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QEEG Clinical Report

BrainLens V0.4

Report Description

Personal & Clinical Data

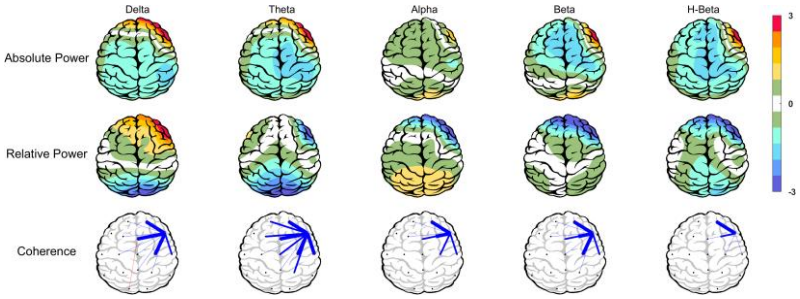
Name	Mohamad Hosein Ajvadi	Date of Recording	05-Feb-2025
Date of Birth - Age	10-Dec-2008 - 16.15	Gender	Male
Handedness(R/L)	Right	Source of Referral	Movasat-talent-center
Initial Diagnosis	ADHD-Anxiety		
Current Medication	-		

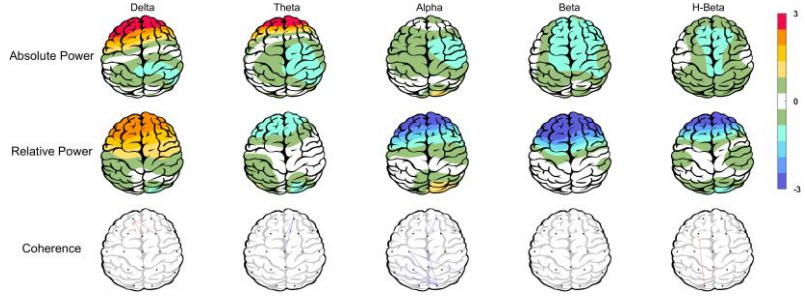
Movasat-talent-center

Summary Report

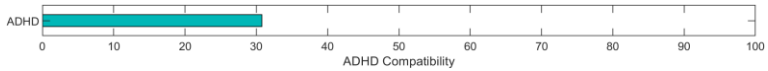
EEG Quality

Z-score Information





Compatibility with ADHD

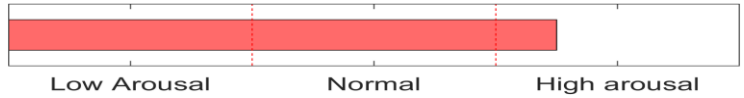


APF

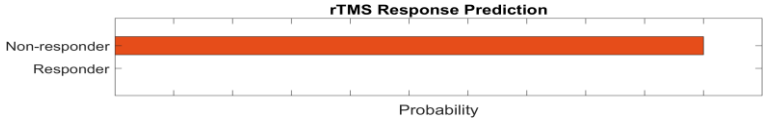
Posterior APF-EC= 10.50

Posterior APF-EO= 10.75

Arousal Level



TMS Responsibility



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

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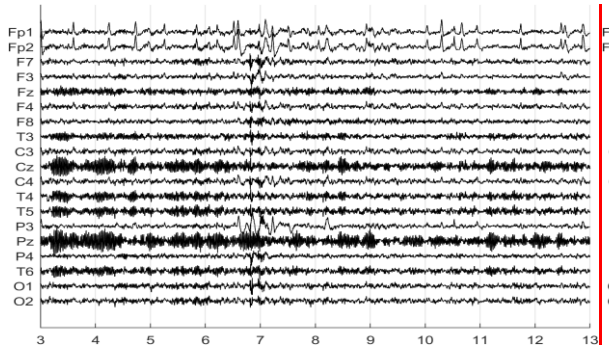
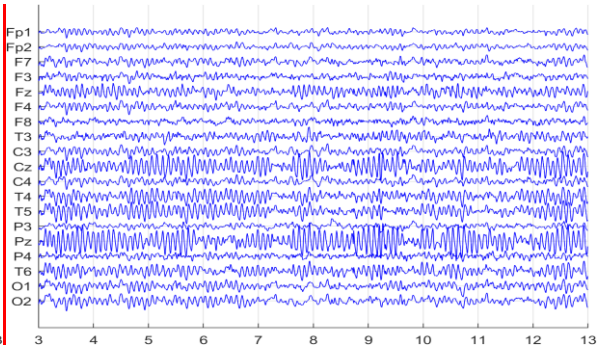
Denoising Information (EC)

Raw EEG



Denoised EEG



Flat Channels

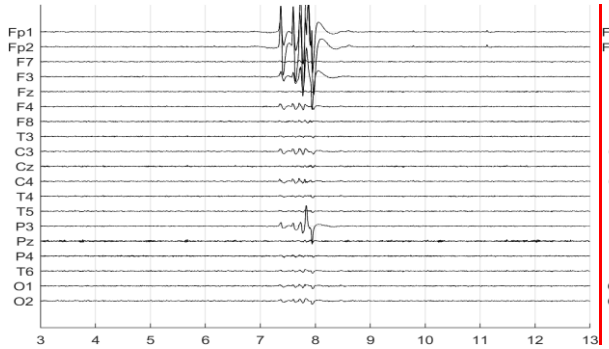
Rejected Channels

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

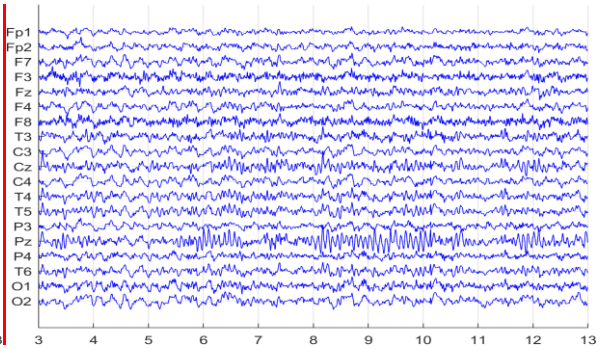
Low Artifact Percentage	
High Artifact Percentage	
Total Recording Time Remaining	234.98 sec

Denoising Information (EO)

Raw EEG



Denoised EEG



Flat Channels

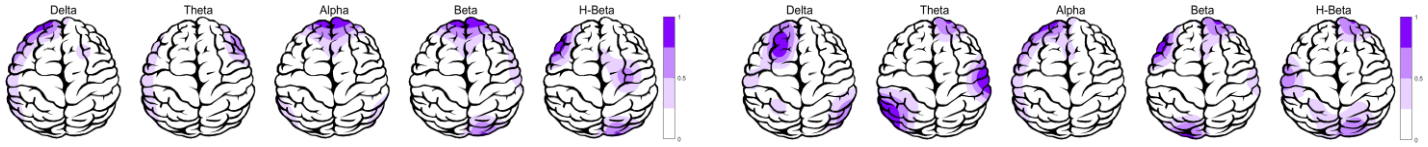
Rejected Channels

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

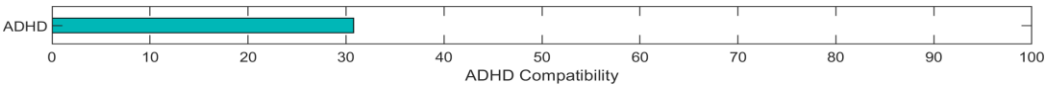
Low Artifact Percentage	
High Artifact Percentage	
Total Recording Time Remaining	245.22 sec

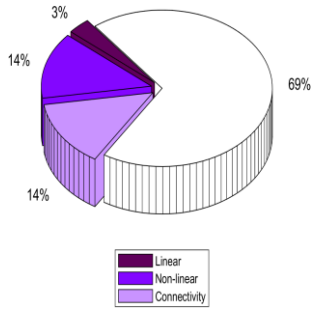
Pathological assessment for ADHD

Compare to ADHD Database

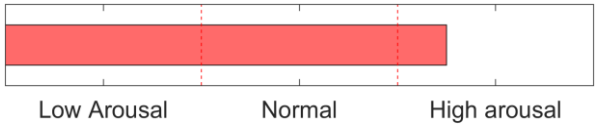


EEG Compatibility with ADHD Diagnosis





Arousal Level Detection



ADHD Clustering *

1. Same inattentive and hyperactive prevalence, may be anxious, may be highly intelligent, need sufficient sleep, and should avoid high arbohydrate inbtake. Consider clonidine

* If there is Paroxymal epileptic discharge in EEG data, this case needs sufficient sleep and should avoid high carbohydrate intake.
You can consider anticonvulant medications.

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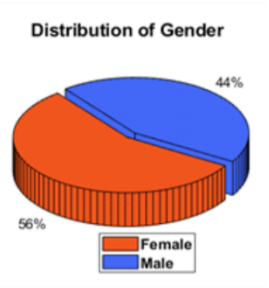
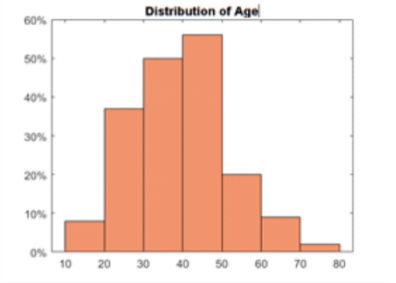
rTMS Response Prediction

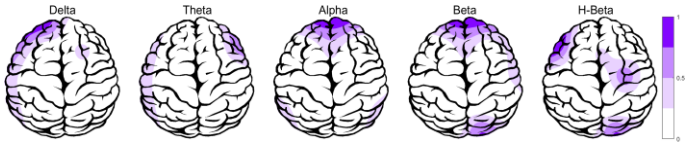
Network Performance

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

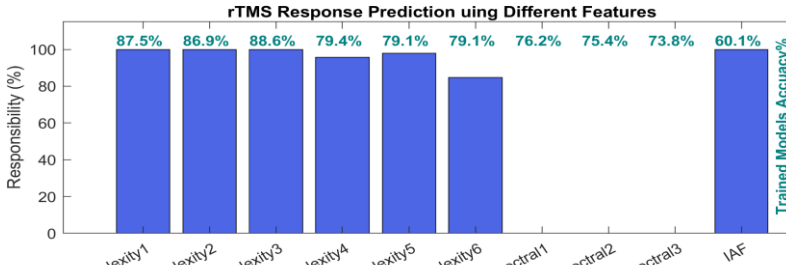
Participants Information



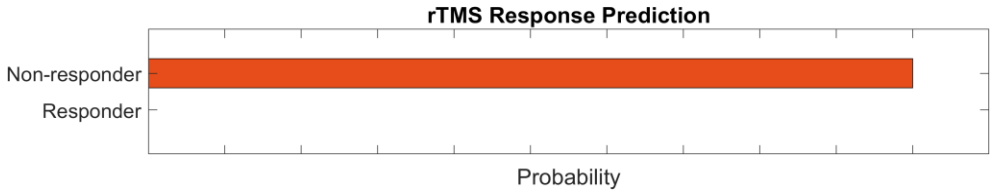




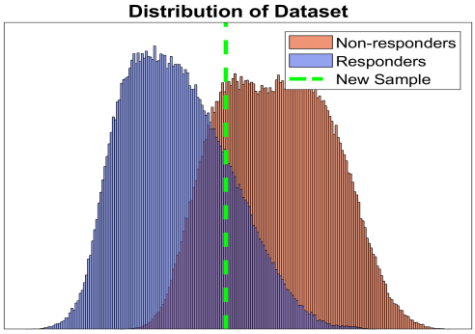
Features Information



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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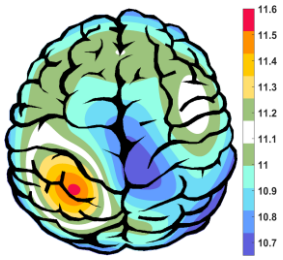
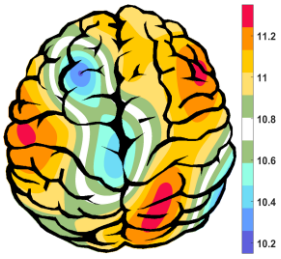
APF(EO)



Frontal APF= 11.00

Posterior APF= 10.75

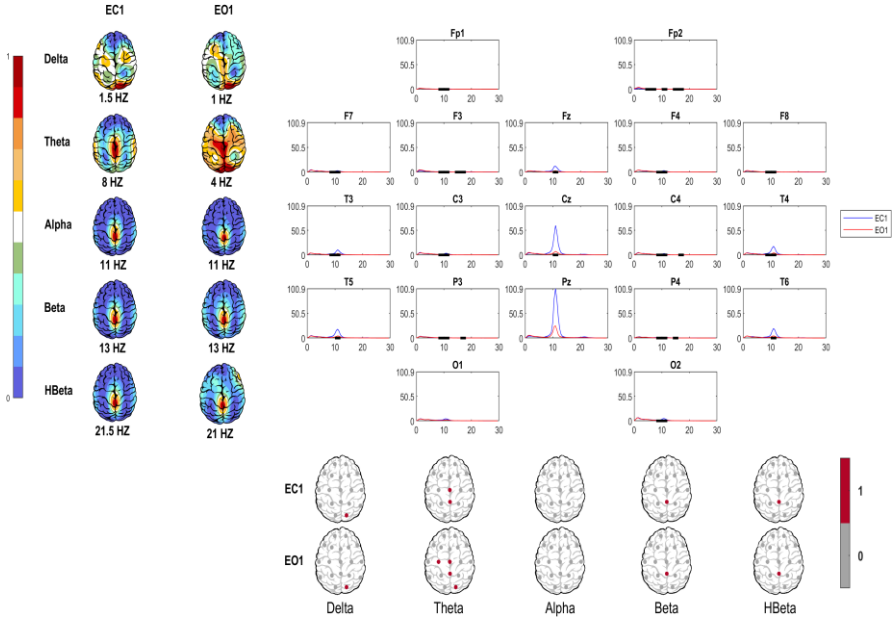
APF(EC)



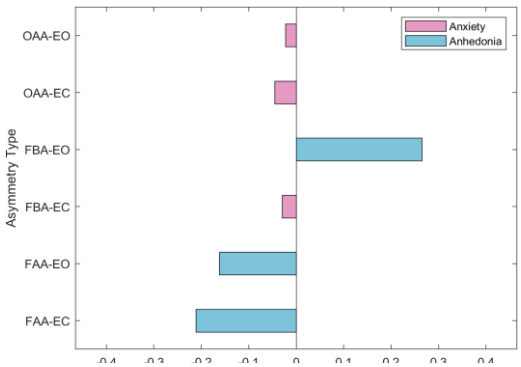
Frontal APF= 11.00

Posterior APF= 10.50

EEG Spectra



Alpha Asymmetry(AA)



Alpha Blocking

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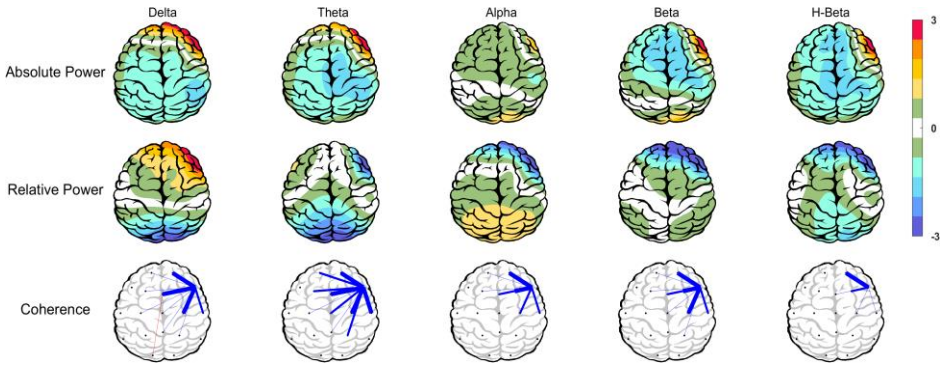
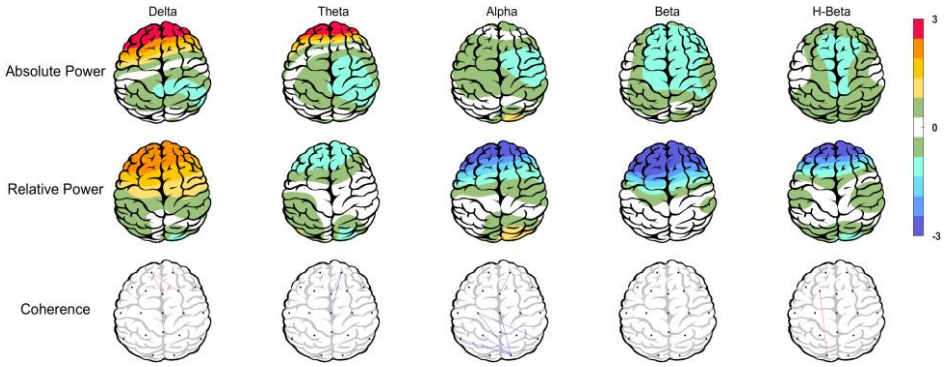
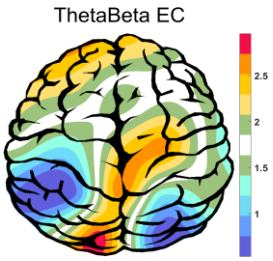
Z Score Summary Information (EC)

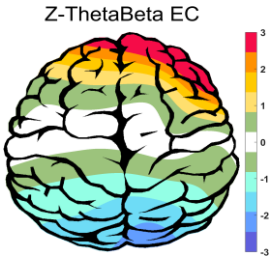


Z Score Summary Information (EO)

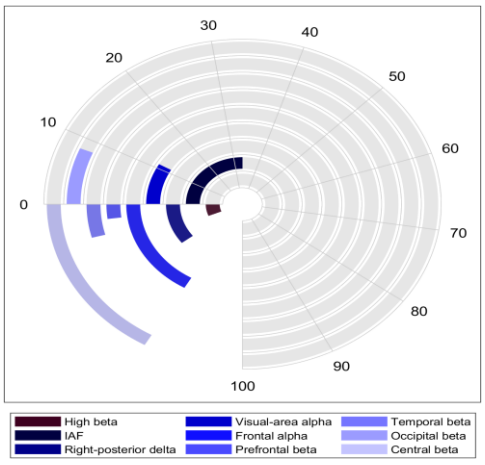


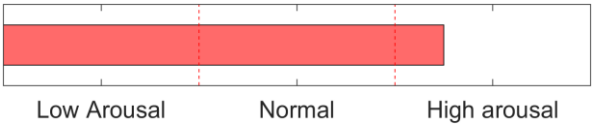
E.C.T/B Ratio (Raw- Z Score)



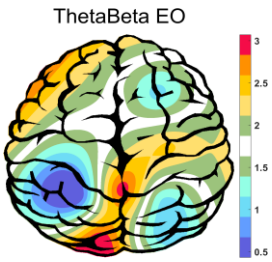


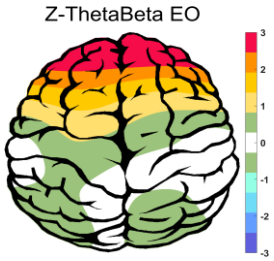
Arousal Level



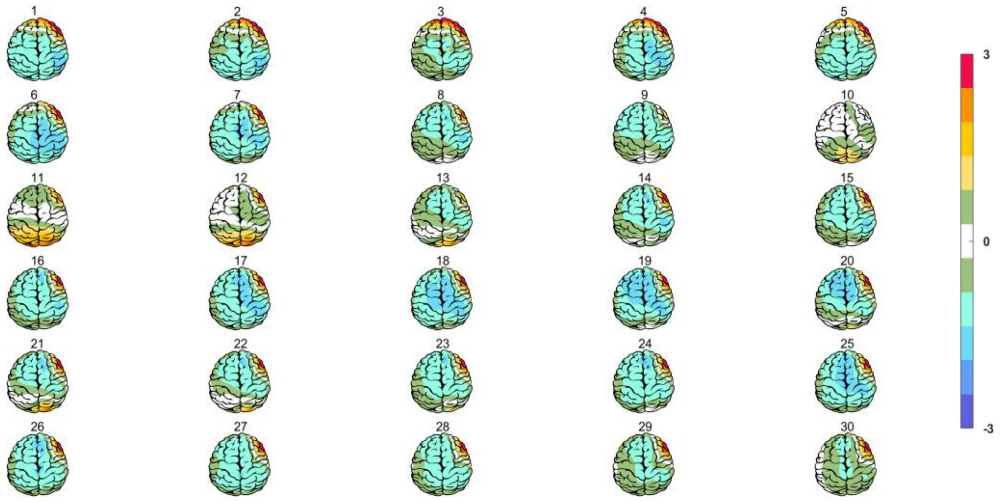


E.O.T/B Ratio (Raw- Z Score)

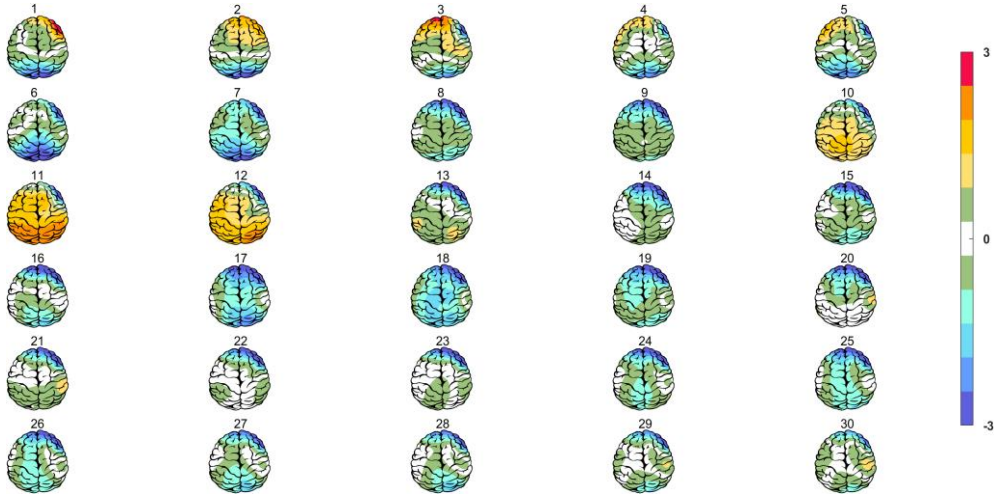




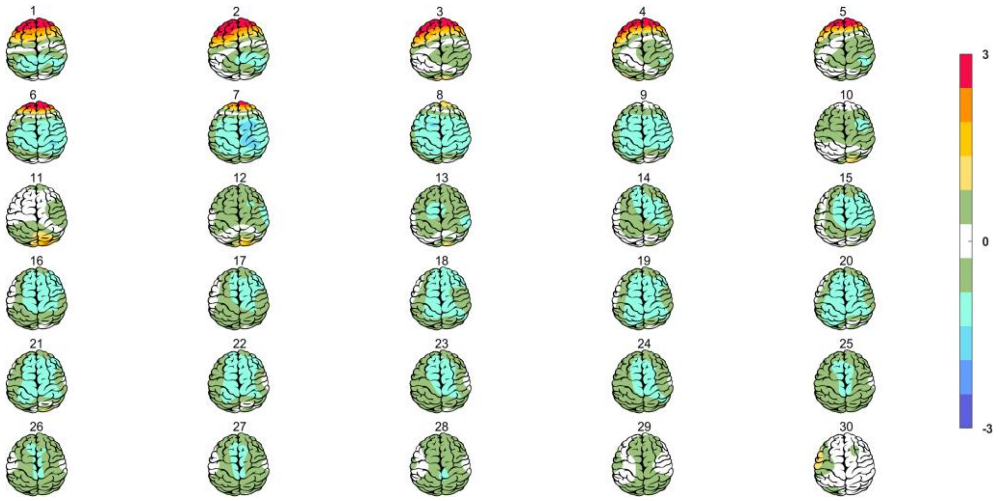
Absolute Power-Eye Closed (EC)



Relative Power-Eye Closed (EC)



Absolute Power-Eye Open (EO)



Relative Power-Eye Open (EO)