QEEG Clinical Report

BrainLens V0.4

Report Description

Personal & Clinical Data

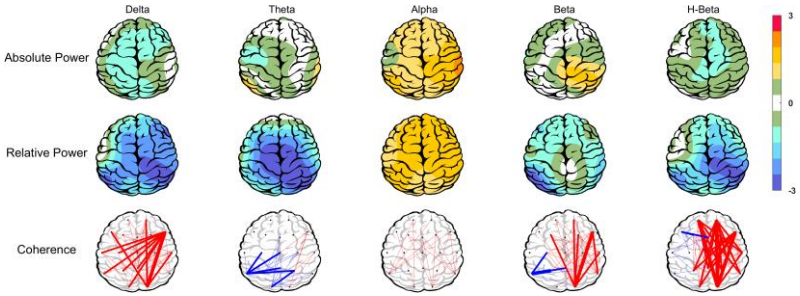
Name	Iman Ghasemi Por	Date of Recording	12-Feb-2025
Date of Birth - Age	01-Apr-1987 - 37.86	Gender	Male
Handedness(R/L)	Right	Source of Referral	Dr Sajjadi
Initial Diagnosis	Aggressive-Attention and Concentration Problem-Busy Brain-Depression		
Current Medication	-		

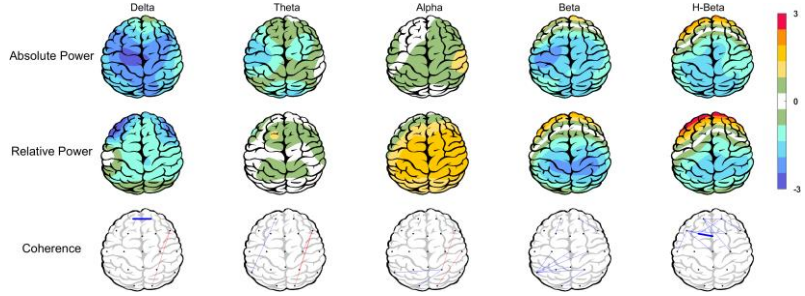
Dr Sajjadi

Summary Report

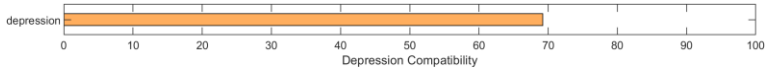
EEG Quality

Z-score Information

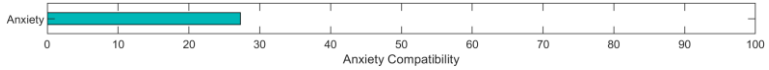




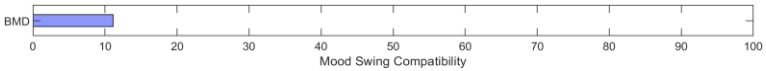
Compatibility with Depression



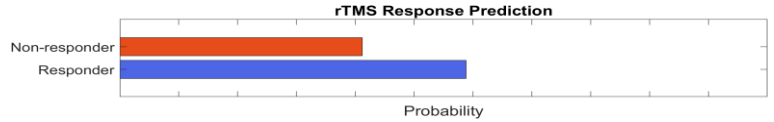
Compatibility with Anxiety



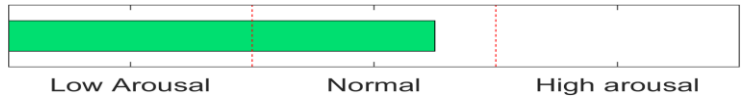
Compatibility with Mood Swing



TMS Responsibility



Arousal Level



Cognitive Performance

APF

Posterior APF-EC= 10.38

Posterior APF-EO= 10.62

To investigate QEEG-based predicting medication response, please refer to the Report.

Iman Ghasemi Por\Dr Sajjadi

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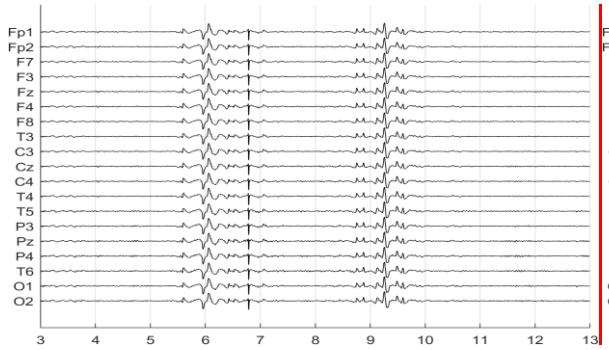
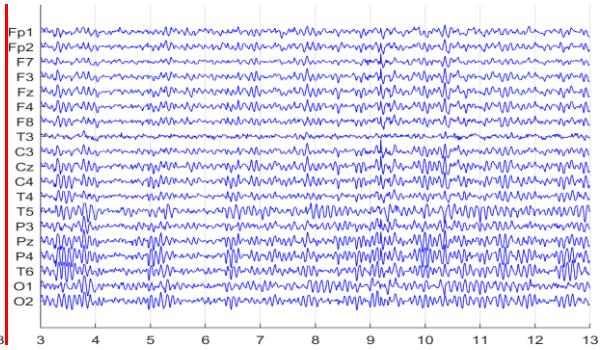
Denoising Information (EC)

Raw EEG



Denoised EEG



Flat Channels

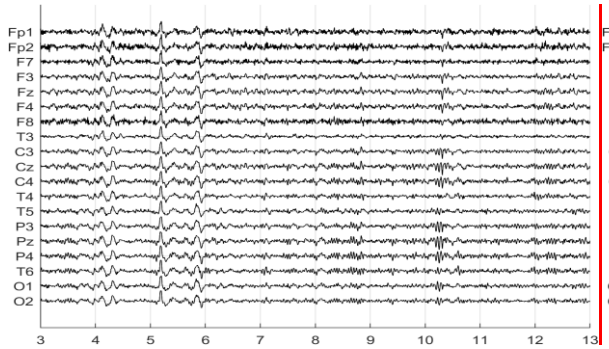
Rejected Channels

Number of Eye and Muscle Elements			
Eye	0	**Muscle**	1
Total Artifact Percentage			
EEG Quality	good		

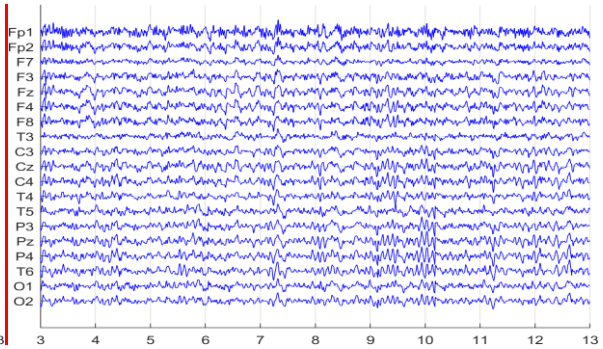
Low Artifact Percentage	
High Artifact Percentage	
Total Recording Time Remaining	259.26 sec

Denoising Information (EO)

Raw EEG



Denoised EEG



Flat Channels

Rejected Channels

Number of Eye and Muscle Elements			
Eye	0	**Muscle**	3
Total Artifact Percentage			
EEG Quality	good		

Low Artifact Percentage	
High Artifact Percentage	
Total Recording Time Remaining	141.41 sec

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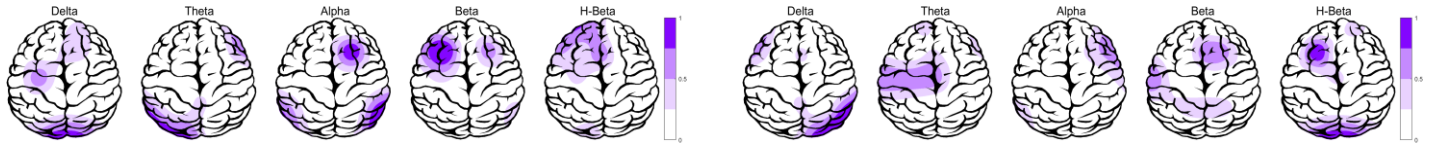
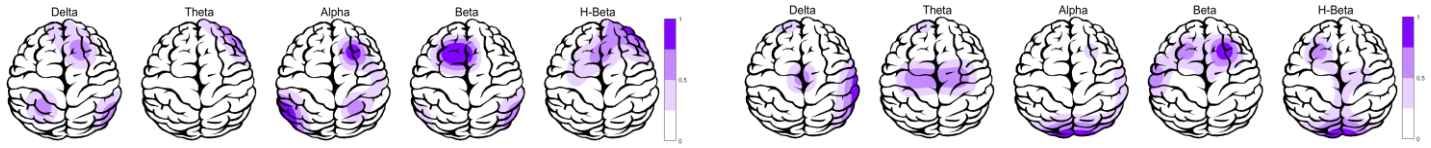
Pathological assessment for mood disorders and adult ADHD

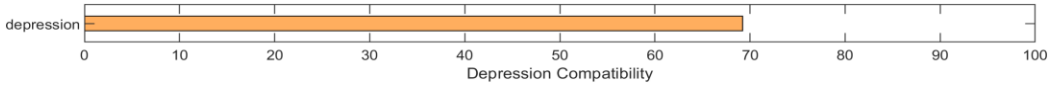
Compare to Mood Disorders Database

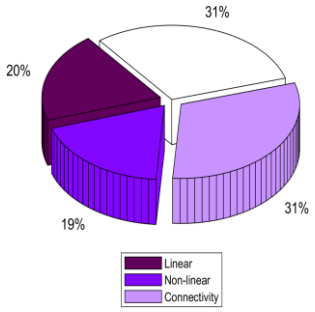


Compare to Adult ADHD Database

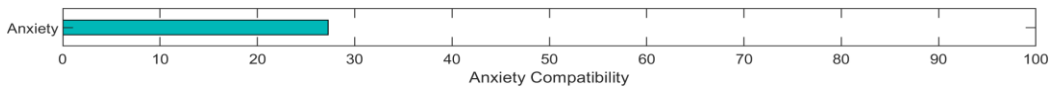


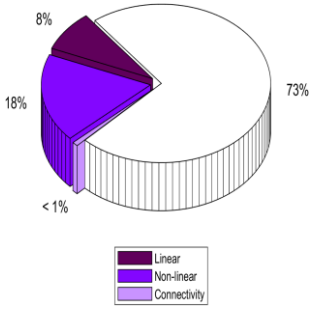
EEG Compatibility with Depression Diagnosis



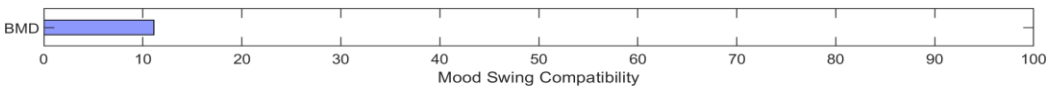


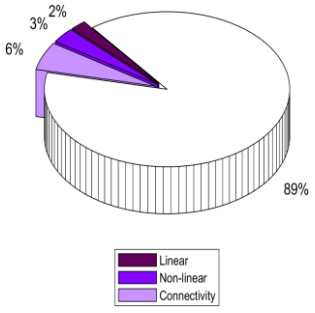
EEG Compatibility with Anxiety Diagnosis





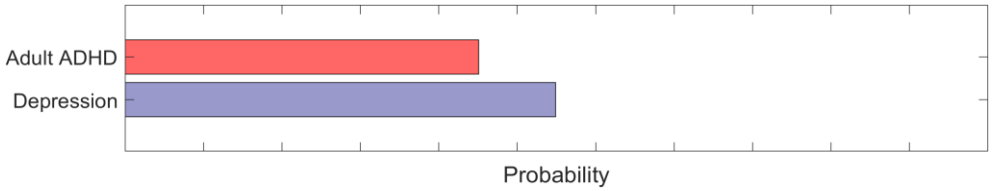
EEG Compatibility with Mood Swing Diagnosis *



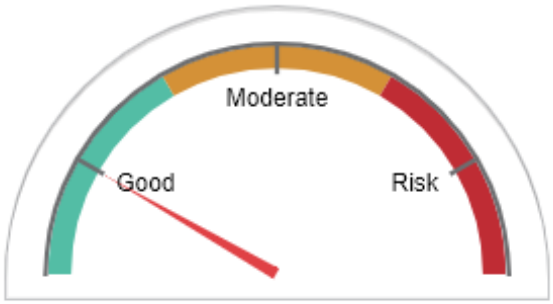


* This index can only be investigated if there are symptoms of mood swings (R/O BMD or R/O mood swings).

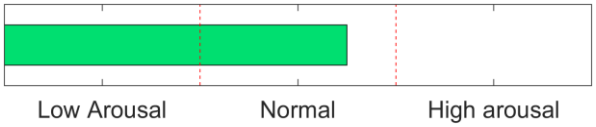
Depression and Adult ADHD Diagnosis Probabiliy



Cognitive Functions Asessment



Arousal Level Detection



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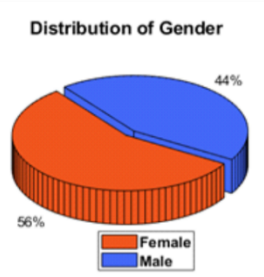
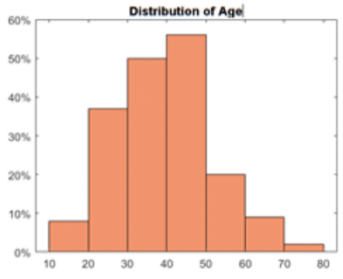
rTMS Response Prediction

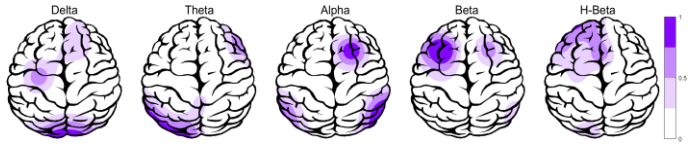
Network Performance

Accuracy: 92.1%
Sensitivity: 89.13%
Specificity: 97.47%

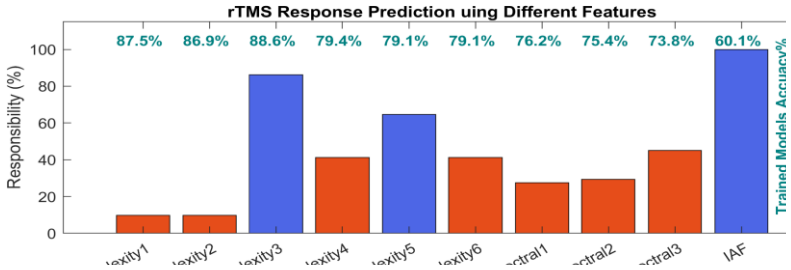
Participants Information



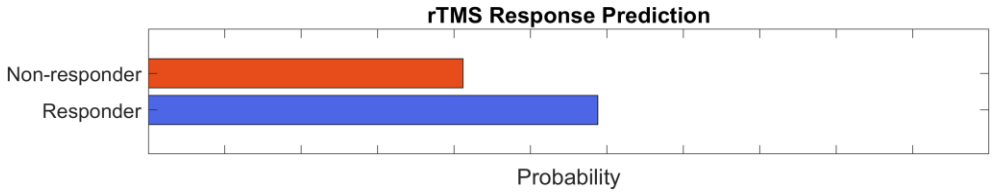




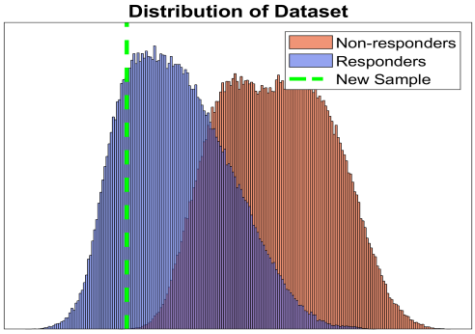
Features Information



Responsibility



Data Distribution



About Predicting rTMS Response

This index was obtained based on machine learning approaches and by examining the QEEG biomarkers of more than 470 cases treated with rTMS. The cases were diagnosed with depression (with and without comorbidity) and all were medication free. By examining more than 40 biomarkers capable of predicting response to rTMS treatment in previous studies and with data analysis, finally 10 biomarkers including bispectral and nonlinear features entered the machine learning process. The final chart can distinguish between RTMS responsive and resistant cases with 92.1% accuracy. This difference rate is much higher than the average response to treatment of 44%, in the selection of patients with clinical criteria, and is an important finding in the direction of personalized treatment for rTMS.

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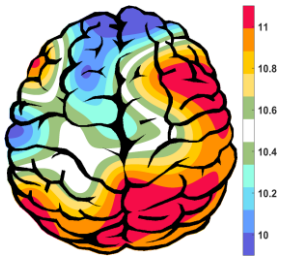
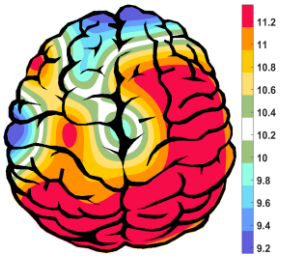
APF(EO)



Frontal APF= 10.67

Posterior APF= 10.62

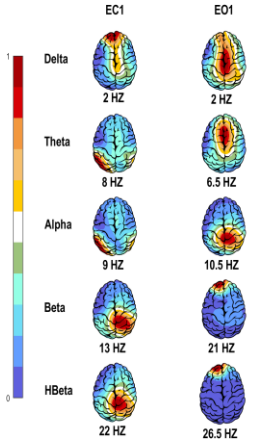
APF(EC)

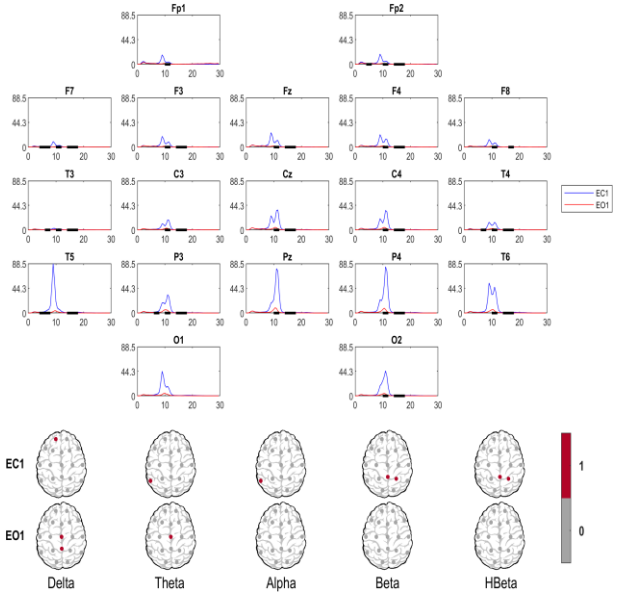


Frontal APF= 11.25

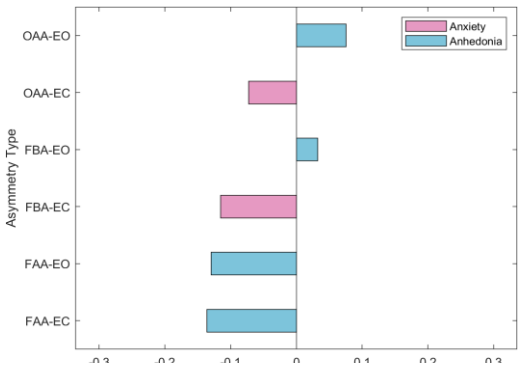
Posterior APF= 10.38

EEG Spectra

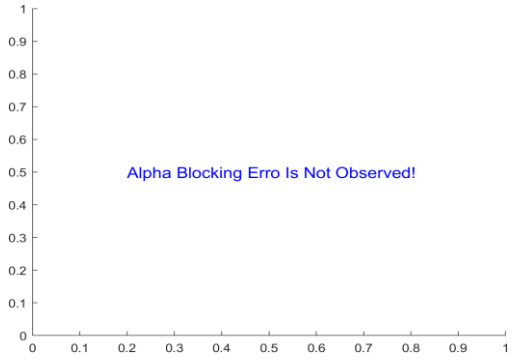




Alpha Asymmetry(AA)



Alpha Blocking



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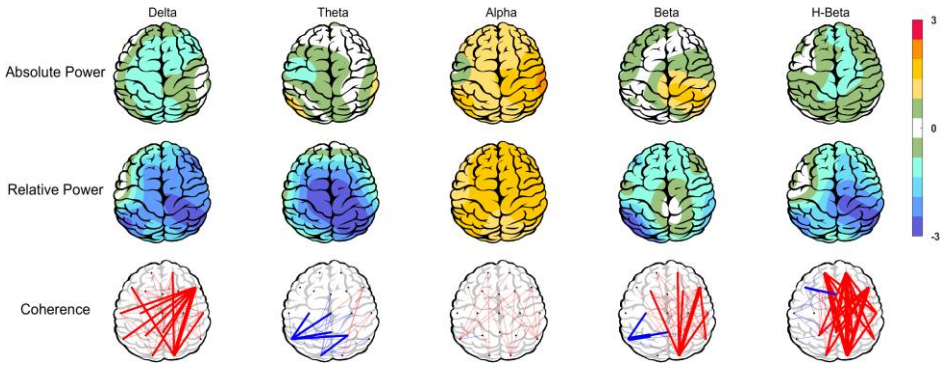
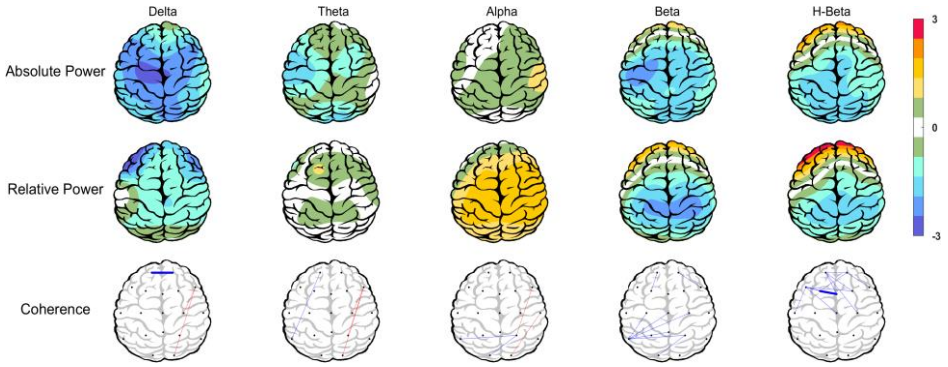
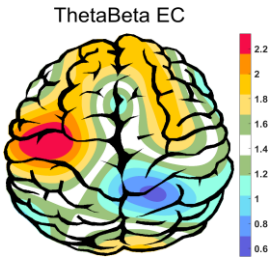
Z Score Summary Information (EC)

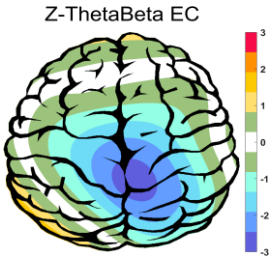


Z Score Summary Information (EO)

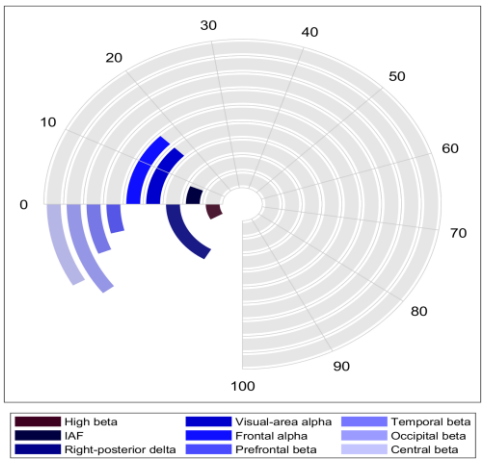


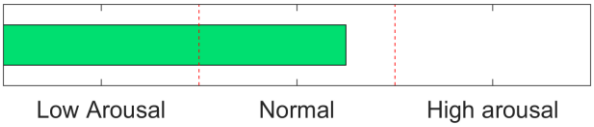
E.C.T/B Ratio (Raw- Z Score)



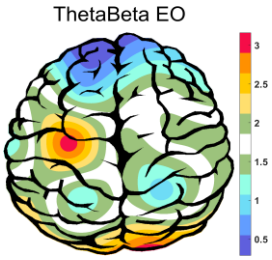


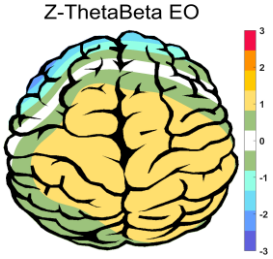
Arousal Level





E.O.T/B Ratio (Raw- Z Score)





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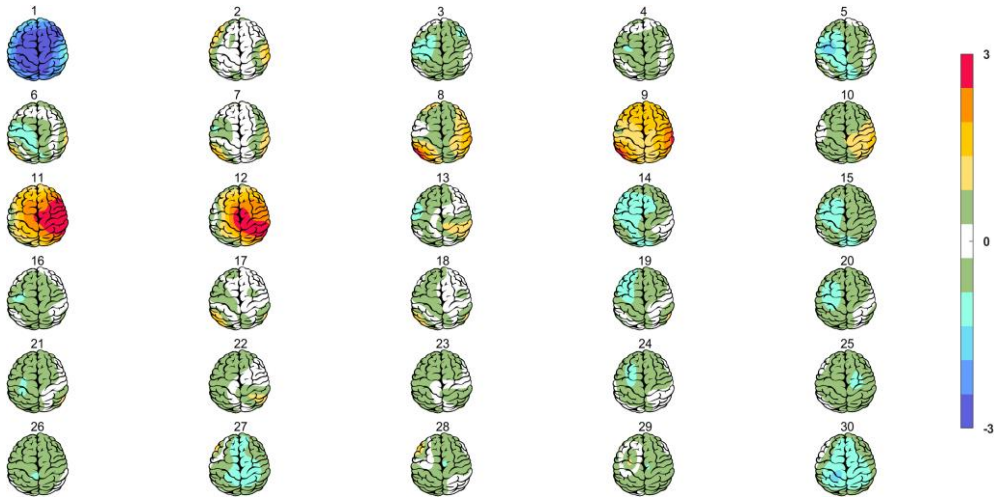
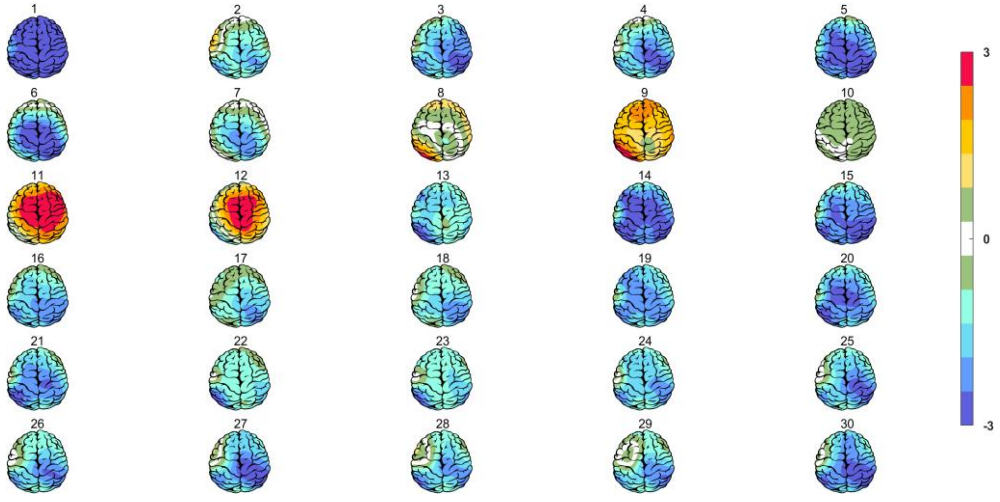
Absolute Power-Eye Closed (EC)



Relative Power-Eye Closed (EC)



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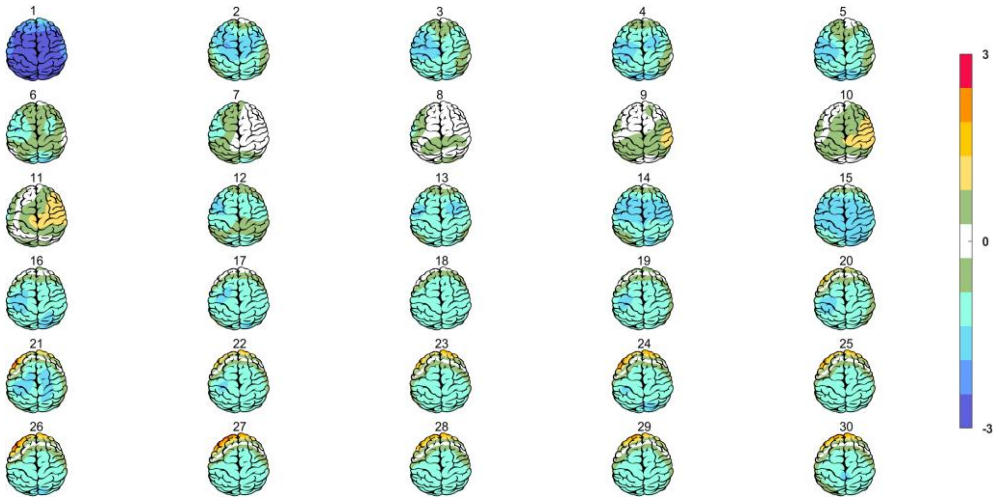
Absolute Power-Eye Open (EO)



Relative Power-Eye Open (EO)