



## QEEG Clinical Report

BrainLens V0.4



### Report Description

### Personal & Clinical Data

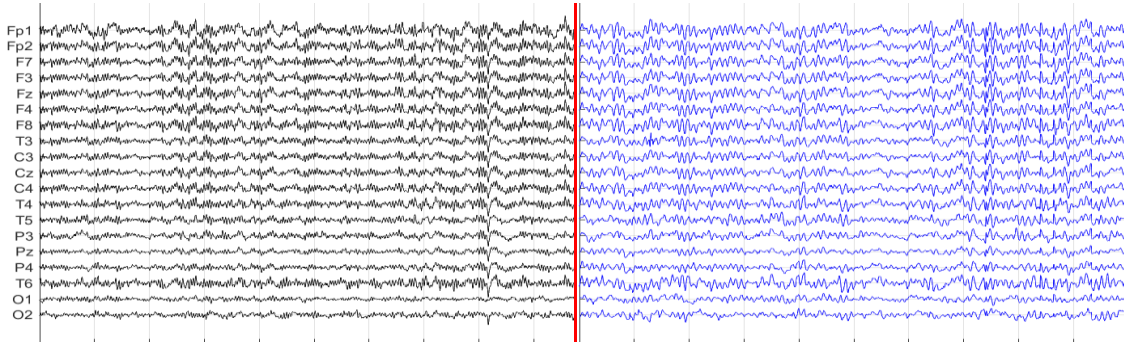
|                     |                    |                    |                |
|---------------------|--------------------|--------------------|----------------|
| Name                | Arvin Miri         | Date of Recording  | 19-Aug-2024    |
| Date of Birth - Age | 31-Dec-2014 - 9.63 | Gender             | Male           |
| Handedness(R/L)     | Right              | Source of Referral | Dr AtefeSafavi |
| Initial Diagnosis   | -                  |                    |                |
| Current Medication  | Medication Free    |                    |                |

Dr AtefeSafavi

## Denoising Information (EC)

Raw EEG

Denoised EEG



Flat Channels

Rejected Channels

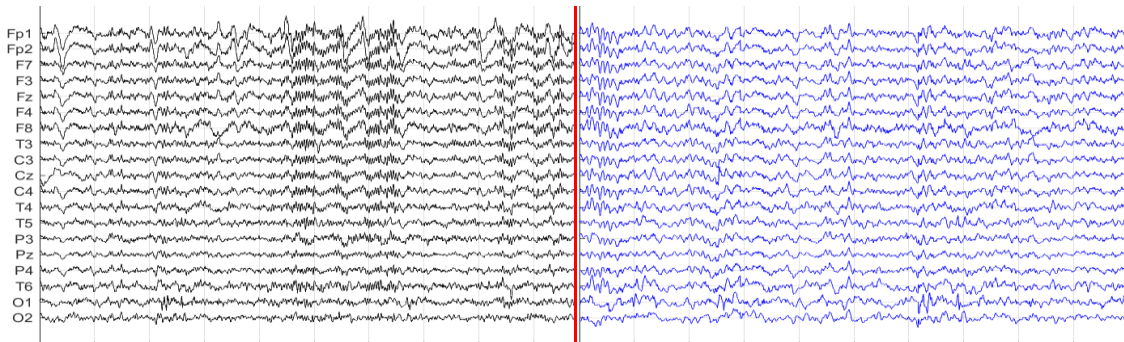


| Number of Eye and Muscle Elements |   |        |   | Low Artifact Percentage        |  |
|-----------------------------------|---|--------|---|--------------------------------|--|
| Eye                               | 2 | Muscle | 0 |                                |  |
| Total Artifact Percentage         |   |        |   | High Artifact Percentage       |  |
|                                   |   |        |   |                                |  |
| EEG Quality                       |   | bad    |   | Total Recording Time Remaining |  |
|                                   |   |        |   | 142.10 sec                     |  |

## Denoising Information (EO)

Raw EEG

Denoised EEG



Flat Channels

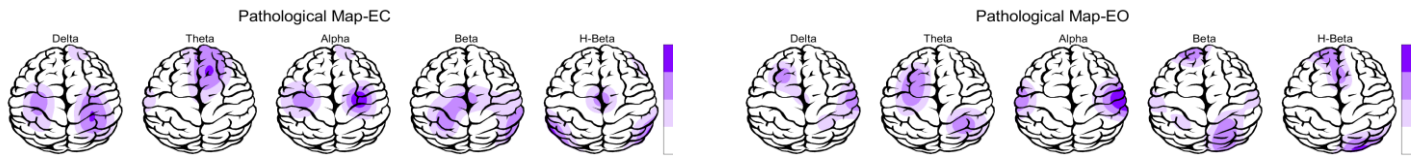
Rejected Channels



| Number of Eye and Muscle Elements |   |        |   | Low Artifact Percentage        |  |
|-----------------------------------|---|--------|---|--------------------------------|--|
| Eye                               | 2 | Muscle | 0 |                                |  |
| Total Artifact Percentage         |   |        |   | High Artifact Percentage       |  |
|                                   |   |        |   |                                |  |
| EEG Quality                       |   | bad    |   | Total Recording Time Remaining |  |
|                                   |   |        |   | 148.48 sec                     |  |

## Pathological assessment for ADHD

### Compare to ADHD Database



### EEG Compatibility with ADHD Diagnosis

| ADHD Table          | EC        |        | EO        |           |
|---------------------|-----------|--------|-----------|-----------|
| Feature Name        | Threshold | Region | Threshold | Region    |
| Increased rDelta    | 0.00      | NAN    | 0.50      | global    |
| Increased rTheta    | 0.00      | NAN    | 0.00      | NAN       |
| Increased rAlpha    | 1.00      | global | 0.00      | NAN       |
| Increased rBeta     | 0.00      | NAN    | 0.00      | NAN       |
| Decreased SMR       | -1.00     | global | -1.00     | global    |
| Increased T/B Ratio | 0.00      | NAN    | 0.75      | Fz and Cz |

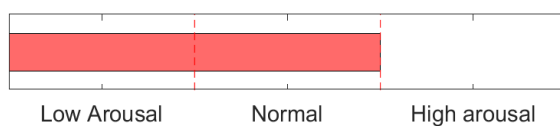
ADHD

0 10 20 30 40 50 60 70 80 90 100

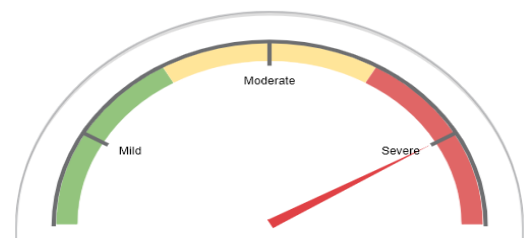
ADHD Probability

ADHD Probability

### Arousal Level Detection



### ADHD Severity

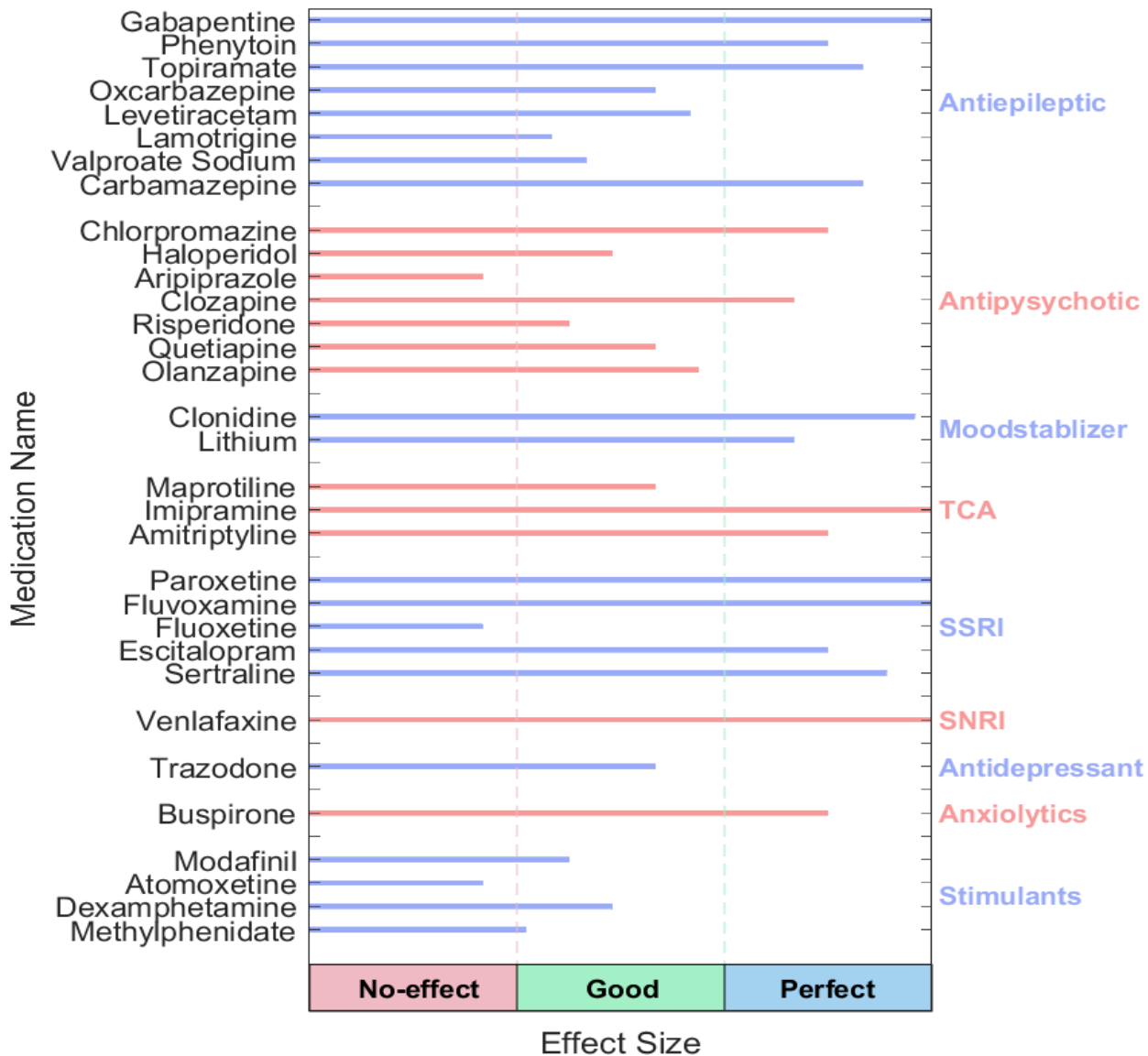


### ADHD Clustering \*

1. Least impulsive group, almost only inattentive. May respond to stimulants.
2. May be artistic/creative, may have affective regulatory dysfunction. May respond to SSRI.

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

## QEEG based predicting medication response



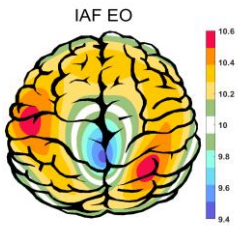
## Explanation

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 Pharmacoe 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.

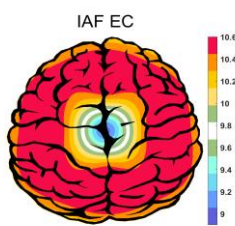
## APF(EO)



Frontal APF= 10.25

Posterior APF= 09.62

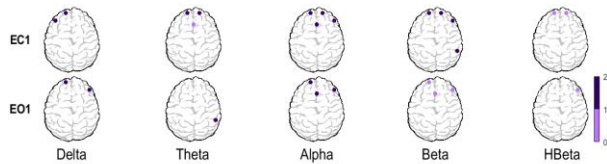
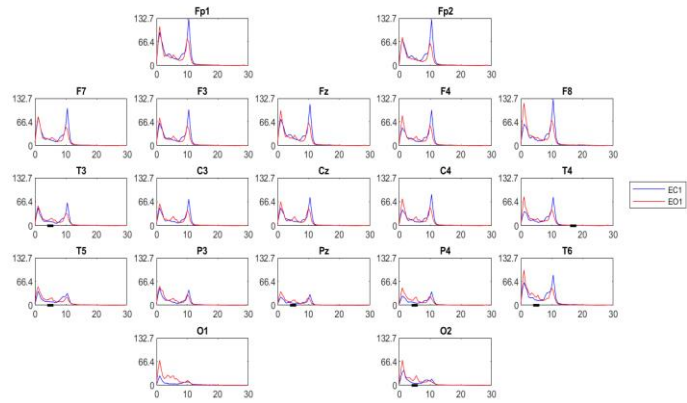
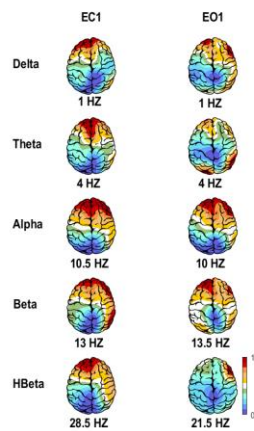
## APF(EC)



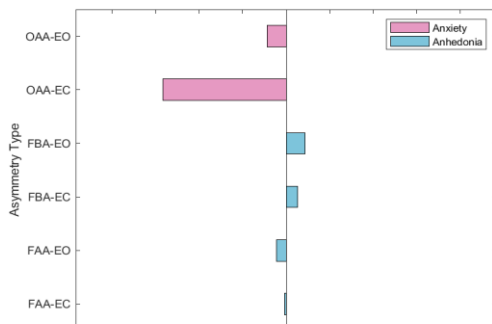
Frontal APF= 10.50

Posterior APF= 09.75

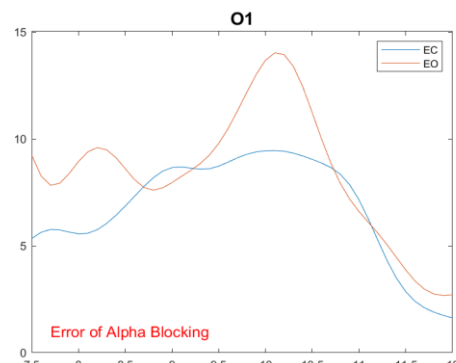
## EEG Spectra



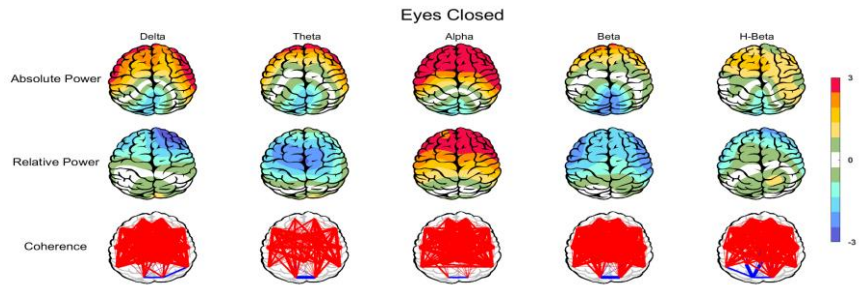
## Alpha Asymmetry(AA)



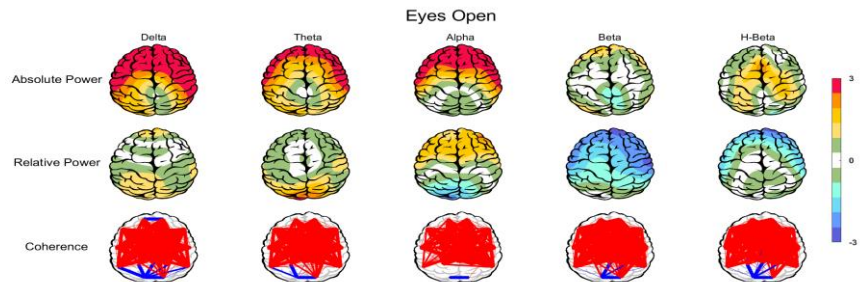
## Alpha Blocking



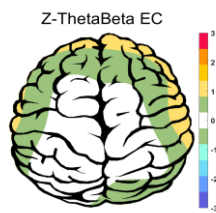
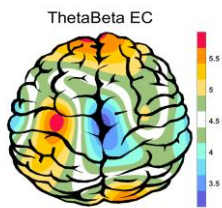
## Z Score Summary Information (EC)



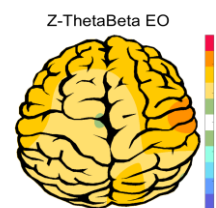
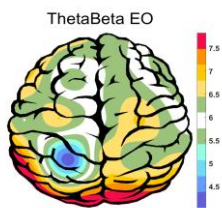
## Z Score Summary Information (EO)



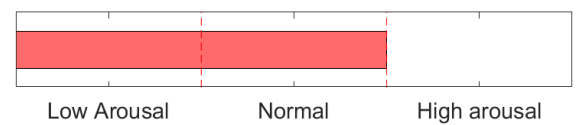
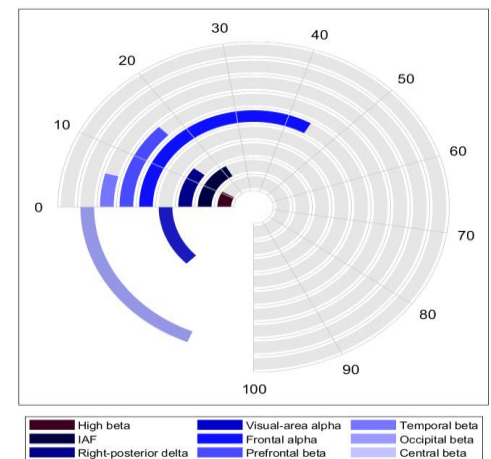
## E.C.T/B Ratio ( Raw- Z Score)



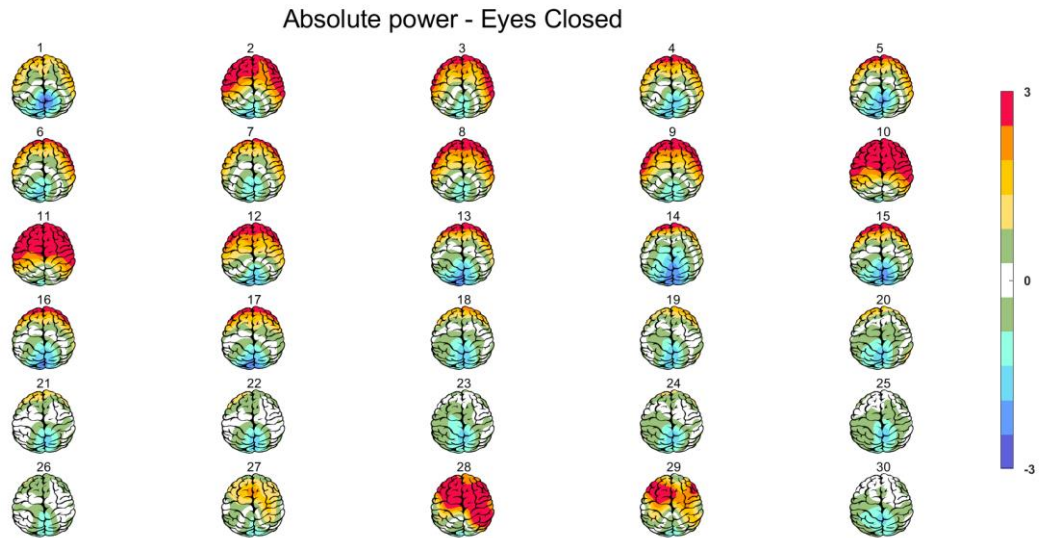
## E.O.T/B Ratio ( Raw- Z Score)



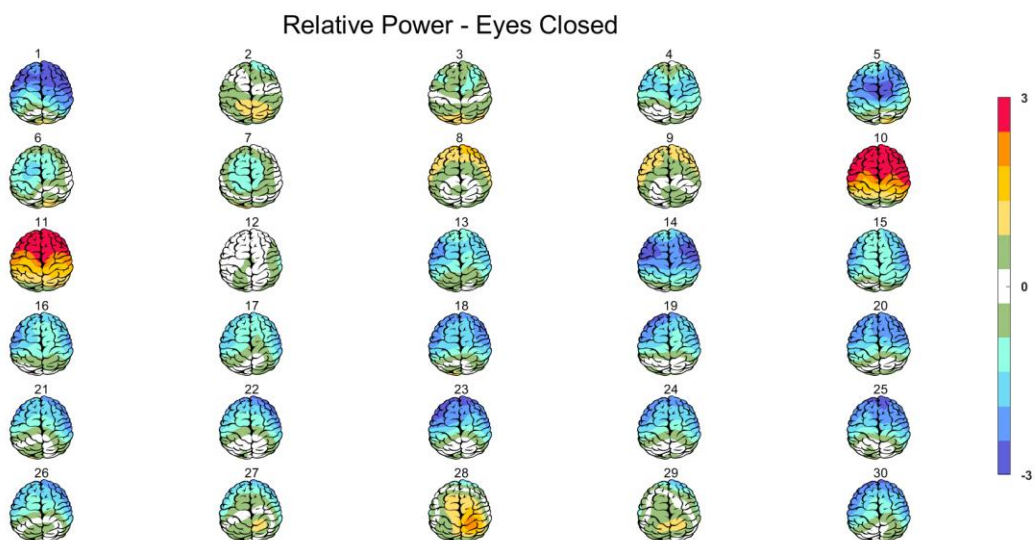
## Arousal Level



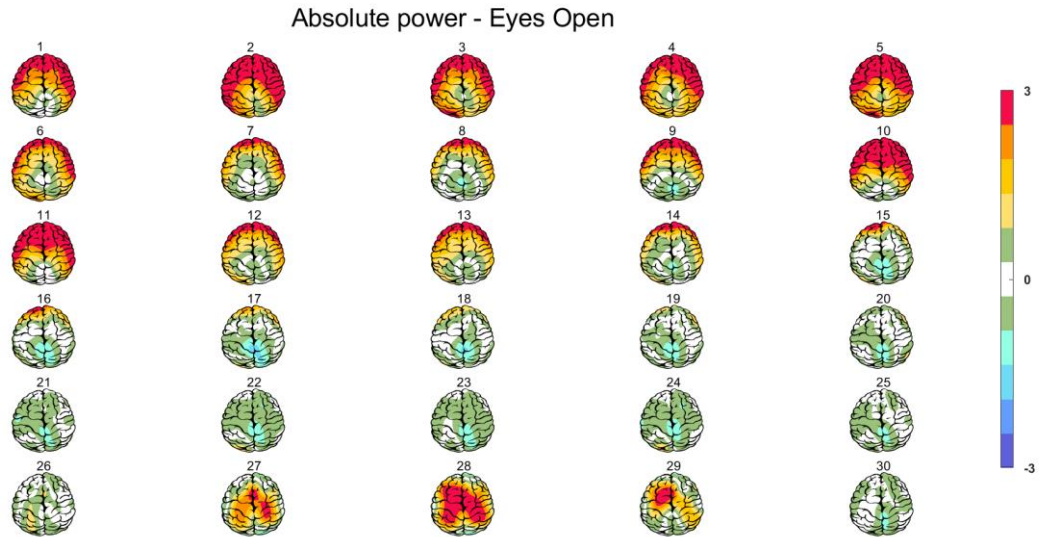
## Absolute Power-Eye Closed (EC)



## Relative Power-Eye Closed (EC)



## Absolute Power-Eye Open (EO)



## Relative Power-Eye Open (EO)

