# QEEG Clinical Report

EEGLens

The QEEG report is provided by NPCindex Company, operating under the QEEGhome brand.

## Personal Data:

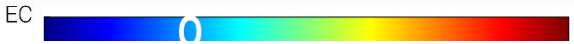
Name: Alirezadorfaki
Gender: Male
Age: 2009-01-18 - 16.9
Handedness: Right

## Clinical Data:

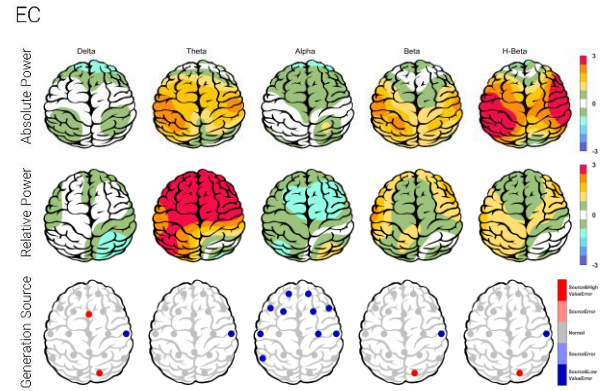
Initial diagnosis: ADHD
Medication: -
Date of Recording: 2025-10-08
Source of Referral: Kamal Barzegar Ghazi

This case belongs to Kamal Barzegar Ghazi

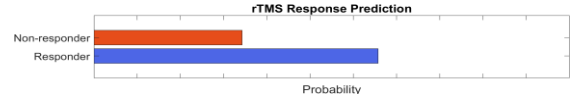
## EEG Quality



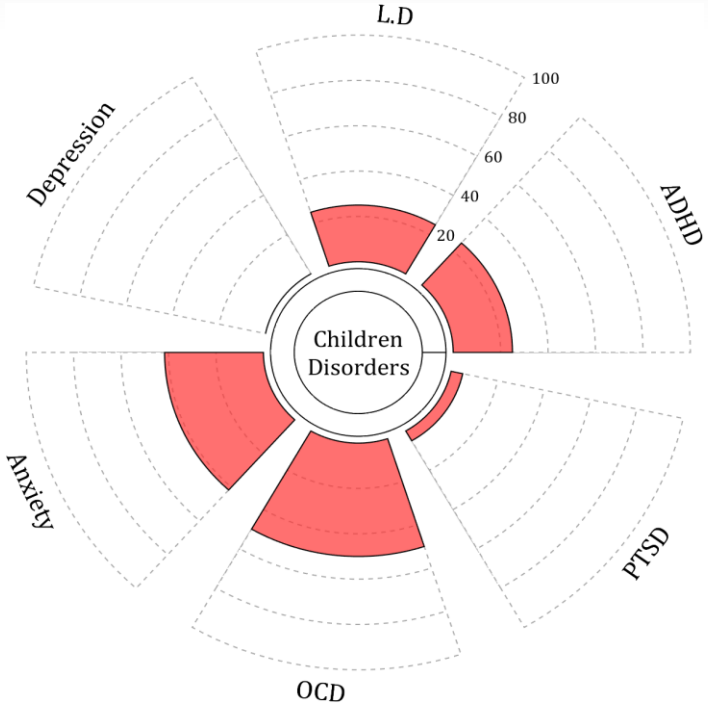

## Z-score Information




## TMS Reponsibility




## Pathological Assessment



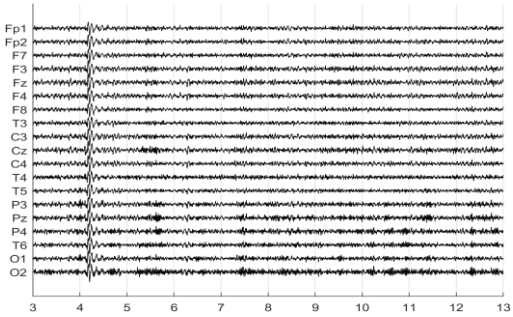

## EEG Neuromarker Values

| Neuromarker | Region | Value | Assessment |
|---|---|---|---|
| AFP | Frontal | 10.00 | Normal |
| AFP | Occipital | 10.12 | Normal |
| Arousal Level | - | - | Normal |

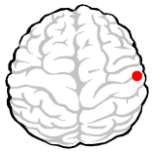
## Denoising Information

Eye Close

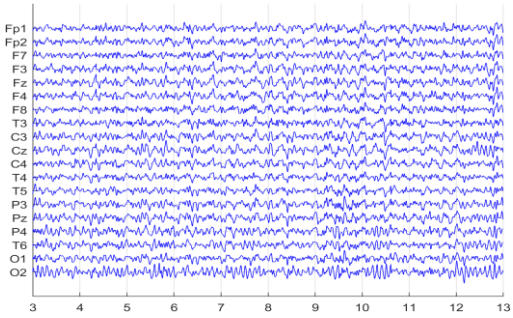
Raw EEG




Rejected Channel



Denoised EEG




Flat Channel

**Total Recording Time Remaining:**
230.07 sec

**Number of Eye and Muscle Elements**
Eye: 0
Muscle: 0

Low Artifact Percentage

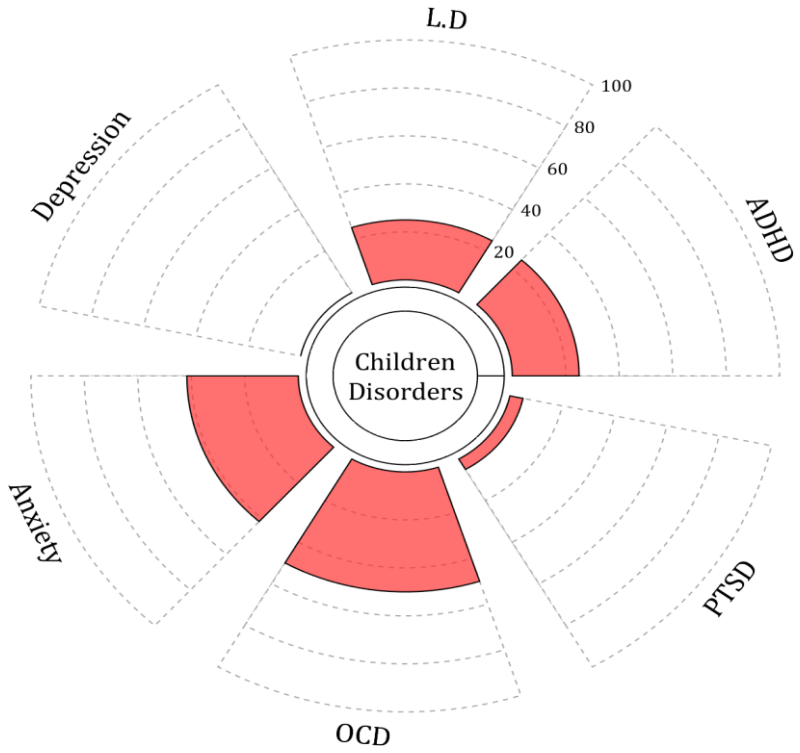

High Artifact Percentage


Total Artifact Percentage


**EEG Quality:** perfect

# Pathological Assessment

## Main Diagnosis: Children Disorder




## ADHD Subtypes

1. Prone to moody behavior and temper tantrums. May be anxious, may be highly intelligent, need sufficient sleep, and should avoid high carbohydrate intake. Avoide stimulants,

## Description

According to the guidelines, psychiatric disorders in children (under 17 years) include *ADHD, learning disorder (LD), PTSD, OCD, depression, and anxiety.*

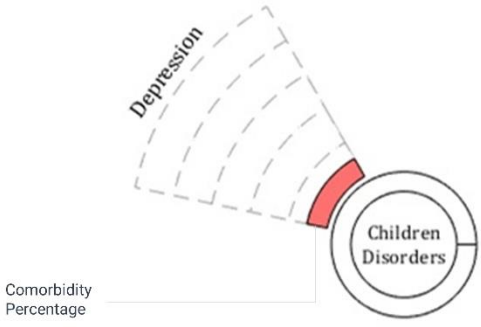
In the above graph, the red area shows the percentage of each disorder from your patient's EEG markers. Observe that each disorder marker is not unique and can be shared with others.

References:

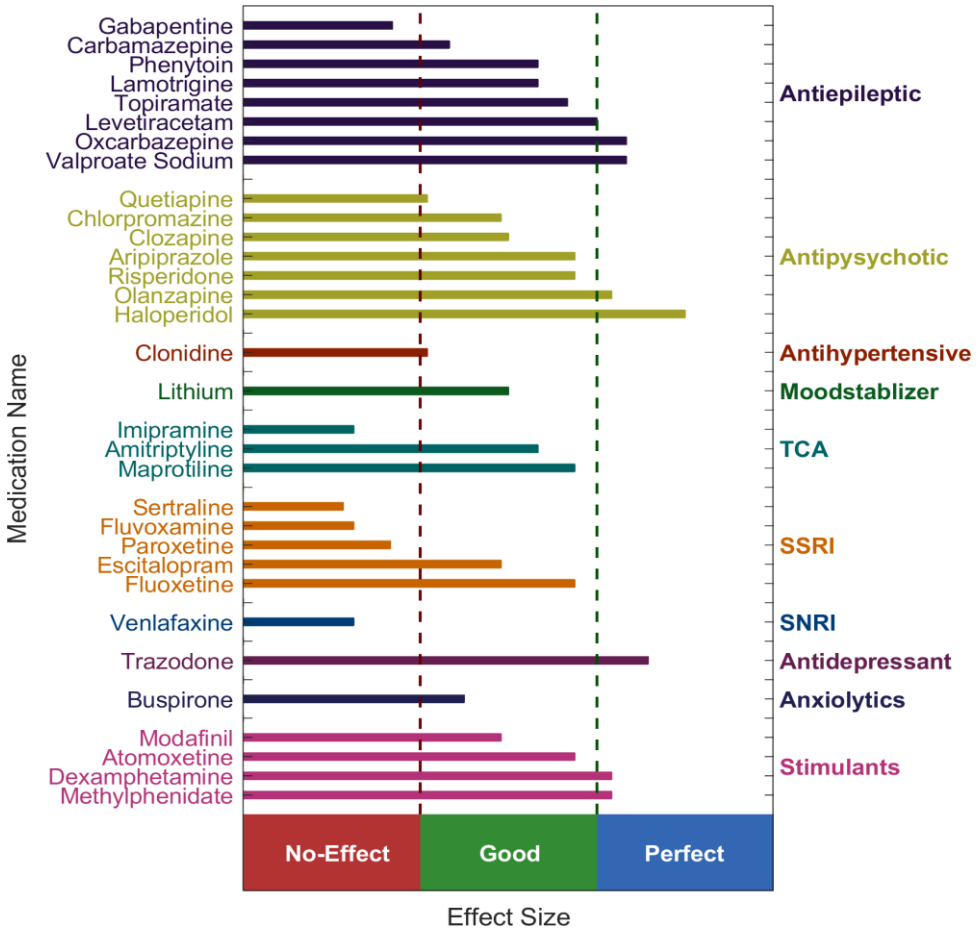
Sadock, B. J., Sadock, V. A., & Ruiz, P. (Eds.). (2025). Kaplan and Sadock's comprehensive textbook of psychiatry (11th ed., Vols. 1–2). Wolters Kluwer

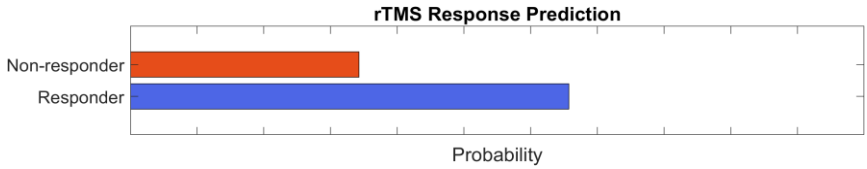
Sadock, B. J., Sadock, V. A., & Ruiz, P. (2022). Kaplan and Sadock's synopsis of psychiatry: Behavioral sciences/clinical psychiatry (12th ed.). Wolters Kluwer

User Manual



# QEEG Based Predicting Medication Response




## Explanation

These two tables can be considered the most important finding that can be extracted from QEEG. To prepare this list, the NPCIndex Article Review Team has studied, categorized, and extracted algorithms from many authoritative published articles on predict medication response and Pharmaco EEG studies. These articles are published between 1970 and 2021. The findings extracted from this set include 85 different factors in the raw band domains, spectrum, power, coherence, and loreta that have not been segregated to avoid complexity, and their results are shown in these diagrams. One can review details in NPCIndex.com .

## Medication Recommendation

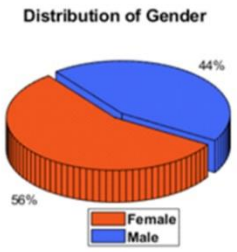
These two charts, calculate response probability to various medications, according only to QEEG indicators. Blue charts favor drug response and red charts favor drug resistance. The longer the bar, the more evidence there is in the articles. Only drugs listed in the articles are listed. These tables present the indicators reviewed in the QEEG studies and are not a substitute for physician selection.

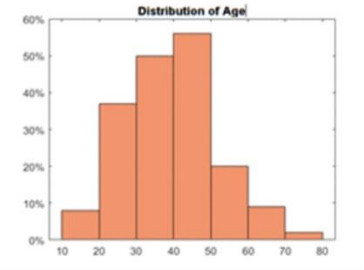
# rTMS Response Prediction

## Network Performance

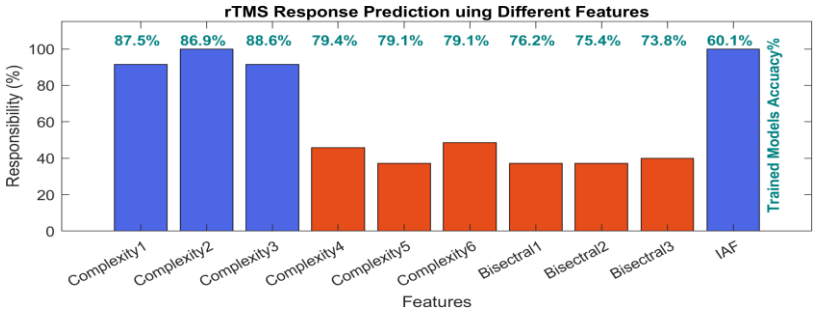
Accuracy: 92.10%
Sensitivity: 89.13%
Specificity: 97.47%

## Participants Information

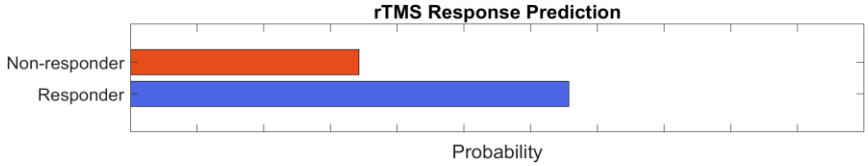


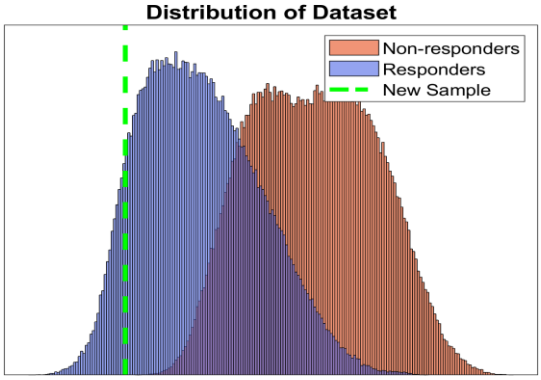

## Features Information




## Responsibility



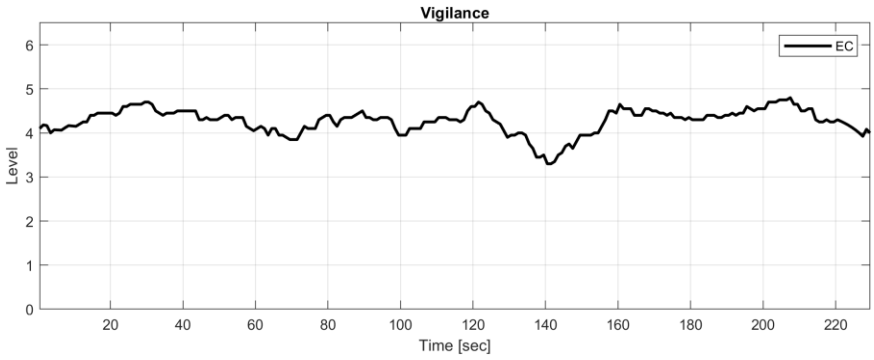

## Data Distribution




## 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.

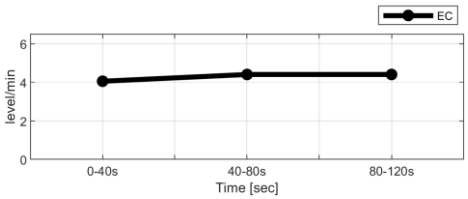
## Vigilance




### Vigilance Slope

**-0.04**

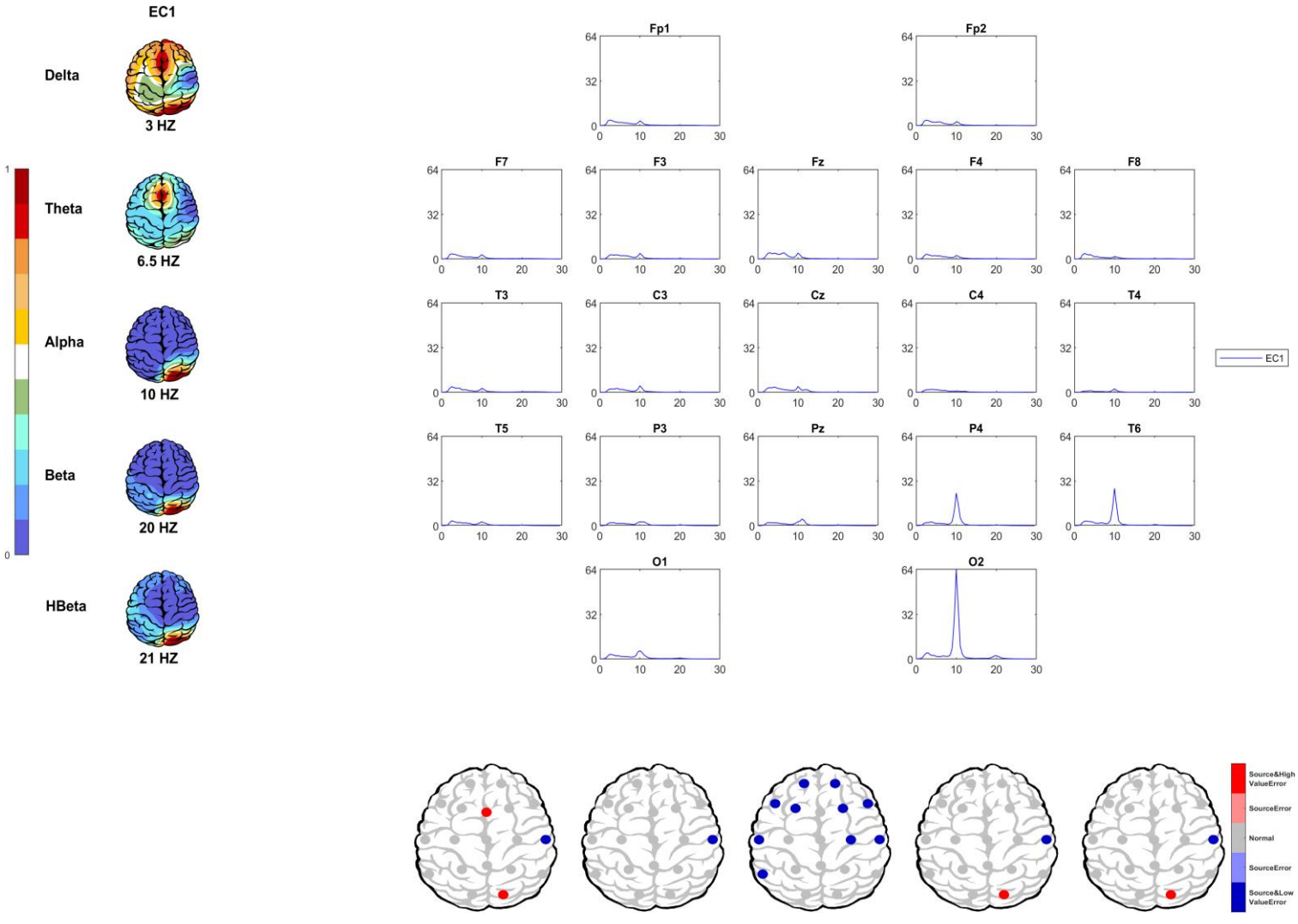
2min




## EEG Neuromarker Values

| Neuromarker | Region | Value | Assessment |
|---|---|---|---|
| APF | Frontal | 10.00 | Normal |
| APF | Occipital | 10.12 | Normal |
| Alpha Asymmetry | Frontal | 00.15 | Anxiety |
| Alpha Asymmetry | Occipital | -0.70 | Anhedonia |
| Beta Asymmetry | Frontal | -0.00 | Anxiety |
| Arousal Level | - | - | Normal |
| Vigilance Level | - | 05.00 | Normal |
| Vigilance Mean | - | 04.27 | Normal |
| Vigilance Regulation | - | -0.04 | Normal |
| Vigilance 0 Stage (%) | - | 00.00 | Normal |
| Vigilance A1 Stage (%) | - | 58.70 | - |

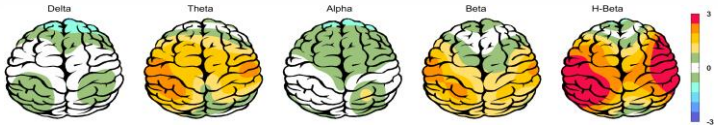
## EEG Spectra


EC1
Delta
3 HZ
Theta
6.5 HZ
Alpha
10 HZ
Beta
20 HZ
HBeta
21 HZ
1
0
Fp1
Fp2
F7
F3
Fz
F4
F8
T3
C3
Cz
C4
T4
T5
P3
Pz
P4
T6
O1
O2
64
32
0
0 10 20 30
EC1
Source&High ValueError
SourceError
Normal
SourceError
Source&Low ValueError

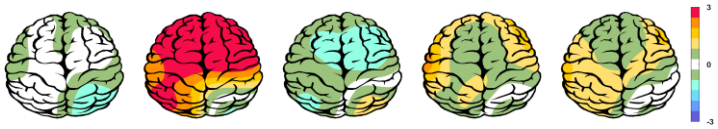
## Z Score Summary Information

### Eye Close

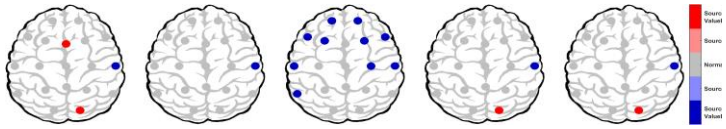
Absolute Power



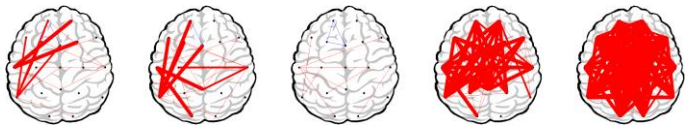

Relative Power



Generation Source

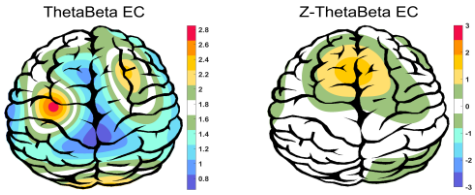


Coherence



## Theta/Beta Ratio

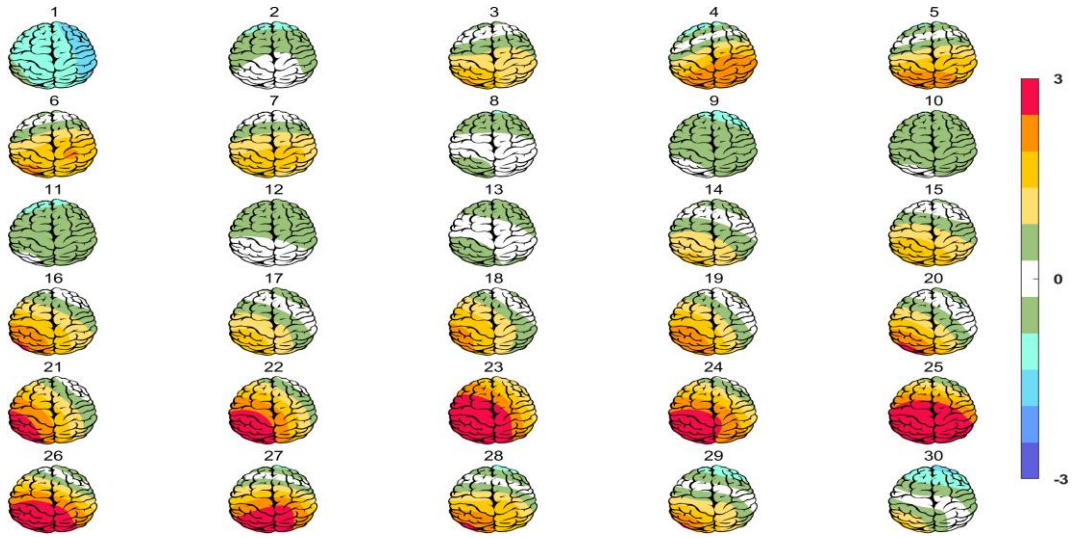
### Eye Close




Raw ThetaBeta

Z- ThetaBeta EC

## Absolute Power-Eye Close




## Relative Power-Eye Close