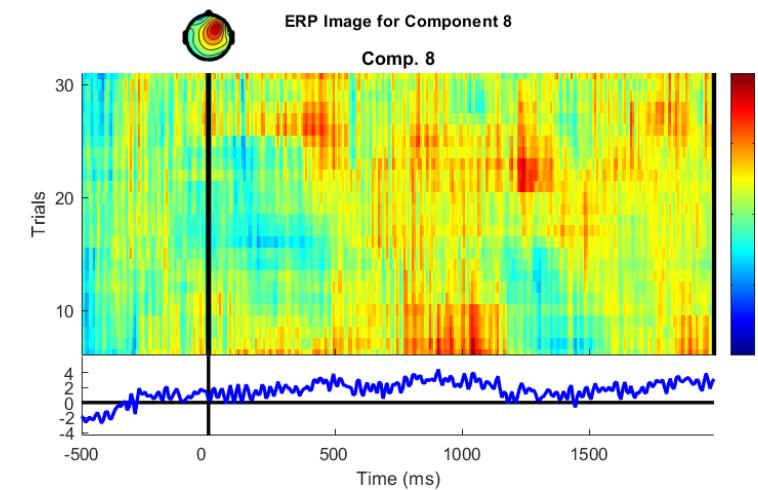
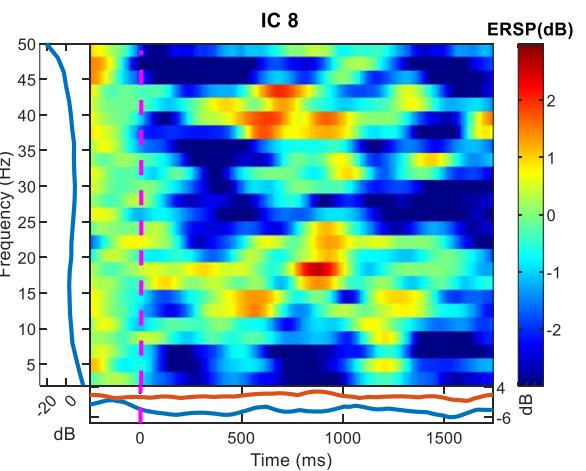


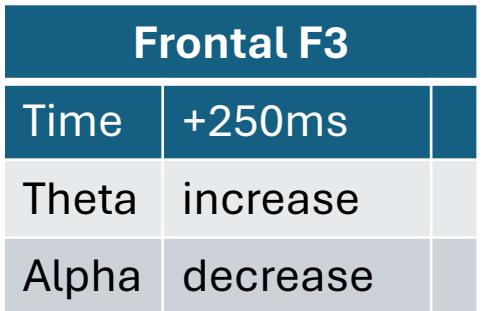
110

110_1_1

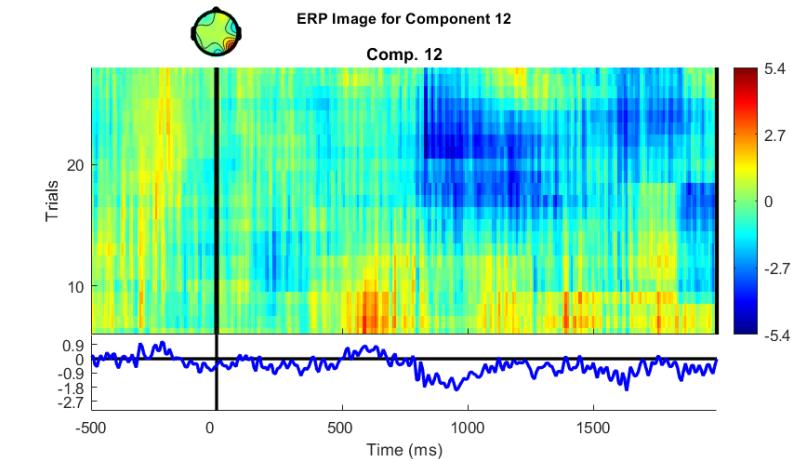
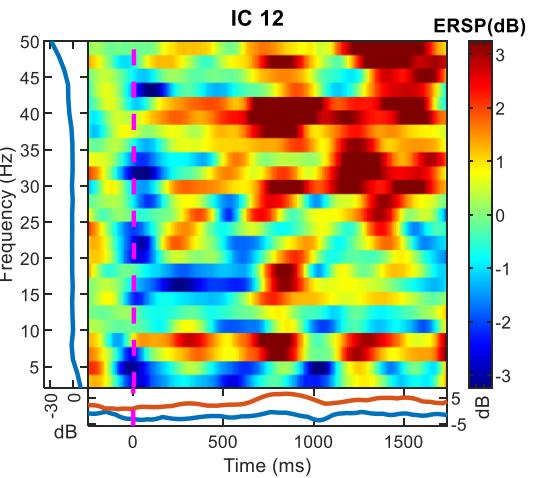
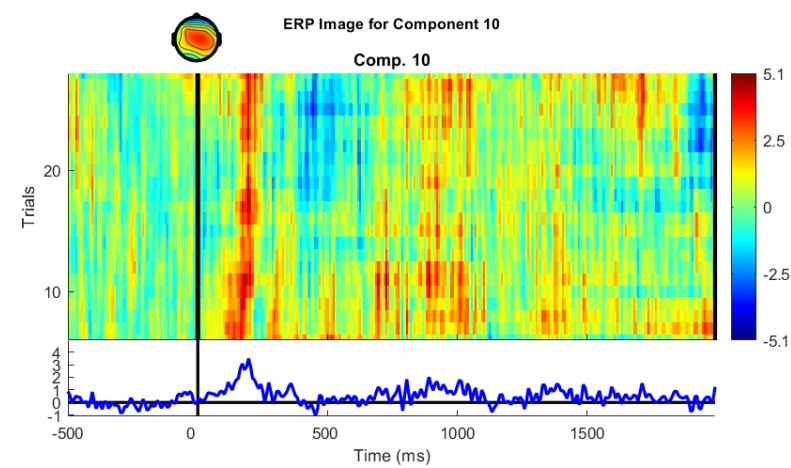
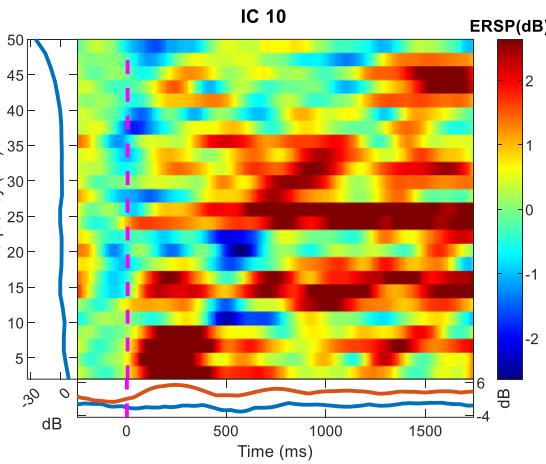
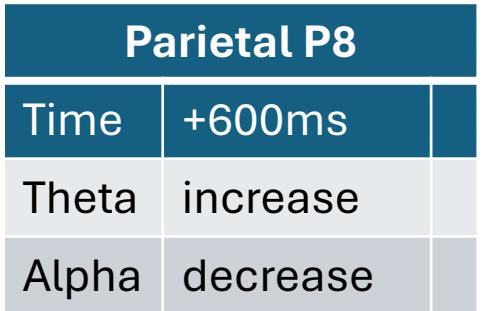
Frontal F4		
Time	+800ms	
Theta	decrease	
Alpha	increase	



110_1_3

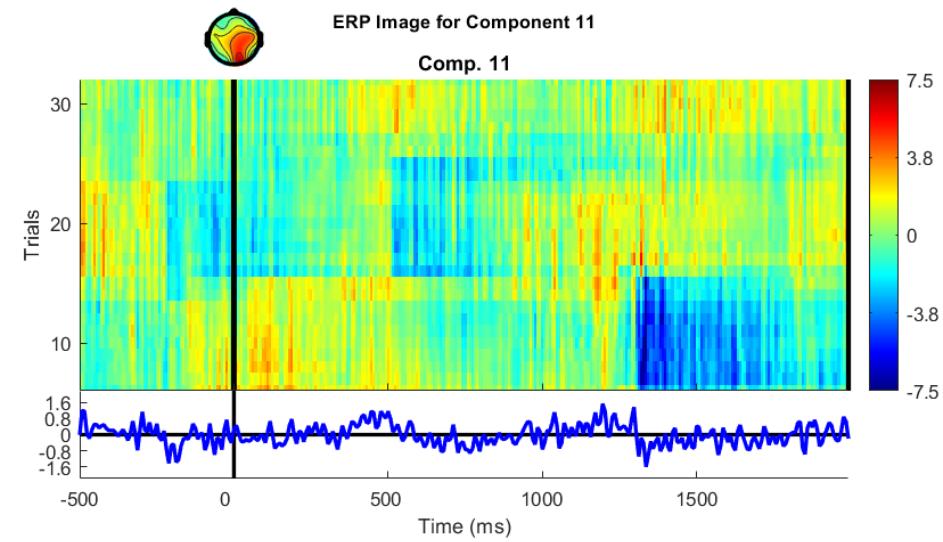
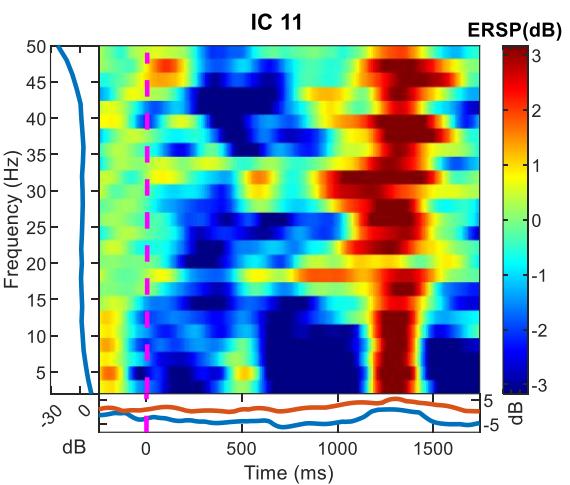


!!



110_2_1

Occipital O2		
Time	+500ms	
Theta	increase	
Alpha	decrease	

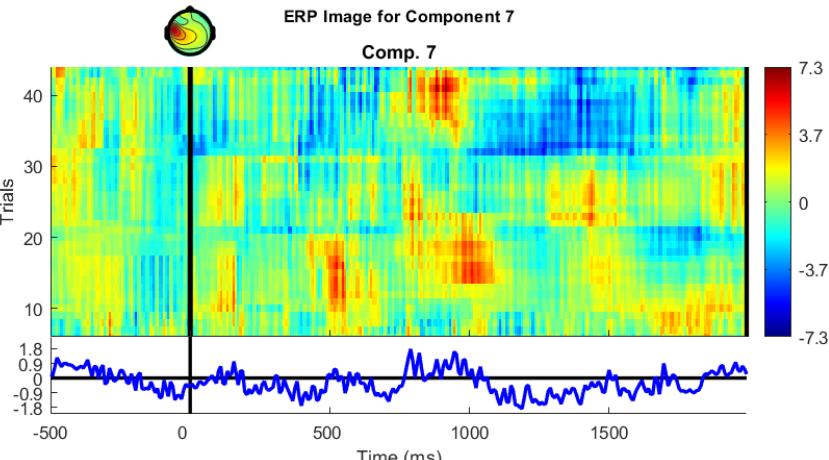
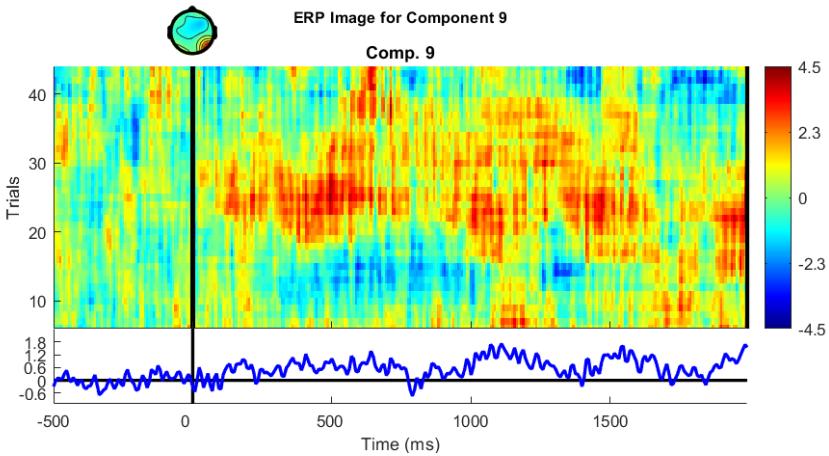
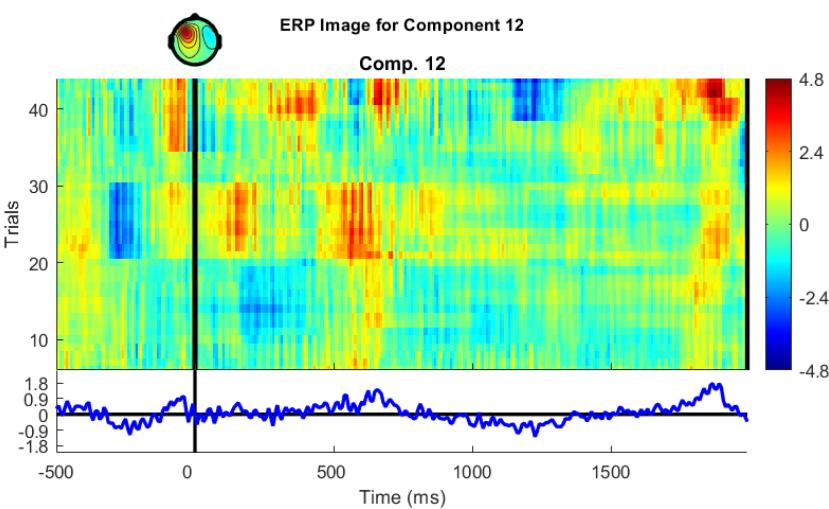
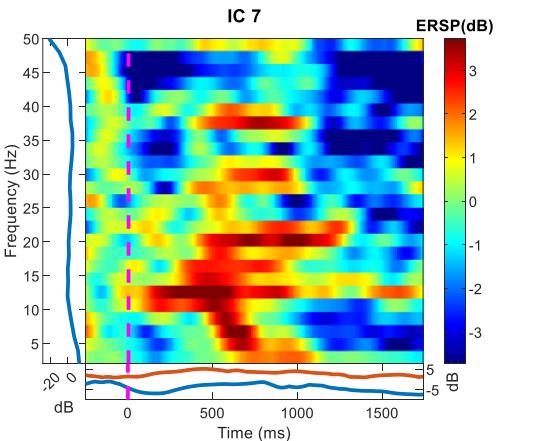
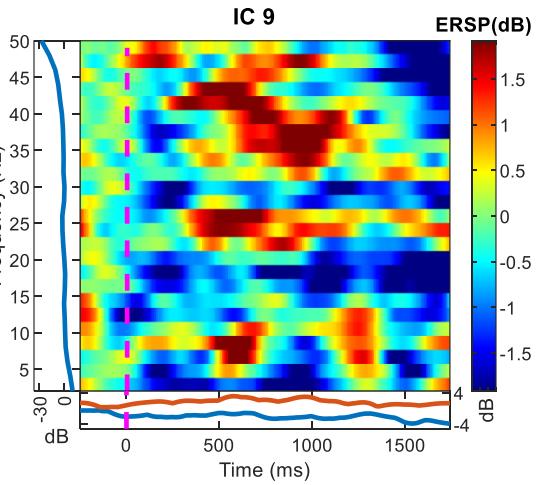
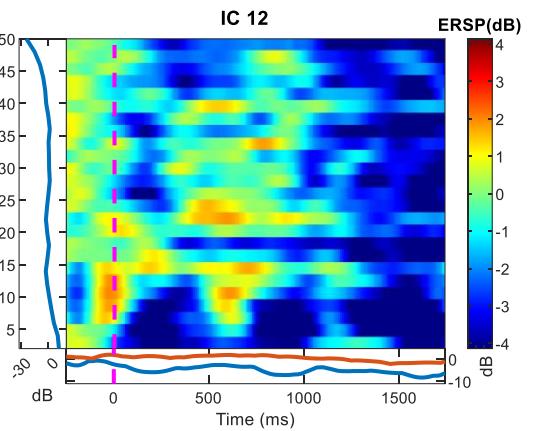


110_2_2

Frontal F3	
Time	+200ms
Theta	increase
Alpha	decrease

Parietal P8	
Time	+850ms
Theta	increase
Alpha	decrease

Frontal FC5	
Time	+800ms
Theta	increase
Alpha	decrease

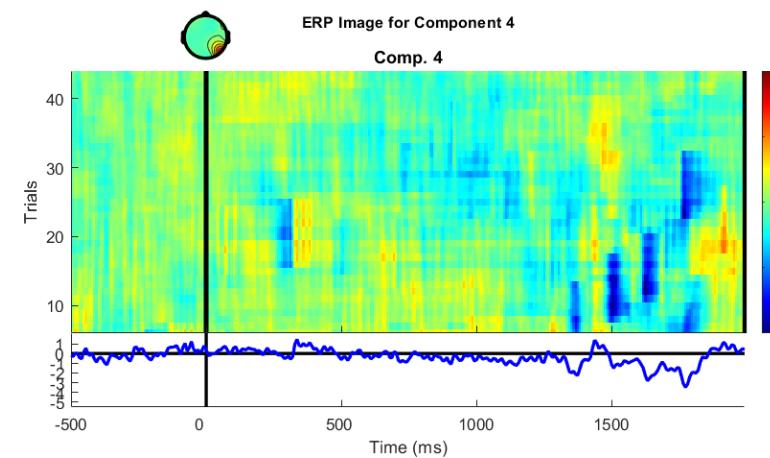
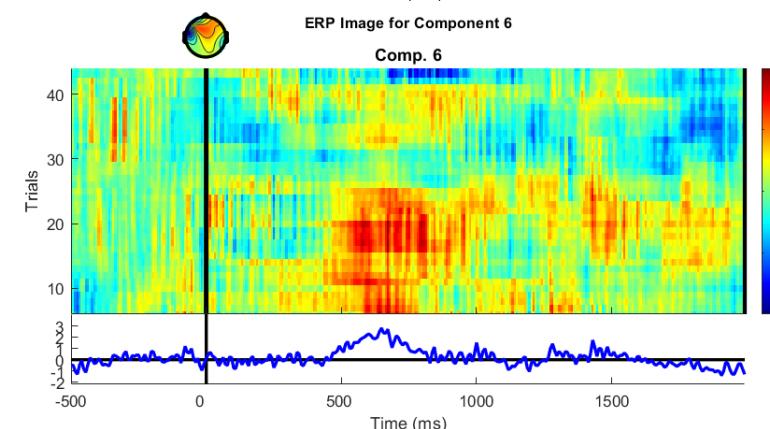
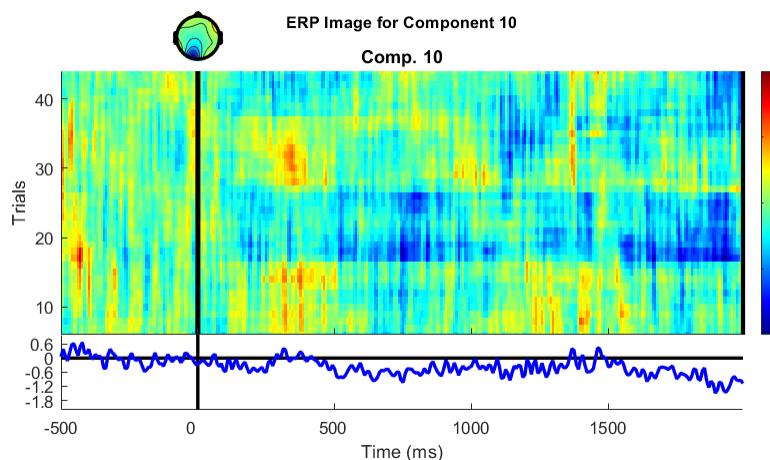
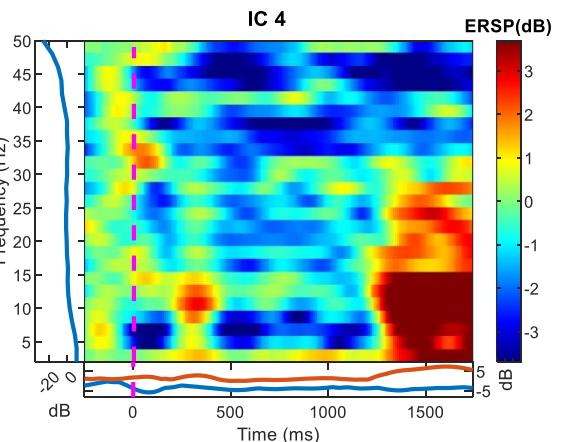
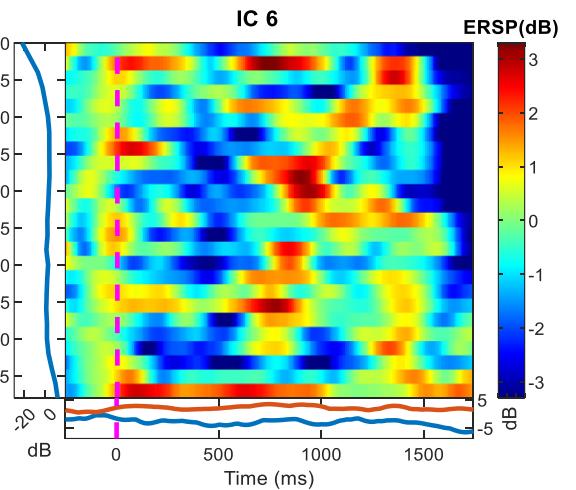
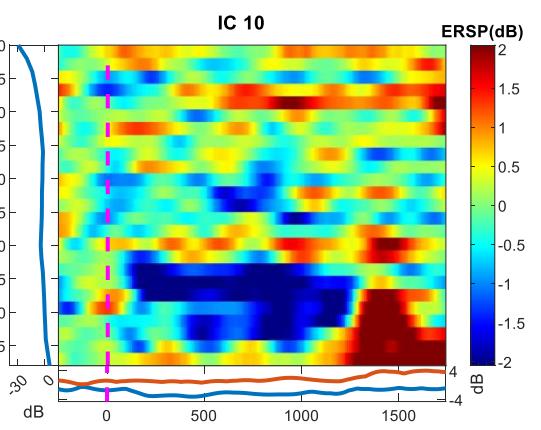


110_2_3

Occipital O1		
Time	+450ms	
Theta	increase	
Alpha	decrease	

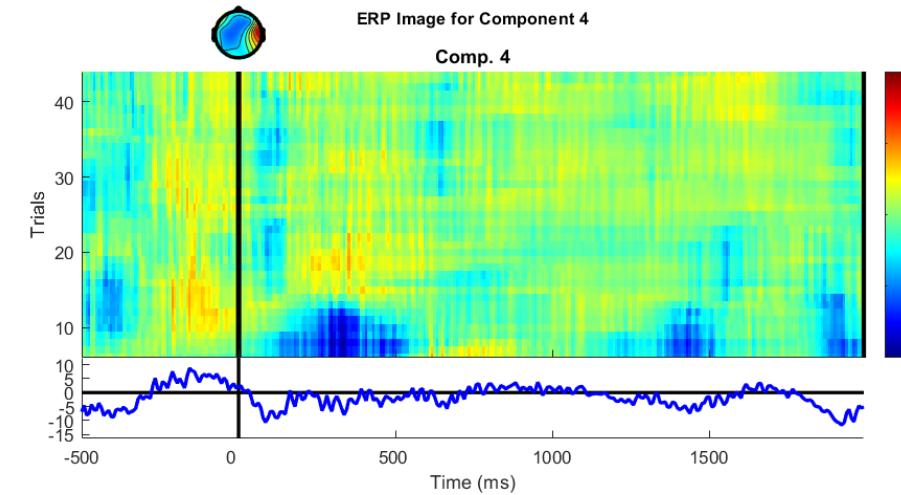
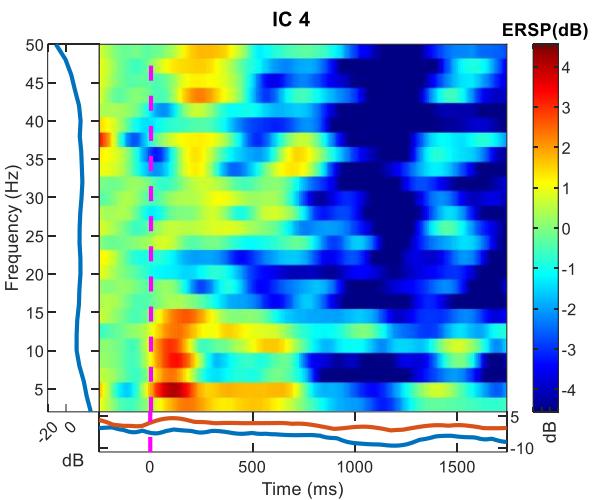
Frontal F3		
Time	+800ms	
Theta	increase	
Alpha	decrease	

Parietal P8		
Time	+500ms	
Theta	increase	
Alpha	decrease	

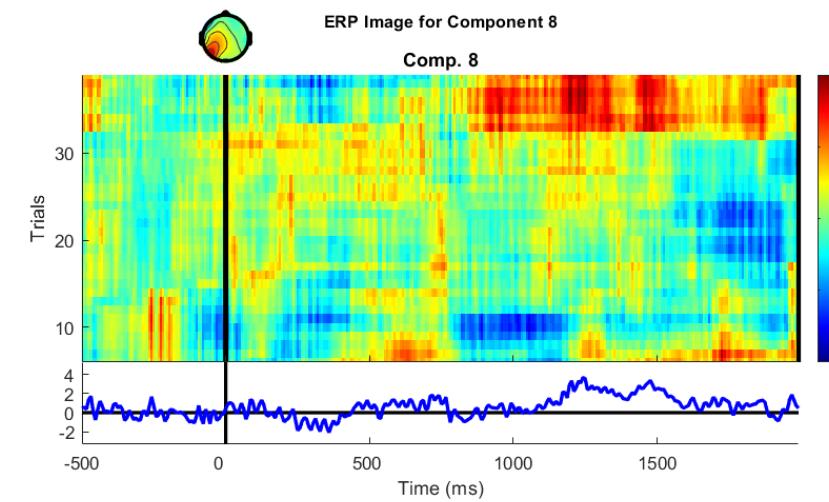
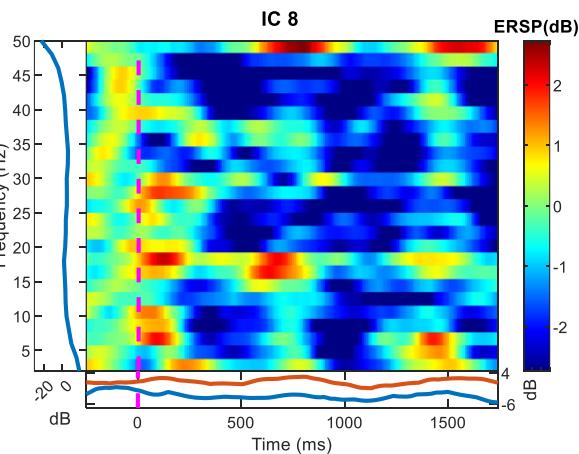
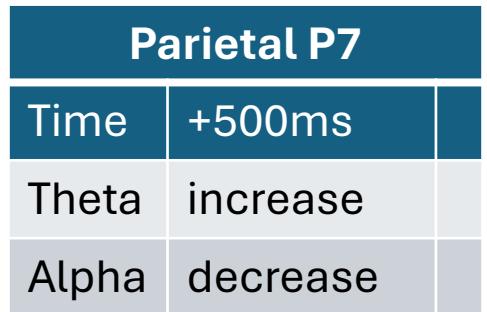
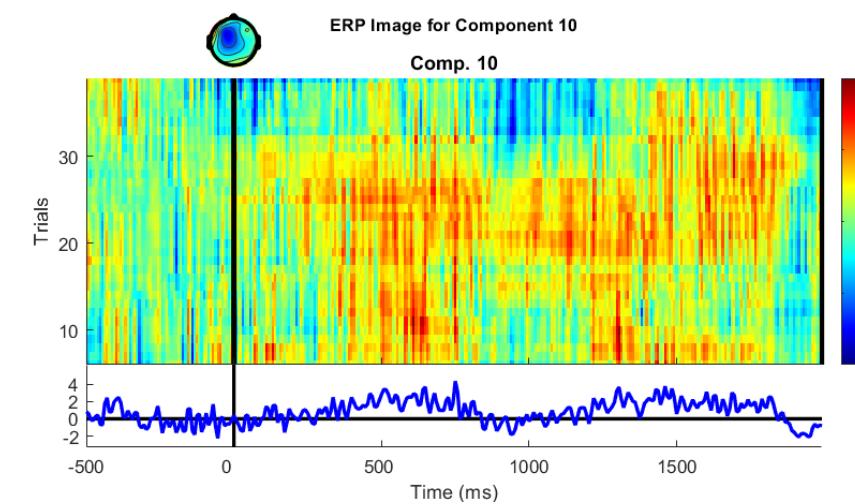
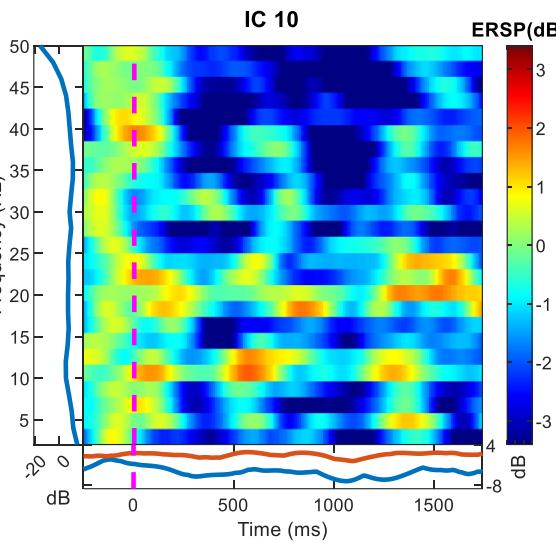
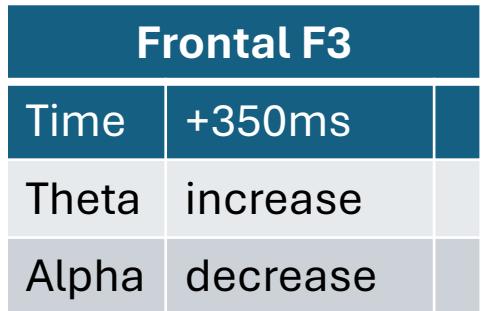


110_3_2

Parietal P8		
Time	+800ms	
Theta	increase	
Alpha	decrease	

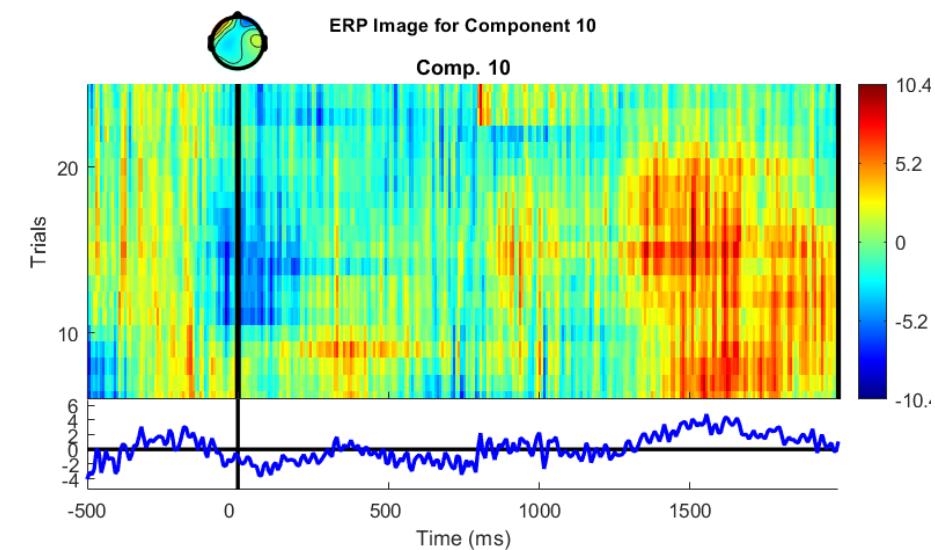
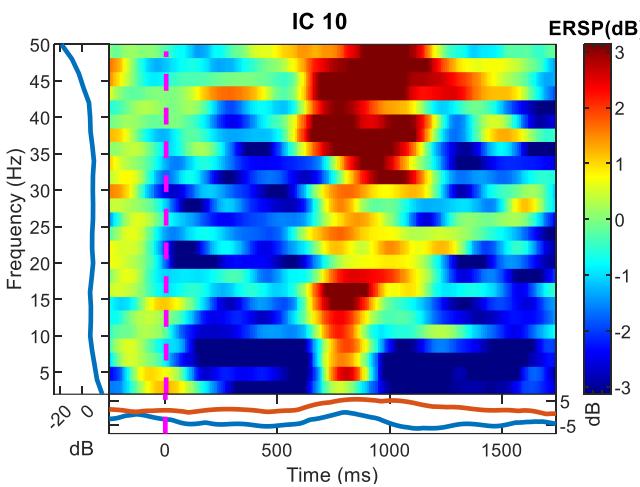


110_3_3



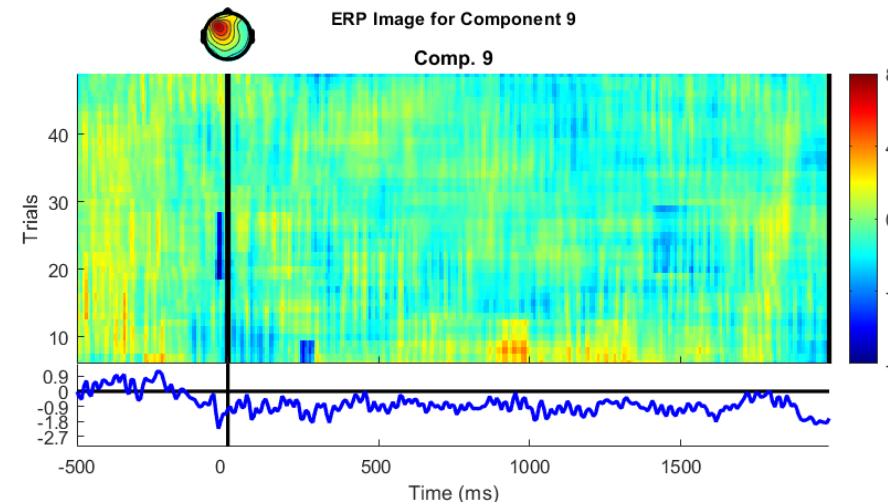
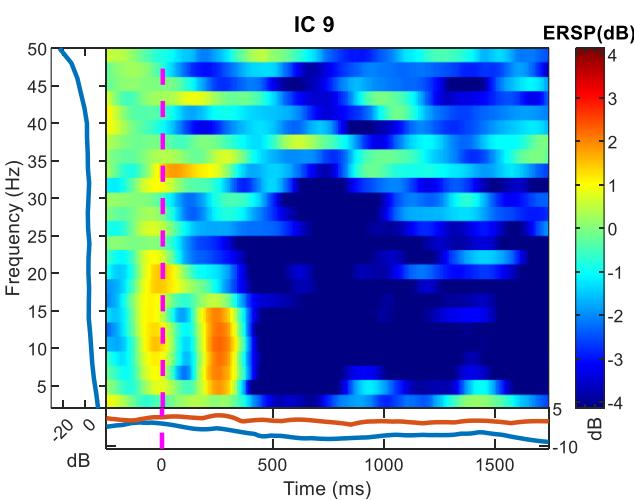
110_4_1

Frontal F7		
Time	+400ms	
Theta	decrease	
Alpha	decrease	

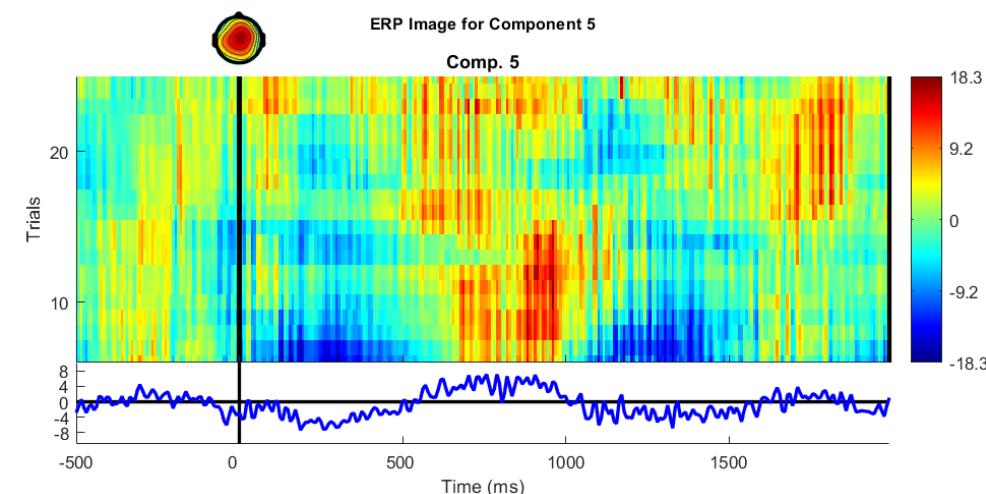
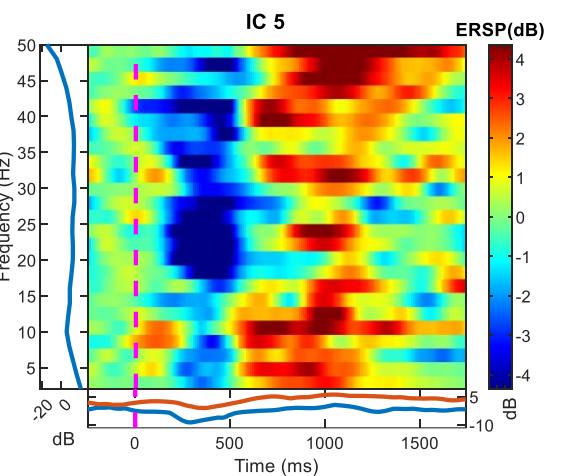
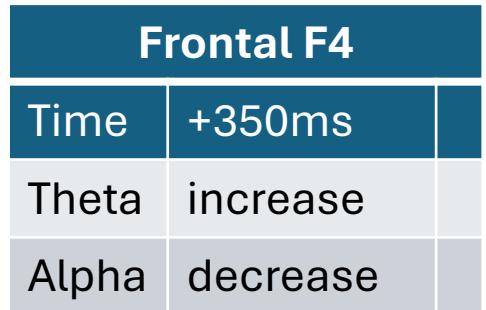
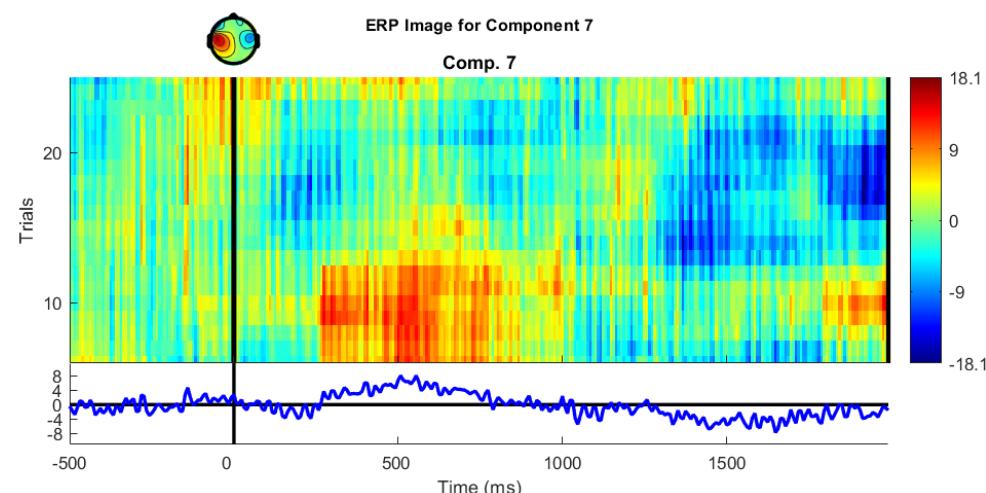
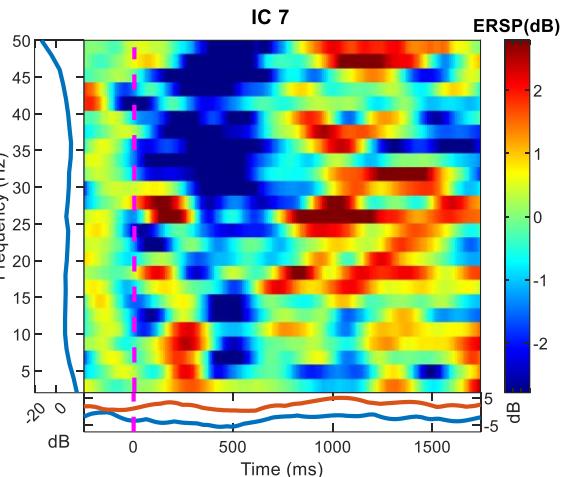
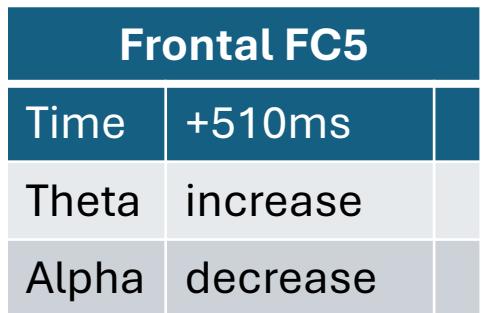


110_4_3

Frontal FC5		
Time	+800ms	
Theta	increase	
Alpha	decrease	

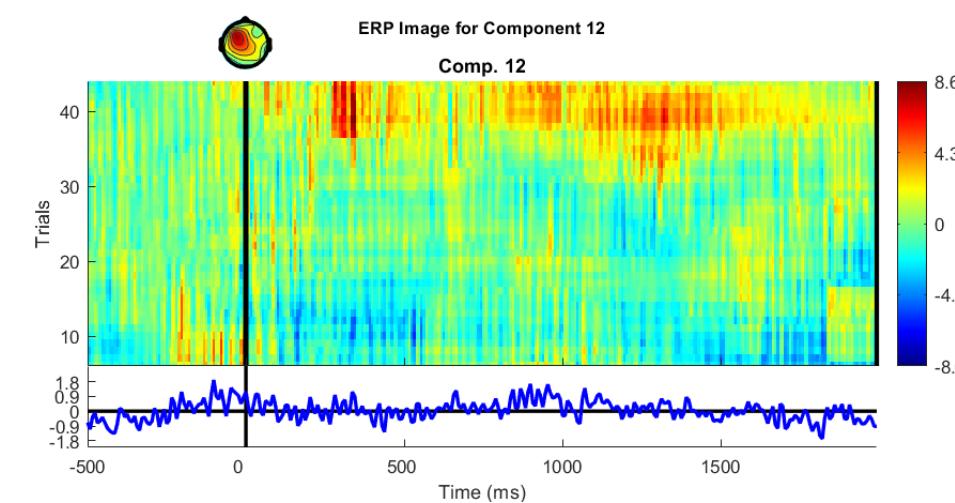
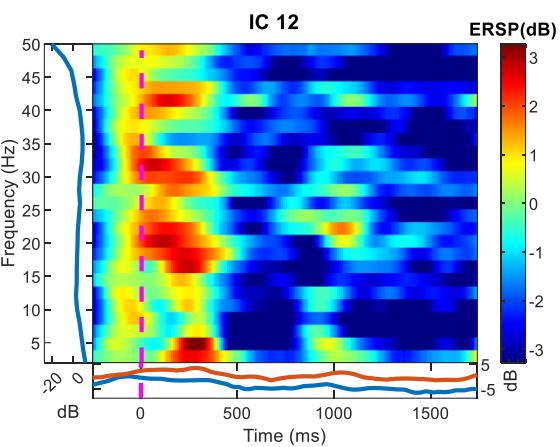


110_5_2

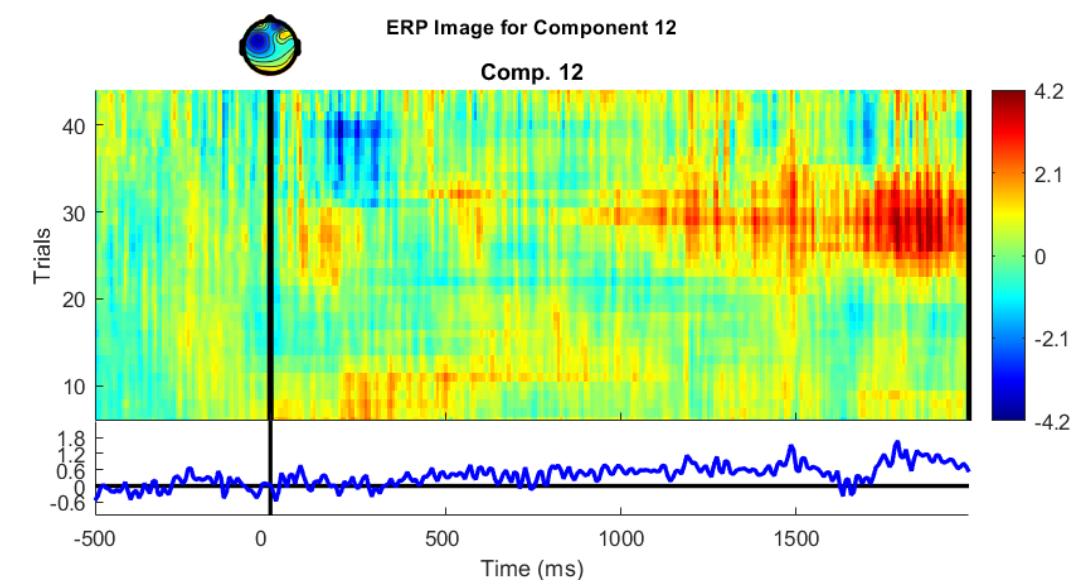
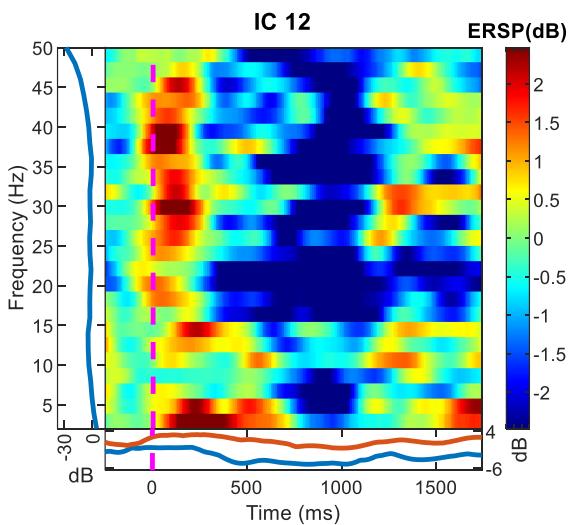
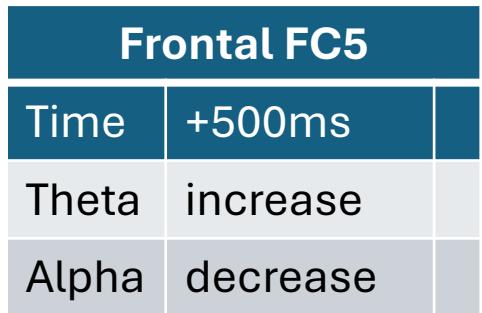
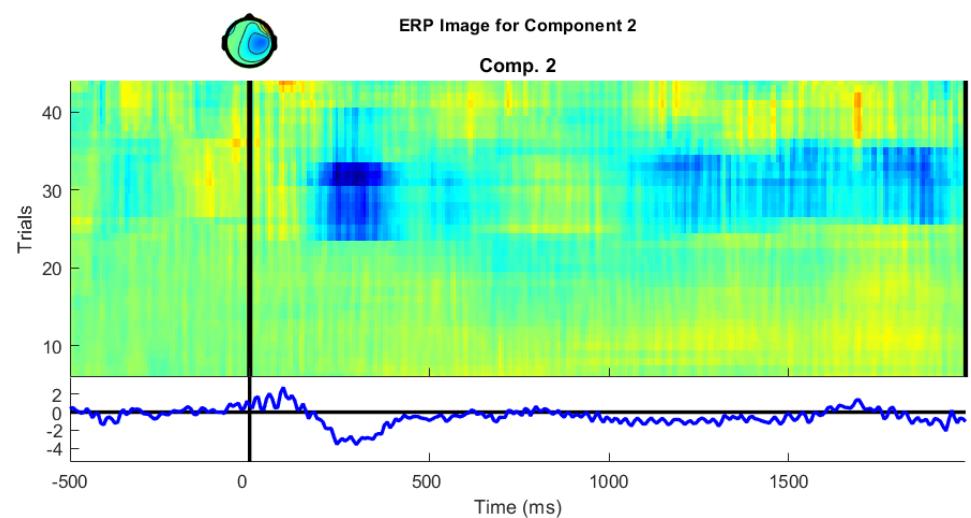
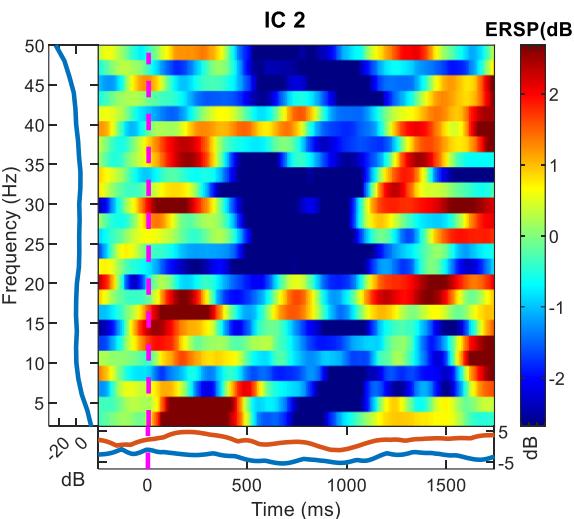
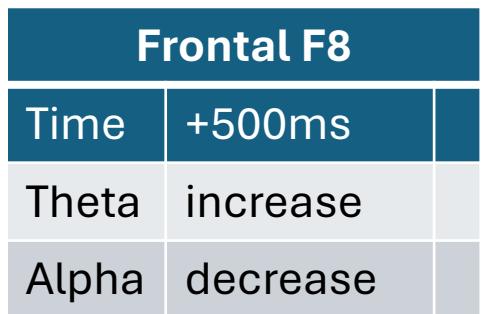


110_5_3

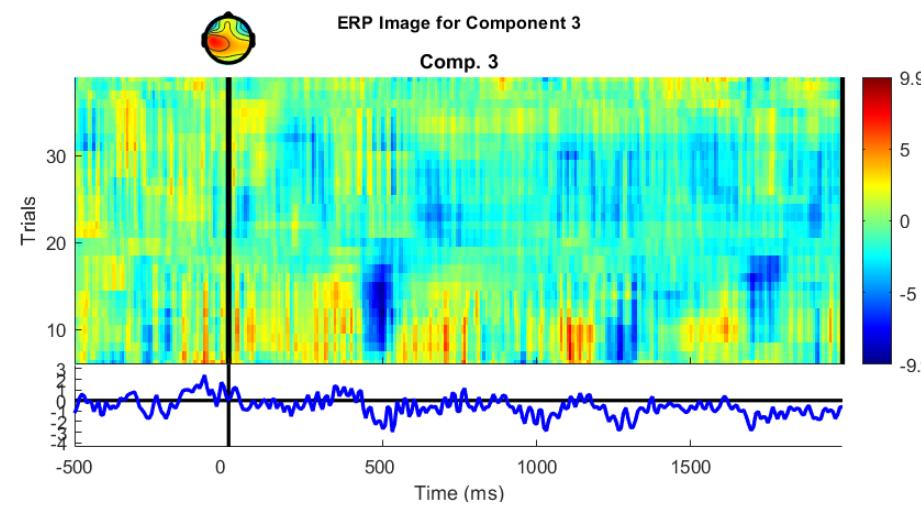
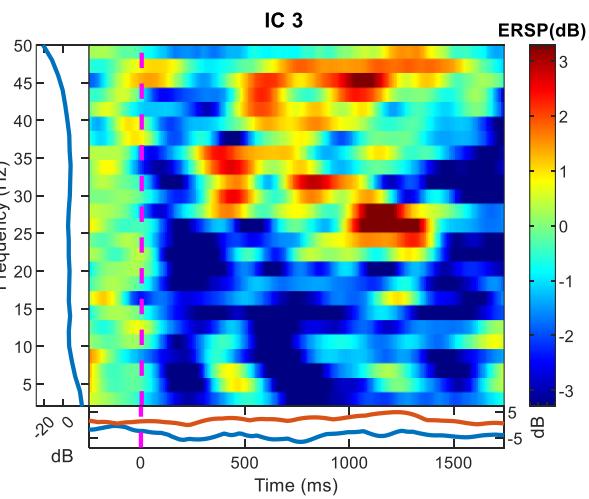
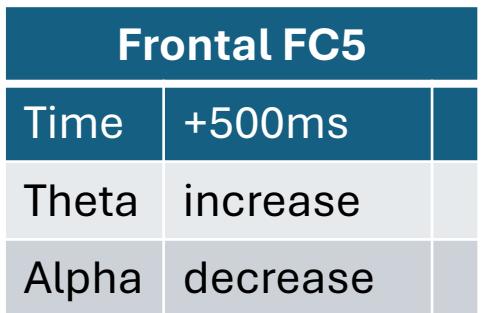
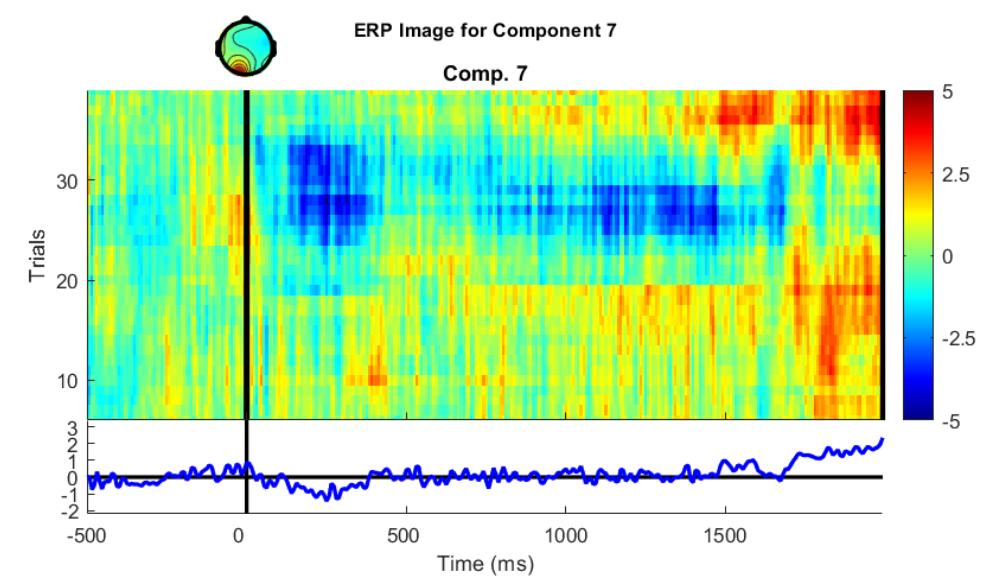
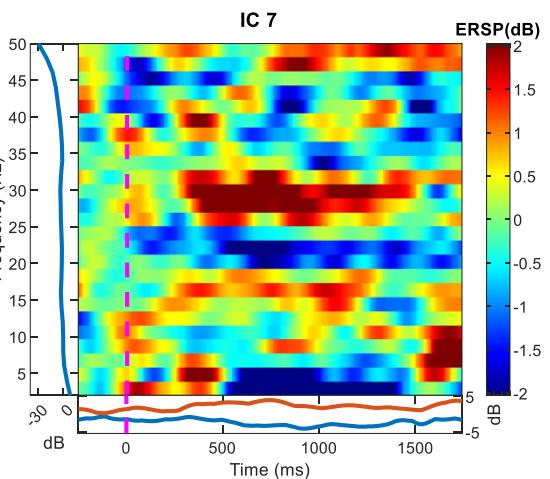
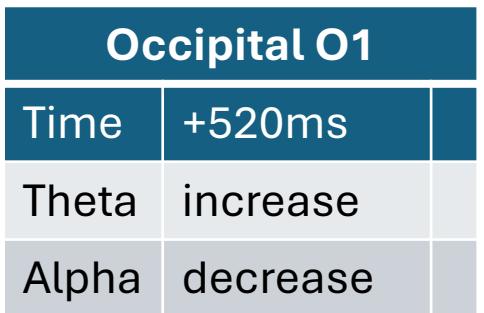
Frontal FC5		
Time	+300ms	
Theta	increase	
Alpha	decrease	



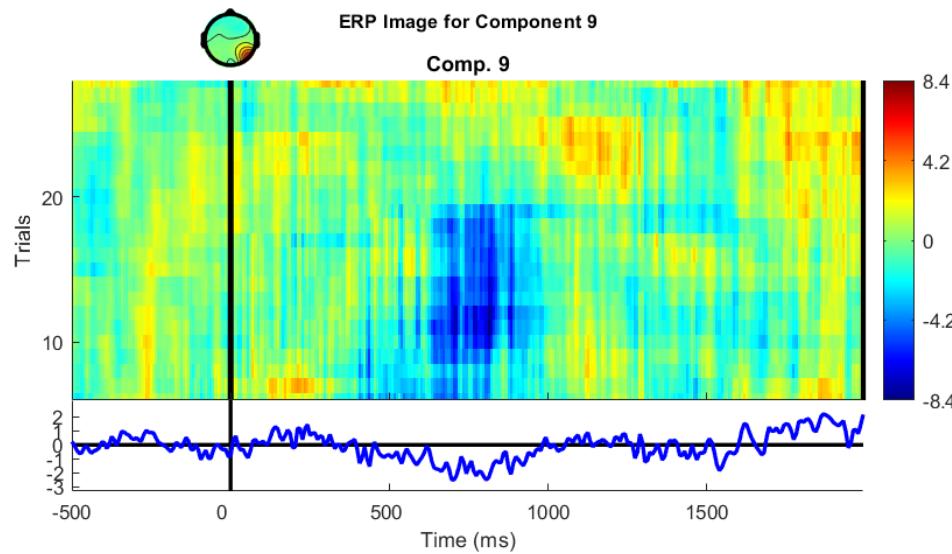
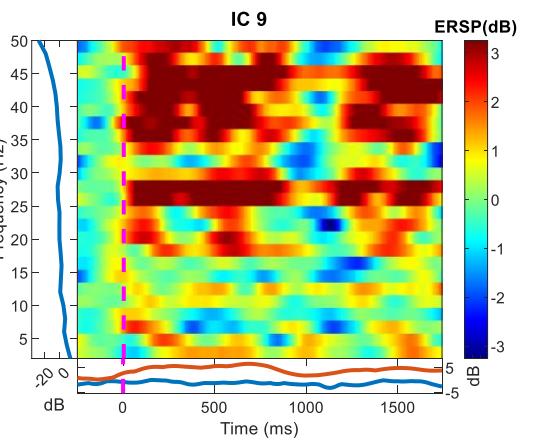
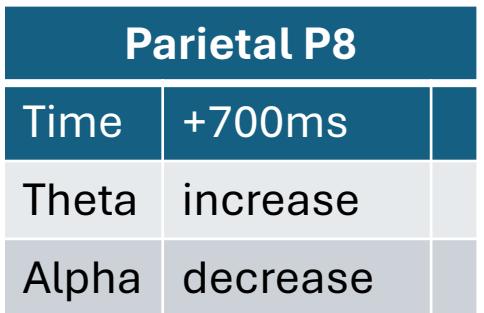
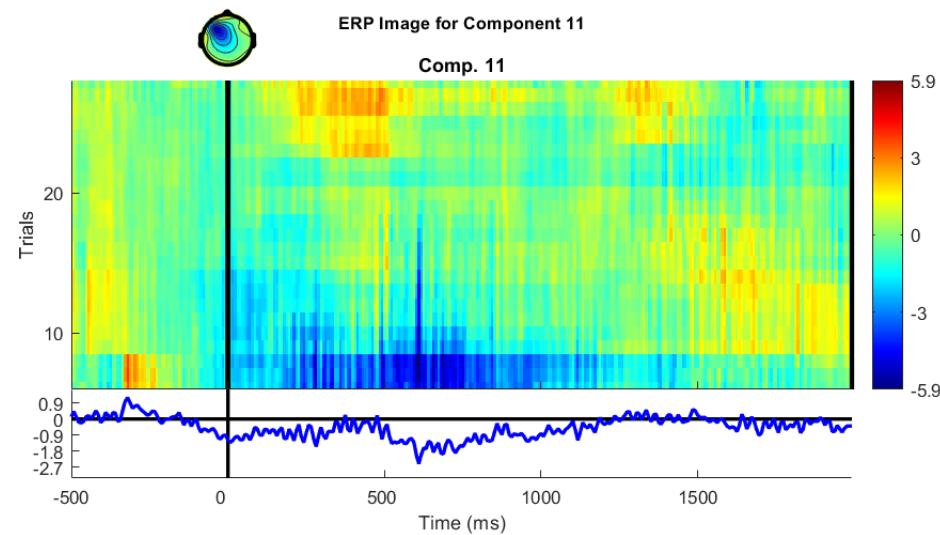
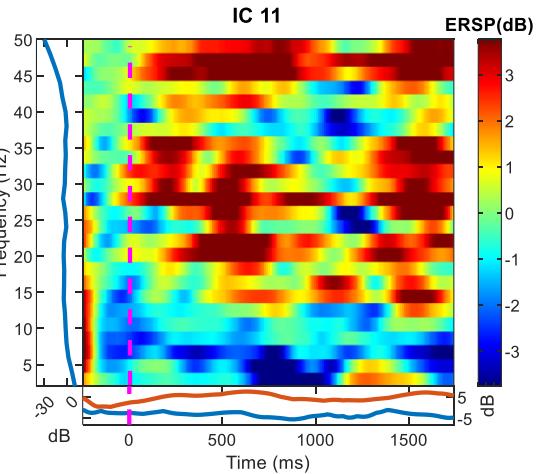
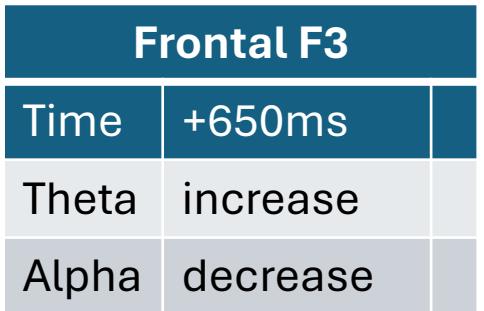
110_6_2



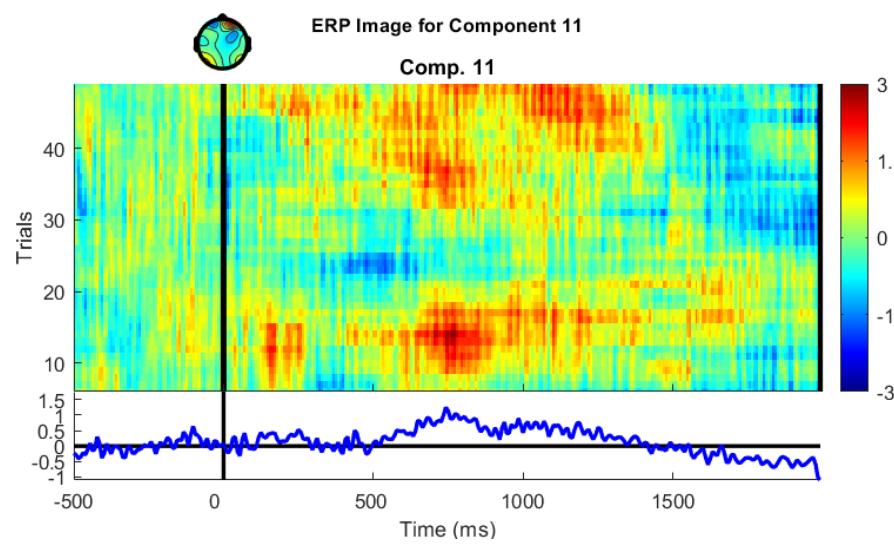
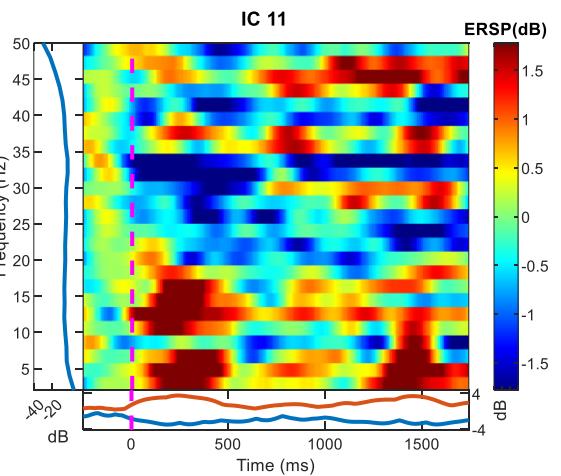
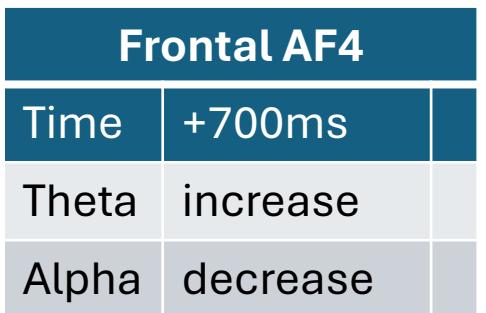
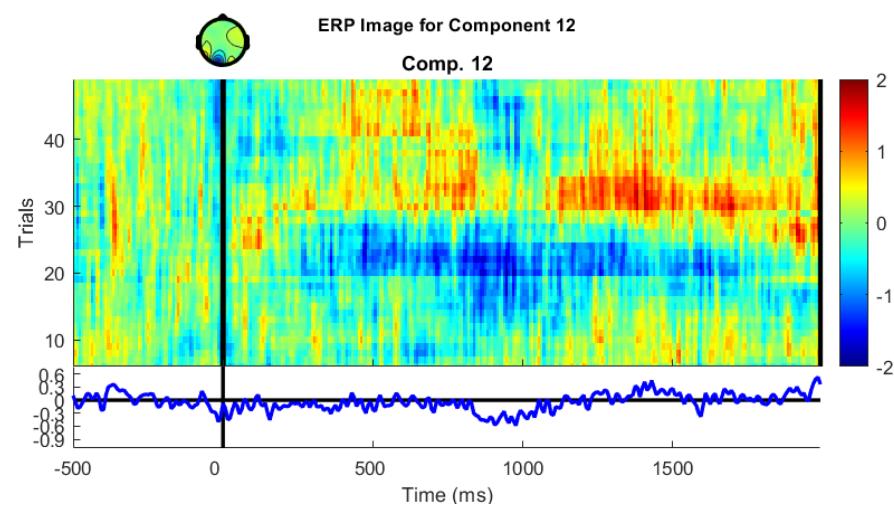
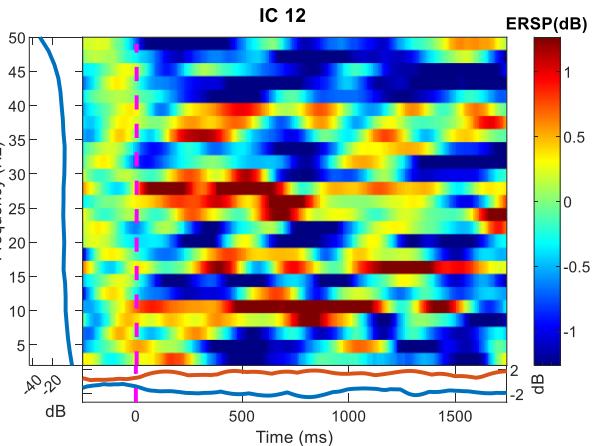
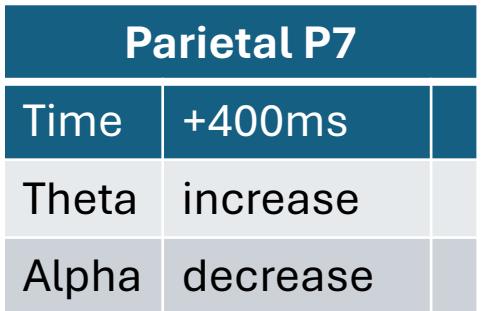
110_6_3



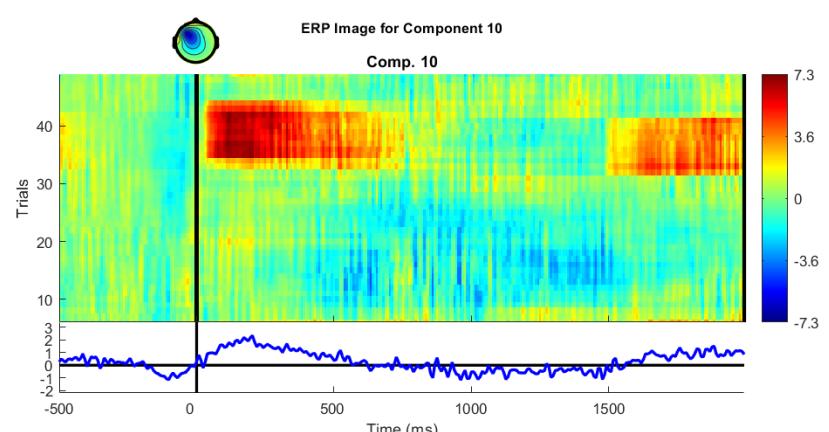
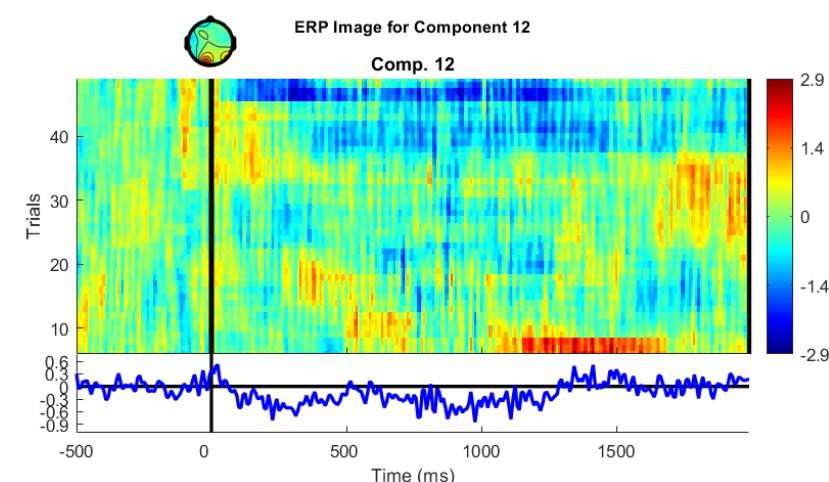
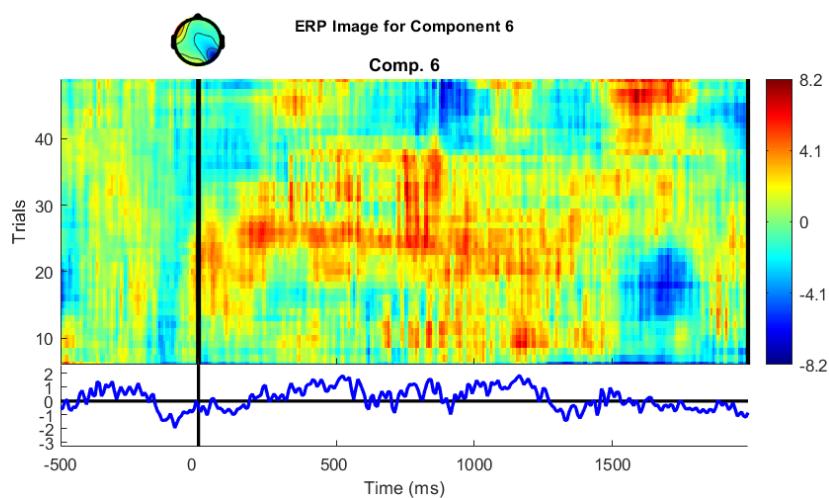
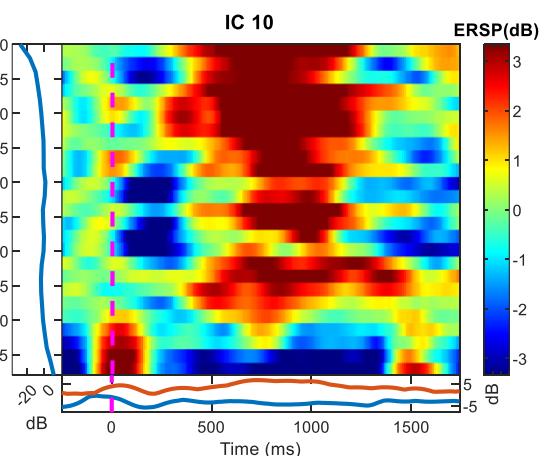
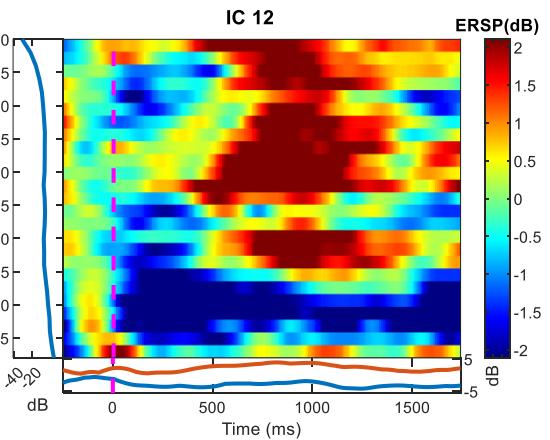
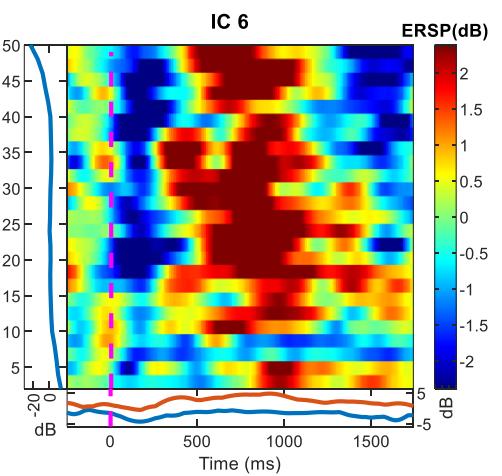
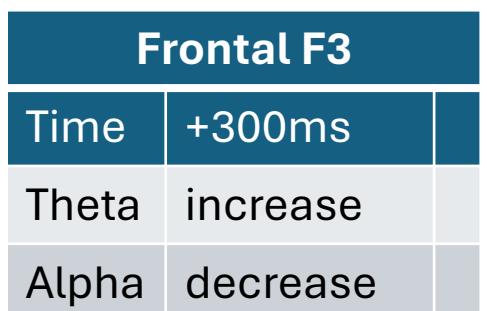
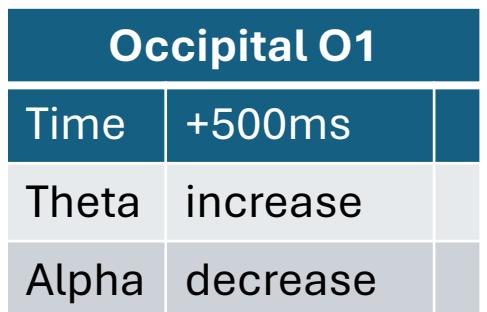
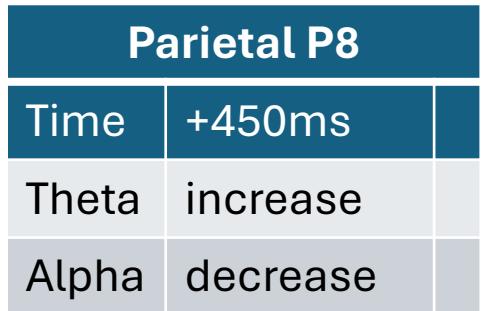
110_7_1



110_7_2

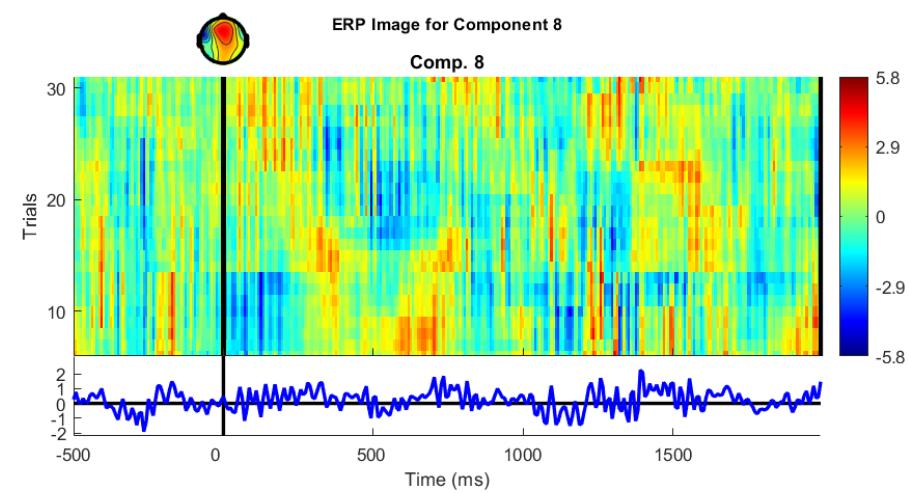
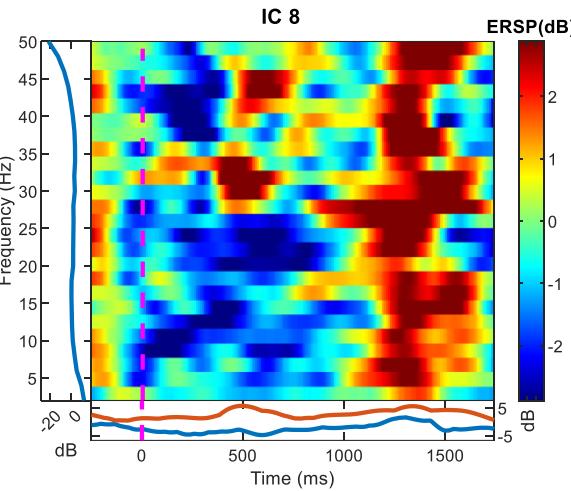


110_7_3



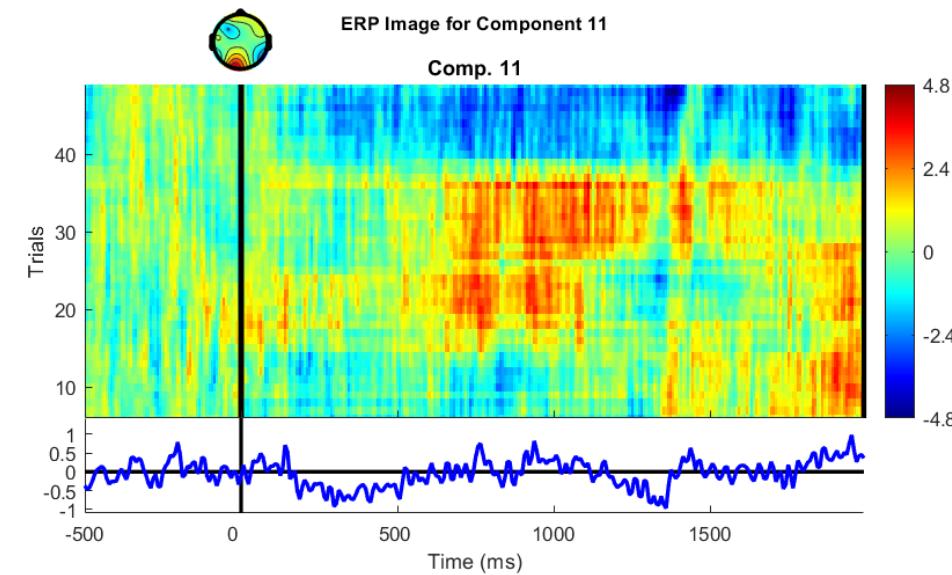
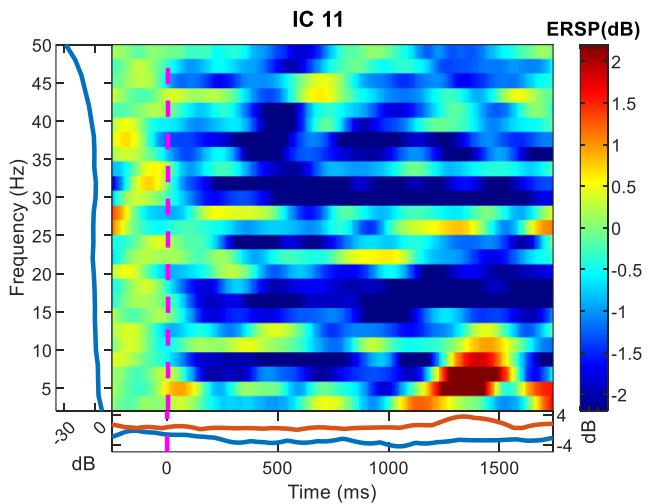
110_8_1

Frontal F3		
Time	+500ms	
Theta	increase	
Alpha	decrease	



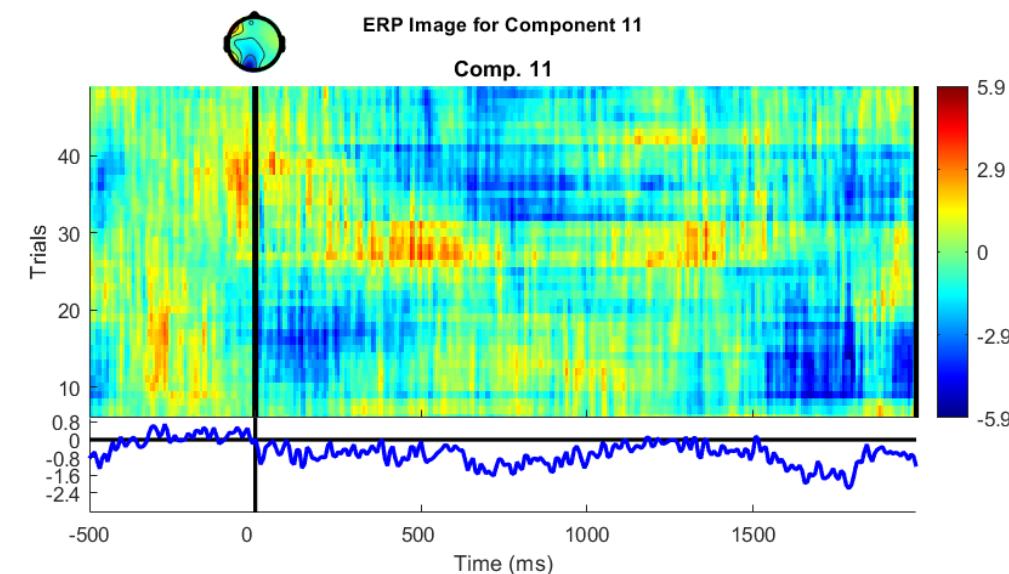
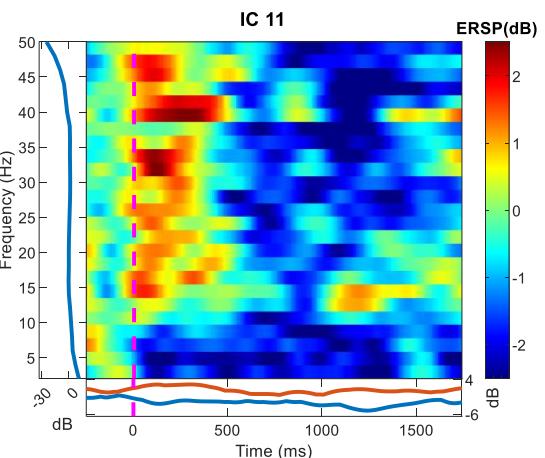
110_8_2

Occipital O1		
Time	+650ms	
Theta	increase	
Alpha	decrease	



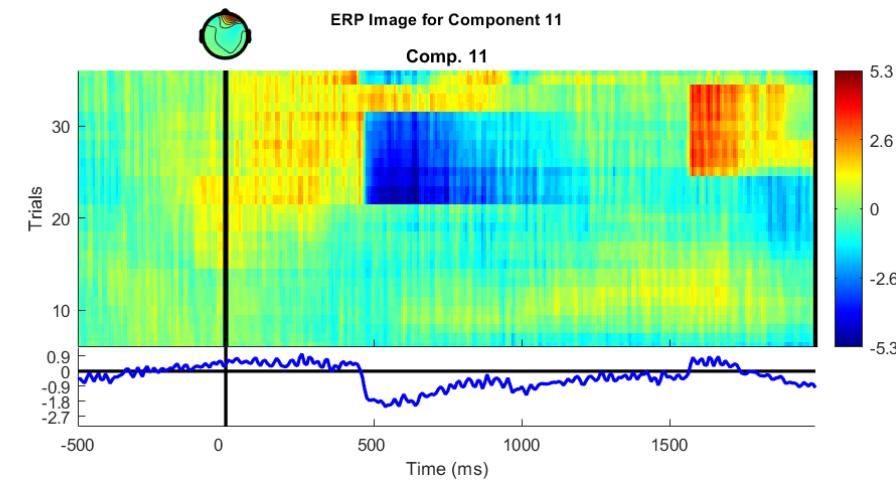
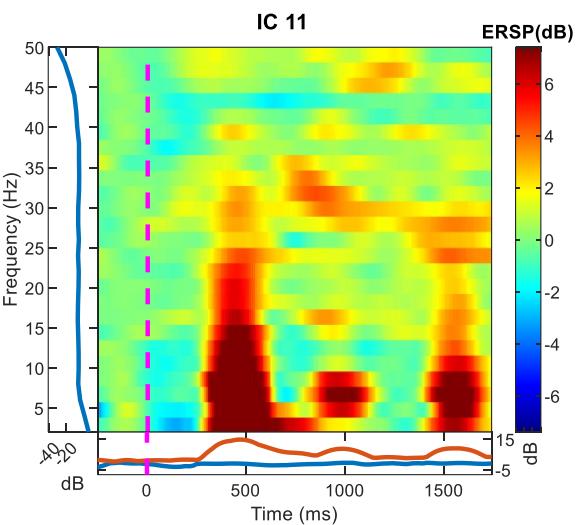
110_8_3

Parietal P7		
Time	+300ms	
Theta	increase	
Alpha	decrease	



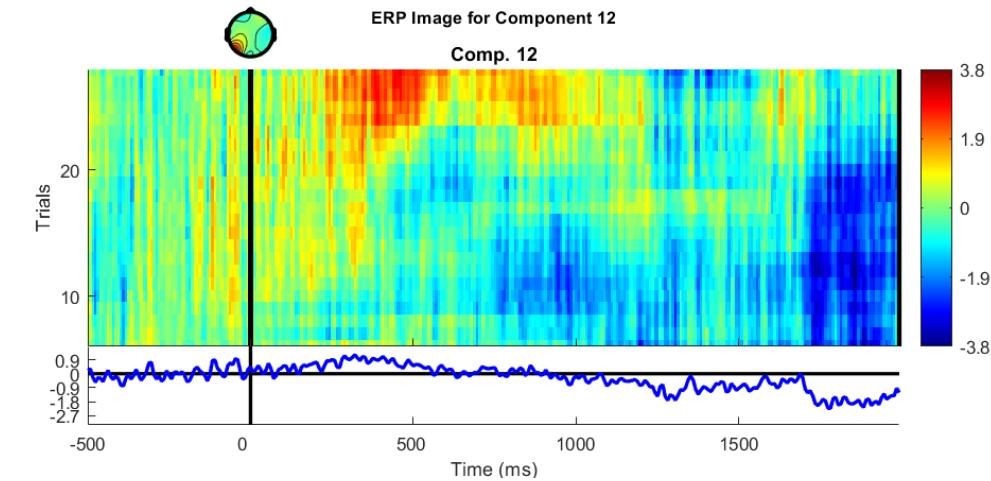
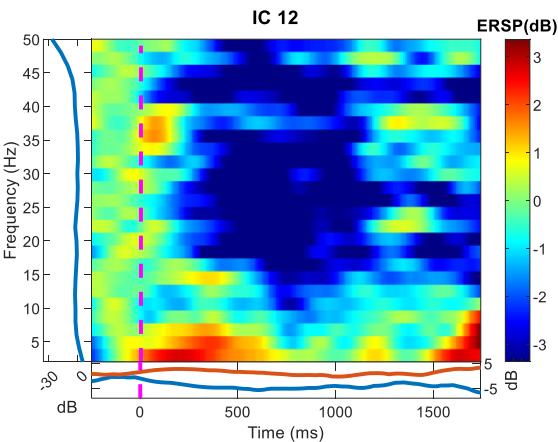
110_9_1

Frontal AF4		
Time	+450ms	
Theta	increase	
Alpha	decrease	



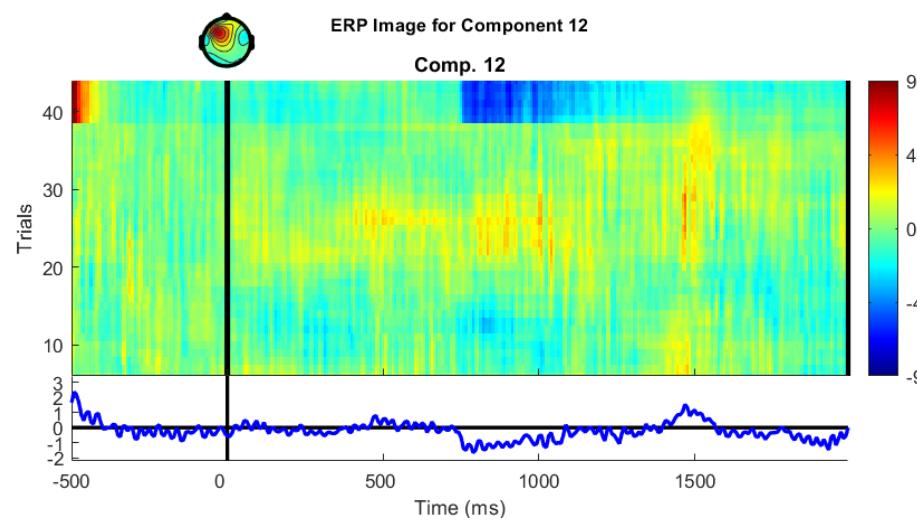
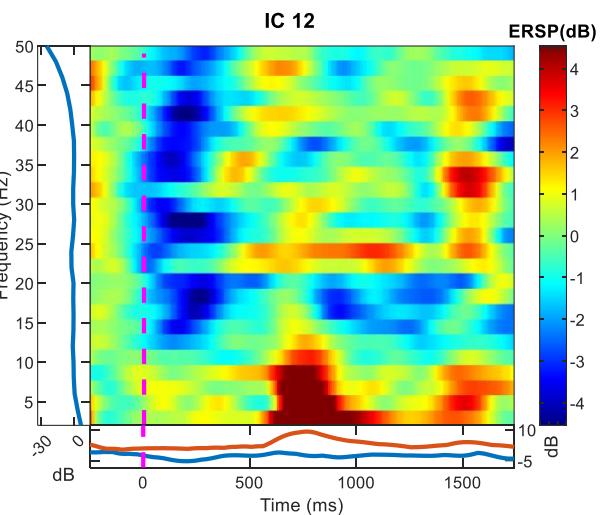
110_9_3

Parietal P7		
Time	+300ms	
Theta	increase	
Alpha	decrease	

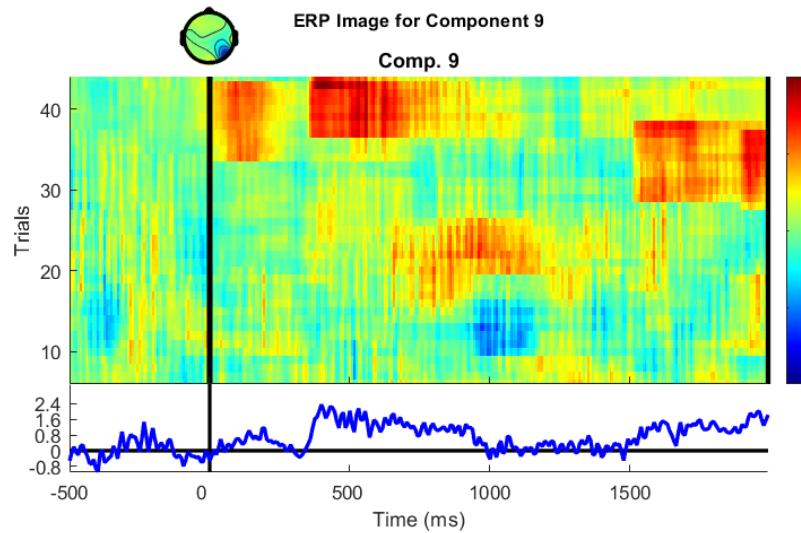
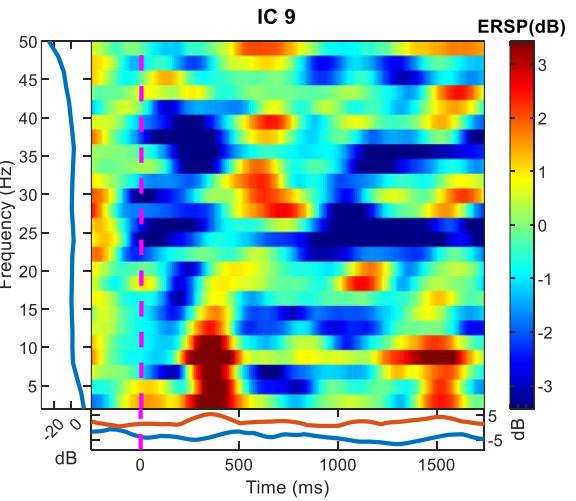


110_10_2

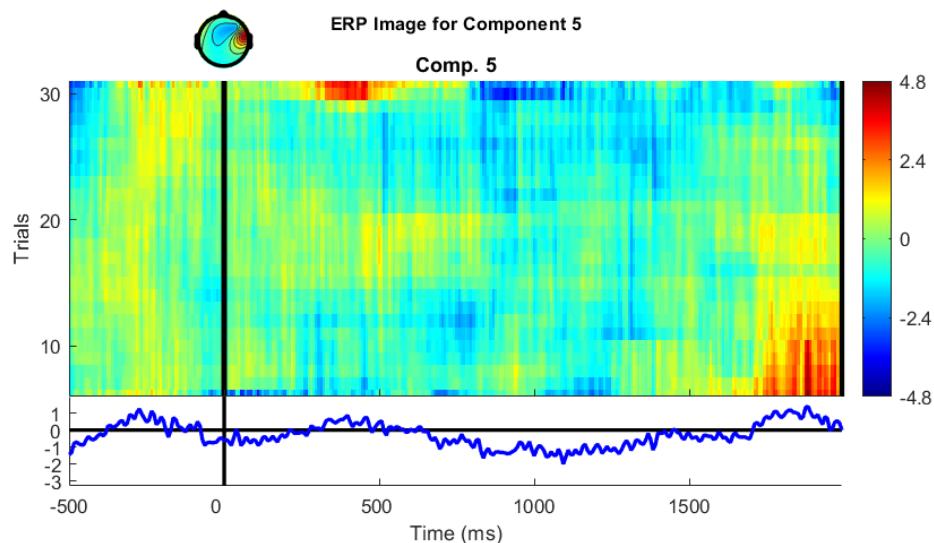
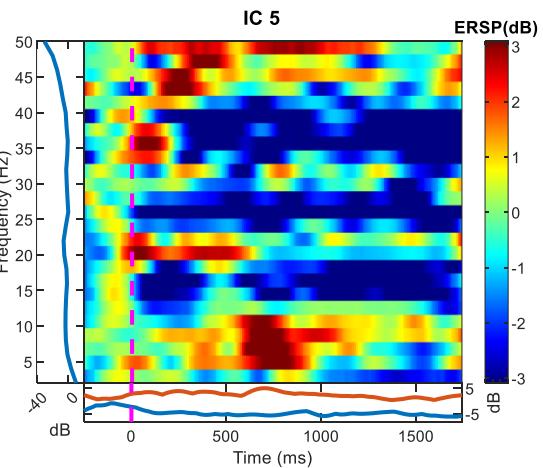
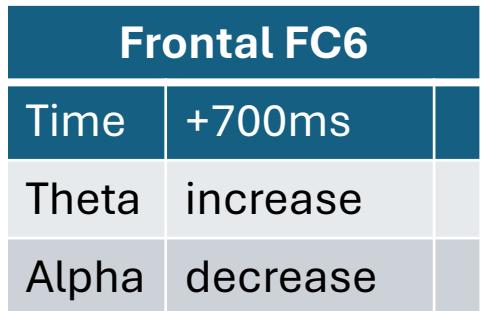
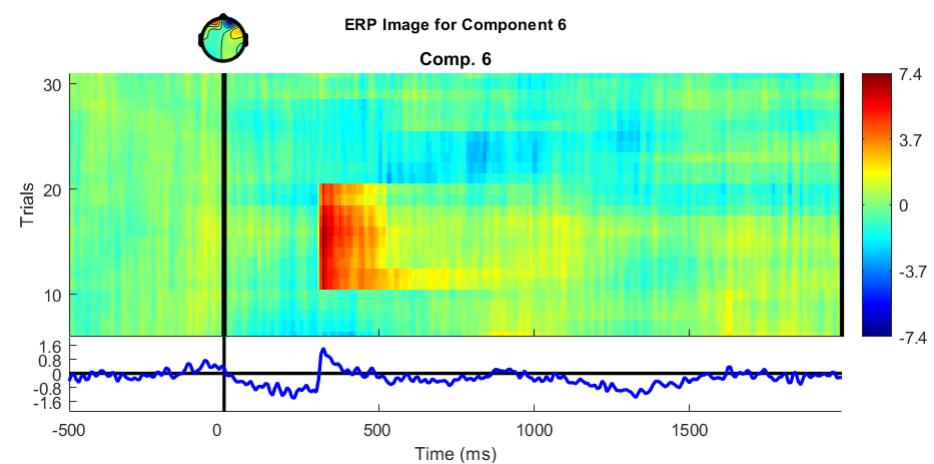
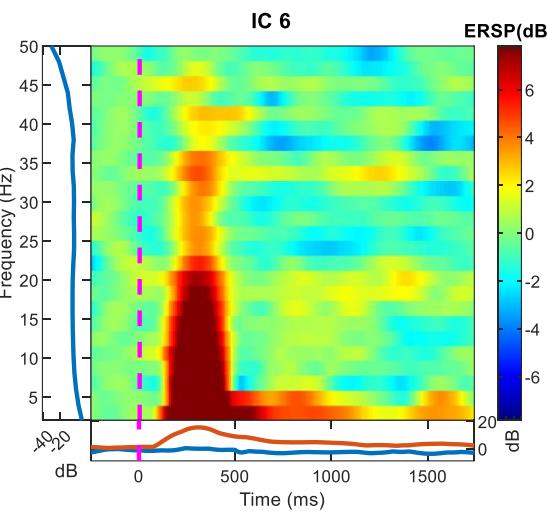
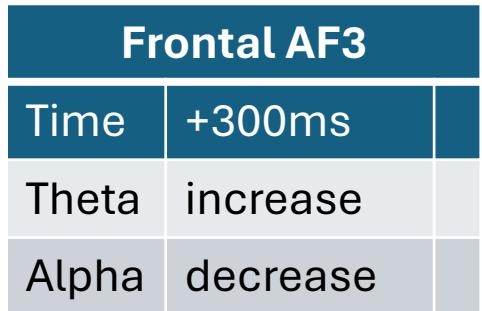
Frontal F3		
Time	+750ms	
Theta	increase	
Alpha	decrease	



Parietal P8		
Time	+300ms	
Theta	increase	
Alpha	decrease	

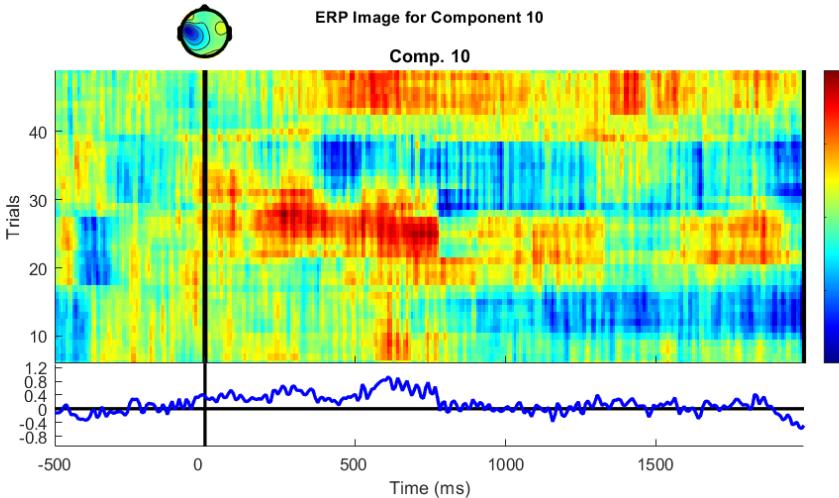
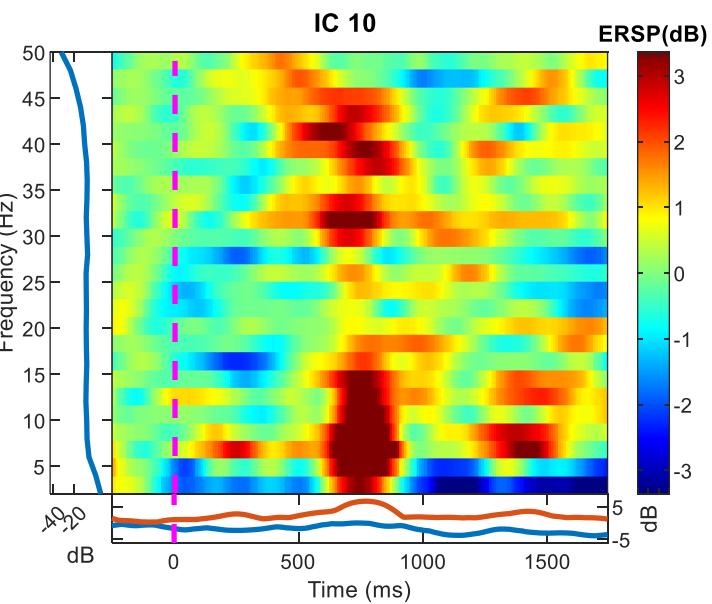
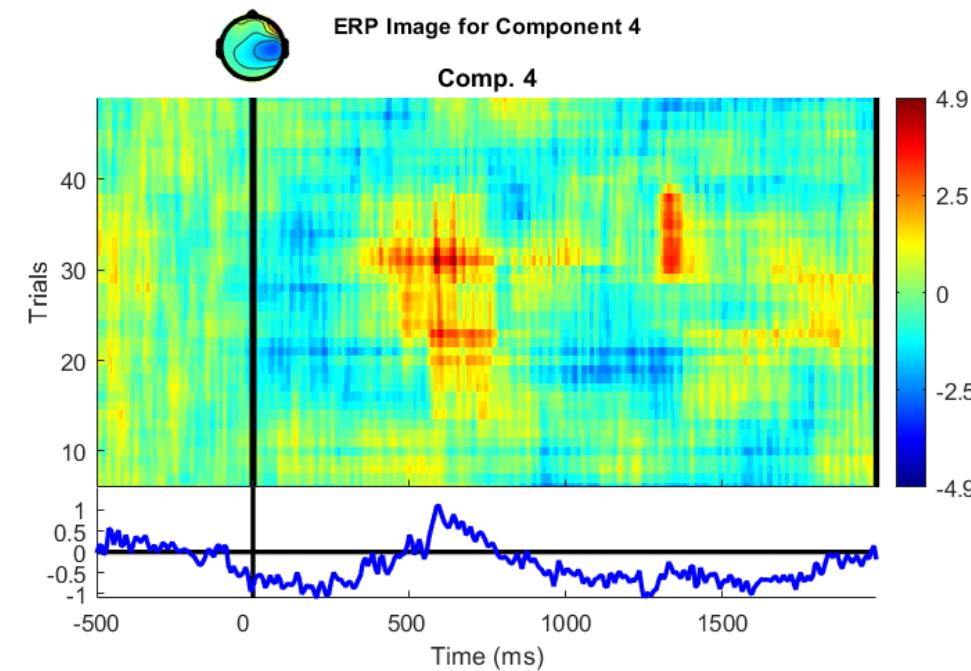
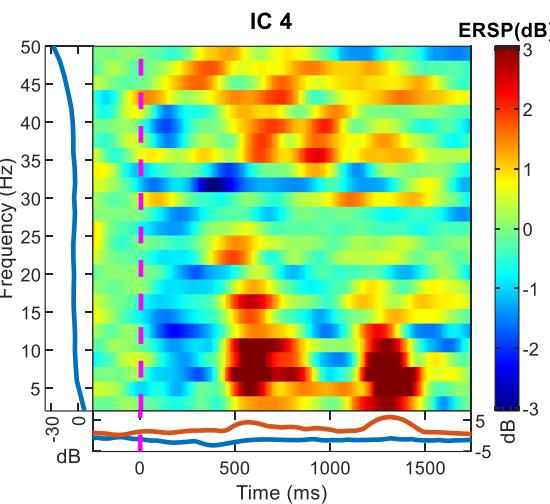


110_11_2



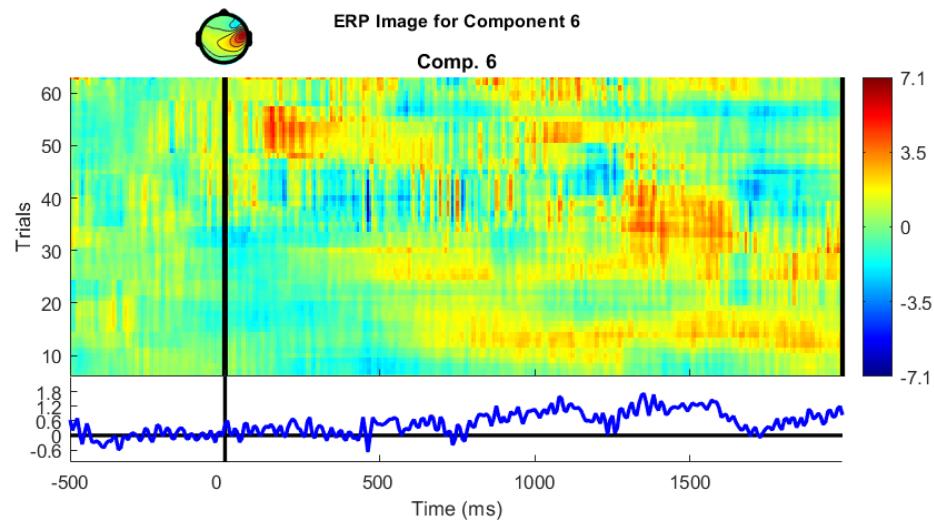
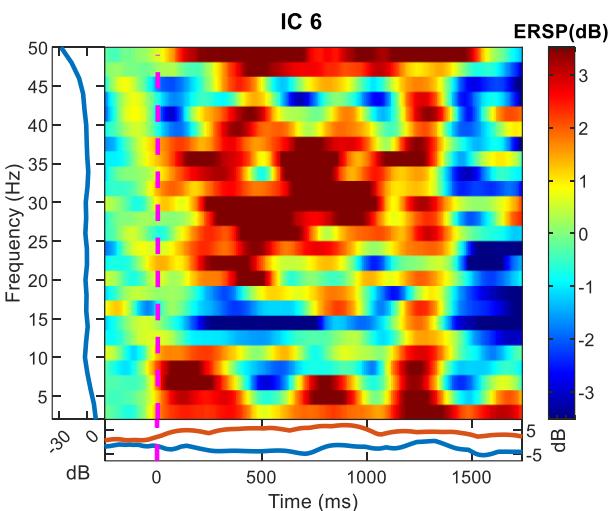
110_11_3

Frontal F8		
Time	+600ms	
Theta	increase	
Alpha	decrease	

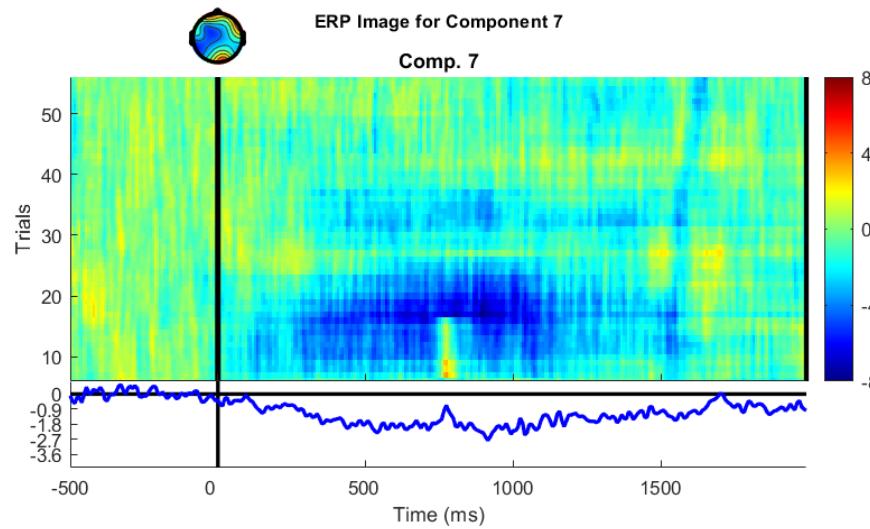
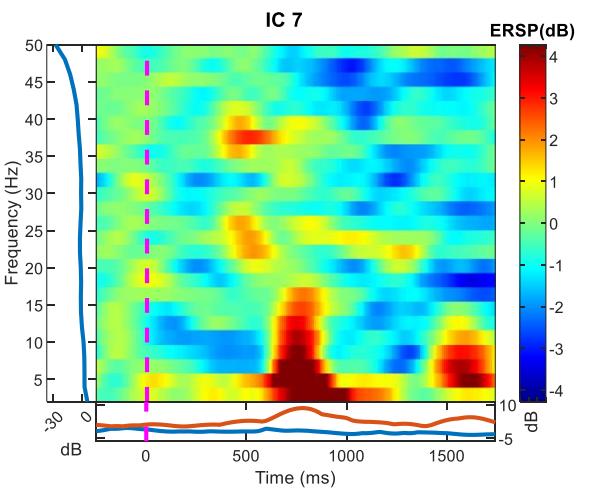
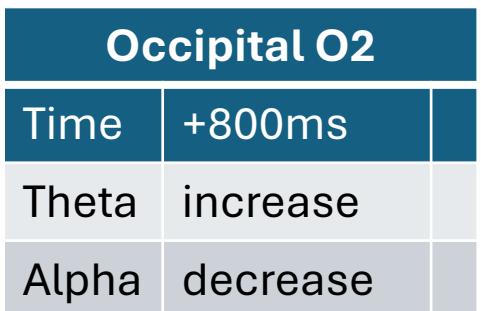
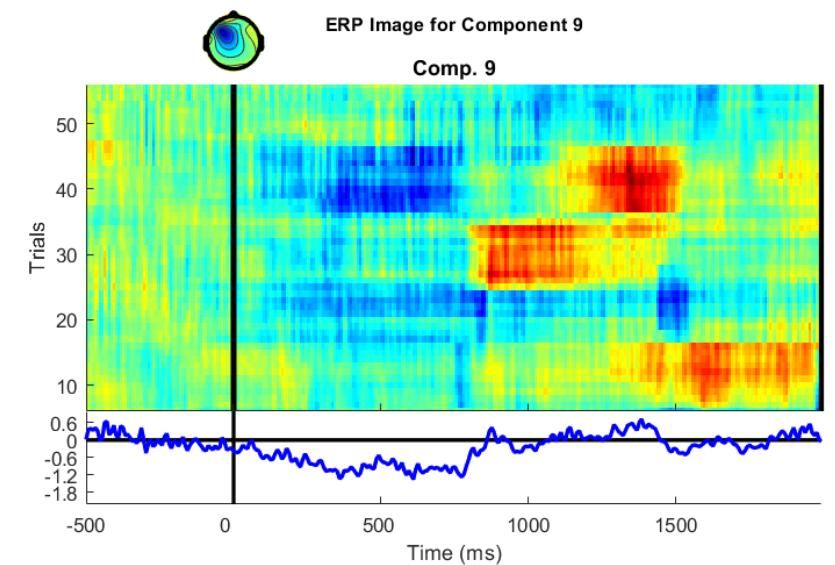
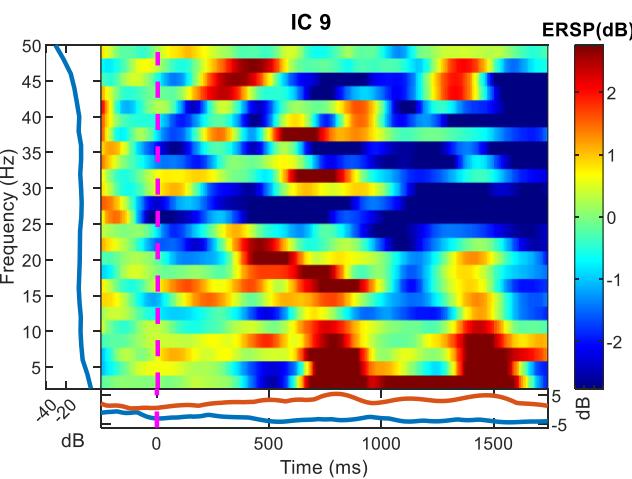
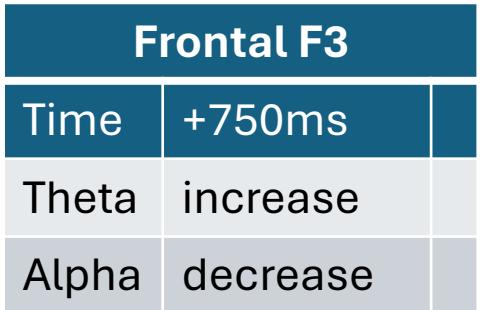


110_12_2

Frontal FC6		
Time	+150ms	
Theta	increase	
Alpha	decrease	



110_12_3

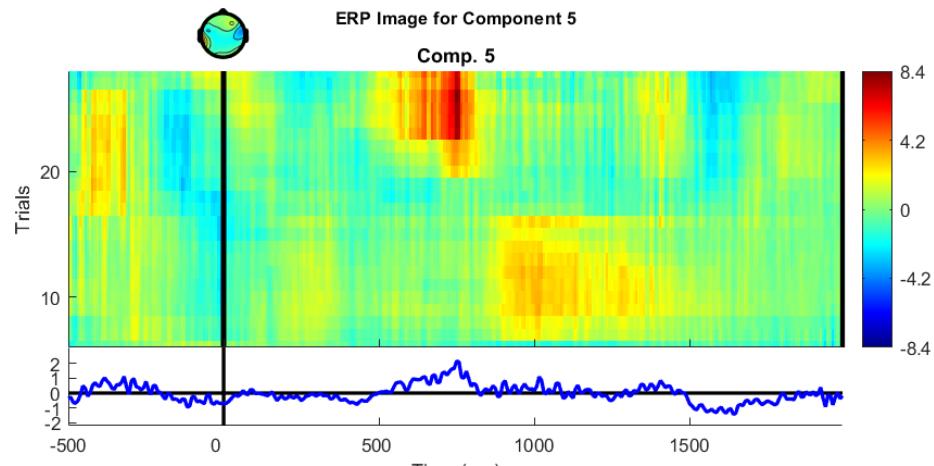
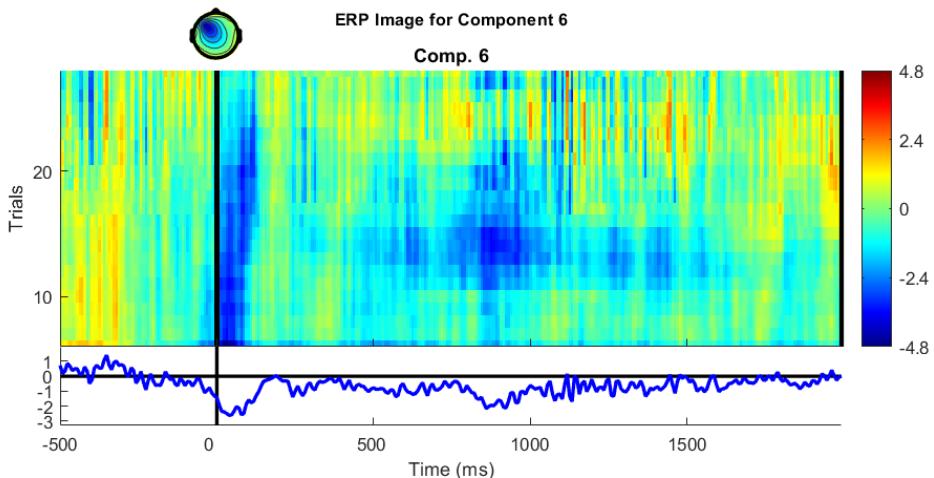
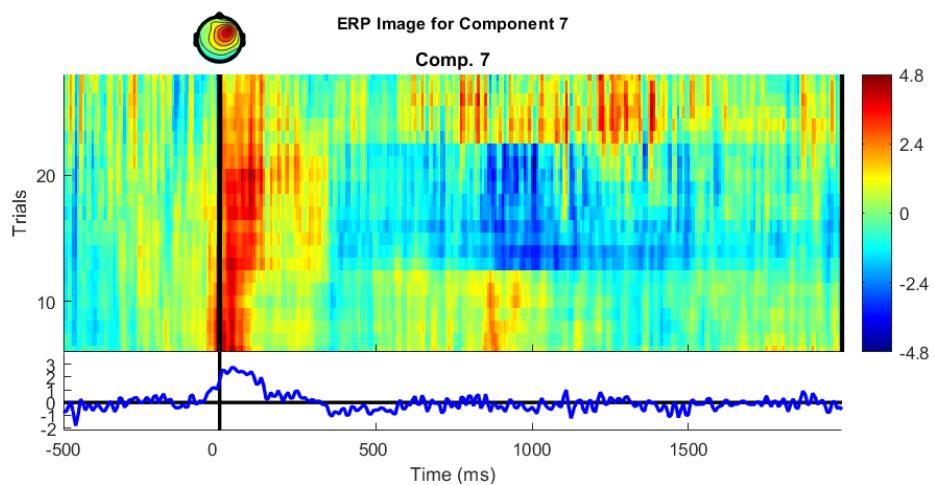
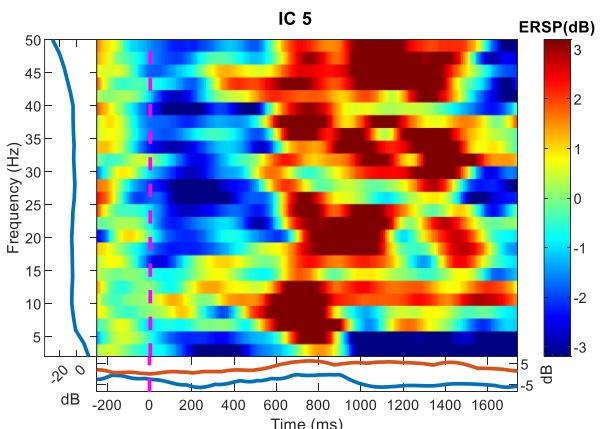
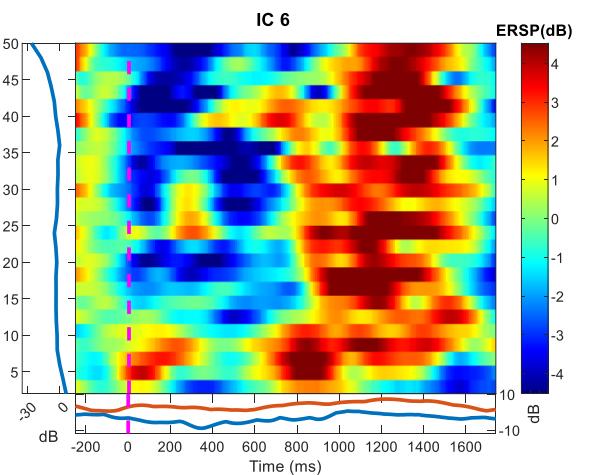
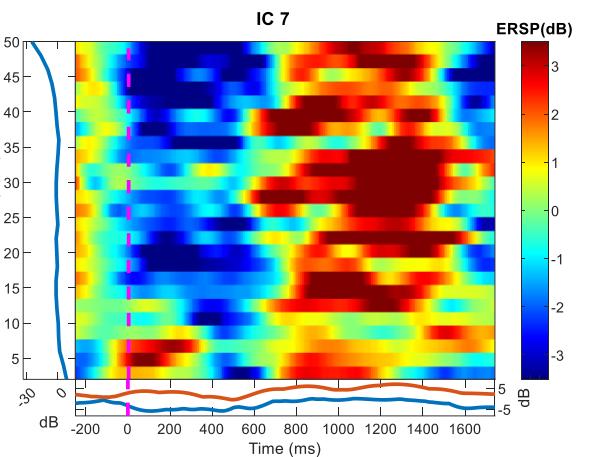


110_13_1

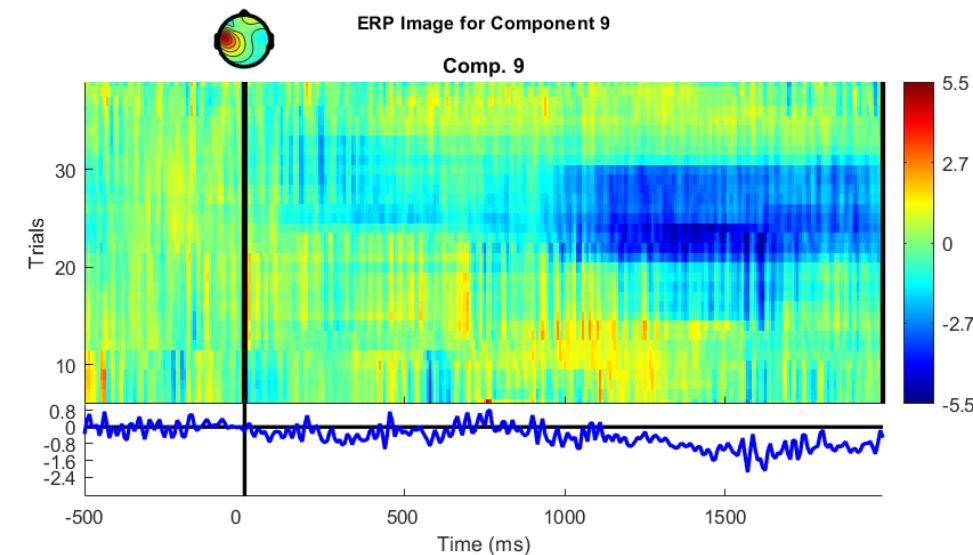
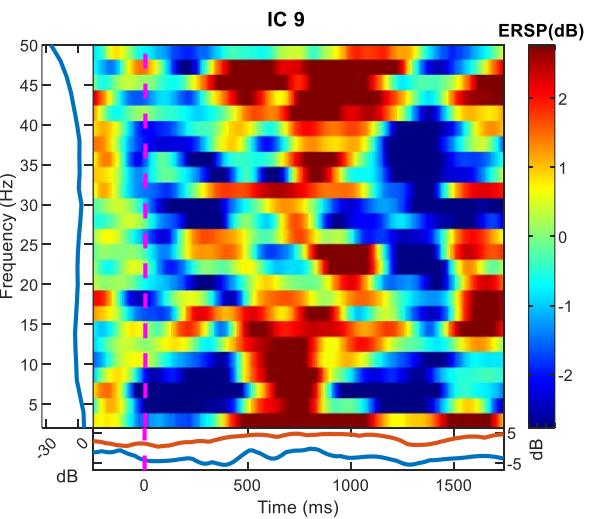
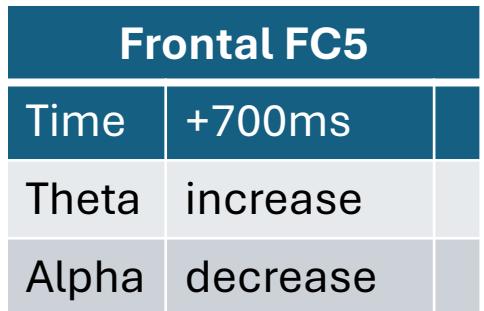
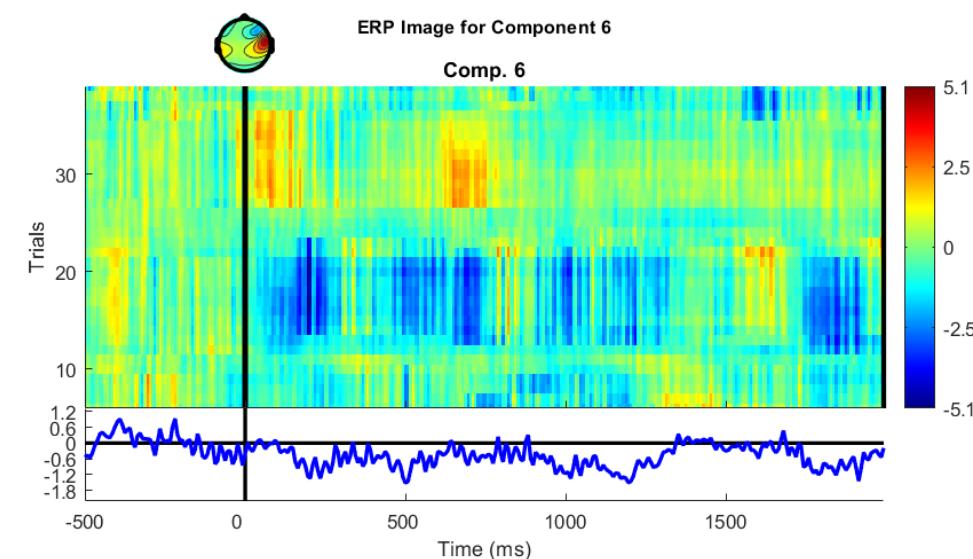
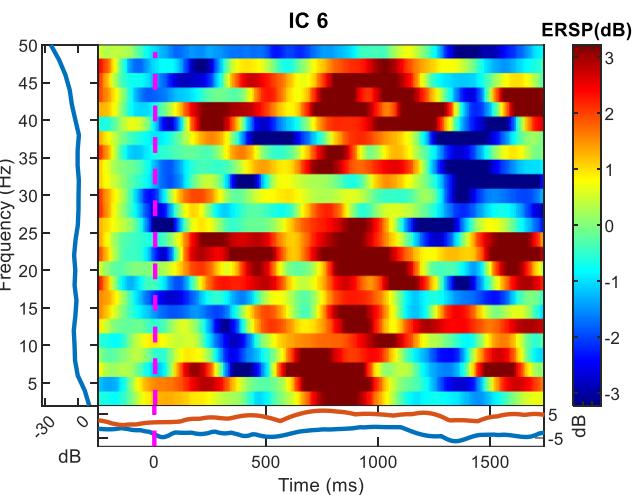
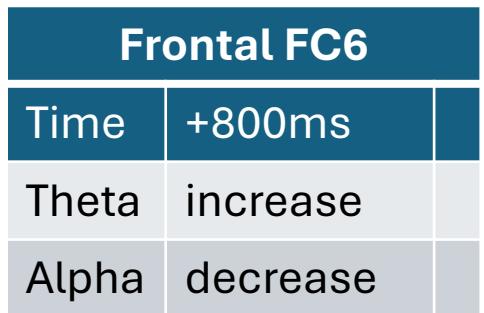
Frontal F4	
Time	+100ms
Theta	increase
Alpha	decrease

Frontal F3	
Time	+100ms
Theta	increase
Alpha	decrease

Parietal P7	
Time	+500ms
Theta	increase
Alpha	decrease

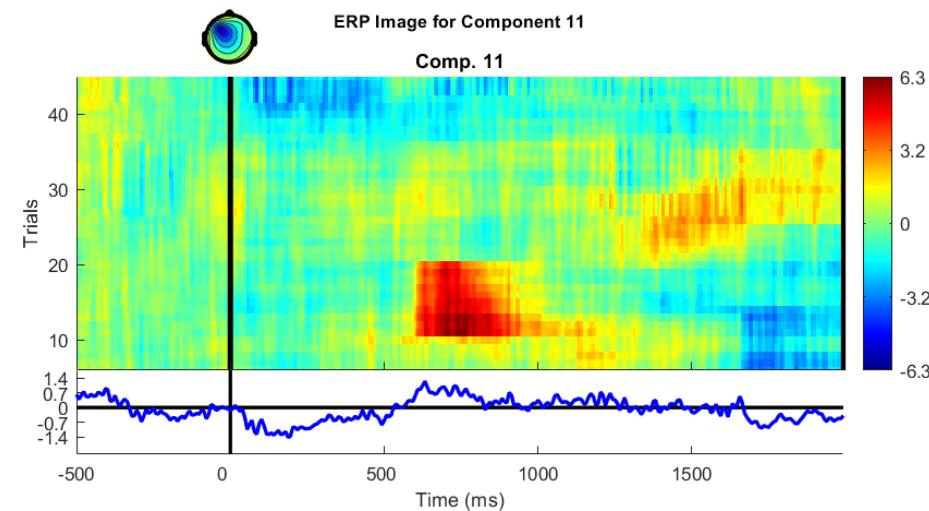
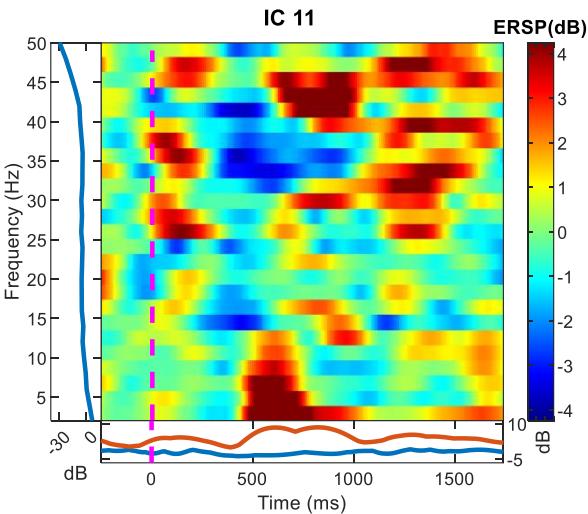


110_13_2



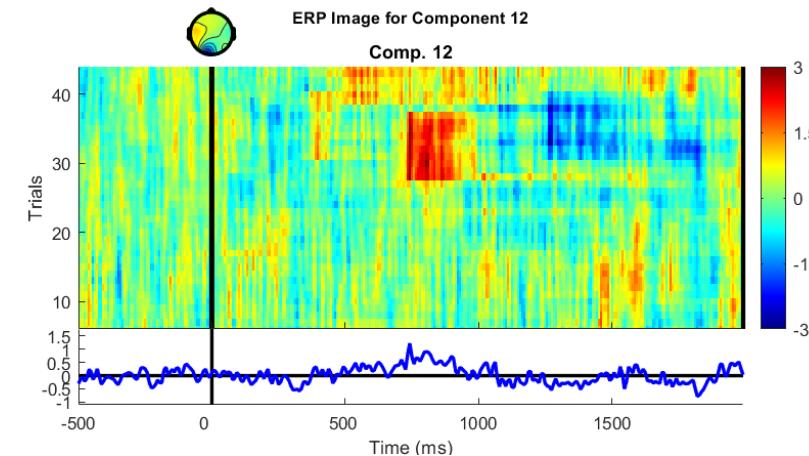
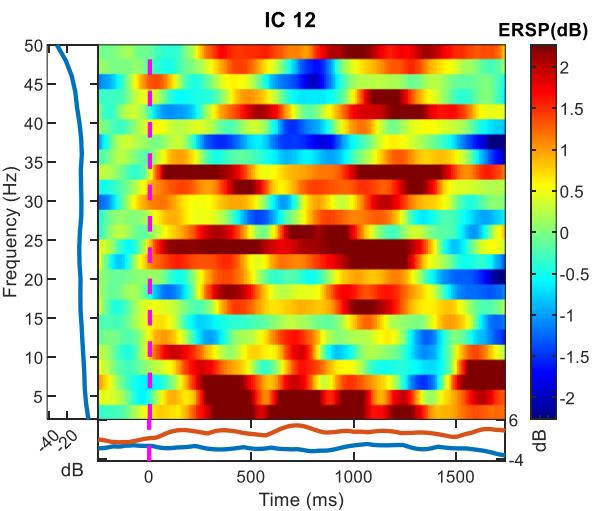
110_14_3

Frontal F3		
Time	+600ms	
Theta	increase	
Alpha	decrease	



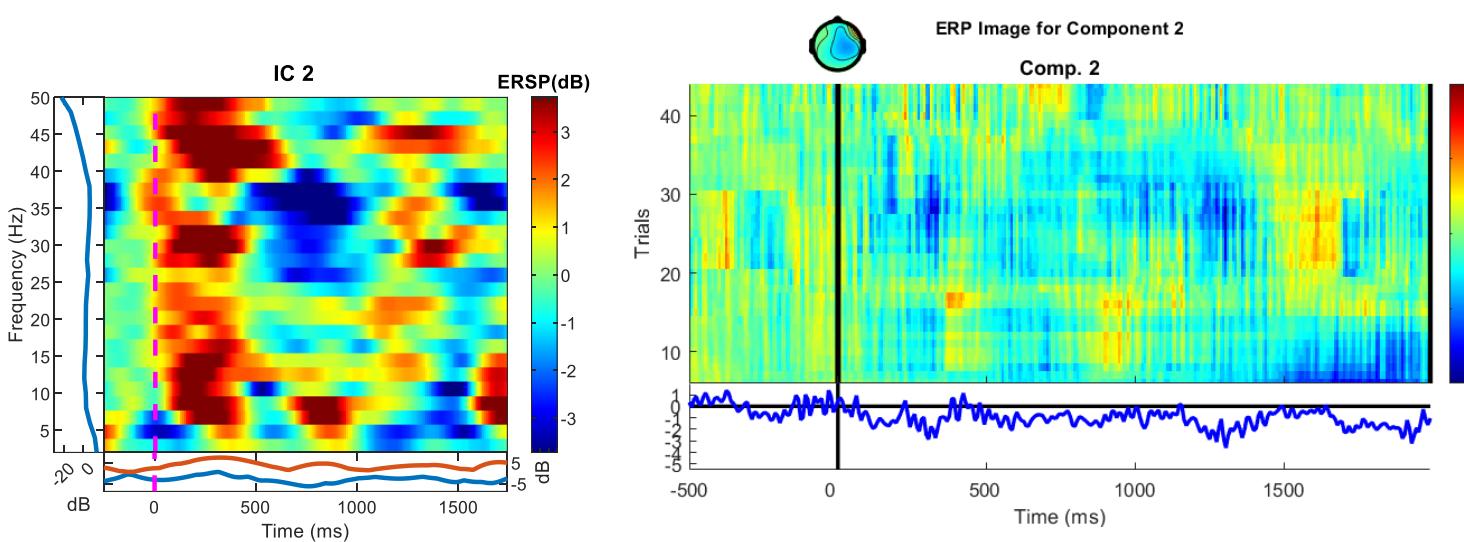
110_15_1

Occipital O1		
Time	+700ms	
Theta	increase	
Alpha	decrease	



110_15_3

Frontal F8		
Time	+400ms	
Theta	increase	
Alpha	decrease	

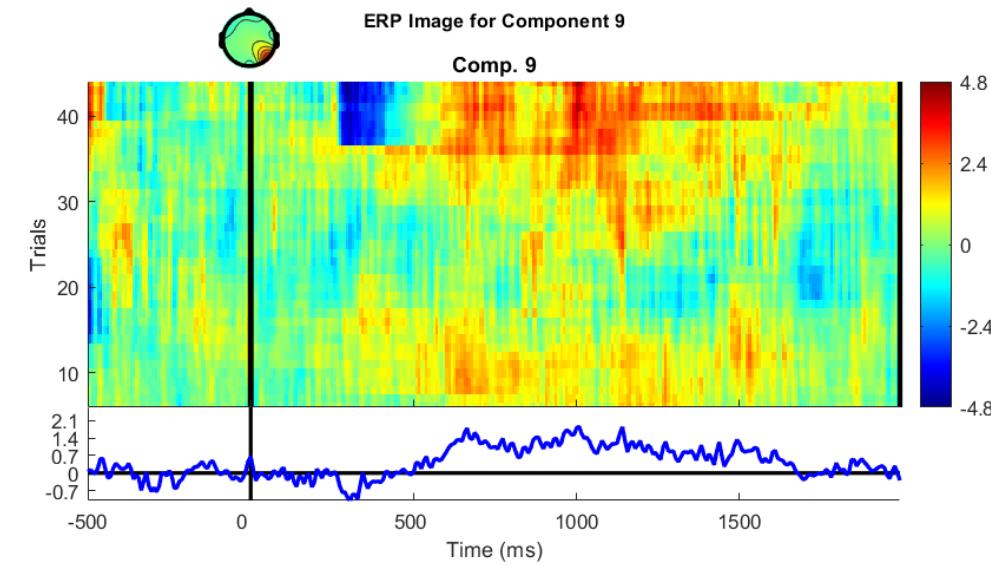
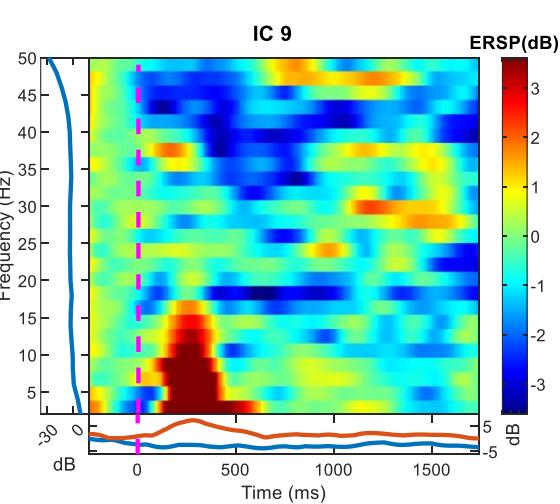


110_16_3

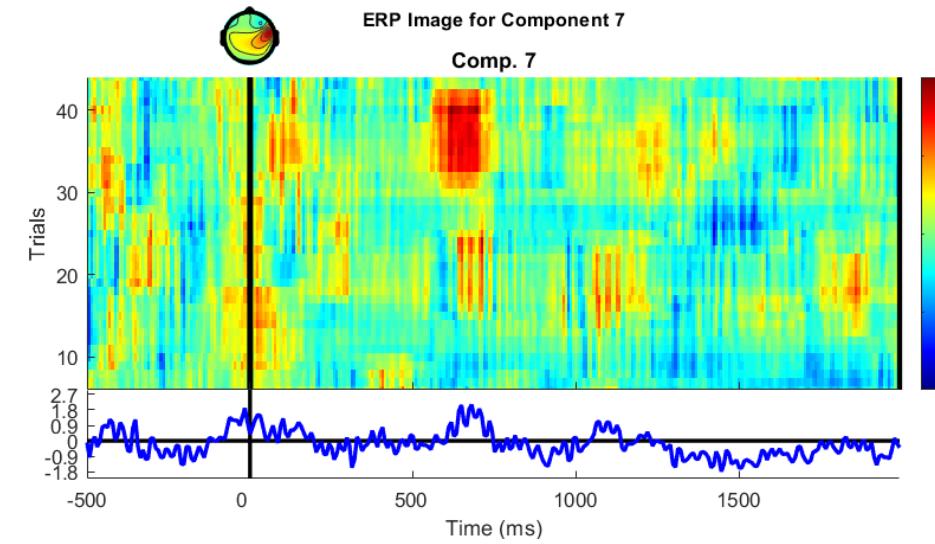
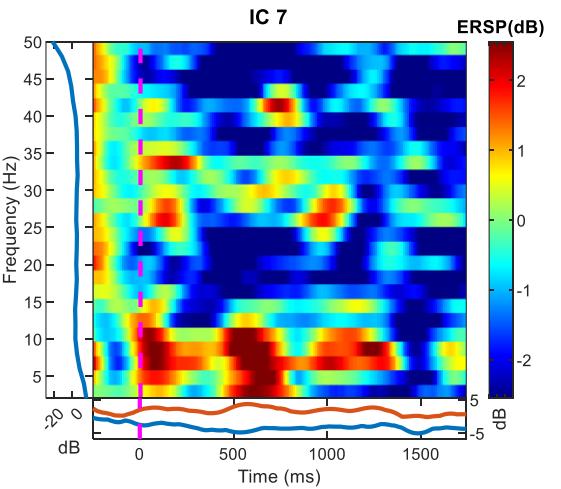
Frontal F8		
Time	+500ms	
Theta	increase	
Alpha	decrease	

110_16_3

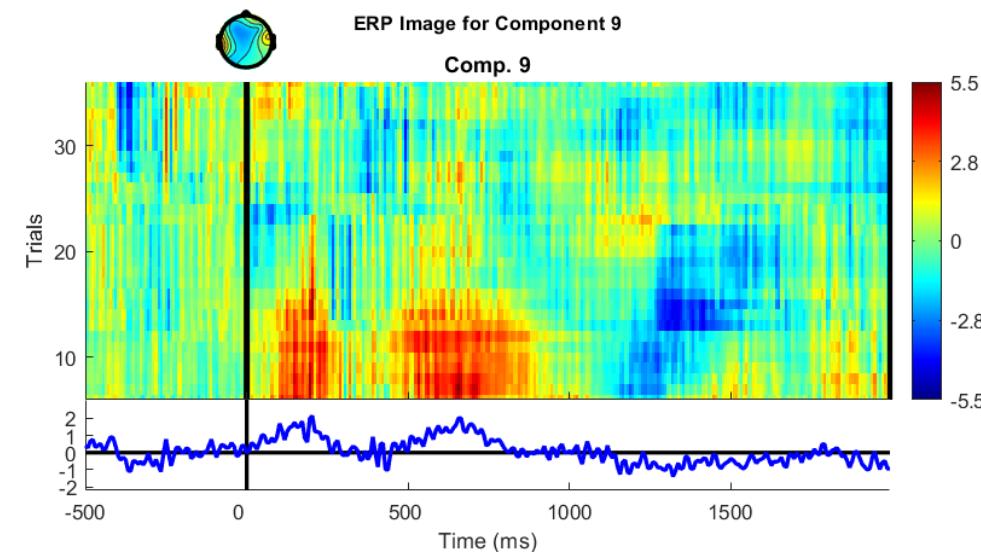
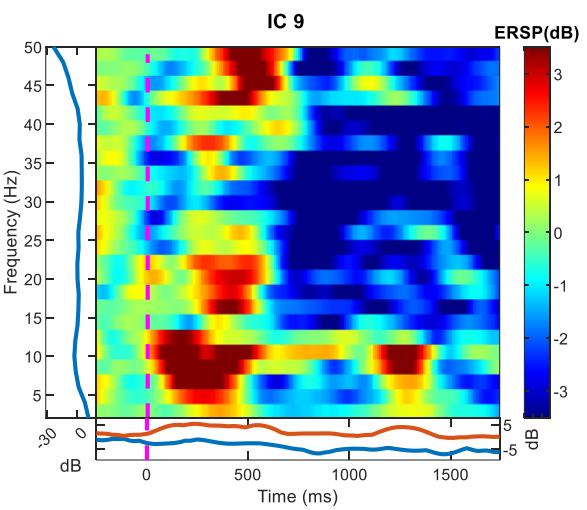
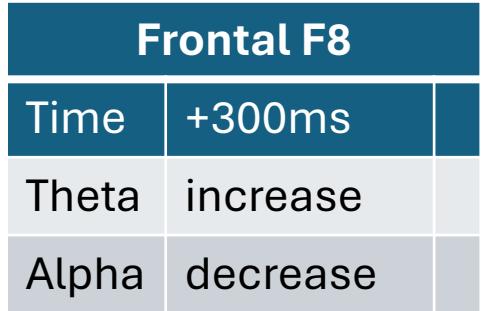
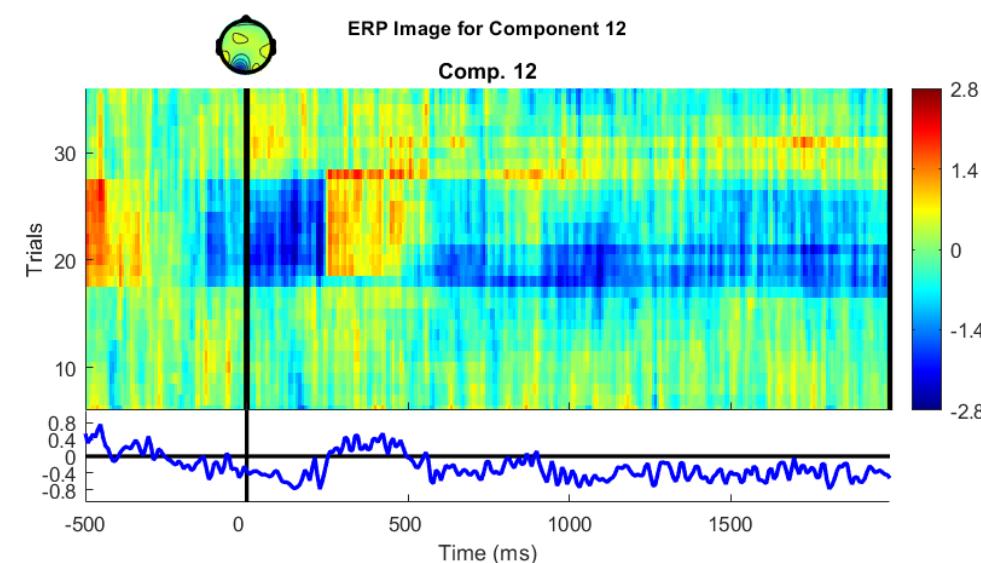
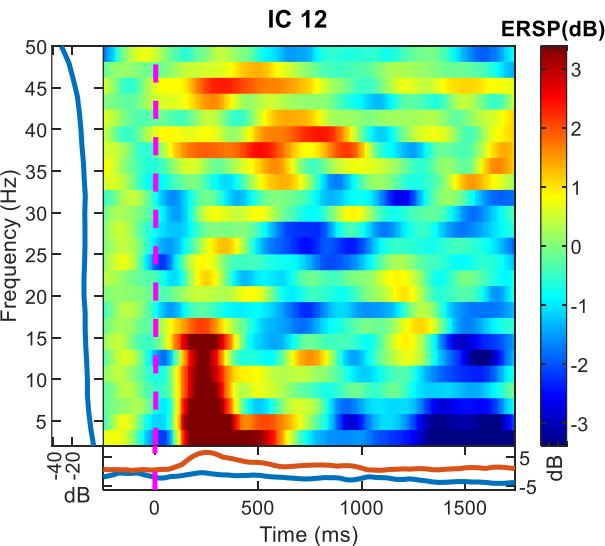
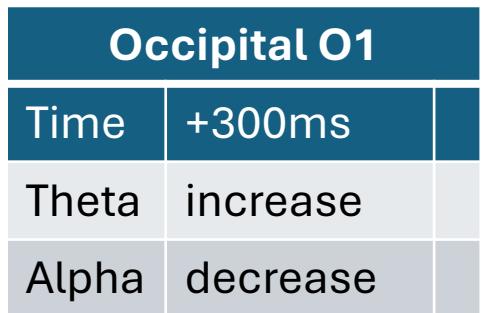
Parietal P8		
Time	+300ms	
Theta	increase	
Alpha	decrease	



Frontal FC6		
Time	+600ms	
Theta	increase	
Alpha	decrease	

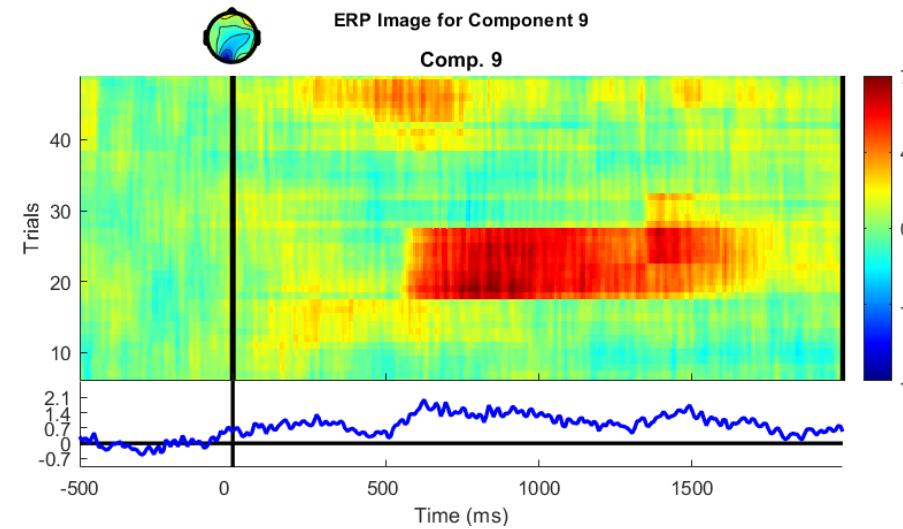
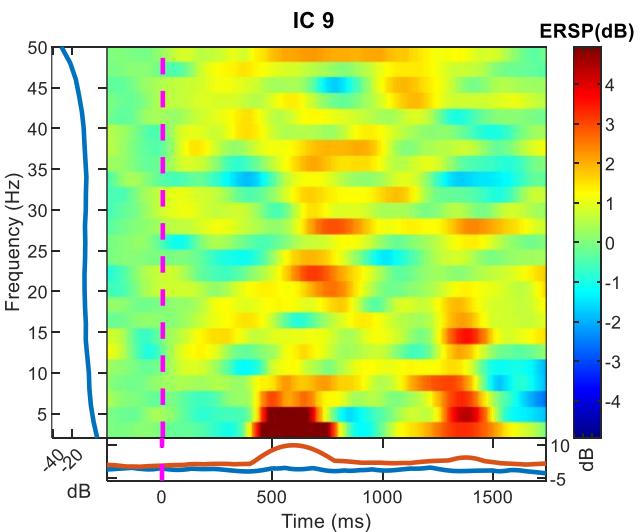


110_17_1



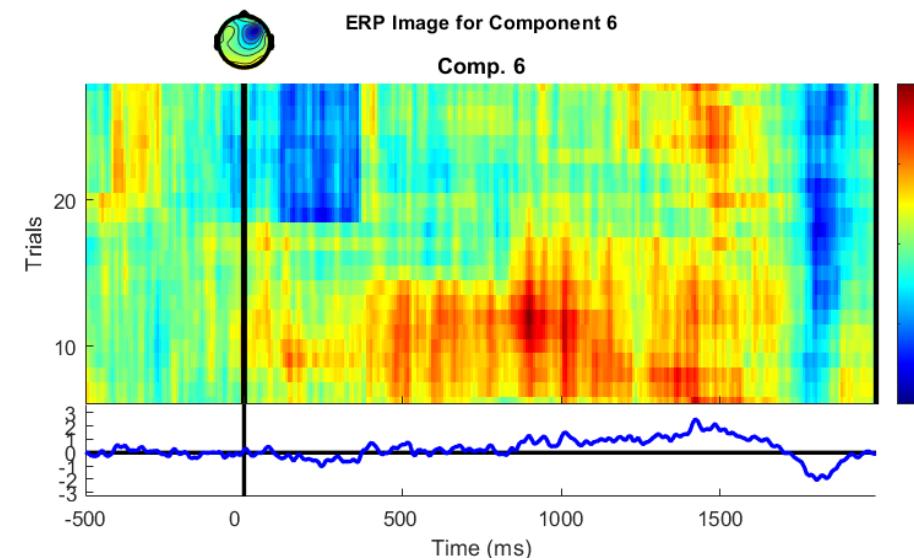
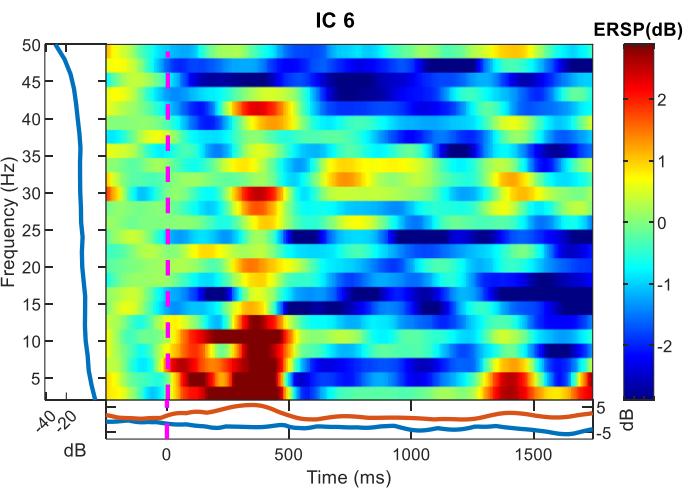
110_17_2

Occipital O1		
Time	+600ms	
Theta	increase	
Alpha	decrease	



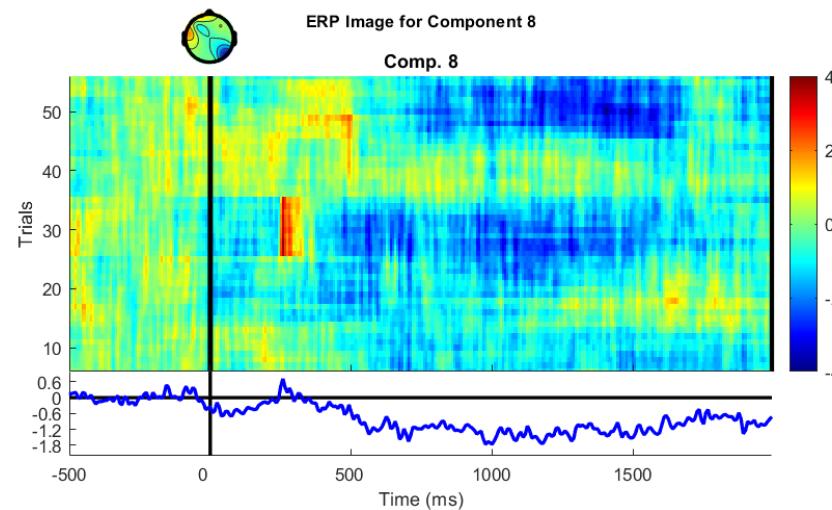
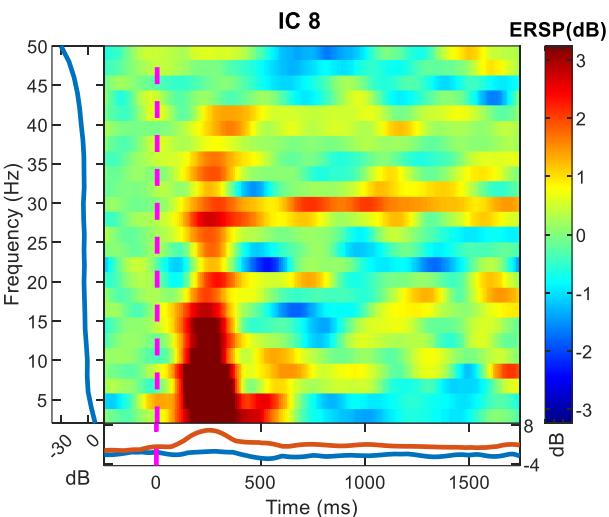
110_18_1

Frontal F4		
Time	+300ms	
Theta	increase	
Alpha	decrease	



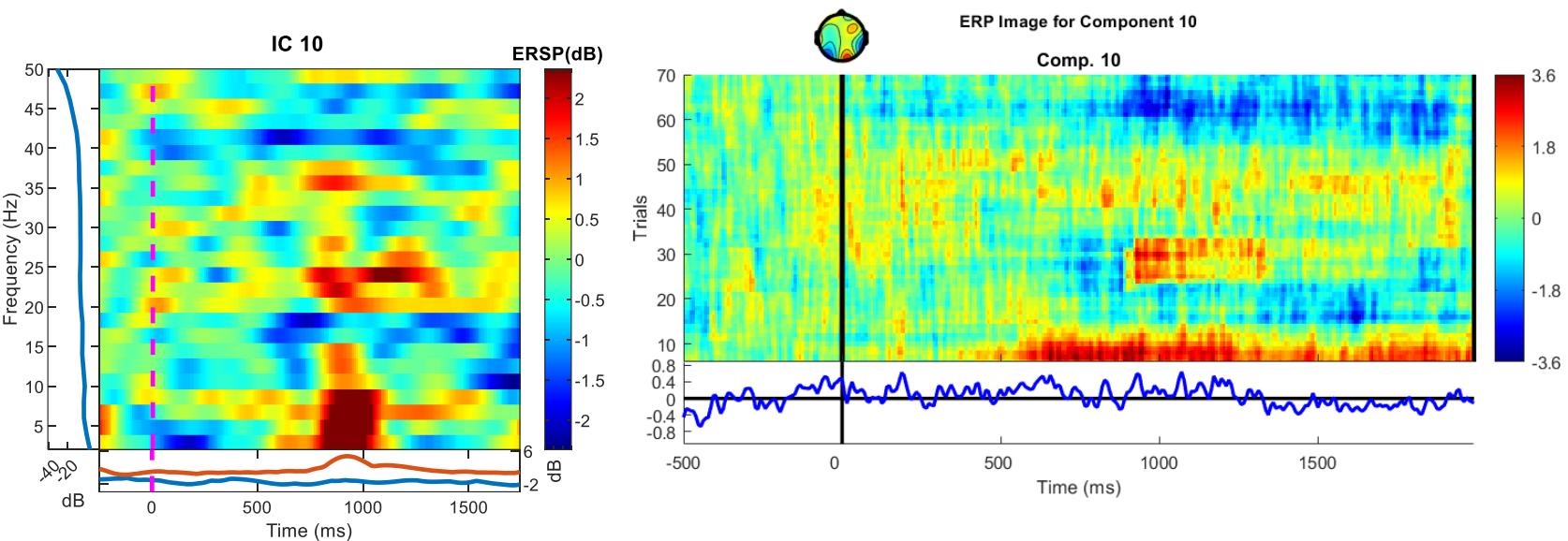
110_18_2

Parietal P8		
Time	+300ms	
Theta	increase	
Alpha	decrease	

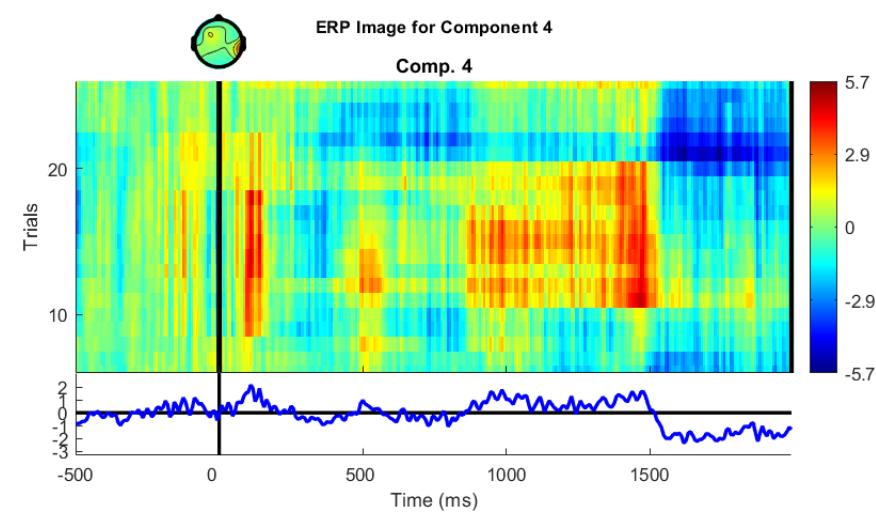
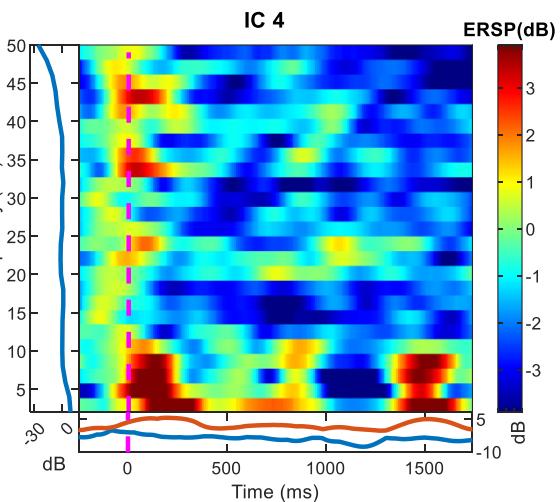
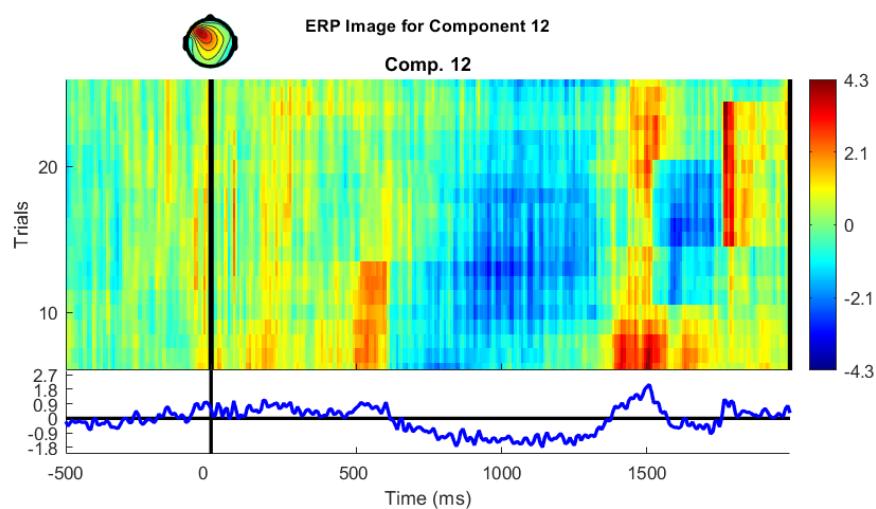
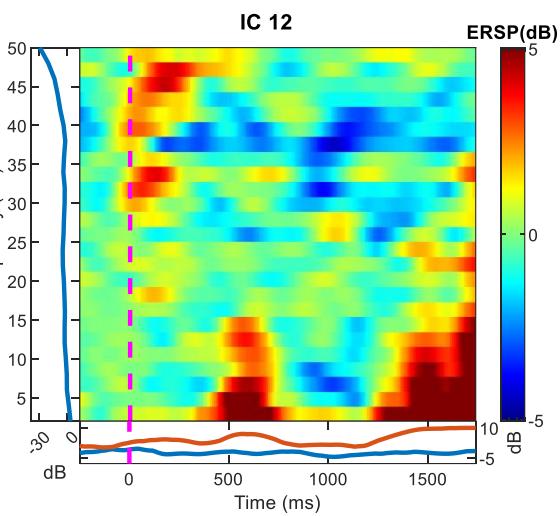
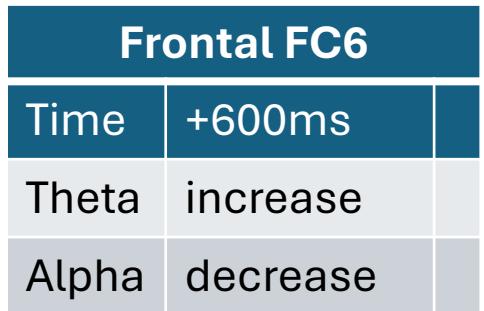
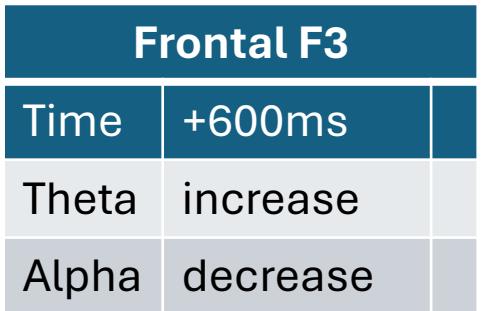


110_18_3

Occipital O2		
Time	+850ms	
Theta	increase	
Alpha	decrease	

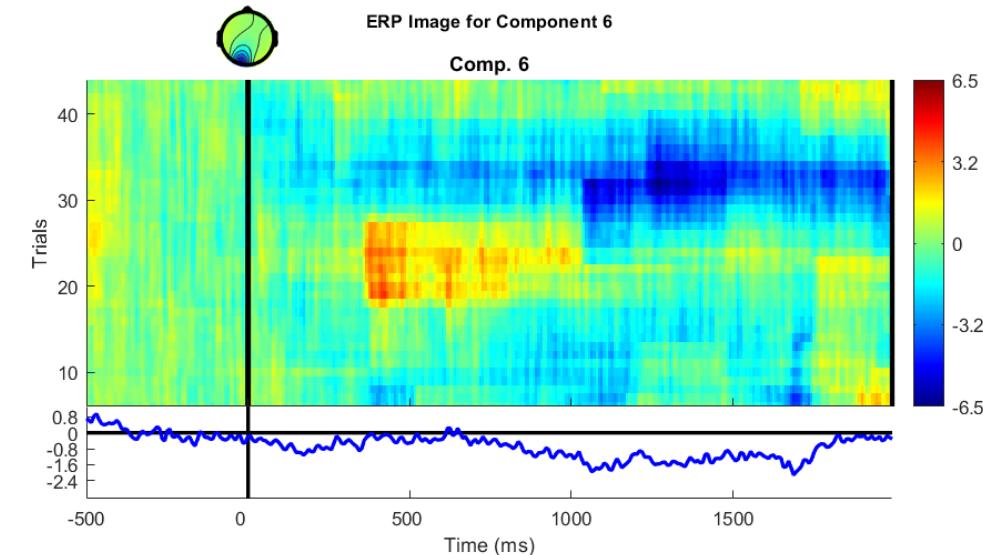
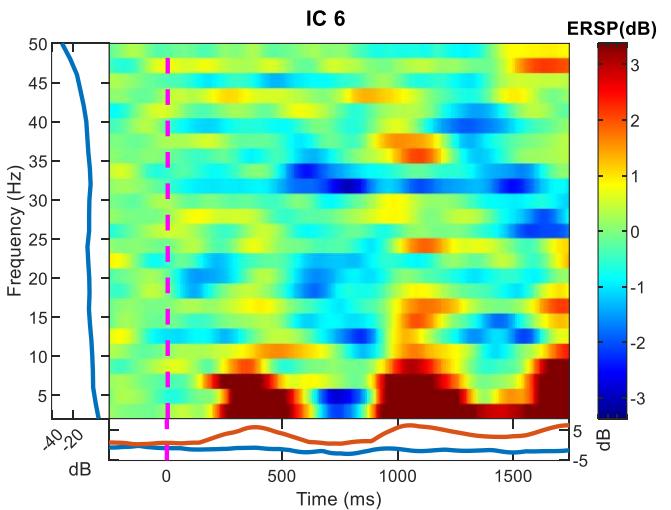


110_19_1

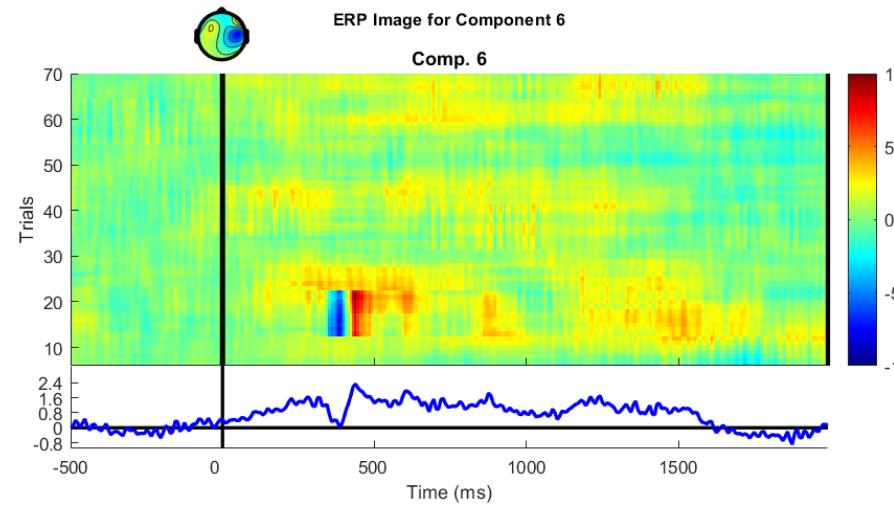
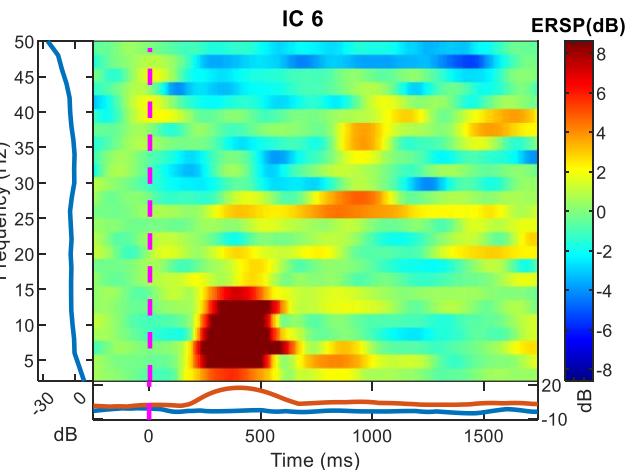
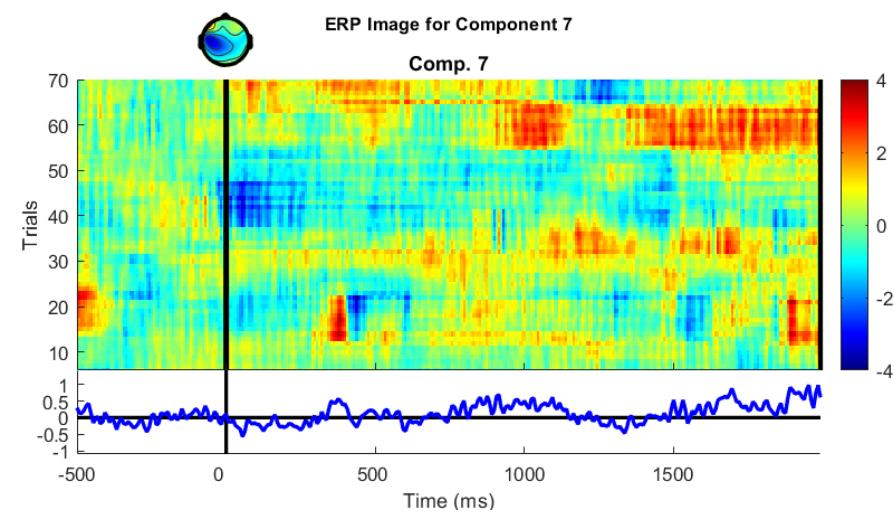
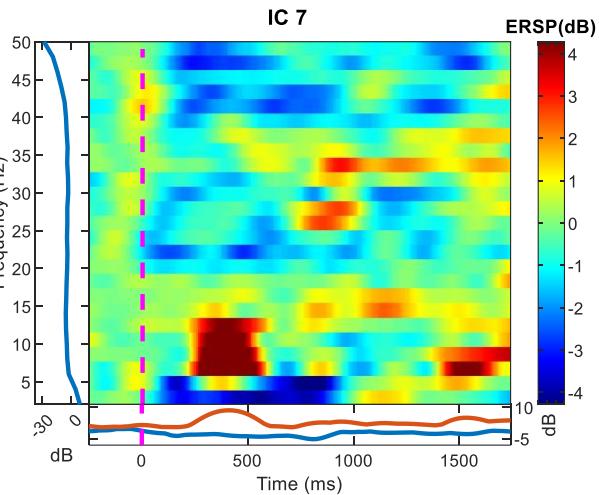
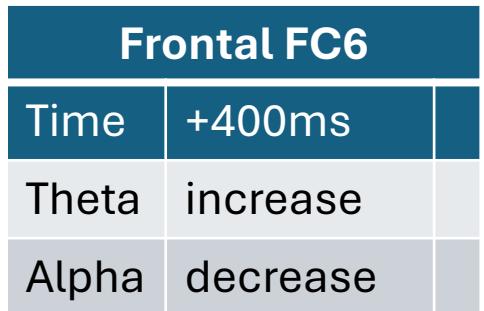
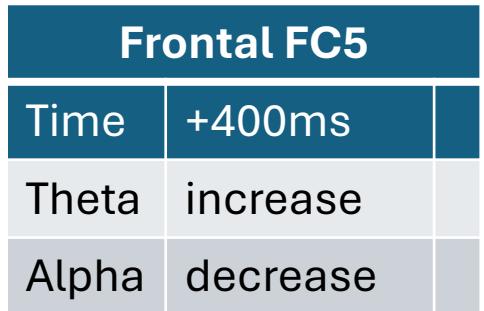


110_19_2

Occipital O1		
Time	+350ms	
Theta	increase	
Alpha	decrease	

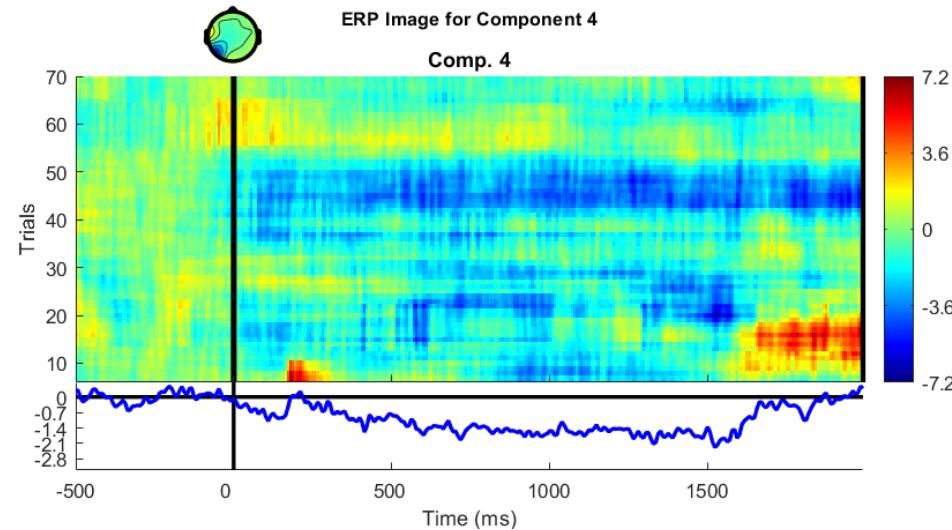
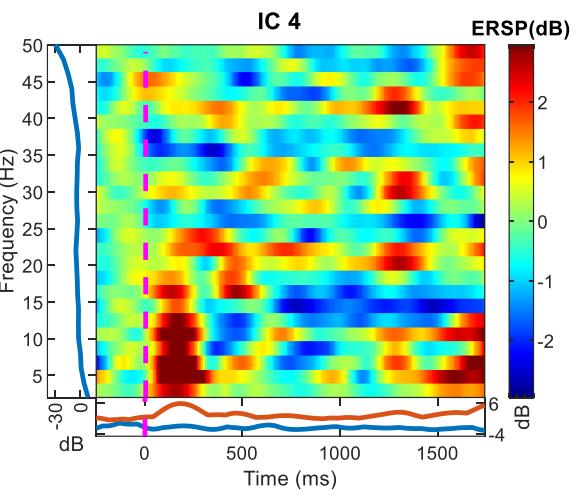


110_19_3

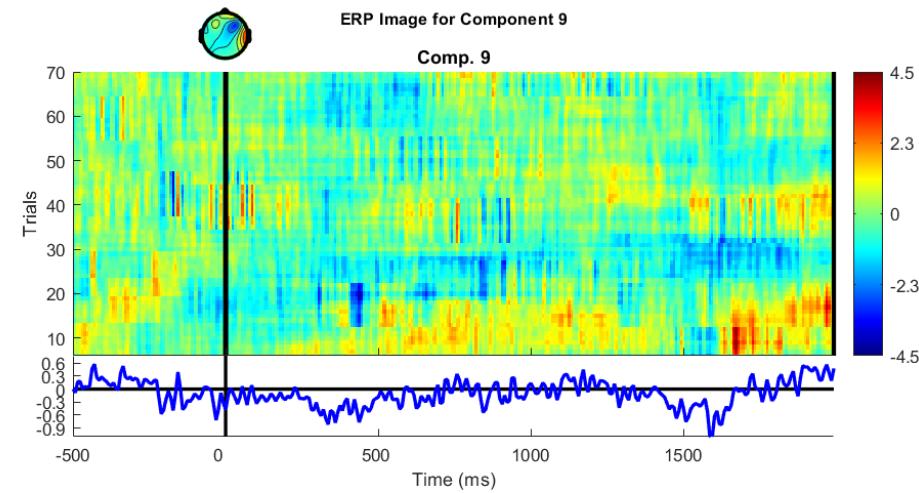
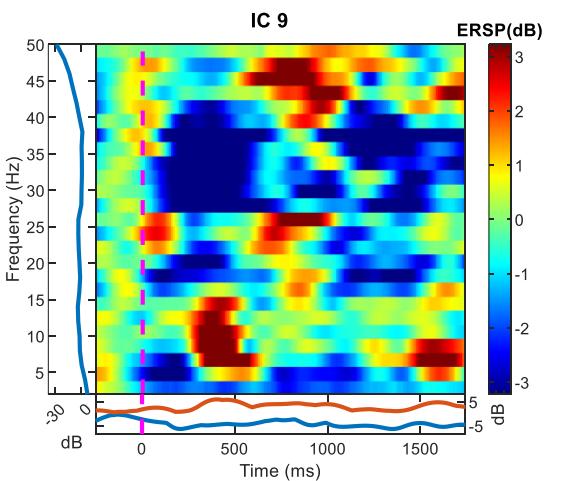


110_19_3

Parietal P7		
Time	+200ms	
Theta	increase	
Alpha	decrease	

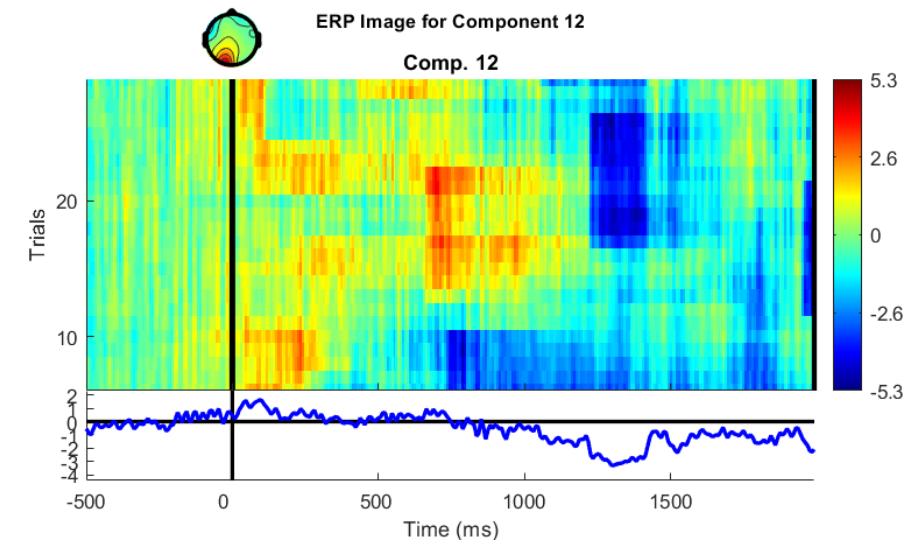
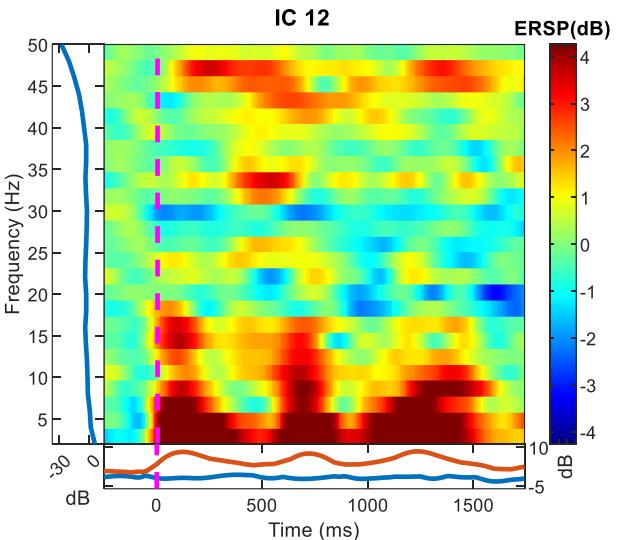


Frontal F4		
Time	+420ms	
Theta	increase	
Alpha	decrease	



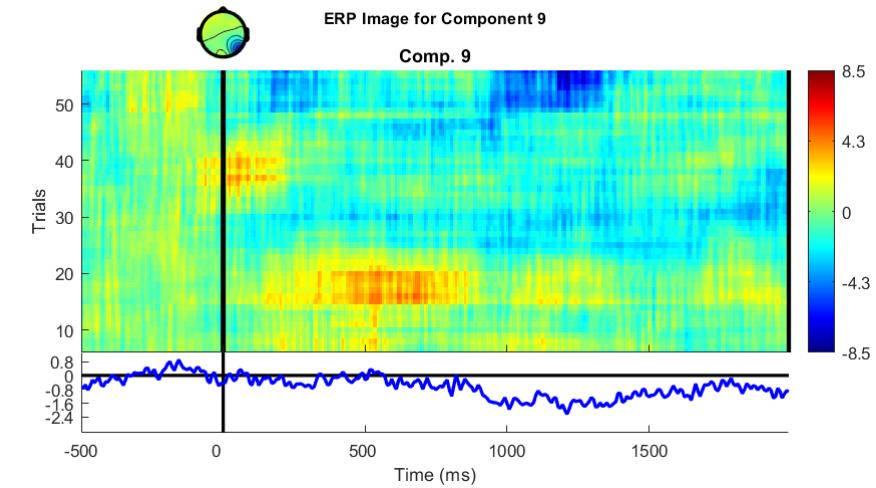
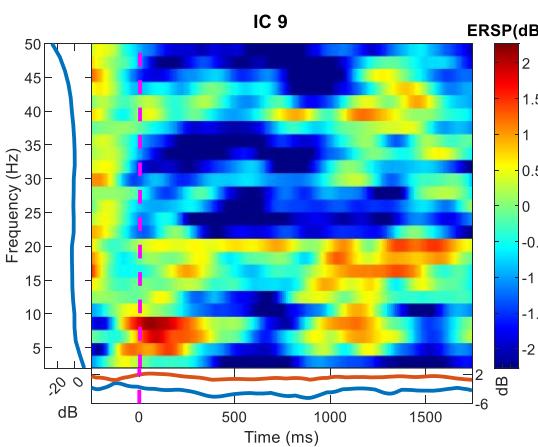
110_20_1

Occipital O1		
Time	+200ms	
Theta	increase	
Alpha	decrease	



110_20_3

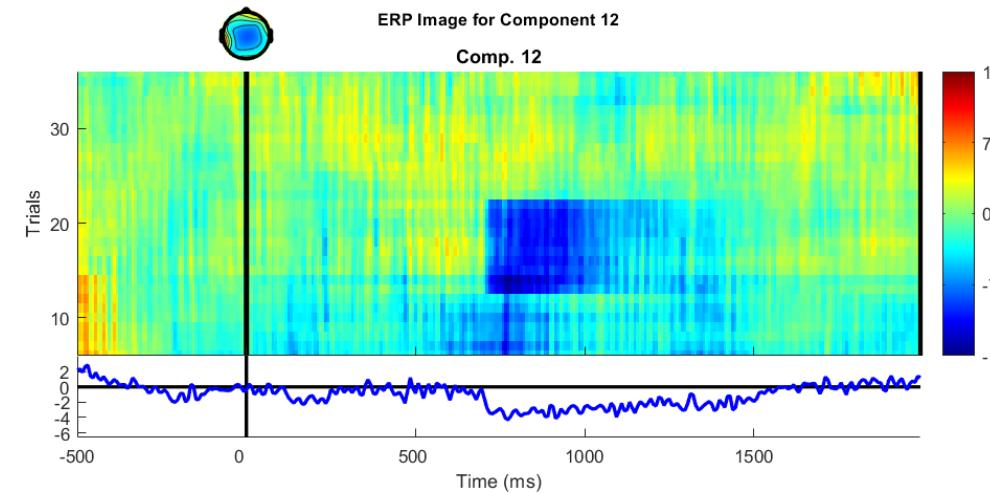
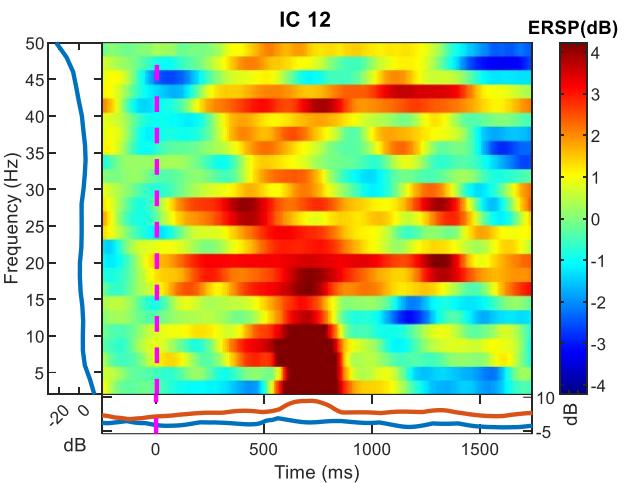
Parietal P8		
Time	+150ms	
Theta	increase	
Alpha	decrease	



110_21_1

Parietal P7

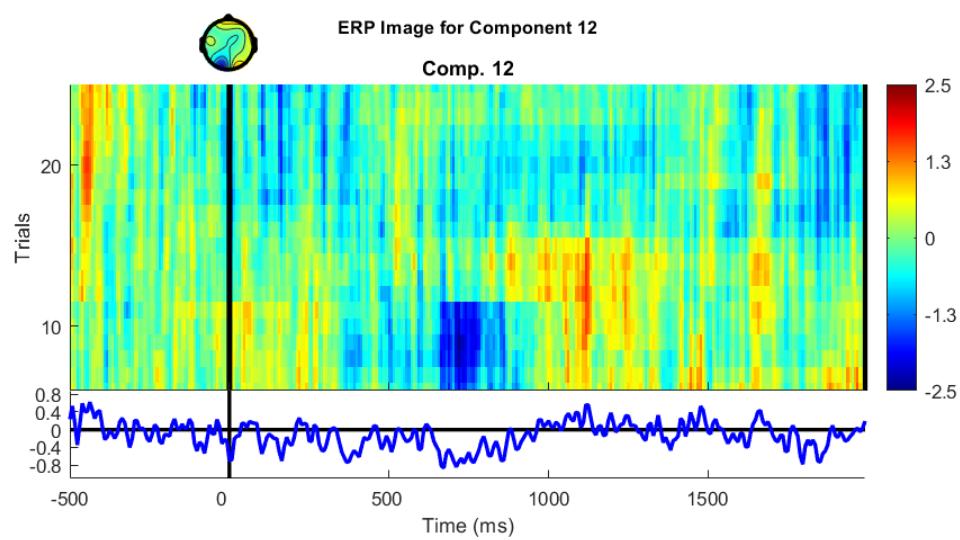
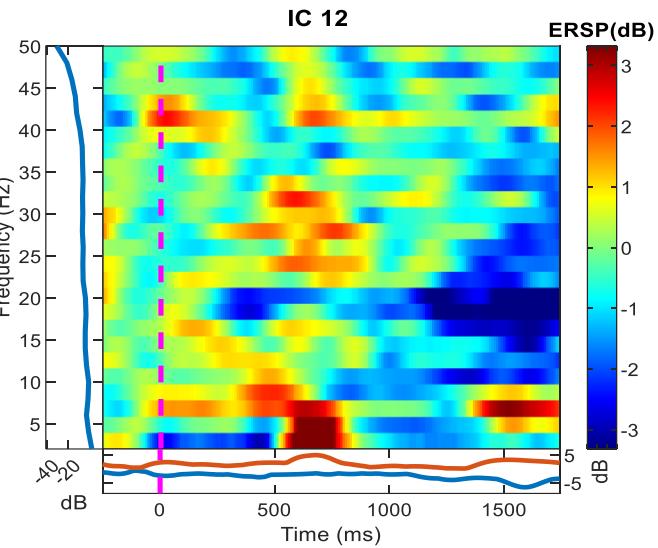
Time	+700ms	
Theta	increase	
Alpha	decrease	



110_22_1

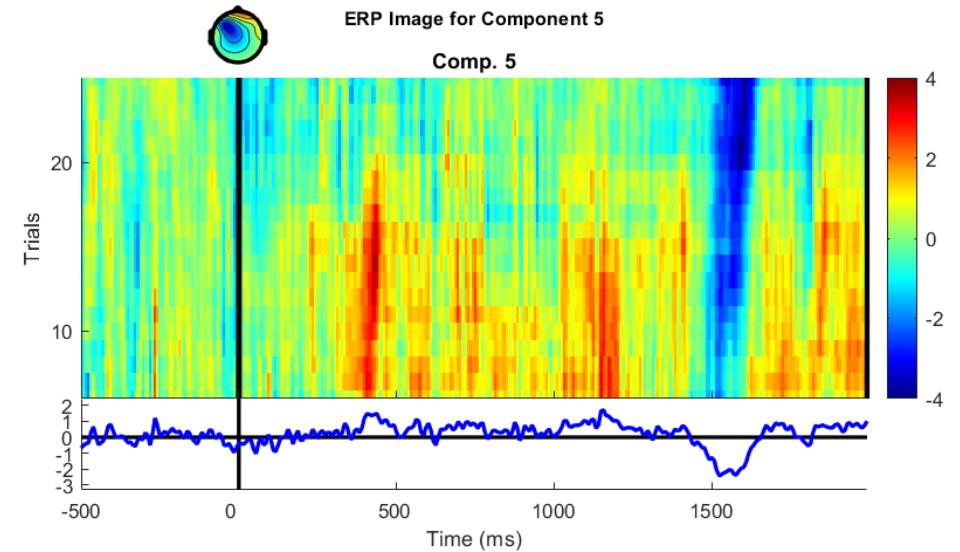
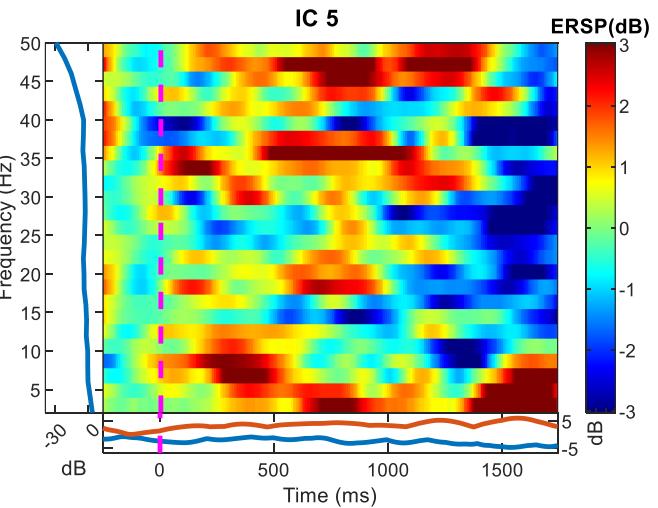
Occipital O1

Time	+650ms	
Theta	increase	
Alpha	decrease	

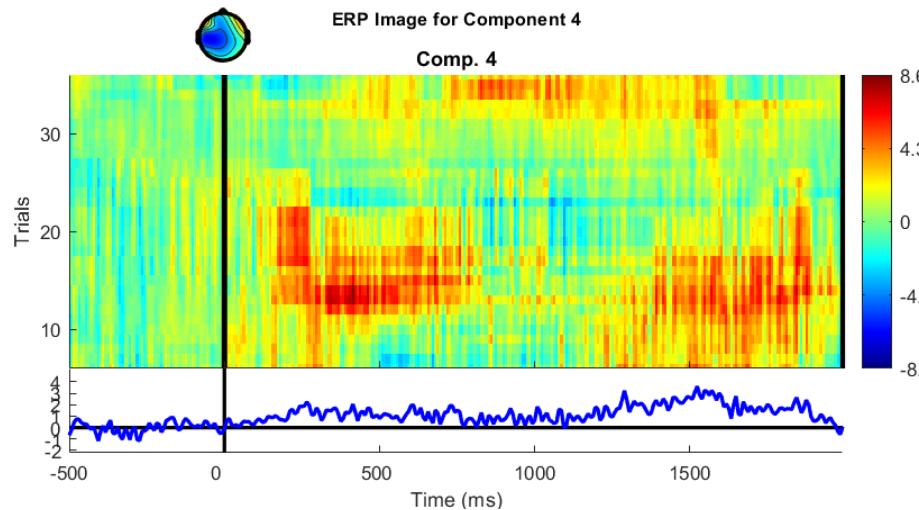
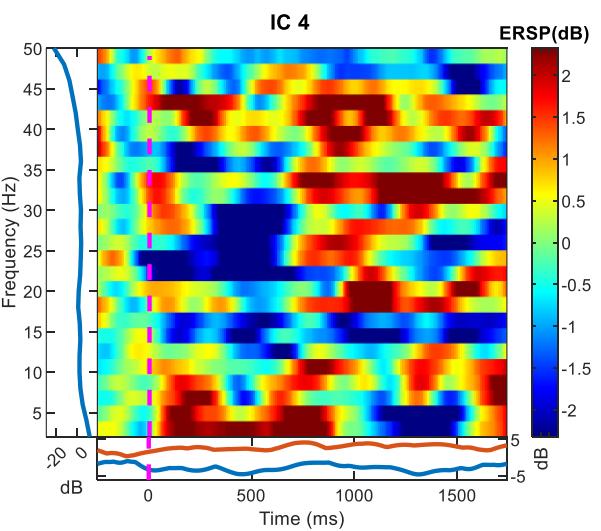
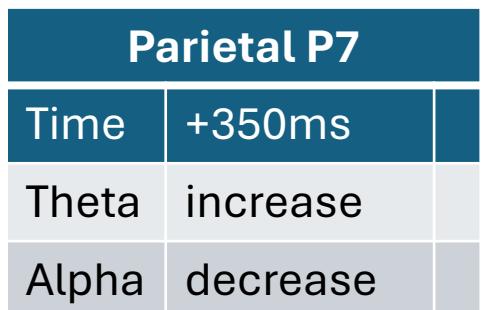
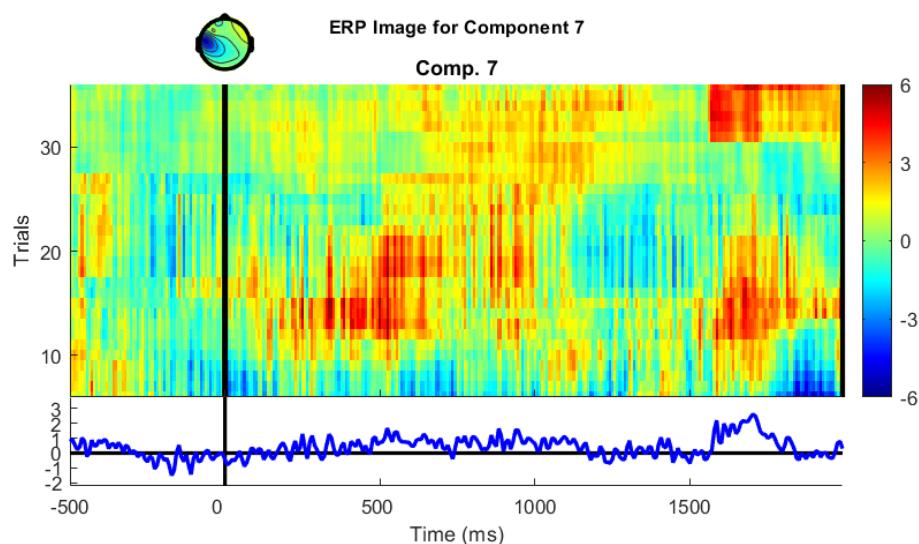
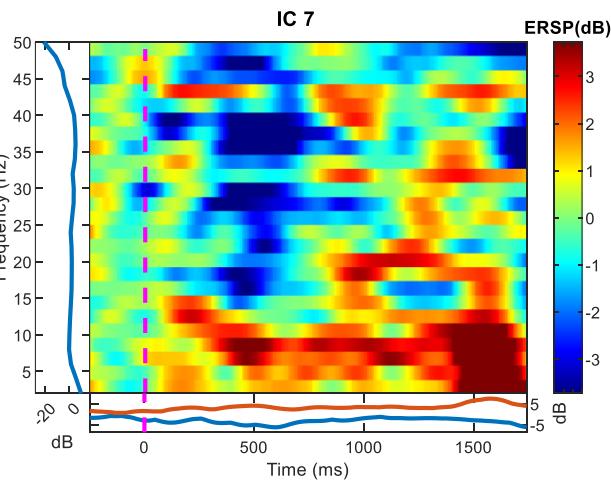
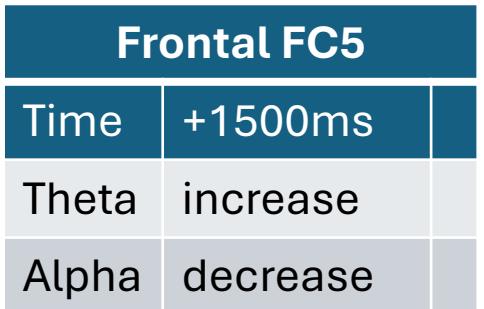


Frontal F3

Time	+400ms	
Theta	increase	
Alpha	decrease	

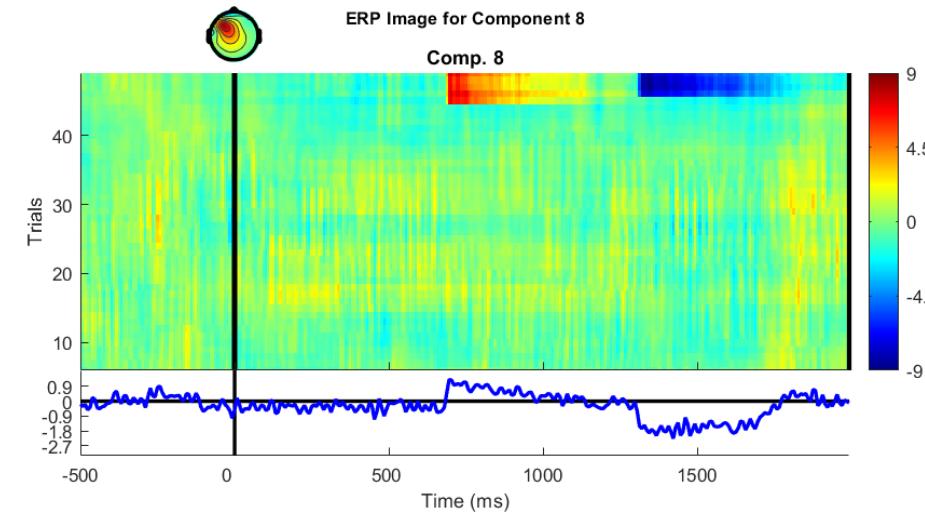
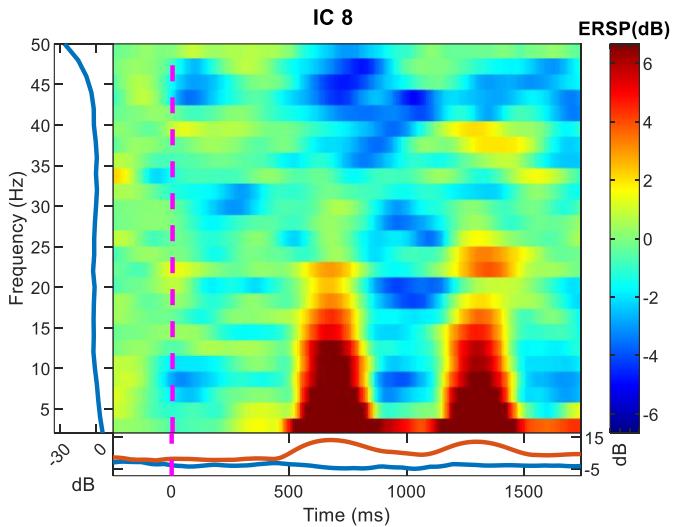


110_22_2



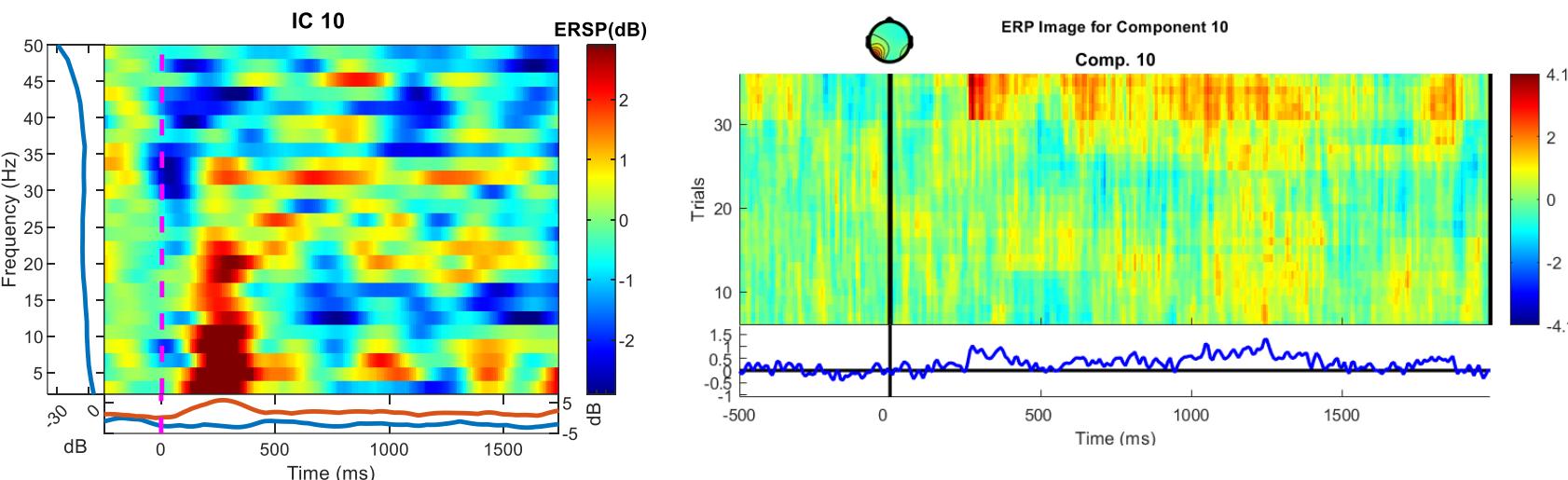
110_22_3

Frontal F3		
Time	+700ms	
Theta	increase	
Alpha	decrease	



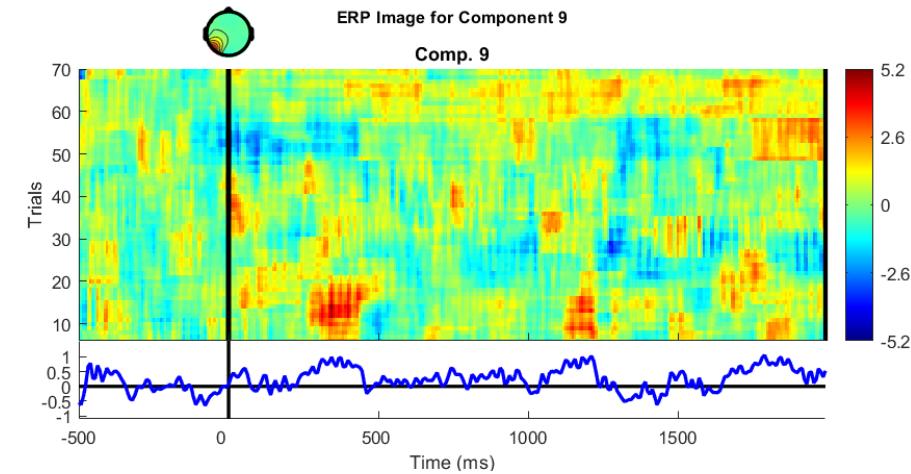
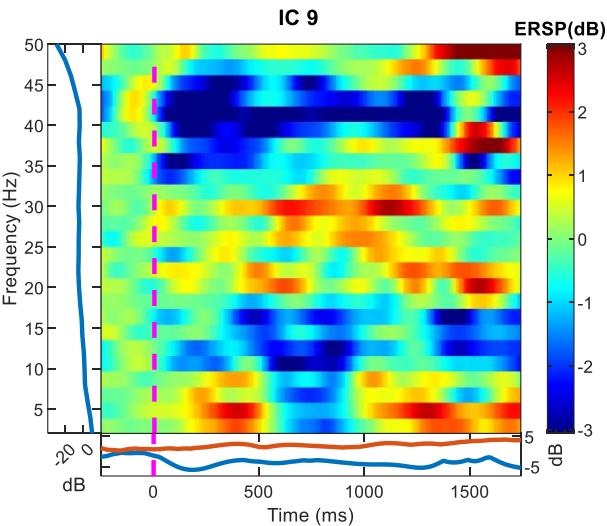
110_23_1

Parietal P7		
Time	+300ms	
Theta	increase	
Alpha	decrease	



110_23_3

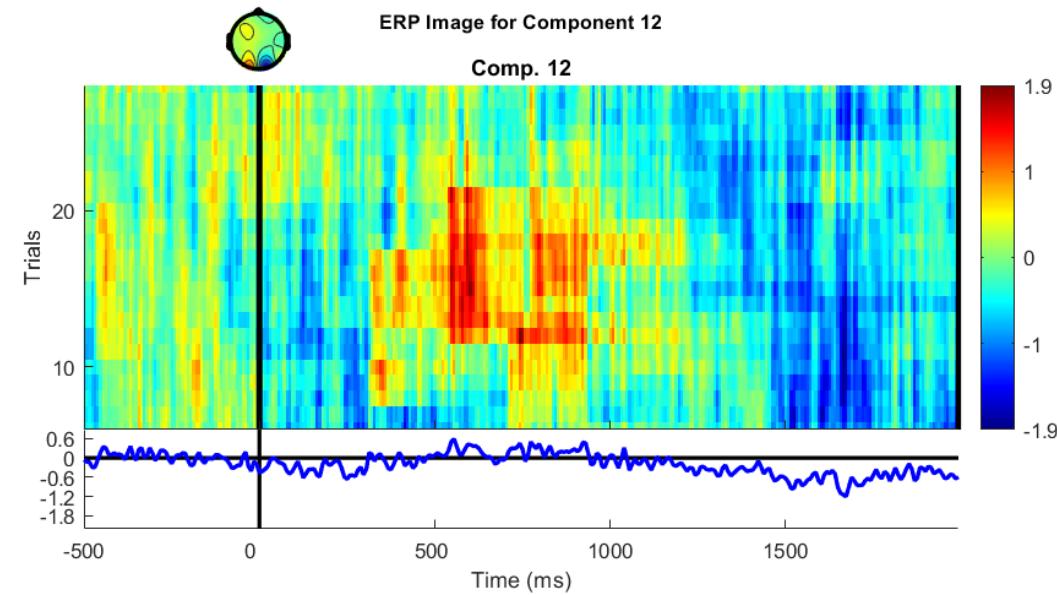
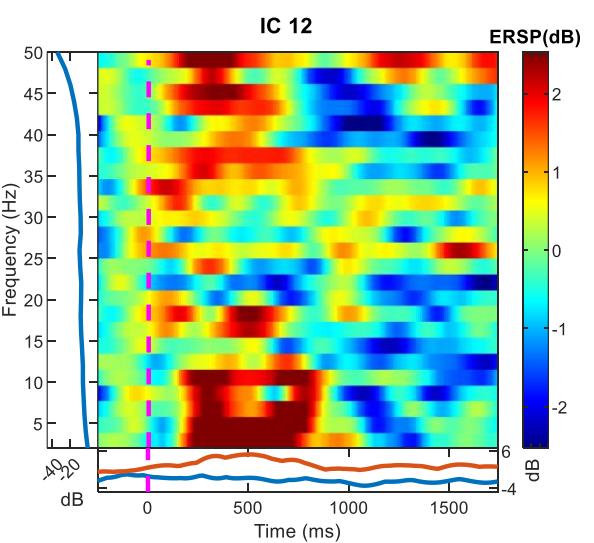
Parietal P7		
Time	+400ms	
Theta	increase	
Alpha	decrease	



110_24_1

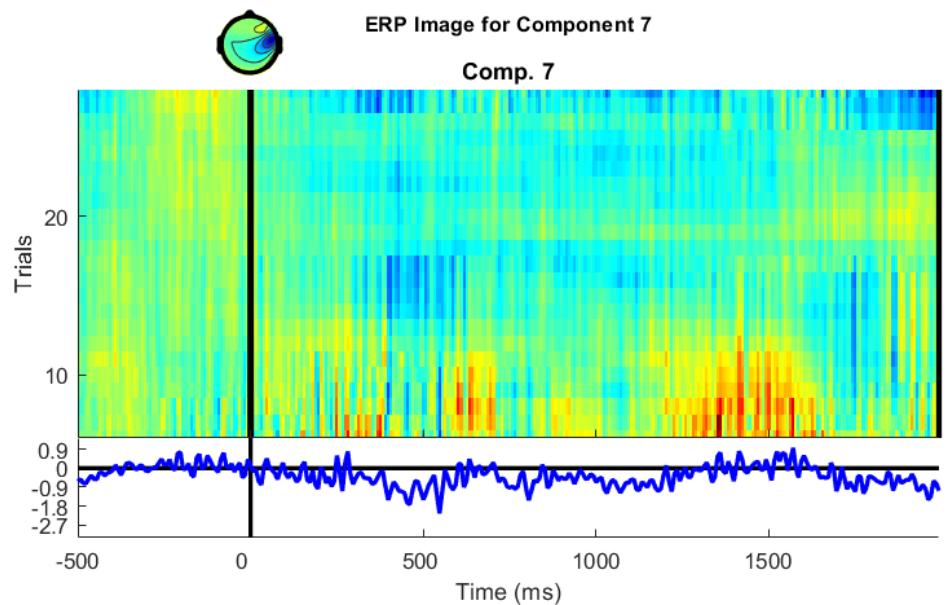
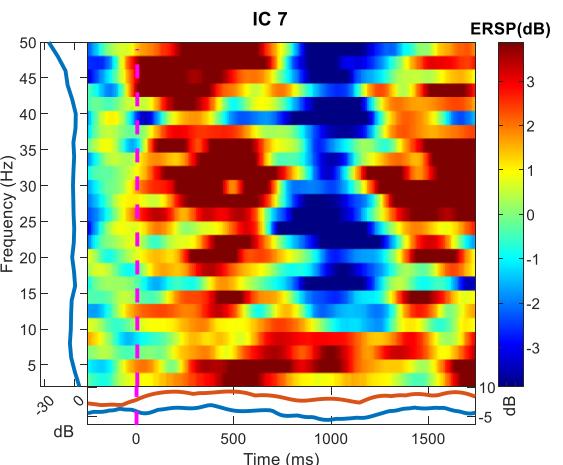
Occipital O2

Time	+600ms
Theta	increase
Alpha	decrease

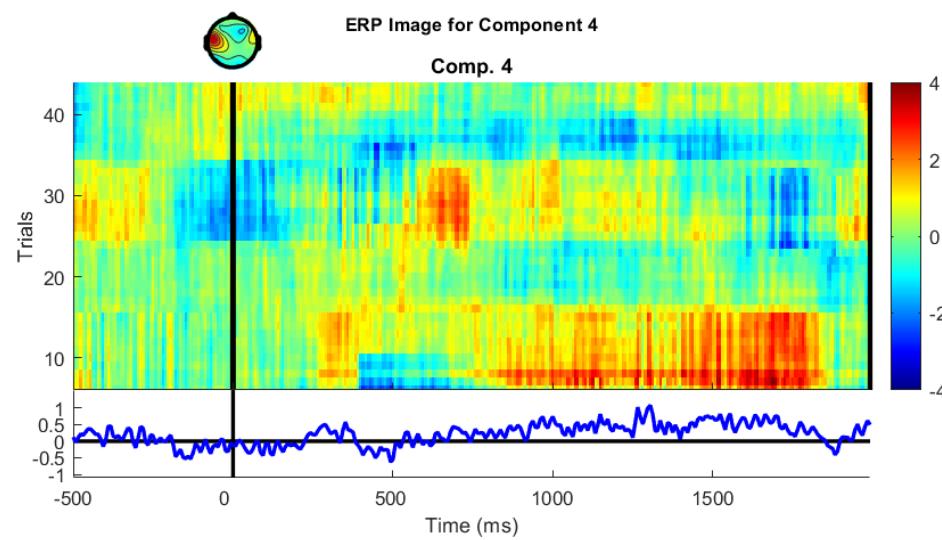
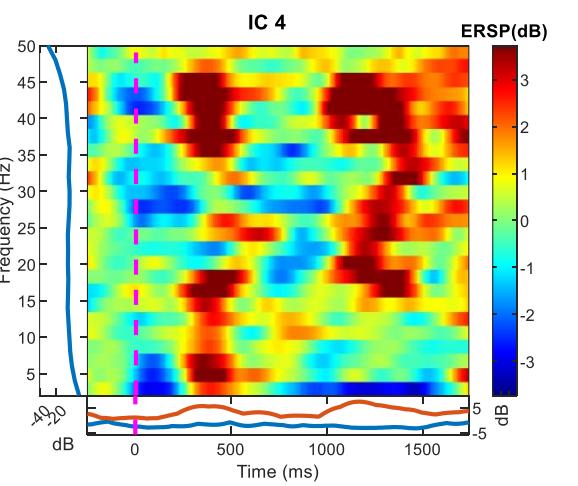
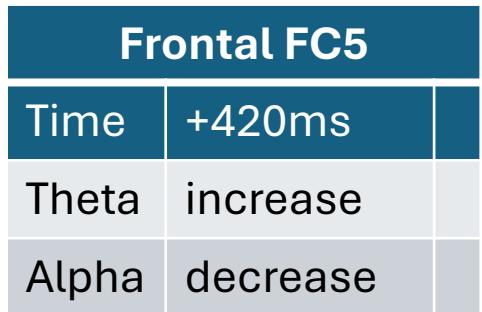
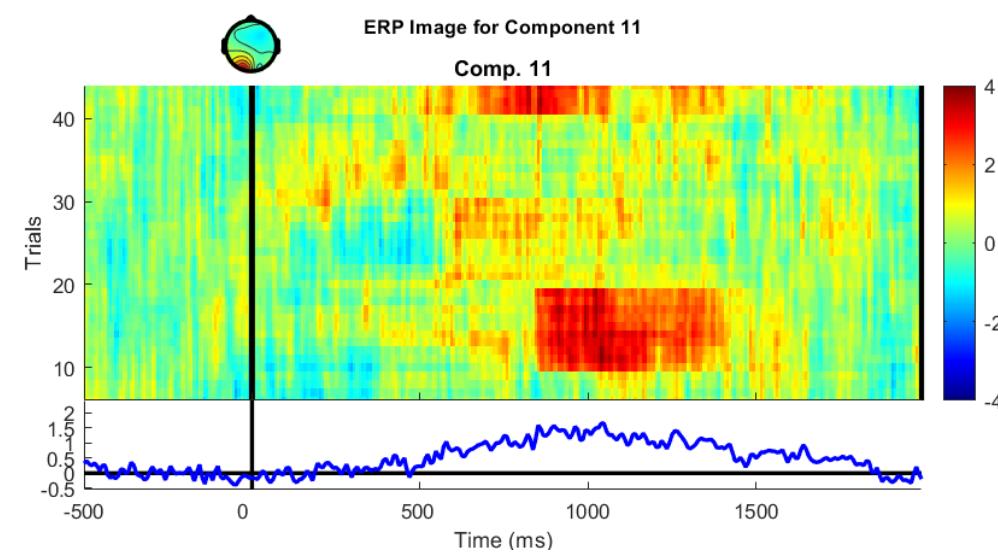
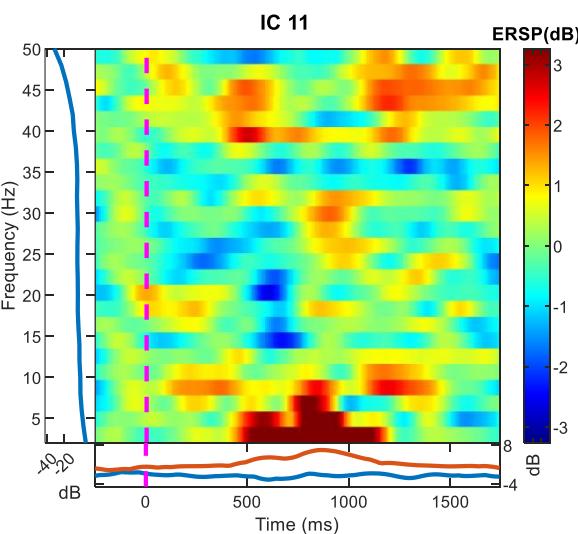
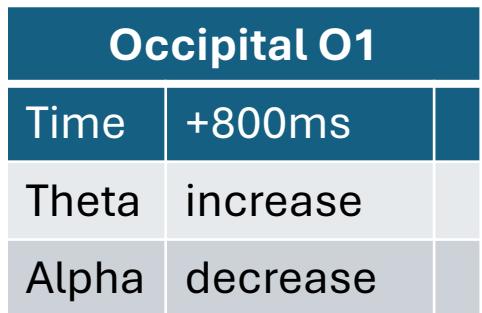


Frontal FC6

Time	+590ms
Theta	increase
Alpha	decrease

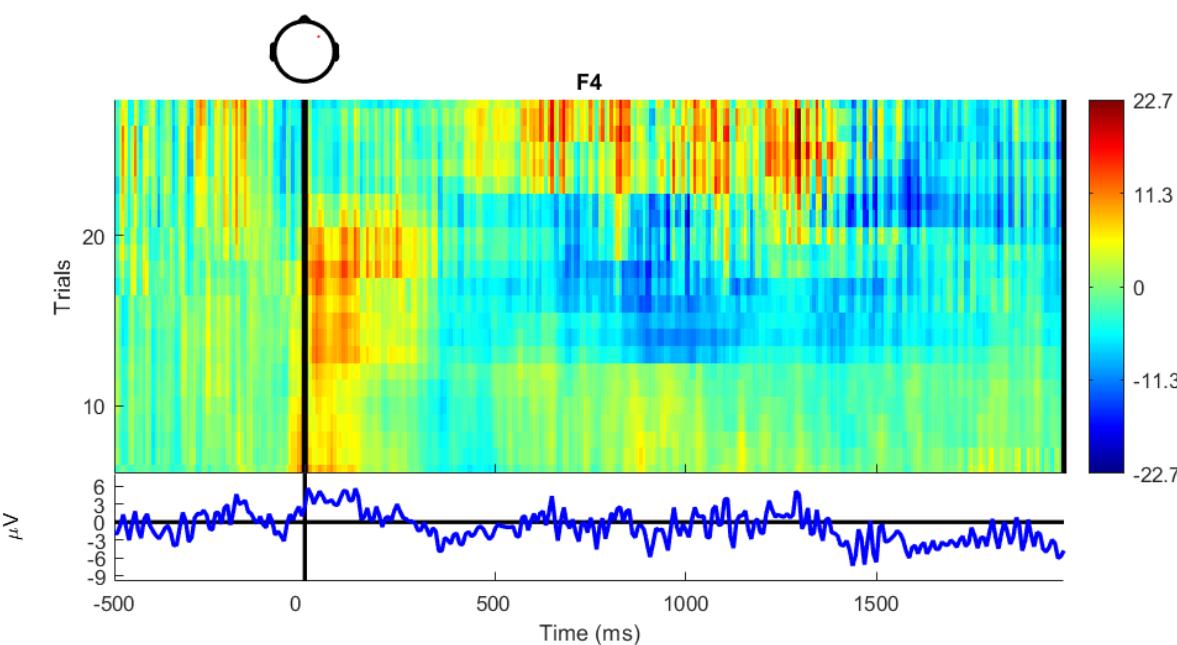


110_24_3

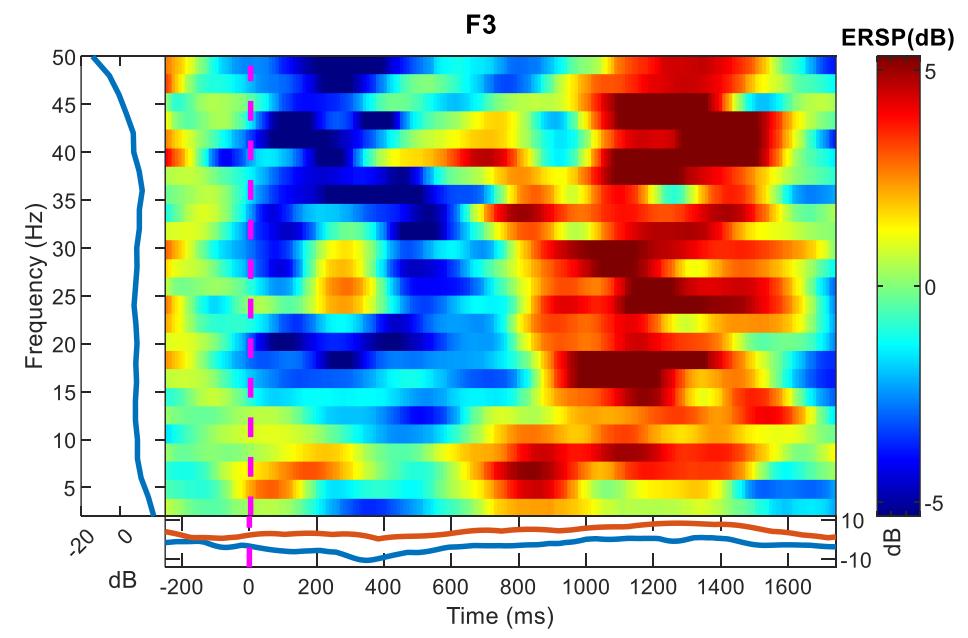
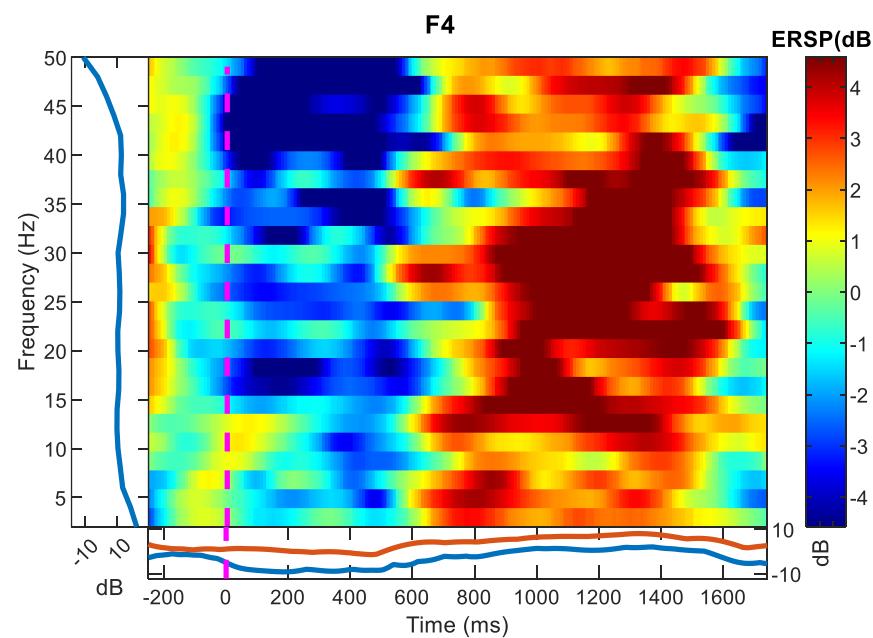
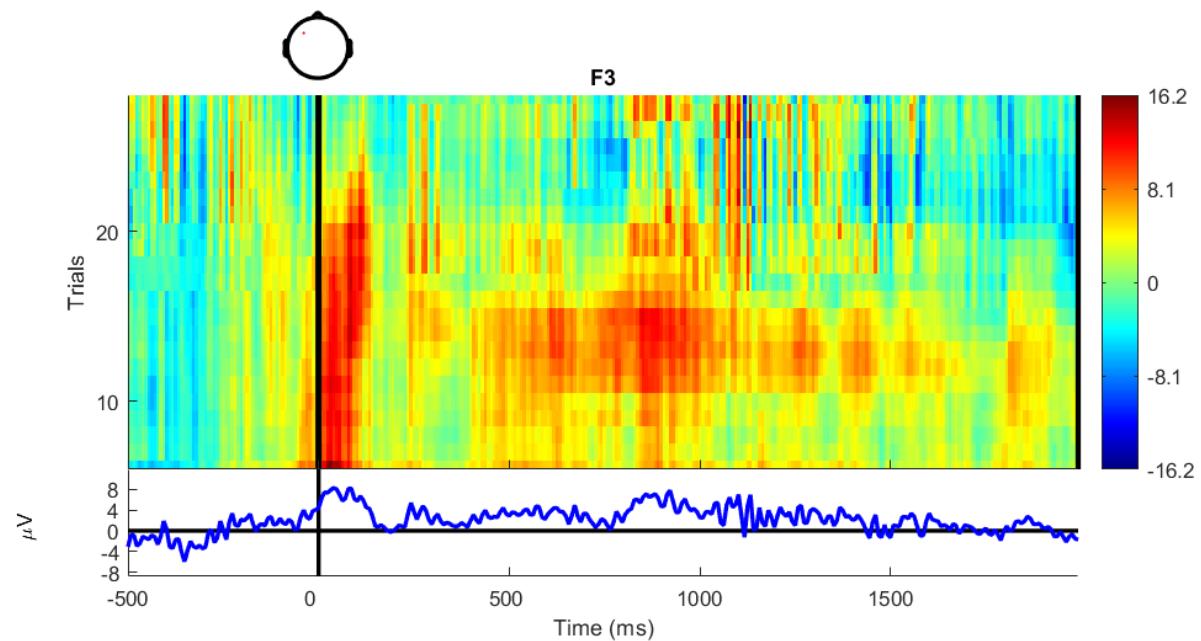


110_13_1

Channel based ERP F4

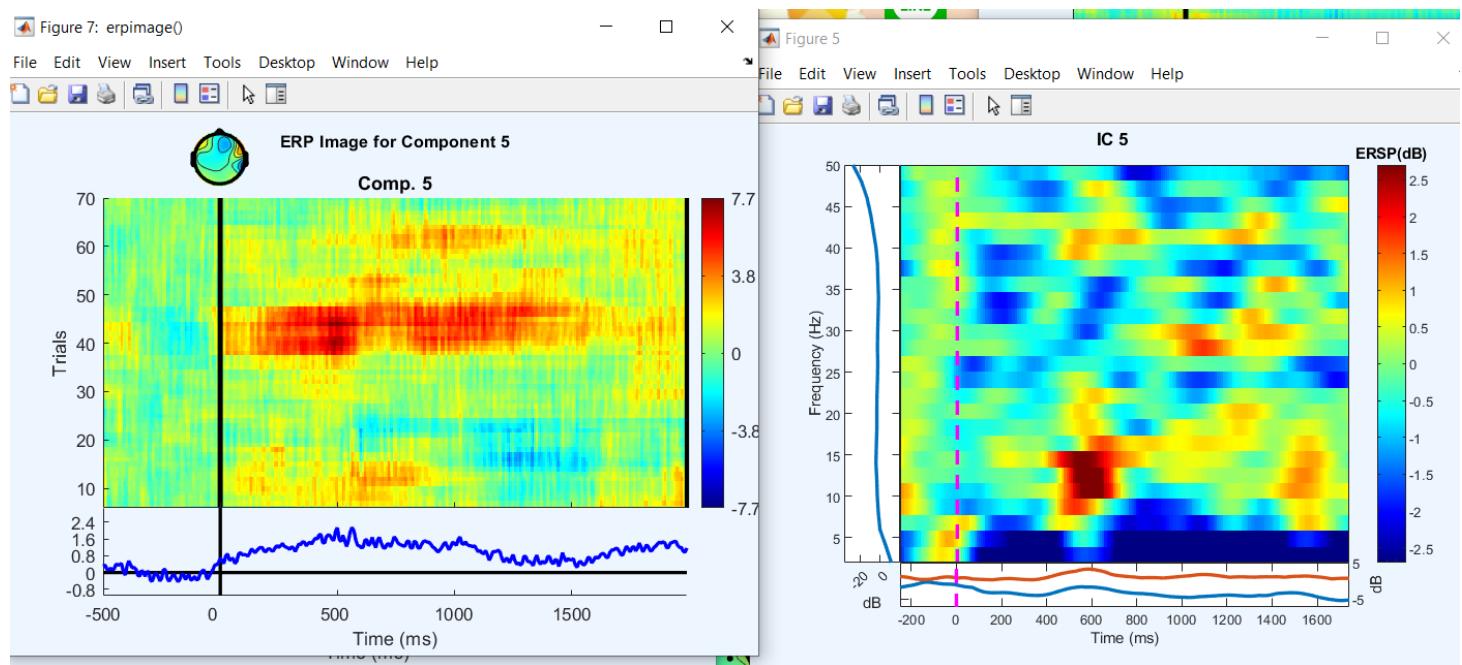


Channel based ERP F3



110_19_3

- 這種一般都是頭部晃動造成低頻noise, 壓住了working memory engagement 的feature, theta sychronisation 故見不到。



Theta Regional

Theta = 4:8
Baseline = [-150,0]
Window = [-100, +100]

===== All Regions Summary =====

Region: Left-Frontal

Components processed: 26

p-value (Early vs Middle): 0.034189 (increase)

p-value (Middle vs Later): 0.17954661 (decrease)

p-value (Early vs Later): 0.5111159 (increase)

Region: Right-Frontal

Components processed: 18

p-value (Early vs Middle): 0.41055 (increase)

p-value (Middle vs Later): 0.81247447 (increase)

p-value (Early vs Later): 0.58722027 (increase)

Region: Left-Temporal

Components processed: 0

p-value (Early vs Middle): NA

p-value (Middle vs Later): NA

p-value (Early vs Later): NA

Region: Right-Temporal

Components processed: 0

p-value (Early vs Middle): NA

p-value (Middle vs Later): NA

p-value (Early vs Later): NA

Region: Left-Occipital

Components processed: 11

p-value (Early vs Middle): 0.81909 (increase)

p-value (Middle vs Later): 0.24909961 (increase)

p-value (Early vs Later): 0.077533081 (increase)

Region: Right-Occipital

Components processed: 4

p-value (Early vs Middle): 0.36674 (increase)

p-value (Middle vs Later): 0.34426721 (decrease)

p-value (Early vs Later): 0.97194371 (increase)

Region: Left-Parietal

Components processed: 10

p-value (Early vs Middle): 0.85147 (increase)

p-value (Middle vs Later): 0.52619481 (decrease)

p-value (Early vs Later): 0.57951094 (decrease)

Region: Right-Parietal

Components processed: 10

p-value (Early vs Middle): 0.20348 (increase)

p-value (Middle vs Later): 0.47982459 (decrease)

p-value (Early vs Later): 0.49935354 (increase)

Theta Regional

Theta = 4:7

Baseline = [-150,0]

Window = [-150, +150]

===== All Regions Summary =====

Region: Left-Frontal

Components processed: 26

p-value (Early vs Middle): 0.0032715 (increase)

p-value (Middle vs Later): 0.026454864 (decrease)

p-value (Early vs Later): 0.6468065 (decrease)

Region: Right-Frontal

Components processed: 18

p-value (Early vs Middle): 0.13108 (increase)

p-value (Middle vs Later): 0.77397509 (increase)

p-value (Early vs Later): 0.21157631 (increase)

Region: Left-Temporal

Components processed: 0

p-value (Early vs Middle): NA

p-value (Middle vs Later): NA

p-value (Early vs Later): NA

Region: Right-Temporal

Components processed: 0

p-value (Early vs Middle): NA

p-value (Middle vs Later): NA

p-value (Early vs Later): NA

Region: Left-Occipital

Components processed: 11

p-value (Early vs Middle): 0.29969 (increase)

p-value (Middle vs Later): 0.74726162 (decrease)

p-value (Early vs Later): 0.24599825 (increase)

Region: Right-Occipital

Components processed: 4

p-value (Early vs Middle): 0.25234 (increase)

p-value (Middle vs Later): 0.30598999 (decrease)

p-value (Early vs Later): 0.54678182 (increase)

Region: Left-Parietal

Components processed: 10

p-value (Early vs Middle): 0.78484 (increase)

p-value (Middle vs Later): 0.44849229 (increase)

p-value (Early vs Later): 0.25112317 (increase)

Region: Right-Parietal

Components processed: 10

p-value (Early vs Middle): 0.031042 (increase)

p-value (Middle vs Later): 0.12920609 (decrease)

p-value (Early vs Later): 0.69944062 (increase)

Theta Regional

Theta = 4:8

Baseline = [-150,0]

Window = [-150, +150]

===== All Regions Summary =====

Region: Left-Frontal

Components processed: 26

p-value (Early vs Middle): 0.0040581 (increase)

p-value (Middle vs Later): 0.034490937 (decrease)

p-value (Early vs Later): 0.60714516 (increase)

Region: Right-Frontal

Components processed: 18

p-value (Early vs Middle): 0.17808 (increase)

p-value (Middle vs Later): 0.87705776 (decrease)

p-value (Early vs Later): 0.20936533 (increase)

Region: Left-Temporal

Components processed: 0

p-value (Early vs Middle): NA

p-value (Middle vs Later): NA

p-value (Early vs Later): NA

Region: Right-Temporal

Components processed: 0

p-value (Early vs Middle): NA

p-value (Middle vs Later): NA

p-value (Early vs Later): NA

Region: Left-Occipital

Components processed: 11

p-value (Early vs Middle): 0.29436 (increase)

p-value (Middle vs Later): 0.79638287 (decrease)

p-value (Early vs Later): 0.18817951 (increase)

Region: Right-Occipital

Components processed: 4

p-value (Early vs Middle): 0.22746 (increase)

p-value (Middle vs Later): 0.34905758 (decrease)

p-value (Early vs Later): 0.56566129 (decrease)

Region: Left-Parietal

Components processed: 10

p-value (Early vs Middle): 0.78644 (increase)

p-value (Middle vs Later): 0.50574037 (increase)

p-value (Early vs Later): 0.24902823 (increase)

Region: Right-Parietal

Components processed: 10

p-value (Early vs Middle): 0.05221 (increase)

p-value (Middle vs Later): 0.21534991 (decrease)

p-value (Early vs Later): 0.6360665 (increase)

Theta Regional

Theta = 4:7

Baseline = [-150,0]

Window = [-200, +200]



===== All Regions Summary =====

Region: Left-Frontal

Components processed: 26

p-value (Early vs Middle): 0.0044531 (increase)

p-value (Middle vs Later): 0.11565556 (decrease)

p-value (Early vs Later): 0.34836176 (increase)

Region: Right-Frontal

Components processed: 18

p-value (Early vs Middle): 0.010056 (increase)

p-value (Middle vs Later): 0.8309115 (decrease)

p-value (Early vs Later): 0.0063135764 (increase)

Region: Left-Temporal

Components processed: 0

p-value (Early vs Middle): NA

p-value (Middle vs Later): NA

p-value (Early vs Later): NA

Region: Right-Temporal

Components processed: 0

p-value (Early vs Middle): NA

p-value (Middle vs Later): NA

p-value (Early vs Later): NA

Region: Left-Occipital

Components processed: 11

p-value (Early vs Middle): 0.28778 (increase)

p-value (Middle vs Later): 0.80524637 (decrease)

p-value (Early vs Later): 0.12101959 (increase)

Region: Right-Occipital

Components processed: 4

p-value (Early vs Middle): 0.50449 (increase)

p-value (Middle vs Later): 0.86514145 (decrease)

p-value (Early vs Later): 0.72330094 (decrease)

Region: Left-Parietal

Components processed: 10

p-value (Early vs Middle): 0.56861 (decrease)

p-value (Middle vs Later): 0.039784934 (increase)

p-value (Early vs Later): 0.049709835 (increase)

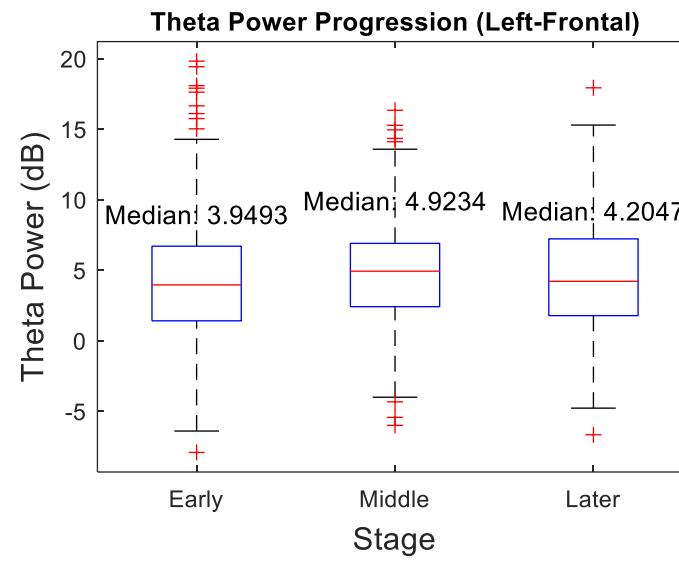
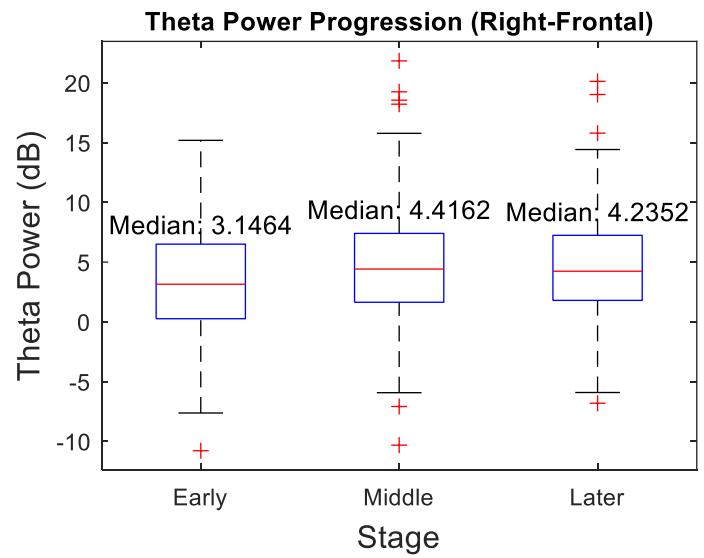
Region: Right-Parietal

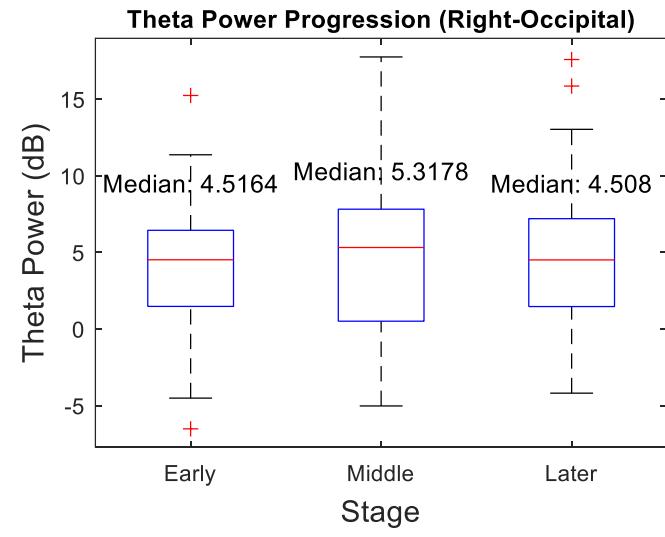
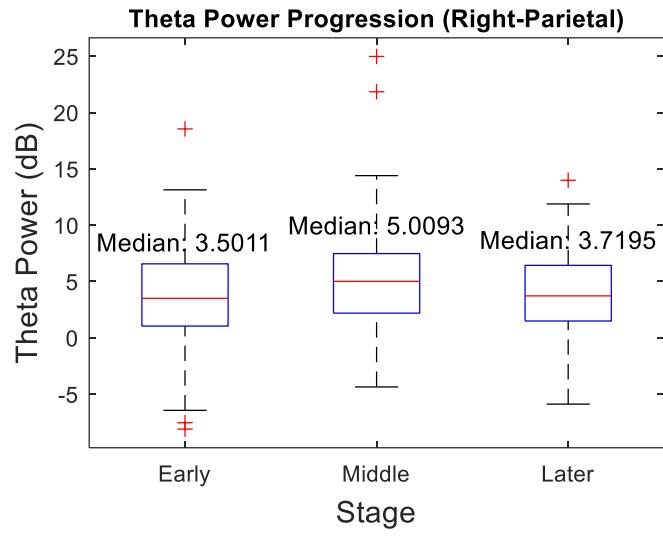
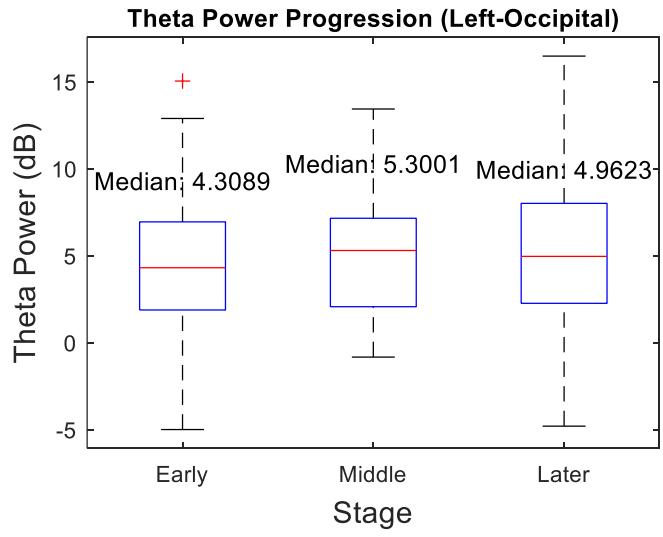
Components processed: 10

p-value (Early vs Middle): 0.010637 (increase)

p-value (Middle vs Later): 0.061182312 (decrease)

p-value (Early vs Later): 0.56504926 (increase)





Theta Regional

Theta = 4:8
Baseline = [-150,0]
Window = [-200, +200]

===== All Regions Summary =====

Region: Left-Frontal

Components processed: 26

p-value (Early vs Middle): 0.0047922 (increase)

p-value (Middle vs Later): 0.11653151 (decrease)

p-value (Early vs Later): 0.33834205 (increase)

Region: Right-Frontal

Components processed: 18

p-value (Early vs Middle): 0.0044208 (increase)

p-value (Middle vs Later): 0.90851327 (decrease)

p-value (Early vs Later): 0.0038758731 (increase)

Region: Left-Temporal

Components processed: 0

p-value (Early vs Middle): NA

p-value (Middle vs Later): NA

p-value (Early vs Later): NA

Region: Right-Temporal

Components processed: 0

p-value (Early vs Middle): NA

p-value (Middle vs Later): NA

p-value (Early vs Later): NA

Region: Left-Occipital

Components processed: 11

p-value (Early vs Middle): 0.38103 (increase)

p-value (Middle vs Later): 0.98810521 (decrease)

p-value (Early vs Later): 0.092263464 (increase)

Region: Right-Occipital

Components processed: 4

p-value (Early vs Middle): 0.50449 (increase)

p-value (Middle vs Later): 0.91933091 (decrease)

p-value (Early vs Later): 0.65088845 (increase)

Region: Left-Parietal

Components processed: 10

p-value (Early vs Middle): 0.51325 (decrease)

p-value (Middle vs Later): 0.041779206 (increase)

p-value (Early vs Later): 0.084367243 (increase)

Region: Right-Parietal

Components processed: 10

p-value (Early vs Middle): 0.037614 (increase)

p-value (Middle vs Later): 0.15922229 (decrease)

p-value (Early vs Later): 0.59729964 (increase)

Alpha Regional

Alpha = 8:13

Baseline = [-150,0]

Window = [-200, +200]



===== All Regions Summary =====

Region: Left-Frontal

Components processed: 26

p-value (Early vs Middle): 0.056214 (increase)

p-value (Middle vs Later): 0.69560895 (increase)

p-value (Early vs Later): 0.027609738 (increase)

Region: Right-Frontal

Components processed: 18

p-value (Early vs Middle): 0.0015745 (increase)

p-value (Middle vs Later): 0.75911054 (decrease)

p-value (Early vs Later): 0.0048853954 (increase)

Region: Left-Temporal

Components processed: 0

p-value (Early vs Middle): NA

p-value (Middle vs Later): NA

p-value (Early vs Later): NA

Region: Right-Temporal

Components processed: 0

p-value (Early vs Middle): NA

p-value (Middle vs Later): NA

p-value (Early vs Later): NA

Region: Left-Occipital

Components processed: 11

p-value (Early vs Middle): 0.92779 (increase)

p-value (Middle vs Later): 0.41485574 (increase)

p-value (Early vs Later): 0.056320948 (increase)

Region: Right-Occipital

Components processed: 4

p-value (Early vs Middle): 0.7688 (increase)

p-value (Middle vs Later): 0.11095002 (increase)

p-value (Early vs Later): 0.071375802 (increase)

Region: Left-Parietal

Components processed: 10

p-value (Early vs Middle): 0.41155 (decrease)

p-value (Middle vs Later): 0.068309418 (increase)

p-value (Early vs Later): 0.27947931 (increase)

Region: Right-Parietal

Components processed: 10

p-value (Early vs Middle): 0.5879 (decrease)

p-value (Middle vs Later): 0.72181731 (increase)

p-value (Early vs Later): 0.2904768 (increase)

Alpha Regional

Alpha = 9:13

Baseline = [-150,0]

Window = [-200, +200]

===== All Regions Summary =====

Region: Left-Frontal

Components processed: 26

p-value (Early vs Middle): 0.054307 (increase)

p-value (Middle vs Later): 0.55088564 (increase)

p-value (Early vs Later): 0.017816649 (increase)

Region: Right-Frontal

Components processed: 18

p-value (Early vs Middle): 0.0052471 (increase)

p-value (Middle vs Later): 0.81937677 (decrease)

p-value (Early vs Later): 0.01319808 (increase)

Region: Left-Temporal

Components processed: 0

p-value (Early vs Middle): NA

p-value (Middle vs Later): NA

p-value (Early vs Later): NA

Region: Right-Temporal

Components processed: 0

p-value (Early vs Middle): NA

p-value (Middle vs Later): NA

p-value (Early vs Later): NA

Region: Left-Occipital

Components processed: 11

p-value (Early vs Middle): 0.85054 (increase)

p-value (Middle vs Later): 0.49212291 (increase)

p-value (Early vs Later): 0.075819455 (increase)

Region: Right-Occipital

Components processed: 4

p-value (Early vs Middle): 0.84915 (increase)

p-value (Middle vs Later): 0.065750982 (increase)

p-value (Early vs Later): 0.081488029 (increase)

Region: Left-Parietal

Components processed: 10

p-value (Early vs Middle): 0.40326 (decrease)

p-value (Middle vs Later): 0.083312645 (increase)

p-value (Early vs Later): 0.2731208 (increase)

Region: Right-Parietal

Components processed: 10

p-value (Early vs Middle): 0.47438 (increase)

p-value (Middle vs Later): 0.80191852 (increase)

p-value (Early vs Later): 0.22272347 (increase)