

eABR data from all study participants

CL = Current Level

CU = Current Units

μC = micro Coulombs

μV = microvolts

ms = milliseconds

CI = Cochlear implant

BAER = Brainstem auditory evoked response

RW = Round window = golf club eABR = extracochlear eABR

ITA = Intracochlear test array = CMD = Custom-made device

Scale on all graphs: y-axis; 1 interval = $0.05 \mu\text{V}$. x-axis; 1 interval = 1 ms

Golf-club

CL	μC	μV	ms
230	0.223	0.55	4.34
210	0.155	0.40	4.64
200	0.130	0.27	4.96
190	0.108	NR	NR

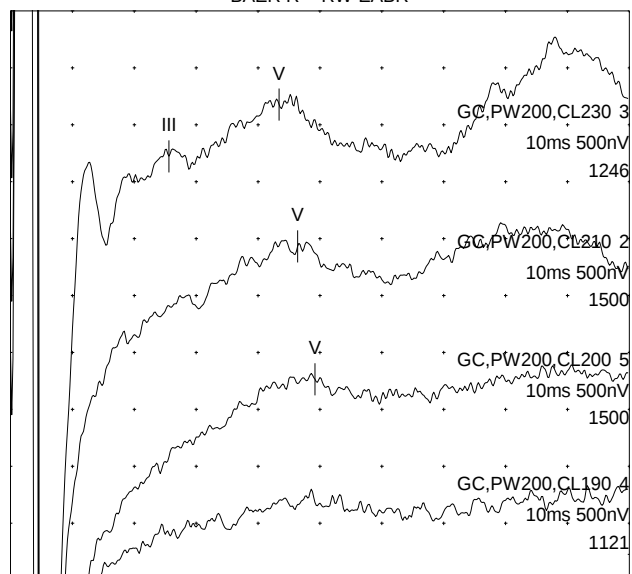
ITA e3

CU	μC	μV	ms
509	0.031	1.00	3.86
296	0.018	0.64	4.04
207	0.012	0.55	4.16
172	0.010	NR	NR

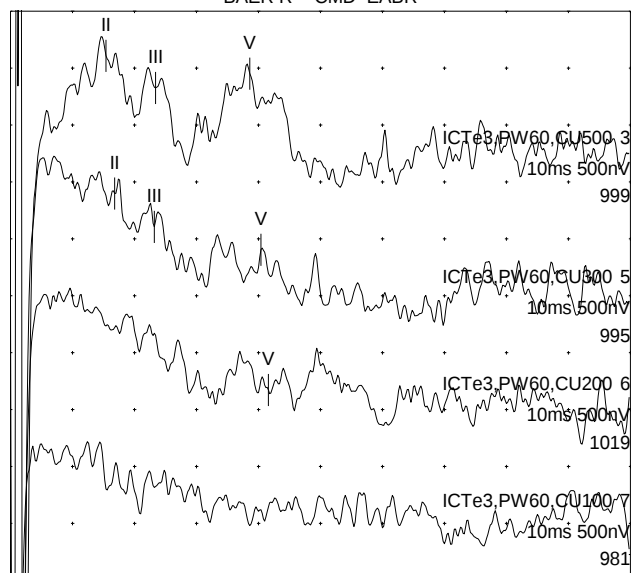
ITA e1

CU	μC	μV	ms
509	0.031	0.80	3.86
296	0.018	0.70	4.46
207	0.012	0.64	4.60
172	0.006	NR	NR

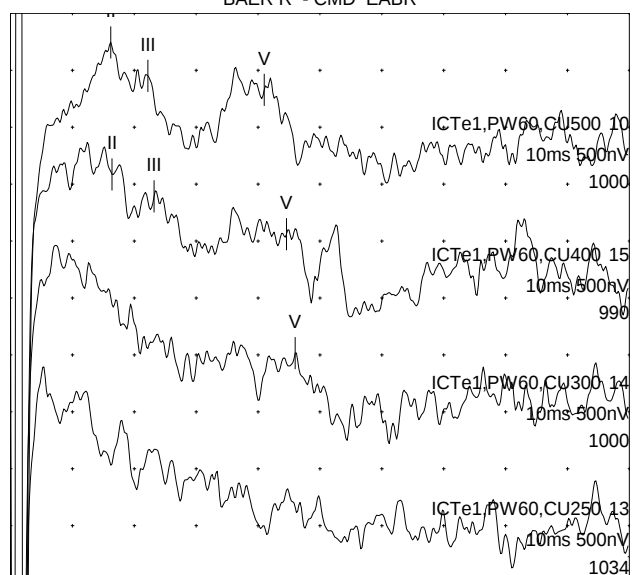
BAER R - RW EABR



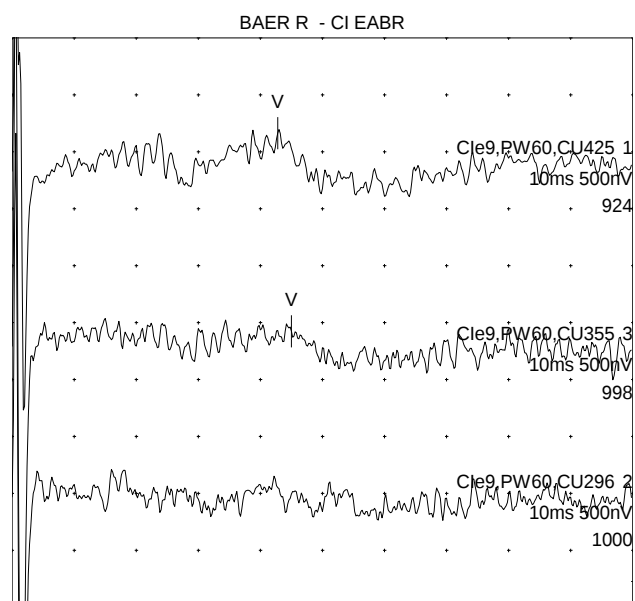
BAER R - CMD EABR



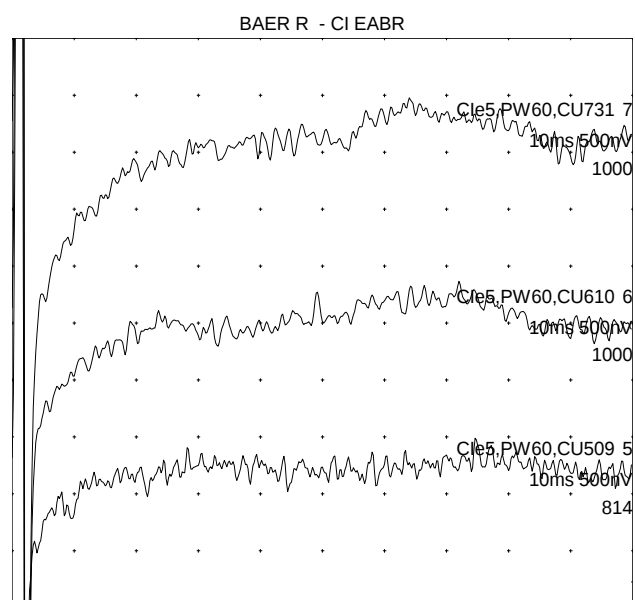
BAER R - CMD EABR



CI e9			
CU	μC	μV	ms
425	0.026	0.61	4.50
355	0.021	0.40	4.28
296	0.019	NR	NR

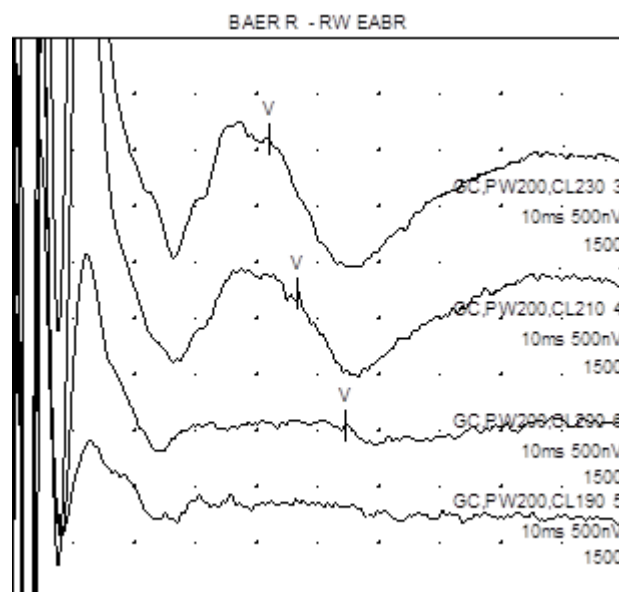


CI e5			
CU	μC	μV	ms
731	0.044	NR	NR
610	0.037	NR	NR
509	0.031	NR	NR



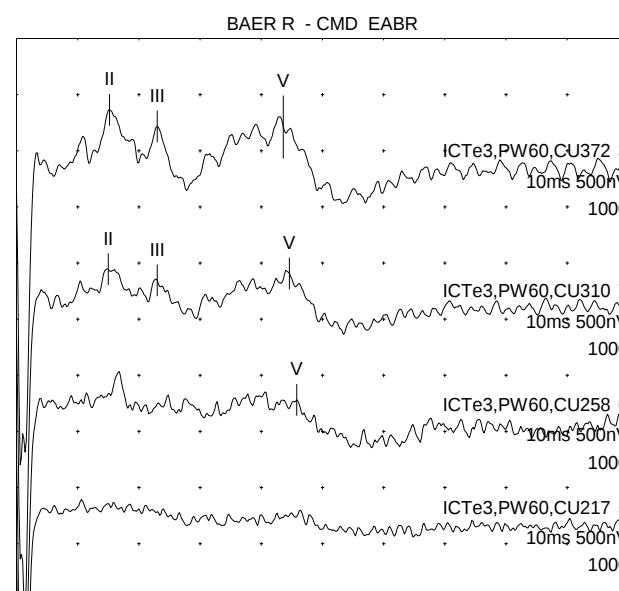
Golf-club

CL	μC	μV	ms
230	0.223	1.1	4.20
210	0.155	0.73	4.66
200	0.130	0.19	5.46
190	0.108	NR	NR



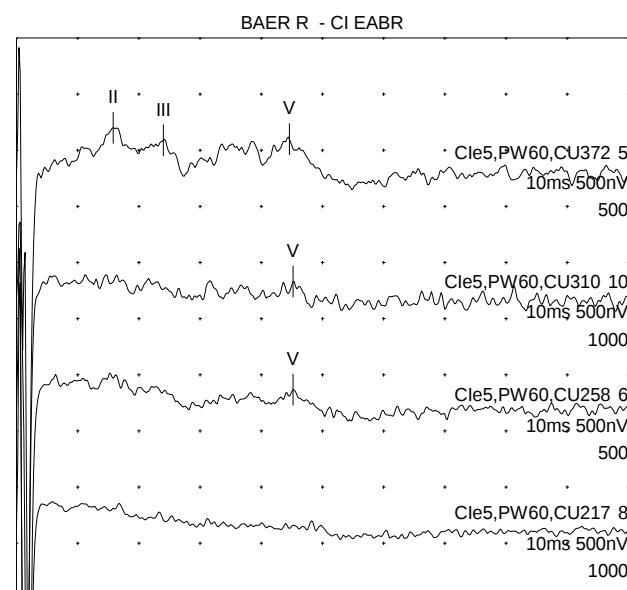
ITA e3

CU	μC	μV	ms
355	0.021	0.72	4.40
296	0.018	0.53	4.42
247	0.015	0.38	4.54
207	0.012	NR	NR



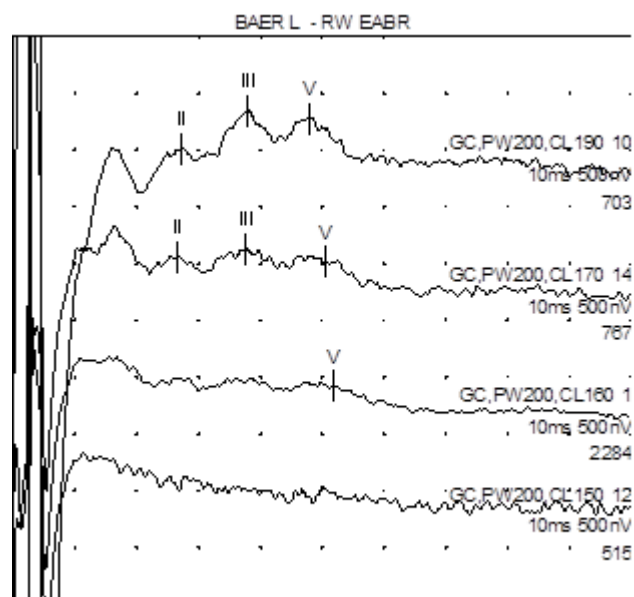
CI e5

CU	μC	μV	ms
355	0.021	0.46	4.46
296	0.018	0.29	4.52
247	0.015	0.28	4.52
207	0.012	NR	NR



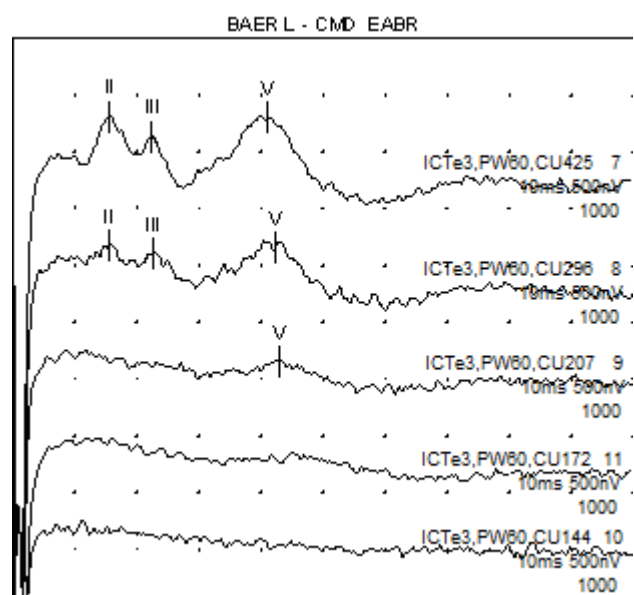
Golf-club

CL	μC	μV	ms
190	0.108	0.40	4.08
170	0.075	0.29	5.06
160	0.063	0.22	5.18
150	0.053	NR	NR



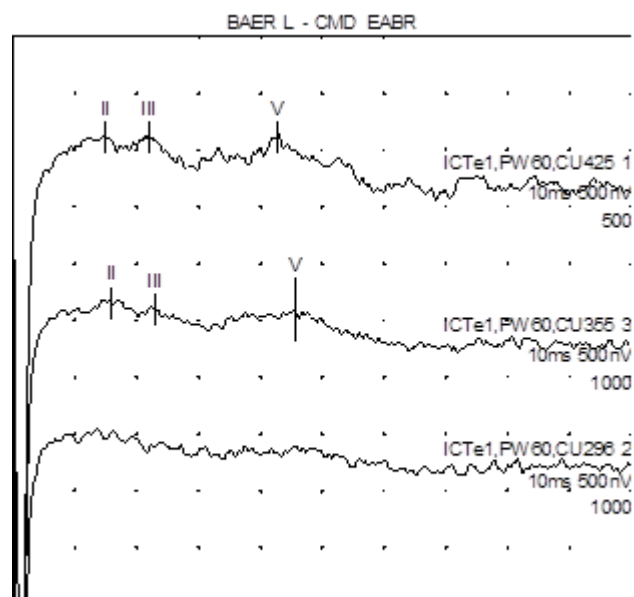
ITA e3

CU	μC	μV	ms
425	0.026	0.80	4.10
296	0.018	0.62	4.22
207	0.012	0.28	4.28
172	0.010	NR	NR

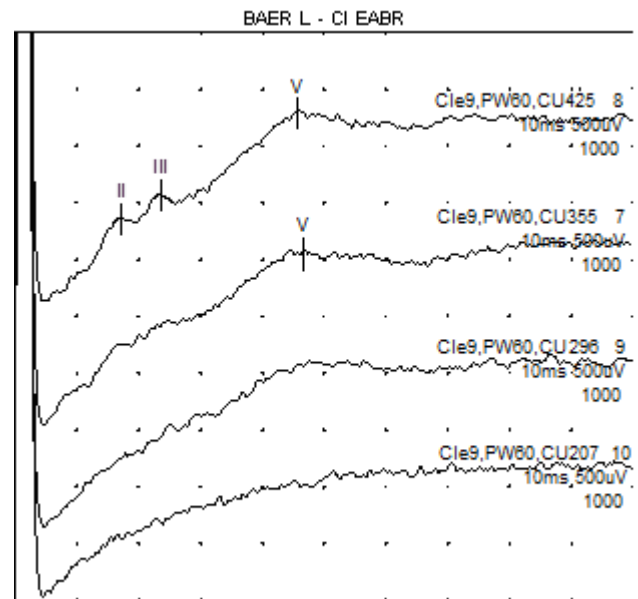


ITA e1

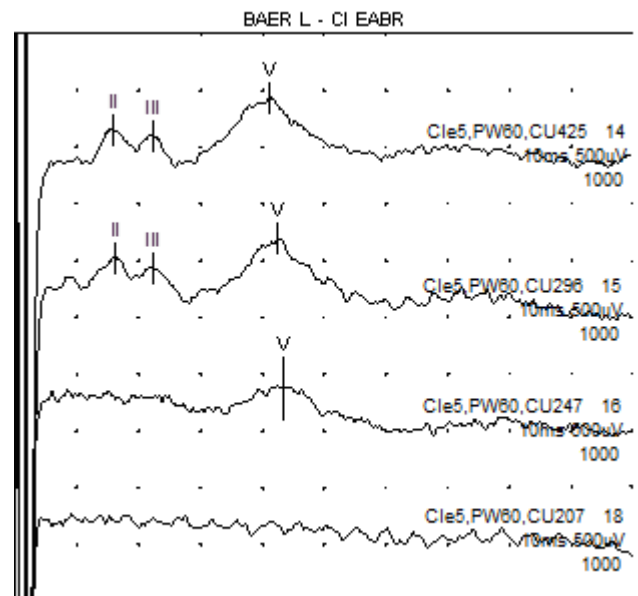
CU	μC	μV	ms
425	0.026	0.52	4.26
355	0.021	0.36	4.56
296	0.018	NR	NR



CI e9			
CU	μC	μV	ms
425	0.026	0.20	4.58
355	0.021	0.14	4.68
296	0.018	NR	NR
207	0.012	NR	NR

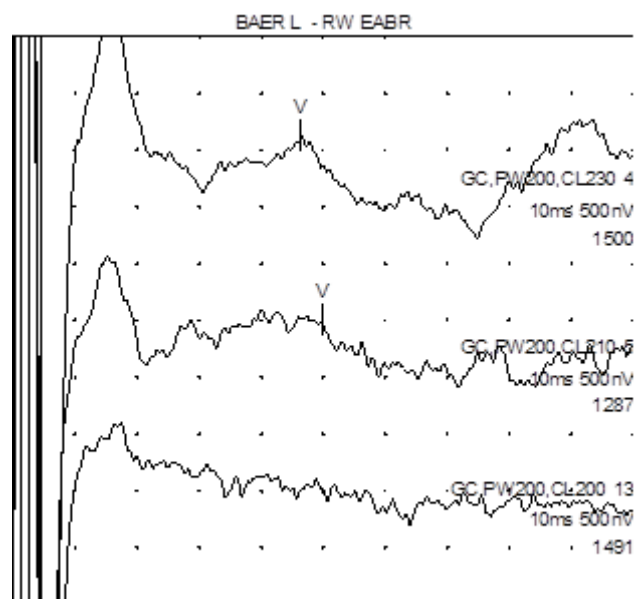


CI e5			
CU	μC	μV	ms
425	0.026	0.60	4.34
296	0.018	0.57	4.24
247	0.015	0.46	4.10
207	0.012	NR	NR



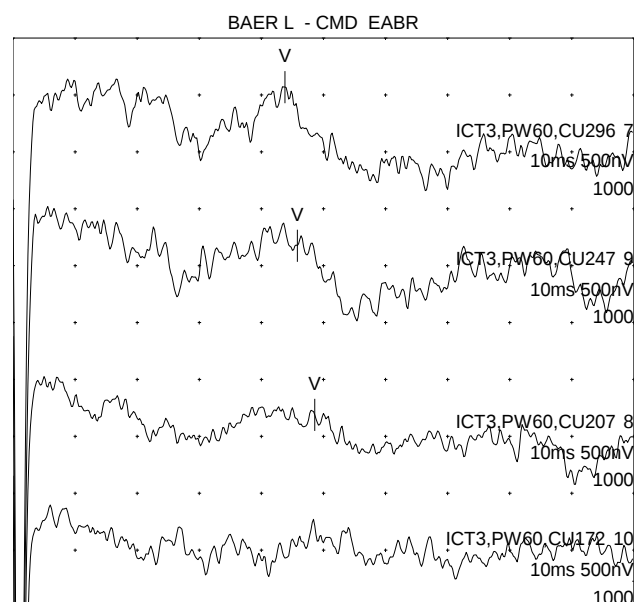
Golf-club

CL	μC	μV	ms
230	0.233	0.64	4.64
210	0.155	0.51	5.00
200	0.130	NR	NR



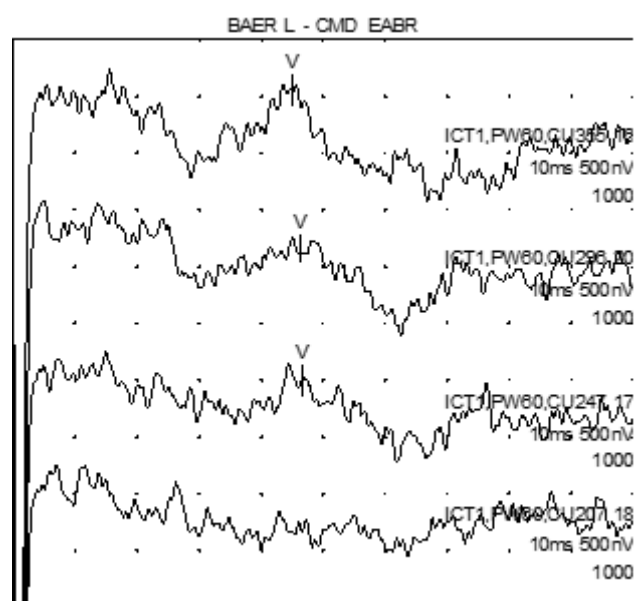
ITA e3

CU	μC	μV	ms
296	0.018	0.85	4.38
247	0.015	0.74	4.58
207	0.012	0.36	4.86
172	0.010	NR	NR

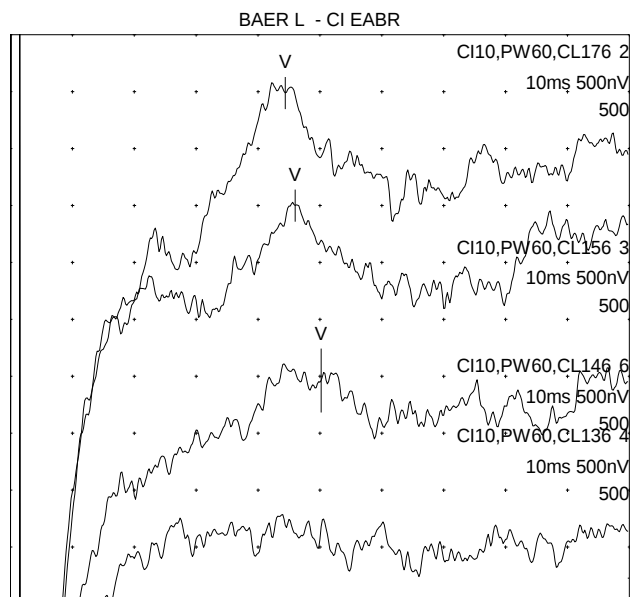


ITA e1

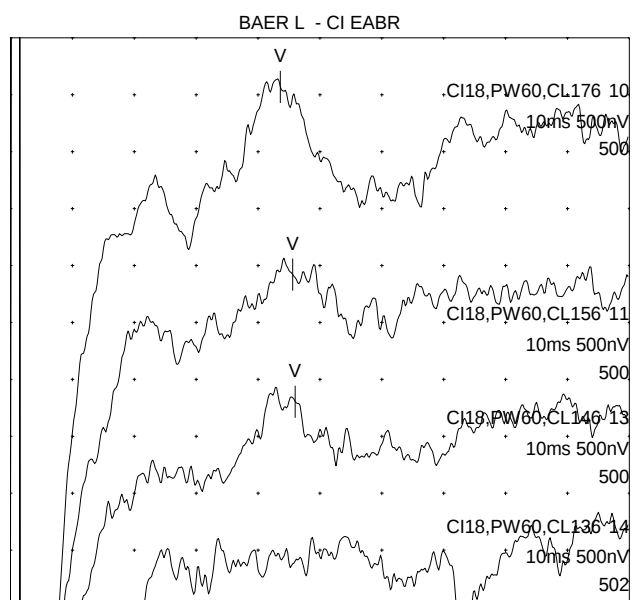
CU	μC	μV	ms
355	0.021	0.81	4.50
296	0.018	0.56	4.65
247	0.015	0.42	4.70
207	0.012	NR	NR



CI e10			
CU	μC	μV	ms
176	0.026	1.00	4.44
156	0.018	0.84	4.60
146	0.015	0.58	5.02
136	0.012	NR	NR



CI e18			
CU	μC	μV	ms
176	0.026	1.01	4.36
156	0.018	0.58	4.56
146	0.015	0.53	4.60
136	0.012	NR	NR



Golf-club

CL	μC	μV	ms
180	0.090	0.64	4.64
170	0.075	0.30	4.76
160	0.063	0.20	4.96
150	0.053	NR	NR

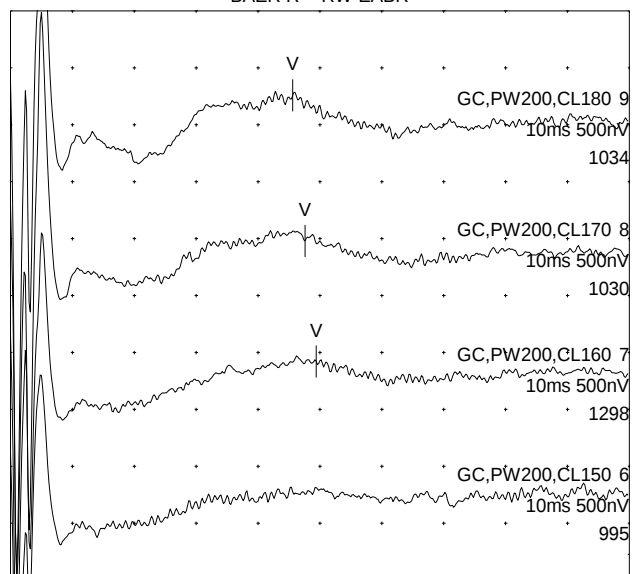
ITA e3

CU	μC	μV	ms
247	0.036	0.45	4.02
207	0.012	0.41	4.04
172	0.010	0.26	4.24
144	0.009	NR	NR

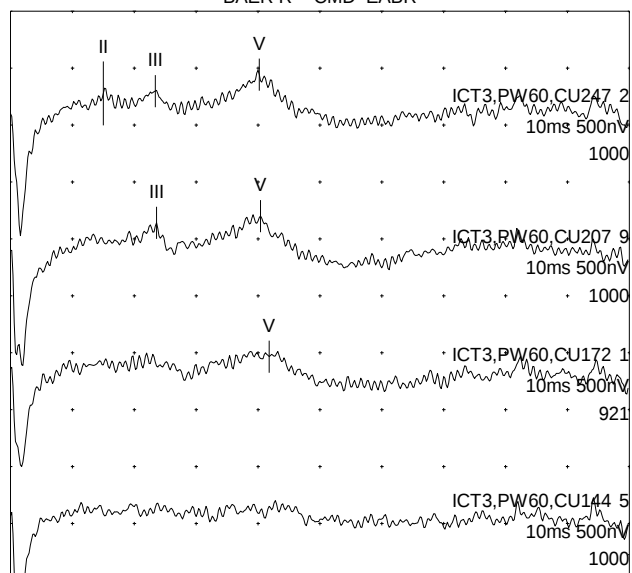
ITA e1

CU	μC	μV	ms
425	0.026	0.52	4.18
355	0.021	0.35	4.26
296	0.018	0.22	4.42
247	0.015	NR	NR

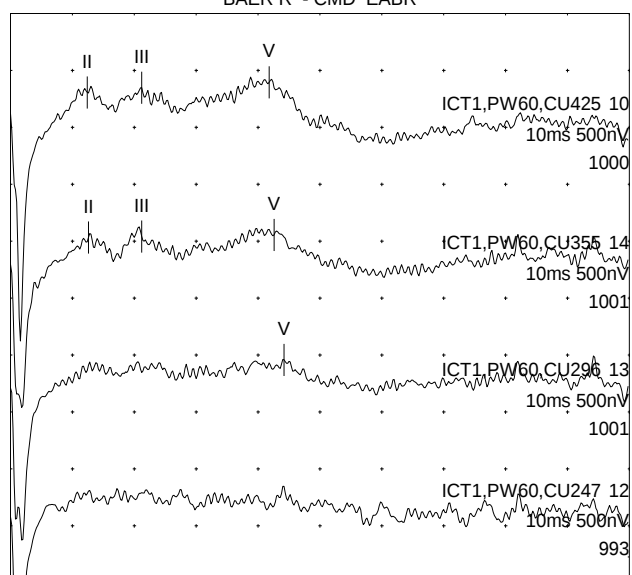
BAER R - RW EABR



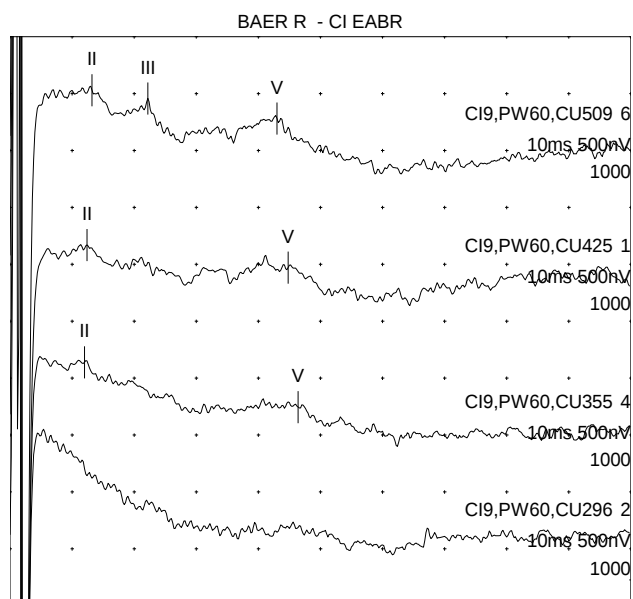
BAER R - CMD EABR



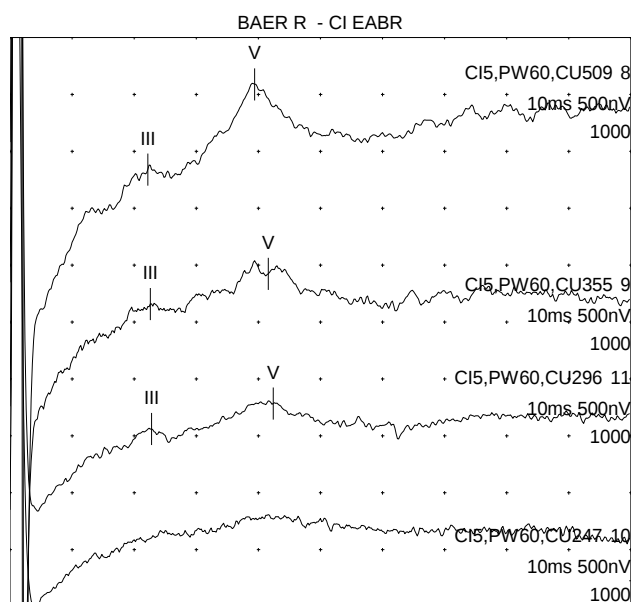
BAER R - CMD EABR



CI e9			
CU	μC	μV	ms
509	0.031	0.50	4.30
425	0.026	0.30	4.48
355	0.021	0.21	4.64
296	0.018	NR	NR

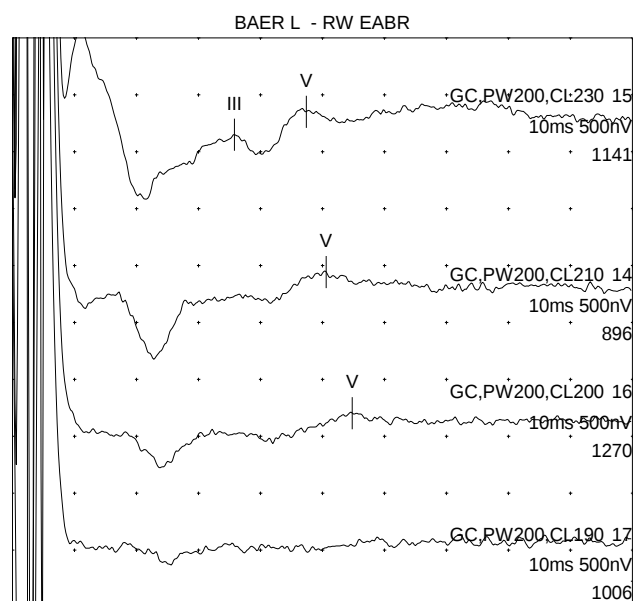


CI e5			
CU	μC	μV	ms
509	0.031	0.51	3.94
355	0.021	0.31	4.16
296	0.018	0.22	4.24
247	0.015	NR	NR



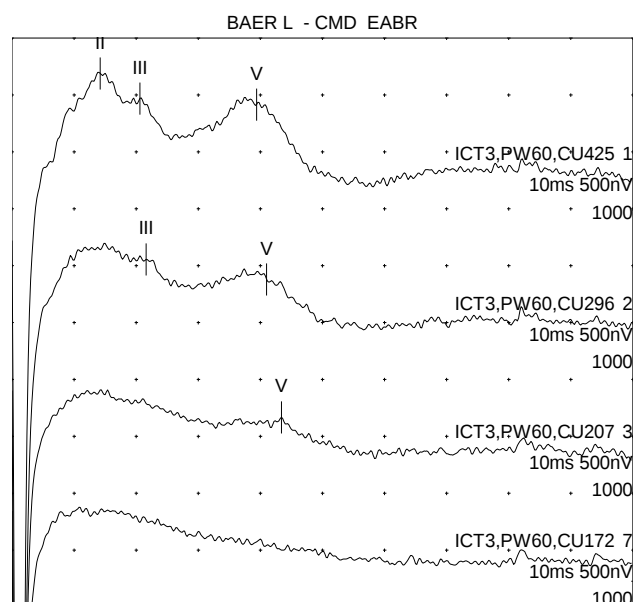
Golf-club

CL	μC	μV	ms
230	0.233	0.17	4.74
210	0.155	0.14	5.06
200	0.130	0.11	5.48
190	0.108	NR	NR



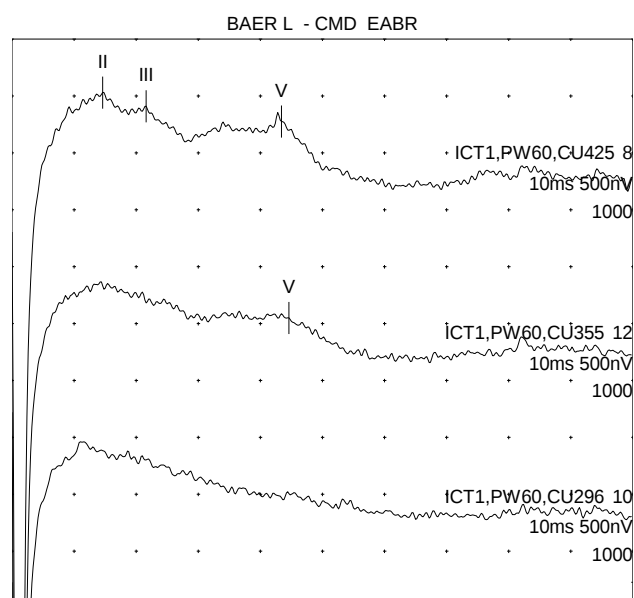
ITA e3

CU	μC	μV	ms
425	0.026	0.72	3.94
296	0.018	0.45	4.10
207	0.012	0.29	4.34
172	0.010	NR	NR

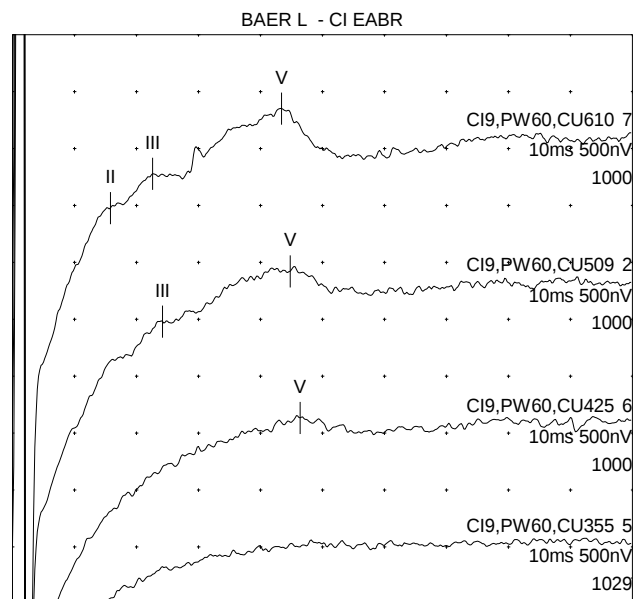


ITA e1

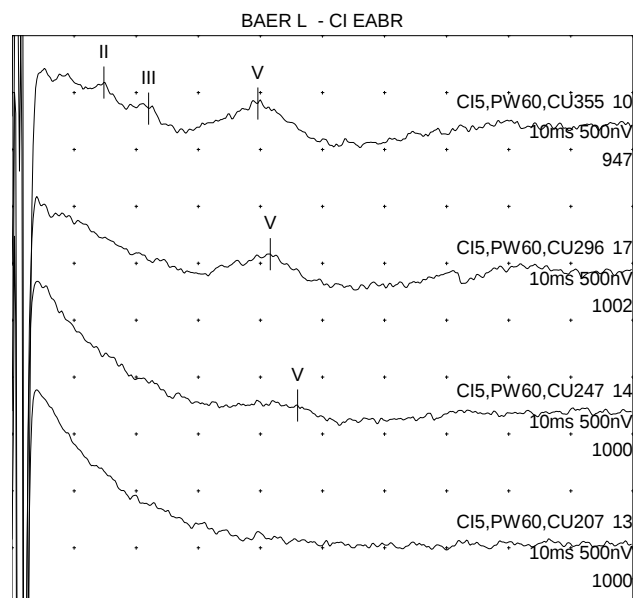
CU	μC	μV	ms
425	0.026	0.55	4.34
355	0.021	0.33	4.46
296	0.018	NR	NR



CI e9			
CU	μC	μV	ms
610	0.037	0.43	4.34
509	0.133	0.21	4.48
425	0.021	0.16	4.64
355	0.018	NR	NR

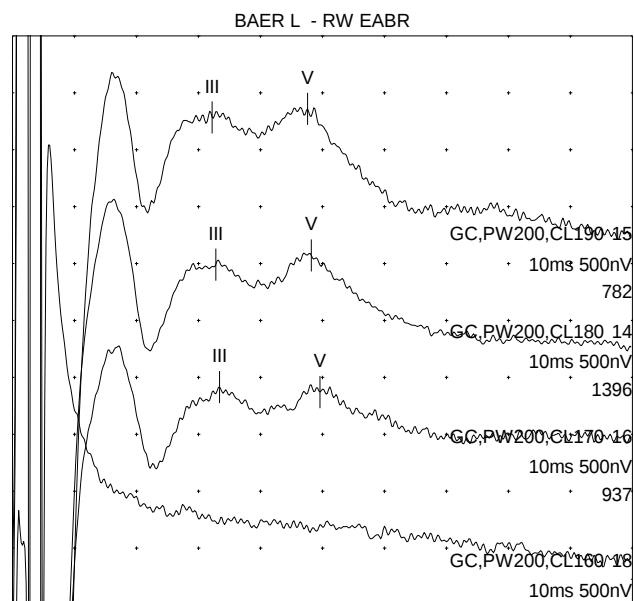


CI e5			
CU	μC	μV	ms
355	0.021	0.40	3.96
296	0.018	0.34	4.16
247	0.015	0.16	4.60
207	0.012	NR	NR



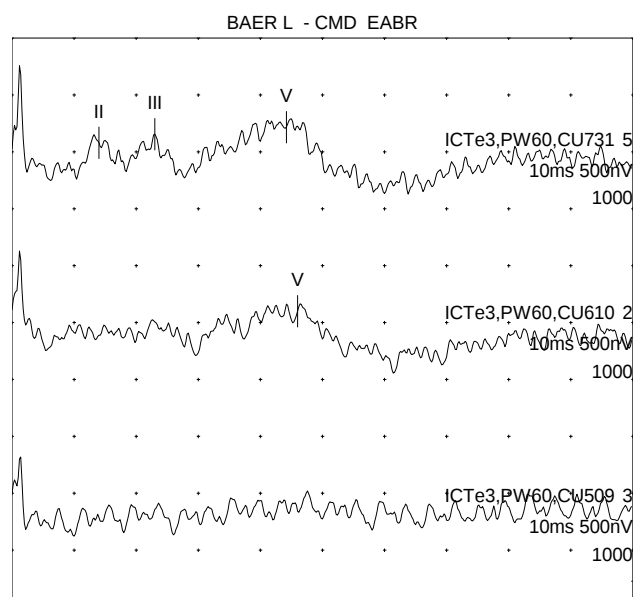
Golf-club

CL	μC	μV	ms
190	0.108	0.88	4.76
180	0.090	0.72	4.82
170	0.075	0.50	4.96
160	0.063	NR	NR



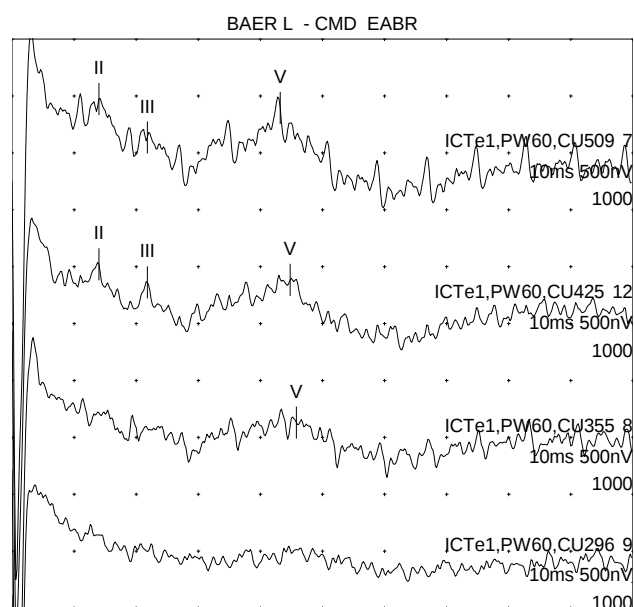
ITA e3

CU	μC	μV	ms
731	0.044	0.66	4.60
610	0.037	0.50	4.42
509	0.031	NR	NR

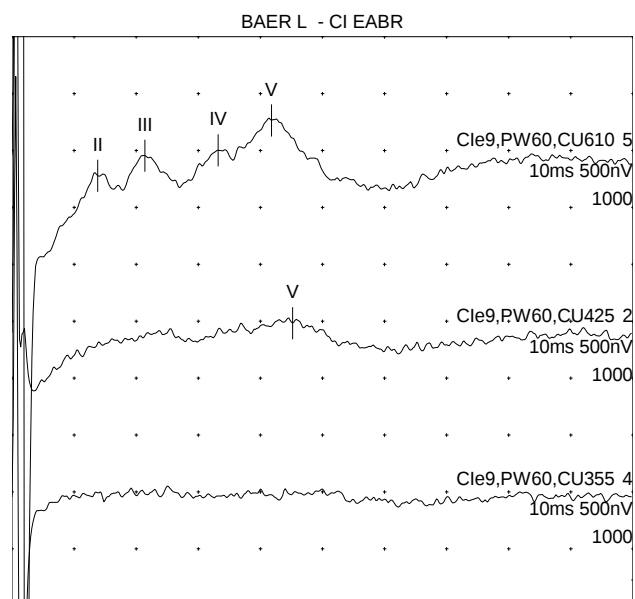


ITA e1

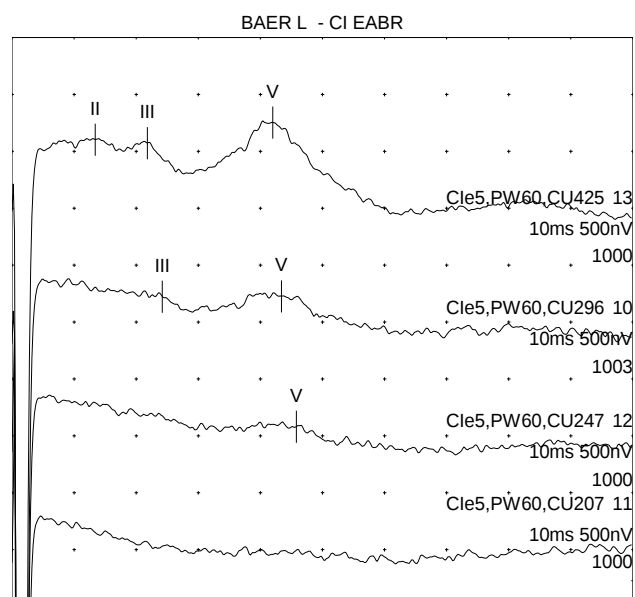
CU	μC	μV	ms
509	0.031	0.88	4.32
425	0.026	0.60	4.48
355	0.021	0.43	4.58
296	0.018	NR	NR



CI e9			
CU	μC	μV	ms
610	0.037	0.63	4.18
425	0.026	0.28	4.52
355	0.021	NR	NR

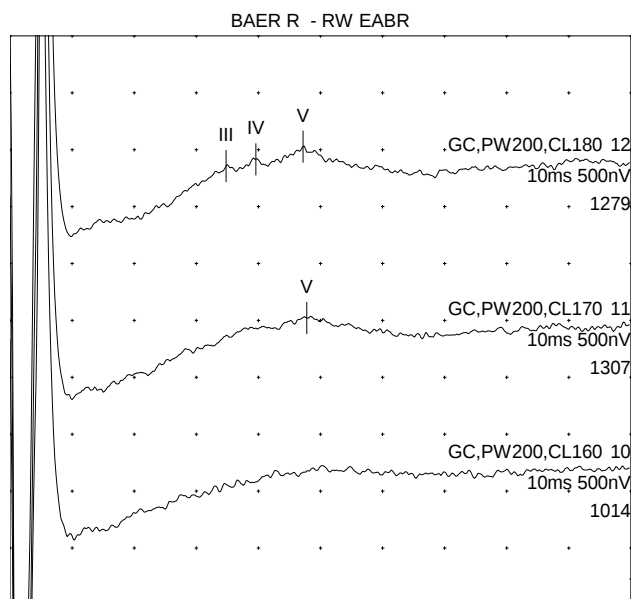


CI e5			
CU	μC	μV	ms
425	0.026	0.74	4.20
296	0.018	0.36	4.34
247	0.015	0.23	4.58
207	0.012	NR	NR



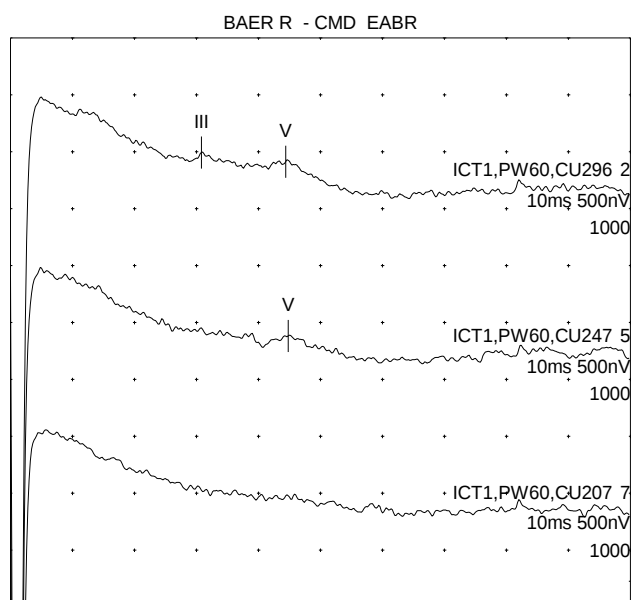
Golf-club

CL	μC	μV	ms
180	0.090	0.24	4.78
170	0.075	0.18	4.72
160	0.063	NR	NR



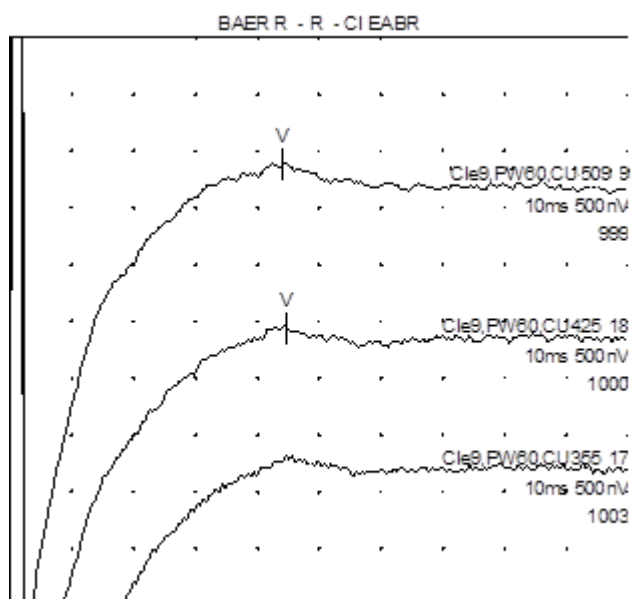
ITA e1

CU	μC	μV	ms
296	0.018	0.30	4.44
247	0.015	0.22	4.48
207	0.012	NR	NR

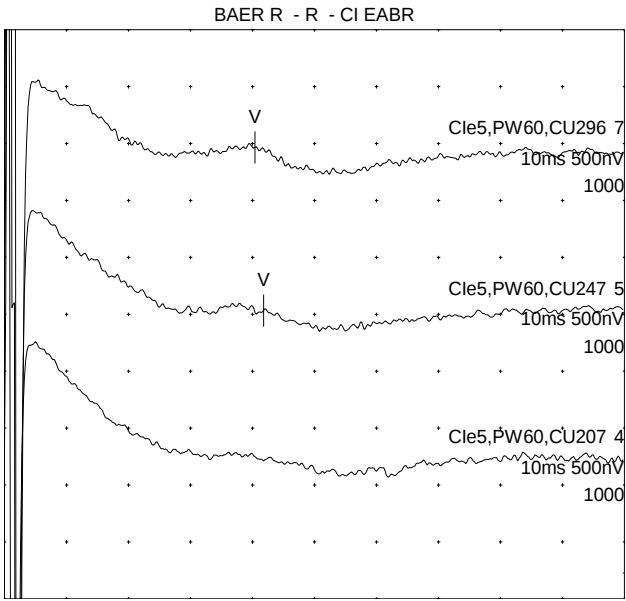


CI e9

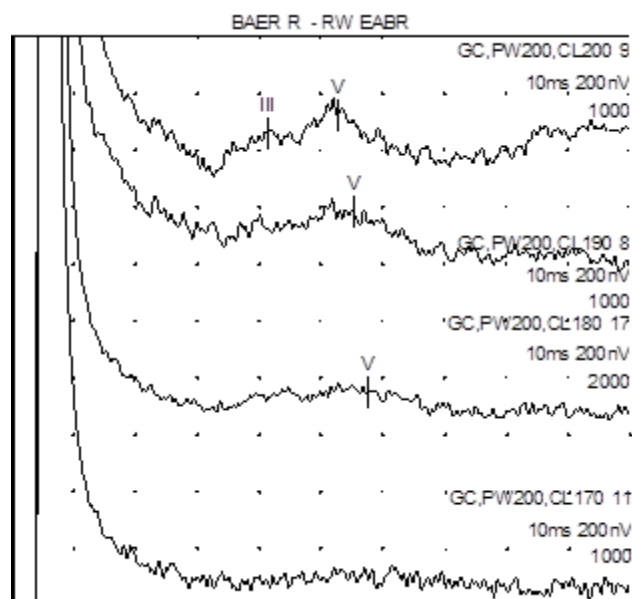
CU	μC	μV	ms
509	0.031	0.23	4.42
425	0.026	0.16	4.48
355	0.021	NR	NR



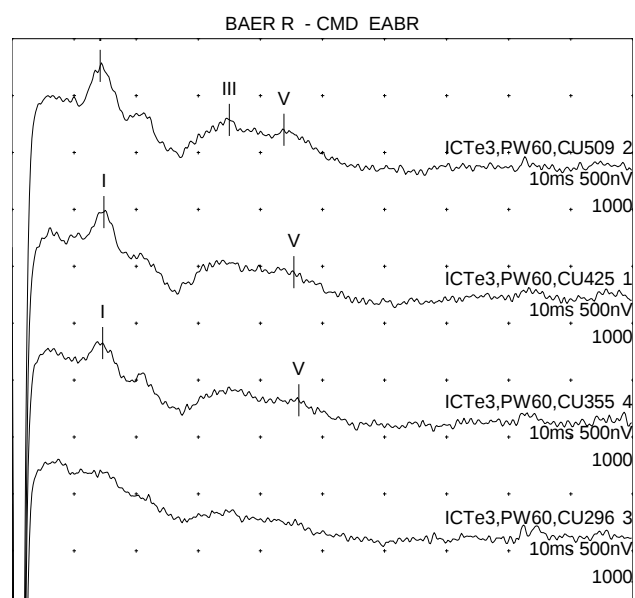
CI e5			
CU	µC	µV	ms
296	0.018	0.28	4.04
247	0.015	0.21	4.18
207	0.012	NR	NR



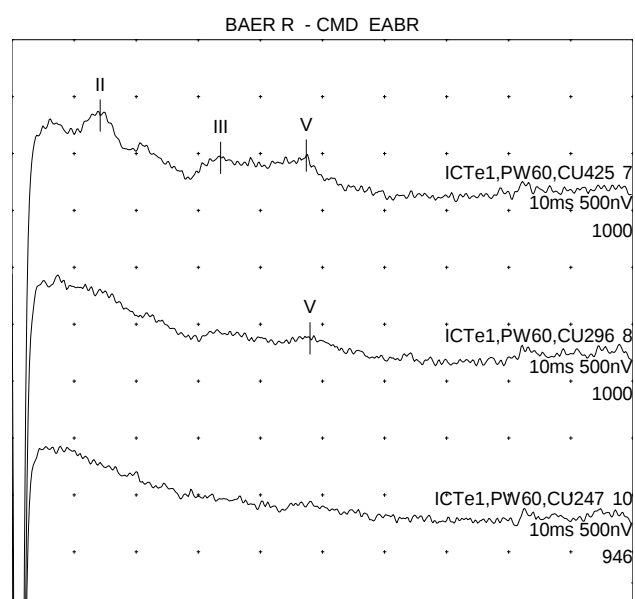
Golf-club			
CL	μC	μV	ms
200	0.130	0.22	5.28
190	0.108	0.20	5.54
180	0.090	0.09	5.78
170	0.075	NR	NR



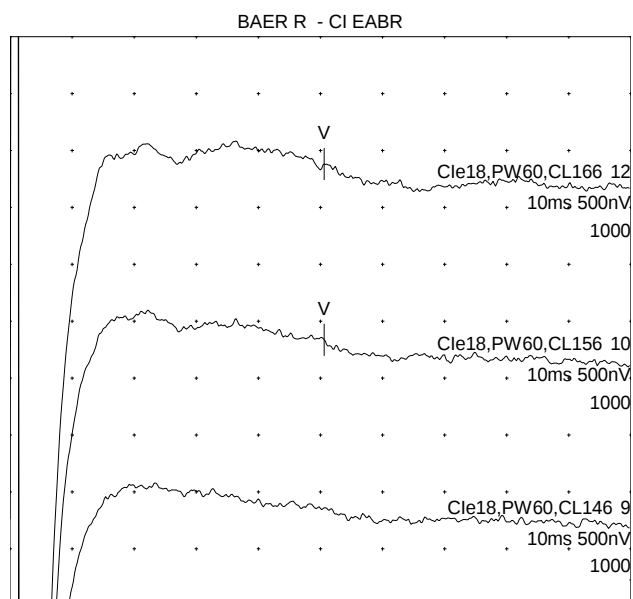
ITA e3			
CU	μC	μV	ms
509	0.031	0.39	4.38
425	0.026	0.25	4.54
355	0.021	0.22	4.62
296	0.018	NR	NR



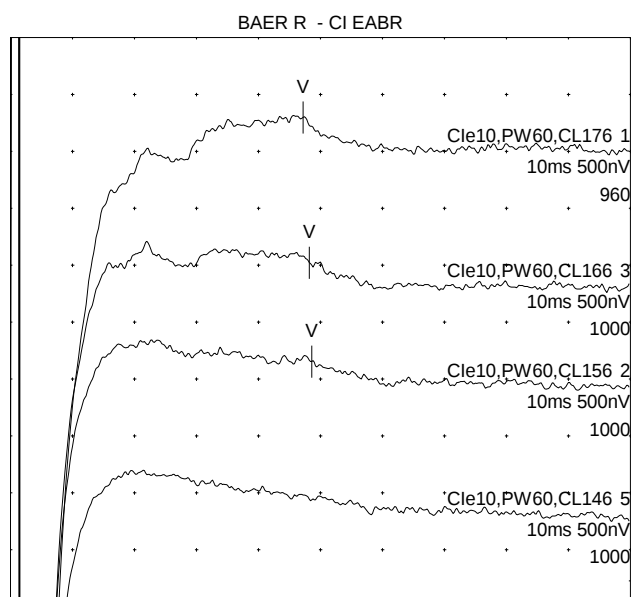
ITA e1			
CU	μC	μV	ms
425	0.026	0.40	4.72
355	0.021	0.11	4.80
296	0.018	NR	NR



CI e18			
CU	μC	μV	ms
166	0.021	0.27	5.06
156	0.018	0.23	5.06
146	0.015	NR	NR

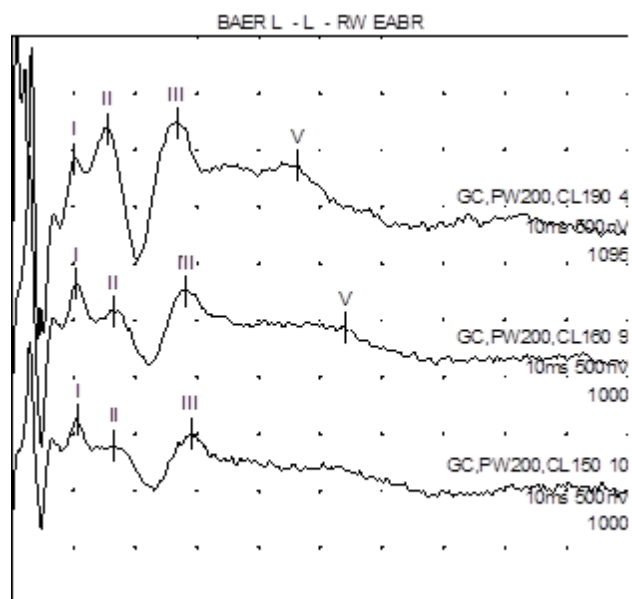


CI e10			
CU	μC	μV	ms
176	0.026	0.31	4.72
166	0.021	0.29	4.82
156	0.018	0.27	4.86
146	0.015	NR	NR



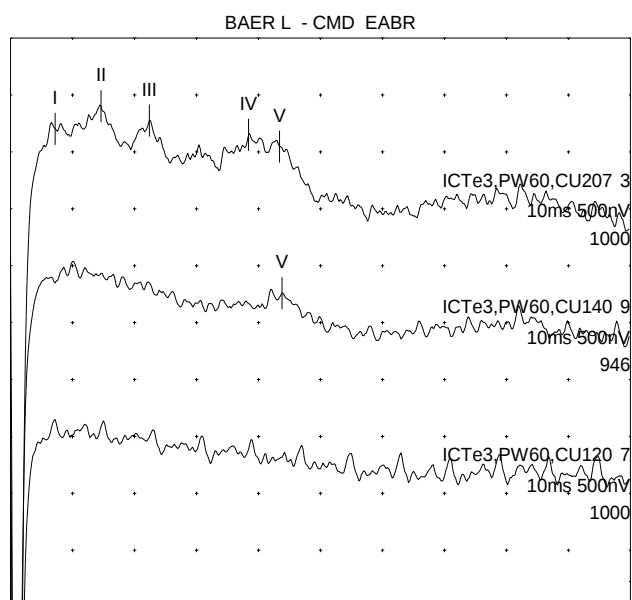
Golf-club

CL	μC	μV	ms
190	0.108	0.59	4.64
160	0.063	0.37	5.40
150	0.053	NR	NR



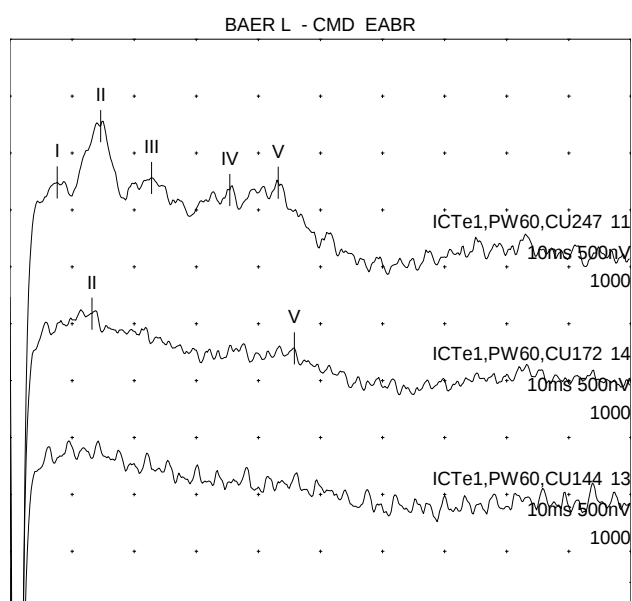
ITA e3

CU	μC	μV	ms
207	0.012	0.59	4.34
140	0.009	0.37	4.38
120	0.007	NR	NR

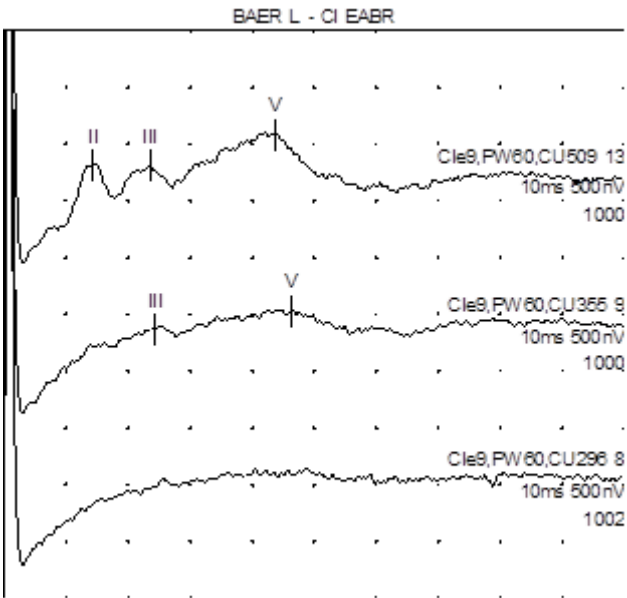


ITA e1

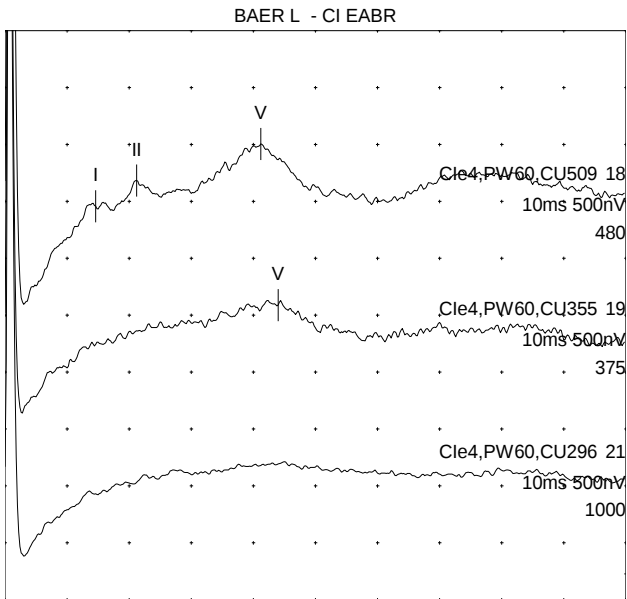
CU	μC	μV	ms
296	0.018	0.73	4.34
172	0.010	0.32	4.58
144	0.009	NR	NR



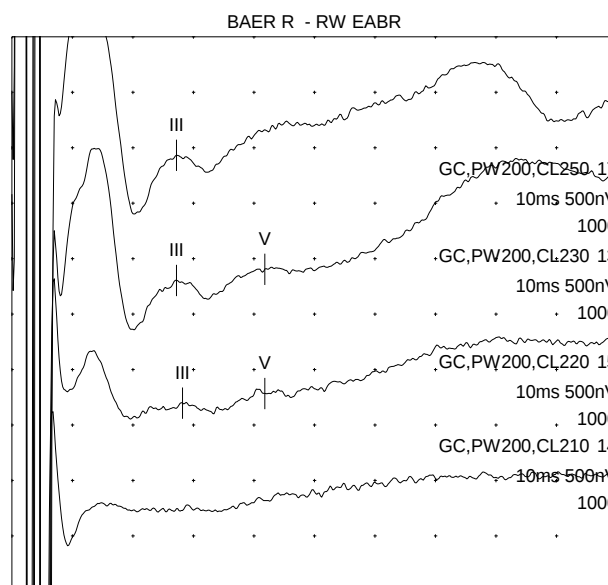
CI e9			
CU	µC	µV	ms
509	0.031	0.50	4.37
355	0.021	0.22	4.62
296	0.018	NR	NR



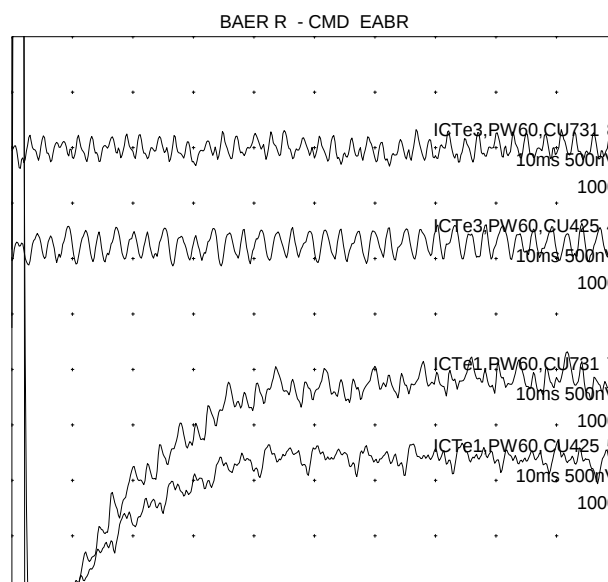
CI e4			
CU	µC	µV	ms
509	0.031	0.50	4.12
355	0.021	0.34	4.40
296	0.018	NR	NR



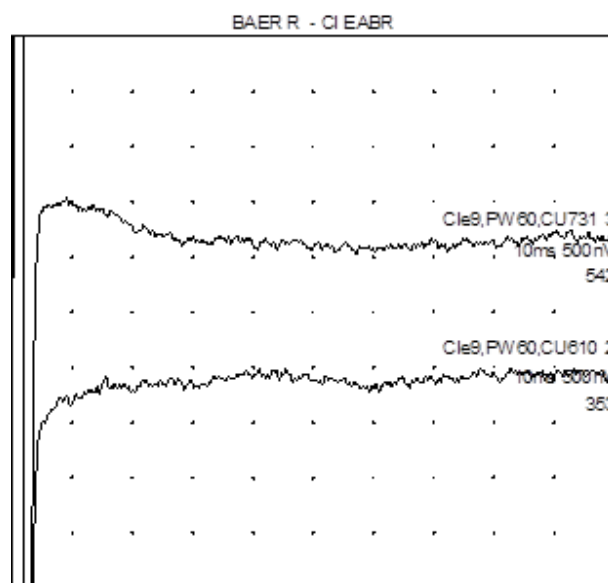
Golf-club			
CL	μC	μV	ms
230	0.223	0.10	4.18
220	0.186	0.10	4.18
210	0.155	NR	NR



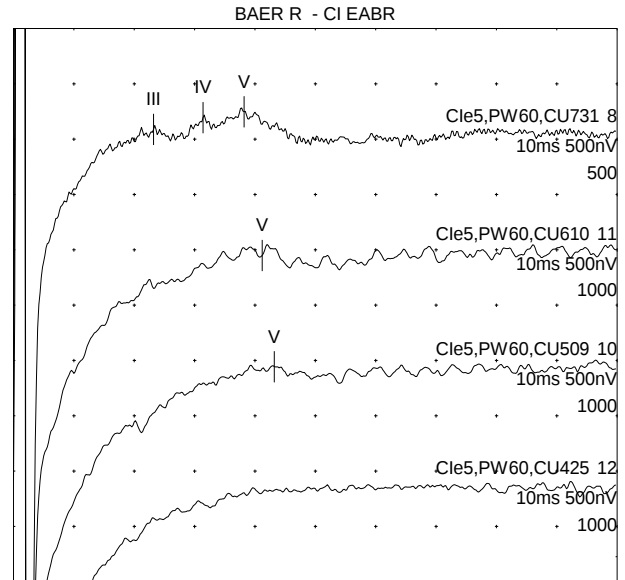
ITA e3			
CU	μC	μV	ms
731	0.044	NR	NR
ITA e1			
CU	μC	μV	ms
731	0.044	NR	NR



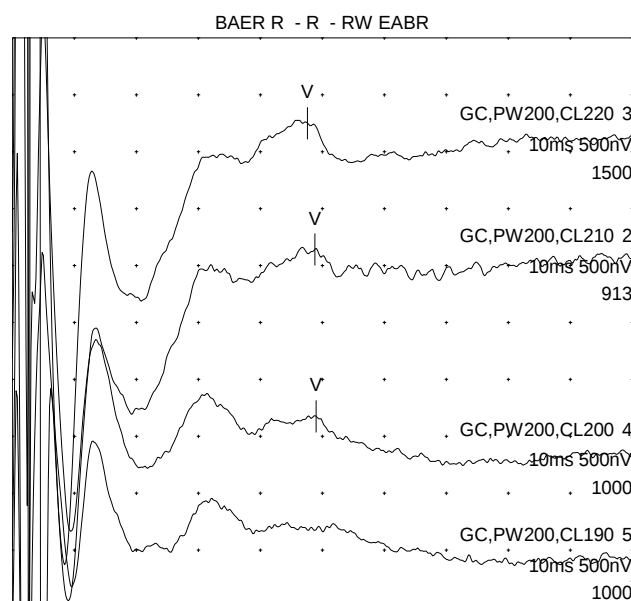
CI e9			
CL	μC	μV	ms
731	0.044	NR	NR
610	0.037	NR	NR



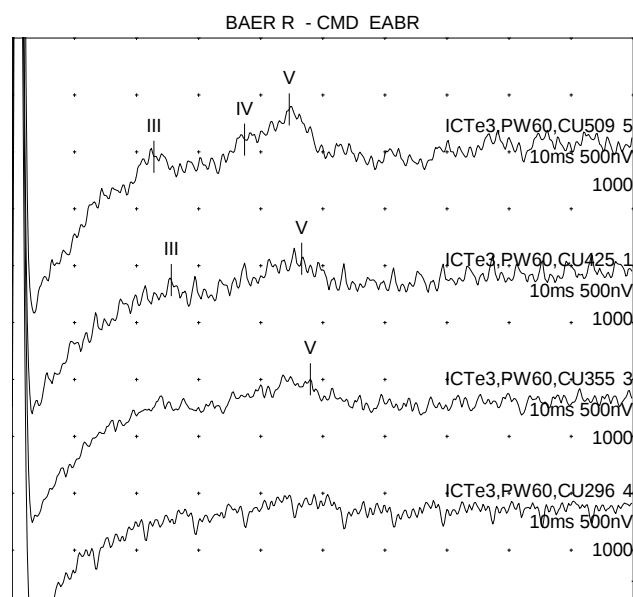
CI e5			
CL	μC	μV	ms
731	0.044	0.28	3.82
610	0.037	0.20	4.12
509	0.031	0.16	4.32
425	0.026	NR	NR



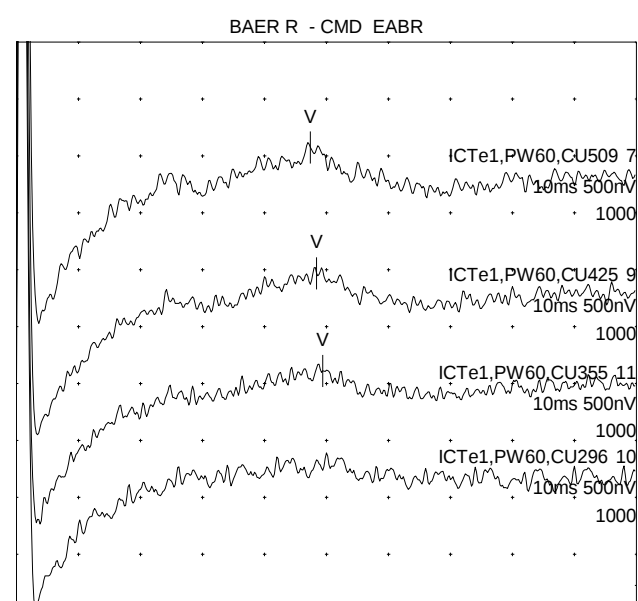
Golf-club			
CL	μC	μV	ms
220	0.186	0.40	4.76
210	0.155	0.29	4.88
200	0.130	0.22	4.90
190	0.108	NR	NR



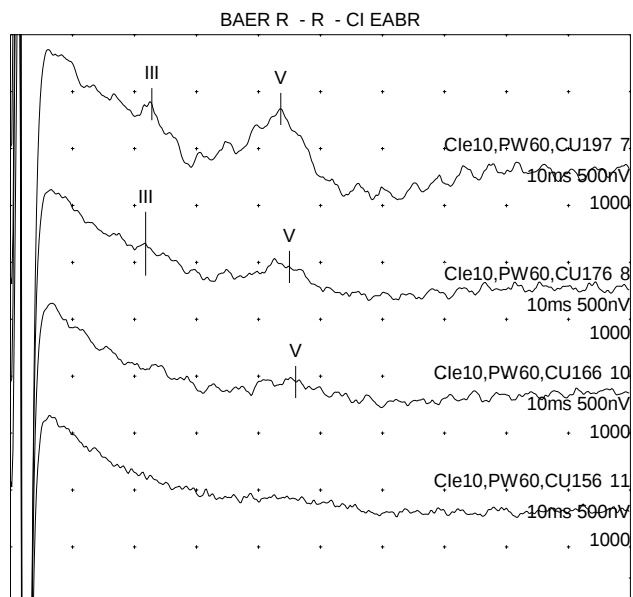
ITA e3			
CU	μC	μV	ms
509	0.031	0.51	4.46
425	0.026	0.33	4.66
355	0.021	0.28	4.78
296	0.018	NR	NR



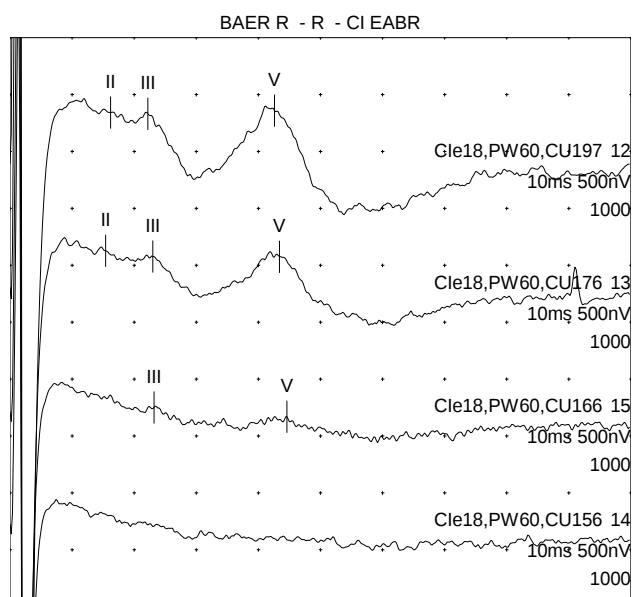
ITA e1			
CU	μC	μV	ms
509	0.031	0.39	4.74
425	0.026	0.27	4.84
355	0.021	0.22	4.90
296	0.018	NR	NR



CI e10			
CU	μC	μV	ms
197	0.037	0.77	4.36
176	0.026	0.27	4.50
166	0.021	0.21	4.60
156	0.018	NR	NR



CI e18			
CU	μC	μV	ms
197	0.037	0.91	4.26
176	0.036	0.62	4.34
166	0.021	0.20	4.46
156	0.018	NR	NR



Golf-club

CL	μC	μV	ms
220	0.186	0.28	4.82
210	0.155	0.24	4.96
200	0.130	0.20	5.08
190	0.108	NR	NR

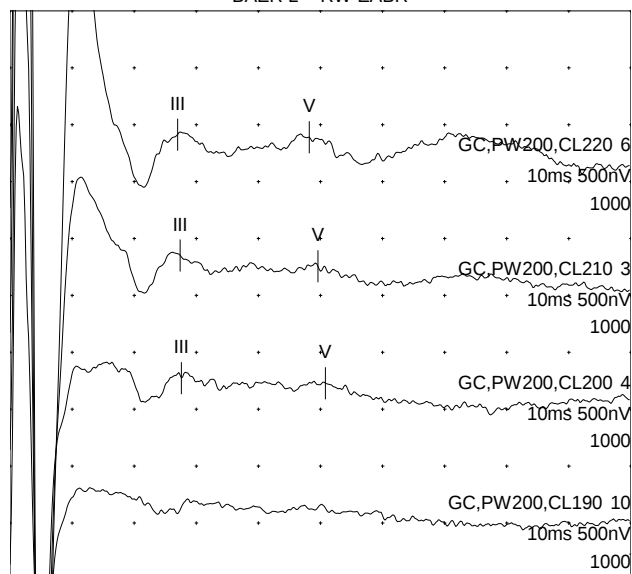
ITA e3

CU	μC	μV	ms
355	0.021	0.35	4.50
296	0.018	0.32	4.56
247	0.015	0.24	4.64
207	0.012	NR	NR

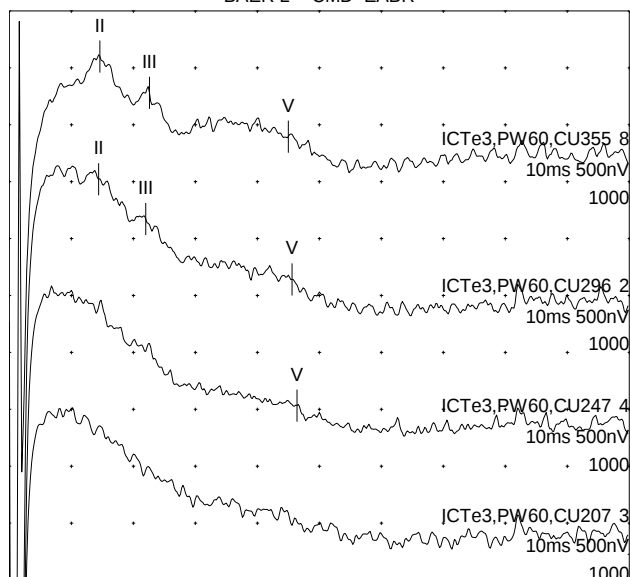
ITA e1

CU	μC	μV	ms
509	0.031	0.47	4.42
425	0.026	0.35	4.60
355	0.021	0.29	4.76
296	0.018	NR	NR

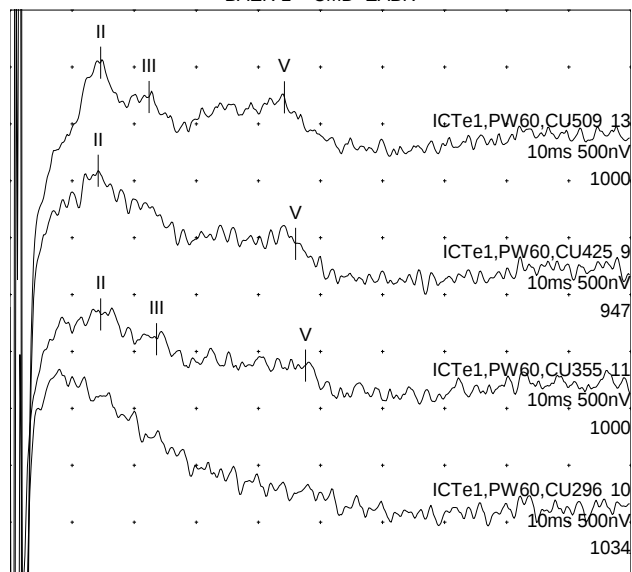
BAER L - RW EABR



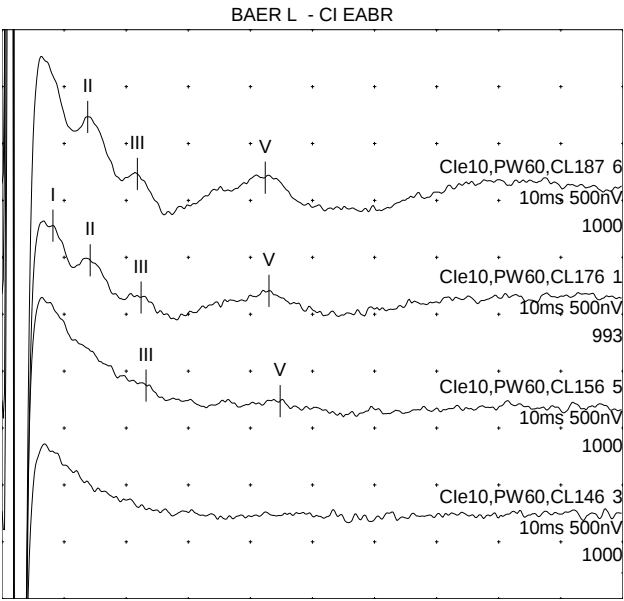
BAER L - CMD EABR



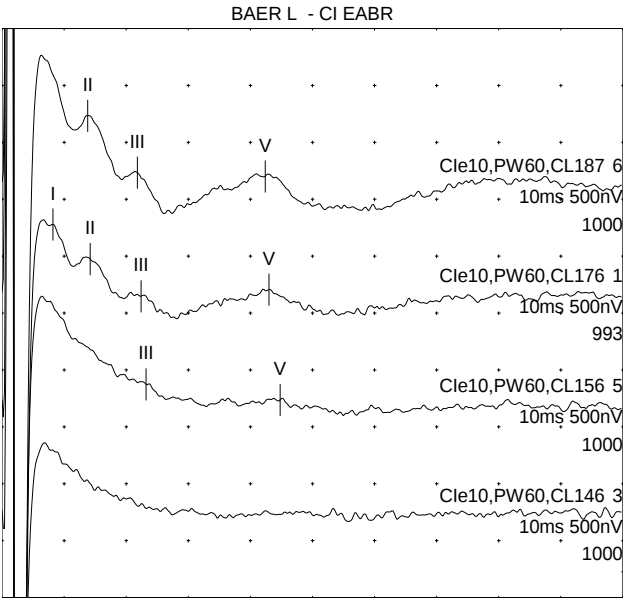
BAER L - CMD EABR



CI e10			
CU	μC	μV	ms
187	0.031	0.34	4.24
176	0.026	0.23	4.30
156	0.018	0.17	4.48
146	0.015	NR	NR

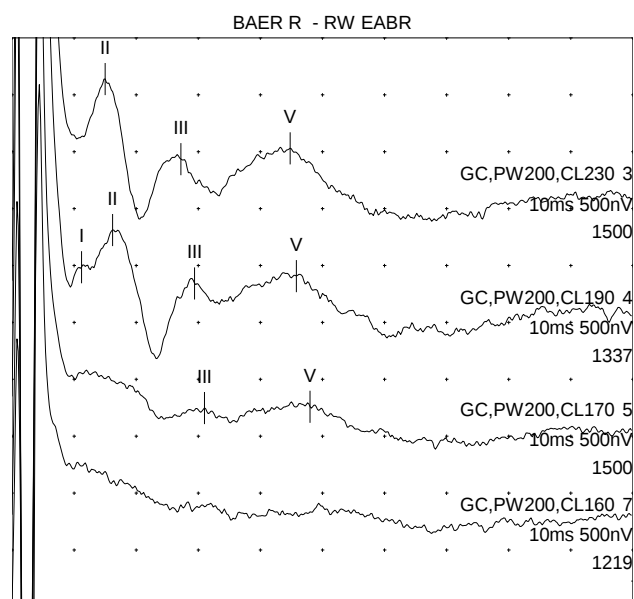


CI e18			
CU	μC	μV	ms
187	0.031	0.48	3.98
166	0.021	0.38	4.14
156	0.018	0.23	4.20
146	0.015	NR	NR



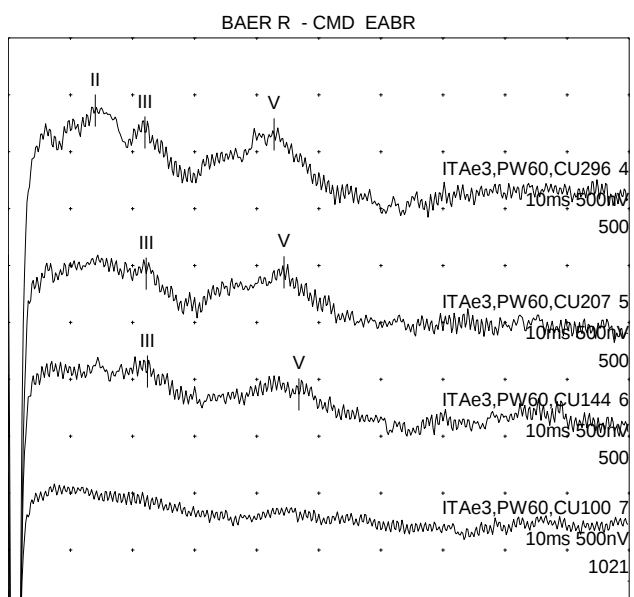
Golf-club

CL	μC	μV	ms
210	0.155	0.62	4.48
190	0.108	0.55	4.58
170	0.075	0.35	4.80
160	0.063	NR	NR



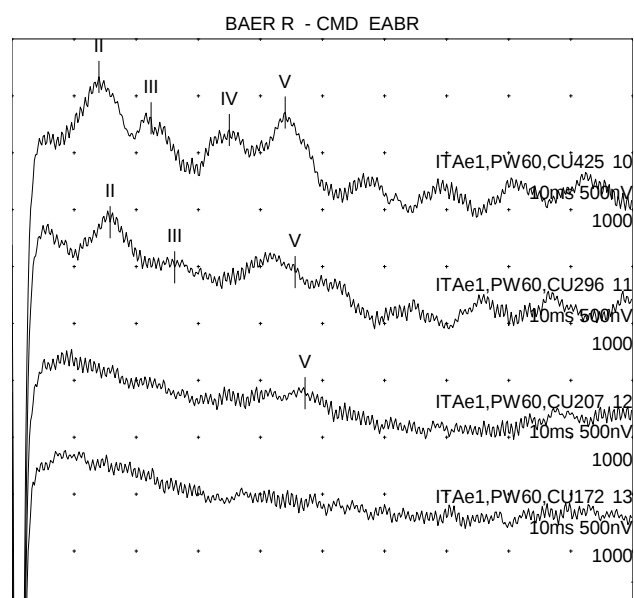
ITA e3

CU	μC	μV	ms
296	0.018	0.72	4.28
207	0.012	0.53	4.44
144	0.009	0.41	4.68
100	0.006	NR	NR

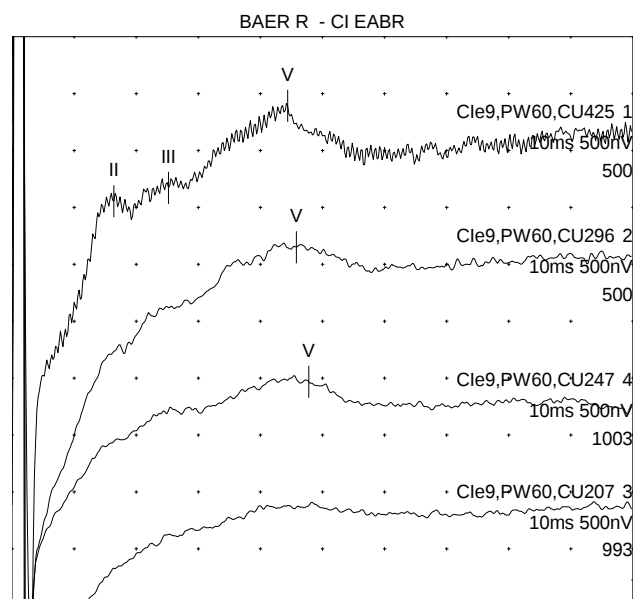


ITA e1

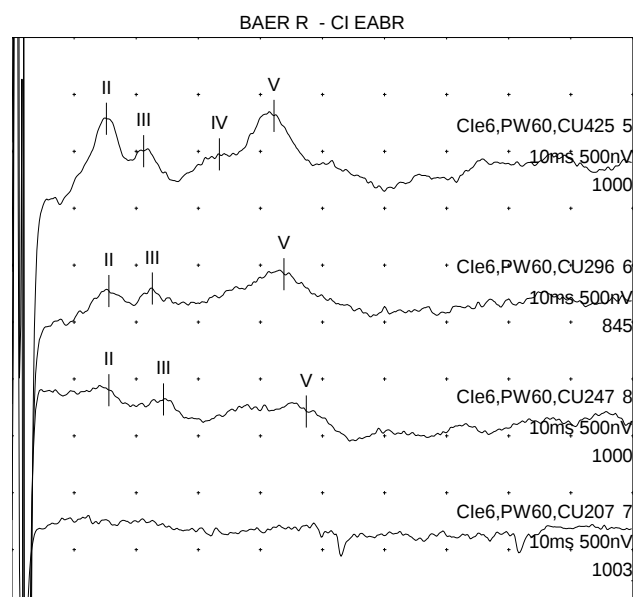
CU	μC	μV	ms
425	0.026	0.68	4.40
296	0.018	0.30	4.56
207	0.012	0.26	4.72
172	0.010	NR	NR



CI e9			
CU	μC	μV	ms
425	0.026	0.46	4.44
296	0.018	0.26	4.58
247	0.015	0.22	4.78
207	0.012	NR	NR

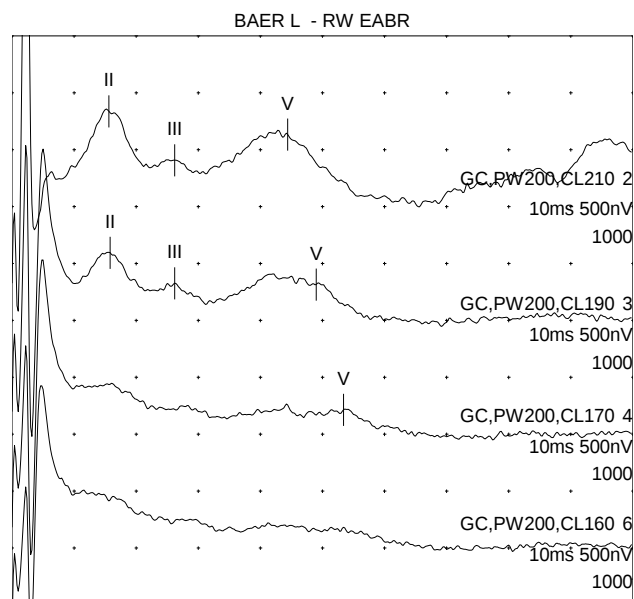


CI e6			
CU	μC	μV	ms
425	0.026	1.10	4.16
296	0.018	0.66	4.38
247	0.015	0.42	4.44
207	0.012	NR	NR



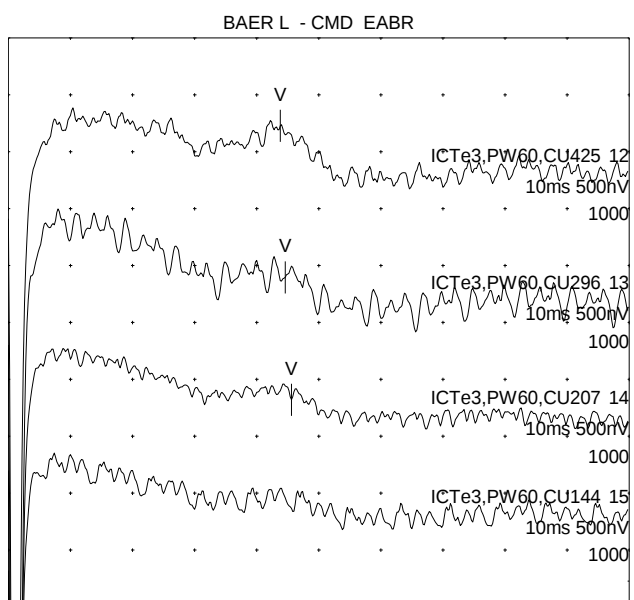
Golf-club

CL	μC	μV	ms
210	0.155	0.58	4.44
190	0.108	0.34	4.90
170	0.075	0.23	5.34
160	0.063	NR	NR



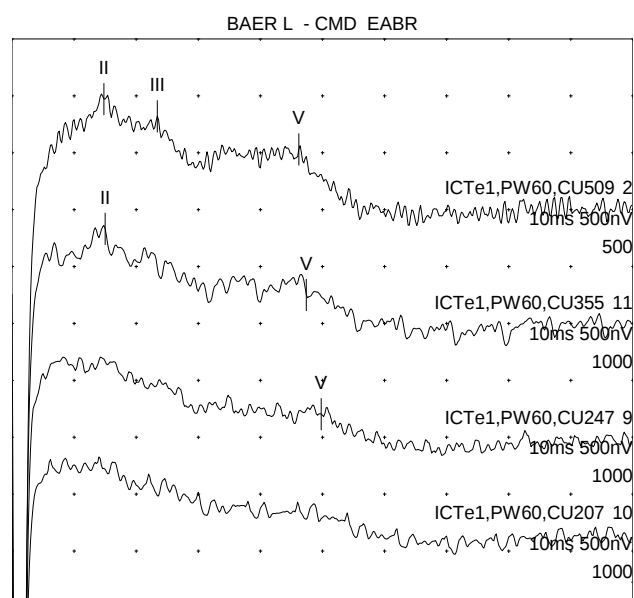
ITA e3

CU	μC	μV	ms
425	0.026	0.53	4.38
296	0.018	0.41	4.46
207	0.012	0.28	4.56
144	0.009	NR	NR

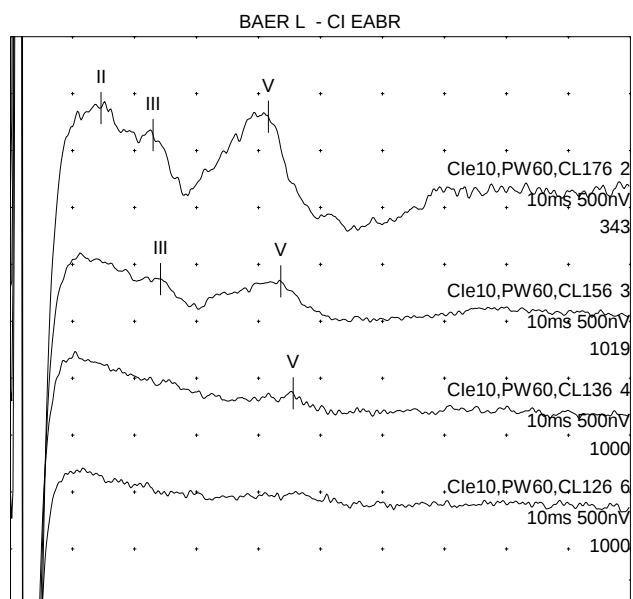


ITA e1

CU	μC	μV	Ms
509	0.031	0.61	4.62
355	0.021	0.40	4.47
247	0.015	0.34	4.98
207	0.012	NR	NR



CI e10			
CU	μC	μV	ms
176	0.026	1.00	4.16
156	0.018	0.34	4.36
136	0.012	0.22	4.56
126	0.010	NR	NR



CI e18			
CU	μC	μV	ms
136	0.012	0.53	3.92
116	0.009	0.32	4.04
106	0.007	0.17	4.16
96	0.006	NR	NR

