

‘Central to successful control is the ability to suppress actions that are no longer relevant or required.’

# Subject 108

**NF Task:** Users look at the car and imagine driving it forward to train alpha inhibition, aiming to enhance information suppression to reduce falling risk in the physical world.

# Epoching information

- Event '7' (alpha power drop, car moves backward) is set as time = 0 ms, with epochs from [-300 1000] ms.
- Event '6' (ERSP alpha power increase, car moves forward) is plotted as a black line to show its latency relative to '7' (fig 1).
- Corrects the baseline by subtracting the -290 to 0 ms mean

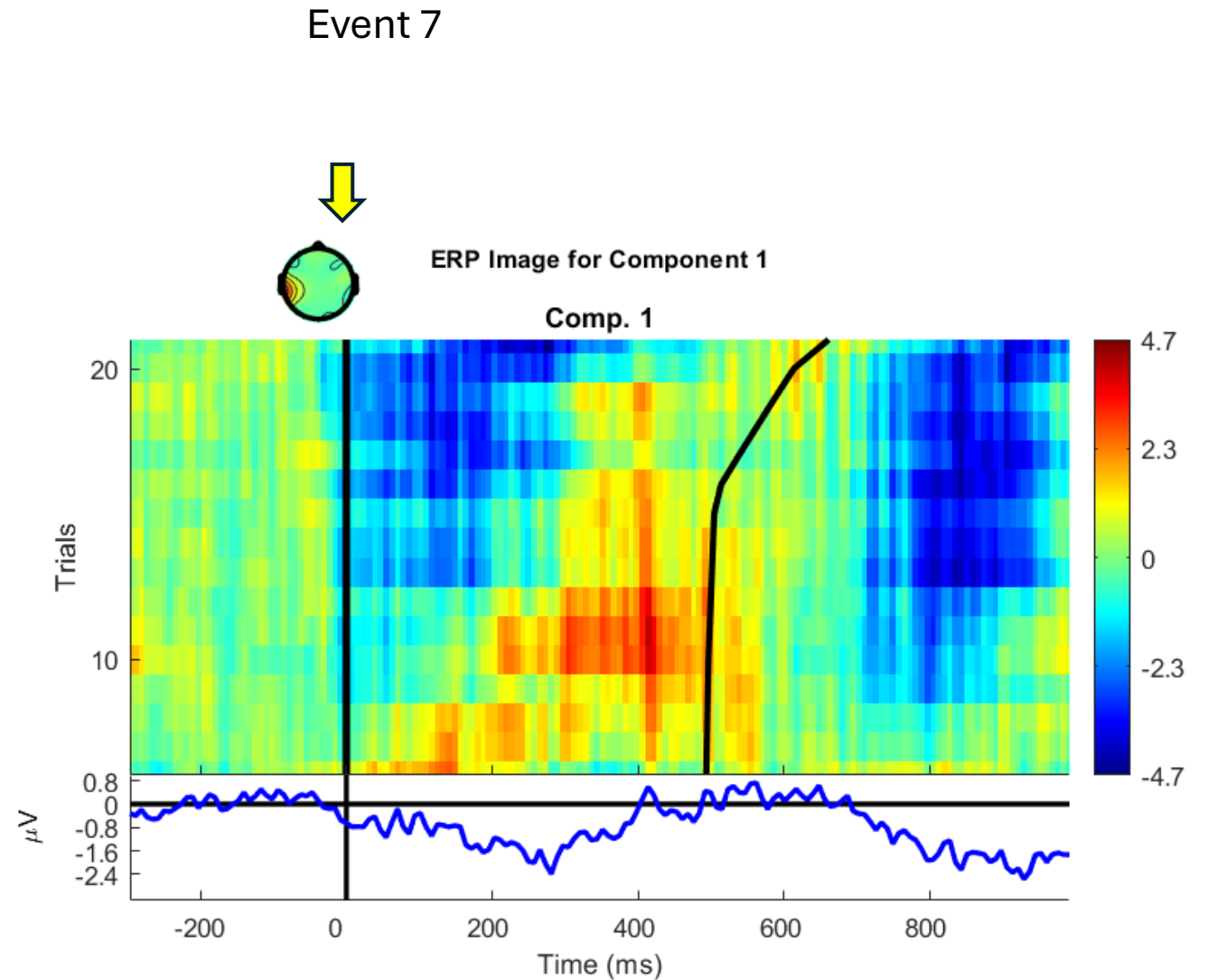
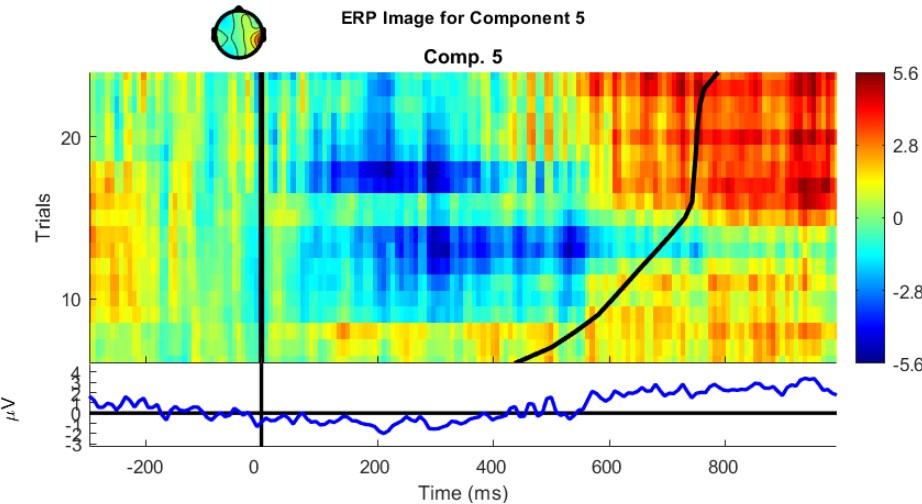
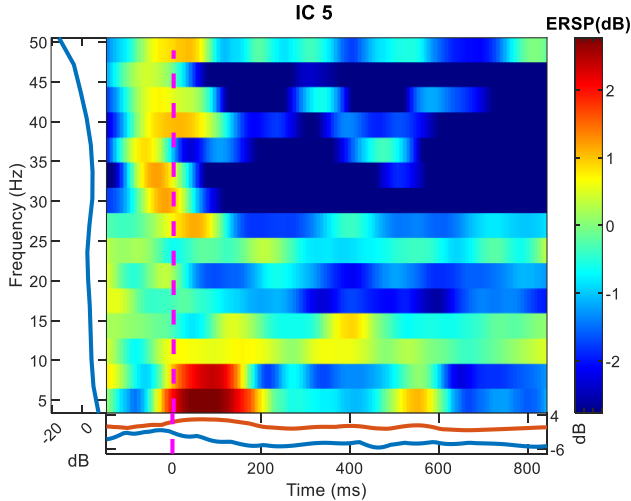
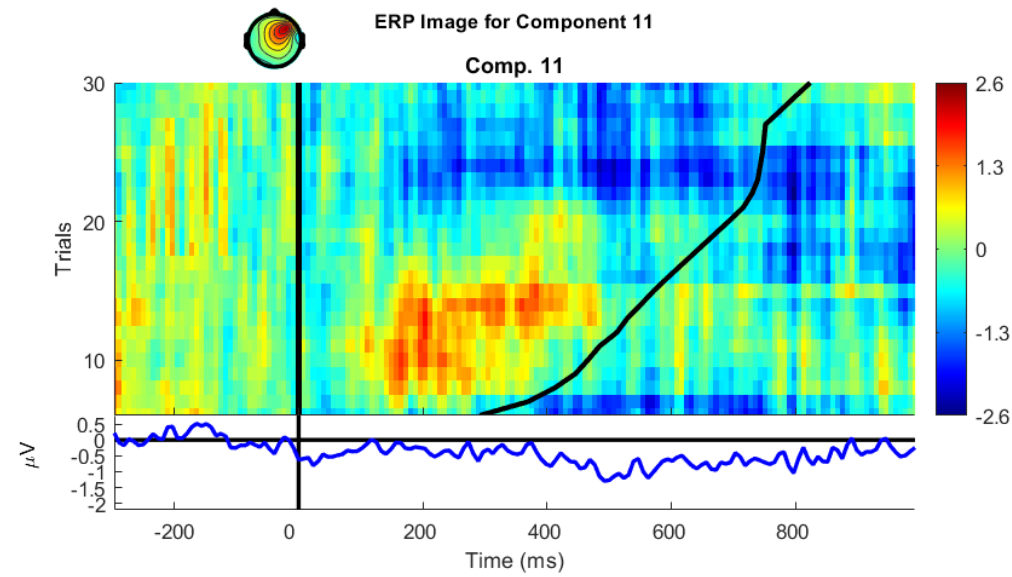
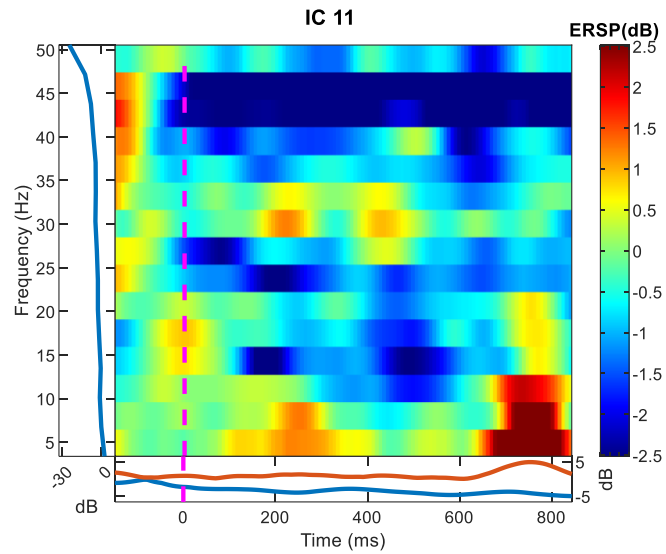


Figure 1. ERP of the 1<sup>st</sup> component for subject 104 training session 1. Event '7' is the stimulus onset when time = 0ms. Event '6' marks the car's forward movement with a black line, sorted by latency

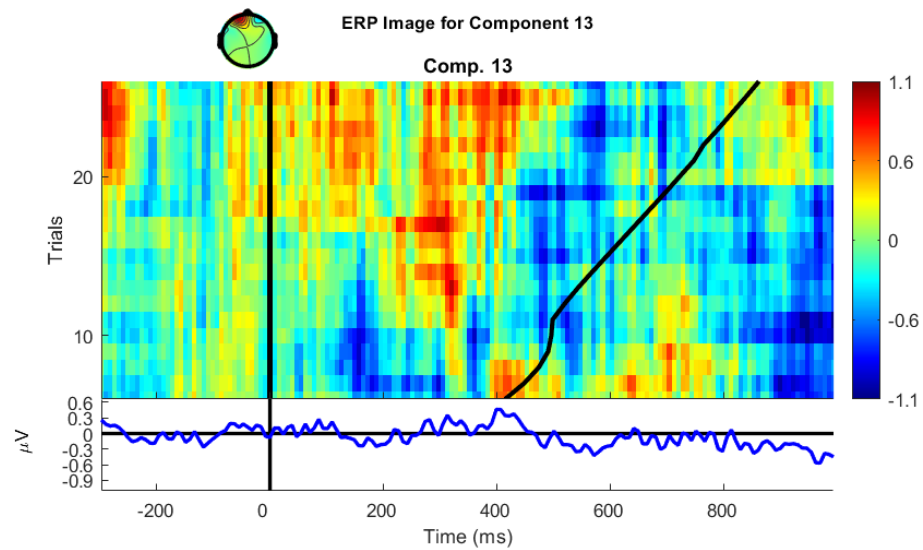
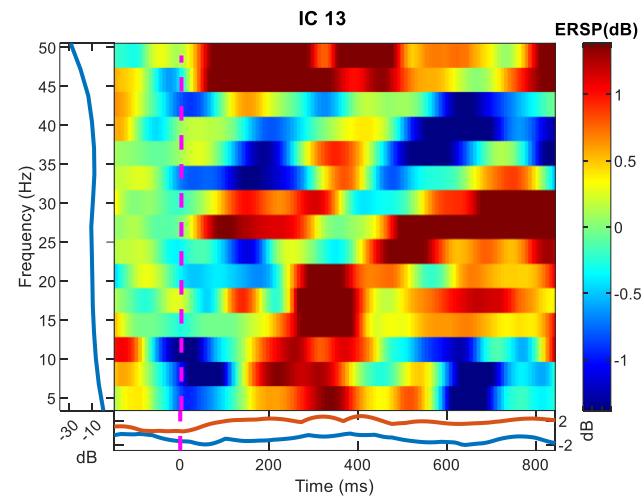
Temporal T8		
Time(ms)	Alpha	
[0, 200]	sync	
[200, 400]	desync	



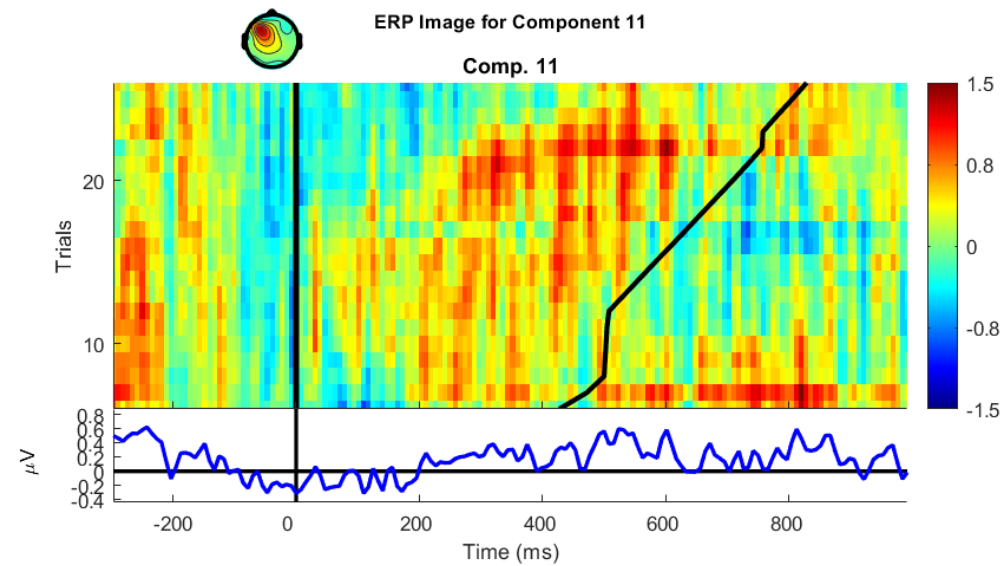
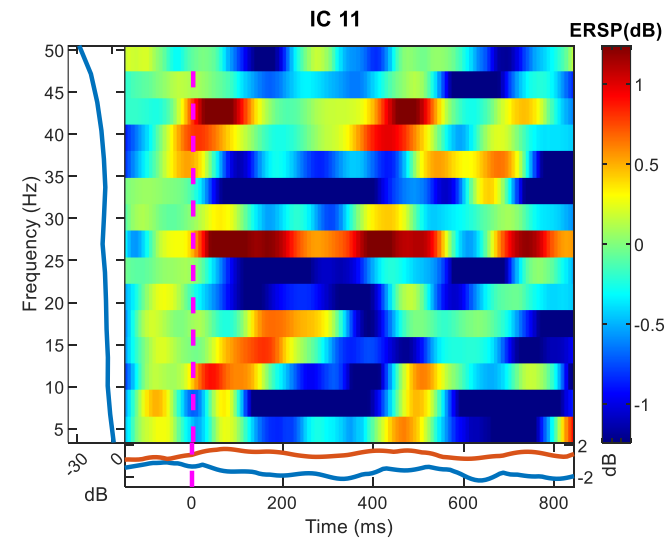
Frontal F4		
Time(ms)	Alpha	
[0, 100]	desync	
[200, 400]	sync	



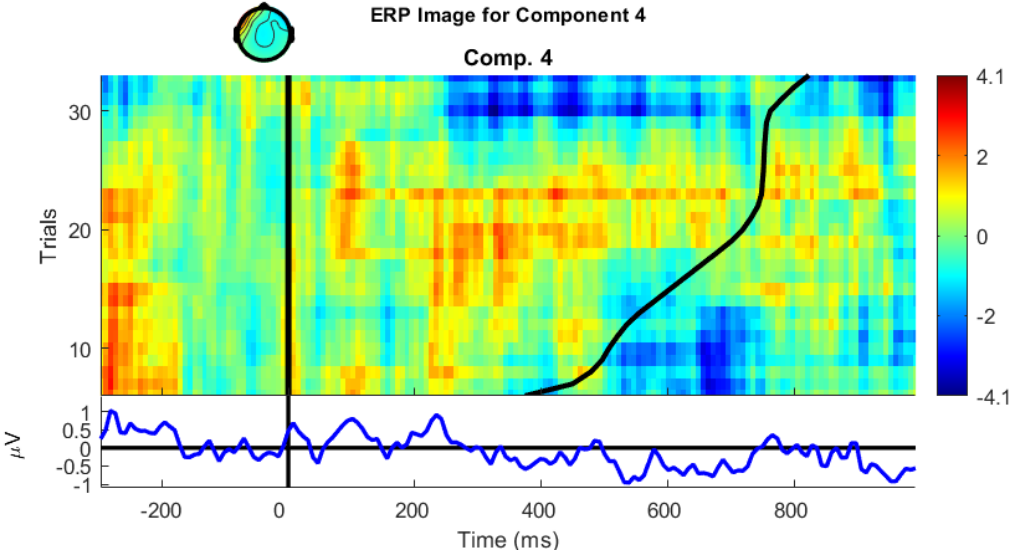
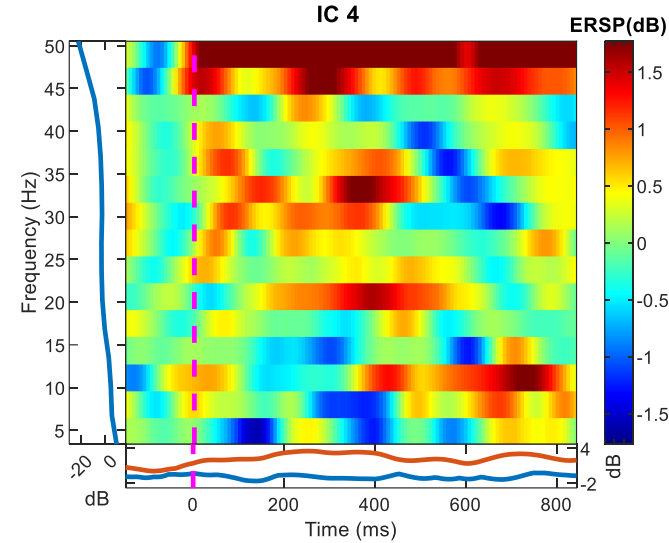
Frontal AF3		
Time(ms)	Alpha	
[0, 100]	desync	
[200, 400]	sync	



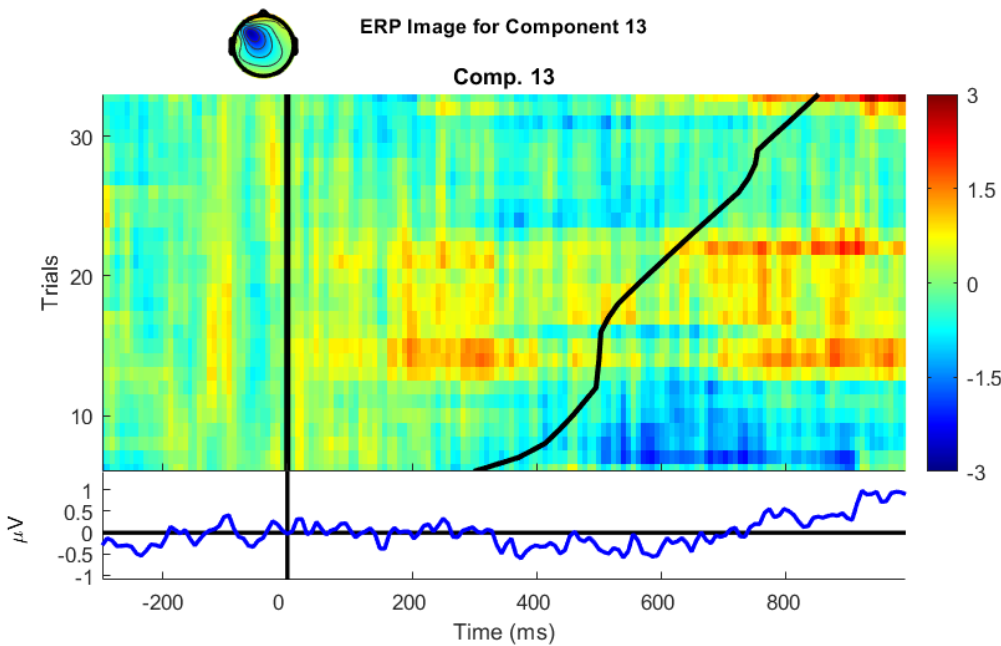
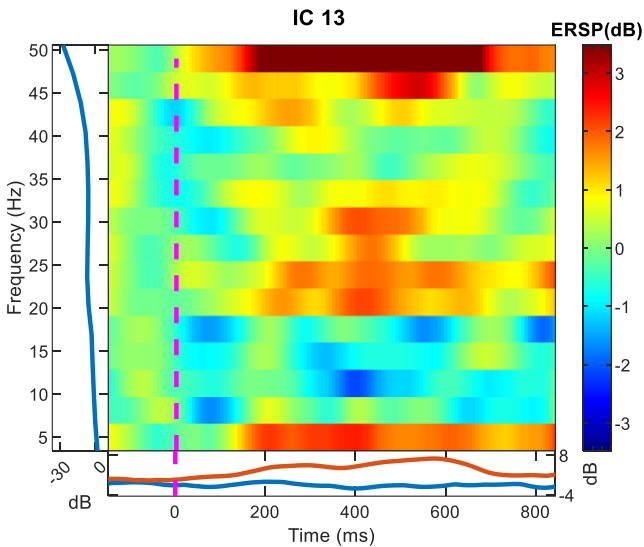
Frontal F3		
Time(ms)	Alpha	
[-50, 100]	sync	
[200, 400]	desync	



Frontal F7		
Time(ms)	Alpha	
[0, 100]	desync	
[200, 400]	sync	

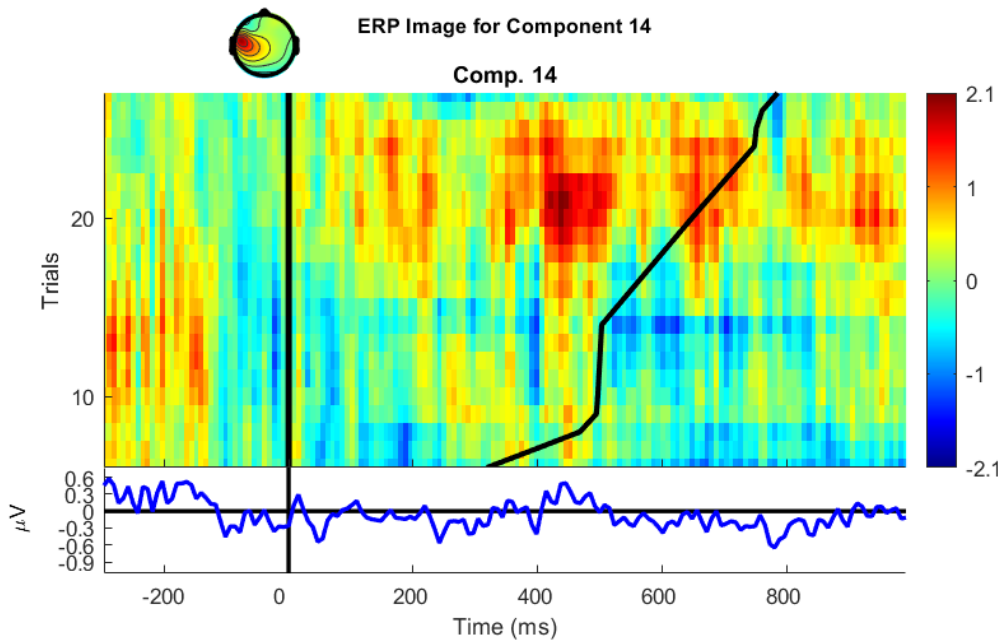
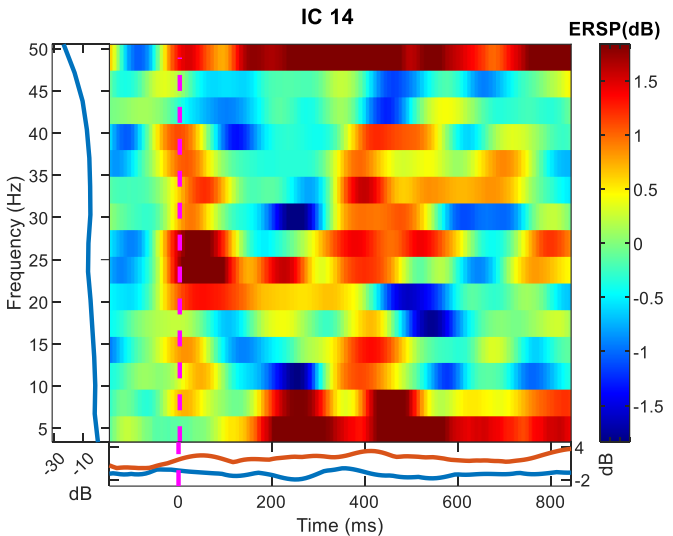


Frontal F3		
Time(ms)	Alpha	
[-50, 100]	desync	
[200, 400]	sync	

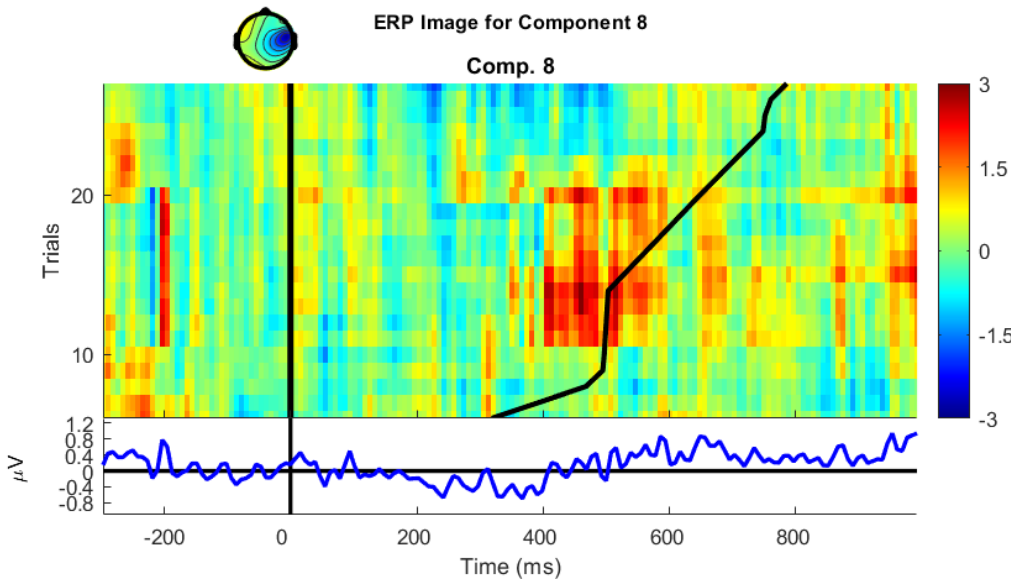
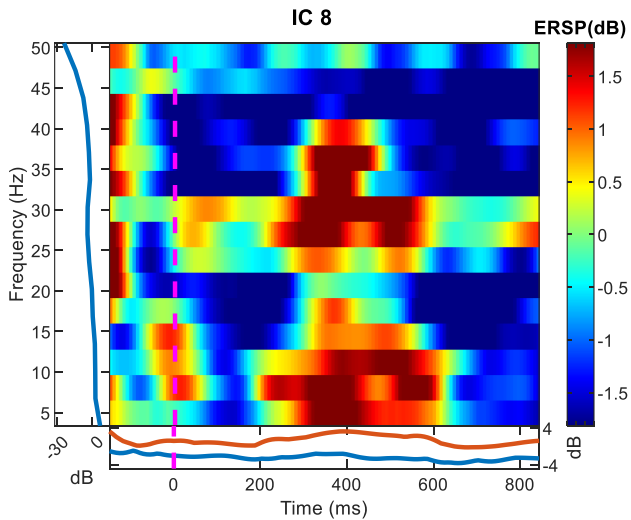




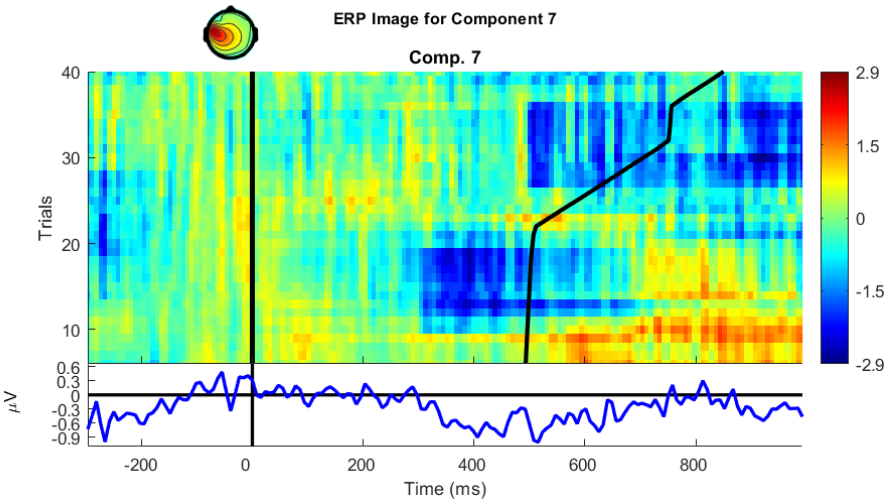
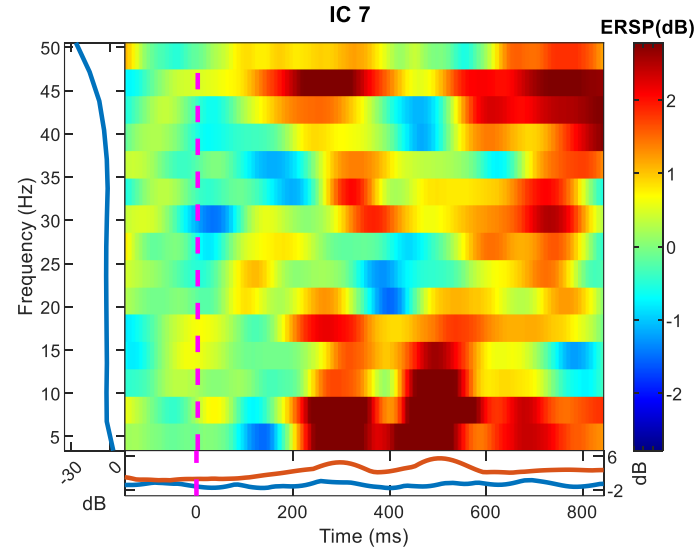
Frontal F4		
Time(ms)	Alpha	
[0, 100]	desync	
[400, 600]	sync	



Frontal FC6		
Time(ms)	Alpha	
[0, 100]	desync	
[400, 600]	sync	

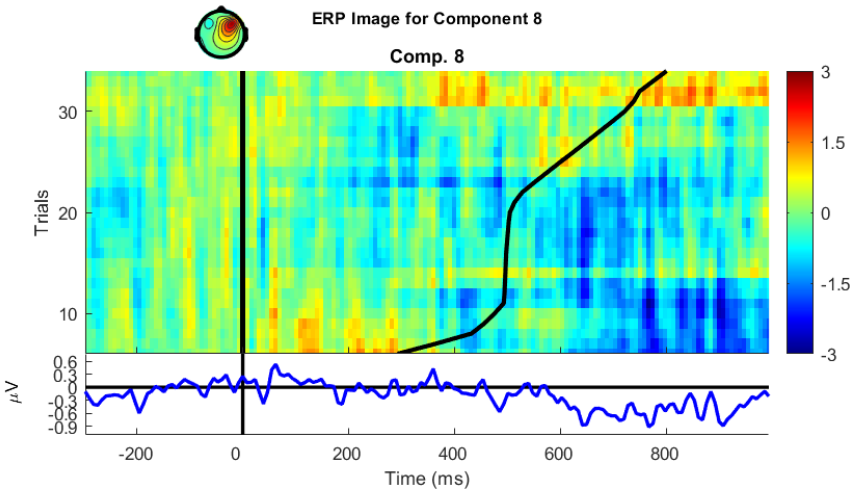
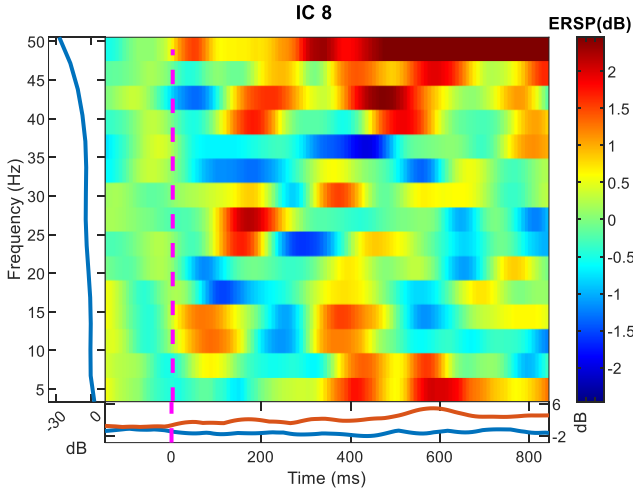


Frontal FC5		
Time(ms)	Alpha	
[-50, 100]	desync	
[200, 400]	sync	

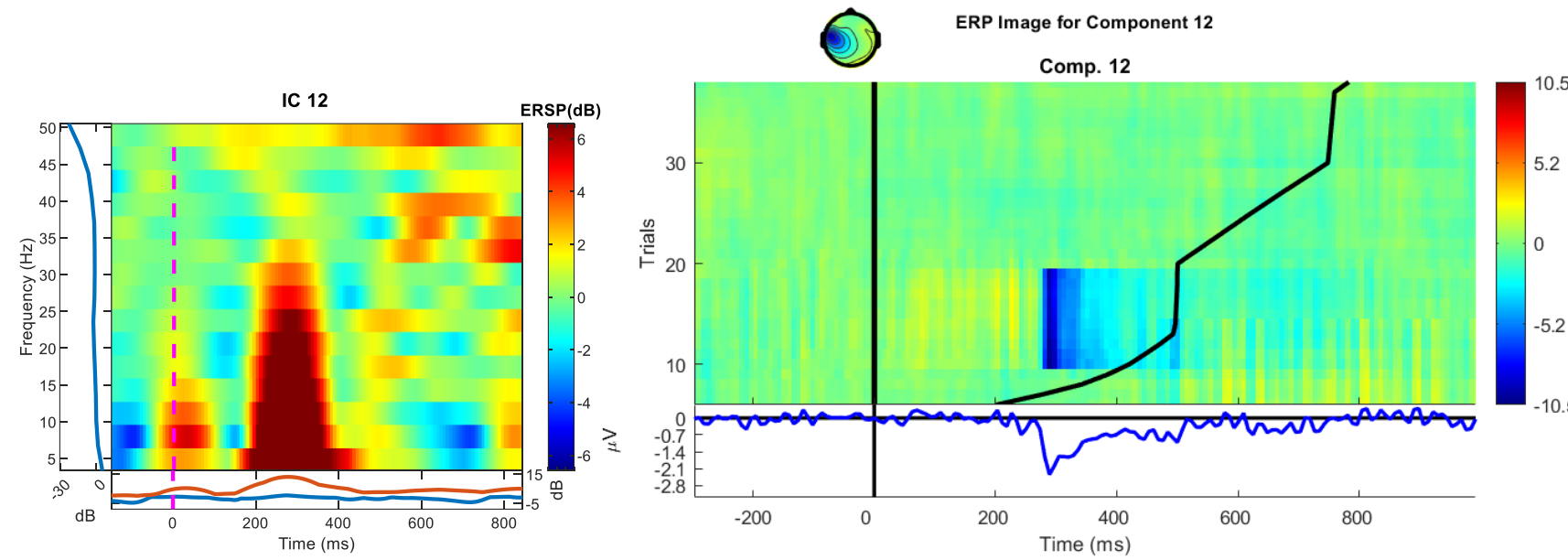


Frontal F4		
Time(ms)	Alpha	
[350,500]	sync	

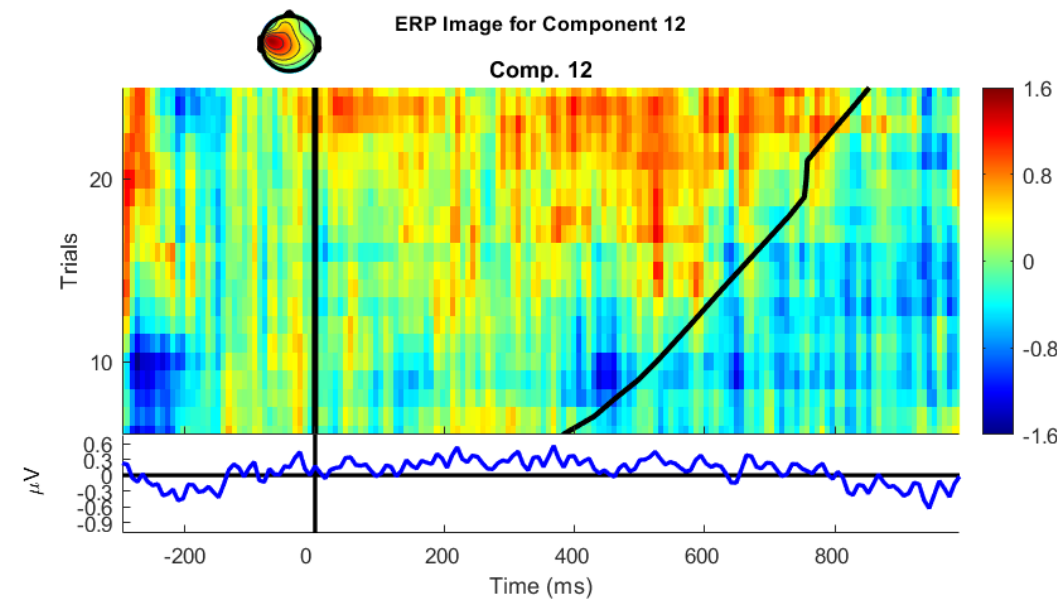
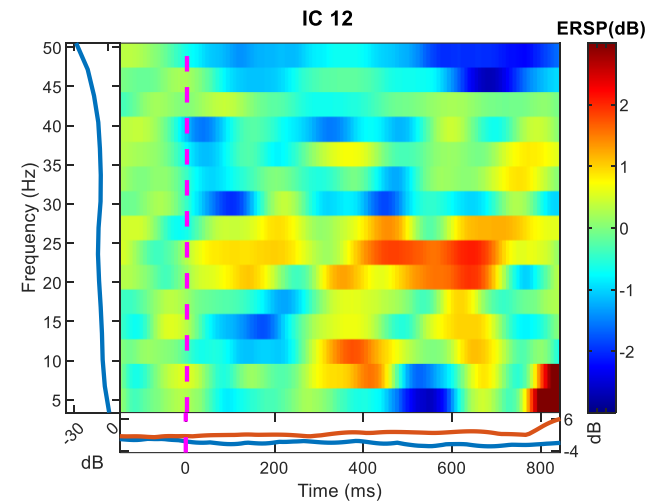
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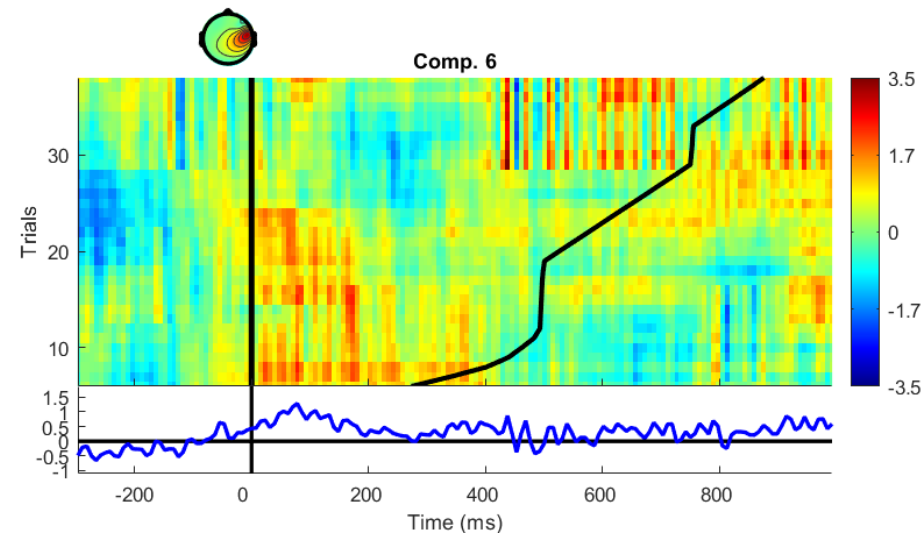
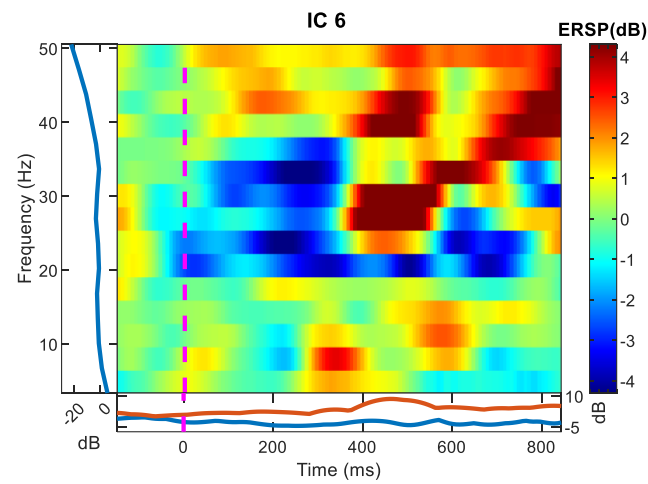
Frontal FC5		
Time(ms)	Alpha	
[0, 100]	sync	
[200, 400]	sync	



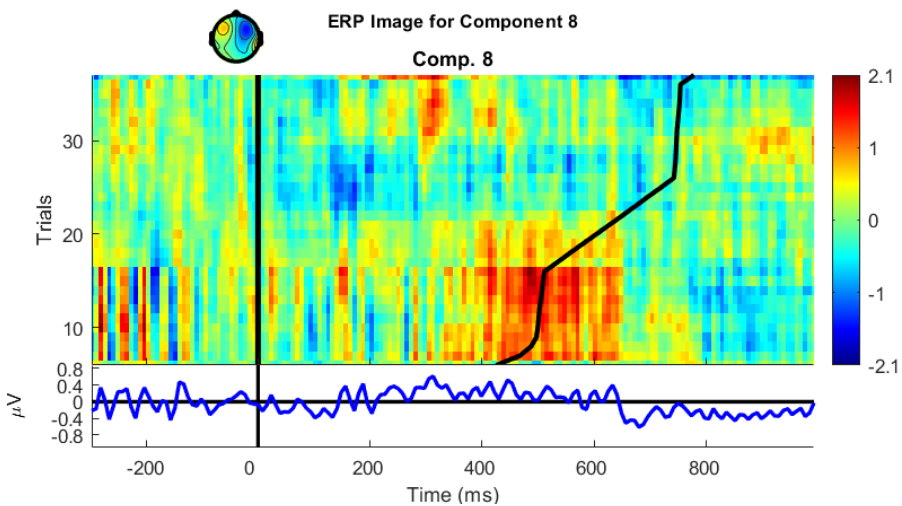
Frontal FC5		
Time(ms)	Alpha	
[0, 200]	desync	
[300, 450]	sync	



Frontal FC6		
Time(ms)	Alpha	
[0, 100]	desync	
[250, 410]	sync	



Frontal F4		
Time(ms)	Alpha	
[0, 50]	desync	
[100, 300]	sync	



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

Region: Left-Frontal

Components processed: 10

p-value (Early vs Middle): 0.0022732 (increase)

p-value (Middle vs Later): 4.7271635e-08 (decrease)

p-value (Early vs Later): 3.9749173e-06 (decrease)

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Region: Right-Frontal

Components processed: 6

p-value (Early vs Middle): 0.31848 (decrease)

p-value (Middle vs Later): 0.4783427 (increase)

p-value (Early vs Later): 0.49005049 (decrease)

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No data available for Left-Occipital

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No data available for Right-Occipital

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No data available for Left-Parietal

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No data available for Right-Parietal

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