

Comparison of Brain Activation During Motor Imagery and Motor Movement Using fNIRS

Supplementary Material

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Table S1 Effect of Task, Motor Type, and Task*Type Interaction. Comparison of Task (5 levels: left hand, right hand, left foot, right foot, rest), Motor Type (2 levels: motor imagery, motor execution), and the interaction between Task and Type. Significant effects ($p < 0.05$, FDR adjusted) are highlighted in bold.

Optode	Task	Type	Task*Type
1	0.0328	0.0000	0.0329
2	0.2811	0.2673	0.0637
3	0.2016	0.1003	0.6258
4	0.4318	0.1003	0.5784
5	0.0193	0.9627	0.0072
6	0.0862	0.7860	0.7322
7	0.0000	0.5471	0.0000
8	0.2420	0.7394	0.7997
9	0.0097	0.0000	0.0105
10	0.0015	0.6030	0.0113
11	0.1327	0.2673	0.6462
12	0.0041	0.7394	0.2157
13	0.0151	0.0009	0.0399
14	0.0328	0.6030	0.9796
15	0.4834	0.6487	0.3599
16	0.0097	0.0047	0.0019
17	0.0328	0.6030	0.7997
18	0.0097	0.7394	0.4848
19	0.0328	0.1003	0.0329
20	0.7382	0.7394	0.9796
21	0.0328	0.7953	0.0566
22	0.0033	0.0000	0.0065
23	0.2811	0.2673	0.7202
24	0.0015	0.0038	0.0065

Table S2 Effect of Task by Optode and Motor Type. Significant effects ($p < 0.05$, FDR corrected) are highlighted in bold.

Optode	Motor Execution		Motor Imagery	
	F-Value	<i>p</i> -Value	F-Value	<i>p</i> -Value
1	2.6811	0.0946	3.3231	0.0448
2	2.2218	0.1581	0.7146	0.7036
3	1.2542	0.4309	0.1638	0.9771
4	1.0478	0.5241	0.6683	0.7036
5	4.5772	0.0120	0.6441	0.7045
6	1.3485	0.4295	1.2604	0.4309
7	12.9852	0.0000	3.5510	0.0332
8	0.5861	0.7340	1.8726	0.2584
9	4.2945	0.0143	2.6608	0.0946
10	6.0101	0.0021	0.8421	0.6297
11	1.2692	0.4309	1.7141	0.3153
12	4.1872	0.0150	1.3980	0.4295
13	2.9167	0.0732	2.2381	0.1581
14	0.9764	0.5608	2.5690	0.1040
15	1.0897	0.5098	0.4512	0.8230
16	5.8867	0.0021	0.6750	0.7036
17	1.5853	0.3659	1.3229	0.4295
18	2.4592	0.1201	1.5325	0.3659
19	3.2432	0.0495	0.2530	0.9473
20	0.0588	0.9936	0.9298	0.5783
21	3.1099	0.0566	1.5488	0.3659
22	4.7873	0.0106	4.0439	0.0157
23	1.1272	0.4994	0.6661	0.7036
24	4.4088	0.0133	1.3407	0.4295

Table S3 Effect of Motor Type by Task and Optode. Optodes and Tasks with a significant effect of Motor Type ($p < 0.05$, FDR adjusted) are shown in bold. The tasks are Left Hand (LH), Left Foot (LF), Right Foot (RF), and Right Hand (RH).

Optodes	LH	LF	RF	RH
1	0.0099	0.0019	0.0709	0.0001
2	0.9573	0.7512	0.0011	0.7798
3	0.6287	0.1023	0.9311	0.4473
4	0.8615	0.9252	0.1023	0.1161
5	0.0064	0.7798	0.0675	0.4098
6	0.4473	0.9228	0.5394	0.8151
7	0.0000	0.9073	0.0010	0.8151
8	0.4098	0.9252	0.8611	0.7798
9	0.0001	0.0093	0.5702	0.2952
10	0.0008	0.8615	0.6503	0.6780
11	0.3452	0.9073	0.1947	0.9073
12	0.2466	0.9073	0.1070	0.5266
13	0.0005	0.9823	0.1023	0.1161
14	0.9252	0.8521	0.6882	0.7755
15	0.2250	0.5394	0.8151	0.4473
16	0.6705	0.8611	0.0399	0.0000
17	0.9073	0.7798	0.9823	0.3205
18	0.2810	0.5394	0.6503	0.6882
19	0.0020	0.4473	0.7798	0.6503
20	0.9073	0.9073	0.9573	0.7022
21	0.0709	0.9823	0.4473	0.2120
22	0.6705	0.0013	0.0005	0.0002
23	0.5369	0.5394	0.8615	0.1947
24	0.3157	0.1330	0.0064	0.0095

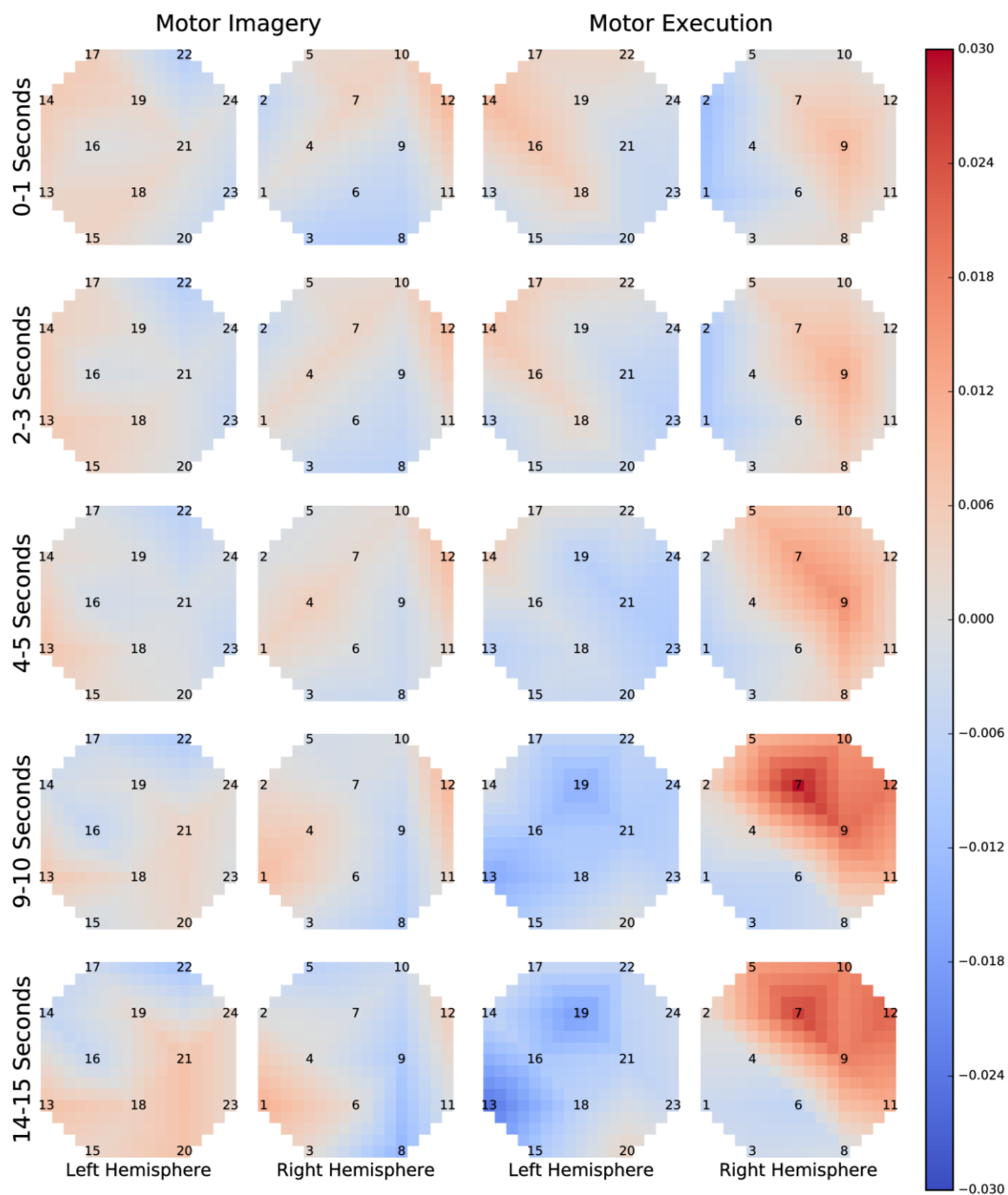


Fig. S1 Average in HbO activation over time for motor imagery and motor execution during the left hand task

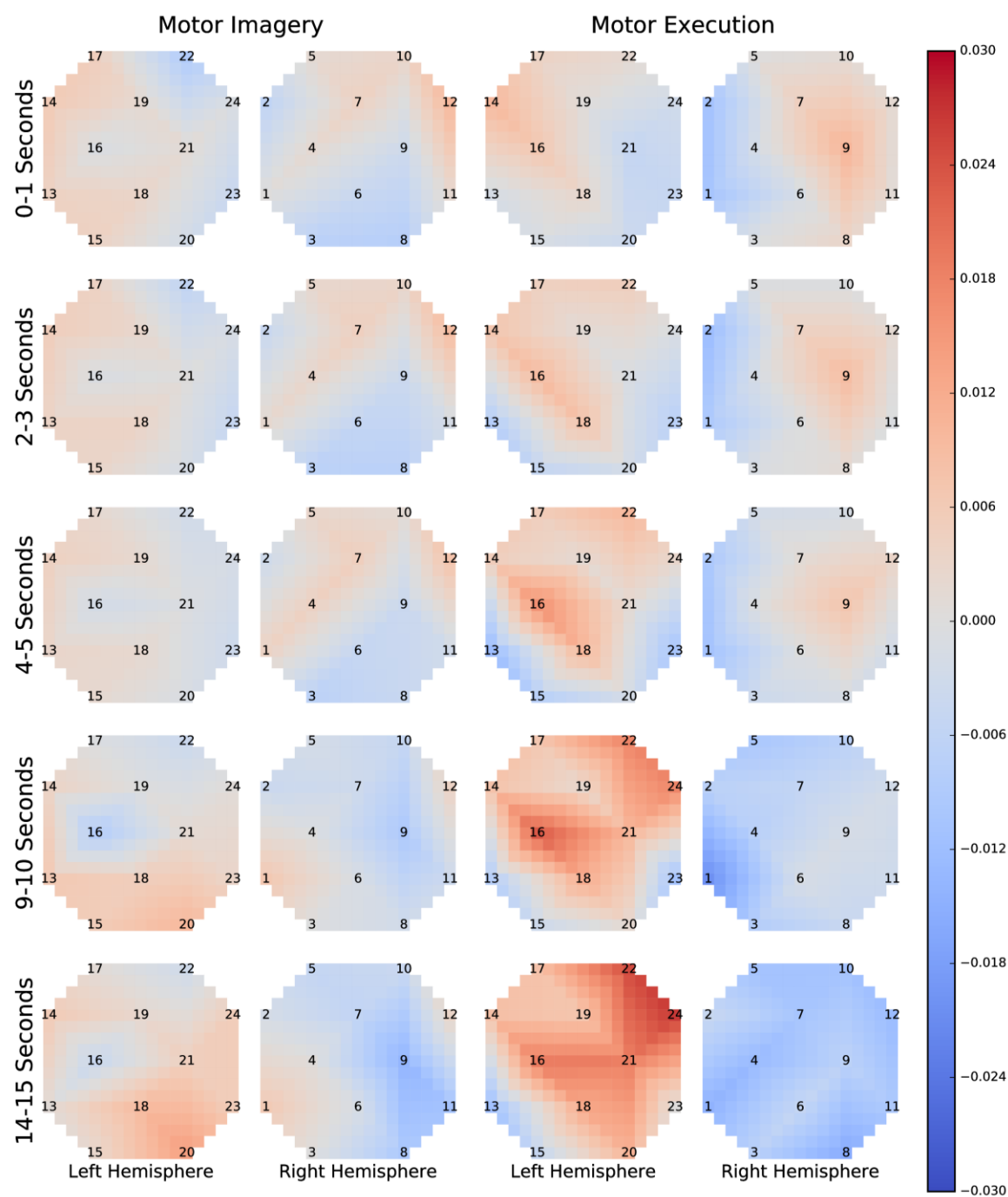


Fig. S2 Average in HbO activation over time for motor imagery and motor execution during the right hand task

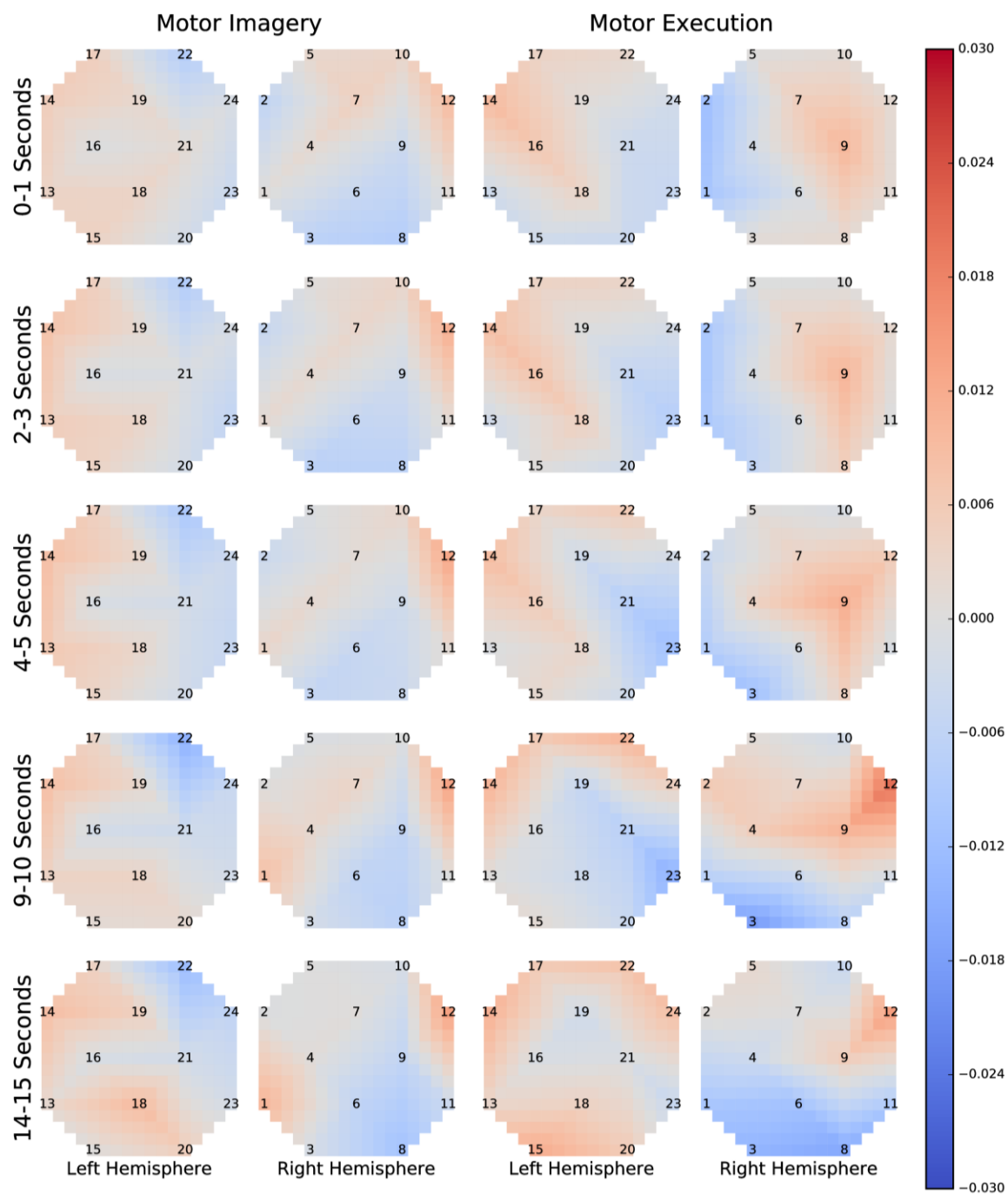


Fig. S3 Average in HbO activation over time for motor imagery and motor execution during the left foot task

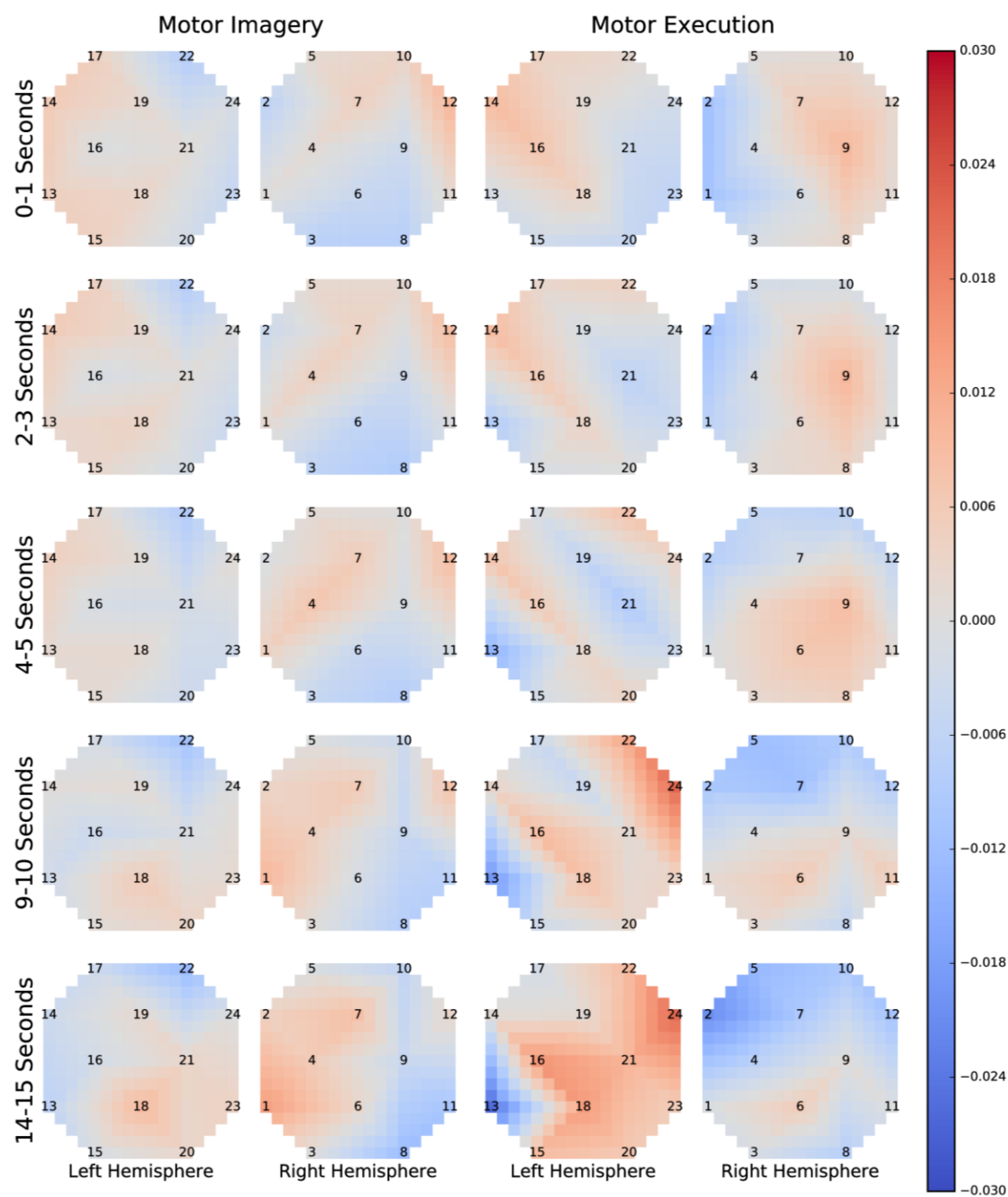


Fig. S4 Average in HbO activation over time for motor imagery and motor execution during the right foot task