.47
son5@3	2.37E+09	0.79	0.08	1.56	0.14	3.40	0.31	-0.01	0.11	0.43	0.31
#1-1@1	1.85E+09	1.65	0.13	-0.23	0.21	-0.89	0.39	1.77	0.17	-0.45	0.39
#1-1@2	2.05E+09	3.62	0.04	1.00	0.16	-0.43	0.39	3.11	0.10	-2.32	0.39
#1-1@3	2.57E+09	4.29	0.09	1.27	0.22	-0.45	0.49	3.64	0.14	-2.86	0.49

#1-3@1	1.77E+09	7.59	0.10	3.92	0.12	2.98	0.34	5.57	0.12	-4.48	0.34
#1-3@2	1.93E+09	7.16	0.12	3.30	0.18	1.51	0.43	5.46	0.15	-4.77	0.43
#1-3@3	2.43E+09	7.02	0.09	3.04	0.13	1.14	0.37	5.46	0.12	-4.63	0.37
#1-4@1	1.82E+09	6.17	0.08	-0.59	0.12	-7.17	0.33	6.48	0.10	-6.04	0.33
#1-4@2	2.00E+09	6.81	0.11	0.04	0.15	-6.47	0.39	6.79	0.14	-6.55	0.39
#1-4@3	2.52E+09	7.05	0.05	1.22	0.10	-3.89	0.40	6.42	0.07	-6.21	0.40
#1-5@1	1.80E+09	4.37	0.09	-1.82	0.07	-8.22	0.26	5.31	0.09	-4.77	0.26
#1-5@2	2.04E+09	5.06	0.08	-1.57	0.15	-8.09	0.32	5.87	0.11	-5.11	0.32
#1-5@3	2.58E+09	6.12	0.05	-0.21	0.05	-6.03	0.22	6.22	0.05	-5.63	0.22
#1-6@1	1.83E+09	6.37	0.10	0.01	0.15	-5.28	0.32	6.37	0.13	-5.29	0.32
#1-6@2	2.10E+09	7.52	0.05	1.72	0.05	-2.10	0.27	6.64	0.06	-5.36	0.27
#1-6@3	2.61E+09	8.12	0.06	3.51	0.14	1.32	0.44	6.32	0.09	-5.36	0.44
Son6@1	1.88E+09	0.88	0.10	1.73	0.14	3.89	0.27	-0.01	0.12	0.60	0.27
Son6@2	1.90E+09	0.67	0.11	1.39	0.19	2.80	0.30	-0.04	0.15	0.15	0.30
Son6@3	2.36E+09	0.83	0.09	1.65	0.14	3.23	0.30	-0.02	0.11	0.10	0.30
son7@1	1.88E+09	0.82	0.10	1.58	0.13	2.87	0.34	0.01	0.12	-0.12	0.34
son7@2	1.95E+09	0.89	0.10	1.64	0.17	3.42	0.40	0.05	0.13	0.31	0.40
son7@3	2.34E+09	0.76	0.08	1.51	0.14	3.14	0.30	-0.01	0.11	0.28	0.30
son9@1	1.89E+09	0.91	0.10	1.71	0.14	3.57	0.28	0.02	0.12	0.31	0.28
son9@2	1.92E+09	0.73	0.11	1.60	0.19	3.69	0.49	-0.09	0.15	0.66	0.49
son9@3	2.35E+09	0.86	0.09	1.56	0.15	2.67	0.38	0.06	0.12	-0.30	0.38
son10@1	1.88E+09	0.93	0.10	1.67	0.14	3.12	0.33	0.07	0.13	-0.04	0.33
son10@2	1.94E+09	0.95	0.10	1.61	0.17	3.98	0.42	0.12	0.13	0.93	0.42
son10@3	2.33E+09	0.73	0.08	1.56	0.14	3.32	0.37	-0.07	0.11	0.36	0.37
#1-7@1	1.82E+09	9.49	0.10	8.25	0.12	9.50	0.49	5.25	0.12	-6.23	0.49
#1-7@2	1.98E+09	10.92	0.05	10.11	0.03	12.12	0.25	5.72	0.05	-7.17	0.25
#1-7@3	2.58E+09	11.87	0.08	11.28	0.13	13.58	0.26	6.08	0.11	-7.97	0.26
#1-8@1	1.77E+09	9.19	0.18	7.44	0.25	7.79	0.43	5.37	0.22	-6.39	0.43
#1-8@2	2.03E+09	8.83	0.10	7.30	0.13	8.01	0.37	5.08	0.12	-5.90	0.37
#1-8@3	2.62E+09	10.16	0.05	8.69	0.07	9.95	0.25	5.69	0.07	-6.62	0.25

#1-9@1	1.84E+09	11.63	0.13	16.16	0.23	27.41	0.49	3.34	0.18	-3.52	0.49
#1-9@2	2.00E+09	10.97	0.12	14.83	0.30	25.25	0.77	3.36	0.19	-3.12	0.77
#1-9@3	2.39E+09	12.70	0.06	15.19	0.05	22.87	0.22	4.91	0.07	-6.19	0.22
#1-10@1	1.76E+09	9.12	0.14	9.03	0.18	11.82	0.42	4.48	0.17	-5.41	0.42
#1-10@2	1.93E+09	9.43	0.08	9.69	0.14	13.33	0.42	4.45	0.11	-5.17	0.42
#1-10@3	2.38E+09	10.04	0.06	10.08	0.15	13.55	0.44	4.86	0.10	-5.69	0.44
son11@1	1.83E+09	0.86	0.12	1.50	0.15	2.87	0.33	0.09	0.15	0.02	0.33
son11@2	1.94E+09	0.81	0.08	1.59	0.14	3.39	0.38	-0.01	0.11	0.36	0.38
son11@3	2.35E+09	0.76	0.09	1.49	0.16	2.99	0.45	-0.01	0.12	0.16	0.45
son12@1	1.87E+09	0.87	0.10	1.71	0.14	3.23	0.34	-0.01	0.12	-0.02	0.34
son12@2	1.92E+09	0.80	0.10	1.45	0.18	2.88	0.34	0.05	0.14	0.13	0.34
son12@3	2.33E+09	0.96	0.08	1.75	0.13	3.18	0.29	0.06	0.10	-0.15	0.29
son13@1	1.86E+09	0.85	0.09	1.77	0.14	3.27	0.32	-0.06	0.12	-0.09	0.32
son13@2	1.93E+09	0.99	0.09	1.75	0.20	2.82	0.53	0.09	0.13	-0.51	0.53
son13@3	2.33E+09	0.91	0.09	1.76	0.14	3.30	0.34	0.00	0.11	-0.05	0.34
son14@1	1.88E+09	0.88	0.10	1.53	0.13	3.02	0.38	0.09	0.12	0.12	0.38
son14@2	1.92E+09	0.93	0.11	1.69	0.20	3.20	0.41	0.06	0.15	-0.01	0.41
son14@3	2.33E+09	0.86	0.07	1.61	0.14	3.16	0.38	0.03	0.10	0.10	0.38

Mount1_2nd set

son16rerun@1	1.82E+09	0.81	0.09	1.36	0.17	3.04	0.48	0.11	0.13	0.46	0.48
son16rerun@2	1.91E+09	0.66	0.24	1.30	0.26	3.18	0.71	-0.01	0.28	0.70	0.71
son16rerun@3	2.31E+09	0.64	0.24	1.27	0.29	2.38	0.62	-0.02	0.28	-0.03	0.62
son17rerun@1	1.85E+09	0.88	0.08	1.75	0.13	3.72	0.53	-0.03	0.10	0.39	0.53
son17rerun@2	1.90E+09	0.87	0.24	1.68	0.28	3.85	0.68	0.01	0.28	0.66	0.68
son17rerun@3	2.34E+09	0.90	0.23	1.79	0.28	3.86	0.69	-0.03	0.28	0.45	0.69
son18rerun@1	1.86E+09	0.79	0.10	1.62	0.16	3.39	0.35	-0.04	0.13	0.31	0.35

son18rerun@2	1.90E+09	0.87	0.25	1.66	0.28	2.95	0.72	0.02	0.29	-0.21	0.72
son18rerun@3	2.32E+09	0.78	0.23	1.55	0.28	3.87	0.60	-0.02	0.27	0.92	0.60
son19rerun@1	1.84E+09	0.74	0.09	1.58	0.15	2.80	0.48	-0.07	0.12	-0.21	0.48
son19rerun@2	1.89E+09	0.96	0.24	1.55	0.27	3.13	0.51	0.16	0.27	0.19	0.51
son19rerun@3	2.30E+09	0.74	0.24	1.37	0.29	2.71	0.60	0.03	0.28	0.11	0.60
Freo1@1	1.84E+09	1.61	0.10	2.97	0.15	6.50	0.38	0.08	0.12	0.86	0.38
Freo1@2	1.88E+09	1.77	0.24	3.13	0.27	6.13	0.68	0.16	0.28	0.17	0.68
Freo1@3	2.27E+09	1.74	0.23	3.30	0.27	7.54	0.57	0.05	0.27	1.27	0.57
Freo2@1	1.84E+09	1.59	0.08	3.19	0.13	6.63	0.43	-0.05	0.10	0.56	0.43
Freo2@2	1.89E+09	1.84	0.24	3.33	0.27	6.30	0.57	0.13	0.28	-0.04	0.57
Freo2@3	2.27E+09	1.75	0.24	3.47	0.28	7.09	0.53	-0.04	0.28	0.49	0.53
#1-11@1	1.76E+09	6.93	0.07	0.92	0.12	-4.04	0.32	6.46	0.09	-5.78	0.32
#1-11@2	1.83E+09	7.48	0.24	2.74	0.23	-1.28	0.45	6.07	0.26	-6.49	0.45
#1-11@3	2.26E+09	8.11	0.23	4.39	0.26	2.68	0.50	5.86	0.27	-5.67	0.50
#1-12@1	1.77E+09	6.30	0.08	0.28	0.10	-5.13	0.34	6.16	0.10	-5.67	0.34
#1-12@2	1.85E+09	6.51	0.24	0.50	0.28	-5.90	0.55	6.25	0.28	-6.85	0.55
#1-12@3	2.32E+09	7.21	0.22	1.51	0.26	-3.96	0.49	6.44	0.26	-6.83	0.49
#1-13@1	1.60E+09	9.93	0.08	3.88	0.12	-0.64	0.42	7.93	0.10	-8.03	0.42
#1-13@2	1.98E+09	9.60	0.25	4.39	0.24	2.22	0.47	7.34	0.28	-6.14	0.47
#1-13@3	2.49E+09	9.39	0.23	5.39	0.26	3.33	0.48	6.61	0.27	-6.95	0.48
#1-14@1	1.53E+09	10.40	0.08	4.19	0.12	-0.09	0.50	8.24	0.10	-8.07	0.50
#1-14@2	1.88E+09	10.40	0.24	4.40	0.25	4.84	0.49	8.14	0.27	-3.53	0.49
#1-14@3	2.25E+09	10.61	0.24	4.72	0.28	0.27	0.74	8.18	0.28	-8.72	0.74
#1-15@1	1.77E+09	5.78	0.14	-0.16	0.28	-6.00	0.57	5.86	0.20	-5.70	0.57
#1-15@2	1.88E+09	5.96	0.24	0.34	0.23	-7.20	0.58	5.78	0.27	-7.85	0.58
#1-15@3	2.32E+09	6.41	0.23	0.71	0.26	-4.82	0.56	6.04	0.26	-6.17	0.56
#1-16@1	1.77E+09	8.83	0.06	3.65	0.07	-0.79	0.32	6.95	0.07	-7.74	0.32
#1-16@2	1.75E+09	9.07	0.23	5.62	0.21	4.75	0.38	6.18	0.25	-5.95	0.38
#1-16@3	1.41E+09	11.28	0.23	10.42	0.25	15.03	0.51	5.92	0.26	-4.86	0.51
son20@1	1.82E+09	0.90	0.11	1.58	0.20	2.80	0.40	0.08	0.15	-0.21	0.40

son20@2	1.85E+09	0.73	0.23	1.50	0.25	4.24	0.52	-0.05	0.27	1.38	0.52
son20@3	2.23E+09	0.84	0.24	1.63	0.28	3.28	0.49	0.00	0.28	0.19	0.49
son21@1	1.82E+09	0.83	0.09	1.69	0.15	3.44	0.33	-0.04	0.11	0.23	0.33
son21@2	1.84E+09	0.84	0.26	1.51	0.32	3.28	0.58	0.07	0.31	0.42	0.58
son21@3	2.27E+09	1.11	0.23	2.03	0.28	4.18	0.51	0.06	0.28	0.31	0.51
son22@1	1.79E+09	0.87	0.07	1.65	0.11	3.26	0.31	0.02	0.09	0.14	0.31
son22@2	1.83E+09	0.76	0.26	1.63	0.34	3.45	0.65	-0.08	0.31	0.35	0.65
son22@3	2.23E+09	0.83	0.23	1.60	0.28	2.57	0.57	0.01	0.27	-0.46	0.57
son23@1	1.82E+09	0.82	0.11	1.65	0.19	3.40	0.42	-0.03	0.15	0.26	0.42
son23@2	1.85E+09	0.95	0.23	2.05	0.24	2.63	0.41	-0.11	0.26	-1.27	0.41
son23@3	2.17E+09	0.82	0.24	1.65	0.30	2.93	0.50	-0.03	0.29	-0.20	0.50
son20@1	1.82E+09	0.84	0.17	1.57	0.25	2.90	0.54	0.04	0.21	-0.08	0.54
son20@2	1.85E+09	0.71	0.17	1.44	0.22	4.06	0.67	-0.03	0.21	1.31	0.67
son20@3	2.23E+09	0.76	0.25	1.45	0.17	3.41	0.75	0.02	0.26	0.65	0.75
son21@1	1.82E+09	0.78	0.15	1.67	0.21	3.59	0.48	-0.09	0.19	0.40	0.48
son21@2	1.84E+09	0.83	0.21	1.45	0.29	3.12	0.70	0.08	0.26	0.37	0.70
son21@3	2.27E+09	1.04	0.24	1.86	0.18	4.24	0.72	0.08	0.26	0.69	0.72
son22@1	1.79E+09	0.81	0.14	1.63	0.19	3.46	0.45	-0.03	0.17	0.36	0.45
son22@2	1.83E+09	0.75	0.21	1.57	0.31	3.31	0.74	-0.06	0.26	0.32	0.74
son22@3	2.23E+09	0.76	0.24	1.42	0.18	2.54	0.74	0.02	0.26	-0.16	0.74
son23@1	1.82E+09	0.77	0.17	1.64	0.24	3.64	0.52	-0.08	0.21	0.53	0.52
son23@2	1.85E+09	0.93	0.17	1.99	0.20	2.50	0.52	-0.09	0.20	-1.28	0.52
son23@3	2.17E+09	0.75	0.25	1.47	0.21	2.83	0.65	-0.01	0.27	0.02	0.65
#1-17@1	1.72E+09	8.58	0.17	6.38	0.26	7.06	0.67	5.30	0.22	-5.10	0.67
#1-17@2	1.85E+09	8.56	0.17	5.87	0.21	5.57	0.56	5.54	0.20	-5.61	0.56
#1-17@3	2.24E+09	8.07	0.25	3.71	0.23	1.98	0.67	6.16	0.28	-5.09	0.67
#1-18@1	1.11E+09	10.12	0.22	10.34	0.27	14.06	0.49	4.80	0.26	-5.69	0.49
#1-18@2	1.59E+09	10.67	0.17	13.21	0.17	18.94	0.45	3.89	0.19	-6.31	0.45
#1-18@3	2.14E+09	11.16	0.25	14.49	0.24	22.72	0.84	3.73	0.28	-4.98	0.84

#1-19@1	1.76E+09	8.21	0.14	12.46	0.18	21.63	0.43	1.81	0.17	-2.18	0.43
#1-19@2	1.83E+09	6.72	0.17	9.40	0.19	15.63	0.43	1.89	0.20	-2.31	0.43
#1-19@3	2.30E+09	7.96	0.24	12.27	0.15	21.68	0.54	1.66	0.25	-1.77	0.54
#1-20@1	1.74E+09	9.59	0.16	11.43	0.17	16.71	0.37	3.72	0.18	-5.12	0.37
#1-20@2	1.80E+09	8.77	0.28	11.61	0.42	18.30	0.97	2.81	0.35	-3.88	0.97
#1-20@3	2.33E+09	7.65	0.26	10.32	0.23	17.34	0.63	2.35	0.28	-2.36	0.63
#1@21	1.60E+09	9.43	0.14	9.10	0.17	10.84	0.37	4.76	0.17	-6.53	0.37
#1@22	1.74E+09	10.95	0.17	10.82	0.19	13.17	0.38	5.40	0.20	-7.50	0.38
#1@23	2.26E+09	10.07	0.29	9.67	0.39	11.91	0.94	5.10	0.35	-6.55	0.94
#1-22@1	1.42E+09	10.72	0.23	10.12	0.27	14.22	0.45	5.53	0.26	-5.09	0.45
#1-22@2	1.77E+09	10.80	0.18	12.71	0.18	18.57	0.40	4.27	0.20	-5.71	0.40
#1-22@3	2.40E+09	10.32	0.26	12.57	0.24	18.35	0.58	3.86	0.29	-5.68	0.58
#1-23@1	1.68E+09	10.65	0.16	9.32	0.25	10.14	0.50	5.86	0.21	-7.65	0.50
#1-23@2	1.90E+09	11.41	0.16	10.70	0.18	11.45	0.37	5.91	0.19	-8.98	0.37
#1-23@3	1.97E+09	12.94	0.24	13.01	0.14	16.33	0.43	6.26	0.25	-8.54	0.43
#1-24@1	1.51E+09	10.78	0.15	11.08	0.19	15.12	0.78	5.10	0.18	-6.03	0.78
#1-24@2	1.66E+09	11.78	0.16	11.59	0.19	14.62	0.57	5.83	0.19	-7.52	0.57
#1-24@3	2.20E+09	13.45	0.24	13.21	0.15	17.50	0.42	6.67	0.25	-7.74	0.42
#1-25@1	7.38E+08	12.40	0.16	11.10	0.19	14.14	0.67	6.70	0.18	-7.05	0.67
#1-25@2	1.05E+09	11.89	0.18	11.41	0.21	17.55	0.41	6.03	0.21	-4.24	0.41
#1-25@3	1.30E+09	12.59	0.26	13.38	0.13	20.45	0.38	5.73	0.27	-5.12	0.38
#1-26@1	1.56E+09	13.47	0.14	10.97	0.17	11.93	0.35	7.84	0.16	-9.01	0.35
#1-26@2	1.70E+09	14.47	0.21	13.08	0.23	16.30	0.42	7.76	0.24	-8.69	0.42
#1-26@3	2.29E+09	12.91	0.28	11.62	0.35	14.95	0.68	6.94	0.33	-7.24	0.68
#1-27@1	8.31E+08	8.26	0.16	7.93	0.19	13.06	0.57	4.18	0.18	-2.06	0.57
#1-27@2	1.09E+09	8.78	0.19	9.65	0.23	16.08	0.48	3.83	0.22	-2.33	0.48
#1-27@3	1.25E+09	10.36	0.25	11.55	0.16	18.38	0.38	4.43	0.27	-3.69	0.38
son24@1	1.75E+09	0.74	0.16	1.25	0.23	2.49	0.38	0.09	0.20	0.11	0.38
son24@2	1.86E+09	0.86	0.18	1.69	0.26	3.57	0.50	-0.02	0.23	0.36	0.50
son24@3	2.17E+09	0.62	0.24	1.30	0.19	2.65	0.45	-0.05	0.26	0.19	0.45

son25@1	1.81E+09	0.73	0.17	1.52	0.24	4.11	0.64	-0.05	0.21	1.23	0.64
son25@2	1.82E+09	1.03	0.17	1.83	0.21	3.20	0.46	0.09	0.20	-0.27	0.46
son25@3	2.15E+09	0.81	0.25	1.69	0.20	3.12	0.35	-0.06	0.27	-0.10	0.35
son26@1	1.78E+09	1.02	0.16	1.81	0.24	3.33	0.46	0.09	0.20	-0.11	0.46
son26@2	1.81E+09	0.84	0.17	1.55	0.18	3.23	0.28	0.05	0.19	0.29	0.28
son26@3	2.20E+09	0.95	0.25	1.83	0.23	3.73	0.40	0.01	0.28	0.25	0.40
son27@1	1.78E+09	0.95	0.15	1.80	0.21	3.39	0.43	0.03	0.18	-0.03	0.43
son27@2	1.83E+09	0.69	0.18	1.36	0.23	3.32	0.49	-0.01	0.21	0.73	0.49
son27@3	2.21E+09	0.95	0.26	1.85	0.23	3.53	0.49	0.00	0.29	0.02	0.49

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son2tryagain@1	1.64E+09	0.80	0.14	1.62	0.22	3.13	0.44	-0.03	0.18	0.06	0.44
son2tryagain@2	1.93E+09	0.77	0.11	1.65	0.16	2.75	0.49	-0.07	0.14	-0.38	0.49
son2tryagain@3	2.66E+09	0.68	0.07	1.53	0.11	2.96	0.23	-0.10	0.09	0.06	0.23
son3@1	1.64E+09	0.59	0.13	1.37	0.20	2.77	0.55	-0.11	0.17	0.17	0.55
son3@2	1.91E+09	0.63	0.10	1.32	0.18	2.31	0.40	-0.05	0.13	-0.20	0.40
son3@3	2.61E+09	0.72	0.07	1.52	0.09	3.30	0.24	-0.06	0.08	0.41	0.24
son4@1	1.63E+09	0.82	0.13	1.47	0.21	2.50	0.50	0.06	0.17	-0.29	0.50
son4@2	1.92E+09	0.76	0.11	1.47	0.17	2.81	0.40	0.00	0.14	0.01	0.40
son4@3	2.63E+09	0.72	0.07	1.47	0.09	2.55	0.32	-0.04	0.09	-0.25	0.32
son5@1	1.62E+09	0.78	0.11	1.61	0.20	3.02	0.54	-0.05	0.15	-0.03	0.54
son5@2	1.91E+09	0.84	0.11	1.57	0.18	2.54	0.45	0.03	0.14	-0.44	0.45
son5@3	2.62E+09	0.94	0.08	1.71	0.09	3.53	0.22	0.06	0.09	0.28	0.22
freo1@1	1.61E+09	-2.26	0.16	-4.70	0.25	-9.72	0.54	0.16	0.20	-0.81	0.54
freo1@2	1.98E+09	-2.68	0.11	-5.17	0.17	-10.19	0.40	-0.01	0.14	-0.39	0.40
freo1@3	2.67E+09	-2.76	0.07	-5.43	0.08	-10.83	0.26	0.04	0.08	-0.53	0.26
#4-34@1	1.65E+09	13.41	0.10	10.97	0.16	11.77	0.42	7.77	0.13	-9.18	0.42
#4-34@2	1.95E+09	13.82	0.13	11.32	0.22	12.50	0.48	8.00	0.17	-9.13	0.48

#4-34@3	2.74E+09	15.63	0.10	14.04	0.11	16.94	0.26	8.42	0.11	-9.90	0.26
#4-35@1	1.60E+09	10.54	0.19	9.36	0.34	11.15	0.76	5.73	0.26	-6.71	0.76
#4-35@2	1.41E+09	10.18	0.18	9.76	0.31	12.77	0.65	5.17	0.24	-5.85	0.65
#4-35@3	6.31E+08	12.33	0.17	13.67	0.15	21.07	0.59	5.32	0.18	-5.06	0.59
#4-36@1	1.62E+09	12.01	0.13	12.41	0.21	17.61	0.48	5.64	0.17	-6.11	0.48
#4-36@2	1.89E+09	11.95	0.10	12.27	0.17	17.58	0.51	5.65	0.14	-5.86	0.51
#4-36@3	2.51E+09	11.96	0.06	12.25	0.05	17.17	0.28	5.67	0.07	-6.23	0.28
#4-37@1	1.62E+09	11.60	0.13	11.49	0.22	15.40	0.50	5.70	0.17	-6.55	0.50
#4-37@2	1.93E+09	11.71	0.10	11.59	0.18	15.90	0.41	5.76	0.14	-6.23	0.41
#4-37@3	2.62E+09	11.50	0.07	11.33	0.09	14.93	0.31	5.68	0.09	-6.69	0.31
#4-38@1	1.58E+09	11.49	0.15	7.92	0.27	7.59	0.54	7.41	0.20	-7.52	0.54
#4-38@2	1.99E+09	11.37	0.14	7.64	0.20	6.89	0.49	7.44	0.17	-7.67	0.49
#4-38@3	2.71E+09	11.43	0.08	7.85	0.09	6.91	0.30	7.40	0.09	-8.06	0.30
#4-39@1	1.59E+09	18.44	0.12	18.20	0.17	24.04	0.44	9.11	0.15	-10.83	0.44
#4-39@2	1.91E+09	18.67	0.16	18.62	0.22	25.01	0.58	9.12	0.20	-10.66	0.58
#4-39@3	2.59E+09	17.01	0.15	16.28	0.23	21.24	0.40	8.66	0.19	-9.92	0.40
son6@1	1.61E+09	0.86	0.14	1.66	0.21	3.05	0.38	0.01	0.18	-0.10	0.38
son6@2	1.90E+09	0.80	0.11	1.72	0.18	3.22	0.49	-0.09	0.14	-0.05	0.49
son6@3	2.56E+09	0.89	0.08	1.69	0.09	3.30	0.36	0.02	0.10	0.10	0.36
son7@1	1.59E+09	0.93	0.11	1.82	0.21	3.70	0.40	-0.01	0.15	0.23	0.40
son7@2	1.86E+09	0.91	0.11	1.74	0.17	3.70	0.53	0.01	0.14	0.39	0.53
son7@3	2.54E+09	0.87	0.08	1.66	0.10	3.20	0.31	0.01	0.10	0.04	0.31
freo2@1	1.58E+09	-2.04	0.15	-4.17	0.20	-7.64	0.52	0.11	0.18	0.26	0.52
freo2@2	1.90E+09	-2.06	0.09	-4.14	0.18	-8.27	0.46	0.07	0.13	-0.42	0.46
freo2@3	2.54E+09	-2.14	0.08	-4.25	0.10	-8.55	0.32	0.05	0.10	-0.49	0.32
#4-40@1	1.56E+09	18.01	0.11	18.29	0.21	24.82	0.41	8.64	0.15	-10.21	0.41
#4-40@2	1.96E+09	17.68	0.13	17.84	0.19	24.55	0.39	8.53	0.16	-9.62	0.39
#4-40@3	2.68E+09	16.37	0.13	16.65	0.15	22.53	0.39	7.83	0.15	-9.33	0.39
#4-41@1	1.58E+09	14.37	0.19	8.31	0.28	6.10	0.45	10.10	0.24	-9.76	0.45
#4-41@2	1.87E+09	12.69	0.18	6.84	0.26	4.21	0.48	9.17	0.23	-8.82	0.48

#4-41@3	2.51E+09	11.16	0.11	5.11	0.15	0.90	0.30	8.53	0.13	-8.83	0.30
#4-42@1	1.11E+09	12.77	0.10	7.47	0.11	5.47	0.32	8.94	0.11	-8.76	0.32
#4-42@2	1.35E+09	13.70	0.07	9.36	0.08	8.89	0.40	8.89	0.08	-8.97	0.40
#4-42@3	1.14E+09	15.69	0.08	11.86	0.09	13.04	0.37	9.60	0.09	-9.61	0.37
#4-43@1	1.55E+09	8.78	0.13	2.88	0.20	-1.05	0.39	7.30	0.17	-6.53	0.39
#4-43@2	1.85E+09	8.99	0.09	2.71	0.14	-2.24	0.46	7.60	0.12	-7.39	0.46
#4-43@3	2.51E+09	10.14	0.07	3.90	0.03	-0.89	0.22	8.13	0.07	-8.32	0.22
#4-44@1	1.58E+09	9.08	0.12	3.72	0.24	-0.19	0.49	7.16	0.17	-7.27	0.49
#4-44@2	1.88E+09	9.90	0.07	4.09	0.08	0.27	0.28	7.80	0.08	-7.52	0.28
#4-44@3	2.54E+09	13.19	0.12	7.40	0.10	4.60	0.28	9.38	0.13	-9.51	0.28
#4-45@1	1.57E+09	9.29	0.12	3.10	0.18	-1.79	0.35	7.69	0.15	-7.70	0.35
#4-45@2	1.90E+09	10.65	0.07	4.93	0.10	1.09	0.36	8.11	0.08	-8.31	0.36
#4-45@3	2.58E+09	12.24	0.07	6.62	0.03	3.98	0.26	8.83	0.07	-8.65	0.26
son8@1	1.60E+09	0.90	0.13	1.67	0.19	3.27	0.43	0.03	0.16	0.09	0.43
son8@2	1.87E+09	0.90	0.10	1.72	0.18	3.49	0.39	0.02	0.14	0.23	0.39
son8@3	2.55E+09	0.84	0.07	1.68	0.09	3.14	0.22	-0.02	0.09	-0.05	0.22
son9@1	1.59E+09	0.83	0.13	1.59	0.22	3.56	0.54	0.01	0.17	0.54	0.54
son9@2	1.88E+09	0.82	0.10	1.55	0.17	3.47	0.35	0.02	0.14	0.51	0.35
son9@3	2.54E+09	0.79	0.08	1.50	0.10	3.32	0.29	0.02	0.09	0.48	0.29
#4-46@1	1.50E+09	8.65	0.19	3.01	0.23	-1.02	0.46	7.10	0.23	-6.74	0.46
#4-46@2	1.89E+09	7.71	0.14	3.06	0.24	0.04	0.50	6.14	0.18	-5.78	0.50
#4-46@3	2.57E+09	8.16	0.07	2.84	0.11	-1.26	0.43	6.69	0.09	-6.67	0.43
#4-47@1	1.54E+09	9.72	0.11	4.50	0.21	0.91	0.53	7.41	0.15	-7.65	0.53
#4-47@2	1.89E+09	11.03	0.08	5.29	0.11	2.14	0.28	8.31	0.10	-7.94	0.28
#4-47@3	2.27E+09	13.12	0.09	7.94	0.04	6.01	0.25	9.04	0.10	-9.13	0.25
#4-48@1	1.54E+09	8.10	0.14	1.84	0.20	-3.50	0.52	7.16	0.17	-7.00	0.52
#4-48@2	1.92E+09	8.04	0.12	1.52	0.21	-4.32	0.50	7.25	0.16	-7.22	0.50
#4-48@3	2.63E+09	8.09	0.07	1.47	0.07	-4.47	0.32	7.33	0.08	-7.27	0.32
#4-49@1	1.54E+09	10.39	0.08	4.72	0.17	1.32	0.38	7.96	0.12	-7.66	0.38
#4-49@2	1.80E+09	12.36	0.08	7.29	0.11	5.78	0.64	8.61	0.10	-8.12	0.64

#4-49@3	1.51E+09	14.06	0.10	10.56	0.09	11.57	0.31	8.63	0.11	-8.59	0.31
#4-50@1	1.30E+09	9.27	0.09	5.22	0.20	4.38	0.52	6.59	0.14	-5.55	0.52
#4-50@2	6.97E+08	12.20	0.17	10.71	0.12	14.58	0.66	6.70	0.18	-5.87	0.66
#4-50@3	3.42E+08	12.34	0.17	12.34	0.08	18.48	0.58	6.00	0.17	-5.10	0.58
#4-51@1	1.42E+09	12.66	0.08	7.01	0.12	4.80	0.38	9.05	0.10	-8.56	0.38
#4-51@2	1.82E+09	14.18	0.09	9.67	0.06	10.35	0.28	9.21	0.09	-8.11	0.28
#4-51@3	1.71E+09	14.66	0.08	11.97	0.04	14.62	0.28	8.51	0.08	-8.26	0.28
son10@1	1.56E+09	0.85	0.13	1.66	0.20	3.75	0.48	0.00	0.17	0.60	0.48
son10@2	1.85E+09	0.86	0.11	1.73	0.16	4.06	0.36	-0.03	0.14	0.77	0.36
son10@3	2.49E+09	0.84	0.08	1.52	0.09	3.13	0.27	0.06	0.09	0.24	0.27
son11@1	1.55E+09	0.89	0.11	1.62	0.20	3.38	0.44	0.05	0.15	0.29	0.44
son11@2	1.82E+09	0.92	0.14	1.66	0.19	3.84	0.47	0.06	0.17	0.68	0.47
son11@3	2.55E+09	0.87	0.08	1.65	0.12	3.46	0.32	0.02	0.10	0.32	0.32
#4-52@1	1.55E+09	-18.59	0.11	-36.22	0.17	-68.23	0.46	0.23	0.14	-0.54	0.46
#4-52@2	2.02E+09	-18.42	0.11	-35.93	0.17	-67.62	0.38	0.25	0.14	-0.45	0.38
#4-52@3	2.61E+09	-17.61	0.07	-34.59	0.05	-65.35	0.28	0.36	0.07	-0.65	0.28
#4-53@1	1.40E+09	-18.78	0.14	-36.44	0.21	-68.04	0.62	0.15	0.18	0.05	0.62
#4-53@2	1.83E+09	-18.06	0.08	-35.36	0.09	-66.00	0.36	0.31	0.09	0.12	0.36
#4-53@3	2.07E+09	-18.17	0.08	-35.56	0.15	-66.70	0.36	0.30	0.12	-0.22	0.36
#4-55@1	1.41E+09	-18.07	0.09	-35.21	0.12	-65.78	0.38	0.22	0.11	0.06	0.38
#4-55@2	1.92E+09	-18.36	0.10	-35.85	0.16	-67.67	0.50	0.27	0.13	-0.65	0.50
#4-55@3	2.66E+09	-17.88	0.07	-34.76	0.09	-65.69	0.21	0.18	0.09	-0.68	0.21
#4-56@1	1.51E+09	-18.24	0.13	-35.54	0.21	-66.59	0.61	0.23	0.17	-0.14	0.61
#4-56@2	1.96E+09	-18.07	0.09	-35.20	0.16	-66.35	0.32	0.22	0.12	-0.53	0.32
#4-56@3	2.68E+09	-18.33	0.09	-35.71	0.14	-67.39	0.44	0.23	0.12	-0.63	0.44
son12@1	1.57E+09	0.74	0.13	1.53	0.21	3.47	0.52	-0.04	0.17	0.56	0.52
son12@2	1.84E+09	0.85	0.11	1.51	0.18	3.12	0.47	0.07	0.15	0.25	0.47
son12@3	2.52E+09	0.85	0.09	1.62	0.10	3.63	0.30	0.02	0.10	0.56	0.30
son13@1	1.70E+09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
son13@2	2.49E+09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

son13@3	3.28E+09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
son14@1	1.55E+09	0.98	0.13	1.71	0.21	3.17	0.48	0.10	0.17	-0.07	0.48
son14@2	1.83E+09	0.91	0.10	1.69	0.17	3.48	0.49	0.04	0.14	0.27	0.49
son14@3	2.50E+09	0.94	0.09	1.78	0.11	3.53	0.36	0.03	0.10	0.14	0.36

GKF01-mount4-grain3

son@02	2.11E+09	0.795	0.033	1.538	0.018	3.663	0.134	0.004	0.034	0.739	0.134
son@03	2.12E+09	0.795	0.029	1.547	0.018	3.786	0.146	-0.001	0.031	0.845	0.146
son@04	2.10E+09	0.859	0.032	1.571	0.018	3.881	0.139	0.050	0.033	0.894	0.139
son@05	2.10E+09	0.899	0.031	1.680	0.018	3.966	0.139	0.034	0.033	0.771	0.139
GKF01_mount4_1102_grain-3@1	2.07E+09	12.849	0.030	13.162	0.018	19.200	0.138	6.092	0.032	-5.956	0.138
GKF01_mount4_1102_grain-3@2	2.08E+09	13.169	0.033	13.381	0.018	19.419	0.137	6.300	0.034	-6.158	0.137
GKF01_mount4_1102_grain-3@3	2.08E+09	13.557	0.030	13.474	0.018	19.544	0.154	6.640	0.031	-6.212	0.154
GKF01_mount4_1102_grain-3@4	2.09E+09	13.598	0.031	13.512	0.019	19.250	0.153	6.662	0.033	-6.579	0.153
GKF01_mount4_1102_grain-3@5	2.04E+09	13.403	0.031	13.358	0.019	18.945	0.147	6.546	0.032	-6.588	0.147
freo@1	2.09E+09	-2.231	0.033	-4.472	0.018	-7.837	0.147	0.074	0.034	0.642	0.147
son@06	2.12E+09	0.913	0.030	1.684	0.019	3.878	0.134	0.045	0.032	0.676	0.134
son@07	2.13E+09	0.896	0.033	1.624	0.018	3.937	0.137	0.060	0.035	0.849	0.137
GKF01_mount4_1102_grain-3@7	2.10E+09	13.410	0.032	13.226	0.019	18.520	0.162	6.620	0.033	-6.759	0.162
GKF01_mount4_1102_grain-3@8	2.11E+09	13.638	0.031	13.615	0.019	19.307	0.135	6.649	0.033	-6.719	0.135
GKF01_mount4_1102_grain-3@9	2.11E+09	13.314	0.030	13.420	0.018	19.273	0.149	6.425	0.031	-6.379	0.149
GKF01_mount4_1102_grain-3@10	2.12E+09	13.802	0.030	14.247	0.018	20.868	0.135	6.490	0.031	-6.375	0.135
GKF01_mount4_1102_grain-3@11	2.09E+09	17.126	0.033	17.424	0.018	24.656	0.137	8.191	0.035	-8.709	0.137
GKF01_mount4_1102_grain-3@12	2.08E+09	14.017	0.035	14.129	0.018	20.153	0.136	6.765	0.036	-6.862	0.136
freo@2	2.05E+09	-2.212	0.033	-4.421	0.018	-7.406	0.144	0.067	0.034	0.978	0.144
son@08	2.10E+09	0.883	0.033	1.664	0.018	4.127	0.135	0.026	0.035	0.963	0.135
son@09	2.10E+09	0.862	0.033	1.631	0.019	3.990	0.135	0.022	0.034	0.890	0.135
GKF01_mount4_1102_grain-3@13	2.09E+09	13.869	0.033	13.811	0.018	19.943	0.136	6.780	0.034	-6.460	0.136

GKF01_mount4_1102_grain-3@14	2.10E+09	13.801	0.032	13.850	0.019	19.946	0.136	6.692	0.033	-6.533	0.136
GKF01_mount4_1102_grain-3@15	2.14E+09	13.593	0.031	13.641	0.018	19.462	0.135	6.590	0.032	-6.615	0.135
GKF01_mount4_1102_grain-3@16	2.17E+09	13.397	0.031	13.379	0.019	19.093	0.134	6.529	0.032	-6.480	0.134
GKF01_mount4_1102_grain-3@17	2.18E+09	13.041	0.033	13.220	0.018	19.047	0.144	6.255	0.034	-6.220	0.144
GKF01_mount4_1102_grain-3@18	2.19E+09	13.596	0.035	13.573	0.018	19.603	0.172	6.629	0.036	-6.343	0.172
GKF01_mount4_1102_grain-3@19	2.20E+09	13.747	0.033	13.812	0.019	19.992	0.135	6.657	0.034	-6.414	0.135
son@10	2.25E+09	0.869	0.031	1.615	0.018	3.863	0.130	0.038	0.033	0.792	0.130
son@11	2.22E+09	0.870	0.033	1.605	0.018	3.950	0.131	0.044	0.035	0.899	0.131
son@12	2.22E+09	0.817	0.030	1.600	0.018	3.870	0.135	-0.007	0.032	0.827	0.135
son@13	2.21E+09	0.831	0.035	1.579	0.018	3.996	0.131	0.018	0.036	0.994	0.131
son@15	2.11E+09	0.885	0.037	1.604	0.018	3.153	0.150	0.059	0.038	0.103	0.150
son@16	2.11E+09	0.902	0.031	1.631	0.018	3.279	0.146	0.062	0.032	0.178	0.146
son@17	2.12E+09	0.922	0.031	1.734	0.018	3.273	0.142	0.030	0.032	-0.023	0.142
GKF01_mount4_1102_grain-3@20	2.00E+09	18.077	0.031	17.803	0.021	23.316	0.146	8.948	0.033	-10.780	0.146
GKF01_mount4_1102_grain-3@21	2.08E+09	13.839	0.033	14.028	0.019	19.252	0.166	6.639	0.034	-7.569	0.166
GKF01_mount4_1102_grain-3@22	2.03E+09	13.940	0.034	13.802	0.019	19.025	0.147	6.855	0.035	-7.362	0.147
GKF01_mount4_1102_grain-3@23	2.01E+09	13.762	0.034	14.285	0.018	20.584	0.144	6.430	0.035	-6.732	0.144
GKF01_mount4_1102_grain-3@24	1.97E+09	13.940	0.035	14.055	0.020	19.468	0.159	6.726	0.036	-7.406	0.159
GKF01_mount4_1102_grain-3@25	1.93E+09	13.033	0.033	13.141	0.019	18.053	0.145	6.287	0.034	-7.061	0.145
GKF01_mount4_1102_grain-3@26	1.99E+09	13.784	0.033	13.809	0.018	19.219	0.143	6.696	0.034	-7.180	0.143
son@18	2.03E+09	0.846	0.033	1.659	0.018	3.359	0.140	-0.008	0.034	0.206	0.140
son@19	2.03E+09	0.762	0.030	1.548	0.019	3.183	0.144	-0.035	0.031	0.240	0.144
GKF01_mount4_1102_grain-3@27	2.03E+09	13.646	0.031	14.259	0.018	20.078	0.147	6.328	0.033	-7.187	0.147
GKF01_mount4_1102_grain-3@28	2.03E+09	13.668	0.033	14.329	0.018	20.575	0.140	6.314	0.034	-6.826	0.140
GKF01_mount4_1102_grain-3@27	2.03E+09	13.646	0.031	14.259	0.018	20.088	0.146	6.328	0.033	-7.178	0.146
GKF01_mount4_1102_grain-3@28	2.03E+09	13.668	0.033	14.329	0.018	20.585	0.140	6.314	0.034	-6.816	0.140
GKF01_mount4_1102_grain-3@29	2.01E+09	13.670	0.033	14.104	0.019	19.862	0.146	6.431	0.034	-7.105	0.146
GKF01_mount4_1102_grain-3@30	2.00E+09	13.812	0.031	13.768	0.019	19.145	0.140	6.745	0.033	-7.176	0.140
son@20	2.00E+09	0.765	0.033	1.568	0.019	3.315	0.139	-0.042	0.035	0.334	0.139
son@21	2.01E+09	0.799	0.030	1.536	0.019	3.200	0.139	0.009	0.032	0.280	0.139

GKF01_mount4_1102_grain-3@33	1.99E+09	13.347	0.032	13.601	0.018	19.254	0.141	6.366	0.033	-6.746	0.141
GKF01_mount4_1102_grain-3@34	2.00E+09	13.770	0.032	13.717	0.019	19.077	0.150	6.729	0.034	-7.146	0.150
GKF01_mount4_1102_grain-3@35	2.01E+09	13.795	0.033	13.927	0.018	19.253	0.140	6.646	0.034	-7.374	0.140
GKF01_mount4_1102_grain-3@36	1.92E+09	13.531	0.030	13.676	0.019	18.844	0.146	6.512	0.032	-7.301	0.146
GKF01_mount4_1102_grain-3@37	1.99E+09	13.758	0.033	14.082	0.019	19.652	0.141	6.531	0.035	-7.273	0.141
GKF01_mount4_1102_grain-3@38	1.98E+09	13.770	0.031	13.815	0.019	18.618	0.160	6.679	0.033	-7.794	0.160
son@23	1.99E+09	0.796	0.030	1.632	0.019	3.245	0.140	-0.045	0.031	0.142	0.140
son@24	2.01E+09	0.794	0.032	1.579	0.018	3.220	0.171	-0.019	0.034	0.217	0.171

Note: Spots labeled Freo include two types of sulfides with different composition.

Table S4: Data Used for Plotting: (Based on Single SIMS spot – i.e., data for pits occupied more than once were averaged)

Analysis	Depth	$^{32}S_{counts}$	$\delta^{33}S_{VCDT}$	2s (est)	$\delta^{34}S_{VCDT}$	2s (est)	$\delta^{36}S_{VCDT}$	2s (est)	$\Delta^{33}S_{VCDT}$	2s (est)	$\Delta^{36}S_{VCDT}$	2s (est)
GKF01_mount4_1102_grain-1@1	1102.6	1963684000	-10.57	0.09	-18.83	0.05	-33.58	0.32	-0.83	0.19	1.89	0.32
GKF01_mount4_1102_grain-1@2	1102.6	2004094000	-11.39	0.09	-20.13	0.04	-35.78	0.32	-0.97	0.18	2.13	0.32
GKF01_mount4_1102_grain-1@3	1102.6	1992369000	-11.63	0.09	-20.61	0.04	-36.94	0.32	-0.96	0.18	1.86	0.32
GKF01_mount4_1102_grain-1@4	1102.6	1910827000	-7.10	0.10	-13.31	0.04	-24.08	0.38	-0.22	0.20	1.06	0.38
GKF01_mount4_1102_grain-1@5	1102.6	1919286000	-8.83	0.10	-16.04	0.04	-28.98	0.32	-0.54	0.21	1.27	0.32
GKF01_mount4_1102_grain-1@6	1102.6	1966206000	-10.66	0.09	-19.02	0.05	-33.92	0.36	-0.82	0.19	1.91	0.36
GKF01_mount4_1102_grain-1@7	1102.6	1953448000	-11.35	0.09	-20.35	0.04	-36.52	0.36	-0.81	0.19	1.79	0.36
GKF01_mount4_1102_grain-1@8	1102.6	1922052000	-11.57	0.09	-20.79	0.04	-37.63	0.32	-0.81	0.19	1.49	0.32
GKF01_mount4_1102_grain-1@9	1102.6	1991534000	-10.66	0.09	-18.94	0.05	-33.55	0.32	-0.86	0.19	2.14	0.32
GKF01_mount4_1102_grain-1@10	1102.6	1936654000	-11.06	0.09	-19.68	0.05	-35.36	0.34	-0.87	0.18	1.71	0.34
GKF01_mount4_1102_grain-1@11	1102.6	1979796000	-11.70	0.09	-20.86	0.04	-37.66	0.32	-0.90	0.19	1.61	0.32
GKF01_mount4_1102_grain-1@12	1102.6	2046575000	-11.55	0.09	-20.64	0.05	-37.33	0.34	-0.87	0.18	1.52	0.34
GKF01_mount4_1102_grain-1@13	1102.6	2091787000	-11.02	0.09	-19.69	0.04	-35.15	0.31	-0.84	0.19	1.93	0.31
GKF01_mount4_1102_grain-1@14	1102.6	2092129000	-11.18	0.09	-20.02	0.04	-36.13	0.31	-0.82	0.18	1.56	0.31
GKF01_mount4_1102_grain-1@15	1102.6	2100716000	-11.16	0.09	-19.79	0.04	-35.45	0.31	-0.91	0.18	1.81	0.31
GKF01_mount4_1102_grain-1@16	1102.6	2102640000	-11.18	0.10	-19.88	0.05	-35.40	0.31	-0.89	0.20	2.03	0.31
GKF01_mount4_1102_grain-1@17	1102.6	2065836000	-9.56	0.09	-17.27	0.05	-31.22	0.31	-0.62	0.20	1.34	0.31
GKF01_mount4_1102_grain-1@18	1102.6	2089228000	-10.63	0.09	-19.04	0.04	-34.19	0.32	-0.78	0.18	1.68	0.32
GKF01_mount4_1102_grain-1@19	1102.6	2349567000	-11.31	0.06	-20.10	0.03	-35.93	0.31	-0.91	0.12	1.92	0.31
GKF01_mount4_1102_grain-1@20	1102.6	2319917000	-12.08	0.05	-21.55	0.04	-38.74	0.31	-0.92	0.11	1.81	0.31
GKF01_mount4_1102_grain-1@21	1102.6	2368344000	-10.72	0.06	-19.01	0.04	-33.84	0.31	-0.89	0.13	1.97	0.31
GKF01_mount4_1102_grain-1@22	1102.6	2361454000	-10.41	0.05	-18.32	0.03	-32.51	0.31	-0.94	0.10	2.00	0.31
GKF01_mount4_1102_grain-1@23	1102.6	2384411000	-11.67	0.06	-20.80	0.03	-37.29	0.32	-0.91	0.12	1.85	0.32
GKF01_mount4_1102_grain-1@24	1102.6	2369703000	-11.05	0.05	-19.71	0.04	-35.57	0.31	-0.85	0.11	1.55	0.31
GKF01_mount4_1102_grain-1@25	1102.6	2386896000	-10.41	0.06	-18.55	0.03	-33.37	0.32	-0.81	0.13	1.58	0.32
GKF01_mount4_1102_grain-1@26	1102.6	2412194000	-11.40	0.05	-20.38	0.03	-36.43	0.32	-0.85	0.11	1.94	0.32
GKF01_mount4_1102_grain-1@27	1102.6	2394080000	-8.99	0.06	-16.20	0.03	-28.93	0.32	-0.62	0.12	1.62	0.32

GKF01_mount4_1102_grain-1@28	1102.6	2405743000	-11.02	0.05	-19.62	0.03	-35.10	0.34	-0.87	0.11	1.85	0.34
GKF01_mount4_1102_grain-1@29	1102.6	2441336000	-11.10	0.05	-19.78	0.03	-35.40	0.33	-0.87	0.11	1.85	0.33
GKF01_mount4_1102_grain-1@30	1102.6	2432741000	-11.10	0.05	-19.82	0.03	-35.86	0.33	-0.85	0.11	1.46	0.33
GKF01_mount4_1102_grain-1@31	1102.6	2347797000	-8.40	0.05	-15.12	0.03	-27.08	0.35	-0.58	0.11	1.44	0.35
GKF01_mount4_1102_grain-1@32	1102.6	2430019000	-9.57	0.05	-17.10	0.03	-30.84	0.38	-0.73	0.11	1.40	0.38
GKF01_mount4_1102_grain-1@33	1102.6	2345148000	-11.32	0.06	-20.17	0.03	-36.46	0.37	-0.88	0.12	1.52	0.37
GKF01_mount4_1102_grain-1@34	1102.6	2423033000	-11.57	0.05	-20.63	0.03	-37.09	0.36	-0.90	0.10	1.74	0.36
GKF01_mount4_1102_grain-1@35	1102.6	2408678000	-10.81	0.06	-19.29	0.03	-34.41	0.38	-0.83	0.12	1.92	0.38
GKF01_mount4_1102_grain-1@36	1102.6	2385985000	-10.78	0.06	-19.34	0.03	-34.69	0.38	-0.78	0.13	1.74	0.38
GKF01_mount4_1102_grain-1@37	1102.6	2393396000	-11.59	0.04	-20.75	0.03	-37.16	0.25	-0.85	0.09	1.89	0.25
GKF01_mount4_1102_grain-1@38	1102.6	2364168000	-10.08	0.04	-18.09	0.02	-32.29	0.26	-0.73	0.09	1.80	0.26
GKF01_mount4_1102_grain-1@39	1102.6	2341595000	-9.87	0.04	-17.90	0.02	-32.04	0.26	-0.62	0.09	1.68	0.26
GKF01_mount4_1102_grain-1@40	1102.6	1877470000	-7.65	0.05	-14.18	0.03	-26.20	0.29	-0.33	0.11	0.56	0.29
GKF01_mount4_1102_grain-1@41	1102.6	2390650000	-11.46	0.05	-20.45	0.02	-36.53	0.26	-0.88	0.09	1.97	0.26
GKF01_mount4_1102_grain-1@42	1102.6	2387356000	-11.23	0.05	-19.97	0.02	-35.39	0.26	-0.90	0.09	2.20	0.26
GKF01_mount4_1102_grain-1@43	1102.6	2379639000	-8.56	0.04	-15.36	0.02	-27.57	0.26	-0.62	0.08	1.42	0.26
GKF01_mount4_1102_grain-1@44	1102.6	2377866000	-7.33	0.05	-13.43	0.04	-24.09	0.27	-0.39	0.10	1.28	0.27
GKF01_mount4_1102_grain-1@45	1102.6	2412813000	-11.48	0.05	-20.50	0.02	-36.68	0.32	-0.87	0.10	1.91	0.32
GKF01_mount4_1102_grain-1@46	1102.6	2380800000	-11.34	0.04	-20.28	0.02	-36.39	0.30	-0.85	0.09	1.79	0.30
GKF01_mount4_1102_grain-1@47	1102.6	2372241000	-11.45	0.05	-20.48	0.02	-36.75	0.29	-0.85	0.10	1.80	0.29
GKF01_mount4_1102_grain-1@48	1102.6	2373475000	-11.03	0.05	-19.46	0.02	-34.62	0.31	-0.96	0.10	2.02	0.31
GKF01_mount4_1102_grain-1@49	1102.6	2375863000	-11.32	0.05	-20.41	0.03	-36.45	0.28	-0.75	0.10	1.98	0.28
GKF01_mount4_1102_grain-1@50	1102.6	2246487000	-11.20	0.04	-20.39	0.02	-36.89	0.29	-0.65	0.08	1.49	0.29
GKF01_mount4_1102_grain-1@51	1102.6	2368179000	-11.10	0.04	-19.91	0.02	-35.65	0.29	-0.80	0.08	1.84	0.29
GKF01_mount4_1102_grain-1@52	1102.6	2408386000	-10.97	0.04	-19.53	0.02	-34.92	0.29	-0.86	0.08	1.85	0.29
GKF01_mount4_1102_grain-1@53	1102.6	2383108000	-11.45	0.05	-20.32	0.02	-36.48	0.29	-0.93	0.09	1.78	0.29
GKF01_mount4_1102_grain-1@54	1102.6	2340803000	-11.21	0.04	-20.16	0.03	-36.21	0.32	-0.78	0.09	1.75	0.32
GKF01_mount4_1102_grain-1@55	1102.6	2352265000	-10.26	0.05	-18.33	0.03	-32.94	0.25	-0.78	0.11	1.60	0.25
GKF01_mount4_1102_grain-1@56	1102.6	2291214000	-11.07	0.05	-19.93	0.03	-35.67	0.26	-0.76	0.11	1.86	0.26
GKF01_mount4_1102_grain-1@57	1102.6	2315253000	-10.88	0.05	-19.71	0.03	-35.50	0.28	-0.68	0.11	1.62	0.28

GKF01_mount4_1102_grain-1@58	1102.6	2305121000	-11.35	0.05	-20.39	0.03	-36.54	0.26	-0.80	0.10	1.85	0.26
GKF01_mount4_1102_grain-1@59	1102.6	2321738000	-11.05	0.05	-19.55	0.03	-34.84	0.29	-0.94	0.10	1.98	0.29
GKF01_mount4_1102_grain-1@60	1102.6	2196690000	-10.71	0.06	-19.54	0.03	-35.03	0.26	-0.60	0.12	1.76	0.26
GKF01_mount4_1102_grain-1@61	1102.6	2300355000	-11.29	0.05	-20.26	0.03	-36.51	0.28	-0.80	0.11	1.63	0.28
GKF01_mount4_1102_grain-1@62	1102.6	2293968000	-9.83	0.05	-17.67	0.05	-31.49	0.29	-0.69	0.11	1.82	0.29
GKF01_mount4_1102_grain-1@63	1102.6	2295426000	-11.37	0.05	-20.40	0.03	-36.44	0.26	-0.81	0.10	1.96	0.26
GKF01_mount4_1102_grain-1@64	1102.6	2252573000	-10.26	0.04	-18.50	0.03	-33.31	0.28	-0.69	0.09	1.56	0.28
GKF01_mount4_1102_grain-1@65	1102.6	2281039000	-10.29	0.05	-18.53	0.05	-33.81	0.30	-0.71	0.11	1.10	0.30
GKF01_mount4_1102_grain-1@66	1102.6	2271183000	-10.65	0.05	-19.06	0.03	-34.62	0.26	-0.79	0.10	1.27	0.26
GKF01_mount4_1102_grain-1@67	1102.6	2285080000	-9.17	0.05	-16.42	0.03	-29.54	0.26	-0.67	0.10	1.44	0.26
GKF01_mount4_1102_grain-1@68	1102.6	2286142000	-11.33	0.05	-20.34	0.03	-36.40	0.26	-0.80	0.11	1.89	0.26
GKF01_mount4_1102_grain-1@69	1102.6	2243309000	-10.78	0.04	-19.53	0.03	-35.06	0.26	-0.68	0.09	1.72	0.26
GKF01_mount4_1102_grain-1@70	1102.6	2267255000	-10.53	0.05	-19.25	0.03	-34.47	0.26	-0.57	0.10	1.78	0.26
GKF01_mount4_1102_grain-1@71	1102.6	2258896000	-10.68	0.05	-19.07	0.03	-34.01	0.26	-0.81	0.11	1.91	0.26
GKF01_mount4_1102_grain-1@72	1102.6	2323116000	-11.62	0.05	-20.65	0.03	-36.82	0.25	-0.93	0.11	2.05	0.25
GKF01_mount4_1102_grain-1@73	1102.6	2259448000	-10.40	0.05	-18.71	0.04	-33.64	0.37	-0.72	0.11	1.60	0.37
#4@1	1102.6	2119875000	11.73	0.05	11.86	0.02	16.44	0.30	5.64	0.10	-6.21	0.30
#4@2	1102.6	2116908000	11.69	0.05	11.79	0.02	16.31	0.32	5.63	0.10	-6.21	0.32
#4@3	1102.6	2229564000	17.42	0.04	17.12	0.02	22.67	0.29	8.64	0.09	-10.10	0.29
#4@4	1102.6	2212191000	17.49	0.04	16.97	0.02	22.19	0.31	8.79	0.09	-10.31	0.31
#4@5	1102.6	2197442000	14.32	0.08	12.54	0.10	15.01	0.30	7.88	0.19	-8.94	0.30
#4@6	1102.6	2136730000	15.80	0.06	15.46	0.02	20.52	0.31	7.87	0.11	-9.06	0.31
#4@7	1102.6	2163757000	13.69	0.05	14.21	0.02	19.96	0.30	6.40	0.10	-7.22	0.30
#4@8	1102.6	2217181000	14.09	0.05	14.48	0.02	20.37	0.31	6.66	0.11	-7.32	0.31
#4@9	1102.6	2203912000	14.94	0.05	15.16	0.02	20.95	0.29	7.16	0.10	-8.04	0.29
#4@10	1102.6	2142070000	20.97	0.05	21.58	0.02	29.13	0.29	9.91	0.10	-12.27	0.29
#4@11	1102.6	2220116000	13.80	0.04	13.78	0.02	18.63	0.30	6.73	0.09	-7.71	0.30
#4@12	1102.6	2186260000	13.85	0.05	13.77	0.02	18.71	0.30	6.78	0.10	-7.61	0.30
#4@13	1102.6	2057763000	15.54	0.07	14.64	0.07	18.69	0.33	8.02	0.16	-9.32	0.33
#4@14	1102.6	2168764000	16.23	0.05	14.75	0.03	17.98	0.29	8.66	0.10	-10.24	0.29

#4@15	1102.6	2204727000	12.98	0.05	13.05	0.02	18.02	0.29	6.28	0.10	-6.93	0.29
#4@16	1102.6	2081519000	14.11	0.06	11.93	0.04	13.88	0.30	7.98	0.12	-8.90	0.30
#4@17	1102.6	2202130000	13.60	0.05	13.69	0.02	18.87	0.29	6.57	0.11	-7.30	0.29
#4@18	1102.6	2227157000	14.66	0.04	14.82	0.02	20.74	0.29	7.05	0.09	-7.62	0.29
#4@19	1102.6	2160741000	11.67	0.05	11.45	0.02	15.67	0.31	5.79	0.10	-6.19	0.31
#4@20	1102.6	2046263000	13.48	0.06	12.23	0.02	15.40	0.30	7.20	0.12	-7.97	0.30
#4@21	1102.6	2172931000	8.26	0.05	6.26	0.02	6.66	0.30	5.04	0.11	-5.27	0.30
#4@22	1102.6	2220470000	14.75	0.05	14.88	0.02	20.33	0.31	7.11	0.10	-8.13	0.31
#4@23	1102.6	2127924000	-10.33	0.06	-19.04	0.03	-33.79	0.30	-0.48	0.12	2.07	0.30
#4@24	1102.6	2171816000	12.70	0.05	12.93	0.03	18.68	0.31	6.06	0.10	-6.03	0.31
#4@25												
#4@26	1102.6	2081591000	-10.53	0.05	-19.29	0.03	-34.83	0.31	-0.55	0.10	1.51	0.31
#4@27	1102.6	2073148000	-10.80	0.05	-19.72	0.04	-35.58	0.38	-0.59	0.11	1.54	0.38
#4@28	1102.6	2037062000	-9.22	0.05	-17.52	0.04	-31.88	0.32	-0.16	0.11	1.15	0.32
#4@29	1102.6	2066346000	-9.34	0.05	-17.59	0.03	-32.04	0.32	-0.25	0.11	1.11	0.32
#4@30	1102.6	2066763000	-9.69	0.05	-17.88	0.02	-32.45	0.40	-0.44	0.11	1.25	0.40
#4@31	1102.6	2112814000	-10.87	0.05	-19.77	0.02	-35.58	0.32	-0.63	0.10	1.65	0.32
#4@32	1102.6	2142169000	-11.01	0.05	-19.72	0.03	-35.40	0.32	-0.81	0.11	1.74	0.32
#4@33	1102.6	2144303000	-9.65	0.05	-17.33	0.03	-31.03	0.33	-0.69	0.10	1.63	0.33
#4-34@1	1102.6	1647642000	13.41	0.19	10.97	0.32	11.77	0.83	7.77	0.25	-9.18	0.83
#4-34@2	1102.6											
#4-34@3	1102.6											
#4-35@1	1102.6	1214433767	11.02	2.30	10.93	4.76	15.00	10.64	5.40	0.57	-5.87	1.65
#4-35@2	1102.6											
#4-35@3	1102.6											
#4-36@1	1102.6	2005436333	11.97	0.07	12.31	0.18	17.45	0.49	5.65	0.03	-6.07	0.38
#4-36@2	1102.6											
#4-36@3	1102.6											
#4-37@1	1102.6	2055848000	11.60	0.21	11.47	0.26	15.41	0.97	5.71	0.08	-6.49	0.48
#4-37@2	1102.6											

#4-37@3	1102.6											
#4-38@1	1102.6	2092897667	11.43	0.12	7.80	0.30	7.13	0.80	7.42	0.04	-7.75	0.56
#4-38@2	1102.6											
#4-38@3	1102.6											
#4-39@1	1102.6	2033232000	18.04	1.80	17.70	2.49	23.43	3.92	8.96	0.53	-10.47	0.96
#4-39@2	1102.6											
#4-39@3	1102.6											
#4-40@1	1102.6	2065271667	17.36	1.74	17.59	1.70	23.97	2.50	8.34	0.88	-9.72	0.90
#4-40@2	1102.6											
#4-40@3	1102.6											
GKF01_mount4_1102_grain-3@1	1102.6	2066198000	12.85	0.06	13.16	0.04	19.20	0.28	6.09	0.06	-5.96	0.28
GKF01_mount4_1102_grain-3@2	1102.6	2075451000	13.17	0.07	13.38	0.04	19.42	0.27	6.30	0.07	-6.16	0.27
GKF01_mount4_1102_grain-3@3	1102.6	2078350000	13.56	0.06	13.47	0.04	19.54	0.31	6.64	0.06	-6.21	0.31
GKF01_mount4_1102_grain-3@4	1102.6	2086657000	13.60	0.06	13.51	0.04	19.25	0.31	6.66	0.07	-6.58	0.31
GKF01_mount4_1102_grain-3@5	1102.6	2040383000	13.40	0.06	13.36	0.04	18.95	0.29	6.55	0.06	-6.59	0.29
GKF01_mount4_1102_grain-3@7	1102.6	2097557000	13.41	0.06	13.23	0.04	18.52	0.32	6.62	0.07	-6.76	0.32
GKF01_mount4_1102_grain-3@8	1102.6	2113695000	13.64	0.06	13.61	0.04	19.31	0.27	6.65	0.07	-6.72	0.27
GKF01_mount4_1102_grain-3@9	1102.6	2114464000	13.31	0.06	13.42	0.04	19.27	0.30	6.43	0.06	-6.38	0.30
GKF01_mount4_1102_grain-3@10	1102.6	2122712000	13.80	0.06	14.25	0.04	20.87	0.27	6.49	0.06	-6.37	0.27
GKF01_mount4_1102_grain-3@11	1102.6	2087238000	17.13	0.07	17.42	0.04	24.66	0.27	8.19	0.07	-8.71	0.27
GKF01_mount4_1102_grain-3@12	1102.6	2082777000	14.02	0.07	14.13	0.04	20.15	0.27	6.77	0.07	-6.86	0.27
GKF01_mount4_1102_grain-3@13	1102.6	2087940000	13.87	0.07	13.81	0.04	19.94	0.27	6.78	0.07	-6.46	0.27
GKF01_mount4_1102_grain-3@14	1102.6	2101860000	13.80	0.06	13.85	0.04	19.95	0.27	6.69	0.07	-6.53	0.27
GKF01_mount4_1102_grain-3@15	1102.6	2140811000	13.59	0.06	13.64	0.04	19.46	0.27	6.59	0.06	-6.62	0.27
GKF01_mount4_1102_grain-3@16	1102.6	2171254000	13.40	0.06	13.38	0.04	19.09	0.27	6.53	0.06	-6.48	0.27
GKF01_mount4_1102_grain-3@17	1102.6	2175148000	13.04	0.07	13.22	0.04	19.05	0.29	6.25	0.07	-6.22	0.29
GKF01_mount4_1102_grain-3@18	1102.6	2188712000	13.60	0.07	13.57	0.04	19.60	0.34	6.63	0.07	-6.34	0.34
GKF01_mount4_1102_grain-3@19	1102.6	2202654000	13.75	0.07	13.81	0.04	19.99	0.27	6.66	0.07	-6.41	0.27
GKF01_mount4_1102_grain-3@20	1102.6	1999281000	18.08	0.06	17.80	0.04	23.32	0.29	8.95	0.07	-10.78	0.29
GKF01_mount4_1102_grain-3@21	1102.6	2079303000	13.84	0.07	14.03	0.04	19.25	0.33	6.64	0.07	-7.57	0.33

GKF01_mount4_1102_grain-3@22	1102.6	2031845000	13.94	0.07	13.80	0.04	19.03	0.29	6.86	0.07	-7.36	0.29
GKF01_mount4_1102_grain-3@23	1102.6	2010229000	13.76	0.07	14.28	0.04	20.58	0.29	6.43	0.07	-6.73	0.29
GKF01_mount4_1102_grain-3@24	1102.6	1971436000	13.94	0.07	14.06	0.04	19.47	0.32	6.73	0.07	-7.41	0.32
GKF01_mount4_1102_grain-3@25	1102.6	1932960000	13.03	0.07	13.14	0.04	18.05	0.29	6.29	0.07	-7.06	0.29
GKF01_mount4_1102_grain-3@26	1102.6	1990914000	13.78	0.07	13.81	0.04	19.22	0.29	6.70	0.07	-7.18	0.29
GKF01_mount4_1102_grain-3@27	1102.6	2031901000	13.65	0.06	14.26	0.04	20.08	0.29	6.33	0.07	-7.19	0.29
GKF01_mount4_1102_grain-3@28	1102.6	2034031000	13.67	0.07	14.33	0.04	20.58	0.28	6.31	0.07	-6.83	0.28
GKF01_mount4_1102_grain-3@27	1102.6	2031901000	13.65	0.06	14.26	0.04	20.09	0.29	6.33	0.07	-7.18	0.29
GKF01_mount4_1102_grain-3@28	1102.6	2034031000	13.67	0.07	14.33	0.04	20.59	0.28	6.31	0.07	-6.82	0.28
GKF01_mount4_1102_grain-3@29	1102.6	2012551000	13.67	0.07	14.10	0.04	19.86	0.29	6.43	0.07	-7.10	0.29
GKF01_mount4_1102_grain-3@30	1102.6	1997552000	13.81	0.06	13.77	0.04	19.14	0.28	6.75	0.07	-7.18	0.28
GKF01_mount4_1102_grain-3@33	1102.6	1993133000	13.35	0.06	13.60	0.04	19.25	0.28	6.37	0.07	-6.75	0.28
GKF01_mount4_1102_grain-3@34	1102.6	2000236000	13.77	0.06	13.72	0.04	19.08	0.30	6.73	0.07	-7.15	0.30
GKF01_mount4_1102_grain-3@35	1102.6	2007329000	13.79	0.07	13.93	0.04	19.25	0.28	6.65	0.07	-7.37	0.28
GKF01_mount4_1102_grain-3@36	1102.6	1923773000	13.53	0.06	13.68	0.04	18.84	0.29	6.51	0.06	-7.30	0.29
GKF01_mount4_1102_grain-3@37	1102.6	1990494000	13.76	0.07	14.08	0.04	19.65	0.28	6.53	0.07	-7.27	0.28
GKF01_mount4_1102_grain-3@38	1102.6	1979141000	13.77	0.06	13.82	0.04	18.62	0.32	6.68	0.07	-7.79	0.32
#2-1@1	835.6	1565766333	10.56	2.40	7.93	3.96	6.64	8.27	6.48	0.39	-8.49	0.76
#2-1@2	835.6											
#2-1@3	835.6											
#2-2@1	835.6	1617822333	9.57	0.77	6.03	1.38	2.78	2.83	6.47	0.06	-8.72	0.99
#2-2@2	835.6											
#2-2@3	835.6											
#2-3@1	835.6	563591700	10.85	3.61	7.98	6.56	5.70	12.62	6.75	0.53	-9.51	0.99
#2-3@2	835.6											
#2-3@3	835.6											
#2-5@1	835.6	118108066.7	9.02	3.22	7.82	6.53	7.43	13.52	5.00	0.27	-7.49	1.12
#2-5@2	835.6											
#2-5@3	835.6											
#2-6@1	835.6	813228933.3	10.93	3.93	8.37	7.17	7.27	14.41	6.63	0.31	-8.71	0.71

#2-6@2	835.6											
#2-6@3	835.6											
#2-8@1	835.6	102820206.7	10.67	5.70	8.76	7.57	8.12	18.03	6.17	2.20	-8.59	3.57
#2-8@2	835.6											
#2-8@3	835.6											
#2-9@1	1404.6	1571561000	14.00	0.43	13.96	0.76	18.66	1.22	6.84	0.13	-8.03	0.52
#2-9@2	1404.6											
#2-9@3	1404.6											
#2-10@1	1404.6	1684061000	14.30	0.37	14.19	0.49	18.97	1.27	7.02	0.19	-8.16	0.39
#2-10@2	1404.6											
#2-10@3	1404.6											
#2-11@1	1404.6	381081566.7	14.15	3.19	14.36	5.64	19.33	12.11	6.79	0.58	-8.13	1.37
#2-11@2	1404.6											
#2-11@3	1404.6											
#2-12@1	1404.6	1465842333	13.80	0.14	13.45	0.05	18.01	0.07	6.89	0.12	-7.70	0.16
#2-12@2	1404.6											
#2-12@3	1404.6											
#2-13@1	1404.6	1077736900	13.13	1.07	12.40	1.61	16.05	2.02	6.76	0.25	-7.65	1.22
#2-13@2	1404.6											
#2-13@3	1404.6											
#2-14@1	1404.6	1656253667	13.82	0.68	13.66	1.39	18.06	3.31	6.81	0.05	-8.06	1.47
#2-14@2	1404.6											
#2-14@3	1404.6											
#2-15@1	1404.6	1269876333	6.58	4.44	5.85	4.76	7.04	6.69	3.57	2.15	-4.10	2.63
#2-15@2	1404.6											
#2-15@3	1404.6											
#1-1@1	729.7	2155994000	3.19	2.75	0.68	1.60	-0.59	0.52	2.84	1.93	-1.88	2.53
#1-1@2	729.7											
#1-1@3	729.7											
#1-3@1	729.7	2043719667	7.26	0.59	3.42	0.90	1.88	1.94	5.50	0.13	-4.63	0.29

#1-3@2	729.7											
#1-3@3	729.7											
#1-4@1	729.7	2114354000	6.68	0.91	0.22	1.84	-5.84	3.46	6.56	0.40	-6.27	0.51
#1-4@2	729.7											
#1-4@3	729.7											
#1-5@1	729.7	2138819333	5.18	1.76	-1.20	1.73	-7.45	2.46	5.80	0.92	-5.17	0.87
#1-5@2	729.7											
#1-5@3	729.7											
#1-6@1	729.7	2178885000	7.34	1.78	1.74	3.50	-2.02	6.59	6.44	0.35	-5.34	0.08
#1-6@2	729.7											
#1-6@3	729.7											
#1-7@1	729.7	2125940333	10.76	2.40	9.88	3.06	11.73	4.13	5.68	0.84	-7.12	1.75
#1-7@2	729.7											
#1-7@3	729.7											
#1-8@1	729.7	2137545667	9.39	1.38	7.81	1.53	8.59	2.38	5.38	0.62	-6.31	0.73
#1-8@2	729.7											
#1-8@3	729.7											
#1-9@1	729.7	2077717000	11.77	1.75	15.39	1.37	25.18	4.54	3.87	1.80	-4.27	3.34
#1-9@2	729.7											
#1-9@3	729.7											
#1-10@1	729.7	2021985667	9.53	0.93	9.60	1.06	12.90	1.89	4.59	0.46	-5.42	0.52
#1-10@2	729.7											
#1-10@3	729.7											
#1-11@1	729.7	1949986000	7.51	1.18	2.68	3.47	-0.88	6.76	6.13	0.61	-5.98	0.89
#1-11@2	729.7											
#1-11@3	729.7											
#1-12@1	729.7	1978165333	6.68	0.96	0.76	1.31	-5.00	1.95	6.28	0.28	-6.45	1.35
#1-12@2	729.7											
#1-12@3	729.7											
#1-13@1	729.7	2025229000	9.64	0.55	4.56	1.54	1.63	4.10	7.30	1.32	-7.04	1.90

#1-13@2	729.7											
#1-13@3	729.7											
#1-14@1	729.7	1887643333	10.47	0.24	4.44	0.54	1.67	5.49	8.19	0.10	-6.78	5.66
#1-14@2	729.7											
#1-14@3	729.7											
#1-15@1	729.7	1987793667	6.05	0.64	0.30	0.87	-6.01	2.38	5.90	0.26	-6.57	2.26
#1-15@2	729.7											
#1-15@3	729.7											
#1-16@1	729.7	1646501000	9.73	2.70	6.56	6.96	6.33	16.06	6.35	1.07	-6.18	2.91
#1-16@2	729.7											
#1-16@3	729.7											
#1-17@1	729.7	1936335000	8.40	0.58	5.32	2.83	4.87	5.22	5.67	0.88	-5.26	0.59
#1-17@2	729.7											
#1-17@3	729.7											
#1-18@1	829.5	1612664000	10.65	1.05	12.68	4.24	18.58	8.69	4.14	1.16	-5.66	1.34
#1-18@2	829.5											
#1-18@3	829.5											
#1-19@1	829.5	1961885000	7.63	1.59	11.38	3.43	19.64	6.96	1.79	0.24	-2.09	0.57
#1-19@2	829.5											
#1-19@3	829.5											
#1-20@1	829.5	1957171000	8.67	1.95	11.12	1.40	17.45	1.60	2.96	1.40	-3.79	2.76
#1-20@2	829.5											
#1-20@3	829.5											
#1@21	829.5	1868771667	10.15	1.53	9.87	1.75	11.97	2.33	5.08	0.64	-6.86	1.10
#1@22	829.5											
#1@23	829.5											
#1-22@1	829.5	1863819000	10.61	0.52	11.80	2.92	17.05	4.91	4.55	1.74	-5.49	0.69
#1-22@2	829.5											
#1-22@3	829.5											
#1-23@1	829.5	1847160333	11.66	2.33	11.01	3.73	12.64	6.53	6.01	0.43	-8.39	1.36

#1-23@2	829.5											
#1-23@3	829.5											
#1-24@1	829.5	1791701667	12.01	2.69	11.96	2.22	15.75	3.08	5.87	1.57	-7.10	1.87
#1-24@2	829.5											
#1-24@3	829.5											
#1-25@1	829.5	1027854133	12.29	0.73	11.96	2.47	17.38	6.31	6.15	1.00	-5.47	2.88
#1-25@2	829.5											
#1-25@3	829.5											
#1-26@1	829.5	1850938667	13.62	1.59	11.89	2.16	14.40	4.47	7.51	1.00	-8.31	1.89
#1-26@2	829.5											
#1-26@3	829.5											
#1-27@1	829.5	1056680633	9.13	2.19	9.71	3.63	15.84	5.33	4.15	0.60	-2.69	1.75
#1-27@2	829.5											
#1-27@3	829.5											
#4-41@1	888.3	1983704000	12.74	3.21	6.75	3.21	3.74	5.26	9.27	1.58	-9.14	1.08
#4-41@2	888.3											
#4-41@3	888.3											
#4-42@1	888.3	1199003000	14.05	2.98	9.56	4.41	9.14	7.58	9.14	0.79	-9.11	0.89
#4-42@2	888.3											
#4-42@3	888.3											
#4-43@1	888.3	1969897333	9.30	1.46	3.16	1.29	-1.39	1.47	7.67	0.84	-7.41	1.79
#4-43@2	888.3											
#4-43@3	888.3											
#4-44@1	888.3	1997747000	10.72	4.35	5.07	4.05	1.56	5.29	8.11	2.29	-8.10	2.45
#4-44@2	888.3											
#4-44@3	888.3											
#4-45@1	888.3	2013506000	10.72	2.95	4.89	3.52	1.09	5.77	8.21	1.15	-8.22	0.96
#4-45@2	888.3											
#4-45@3	888.3											
#4-46@1	888.3	1990103000	8.17	0.94	2.97	0.23	-0.75	1.39	6.65	0.97	-6.40	1.07

#4-46@2	888.3											
#4-46@3	888.3											
#4-47@1	888.3	1901220000	11.29	3.43	5.91	3.60	3.02	5.32	8.25	1.63	-8.24	1.56
#4-47@2	888.3											
#4-47@3	888.3											
#4-48@1	888.3	2031578000	8.08	0.07	1.61	0.40	-4.10	1.04	7.25	0.17	-7.16	0.29
#4-48@2	888.3											
#4-48@3	888.3											
#4-49@1	888.3	1615899000	12.27	3.67	7.52	5.86	6.23	10.28	8.40	0.76	-8.12	0.93
#4-49@2	888.3											
#4-49@3	888.3											
#4-50@1	888.3	779631366.7	11.27	3.46	9.42	7.47	12.48	14.56	6.43	0.76	-5.51	0.77
#4-50@2	888.3											
#4-50@3	888.3											
#4-51@1	888.3	1649828000	13.83	2.09	9.55	4.97	9.92	9.84	8.92	0.73	-8.31	0.46
#4-51@2	888.3											
#4-51@3	888.3											
#4-52@1[1]	888.3	2062617667	-18.21	1.05	-35.58	1.74	-67.07	3.04	0.28	0.14	-0.55	0.19
#4-52@2[1]	888.3											
#4-52@3[1]	888.3											
#4-53@1[1]	888.3	1765439333	-18.34	0.78	-35.79	1.14	-66.91	2.07	0.26	0.18	-0.01	0.36
#4-53@2[1]	888.3											
#4-53@3[1]	888.3											
#4-55@1[1]	888.3	1996604667	-18.10	0.48	-35.27	1.10	-66.38	2.24	0.22	0.09	-0.43	0.84
#4-55@2[1]	888.3											
#4-55@3[1]	888.3											
#4-56@1[1]	888.3	2050612000	-18.21	0.26	-35.48	0.52	-66.77	1.09	0.22	0.01	-0.43	0.51
#4-56@2[1]	888.3											
#4-56@3[1]	888.3											

[1] late vein

Table S4 SF_6 data for splits of same samples analyzed by SIMS.

Depth	$\delta^{34}S$	$\Delta^{33}S$	$\Delta^{36}S$
1102.6 Ovoid	-18.60	-0.64	1.17
1102.6 Disseminated[1]	12.02	6.61	**-6.68**
1404.6	11.88	4.18	-5.31
729.7	3.48	4.92	-4.59
829.5	11.44	4.79	-6.12
835.6	10.00	5.54	-8.07
888.3	2.71	6.81	-6.81

1small (1 μmol) sample, $\Delta^{36}S$ uncertainty for this sample likely >1 ‰.