



## QEEG Clinical Report

BrainLens V0.4

### Report Description



### Personal & Clinical Data

|                     |                                                                       |                    |            |
|---------------------|-----------------------------------------------------------------------|--------------------|------------|
| Name                | Zahra Kargar                                                          | Date of Recording  | 2025-09-14 |
| Date of Birth - Age | 2009-04-15 - 16.41                                                    | Gender             | Female     |
| Handedness(R/L)     | Right                                                                 | Source of Referral | Dr Sajjadi |
| Initial Diagnosis   | Anxiety-Attention and Concentration Problem-Rumination-Sleep Problems |                    |            |
| Current Medication  | -                                                                     |                    |            |

Dr Sajjadi

# Summary Report

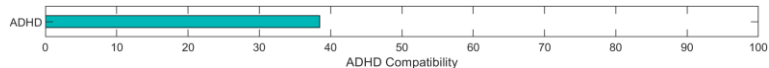
## EEG Quality



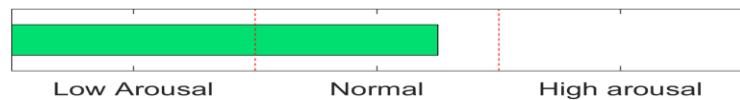
## Z-score Information



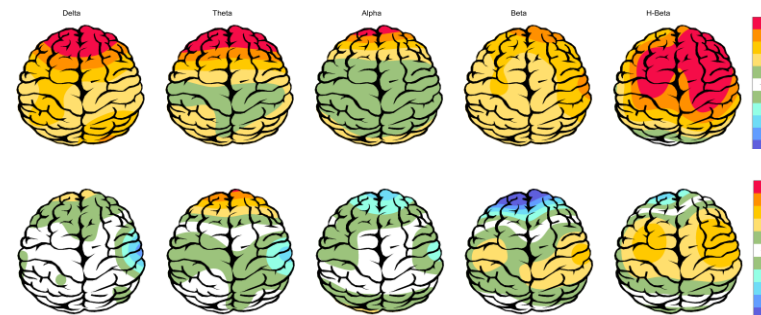
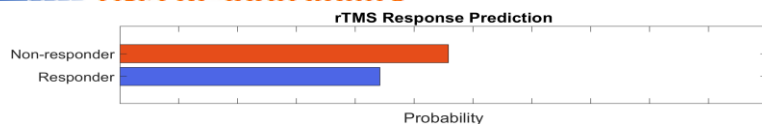
## Compatibility with ADHD



## Arousal Level



## TMS Resnonsihilitv



Absolute Power  
Relative Power

## APF

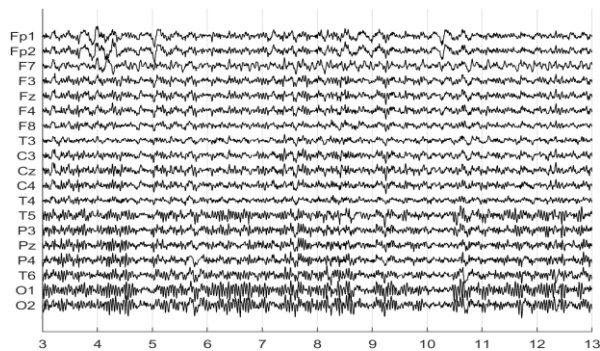
Posterior APF-EC= 10.62

Posterior APF-EO= 11.00

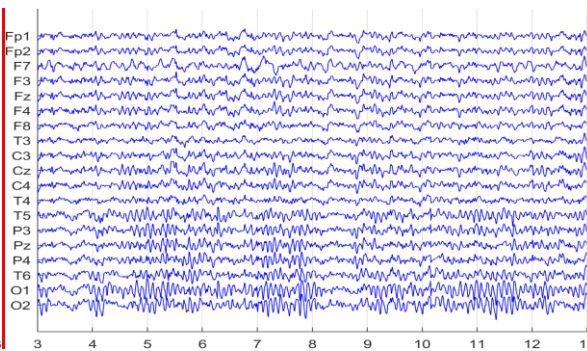
To investigate QEEG-based predicting medication response, please refer to the Report.

## Denoising Information (EC)

### Raw EEG



### Denoised EEG



### Flat Channels



### Rejected Channels



#### Number of Eye and Muscle Elements

Eye 2 Muscle 0

#### Total Artifact Percentage



EEG Quality good

#### Low Artifact Percentage



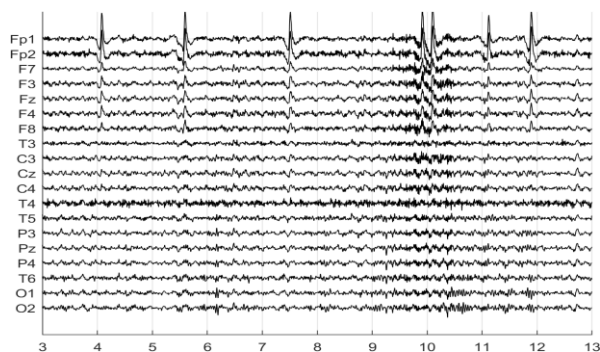
#### High Artifact Percentage



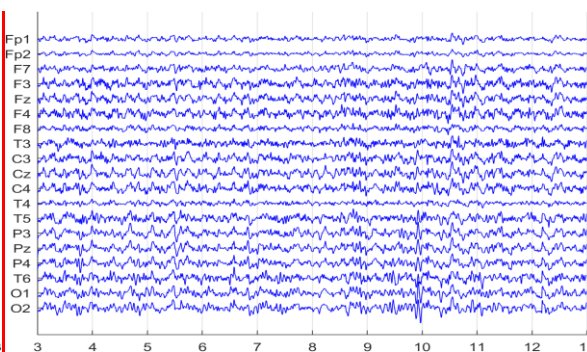
Total Recording Time Remaining 215.40 sec

## Denoising Information (EO)

### Raw EEG



### Denoised EEG



### Flat Channels



### Rejected Channels



#### Number of Eye and Muscle Elements

Eye 1 Muscle 3

#### Total Artifact Percentage

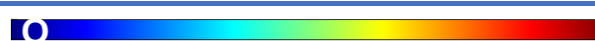


EEG Quality good

#### Low Artifact Percentage



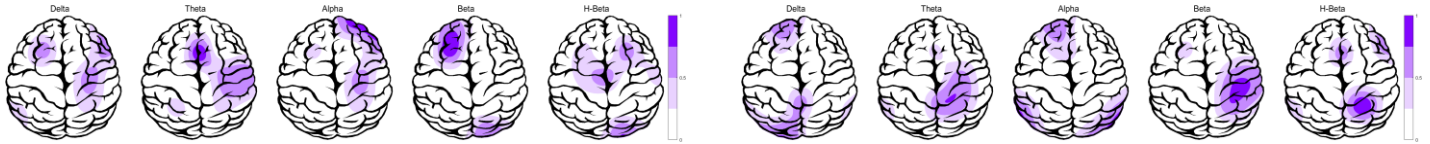
#### High Artifact Percentage



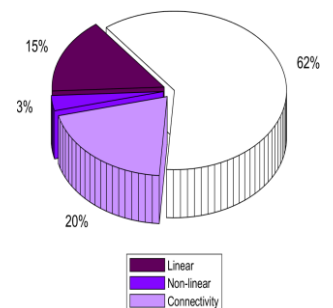
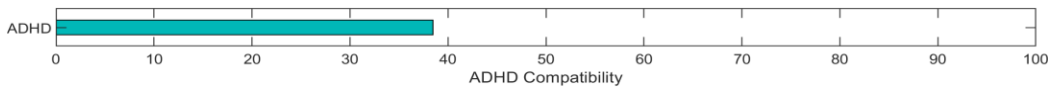
Total Recording Time Remaining 138.11 sec

## Pathological assessment for ADHD

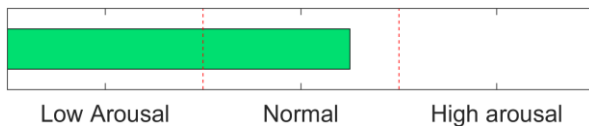
### Compare to ADHD Database



### 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 carbohydrate intake. Consider clonidine

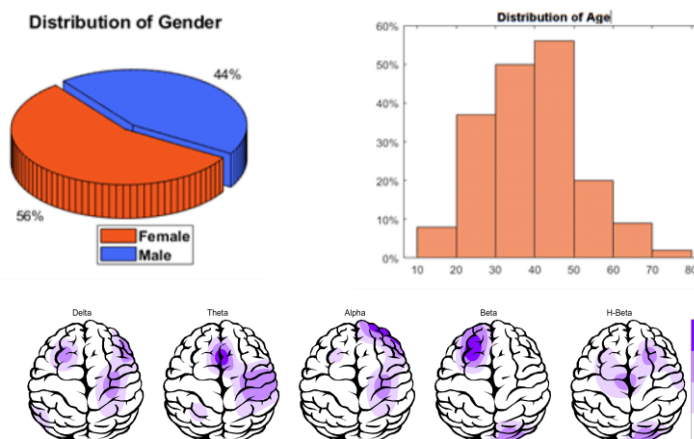
\* If there is Paroxymal epileptic discharge in EEG data, this case needs sufficient sleep and should avoid high carbohydrate intake. You can consider anticonvulant medications.

# rTMS Response Prediction

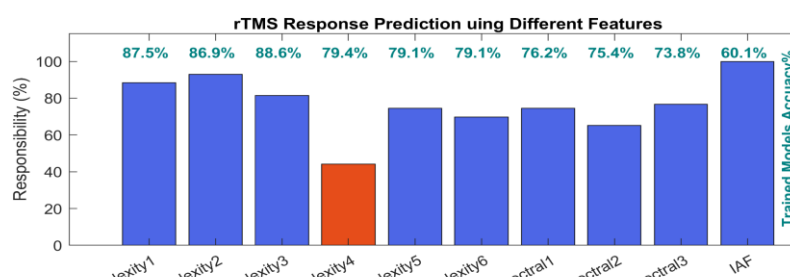
## Network Performance

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

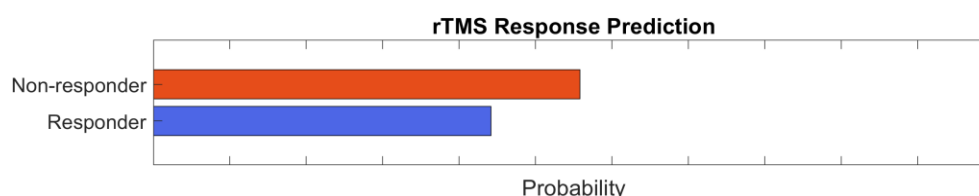
## Participants Information



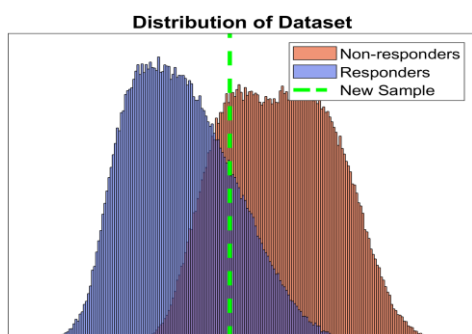
## Features Information



## Responsibility



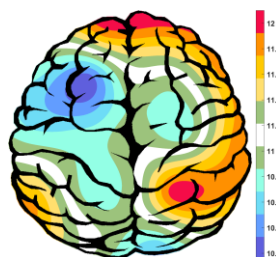
## Data Distribution



## 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.

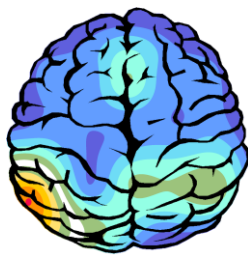
## APF(EO)



Frontal APF= 10.83

Posterior APF= 11.00

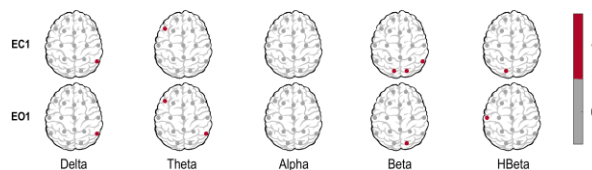
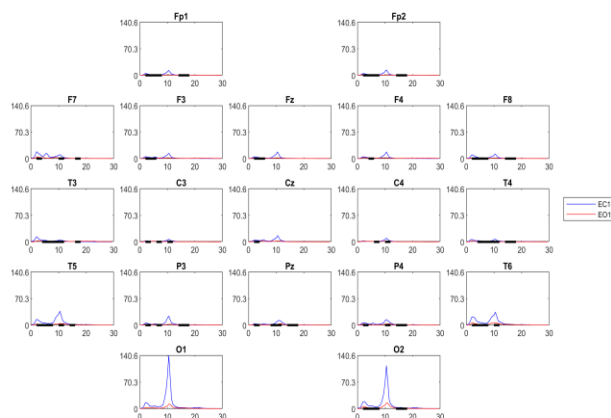
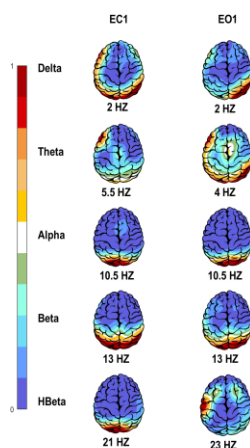
## APF(EC)



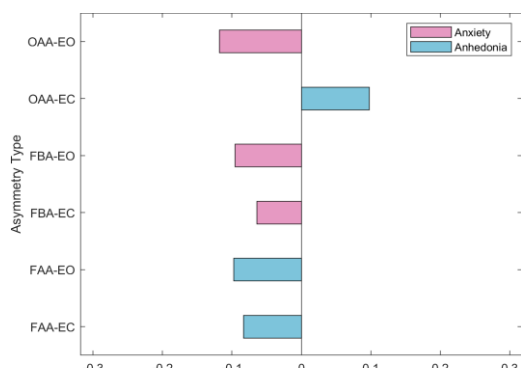
Frontal APF= 10.50

Posterior APF= 10.62

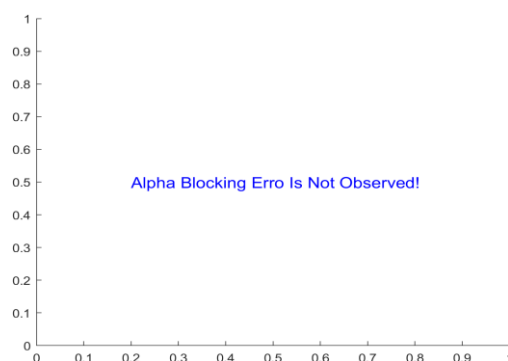
## EEG Spectra



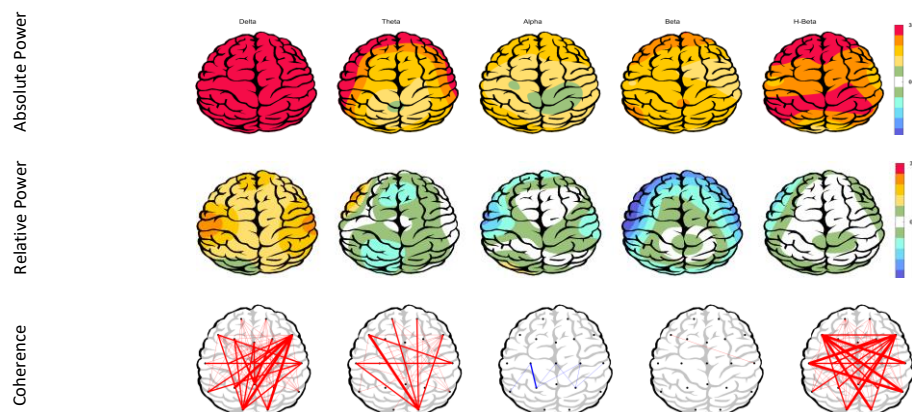
## Alpha Asymmetry(AA)



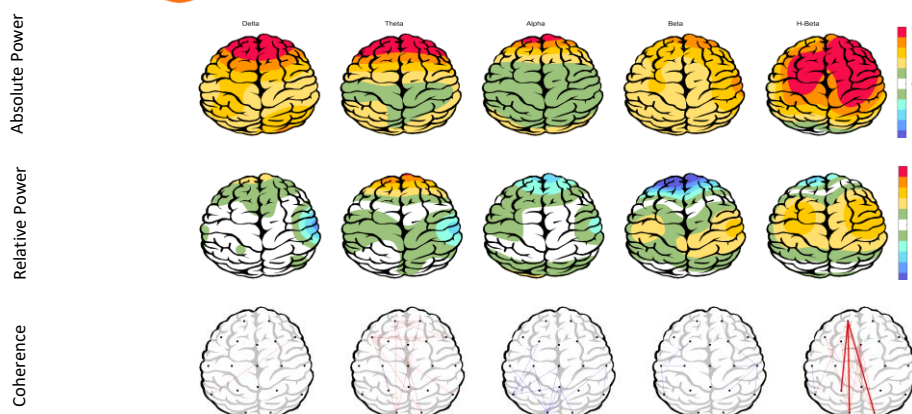
## Alpha Blocking



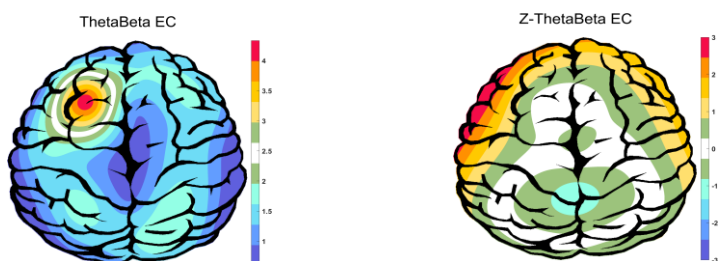
## Z Score Summary Information (EC)



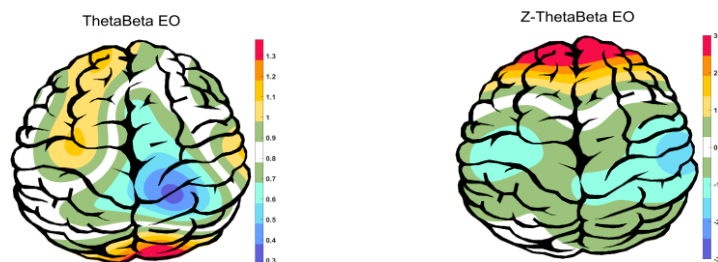
## Z Score Summary Information (EO)



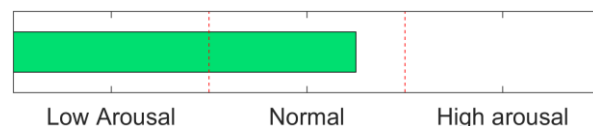
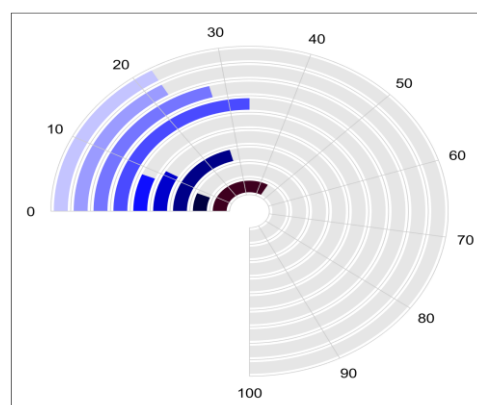
## E.C.T/B Ratio ( Raw- Z Score)



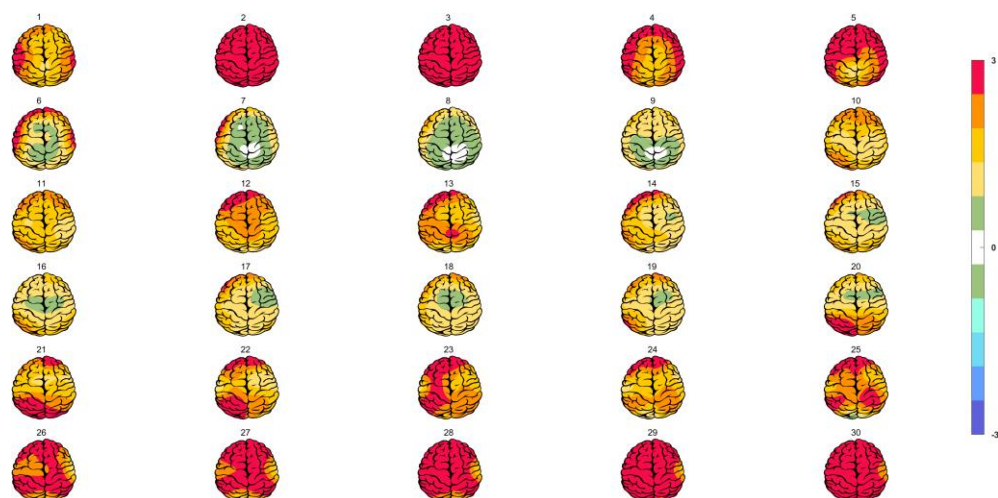
## E.O.T/B Ratio ( Raw- Z Score)



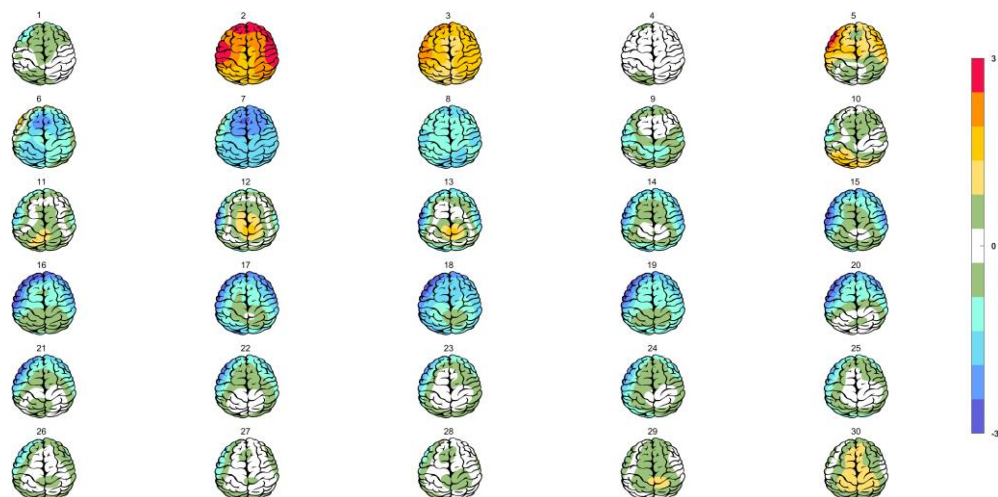
## Arousal Level



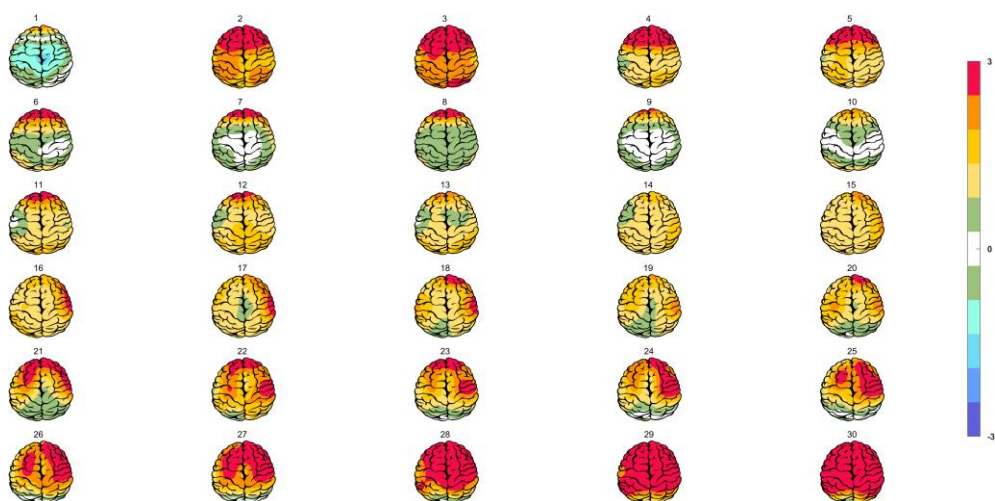
## Absolute Power-Eye Closed (EC)



## Relative Power-Eye Closed (EC)



## Absolute Power-Eye Open (EO)



## Relative Power-Eye Open (EO)

