

QEEG Clinical Report

EEGLens



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

Personal Data:

Name: Khashayar Moradi

Gender: Male

Age: 1999-12-16 - 26

Handedness: Right

Clinical Data:

Initial diagnosis: Anxiety-Drug Abuse

Medication: -

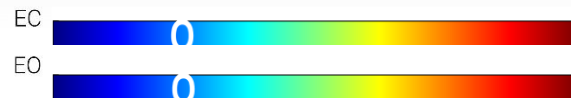
Date of Recording: 2025-10-07

Source of Referral: Dr Dinarvand

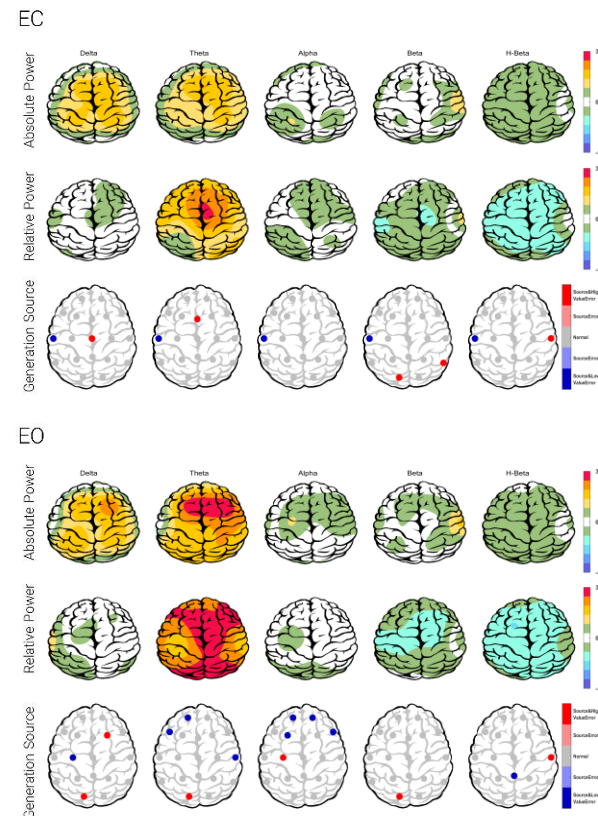


This case belongs to Dr Dinarvand

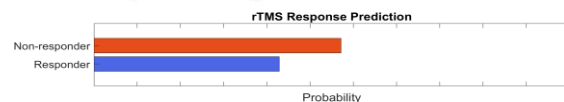
EEG Quality



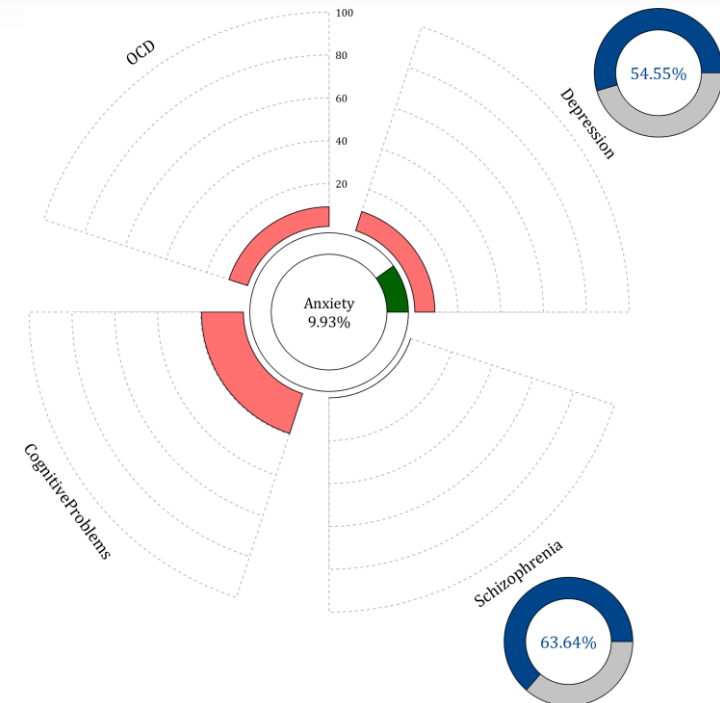
Z-score Information



TMS Responsibility



Pathological Assessment



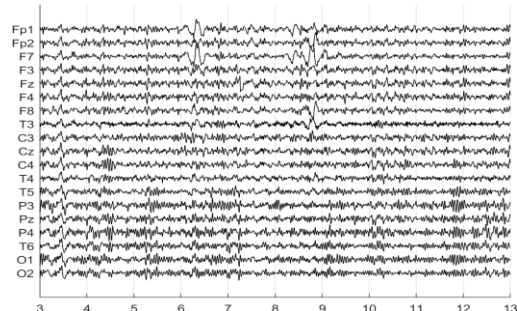
EEG Neuromarker Values

Neuromarker	Region	Value	Assessment
APF - EO	Frontal	09.25	Normal
AFP - EC	Frontal	09.58	Normal
APF - EO	Occipital	10.88	High
AFP - EC	Occipital	10.12	Normal
Arousal Level - EO	-	-	Normal
Arousal Level - EC	-	-	Normal

Denoising Information

Eye Close

Raw EEG



Rejected Channel



Total Recording Time Remaining:

235.98 sec

Number of Eye and Muscle Elements

Eye: 2

Muscle: 0

Low Artifact Percentage



High Artifact Percentage

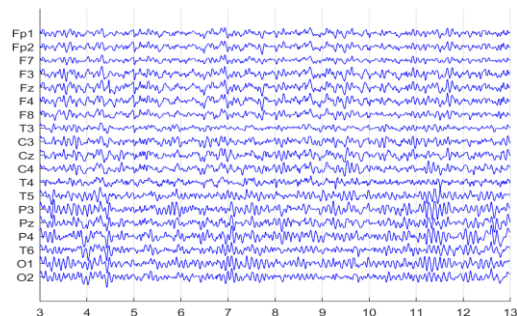


Total Artifact Percentage



EEG Quality: perfect

Denoised EEG

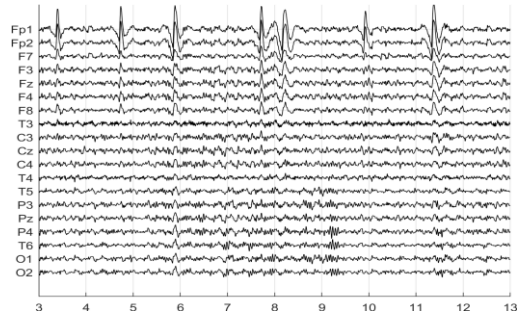


Flat Channel



Eye Open

Raw EEG



Rejected Channel



Total Recording Time Remaining:

229.89 sec

Number of Eye and Muscle Elements

Eye: 2

Muscle: 1

Low Artifact Percentage



High Artifact Percentage

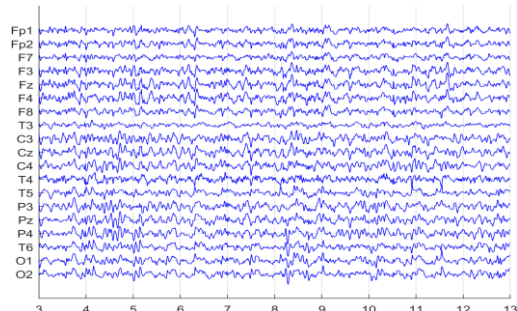


Total Artifact Percentage



EEG Quality: perfect

Denoised EEG

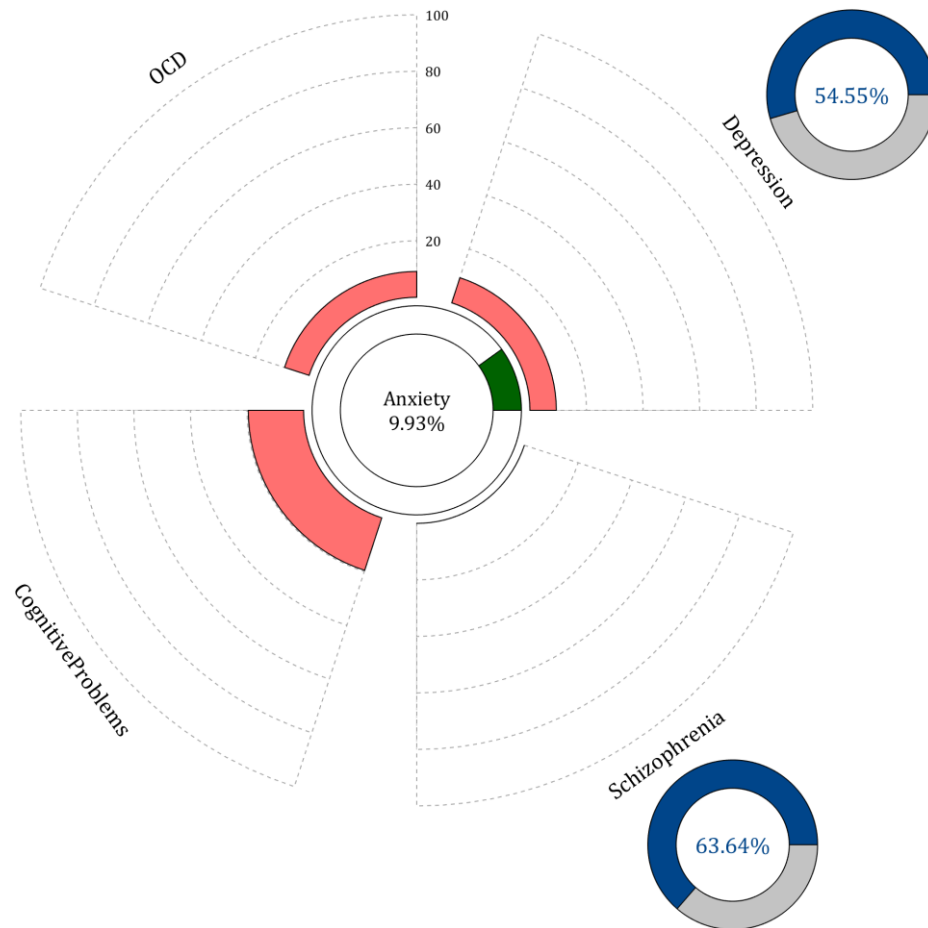


Flat Channel



Pathological Assessment

Main Diagnosis: Anxiety Disorder



Description

According to the guidelines, the initial diagnosis of anxiety disorder could have comorbidities such as **alcohol abuse, depression, and OCD**. It also differentially diagnoses with **depression and schizophrenia**.

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

Side circles in the above graph represent the differential diagnosis between depression and its misdiagnosis conditions based on your patient's EEG markers and trained artificial intelligence. The differential diagnosis probability is represented by **the bold blue bars** in the circles, and the probability of depression is represented by the **gray bars**.

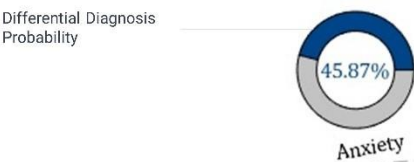
Note: In case your patient has drug abuse, obtain the substance abuse pathologic page of QEEGhome by registering the diagnosis under the initial diagnoses section of the website.

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

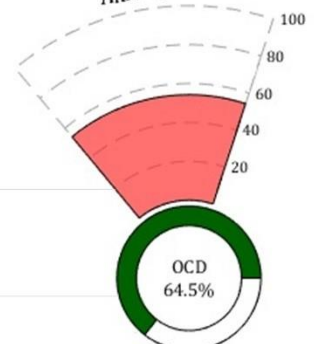
User Manual

Differential Diagnosis Probability



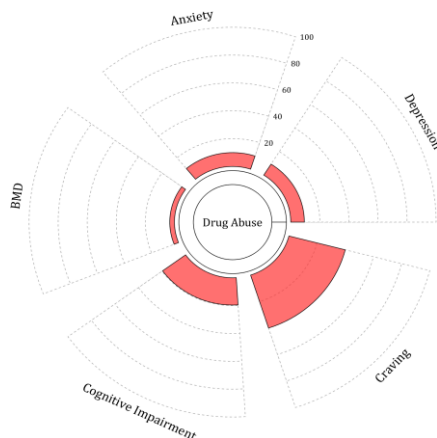
Comorbidity Percentage

Main Diagnosis Compatibility

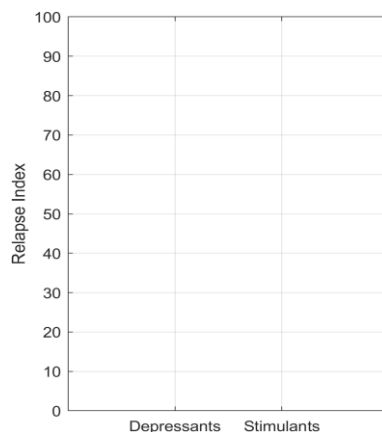


Pathological Assessment for Substance Abuse

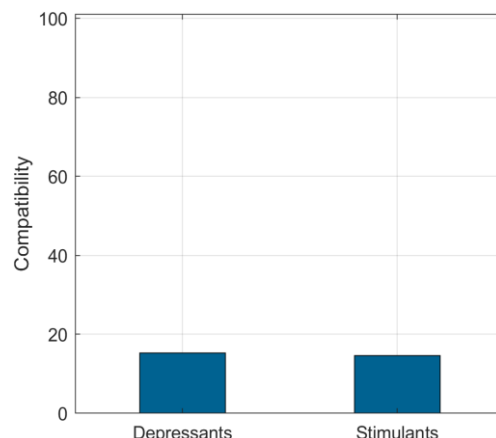
Comorbid Symptoms



Relapse Index

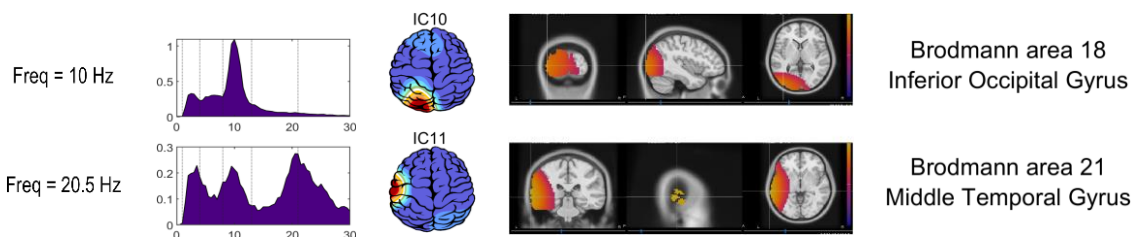


Substance Abuse Compatibility

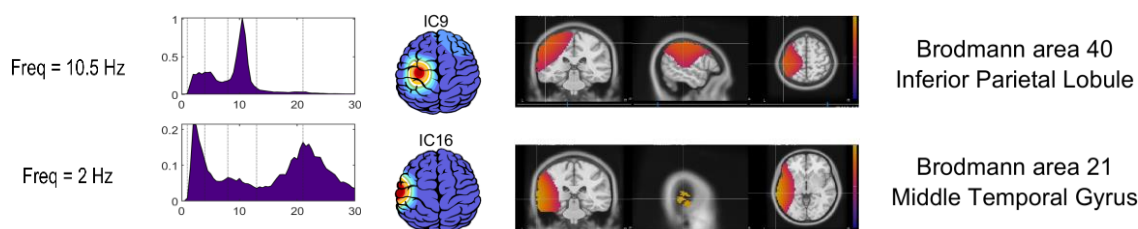


Functional Problems Source Detection

Eye Close



Eye Open



Note

The **Relapse** graph displays the relapse index based on a combination of EEG neuromarkers. It is valid only if the patient has used each of the substances included in the chart; otherwise, the index is not applicable.

The **Compatibility** graph shows how closely the patient's EEG neuromarkers match typical EEG changes caused by specific substances. It helps identify the dominant substance effect in cases of multiple drug use. This index is also valid only if the patient has actually used the substances represented.

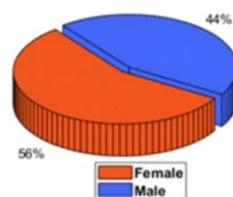
rTMS Response Prediction

Network Performance

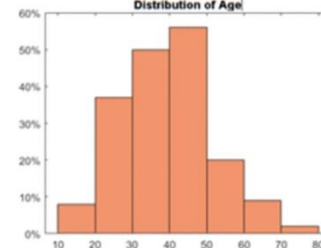
Accuracy: 92.10%
Sensitivity: 89.13%
Specificity: 97.47%

Participants Information

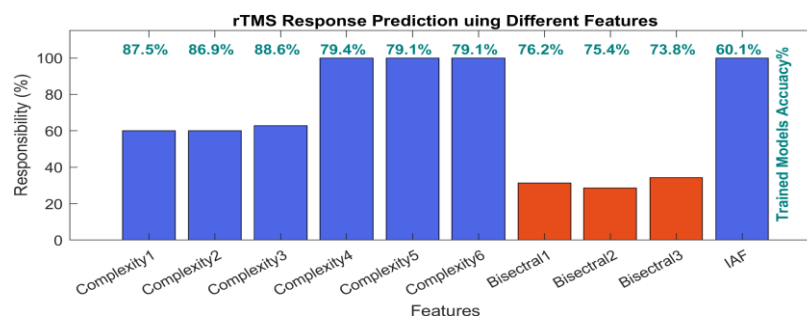
Distribution of Gender



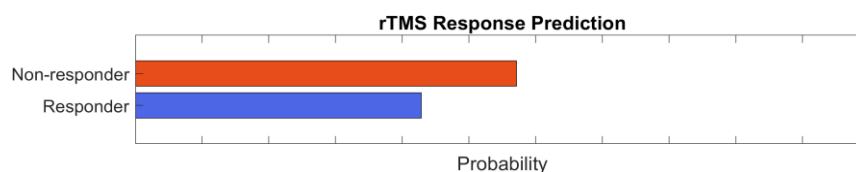
Distribution of Age



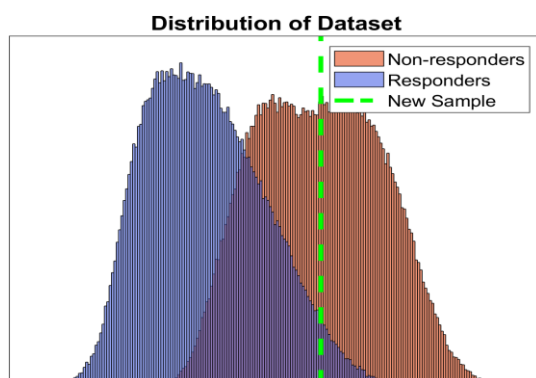
Features Information



Responsibility



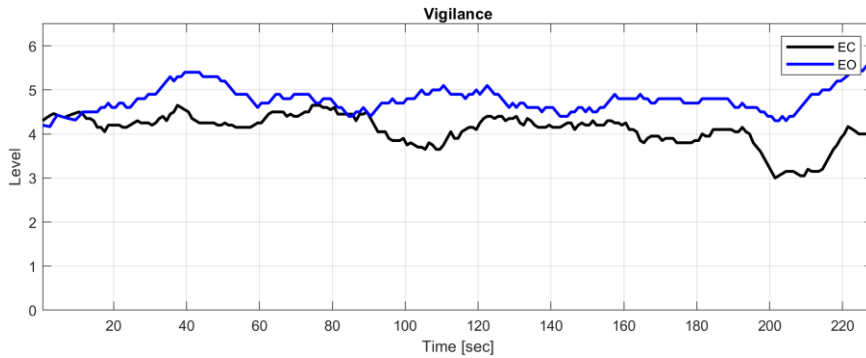
Data Distribution



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

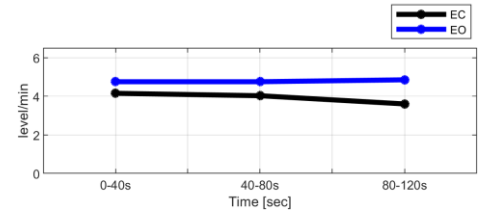


Vigilance Slope

EC:-0.21 EO:0.17

2min

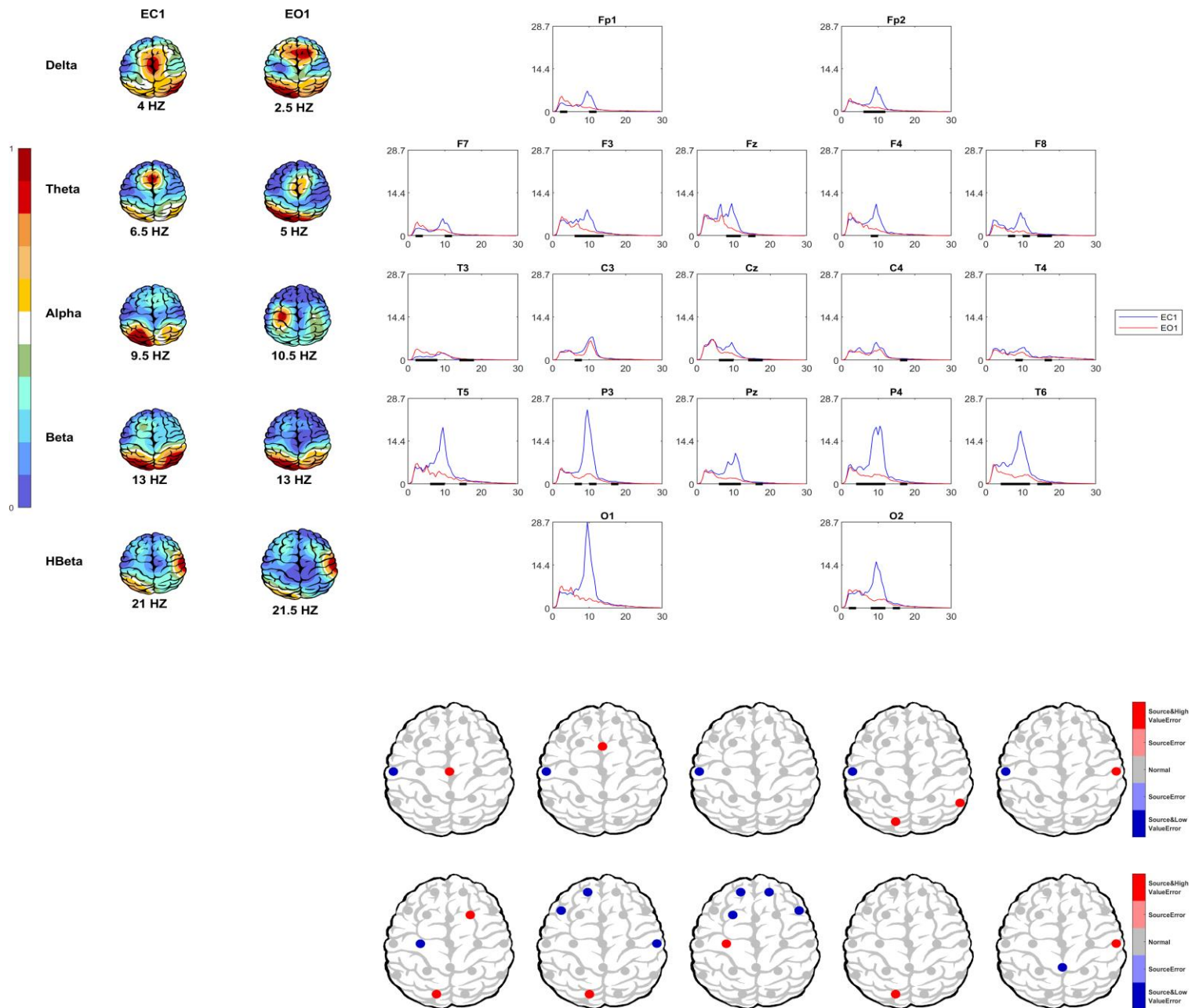
2min



EEG Neuromarker Values

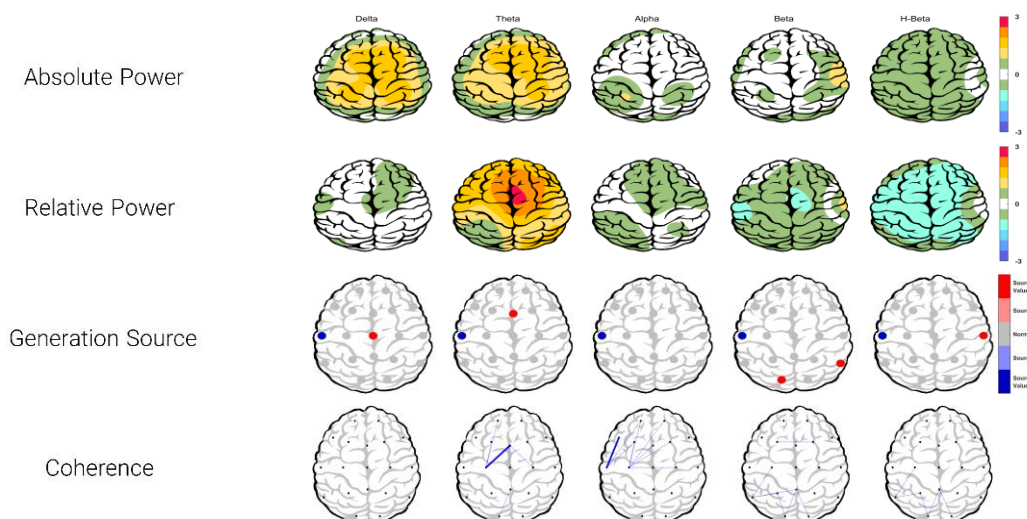
Neuromarker	Region	Value	Assessment
APF - EO	Frontal	09.25	Normal
AFP - EC	Frontal	09.58	Normal
APF - EO	Occipital	10.88	High
AFP - EC	Occipital	10.12	Normal
Alpha Asymmetry - EO	Frontal	-0.00	Anhedonia
Alpha Asymmetry - EC	Frontal	00.00	Anxiety
Alpha Asymmetry - EO	Occipital	00.06	Anxiety
Alpha Asymmetry - EC	Occipital	00.25	Anxiety
Beta Asymmetry - EO	Frontal	00.02	Anhedonia
Beta Asymmetry - EC	Frontal	00.00	Anhedonia
Alpha Blocking	-	-	Not Observed
Arousal Level - EO	-	-	Normal
Arousal Level - EC	-	-	Normal
Vigilance Level - EO	-	04.00	Normal
Vigilance Level - EC	-	04.00	Normal
Vigilance Mean - EO	-	04.78	Normal
Vigilance Mean - EC	-	04.10	Normal
Vigilance Regulation - EO	-	00.17	Normal
Vigilance Regulation - EC	-	-0.21	Normal
Vigilance 0 Stage (%) - EO	-	38.86	Normal
Vigilance 0 Stage (%) - EC	-	00.00	Normal
Vigilance A1 Stage (%) - EO	-	00.00	-
Vigilance A1 Stage (%) - EC	-	46.72	-

EEG Spectra

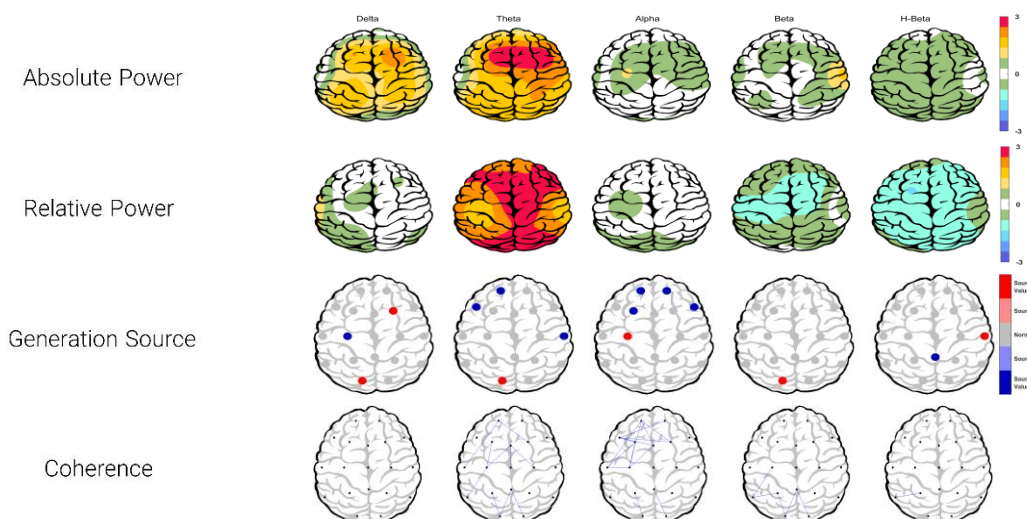


Z Score Summary Information

Eye Close

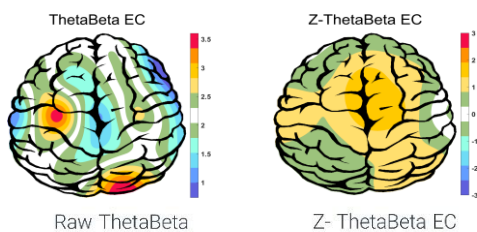


Eye Open

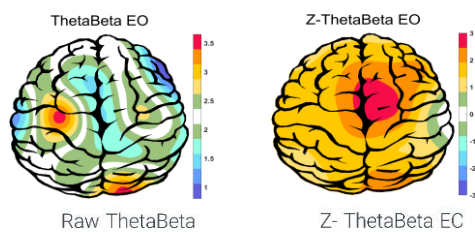


Theta/Beta Ratio

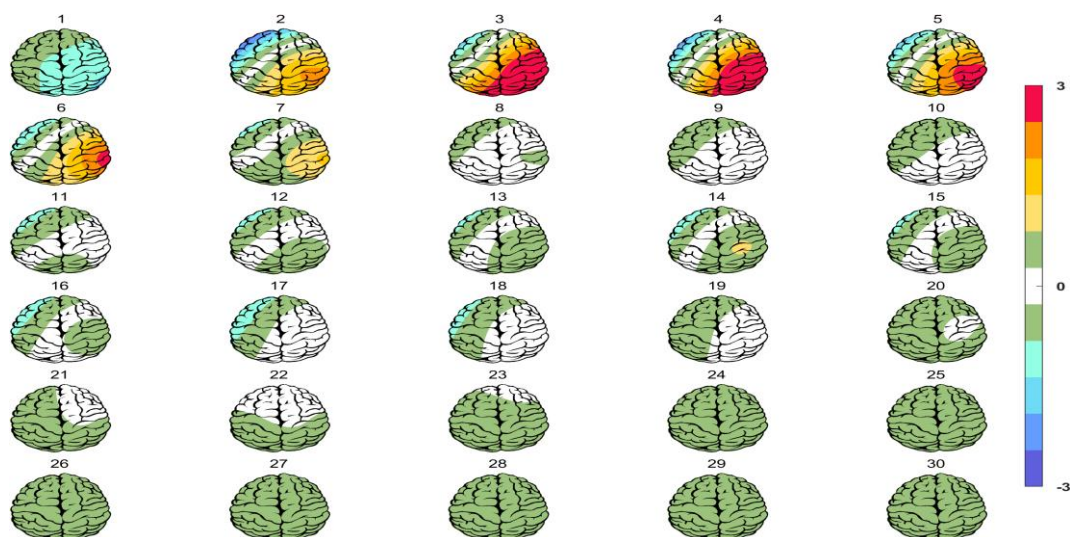
☐ Eye Close



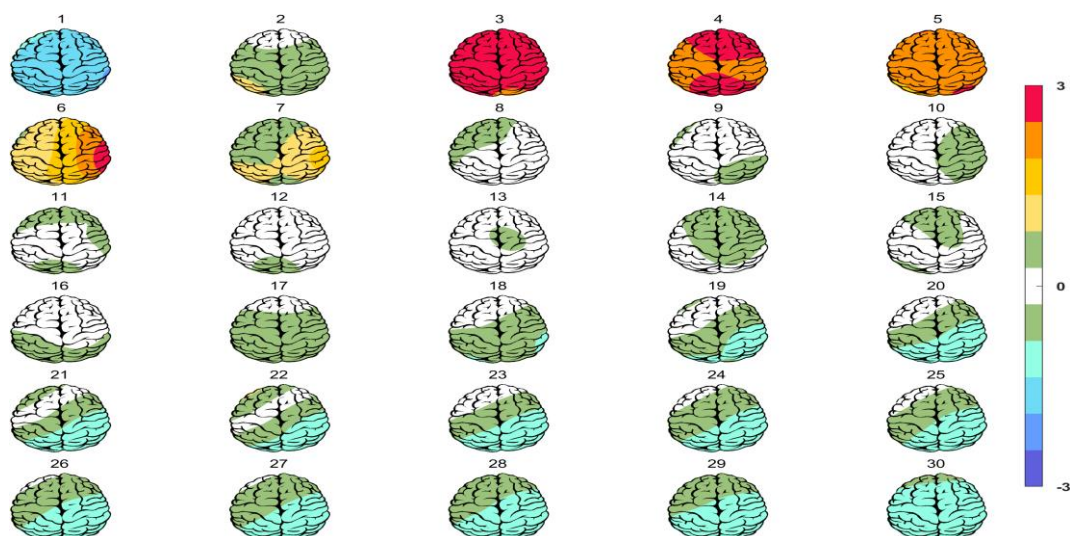
■ Eye Open



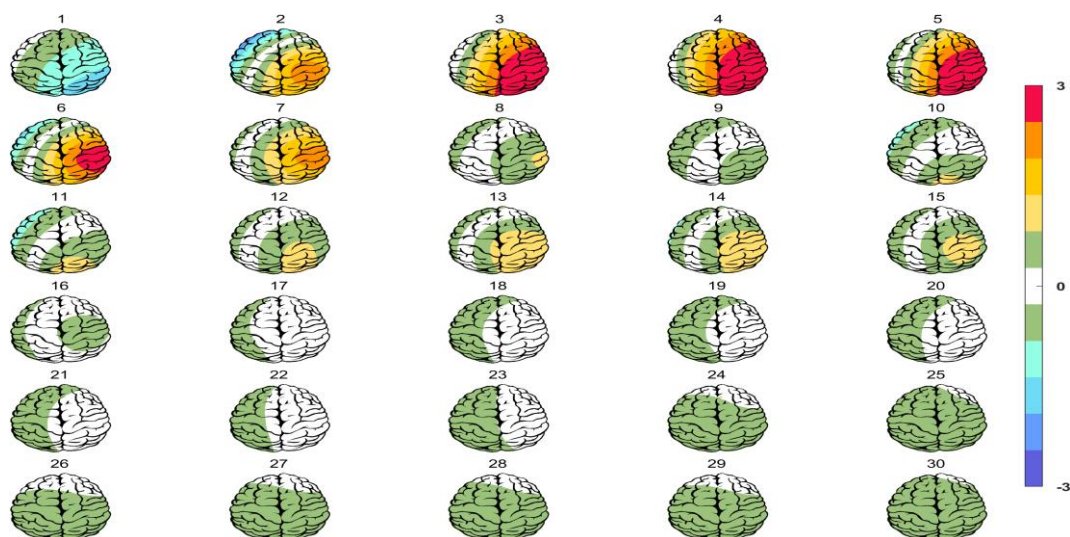
Absolute Power-Eye Close



Relative Power-Eye Close



Absolute Power-Eye Open



Relative Power-Eye Open

