1 Supplementary Material
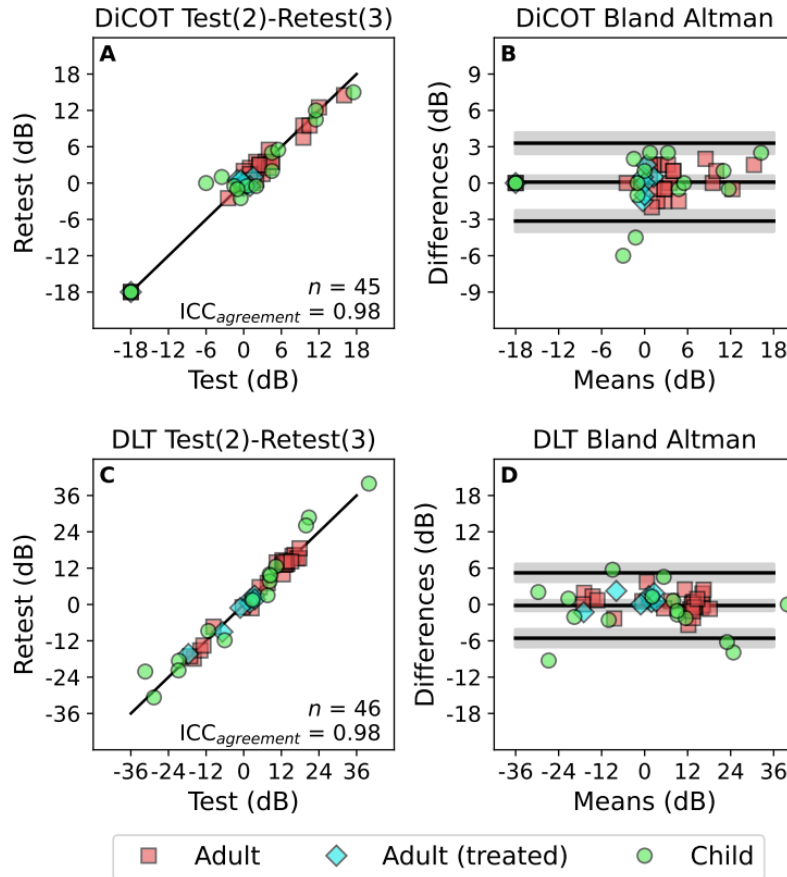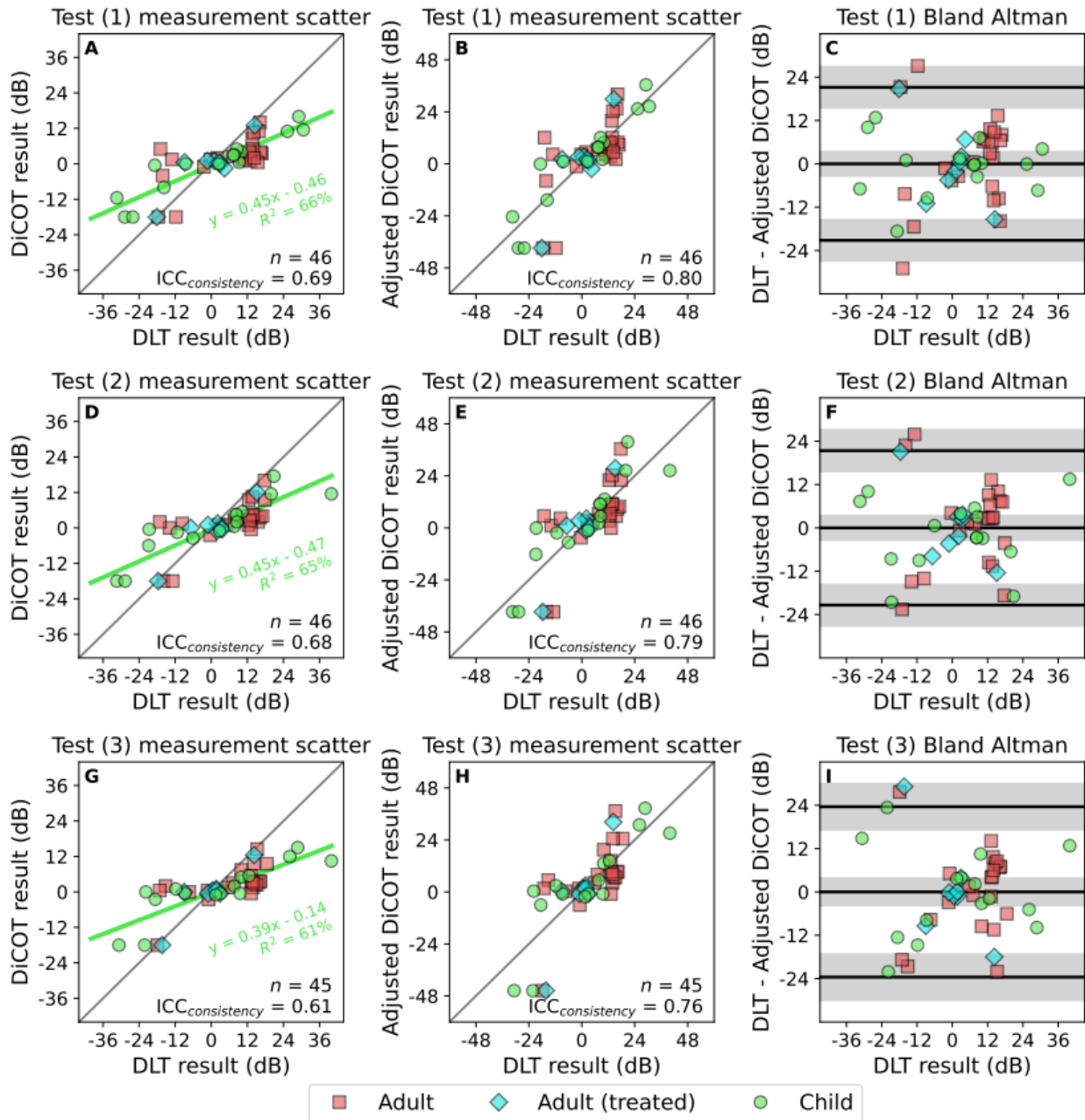

Figure S1. Test-retest reliability comparison of second and third measurements made with the DiCOT (top row) and DLT (bottom row). The panels on the left show scatter plots of retest vs test measurement. The solid diagonal line is the line of equality ($y = x$). The panels on the right show Bland Altman plots of the difference against the mean. The three solid lines show the bias, and the limits of agreement. Shaded regions around those lines give the 95% confidence intervals. Positive and negative values refer to suppression on right and left eyes respectively.

DLT result compared to DiCOT (original and adjusted)

Figure panels A–I showing scatter plots and Bland Altman plots.

Panel A (Test (1) measurement scatter): $y = 0.45x - 0.46$, $R^2 = 66\%$, $n = 46$, $ICC_{consistency} = 0.69$

Panel B (Test (1) measurement scatter): $n = 46$, $ICC_{consistency} = 0.80$

Panel C (Test (1) Bland Altman)

Panel D (Test (2) measurement scatter): $y = 0.45x - 0.47$, $R^2 = 65\%$, $n = 46$, $ICC_{consistency} = 0.68$

Panel E (Test (2) measurement scatter): $n = 46$, $ICC_{consistency} = 0.79$

Panel F (Test (2) Bland Altman)

Panel G (Test (3) measurement scatter): $y = 0.39x - 0.14$, $R^2 = 61\%$, $n = 45$, $ICC_{consistency} = 0.61$

Panel H (Test (3) measurement scatter): $n = 45$, $ICC_{consistency} = 0.76$

Panel I (Test (3) Bland Altman)

Legend: ☐ Adult   ◆ Adult (treated)   ○ Child

Figure S2. Comparisons between DLT and DiCOT measurements. Presentation is similar to that in Figure S1. The left column shows scatter plots with the $ICC_{consistency}$ calculated as well as the linear regression (in green) between the two measures. This regression is used to transform the DiCOT results to give the adjusted DiCOT in the middle column that is put into better agreement with the DLT. The right column shows the Bland Altman plot of the difference between the two measures plotted against the DLT result.

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35 **Supplementary Data Table 1: Complete dataset of the participants. Balance point estimated with the**
36 **DiCOT are expressed in DB. For the DLT, the estimated monocular thresholds are reported. Three**
37 **repetitions for each measurement. *Clinical stereo tests: Randot for adults and Titmus for children.**
38 **NA for No available. NM for No measurable. BF for Bad fit**

AMBLYOPIC ADULTS

Participant ID	Age (yrs)	Sex	Type of Amblyopia	Amblyopic eye (1=R; 2=L)	VA Amblyopic eye (logMAR)	Clinical stereo tests*	#test	DiCOT (dB)	DLT OS	DLT OD	McGill stereo test (arcsec)
1	65	Male	Strabismus 2deg eso	2	0.4 / 0.1	NM	1	3.5	0.9000	0.1300	231
							2	2	0.9000	0.1500	85
							3	3.5	0.8900	0.1400	75
2	31	Female	Strabismus 10deg eso	2	0.6 / 0.1	200	1	1.5	0.8279	0.2470	281
							2	3	0.8309	0.2479	129
							3	1.5	0.8760	0.1770	317
3	22	Male	Strabismus 2deg exo	2	1.0 / 0.3	NM	1	1.5	0.8917	0.2471	1
							2	1	0.8565	0.2065	10625
							3	2.5	0.8476	0.1577	31378
4	28	Male	Mixed 3deg exo	2	0.6	200	1	3	0.8839	0.1876	940
							2	3.5	0.8818	0.1368	914
							3	3.5	0.8888	0.1353	953
5	58	Male	Mixed 3deg exo	2	0.3 / 0	50	1	2.5	0.7465	0.3305	90
							2	2.5	0.7878	0.3262	117
							3	3	0.8063	0.3558	95
6	35	Male	mixed 15deg eso	2	0.4 / -0.1	70	1	4	0.8888	0.1353	64
							2	4	0.9062	0.1276	94
							3	2.5	0.9061	0.1570	70
7	68	Female	Mixed < 5deg eso	1	1.3 / 0	NM	1	-18	0.1177	0.8958	32768
							2	-18	0.1479	0.9259	32768
							3	-18	0.1182	0.9247	32768
9	30	Female	Strabismus 15deg exo	1	0.7 / 0.2	NM	1	-4	0.1368	0.8811	23170
							2	0	0.1796	0.8837	32768
							3	2	0.1572	0.9021	32768
10	26	Female	Mixed 3deg exo	2	0.3 / 0.1	NM	1	8.5	0.9040	0.1890	32769
							2	9.5	0.8700	0.2074	3715
							3	7.5	0.8728	0.2769	6558
13	26	Male	Anisometropia	1	0.8 / -0.1	NM	1	5	0.1280	0.8950	399
							2	2	0.1280	0.9171	351
							3	0.5	0.1273	0.9151	378
14	26	Female	Anisometropia	2	0.4 / 0	40	1	2	0.6647	0.5271	36
							2	1	0.7086	0.3946	38
							3	1.5	0.7270	0.3760	50
15	29	Female	Strabismus 5deg eso	2	0.2 / 0	NM	1	1.5	0.1923	0.8671	BF
							2	1.5	0.2816	0.8560	BF
							3	0	0.3537	0.8228	BF
16	63	Female	Strabismus < 5deg eso	2	1.3 / 0	NM	1	5	0.8679	0.1770	4391
							2	4.5	0.8380	0.1770	32768
							3	3.5	0.8635	0.1875	NA
17	73	Female	Mixed < 5deg eso	1	0.8 / 0.1	NM	1	-18	0.2329	0.9016	32768
							2	-18	0.1974	0.8668	10566
							3		0.1870	0.8906	25829
18	22	Female	Mixed 5deg exo	2	0.5 / 0	500	1	1	0.8463	0.1919	1461
							2	4	0.8344	0.2011	505
							3	5.5	0.8533	0.1875	250
21	61	Male	Anisometropia	2	1.0 / 0.2	200	1	4	0.8571	0.1967	346
							2	4.5	0.8468	0.1710	286
							3	3.5	0.8560	0.1816	260
23	60	Male	Strabismus < 5deg eso	2	NM / 0	NM	1	14	0.8898	0.1379	32768
							2	16	0.9007	0.1176	4824
							3	14.5	0.9085	0.1570	32768
24	21	Female	Anisometropia	2	0.7 / 0.1	50	1	0.5	0.8735	0.1477	124
							2	-0.5	0.8591	0.1875	126
							3	-0.5	0.8272	0.1810	124
25	34	Male	Anisometropia	2	0.8 / 0.1	NM	1	11	0.9074	0.1469	ND
							2	9.5	0.9160	0.1177	ND
							3	9.5	0.9119	0.1078	ND
26	47	Male	Mixed < 5deg exo	2	Fingers / 0	NM	1	10.5	0.8963	0.1770	1
							2	10.5	0.8895	0.1842	30967
							3	9.5	0.9015	0.1769	4694
28	23	Male	Strabismus 3deg exo	2	0.3 / 0	70	1	1.5	0.5745	0.5934	453
							2	1	0.6630	0.4971	212
							3	0.5	0.5437	0.6270	100
30	22	Male	Strabismus 3deg exo	1	0.5 / 0.1	25	1	-1	0.4732	0.6274	68
							2	-2.5	0.5289	0.5522	76
							3	-2.5	0.5228	0.5810	62
31	18	Male	Strabismus 2deg eso	2	0.4 / 0.1	70	1	2	0.8619	0.1671	62
							2	2.5	0.8249	0.1875	173
							3	3	0.8655	0.1727	149
22	51	Female	Strabismus surgery	2	NM / 0.1	NM	1	13	0.8831	0.1670	32768
							2	12	0.9023	0.1578	32768
							3	12.5	0.8619	0.1671	32768

TREATED AMBLYOPIC ADULTS

Participant ID	Age (yrs)	Sex	Type of Amblyopia	Amblyopic eye (1=R; 2=L)	VA Amblyopic eye (logMAR)	Clinical stereo tests*	#test	DiCOT (dB)	DLT OS	DLT OD	McGill stereo test (arcsec)
8	35	Male	Treated	2	0.1 / 0	40	1	1	0.6242	0.5571	56
							2	1.5	0.6608	0.5190	50
							3	1	0.6303	0.5177	163
11	32	Female	Treated 2deg eso	1	0.1 / 0	NM	1	-18	0.1115	0.8966	4987
							2	-18	0.1177	0.8963	4545
							3	-18	0.1380	0.9074	32768
12	33	Male	Treated	1	0 / 0	20	1	0	0.6473	0.4569	53
							2	-1	0.6671	0.5376	42
							3	0.5	0.6857	0.6485	34
19	21	Female	Treated	2	0 / 0	50	1	-1.5	0.7252	0.4369	221
							2	0	0.7205	0.4846	261
							3	-0.5	0.6729	0.4797	248
20	33	Male	Treated Mixed 2deg exo	1	0.1 / 0.1	25	1	1	0.5796	0.6725	69
							2	1	0.6127	0.6952	74
							3	-0.5	0.5407	0.6135	63
27	25	Male	Treated 5deg eso	1	0.2 / 0.1	NM	1	0.5	0.3020	0.8393	32768
							2	0	0.3681	0.8056	32768
							3	0	0.2950	0.8354	4987
29	31	Female	Treated 1deg eso	2	0.2 / 0.1	25	1	0.5	0.6352	0.4706	87
							2	-0.5	0.7070	0.4683	66
							3	0.5	0.6164	0.5079	64

AMBLYOPIC CHILDREN

Participant ID	Age (yrs)	Sex	Type of Amblyopia	Amblyopic eye (1=R; 2=L)	VA Amblyopic eye (logMAR)	Clinical stereo tests*	#test	DiCOT (dB)	DLT OS	DLT OD	McGill stereo test (arcsec)
1	14	Female	Anisometropia	2	0.9	200	1	4	0.7675	0.2413	427
							2	4.5	0.7870	0.3033	309
							3	5	0.8038	0.2558	475
2	8	Male	Anisometropia	1	0.4	40	1	0	0.2916	0.7751	227
							2	-1.5	0.2266	0.8316	2
							3	-0.5	0.3011	0.8227	0
3	9	Male	Anisometropia	1	0.5	NM	1	-8	0.1577	0.9643	13336
							2	-3.5	0.4366	0.8785	32768
							3	1	0.2484	0.9679	NM
4	8	Male	Strabismus 11deg eso	2	0.6	400	1	5	0.9170	0.3454	32768
							2	5.5	0.9067	0.2759	5792
							3	5.5	0.9739	0.2286	32768
5	9	Female	Mixed 11deg eso	1	0.3	40	1	-0.5	0.1078	0.9362	124
							2	-0.5	0.0884	0.9536	148
							3	-2.5	0.1104	0.9396	101
6	10	Male	Anisometropia	2	0.3 / 0	NM	1	16	0.9747	0.0342	32768
							2	17.5	0.9704	0.0884	32768
							3	15	0.9760	0.0357	4824
7	10	Male	Strabismus 11deg eso	2	0.5	200	1	11	0.9775	0.0530	4987
							2	11.5	0.9926	0.0100	32768
							3	10.5	0.9926	0.0100	10022
8	12	Female	Anisometropia	2	0.5	200	1	0.5	0.7827	0.2672	114
							2	0.5	0.8471	0.3527	138
							3	-0.5	0.7674	0.5397	129
9	9	Female	Anisometropia	2	0.6	NA	1	3	0.8290	0.3470	10
							2	4.5	0.8125	0.3134	257
							3	2	0.8118	0.3361	86
10	12	Female	Anisometropia	2	0.3	NA	1	11.5	0.9774	0.0288	32768
							2	11.5	0.9674	0.0980	32768
							3	12	0.9868	0.0489	32768
11	8	Male	Anisometropia	2	0.5	NA	1	3	0.8090	0.3470	66
							2	2	0.8511	0.3192	117
							3	-0.5	0.7752	0.2571	88
12	9	Female	Anisometropia	2	0.7	3000	1	0	0.6858	0.5131	52
							2	-1	0.6876	0.5001	64
							3	-1	0.7920	0.6668	57
13	15	Male	Anisometropia	1	0.4 / 0	NM	1	-18	0.0360	0.9888	32768
							2	-18	0.0266	0.9894	32768
							3	-18	0.0770	0.9867	32768
14	12	Female	Anisometropia	1	0.4	NA	1	-18	0.0480	0.9660	32768
							2	-18	0.0361	0.9774	20792
							3	-18	0.0285	0.9774	4376
15	10	Male	Anisometropia	1	0.4	NM	1	-11.5	0.0266	0.9894	32768
							2	-6	0.0905	0.9926	32768
							3	0	0.0806	0.9879	32768