

False positive rate calculations

	Experiment 1	Experiment 2	Experiment 3	Experiment 4	Experiment 5	Experiment 6	Experiment 7	Experiment 8
Case 1	0.048	0.04	0.052	0.042	0.04	0.049	0.047	0.058
Case 2	0.057	0.047	0.06	0.045	0.047	0.045	0.057	0.039

Probabilities of estimating false positive rates this large, when the true false positive rate is 0.05

	Experiment 1	Experiment 2	Experiment 3	Experiment 4	Experiment 5	Experiment 6	Experiment 7	Experiment 8
Case 1	0.578	0.919	0.351	0.863	0.919	0.520	0.634	0.111
Case 2	0.139	0.634	0.067	0.739	0.634	0.739	0.139	0.940

Case 1: nothing is affected (negative control)

Case 2: left hippocampus is affected

Experiment 1: clip the probabilities at 0.999 and 0.001 (original)

Experiment 2: clip the probabilities at 0.9999 and 0.0001

Experiment 3: run 20 iterations of the EM algorithm (original)

Experiment 4: run 50 iterations of the EM algorithm

Experiment 5: run 100 iterations of the EM algorithm

Experiment 6: initial probabilities are 0.5 (original)

Experiment 7: initial probabilities are 0.25

Experiment 8: initial probabilities are 0.75