



QEEG Clinical Report

BrainLens V0.4

Report Description

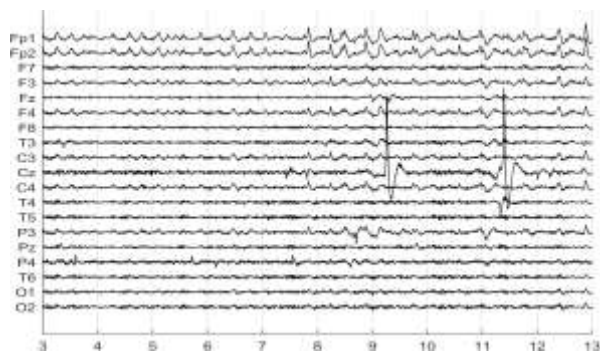
Personal & Clinical Data

Name	Vahdat Asadi	Date of Recording	06-Oct-2024
Date of Birth - Age	04-Dec-1982 - 41.84	Gender	Male
Handedness(R/L)	Right	Source of Referral	Dr Haghi
Initial Diagnosis	ADHD-ADD		
Current Medication	Medication Free		

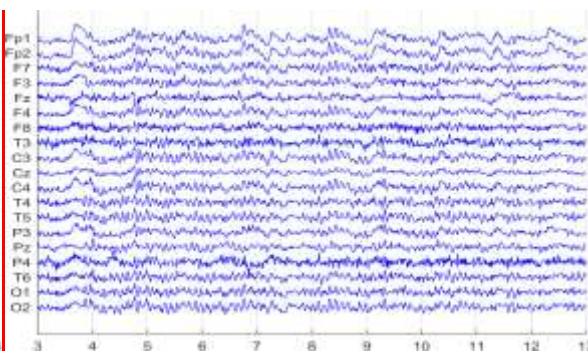
Dr Haghi

Denoising Information (EC)

Raw EEG



Denoised EEG



Flat Channels



Rejected Channels



Number of Eye and Muscle Elements

Eye	2	Muscle	1
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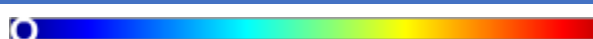
Low Artifact Percentage



Total Artifact Percentage



High Artifact Percentage



EEG Quality

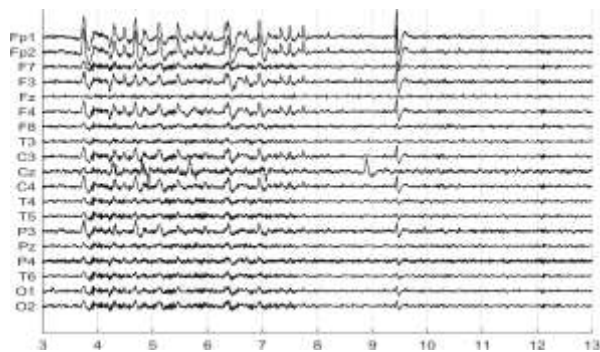
bad

Total Recording Time Remaining

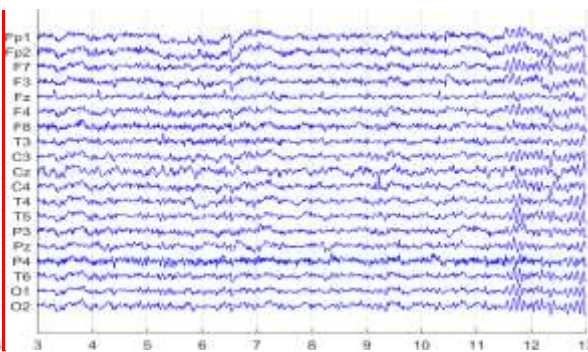
128.88 sec

Denoising Information (EO)

Raw EEG



Denoised EEG



Flat Channels



Rejected Channels



Number of Eye and Muscle Elements

Eye	0	Muscle	2
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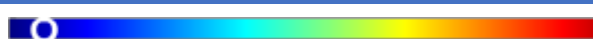
Low Artifact Percentage



Total Artifact Percentage



High Artifact Percentage



EEG Quality

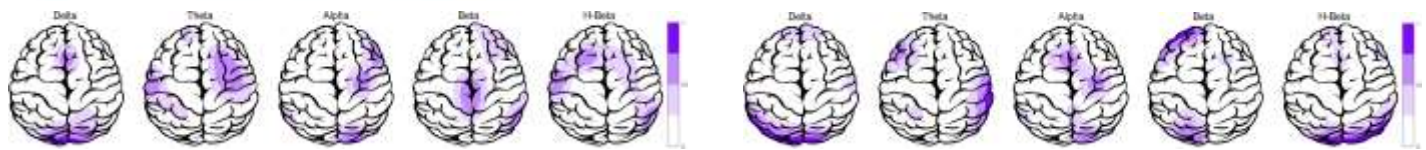
bad

Total Recording Time Remaining

178.24 sec

Pathological assessment for adult ADHD

Compare to Adult ADHD Database



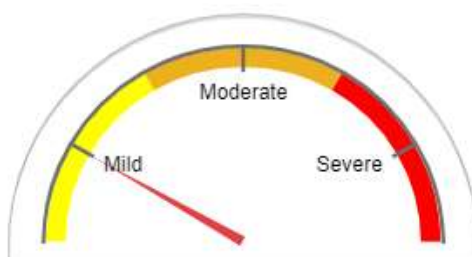
Cognitive Functions



Arousal Level Detection



Adult ADHD Severity

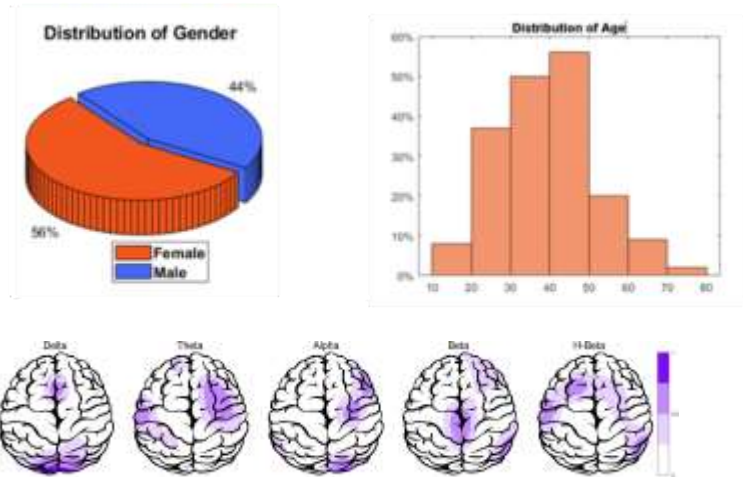


rTMS Response Prediction

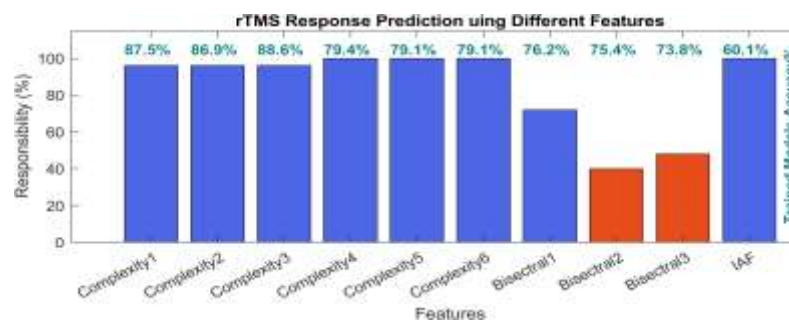
Network Performance

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

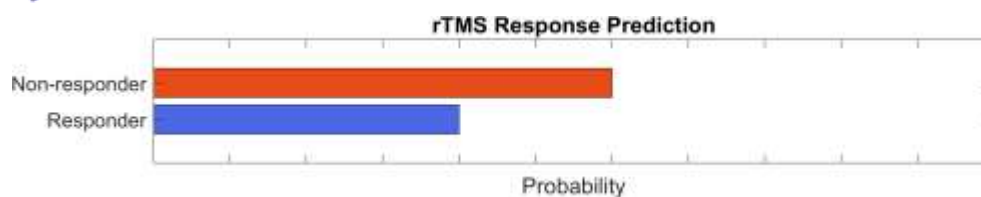
Participants Information



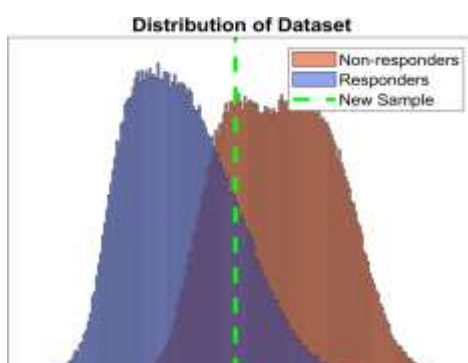
Features Information



Responsibility



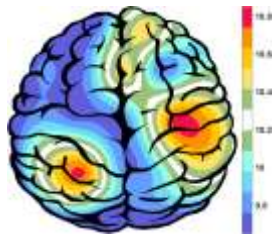
Data Distribution



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.

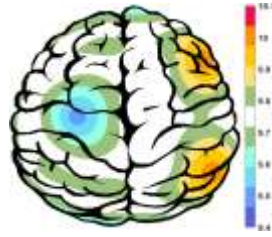
APF(EO)



Frontal APF= 10.08

Posterior APF= 09.75

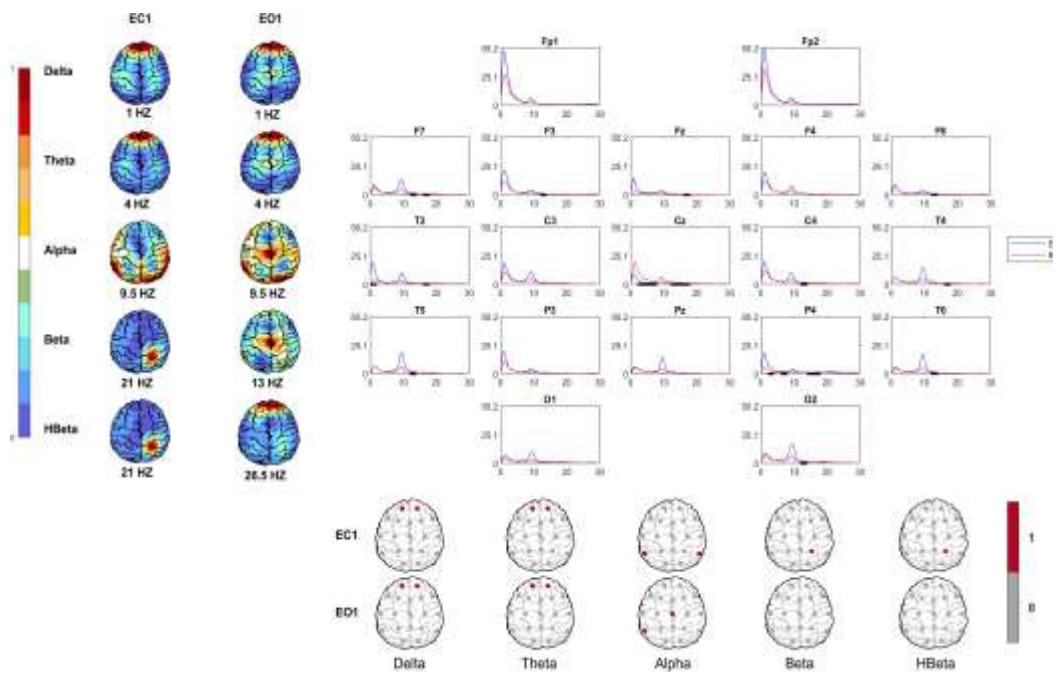
APF(EC)



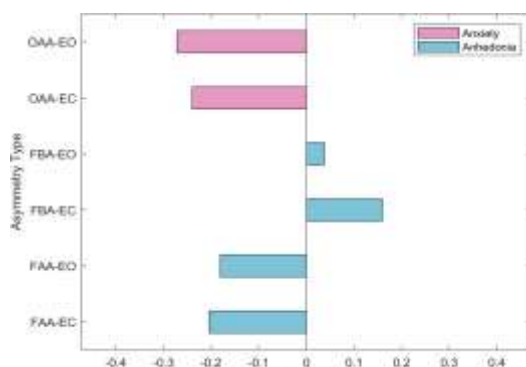
Frontal APF= 09.67

Frontal APF= 09.75

EEG Spectra



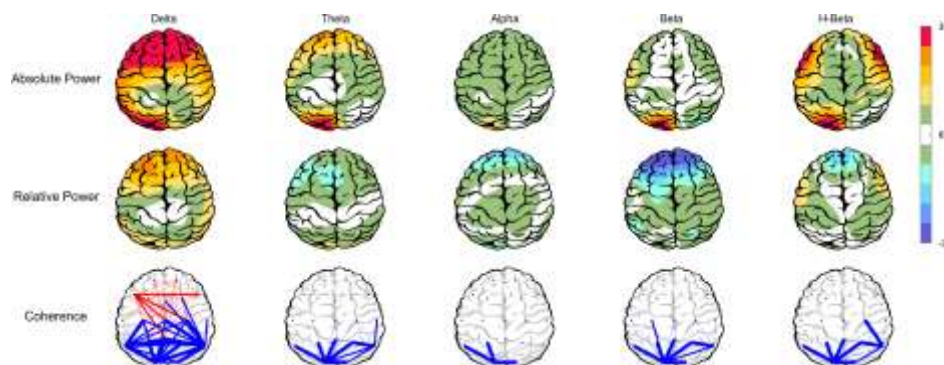
Alpha Asymmetry(AA)



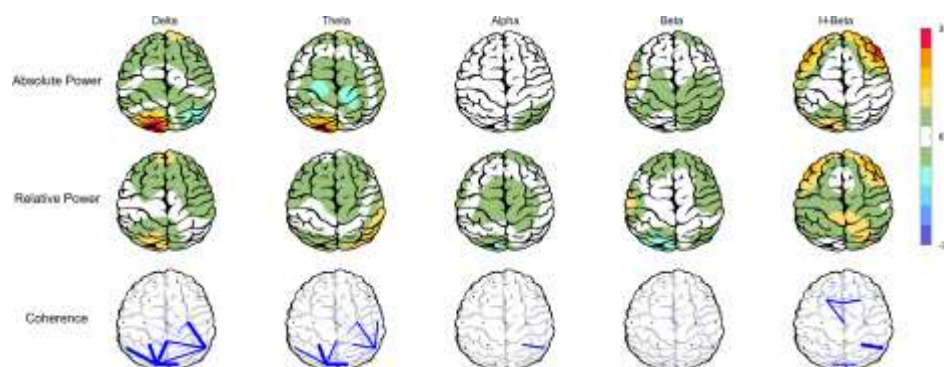
Alpha Blocking



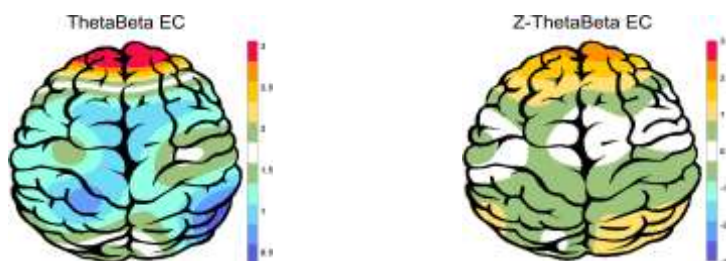
Z Score Summary Information (EC)



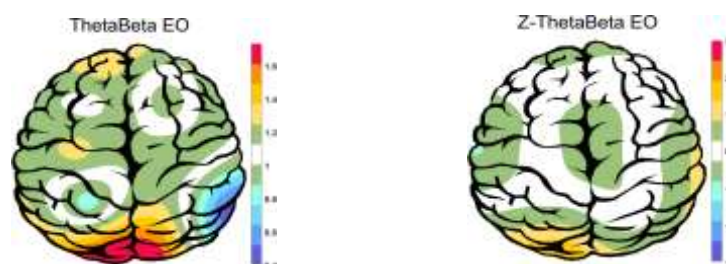
Z Score Summary Information (EO)



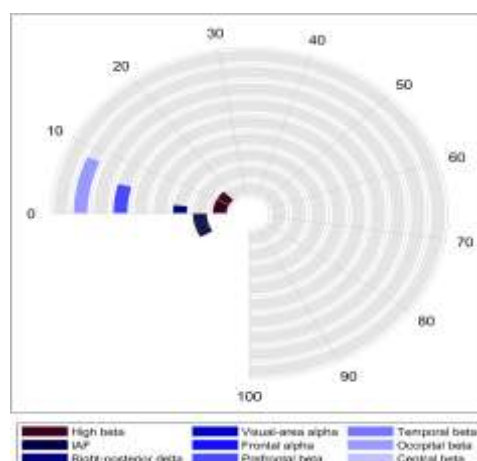
E.C.T/B Ratio (Raw- Z Score)



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



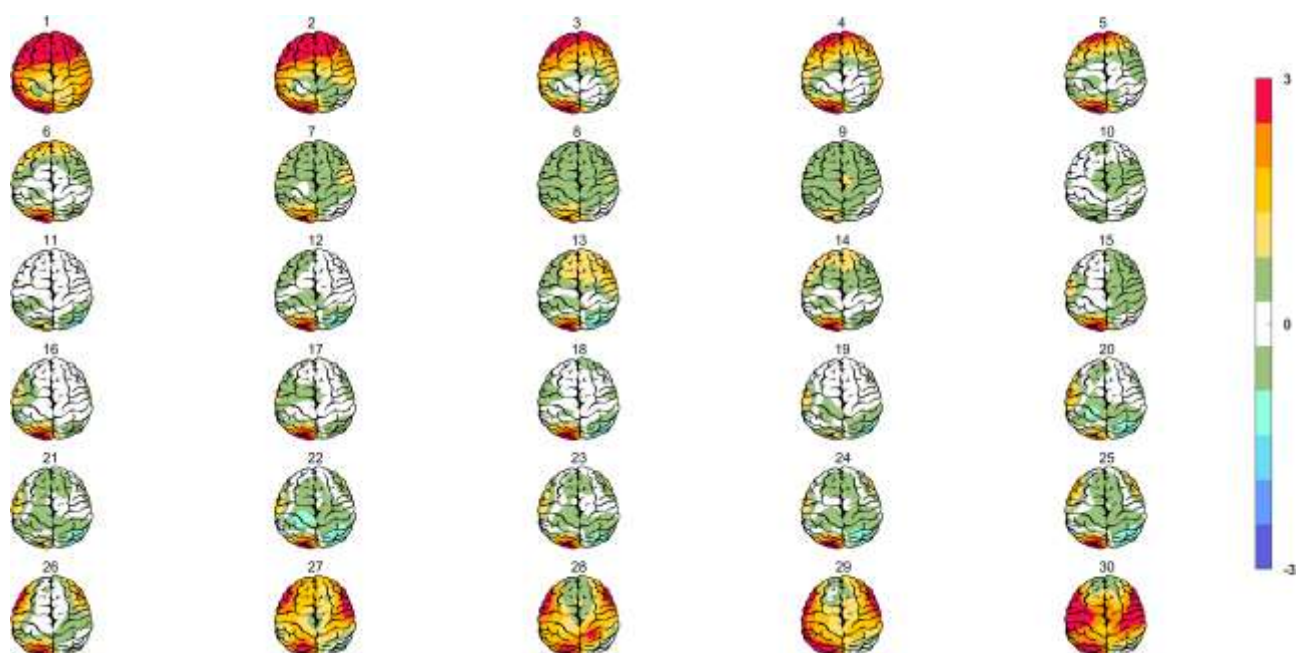
Arousal Level



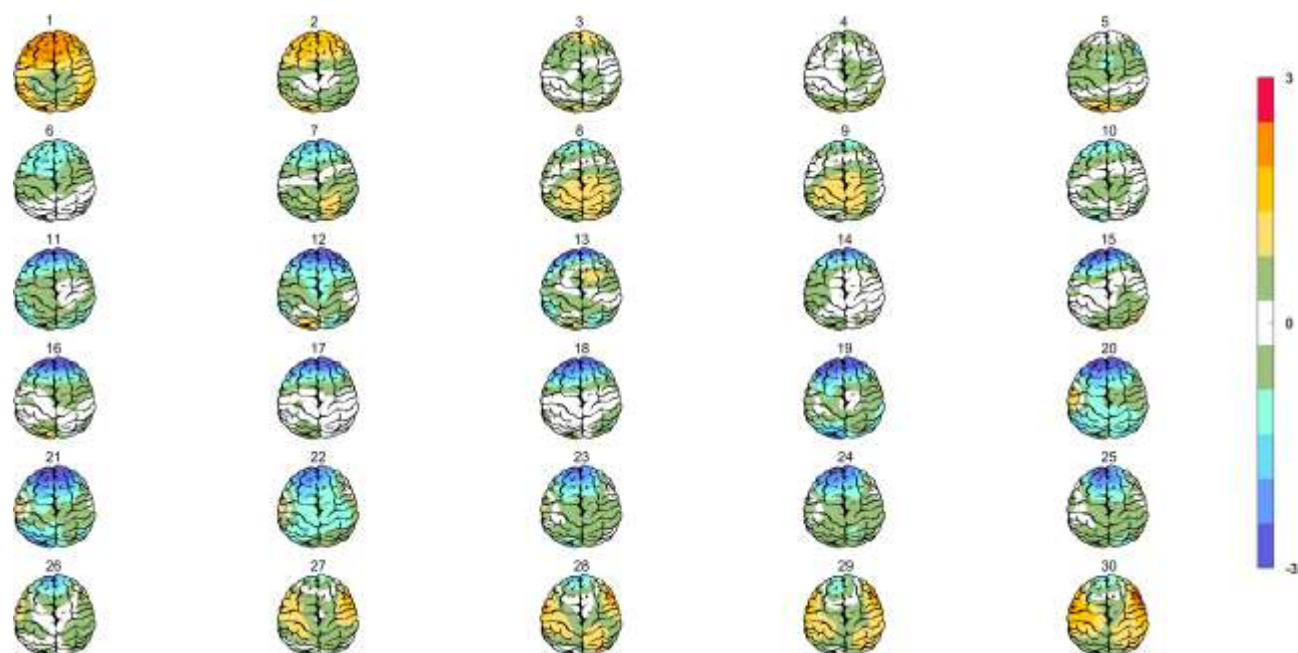
High beta, Visual-area alpha, Temporal beta, IAP, Frontal alpha, Occipital beta, Right-posterior delta, Postnasal beta, Central beta



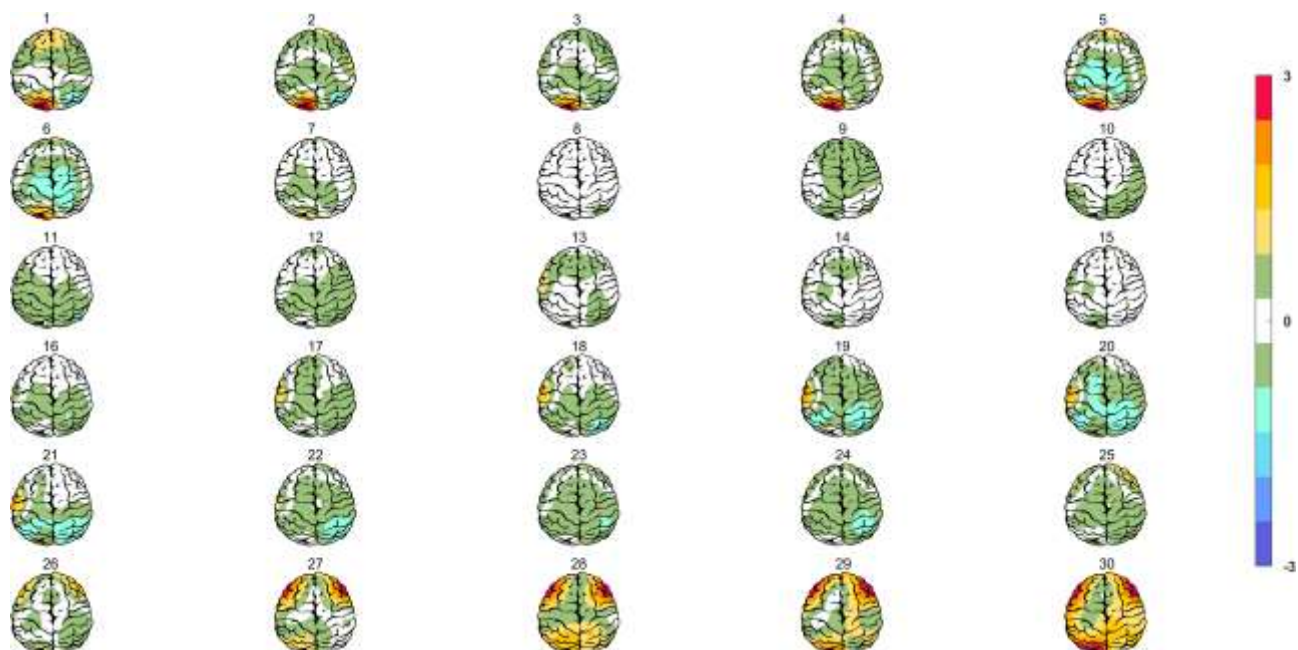
Absolute Power-Eye Closed (EC)



Relative Power-Eye Closed (EC)



Absolute Power-Eye Open (EO)



Relative Power-Eye Open (EO)

