

Supplementary Table e-1 – Patients’ experimental details

Case n.	Selected side	Recording configuration			Levodopa administration (LED)		aDBS Stimulation		
		Recording contact pair	Personalized beta peak (Hz)	30 Hz Impedance (Ohm)	Dose 1	Dose 2	Stimulation contact	Maximum voltage (V)	Average voltage (V)
1	Right	1-3	26	19	133	193	2	3.5	1.0
2	Right	0-3	20	9.2	133	133	1	4	0.7
3	Left	0-3	11	12.3	213	213	1	3	1.4
4	Left	0-2	20	10.3	100	100	1	3	0.9
7	Left	1-3	15	15	117	117	2	2.5	1.1
8	Right	1-3	15	10.4	133	133	2	3.5	2.4
9	Left	1-3	17	5.2	183	183	2	3	1.8
10	Right	0-3	17	8.6	333	333	1	2.5	2.4
11	Left	0-3	17	8	223	223	1	3	2.0
12	Right	1-3	14	7	238	238	2	3	1.2
13	Left	03	11	7.1	133	60	1	2	0.7