

qEEG Report

powered by brainboost BrainAssistant



Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

Basic Information

Client	John Sample
Age	27 (1/1/1997)
Gender	Male
Handedness	Not Specified
Trainer	brainboost
Date	07.02.2024
Segments	EC (00:21 min), EO (00:11 min)
Hardware used	Edf Reader
Sampling Rate	2048
Active Channels	Fp1, Fp2, F7, F3, Fz, F4, F8, C3, Cz, C4, P3, Pz, P4, O1, O2, T7, T8, P7, P8, F9, F10, T9, T10, P9, P10

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

qEEG Report

powered by brainboost BrainAssistant

This comprehensive qEEG (quantitative Electroencephalography) report is designed to provide an in-depth analysis of brainwave activity, offering a rich array of data through various EEG-based scores, brain maps, spectrograms, and neurofeedback protocol suitability scores. It is meticulously structured to facilitate understanding of the individual's neural patterns and the potential for personalized neurofeedback training.

EEG-Based Scores:

These scores are calculated by analyzing the EEG data across different frequency bands (such as Delta, Theta, Alpha, Beta) and areas of the brain. They provide an objective measure of brain activity, highlighting areas that may exhibit under- or over-activity compared to standard reference values. The scores are color-coded into green (normal), yellow (moderate), and red (significant deviation) to indicate different levels of concern or interest.

BrainMaps:

The BrainMaps included in the report visualize the electrical activity across the scalp, providing a topographical representation of different brainwaves and their distribution. They are instrumental in pinpointing specific regions that may correlate with cognitive and emotional processes and are useful for identifying asymmetries and patterns that might be targeted in neurofeedback training.

Spectrograms:

Spectrograms offer a dynamic view of the brain's electrical activity over time, displaying the power and frequency of brainwaves as they fluctuate. These are critical for assessing the stability and variability of brainwave patterns and for understanding how these patterns may change in response to different stimuli or tasks.

Explanations:

Each section of the report includes detailed explanations and interpretations to clarify the data presented. The explanations cover the meaning behind the scores, the significance of the brain maps and spectrograms, and the rationale for the suitability scores of the neurofeedback protocols.

Disclaimer:

Please note that the contents of this qEEG report, which encompass brainwave data, EEG-based scores, brain maps, spectrograms, and neurofeedback protocol suitability scores, are intended solely for informational purposes, research, or to promote a healthy lifestyle. Consequently, this report should not be employed for the diagnosis, treatment, mitigation, or prevention of any medical condition, nor should it replace the guidance of professional medical practitioners. For matters pertaining to health and medical conditions, it is essential to seek the counsel of a qualified healthcare provider. Also note that the Protocol Suitability Score is provided for informational purposes only and is based on the data-driven analysis of EEG recordings. It is not a diagnostic tool, nor does it serve as medical advice. While this score can be a helpful element in the decision-making process for Neurofeedback professionals supporting a healthy lifestyle of someone interested in Neurofeedback

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

training, it is entirely separate from medical consultation. Individuals should continue to consult with a healthcare provider regarding their health concerns or before starting any new treatment. The qEEG Analysis Application is not a replacement for the personalized care and advice provided by a medical professional. Users are encouraged to engage with healthcare providers to ensure that any course of treatment or therapy they undertake is safe, appropriate, and tailored to their specific health needs.

Report Version 24.2

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

Each frequency range in an EEG represents different types of brain activity and can be associated with for example different states of consciousness, cognitive processes or states of the brain.

Here's an overview of the frequency bands used in this report:

Delta (1 - 4 Hz)

- Characteristics: Delta waves are the slowest brainwaves and are present during deep, restorative sleep.
- Associations: They are important for healing, regeneration, and non-REM sleep. Excessive delta activity while awake can suggest brain injuries, learning difficulties, or brain abnormalities.

Theta (4 - 8 Hz)

- Characteristics: Theta waves are associated with light sleep, relaxation, and the twilight state between waking and sleeping.
- Associations: They play a role in creativity, intuition, daydreaming, and recall. High levels in wakefulness can be associated with ADHD or can appear during meditation.

Alpha (8 - 12 Hz)

- Characteristics: Alpha waves are present during wakeful relaxation with closed eyes and are considered the resting state for the brain.
- Associations: Alpha is linked to reduced stress, positive thinking, and a state of relaxed alertness. Imbalances or unusual patterns may be associated with anxiety or depression.

Beta (12 - 20 Hz)

- Characteristics: Beta waves are seen during awake, alert states, including active conversation, problem-solving, judgment, decision making, and focused mental activity.
- Associations: Balanced beta activity is a sign of active, engaged brain functioning. Excessive beta can indicate stress, anxiety, or 'overthinking'.

Low Beta (12 - 15 Hz)

- Characteristics: Sometimes considered a subset of beta waves, low beta is associated with a calm, but alert state.
- Associations: It is often linked to concentration, cognitive tasks, and when a person is attentive to tasks or the environment.

Mid Beta (15 - 20 Hz)

- Characteristics: This is associated with mental activity related to cognitive tasks and processes.
- Associations: An increase in mid-beta activity can indicate high levels of logical processing or anxiety.

High Beta (20 - 35 Hz)

- Characteristics: High beta waves are associated with high-level cognition, anxiety, or excitement.
- Associations: They can be indicative of intense mental activity, complex thought processes, or a state of high alert. In excess, high beta can reflect anxiety or neurosis.

Gamma (>35 Hz)

- Characteristics: Gamma waves are involved in higher mental activity, including perception, problem-solving,

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

and consciousness.

- Associations: They are believed to be involved in binding sensory inputs into the single concept of consciousness and have been seen in advanced meditation practices.

It's important to remember that while certain trends can be observed, the interpretation of EEG waves can be complex and should be done by a trained professional. The presence and balance of these waves can vary greatly depending on the individual and their state of mental, emotional, and physical health.

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

Scores Overview

The ratings below summarize the finding of all assessed EEG scores. Individual interpretations are detailed in more depth in the body of the report.

Green: Within normal range compared to others (Scores smaller than 33)
Yellow: Slightly deviant (increased or decreased) from the normal ranges (Scores 34 to 66)
Red: Markedly deviant (increased or decreased) from the normal ranges (Scores larger than 67)

Focus Score (Theta)



Focus Score (Theta Beta ratio)



Focus Score (Alpha)



Focus Score (Alpha 1 & Alpha 2 Ratio)

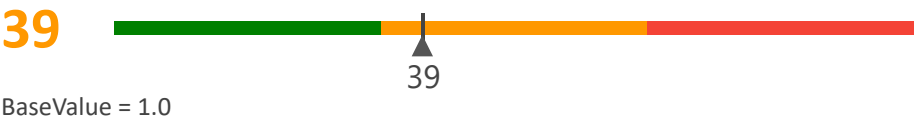


Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

Arousal Score (HighBeta Beta Ratio)



Sensor Performance Score



Motor Cortex Mu-Rhythm



EC Frontal Alpha Asymmetry Score



Alpha Regulation Score (EO vs. EC)



EC Theta / Alpha Score



Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

EC Alpha Frontal - Parietal Asymmetry



Excessive Delta Indicator

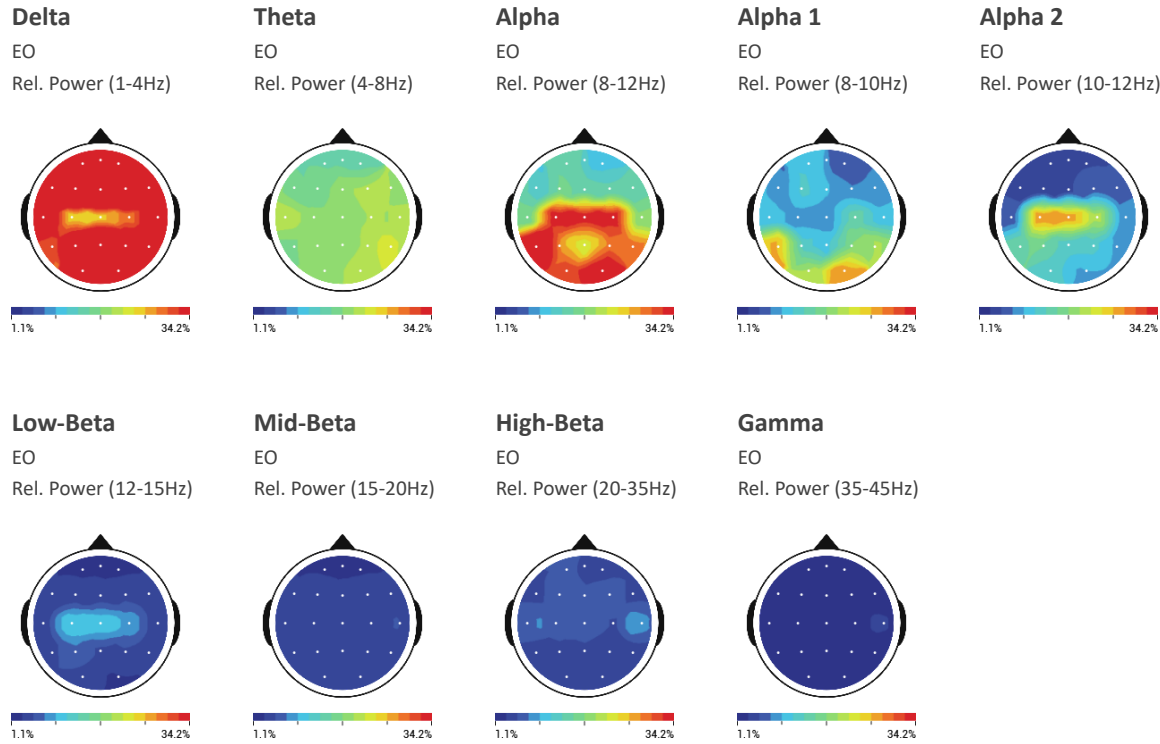


EMG Artifact Score

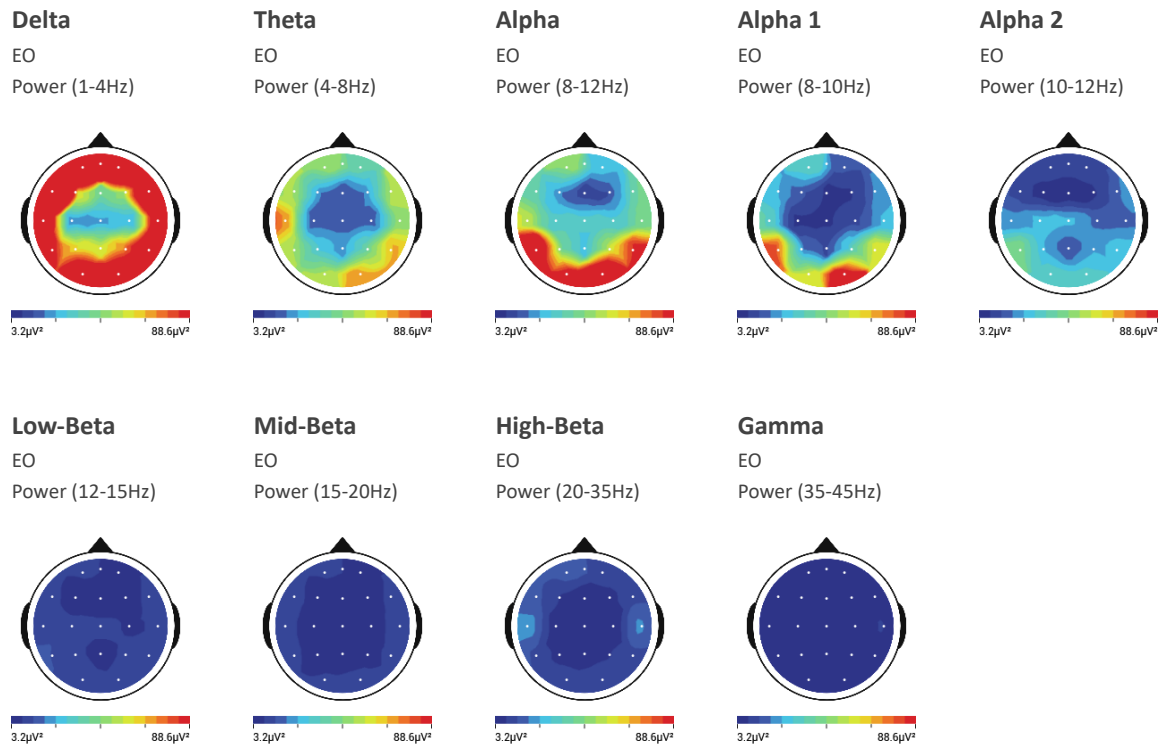


Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

Relative Power EO

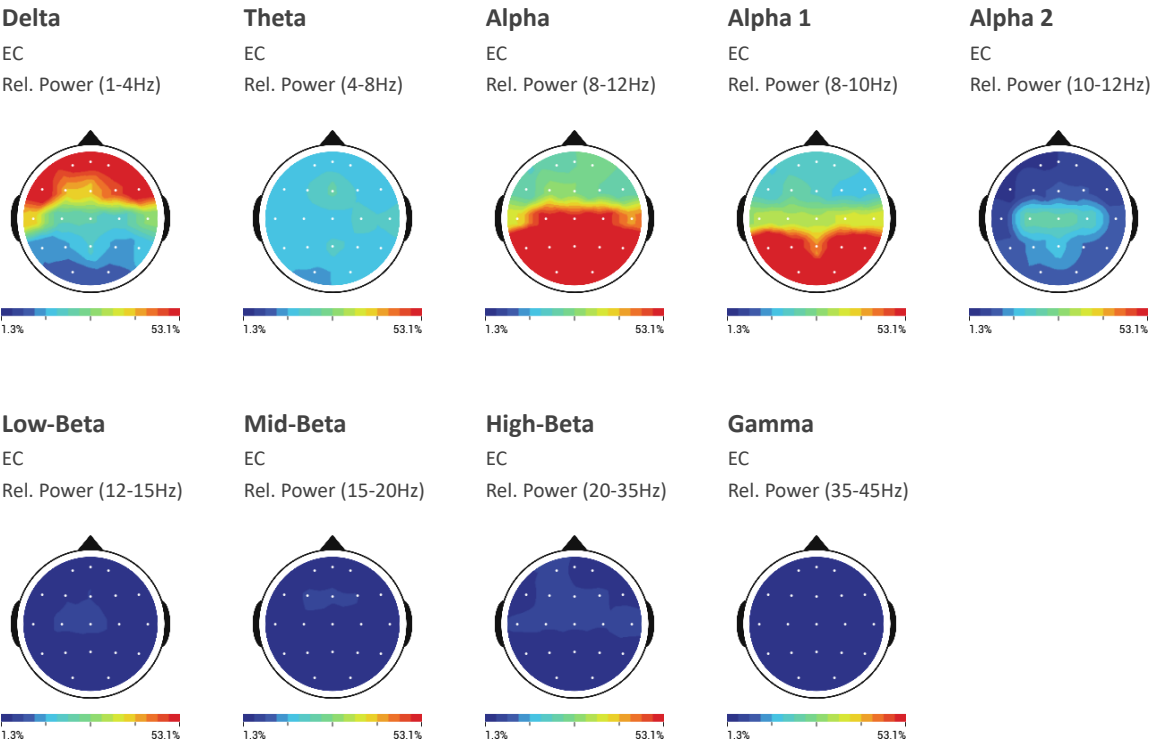


Power EO

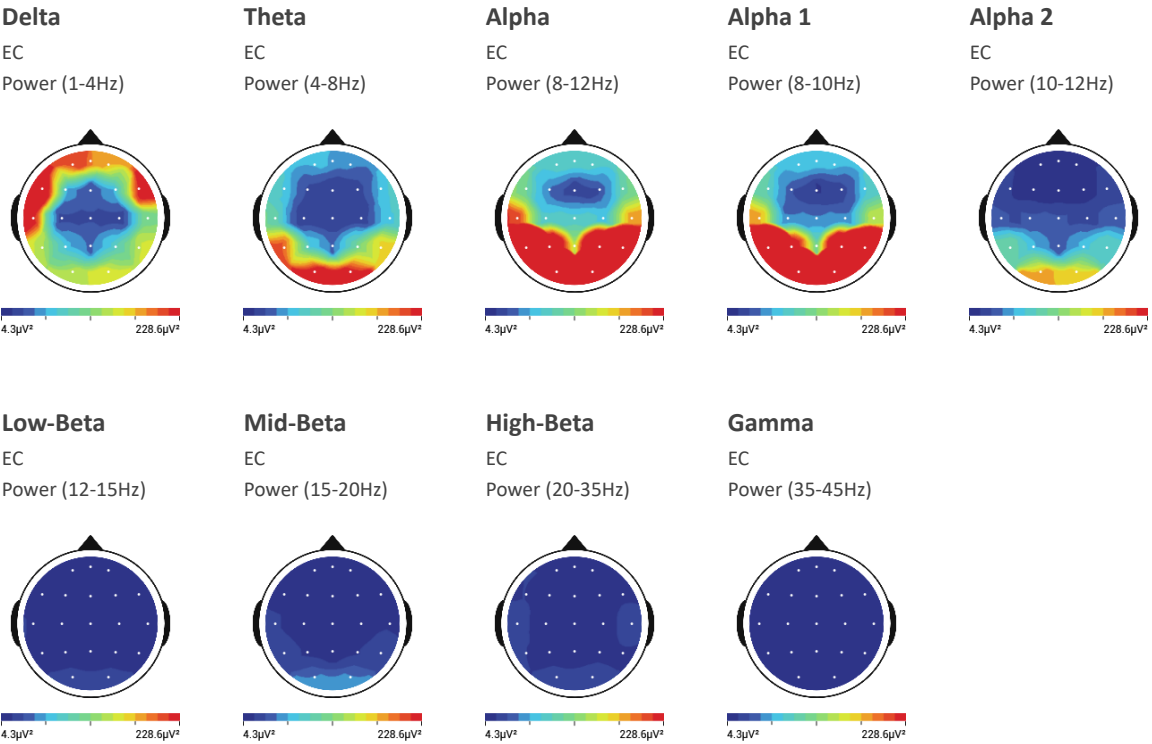


Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

Relative Power EC

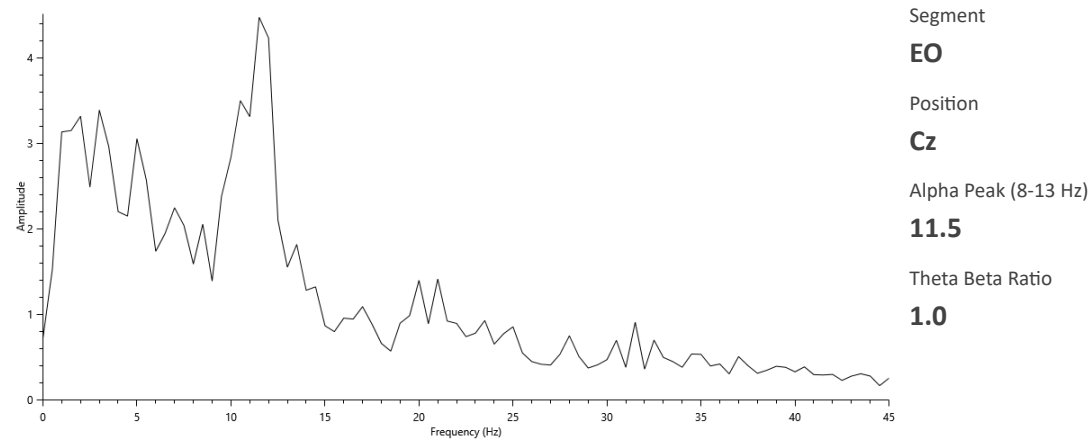


Power EC



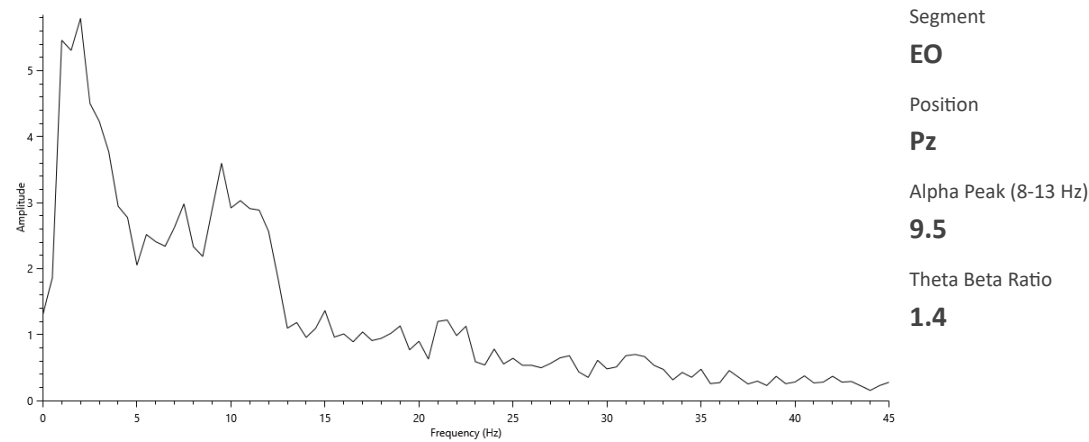
Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

Cz FFT Analysis



Delta	Theta	Alpha	Alpha 1	Alpha 2
8.3 μV	7.0 μV	9.5 μV	4.7 μV	8.5 μV
Low-Beta	Mid-Beta	High-Beta	Gamma	
5.5 μV	3.3 μV	4.2 μV	1.7 μV	

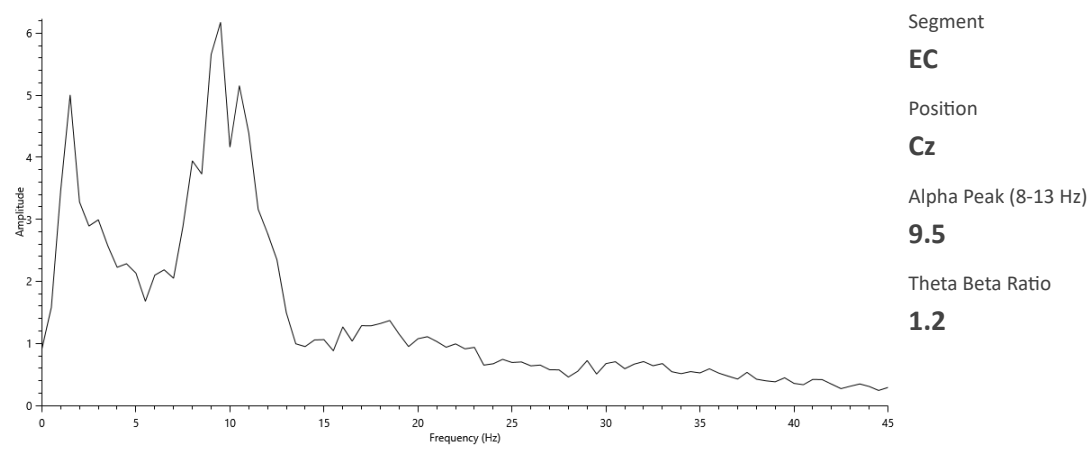
Pz FFT Analysis



Delta	Theta	Alpha	Alpha 1	Alpha 2
12.8 μV	7.9 μV	8.7 μV	6.0 μV	6.4 μV
Low-Beta	Mid-Beta	High-Beta	Gamma	
4.1 μV	3.6 μV	4.1 μV	1.6 μV	

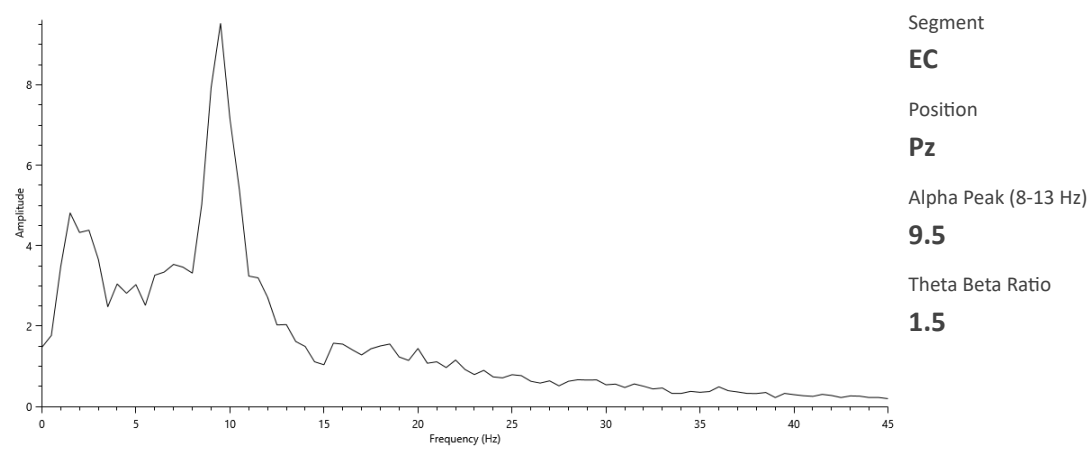
Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

Cz FFT Analysis



Delta	Theta	Alpha	Alpha 1	Alpha 2
9.4 μ V	8.2 μ V	14.9 μ V	11.5 μ V	9.8 μ V
Low-Beta	Mid-Beta	High-Beta	Gamma	
4.6 μ V	4.1 μ V	4.5 μ V	2.0 μ V	

Pz FFT Analysis



Delta	Theta	Alpha	Alpha 1	Alpha 2
10.9 μ V	10.9 μ V	19.4 μ V	16.8 μ V	10.2 μ V
Low-Beta	Mid-Beta	High-Beta	Gamma	
4.8 μ V	4.8 μ V	4.5 μ V	1.5 μ V	

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

Focus Score (Theta)

The Focus Score (Theta) represents the average relative power of Theta brainwaves (4-8 Hz) at the frontal (Fz) and central (Cz) regions of the brain. Theta brainwaves are typically associated with states of deep relaxation, meditation, and drowsiness.

They are also involved in processes such as memory consolidation and creative problem-solving. However, an excess of Theta activity, particularly in the frontal and central regions, can be indicative of attentional difficulties, daydreaming, and an inability to focus on tasks.

Focus Score (Theta)

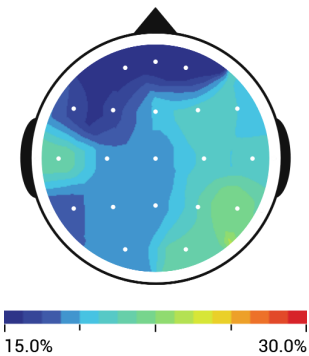


BaseValue = 18.6

A Focus Score of less than 20% suggests that the individual has a normal or expected level of theta activity in the frontal and central regions, which is associated with normal levels of focus and attention. No specific intervention is required.

The Focus Score utilizes the Theta frequency range, which spans from 4-8 Hz. Theta waves are typically observed in the frontal (Fz) and central (Cz) regions of the brain and are associated with deep relaxation, meditation, and mental imagery. When analyzing the full BrainMap, it is important to consider the distribution and prevalence of Theta waves in relation to other frequency ranges.

Theta
EO
Rel. Power (4-8Hz)



References:

1. Strijkstra, A. M., Beersma, D. G., Drayer, B., Halbesma, N., & Daan, S. (2003). Subjective sleepiness correlates negatively with global alpha (8–12 Hz) and positively with central frontal theta (4–8 Hz) frequencies in the human resting awake electroencephalogram. *Neuroscience letters*, 340(1), 17–20. (<https://www.sciencedirect.com/science/article/abs/pii/S0304394003000338>)
2. Hermens, D. F., Soei, E. X., Clarke, S. D., Kohn, M. R., Gordon, E., & Williams, L. M. (2005). Resting EEG theta activity predicts cognitive performance in attention-deficit hyperactivity disorder. *Pediatric neurology*, 32(4), 248–256. (<https://www.sciencedirect.com/science/article/abs/pii/S0887889940400565X>)

Focus Score (Theta)

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

Focus Score (Theta Beta ratio)

The Focus Score, calculated as the average Theta/Beta ratio at the frontal (Fz) and central (Cz) regions of the brain, reflects the balance between Theta (4-8 Hz) and Beta (15-20 Hz) brainwave activities. Theta waves are typically associated with relaxation and drowsiness, while Beta waves are linked with alertness, concentration, and cognitive processing. An elevated Theta/Beta ratio may indicate attentional difficulties and a state of under-arousal, whereas a lower ratio suggests a balanced state of alertness and relaxation conducive to focused attention.

Focus Score (Theta Beta ratio)

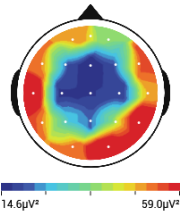


A Focus Score below 1.5 indicates a healthy balance between Theta and Beta activity, reflecting a state of alertness and focused attention. No specific intervention is necessary, but maintaining a healthy lifestyle and regular mindfulness practices can help sustain this optimal state.

Power EO

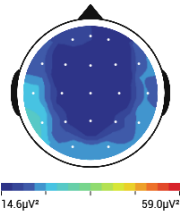
Theta

EO
Power (4-8Hz)



Beta

EO
Power (12-20Hz)



The Focus Score is derived from the Theta (4-8 Hz) and Beta (15-20 Hz) frequency ranges. Theta waves are linked with states of relaxation, drowsiness, and are involved in memory consolidation. Beta waves, on the other hand, are associated with active, analytical thought, and are predominant during states of alertness and focused attention. It is also possible to analyze the Theta and Beta activity displayed in BrainMaps in relation to other frequency ranges, to gain a comprehensive understanding of the individual's brainwave patterns and their implications on cognitive and emotional functioning (see more brainmaps later in the report). The presence of two separate BrainMaps for Theta and Beta right here will facilitate a more in-depth analysis and interpretation of these specific frequency ranges at different positions.

Focus Score (Theta Beta ratio)

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

References:

1. Van Doren, J., Heinrich, H., Bezold, M., Reuter, N., Kratz, O., Horndasch, S., ... & Studer, P. (2017). Theta/beta neurofeedback in children with ADHD: Feasibility of a short-term setting and plasticity effects. *International Journal of Psychophysiology*, 112, 80-88. (<https://www.sciencedirect.com/science/article/abs/pii/S0167876016307826?via%3Dihub>)

2. Wen, T. Y., & Aris, S. M. (2020). Electroencephalogram (EEG) stress analysis on alpha/beta ratio and theta/beta ratio. *Indones. J. Electr. Eng. Comput. Sci*, 17(1), 175-182. (<https://ijeecs.iaescore.com/index.php/IJECS/article/view/20581>)

3. Putman, P., Verkuil, B., Arias-Garcia, E., Pantazi, I., & van Schie, C. (2014). EEG theta/beta ratio as a potential biomarker for attentional control and resilience against deleterious effects of stress on attention. *Cognitive, Affective, & Behavioral Neuroscience*, 14, 782-791. (<https://link.springer.com/article/10.3758/s13415-013-0238-7>)

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

Focus Score (Alpha)

The Focus Score (Alpha) reflects the average relative power of Alpha brainwaves (8-13 Hz) at the frontal (Fz), central (Cz), and parietal (Pz) regions of the brain. Alpha waves are typically associated with a relaxed, yet alert state and are prominent during moments of calmness and meditation. They also play a role in inhibiting irrelevant sensory information to facilitate focused attention. However, an excess of Alpha activity can be indicative of an overly relaxed state, potentially interfering with task performance and cognitive processing.

Focus Score (Alpha)

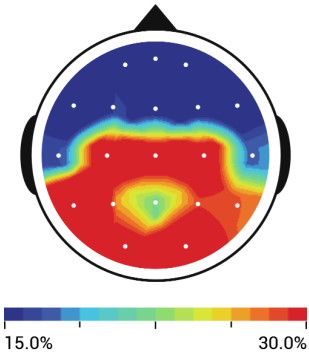


BaseValue = 23.4

A Focus Score between 20-25% suggests a mild elevation in Alpha activity, which may result in occasional difficulties in maintaining focused attention, especially during cognitively demanding tasks. Strategies to enhance alertness, such as physical exercise, adequate hydration, and cognitive training exercises, may be beneficial.

The Focus Score is derived from the Alpha frequency range (8-12 Hz), which is associated with states of relaxation and alertness. This frequency range is crucial for inhibiting irrelevant sensory information and facilitating focused attention. In the context of a full BrainMap, the Alpha activity can be compared to the activity in other frequency ranges, to gain a comprehensive understanding of the individual's brainwave patterns and their potential implications on cognitive and emotional functioning.

Alpha
EO
Rel. Power (8-12Hz)



References:

1. ElShafei HA, Orlemann C, Haegens S. The Impact of Eye Closure on Anticipatory α Activity in a Tactile Discrimination Task. *eNeuro*. 2022 Jan 24;9(1):ENEURO.0412-21.2021. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8805195/>)
2. Del Percio, C., Babiloni, C., Marzano, N., Iacoboni, M., Infarinato, F., Vecchio, F., ... & Eusebi, F. (2009). "Neural efficiency" of athletes' brain for upright standing: a high-resolution EEG study. *Brain research bulletin*, 79(3-4), 193-200. (<https://www.sciencedirect.com/science/article/abs/pii/S0361923009000616>)

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

Focus Score (Alpha 1 & Alpha 2 Ratio)

The Focus Score (Alpha 1 & Alpha 2 ratio) measures the average ratio of Alpha 1 (8-10 Hz) to Alpha 2 (10-12 Hz) brainwaves at the central (Cz) and parietal (Pz) regions of the brain. Alpha 1 waves are generally associated with a relaxed and slightly drowsy state, while Alpha 2 waves are linked to heightened alertness, cognitive processing, and learning. A balanced ratio between these two sub-bands of the Alpha frequency range is important for optimal cognitive functioning and emotional regulation. An imbalance, with a dominance of Alpha 1 or Alpha 2, may result in difficulties with attention, memory, or emotional regulation.

Focus Score (Alpha 1 & Alpha 2 Ratio)

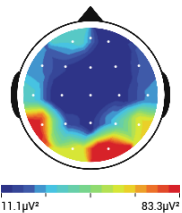


A Focus Score below 1 indicates a balanced ratio of Alpha 1 to Alpha 2 activity, suggesting optimal cognitive and emotional functioning. No specific interventions are required, but regular physical exercise, mindfulness practices, and a balanced diet can help maintain this optimal state.

Power EO

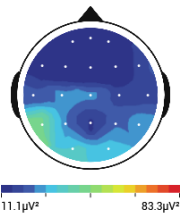
Alpha 1

EO
Power (8-10Hz)



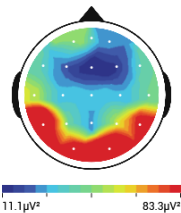
Alpha 2

EO
Power (10-12Hz)



Alpha

EO
Power (8-12Hz)



The BrainMaps visually represent the distribution and intensity of Alpha brainwaves across the brain, with specific focus on central (Cz) and parietal (Pz) regions. The Alpha 1 BrainMap (8-10 Hz) shows the relaxed, drowsy state-related waves, the Alpha 2 BrainMap (10-12 Hz) displays the alertness and cognitive processing-related waves, and the Full Range Alpha BrainMap (8-12 Hz) combines both to provide an overall view of the brain's Alpha wave patterns. Each BrainMap highlights different aspects of cognitive and emotional functioning

References:

Mohamed Z, El Halaby M, Said T, Shawky D, Badawi A. Characterizing Focused Attention and Working Memory Using EEG. *Sensors (Basel)*. 2018 Nov 2;18(11):3743. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6263653/>)

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

Overarousal Score (High Beta - Beta Ratio)

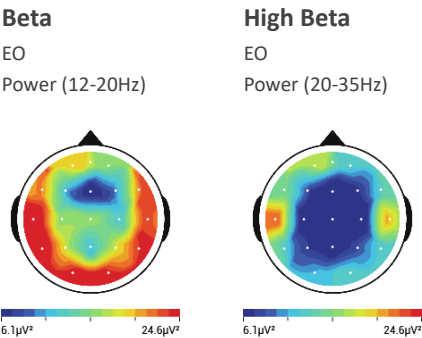
The Overarousal Score is derived from the ratio of High Beta (20-35 Hz) to Beta (12-20 Hz) brainwave frequencies, averaged over the frontal (Fz) and central (Cz) regions of the brain. High Beta waves are often associated with heightened states of arousal, anxiety, and stress. In contrast, Beta waves are linked to alertness, concentration, and active cognitive processing. A balanced ratio suggests a harmonious blend of alertness with a calm and relaxed state of mind. An elevated ratio, on the other hand, can be indicative of excessive stress or anxiety.

Arousal Score (HighBeta Beta Ratio)



A ratio of less than 1 is considered normal, indicating a balanced state of arousal and relaxation. Continue with regular activities that promote well-being and maintain a healthy lifestyle.

Power EO



The BrainMaps visually represent the distribution and intensity of Beta and High Beta brainwave frequencies across the brain and the Overarousal Score is focusing on the frontal (Fz) and central (Cz) regions. The Beta BrainMap displays patterns related to alertness and concentration, while the High Beta BrainMap illustrates patterns associated with stress and anxiety. By comparing these two maps, you can visually assess the balance between stress and relaxation in the brain.

References:

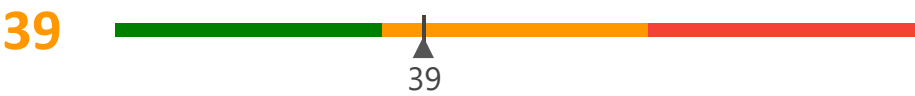
- Gárate, E., Maureira, F., & Flores, E. (2022). Hurst entropy profiles for Beta Low and Beta High EEG sub-bands Part I: Intragroup comparison. *Procedia Computer Science*, 199, 1416-1423. (<https://www.sciencedirect.com/science/article/pii/S1877050922001806?via%3Dihub>)
- Gárate, E., Maureira, F., & Flores, E. (2022). Hurst entropy profiles for Beta Low and Beta High EEG sub-bands II: Intergroup comparison. *Procedia Computer Science*, 199, 1424-1431. (https://www.researchgate.net/publication/356755214_Hurst_entropy_profiles_for_Beta_Low_and_Beta_High_EEG_sub-bands_II_Intergroup_comparison)
- Clarke, A. R., Barry, R. J., Dupuy, F. E., McCarthy, R., Selikowitz, M., & Johnstone, S. J. (2013). Excess beta activity in the EEG of children with attention-deficit/hyperactivity disorder: a disorder of arousal?. *International Journal of Psychophysiology*, 89(3), 314-319. (<https://pubmed.ncbi.nlm.nih.gov/23619205/>)

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

Sensor Performance Score

The Sensor Performance Score is based on the average ratio of Alpha 1 (8-10 Hz) to Alpha 2 (10-12 Hz) brainwave frequencies, specifically focusing on the parietal regions (P3, Pz, P4) of the brain. Alpha 1 waves are typically associated with relaxed, calm states and are predominant during meditative and restful periods. In contrast, Alpha 2 waves are linked to the brain's inhibitory processes and play a crucial role in modulating sensory input. A balanced ratio of Alpha 1 to Alpha 2 in the parietal regions is indicative of optimal sensory processing and cognitive performance.

Sensor Performance Score



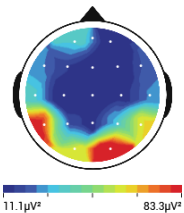
BaseValue = 1.0

A ratio between 1 and 1.2 indicates a mild imbalance, with a slight dominance of Alpha 1 over Alpha 2. Incorporate activities that stimulate the brain, such as puzzles, games, or other cognitive challenges, to enhance sensory processing.

Power EO

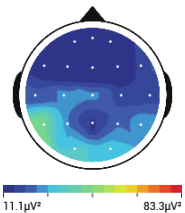
Alpha 1

EO
Power (8-10Hz)



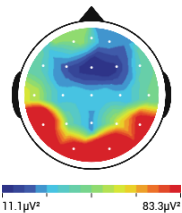
Alpha 2

EO
Power (10-12Hz)



Alpha

EO
Power (8-12Hz)



The BrainMaps display the distribution and intensity of Alpha 1 and Alpha 2 brainwave frequencies (the Sensor Performance Score focuses in the parietal regions P3, Pz, P4). The Alpha 1 BrainMap illustrates patterns related to relaxed, calm states, while the Alpha 2 BrainMap shows patterns associated with sensory inhibitory processes. By comparing these two maps, you can visually assess the balance between relaxation and sensory processing in the brain. The differences between the maps can help to pinpoint specific areas that may require attention to optimize sensory performance and overall cognitive functioning.

References:

Vogt, F., Klimesch, W., & Doppelmayr, M. (1998). High-frequency components in the alpha band and memory performance. *Journal of Clinical Neurophysiology*, 15(2), 167-172.
(https://journals.lww.com/clinicalneurophys/abstract/1998/03000/high_frequency_components_in_the_alpha_band_and.11.aspx)

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

Motor Cortex Mu-Rhythm

The Motor Cortex Mu-Rhythm Score measures the average percentage of relative Alpha brainwave activity, specifically the mu rhythm, over the motor cortex regions C3 and C4. The mu rhythm is a specific pattern of Alpha activity (8-12 Hz) observed over the sensorimotor cortex and is associated with the planning and execution of movement. It is often suppressed or "blocked" when an individual engages in motor activity or observes another person's movements. An increase in the mu rhythm may indicate a state of motor rest or inhibition, while a decrease may signify active movement or motor planning.

Motor Cortex Mu-Rhythm



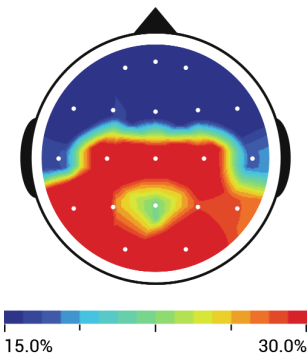
BaseValue = 33.4

A value of more than 25% suggests a significant increase in mu rhythm activity, potentially indicating excessive motor inhibition or difficulties in movement planning. Incorporate physical exercises, motor imagery, and coordination exercises into your routine to stimulate the motor cortex and improve motor planning.

The Brain Map displays the distribution and intensity. Patterns of increased or decreased mu rhythm activity can be observed over the motor cortex regions at C3 and C4, providing insights into the functioning of specific motor cortex regions. Areas of increased mu rhythm may indicate motor rest or inhibition, while areas of decreased mu rhythm may signify active motor planning or movement.

The visual representation of the mu rhythm in the BrainMap can guide targeted interventions to enhance motor cortex functioning and optimize movement planning.

Alpha
EO
Rel. Power (8-12Hz)



References:

1. Fox, N. A., Bakermans-Kranenburg, M. J., Yoo, K. H., Bowman, L. C., Cannon, E. N., Vanderwert, R. E., ... & Van IJzendoorn, M. H. (2016). Assessing human mirror activity with EEG mu rhythm: A meta-analysis. *Psychological bulletin*, 142(3), 291. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5110123/>)
2. Muthukumaraswamy, S. D., & Johnson, B. W. (2004). Primary motor cortex activation during action observation revealed by wavelet analysis of the EEG. *Clinical Neurophysiology*, 115(8), 1760-1766. (<https://www.sciencedirect.com/science/article/abs/pii/S1388245704001014>)
3. R  ther, N. N., Brown, E. C., Klepp, A., & Bellebaum, C. (2014). Observed manipulation of novel tools leads to mu rhythm suppression over sensory-motor cortices. *Behavioural brain research*, 261, 328-335. (<https://www.sciencedirect.com/science/article/pii/S0166432813007821>)

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

Alpha Regulation Score (EO vs. EC)

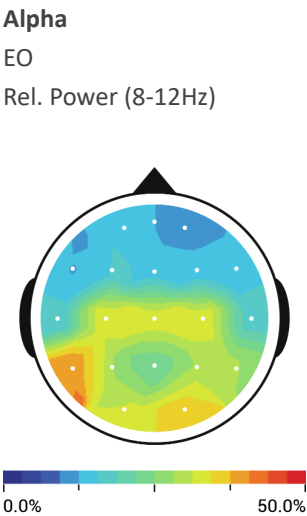
The Alpha Regulation Score is used to evaluate a person's ability to modulate their Alpha brainwave activity (8-12 Hz) in response to different states of awareness. This is done by comparing the relative Alpha power during Eyes Open (EO) to that during Eyes Closed (EC) at the Pz electrode site, located at the top of the head. In general, Alpha activity is expected to increase when the eyes are closed, reflecting a more relaxed and internally focused state, and decrease when the eyes are open, reflecting a more alert and externally focused state.

Alpha Regulation Score (EO vs. EC)



A value of more than 30% indicates a healthy regulation of Alpha activity, with a significant increase in Alpha power when the eyes are closed compared to when they are open. This suggests a good ability to relax and shift into a more internally focused state when needed. Continue with regular relaxation and mindfulness practices to support this regulation.

The BrainMap displays the distribution and intensity of Alpha brainwave activity during both Eyes Open (EO) and Eyes Closed (EC) states. The difference in Alpha activity between these two states can be visually observed, providing insights into the individual's ability to modulate their Alpha activity in response to different states of awareness.

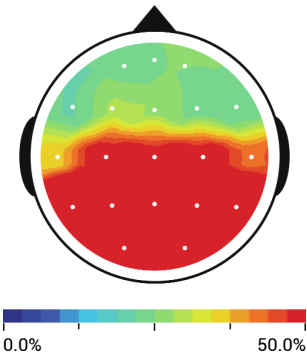


Alpha Regulation Score (EO vs. EC)

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

Areas of increased Alpha activity during EC compared to EO indicate a healthy regulation and a good ability to relax and shift into a more internally focused state. The visual representation of Alpha regulation in the BrainMap can guide targeted interventions to support optimal brain functioning and emotional well-being.

Alpha
EC
Rel. Power (8-12Hz)



References:

1. Nowlis, D. P., & Kamiya, J. (1970). The control of electroencephalographic alpha rhythms through auditory feedback and the associated mental activity. *Psychophysiology*, 6(4), 476-484. (<https://onlinelibrary.wiley.com/doi/10.1111/j.1469-8986.1970.tb01756.x>)
2. Wan, L., Huang, H., Schwab, N., Tanner, J., Rajan, A., Lam, N. B., ... & Ding, M. (2019). From eyes-closed to eyes-open: Role of cholinergic projections in EC-to-EO alpha reactivity revealed by combining EEG and MRI. *Human brain mapping*, 40(2), 566-577. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6338213/>)
3. Metzen, D., Genç, E., Getzmann, S., Larra, M. F., Wascher, E., & Ocklenburg, S. (2022). Frontal and parietal EEG alpha asymmetry: a large-scale investigation of short-term reliability on distinct EEG systems. *Brain Structure and Function*, 227(2), 725-740. (<https://pubmed.ncbi.nlm.nih.gov/34676455/>)

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

EC Theta Alpha Score

The EC Theta / Alpha Score assesses the balance between Theta (4-8 Hz) and Alpha (8-12 Hz) brainwave activity during Eyes Closed (EC) state. This ratio is calculated by taking the average of the Theta / Alpha ratios at the P3, Pz, and P4 electrode sites, which are located over the parietal region of the brain. In general, a higher Theta / Alpha ratio during EC state may reflect a more relaxed and internally focused state, while a lower ratio may reflect a more alert and externally focused state.

EC Theta / Alpha Score

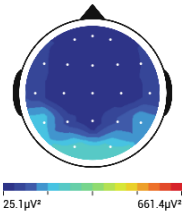


A value of less than 1 indicates a healthy balance between Theta and Alpha activity during EC state, with Theta activity not excessively dominating the Alpha activity. This suggests a good ability to relax and shift into a more internally focused state without becoming overly drowsy or unfocused. Continue with regular relaxation and mindfulness practices to support this balance.

Power EC

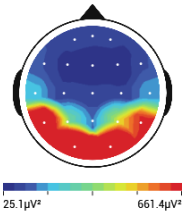
Theta

EC
Power (4-8Hz)



Alpha

EC
Power (8-12Hz)



The BrainMap displays the distribution and intensity of Theta and Alpha brainwave activity during Eyes Closed (EC) state. The ratio of Theta to Alpha activity can be visually observed, providing insights into the individual's ability to balance relaxation and alertness. Areas of increased Theta activity relative to Alpha activity indicate a tendency towards excessive relaxation or drowsiness, while areas of decreased Theta activity relative to Alpha activity indicate a more alert and externally focused state. The visual representation of the Theta / Alpha ratio in the BrainMap can guide targeted interventions to support optimal brain functioning and emotional well-being.

References:

Dobrakowski, P., Blaszkiewicz, M., & Skalski, S. (2020). Changes in the Electrical Activity of the Brain in the Alpha and Theta Bands during Prayer and Meditation. *International Journal of Environmental Research and Public Health*, 17(24), 9567. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7766487/>)

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

EC Alpha Frontal - Parietal Asymmetry

The EC Alpha Frontal - Parietal Asymmetry Score compares the average alpha power in the frontal (F3, Fz, F4) and parietal (P3, Pz, P4) regions of the brain during an Eyes Closed (EC) state. Alpha power is associated with a relaxed and restful state of mind, and the ratio between frontal and parietal alpha power can provide insights into the balance between relaxation and alertness. A higher ratio of parietal to frontal alpha power may indicate a more relaxed and internally focused state, while a lower ratio may indicate a more alert and externally focused state.

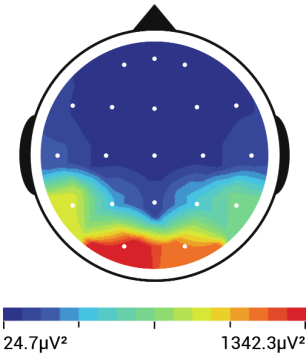
EC Alpha Frontal - Parietal Asymmetry



A value of more than 1.3 indicates a healthy balance between frontal and parietal alpha power, suggesting a good ability to modulate between relaxation and alertness. This can be beneficial for cognitive functioning and emotional well-being. Continue with regular relaxation and mindfulness practices to support this balance.

The BrainMap visually displays the distribution and intensity of alpha power in the frontal and parietal regions during an Eyes Closed (EC) state. The ratio of parietal to frontal alpha power can be observed, providing insights into the individual's ability to balance relaxation and alertness. Areas of increased parietal alpha power relative to frontal alpha power indicate a more relaxed and internally focused state, while areas of decreased parietal alpha power relative to frontal alpha power indicate a more alert and externally focused state. The BrainMap can guide targeted interventions to support optimal brain functioning and emotional well-being.

Alpha
EC
Power (8-12Hz)



References:

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

Excessive Delta Indicator

The Excessive Delta Indicator score is calculated as the average relative Delta power from multiple EEG locations including Fz, C3, Cz, C4, P3, Pz, and P4. Delta waves are typically associated with deep sleep, unconsciousness, or severe brain disorders. Excessive Delta activity in awake individuals could be indicative of brain injury, encephalopathy, or other pathological conditions. Delta waves can also increase during tasks that require focused attention and cognitive effort, although it is generally considered abnormal to have high levels of Delta activity while being awake.

Excessive Delta Indicator



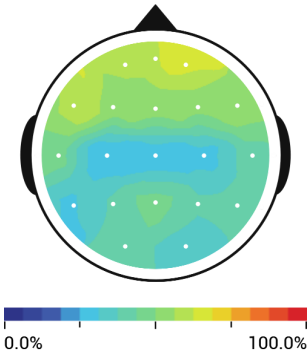
A value of less than 65% indicates normal levels of Delta activity, suggesting a healthy brain state with no excessive Delta waves. Continue to maintain a healthy lifestyle and regular check-ups to ensure optimal brain health.

The BrainMap visually displays the distribution and intensity of Delta waves across multiple EEG locations.

Areas of increased Delta activity will be highlighted, allowing for a detailed analysis of the specific regions affected. The BrainMap can be used to identify patterns of abnormal Delta activity, which can guide further investigation and targeted interventions to address the excessive Delta waves.

The BrainMap provides a comprehensive overview of Delta activity in the brain, facilitating a more informed and accurate interpretation of the Excessive Delta Indicator score.

Delta
EO
Rel. Power (1-4Hz)



References:

- 1.Frohlich, J., Toker, D., & Monti, M. M. (2021). Consciousness among delta waves: a paradox?. *Brain*, 144(8), 2257-2277. (<https://academic.oup.com/brain/article/144/8/2257/6164959?login=false>)
2. Penolazzi, B., Spironelli, C., & Angrilli, A. (2008). Delta EEG activity as a marker of dysfunctional linguistic processing in developmental dyslexia. *Psychophysiology*, 45(6), 1025-1033. (<https://onlinelibrary.wiley.com/doi/10.1111/j.1469-8986.2008.00709.x>)

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

EMG Artifact Score

The EMG Artifact Score measures the average relative High Beta power at specific EEG locations, including T3, T4, Fp1, and Fp2. High Beta waves are typically associated with active, busy, or anxious thinking and active concentration. However, they can also be influenced by muscle activity and may not always reflect cognitive processes. The EMG Artifact Score is used to quantify the degree of muscle-related artifacts in the EEG data. High levels of High Beta could be indicative of muscle tension or movement during the EEG recording, which can impact the quality and interpretation of the EEG data.

EMG Artifact Score

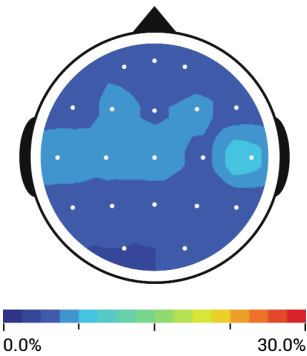


A value of less than 15% indicates normal levels of High Beta activity, suggesting minimal muscle-related artifacts in the EEG data. This is the desired range for accurate EEG interpretation.

The BrainMap visually displays the distribution and intensity of High Beta waves across the specific EEG locations. Areas of increased High Beta activity will be highlighted, allowing for a detailed analysis of the muscle-related artifacts.

The BrainMap can be used to identify specific regions with excessive High Beta activity, which can guide further investigation and interventions to address the muscle artifacts. The BrainMap provides a comprehensive overview of High Beta activity in the brain, facilitating a more informed and accurate interpretation of the EMG Artifact Score.

High Beta
EO
Rel. Power (20-35Hz)



References:

1. Muthukumaraswamy, S. D. (2013). High-frequency brain activity and muscle artifacts in MEG/EEG: a review and recommendations. *Frontiers in human neuroscience*, 7, 138. (<https://www.frontiersin.org/articles/10.3389/fnhum.2013.00138/full>)
2. Hipp, J. F., & Siegel, M. (2013). Dissociating neuronal gamma-band activity from cranial and ocular muscle activity in EEG. *Frontiers in human neuroscience*, 7, 338. (<https://www.frontiersin.org/articles/10.3389/fnhum.2013.00338/full>)

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

Protocol Suitability Score

The Protocol Suitability Score is a numerical value, ranging from 0 to 100, calculated to provide insight into the potential match between an individual's EEG data and a proposed Neurofeedback protocol. This score is computed by analyzing a spectrum of EEG measurements and comparing them to the parameters of different Neurofeedback approaches. A score closer to 100 indicates a higher level of compatibility between the EEG characteristics and the suggested protocol, implying that the individual may benefit more from that particular Neurofeedback training.

This score is derived from a detailed and objective analysis of EEG recordings and does not incorporate personal health information or medical history. It is based on the premise that certain EEG patterns may correspond more closely with specific Neurofeedback protocols.

[Protocol Score] Calmness

33.3

[Protocol Score] Focus

38.5

[Protocol Score] Relax

25.0

Neurofeedback

Neurofeedback training utilizes real-time displays of brain activity— electroencephalography (EEG)—to teach self-regulation of brain function. Typically, sensors are placed on the scalp to measure electrical activity, with measurements displayed using video, feedback-games or sound. Neurofeedback aims to reward and reinforce changes in brainwave patterns towards more desirable and regulated performance.

The process involves monitoring the brain's electrical activity and presenting that information back to the individual in a way that allows them to influence their own neural activity. Over time, neurofeedback may help to make certain desirable brain activity patterns become more automatic, potentially leading to cognitive improvements in various aspects and supporting a healthy lifestyle.

During a neurofeedback session, the individual may be asked to perform tasks on a computer, with brain activity influencing the game or task. Positive feedback is given when the desired brain activity is achieved, subtly encouraging the brain to develop patterns associated with calmness, focus, or other targeted states.

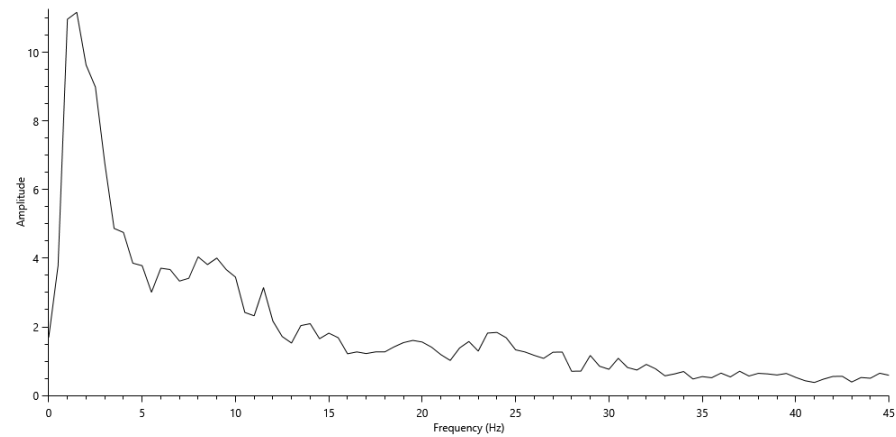
Neurofeedback has been explored for a variety of applications, from enhancing performance in athletes and

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

business professionals to the possibility of improving concentration and relaxation. It's a non-invasive method that can be used alongside other activities.

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

Fp1 FFT Analysis



Segment

EO

Position

Fp1

Alpha Peak (8-13 Hz)

8.0

Theta Beta Ratio

1.6

Delta

23.1 μ V

Theta

11.9 μ V

Alpha

11.6 μ V

Alpha 1

9.9 μ V

Alpha 2

6.1 μ V

Low-Beta

5.2 μ V

Mid-Beta

5.1 μ V

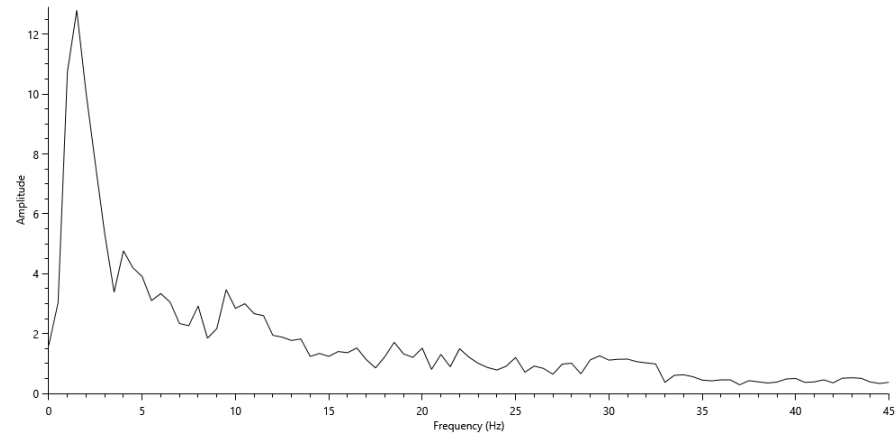
High-Beta

6.9 μ V

Gamma

2.8 μ V

Fp2 FFT Analysis



Segment

EO

Position

Fp2

Alpha Peak (8-13 Hz)

9.5

Theta Beta Ratio

1.6

Delta

22.2 μ V

Theta

10.4 μ V

Alpha

8.9 μ V

Alpha 1

6.5 μ V

Alpha 2

6.1 μ V

Low-Beta

4.5 μ V

Mid-Beta

4.7 μ V

High-Beta

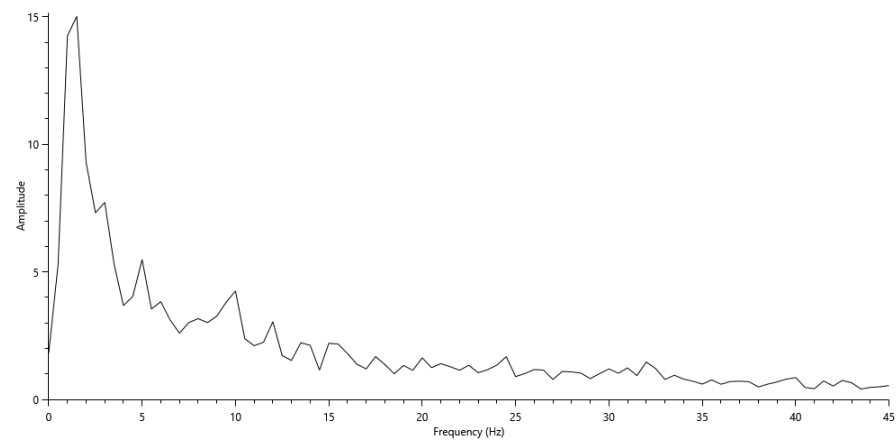
5.9 μ V

Gamma

2.3 μ V

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

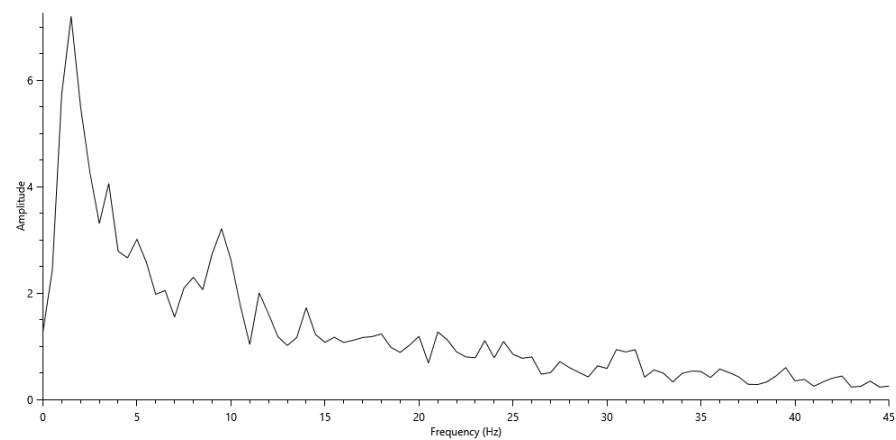
F7 FFT Analysis



Segment
EO
Position
F7
Alpha Peak (8-13 Hz)
10.0
Theta Beta Ratio
1.5

Delta	Theta	Alpha	Alpha 1	Alpha 2
25.0 μ V	12.2 μ V	10.0 μ V	8.2 μ V	5.8 μ V
Low-Beta	Mid-Beta	High-Beta	Gamma	
5.6 μ V	5.5 μ V	6.9 μ V	3.2 μ V	

F3 FFT Analysis



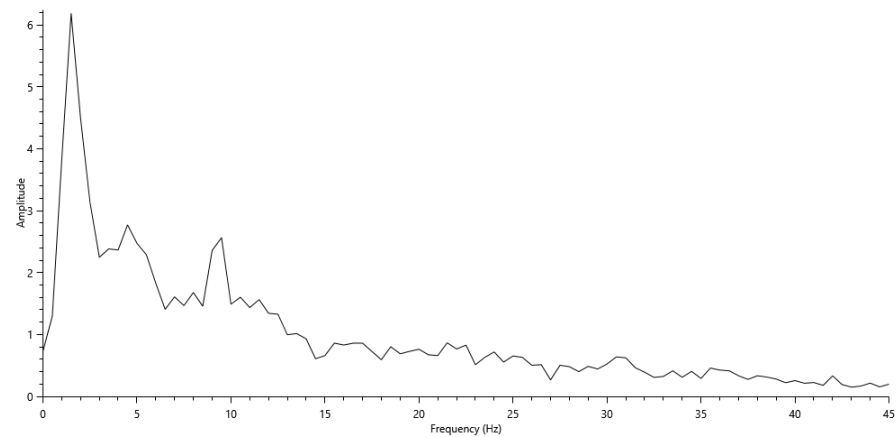
Segment
EO
Position
F3
Alpha Peak (8-13 Hz)
9.5
Theta Beta Ratio
1.4

Delta	Theta	Alpha	Alpha 1	Alpha 2
13.4 μ V	7.5 μ V	7.6 μ V	6.5 μ V	3.9 μ V
Low-Beta	Mid-Beta	High-Beta	Gamma	
3.6 μ V	4.0 μ V	4.6 μ V	1.9 μ V	

EEG FFT Spectra

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

Fz FFT Analysis



Segment
EO

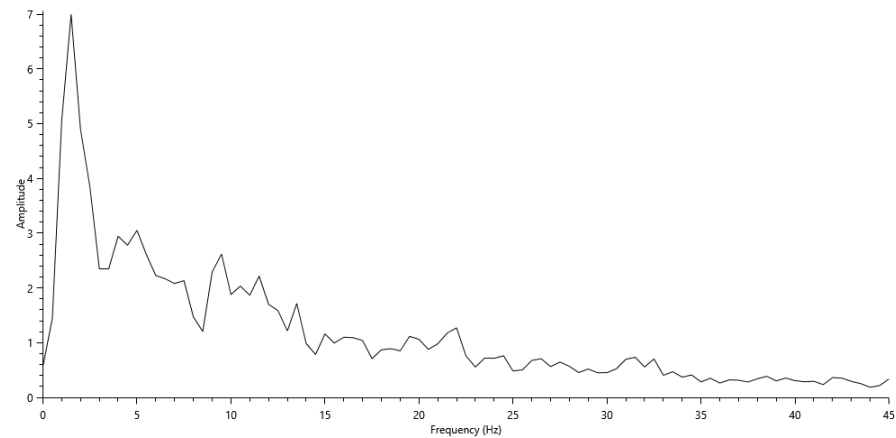
Position
Fz

Alpha Peak (8-13 Hz)
9.5

Theta Beta Ratio
1.6

Delta	Theta	Alpha	Alpha 1	Alpha 2
10.7 μ V	6.4 μ V	5.6 μ V	4.6 μ V	3.2 μ V
Low-Beta	Mid-Beta	High-Beta	Gamma	
2.9 μ V	2.8 μ V	3.4 μ V	1.5 μ V	

F4 FFT Analysis



Segment
EO

Position
F4

Alpha Peak (8-13 Hz)
9.5

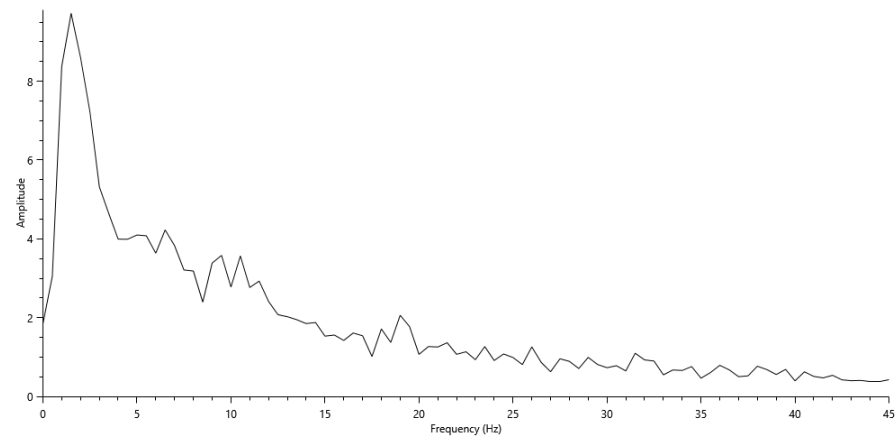
Theta Beta Ratio
1.5

Delta	Theta	Alpha	Alpha 1	Alpha 2
11.8 μ V	7.6 μ V	6.3 μ V	4.6 μ V	4.4 μ V
Low-Beta	Mid-Beta	High-Beta	Gamma	
3.6 μ V	3.4 μ V	4.1 μ V	1.6 μ V	

EEG FFT Spectra

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

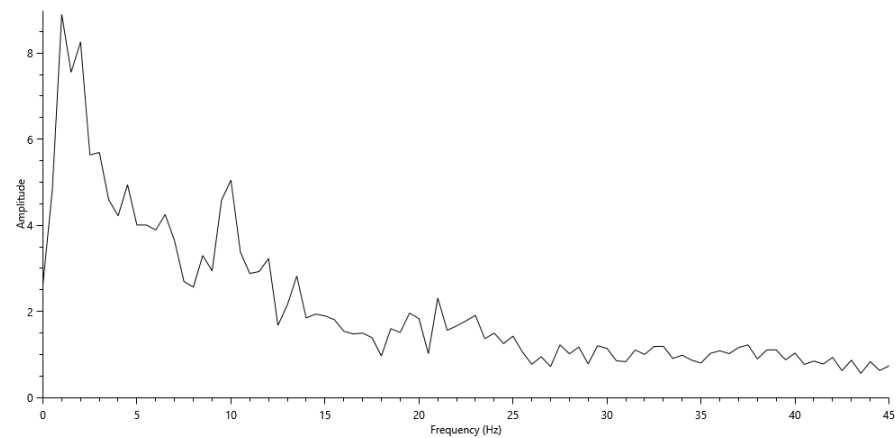
F8 FFT Analysis



Segment
EO
Position
F8
Alpha Peak (8-13 Hz)
9.5
Theta Beta Ratio
1.6

Delta	Theta	Alpha	Alpha 1	Alpha 2
20.1 μV	12.2 μV	10.0 μV	7.3 μV	6.9 μV
Low-Beta	Mid-Beta	High-Beta	Gamma	
5.4 μV	5.4 μV	6.0 μV	2.8 μV	

T3 FFT Analysis



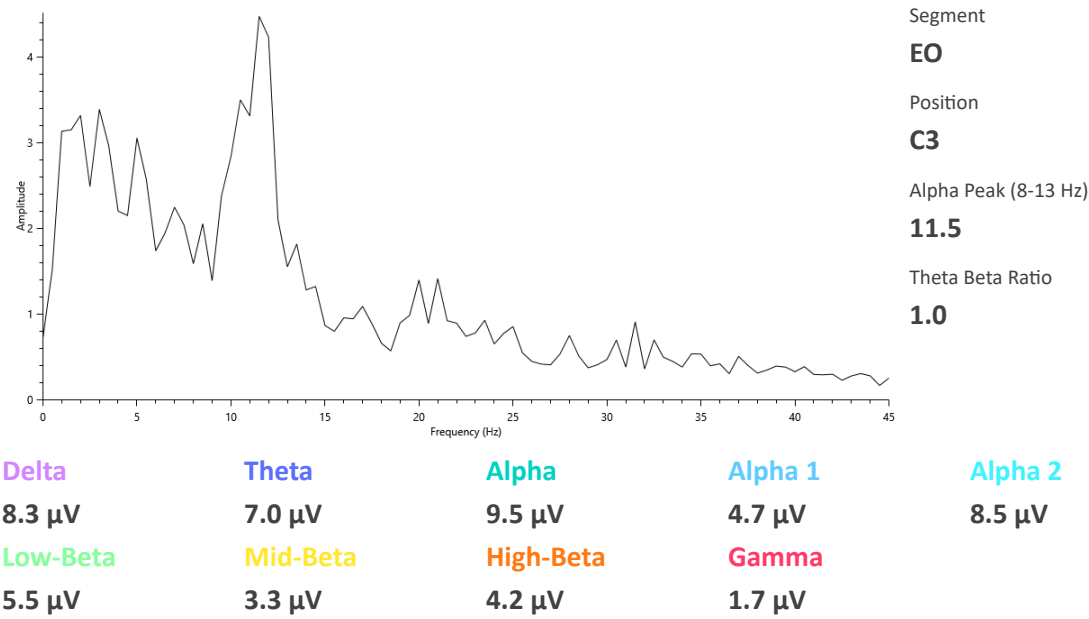
Segment
EO
Position
T3
Alpha Peak (8-13 Hz)
10.0
Theta Beta Ratio
1.5

Delta	Theta	Alpha	Alpha 1	Alpha 2
17.6 μV	12.7 μV	11.7 μV	9.0 μV	7.5 μV
Low-Beta	Mid-Beta	High-Beta	Gamma	
6.2 μV	5.6 μV	7.8 μV	4.7 μV	

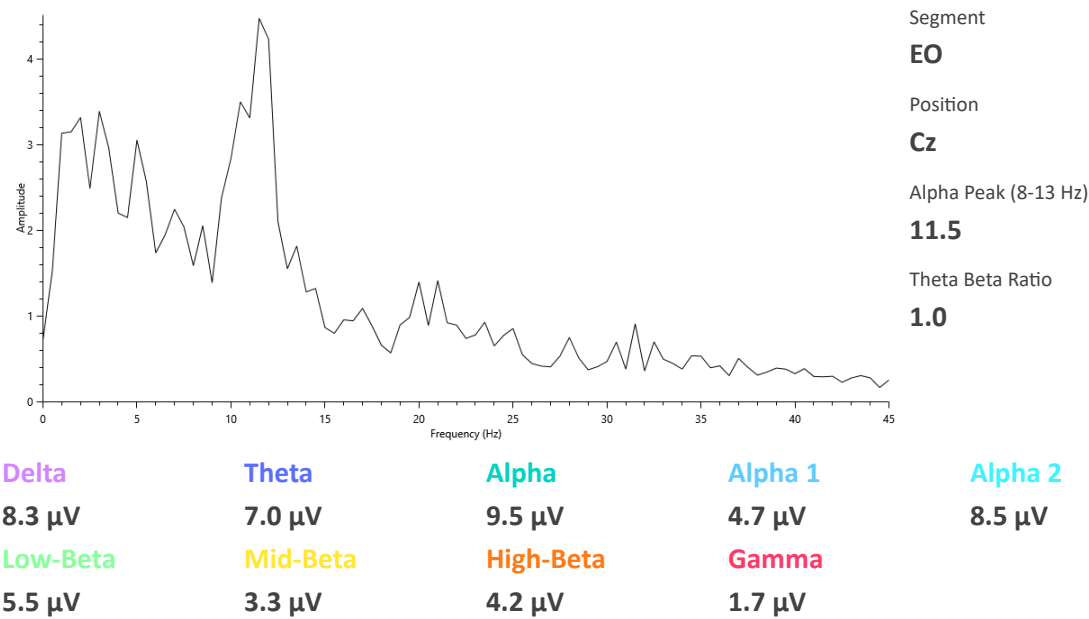
EEG FFT Spectra

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

C3 FFT Analysis



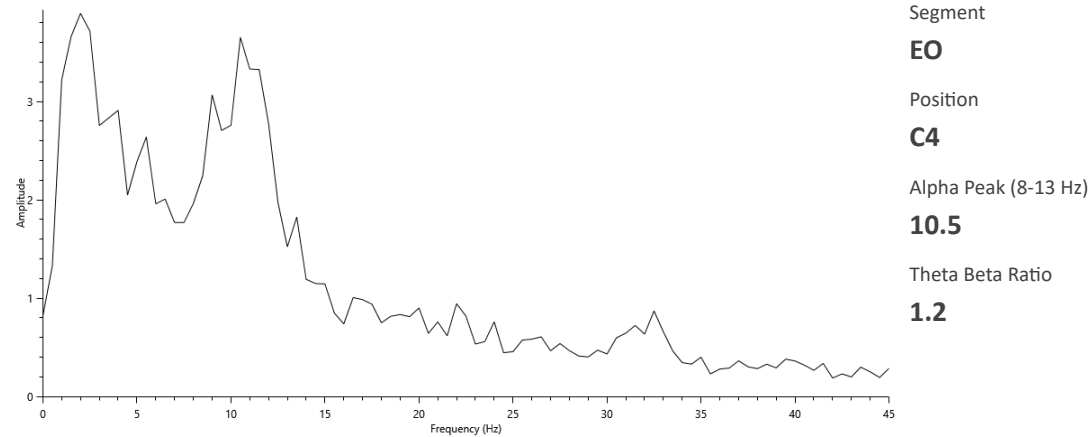
Cz FFT Analysis



EEG FFT Spectra

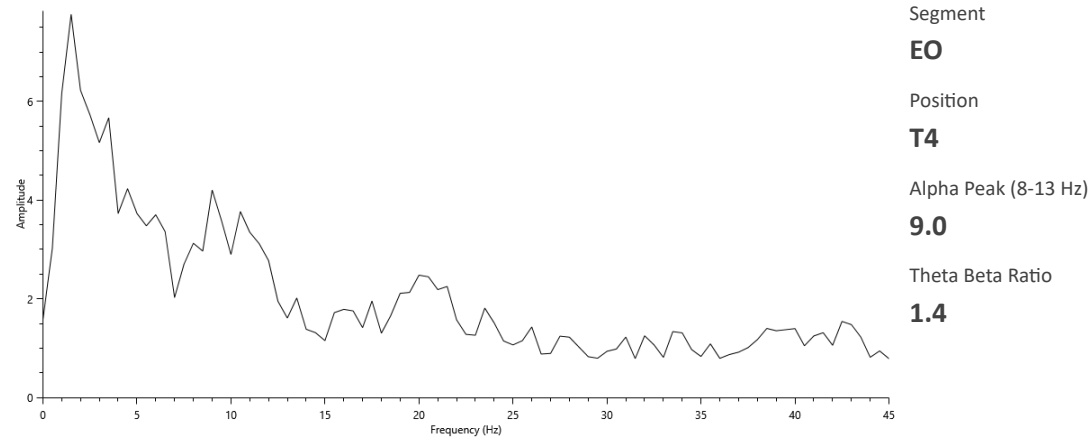
Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

C4 FFT Analysis



Delta	Theta	Alpha	Alpha 1	Alpha 2
8.7 μV	7.1 μV	9.2 μV	6.1 μV	7.2 μV
Low-Beta	Mid-Beta	High-Beta	Gamma	
4.7 μV	3.0 μV	3.7 μV	1.5 μV	

T4 FFT Analysis

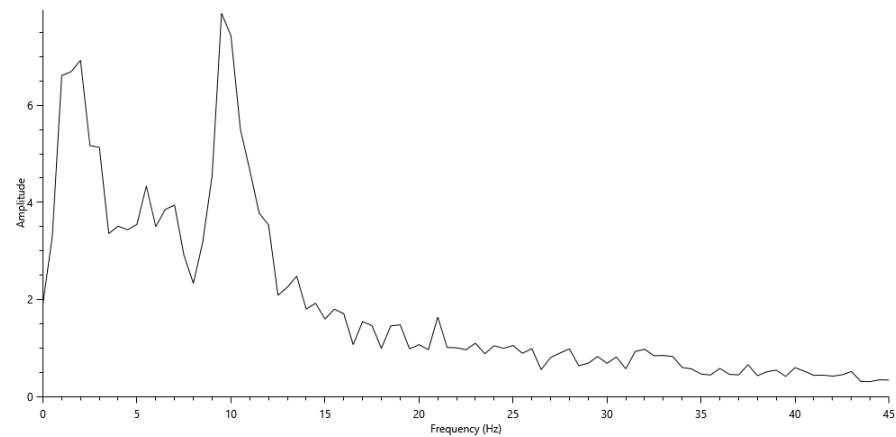


Delta	Theta	Alpha	Alpha 1	Alpha 2
16.0 μV	11.3 μV	10.6 μV	8.0 μV	7.2 μV
Low-Beta	Mid-Beta	High-Beta	Gamma	
5.1 μV	6.3 μV	8.2 μV	5.8 μV	

EEG FFT Spectra

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

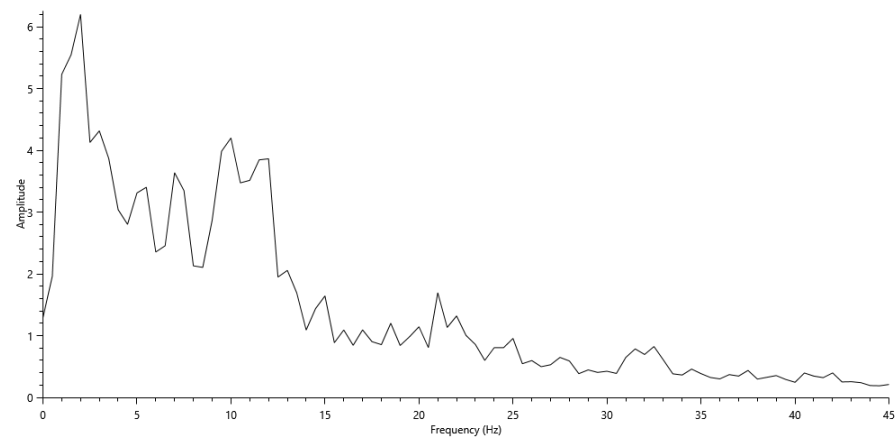
T5 FFT Analysis



Segment
EO
Position
T5
Alpha Peak (8-13 Hz)
9.5
Theta Beta Ratio
1.4

Delta	Theta	Alpha	Alpha 1	Alpha 2
15.0 μV	11.7 μV	18.1 μV	14.4 μV	11.1 μV
Low-Beta	Mid-Beta	High-Beta	Gamma	
6.1 μV	5.1 μV	5.5 μV	2.4 μV	

P3 FFT Analysis

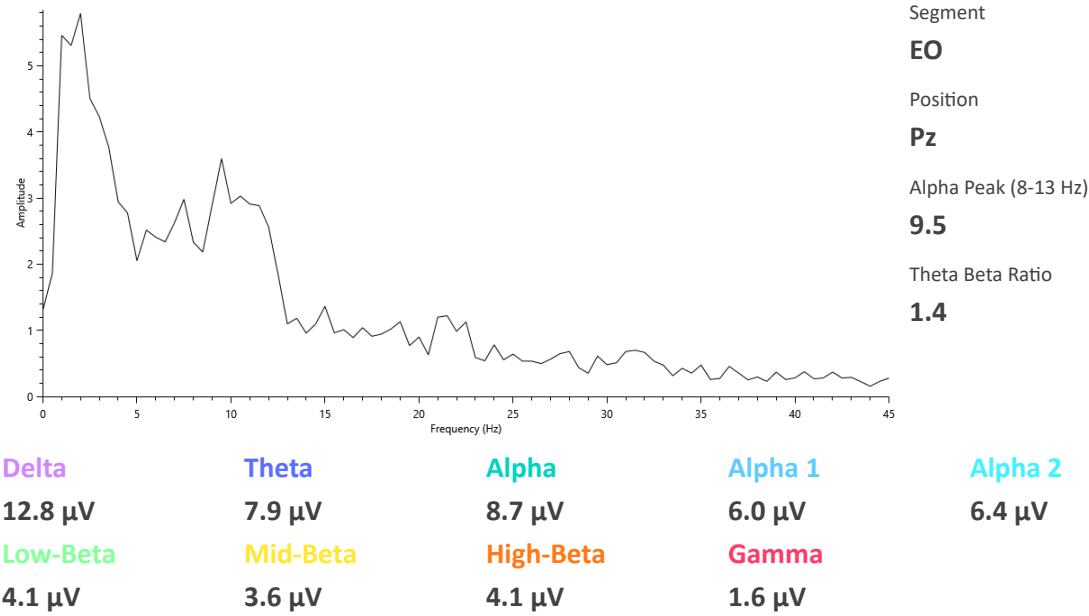


Segment
EO
Position
P3
Alpha Peak (8-13 Hz)
10.0
Theta Beta Ratio
1.3

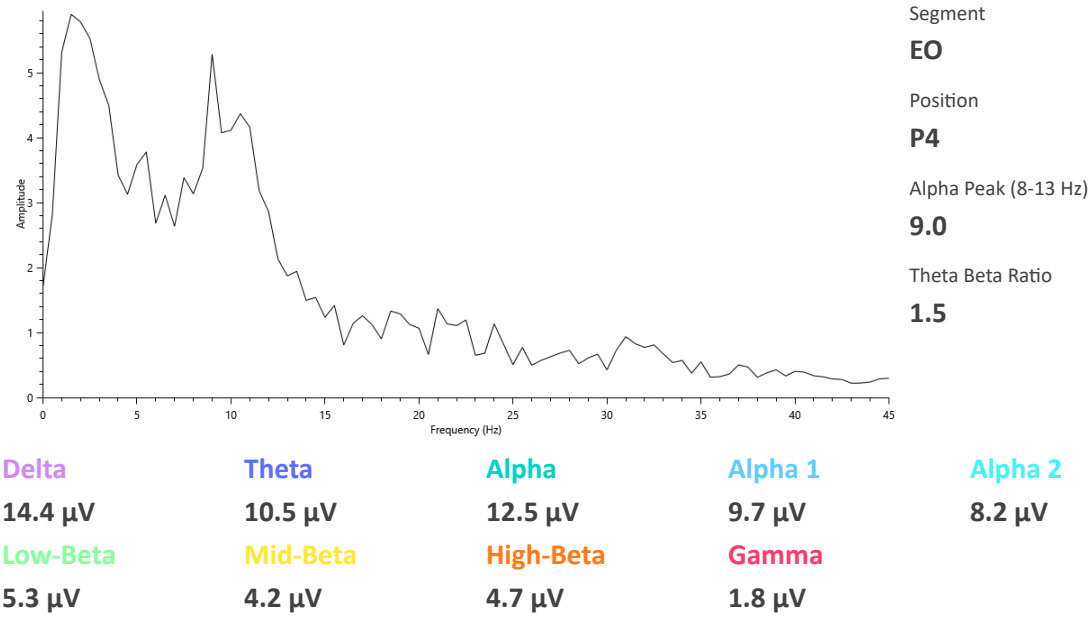
Delta	Theta	Alpha	Alpha 1	Alpha 2
13.3 μV	9.1 μV	11.0 μV	7.3 μV	8.3 μV
Low-Beta	Mid-Beta	High-Beta	Gamma	
5.5 μV	3.8 μV	4.5 μV	1.7 μV	

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

Pz FFT Analysis



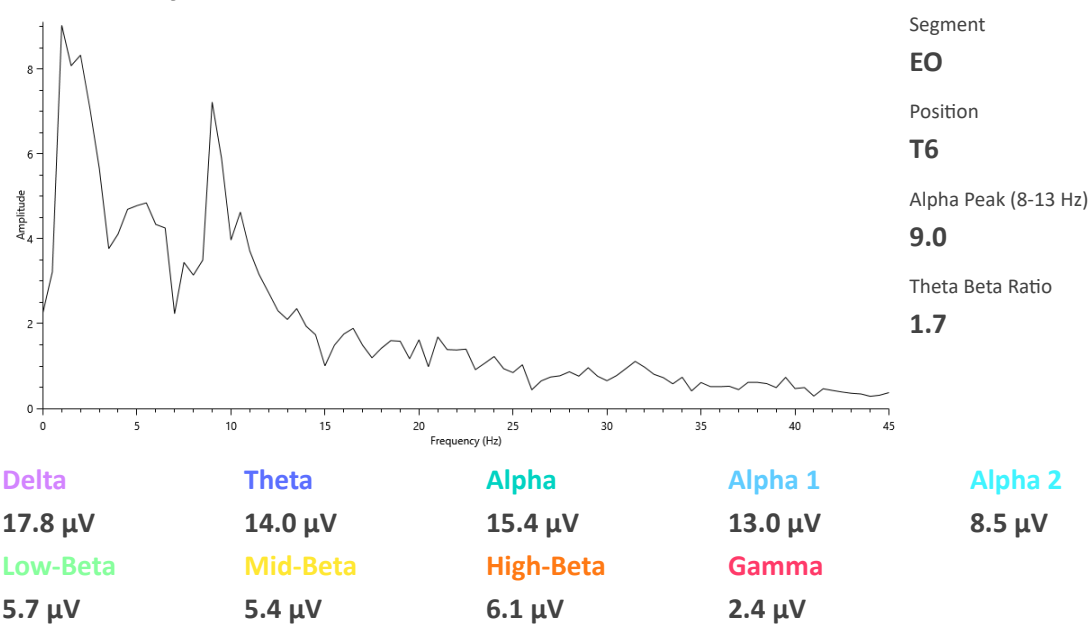
P4 FFT Analysis



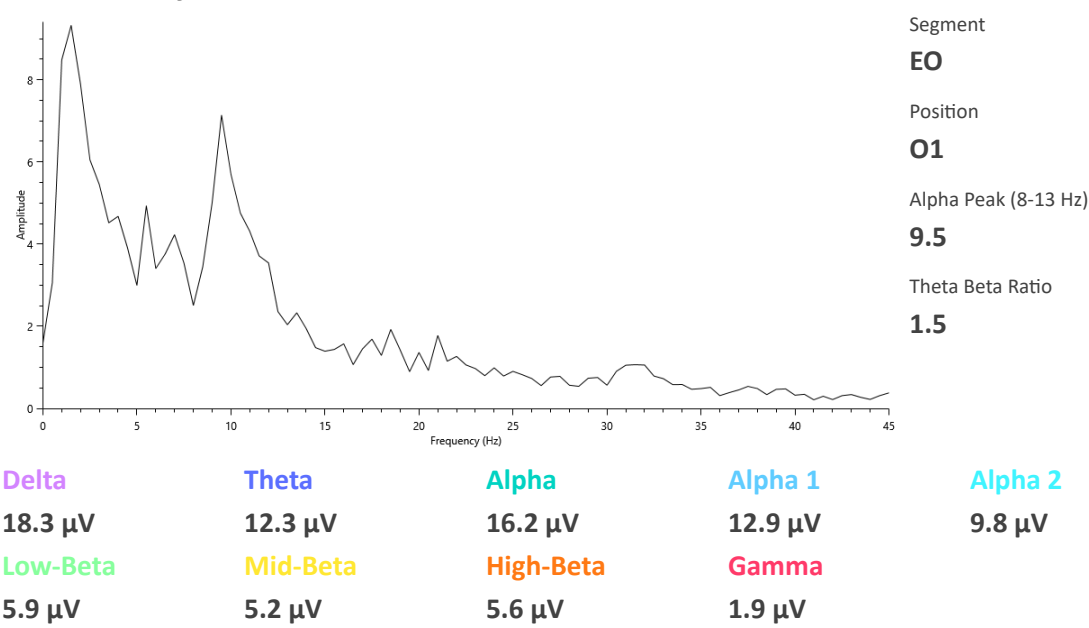
EEG FFT Spectra

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

T6 FFT Analysis

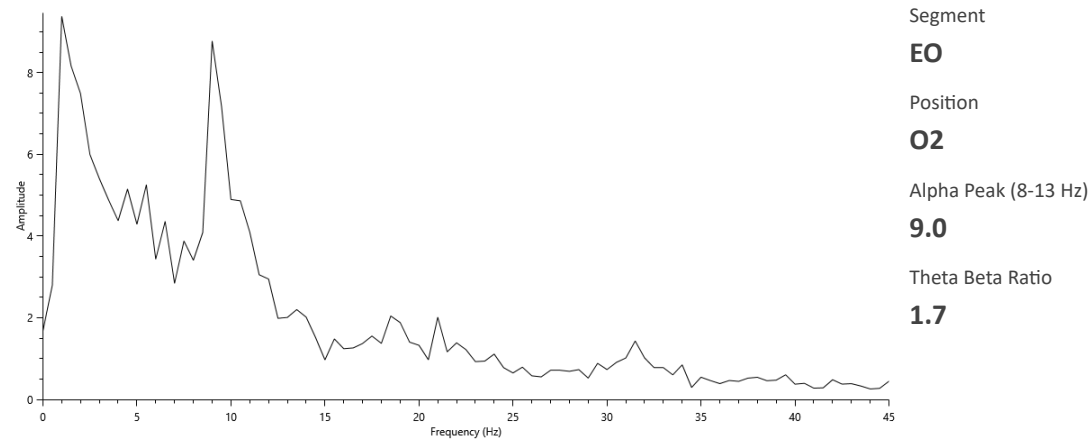


O1 FFT Analysis



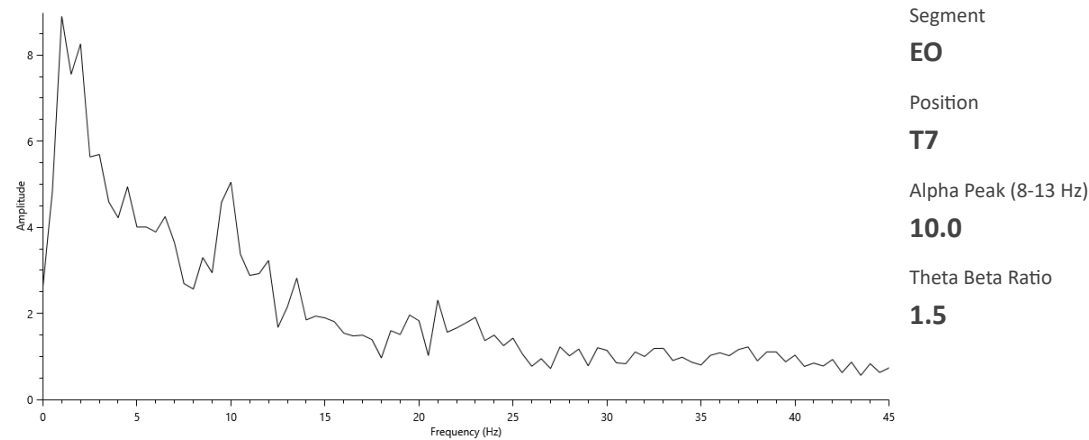
Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

O2 FFT Analysis



Delta	Theta	Alpha	Alpha 1	Alpha 2
18.2 μ V	14.2 μ V	18.8 μ V	16.4 μ V	9.5 μ V
Low-Beta	Mid-Beta	High-Beta	Gamma	
5.4 μ V	5.6 μ V	6.0 μ V	2.2 μ V	

T7 FFT Analysis

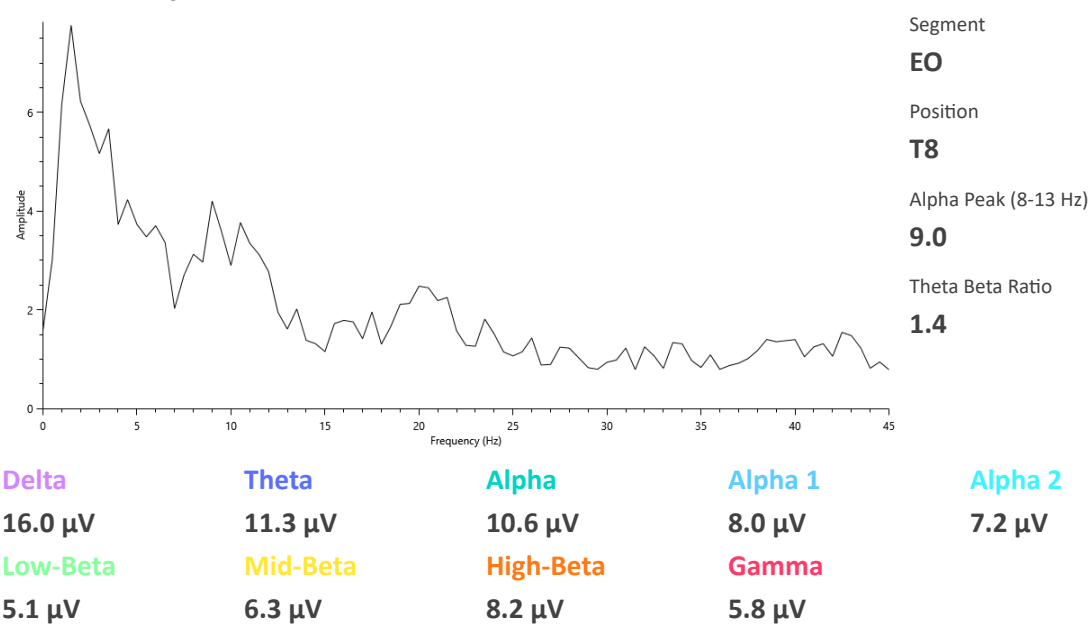


Delta	Theta	Alpha	Alpha 1	Alpha 2
17.6 μ V	12.7 μ V	11.7 μ V	9.0 μ V	7.5 μ V
Low-Beta	Mid-Beta	High-Beta	Gamma	
6.2 μ V	5.6 μ V	7.8 μ V	4.7 μ V	

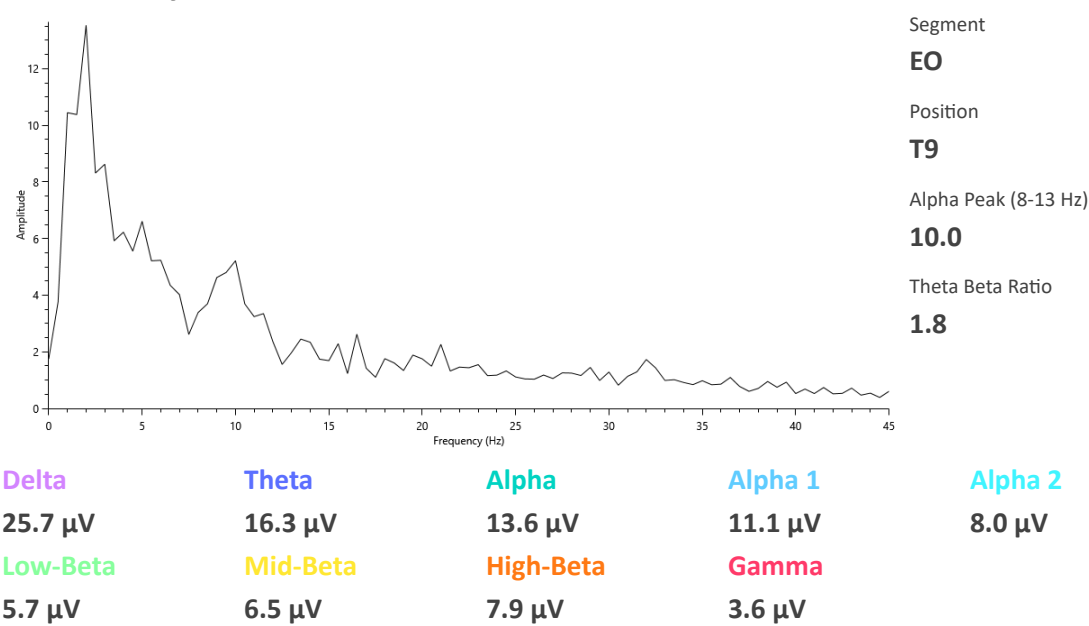
EEG FFT Spectra

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

T8 FFT Analysis



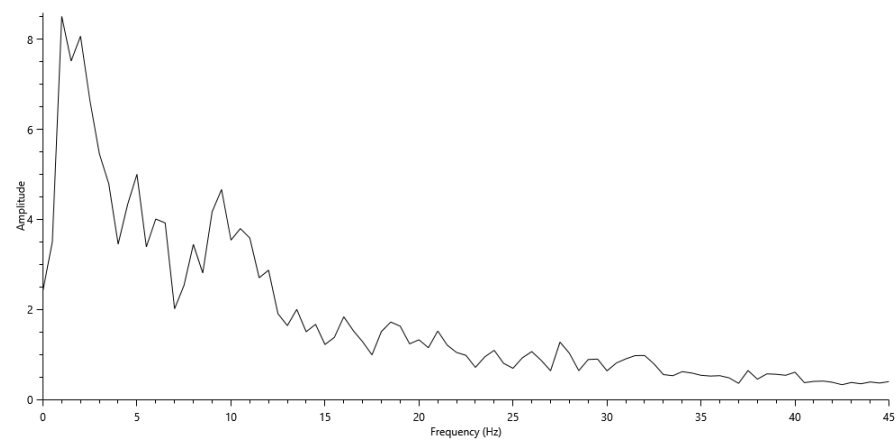
T9 FFT Analysis



EEG FFT Spectra

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

T10 FFT Analysis



Segment

EO

Position

T10

Alpha Peak (8-13 Hz)

9.5

Theta Beta Ratio

1.6

Delta

18.5 μ V

Theta

12.3 μ V

Alpha

11.7 μ V

Alpha 1

9.1 μ V

Alpha 2

7.4 μ V

Low-Beta

5.2 μ V

Mid-Beta

5.1 μ V

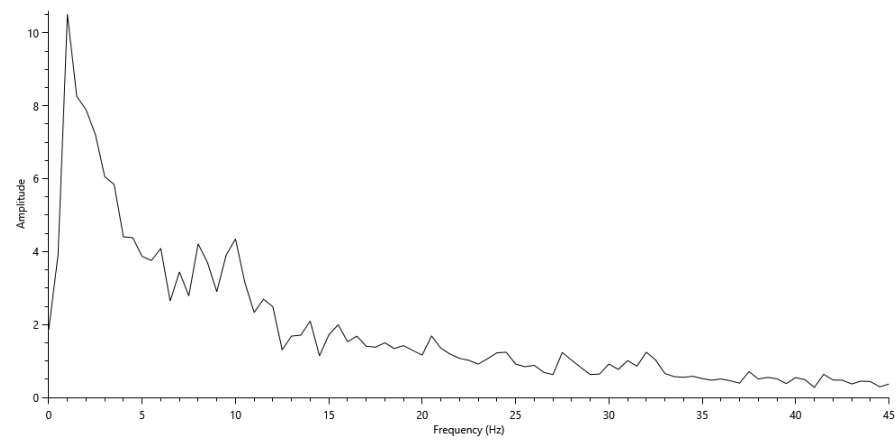
High-Beta

5.7 μ V

Gamma

2.3 μ V

F9 FFT Analysis



Segment

EO

Position

F9

Alpha Peak (8-13 Hz)

10.0

Theta Beta Ratio

1.6

Delta

19.3 μ V

Theta

11.9 μ V

Alpha

11.0 μ V

Alpha 1

9.0 μ V

Alpha 2

6.5 μ V

Low-Beta

4.9 μ V

Mid-Beta

5.4 μ V

High-Beta

6.0 μ V

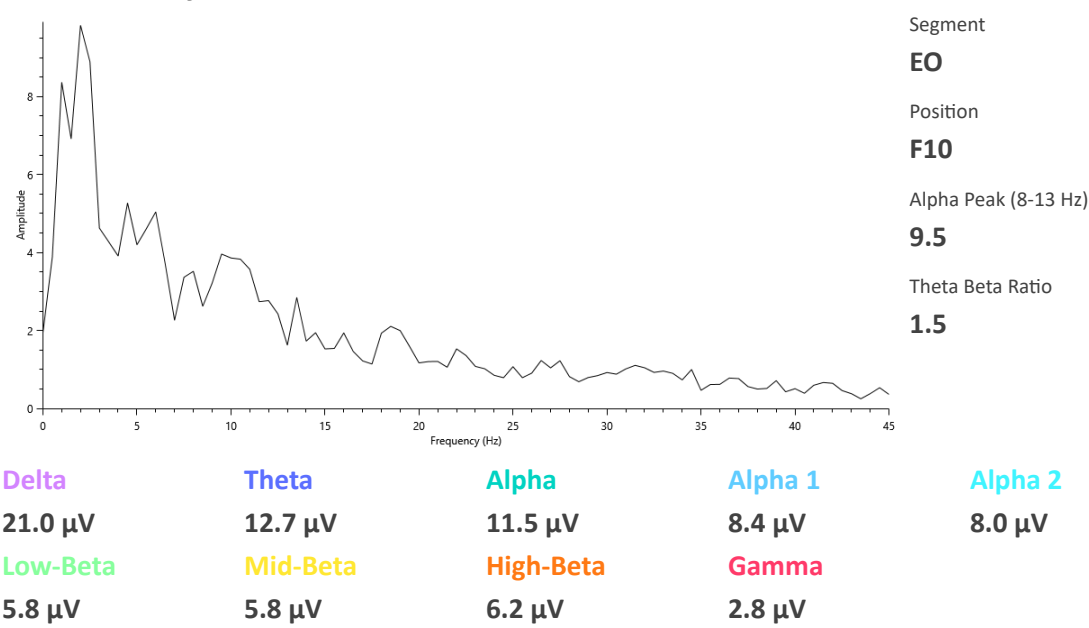
Gamma

2.4 μ V

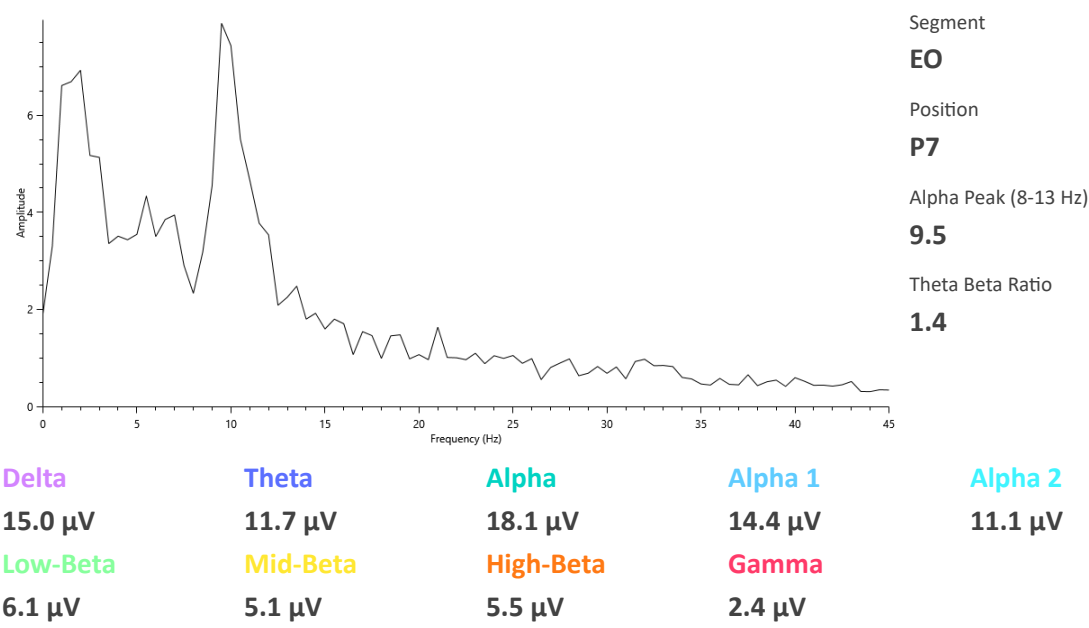
EEG FFT Spectra

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

F10 FFT Analysis



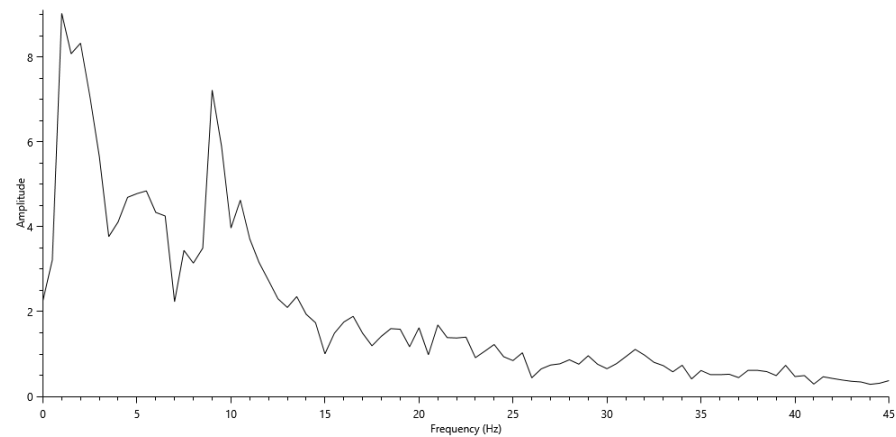
P7 FFT Analysis



EEG FFT Spectra

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

P8 FFT Analysis



Segment

EO

Position

P8

Alpha Peak (8-13 Hz)

9.0

Theta Beta Ratio

1.7

Delta

17.8 μ V

Theta

14.0 μ V

Alpha

15.4 μ V

Alpha 1

13.0 μ V

Alpha 2

8.5 μ V

Low-Beta

5.7 μ V

Mid-Beta

5.4 μ V

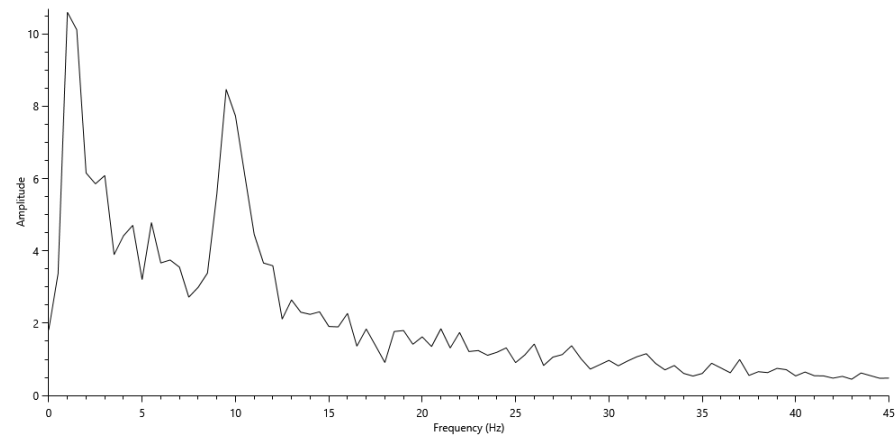
High-Beta

6.1 μ V

Gamma

2.4 μ V

P9 FFT Analysis



Segment

EO

Position

P9

Alpha Peak (8-13 Hz)

9.5

Theta Beta Ratio

1.4

Delta

18.3 μ V

Theta

12.9 μ V

Alpha

19.4 μ V

Alpha 1

15.8 μ V

Alpha 2

11.4 μ V

Low-Beta

6.6 μ V

Mid-Beta

6.0 μ V

High-Beta

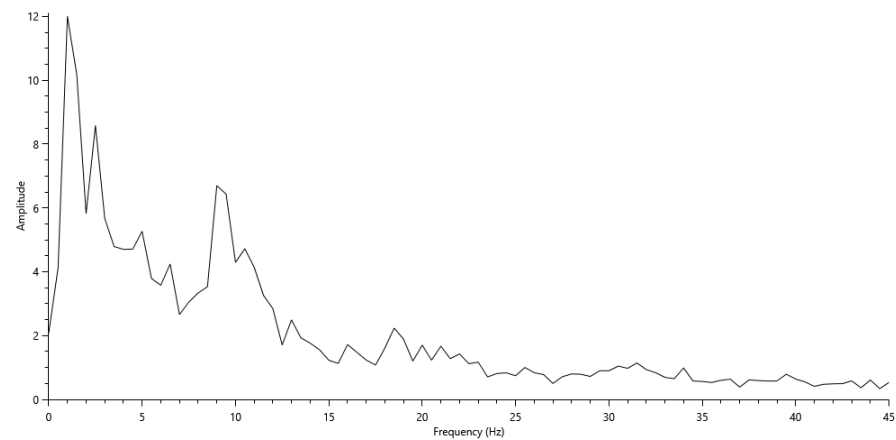
7.0 μ V

Gamma

3.1 μ V

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

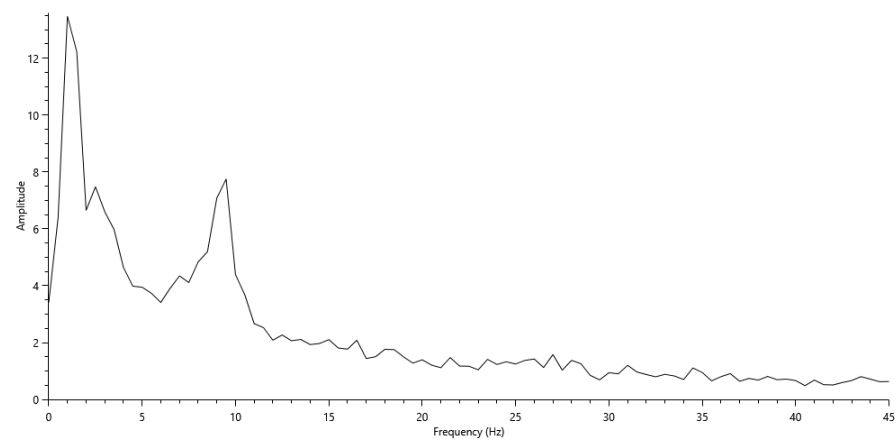
P10 FFT Analysis



Segment
EO
Position
P10
Alpha Peak (8-13 Hz)
9.0
Theta Beta Ratio
1.6

Delta	Theta	Alpha	Alpha 1	Alpha 2
19.6 μ V	13.6 μ V	16.0 μ V	13.3 μ V	9.0 μ V
Low-Beta	Mid-Beta	High-Beta	Gamma	
5.8 μ V	5.4 μ V	6.0 μ V	2.7 μ V	

Fp1 FFT Analysis



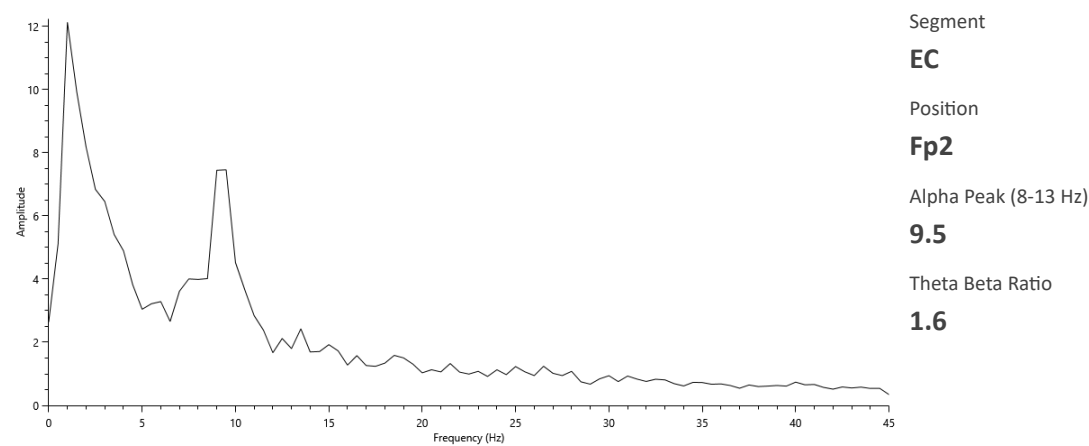
Segment
EC
Position
Fp1
Alpha Peak (8-13 Hz)
9.5
Theta Beta Ratio
1.6

Delta	Theta	Alpha	Alpha 1	Alpha 2
24.3 μ V	13.3 μ V	15.6 μ V	14.3 μ V	6.7 μ V
Low-Beta	Mid-Beta	High-Beta	Gamma	
5.5 μ V	5.8 μ V	7.1 μ V	3.5 μ V	

EEG FFT Spectra

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

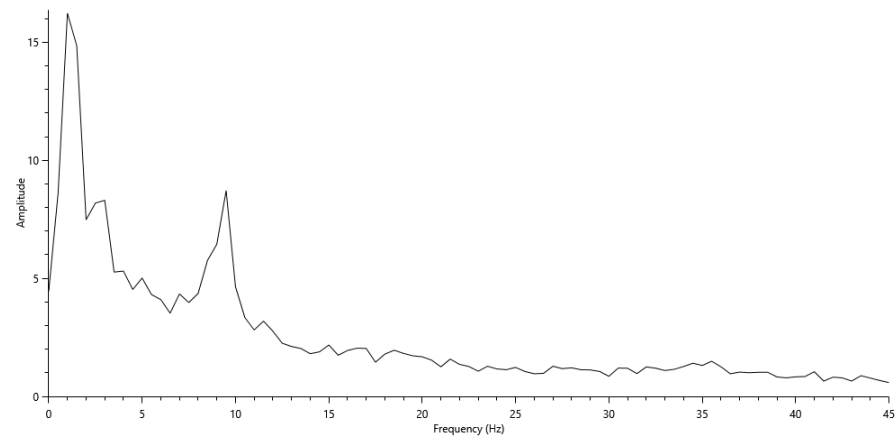
Fp2 FFT Analysis



Delta	Theta	Alpha	Alpha 1	Alpha 2
22.1 μ V	11.9 μ V	15.2 μ V	13.6 μ V	6.9 μ V
Low-Beta	Mid-Beta	High-Beta	Gamma	
5.4 μ V	5.1 μ V	5.9 μ V	3.0 μ V	

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

F7 FFT Analysis



Segment

EC

Position

F7

Alpha Peak (8-13 Hz)

9.5

Theta Beta Ratio

1.6

Delta

28.0 μ V

Theta

14.1 μ V

Alpha

16.3 μ V

Alpha 1

14.9 μ V

Alpha 2

7.1 μ V

Low-Beta

5.5 μ V

Mid-Beta

6.5 μ V

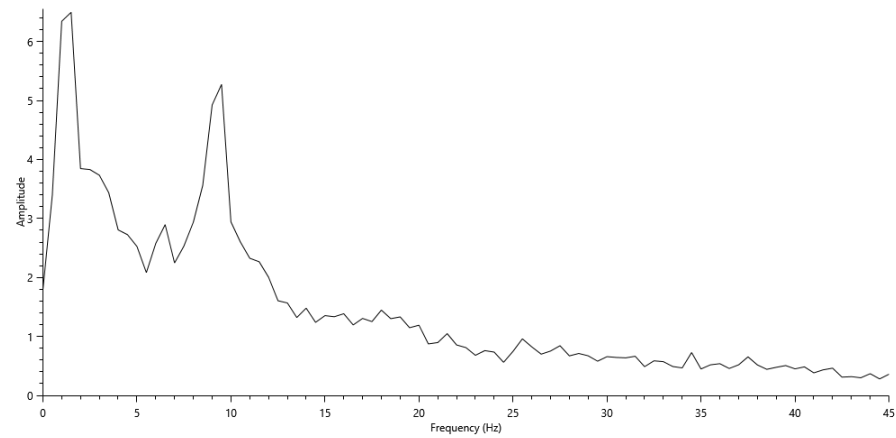
High-Beta

7.5 μ V

Gamma

4.7 μ V

F3 FFT Analysis



Segment

EC

Position

F3

Alpha Peak (8-13 Hz)

9.5

Theta Beta Ratio

1.3

Delta

12.4 μ V

Theta

8.4 μ V

Alpha

10.9 μ V

Alpha 1

9.7 μ V

Alpha 2

5.4 μ V

Low-Beta

4.2 μ V

Mid-Beta

4.5 μ V

High-Beta

4.6 μ V

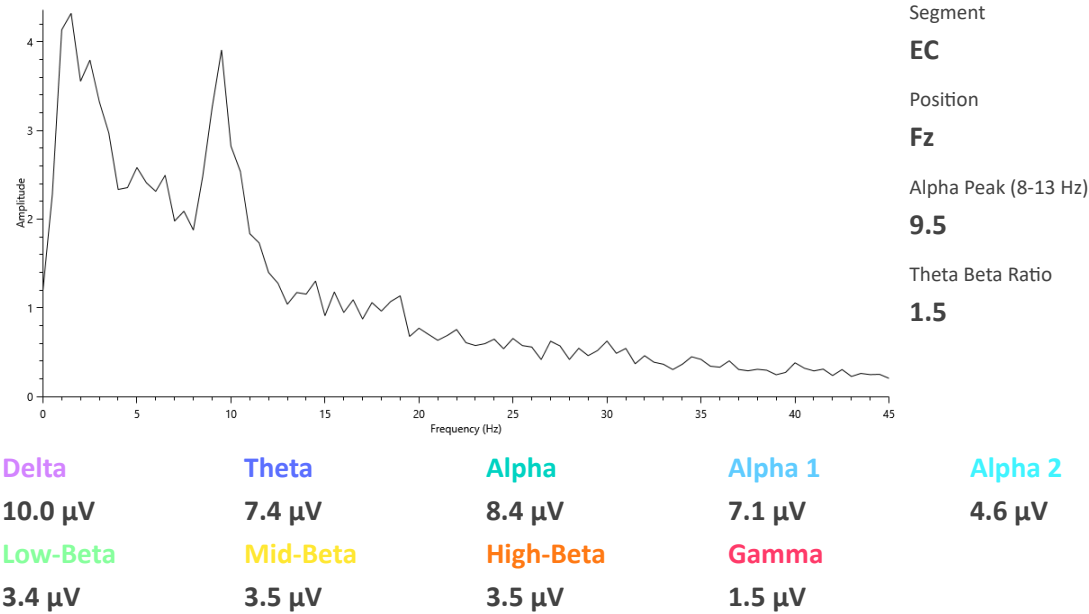
Gamma

2.3 μ V

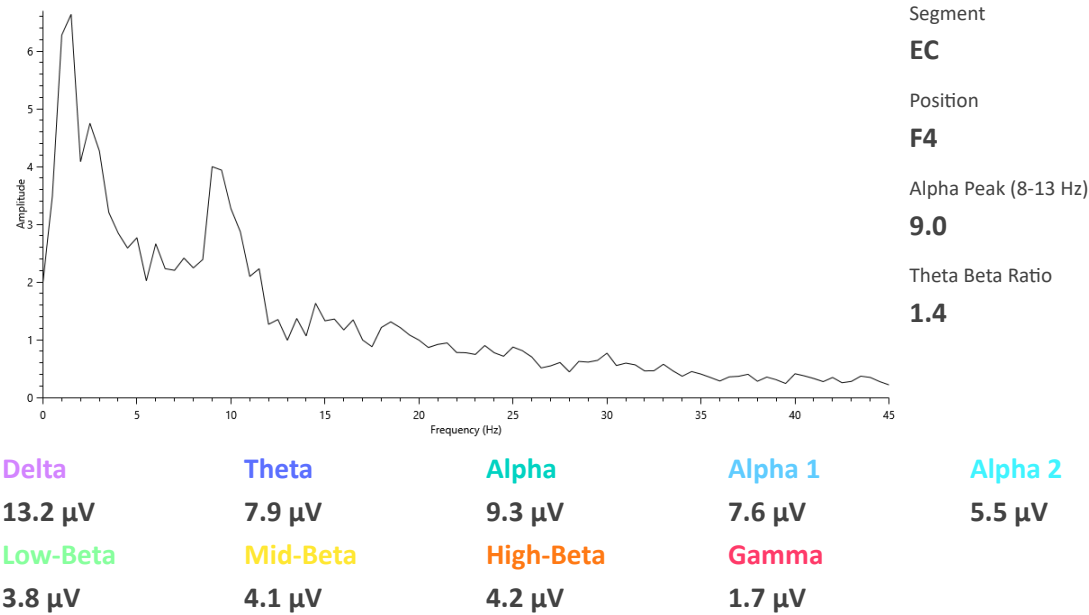
EEG FFT Spectra

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

Fz FFT Analysis



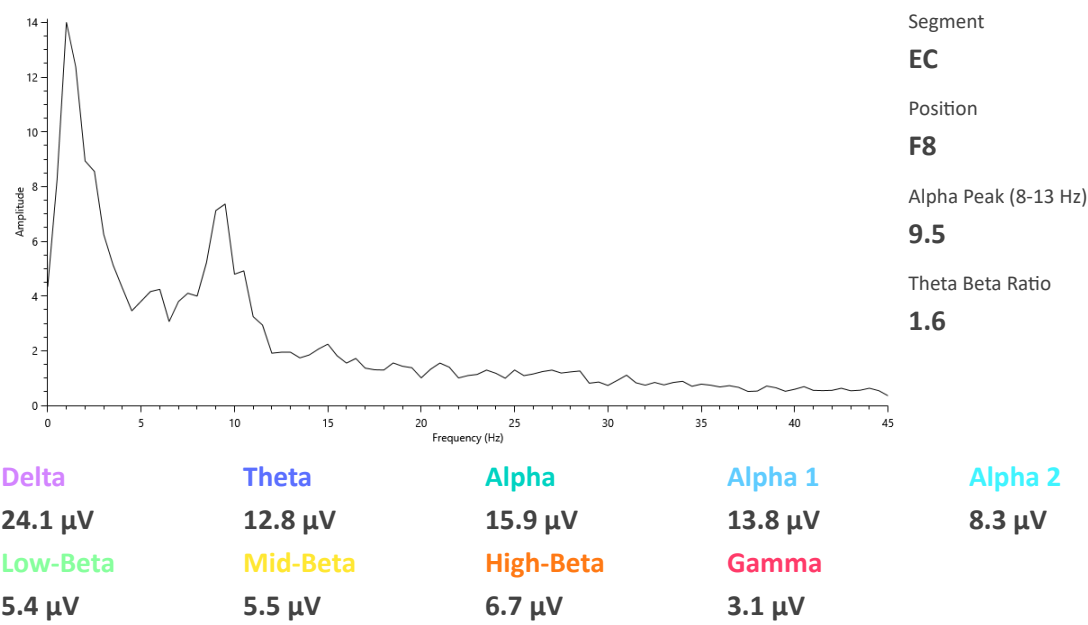
F4 FFT Analysis



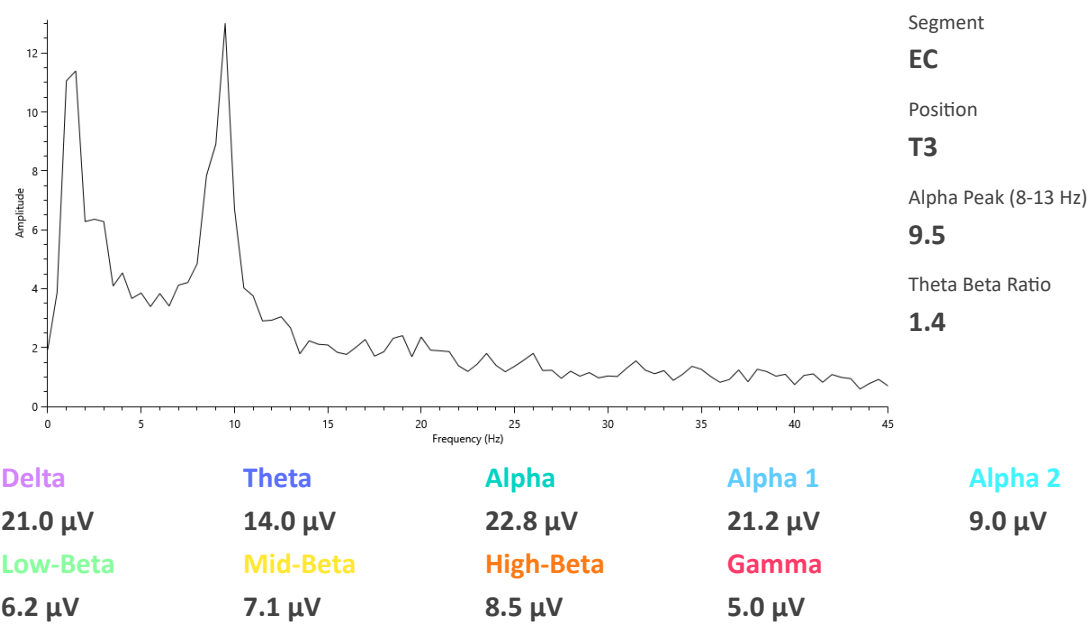
EEG FFT Spectra

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

F8 FFT Analysis

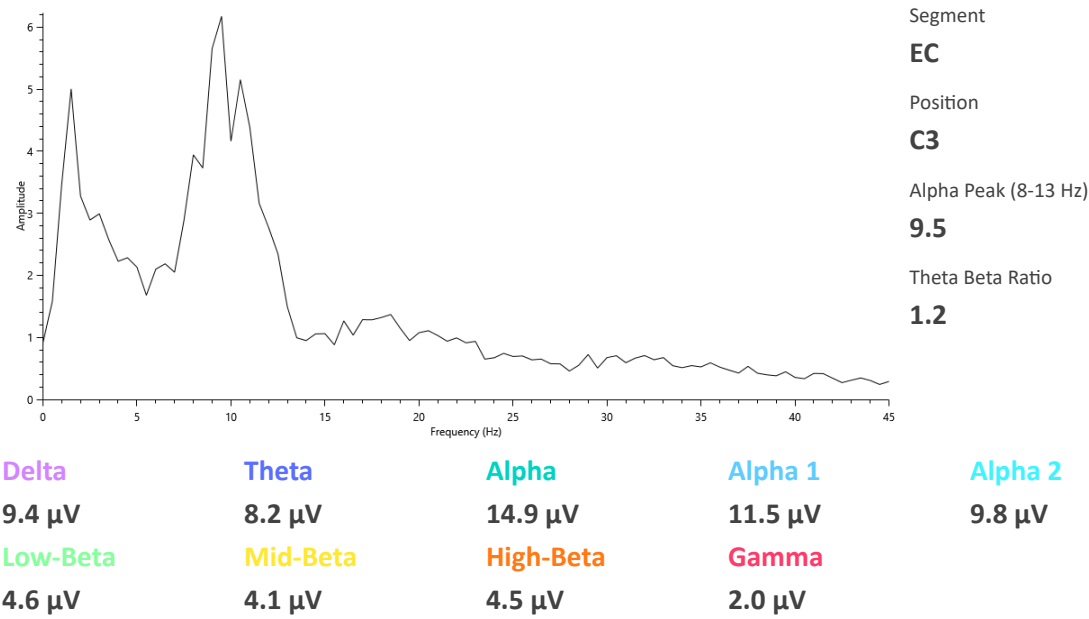


T3 FFT Analysis

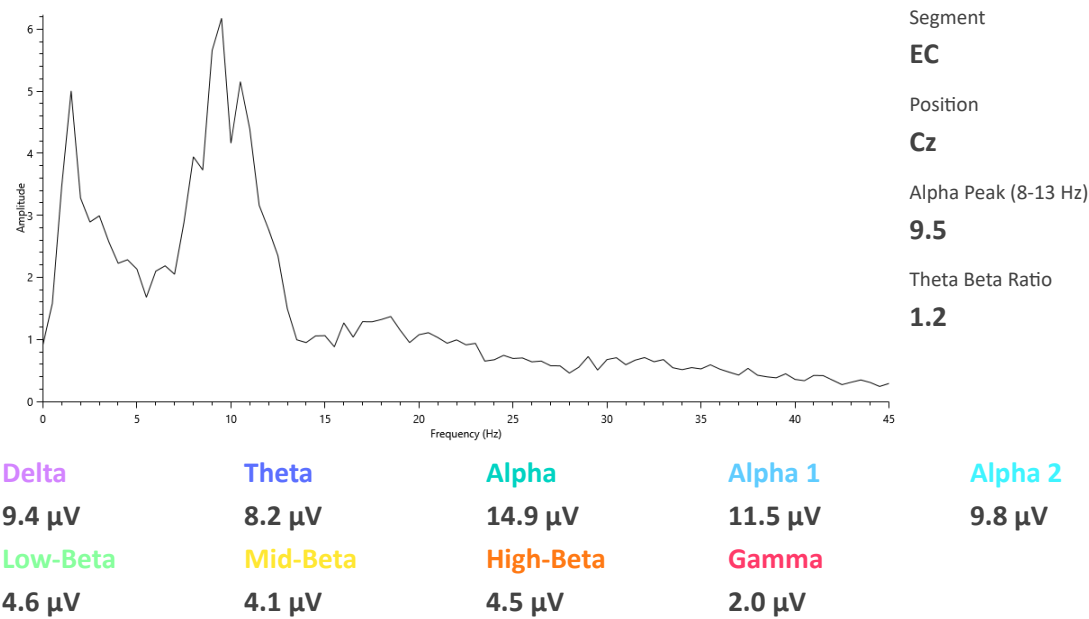


Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

C3 FFT Analysis



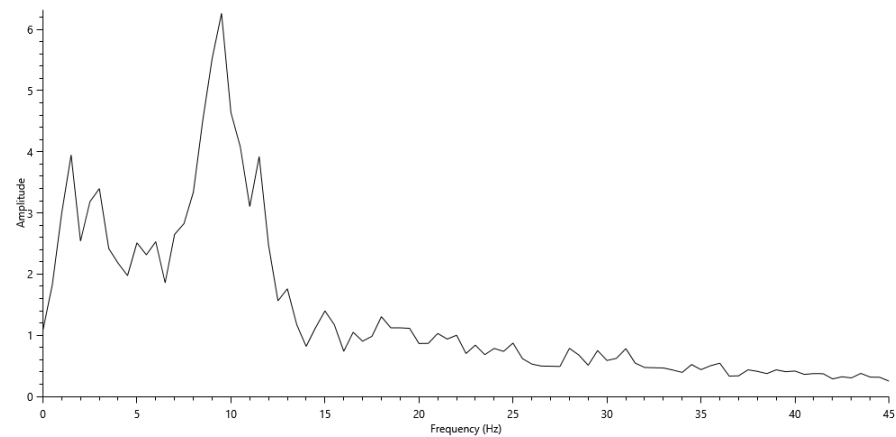
Cz FFT Analysis



EEG FFT Spectra

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

C4 FFT Analysis



Segment

EC

Position

C4

Alpha Peak (8-13 Hz)

9.5

Theta Beta Ratio

1.4

Delta

8.7 μ V

Theta

8.5 μ V

Alpha

14.4 μ V

Alpha 1

11.7 μ V

Alpha 2

8.9 μ V

Low-Beta

4.1 μ V

Mid-Beta

3.8 μ V

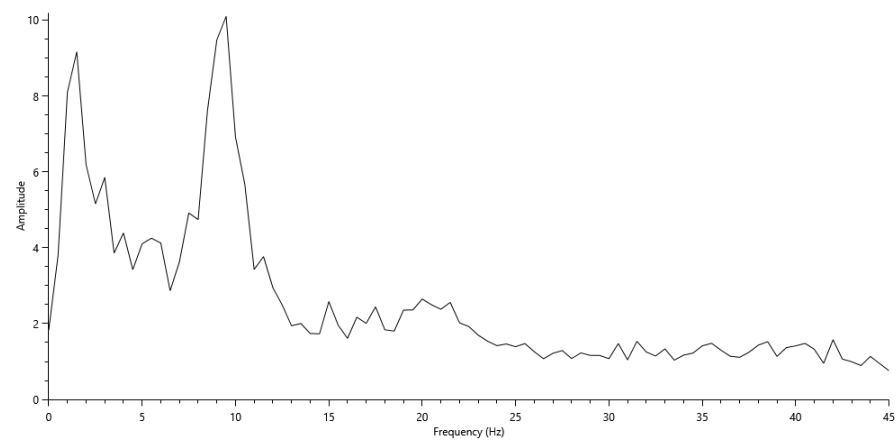
High-Beta

4.3 μ V

Gamma

1.9 μ V

T4 FFT Analysis



Segment

EC

Position

T4

Alpha Peak (8-13 Hz)

9.5

Theta Beta Ratio

1.4

Delta

17.4 μ V

Theta

14.0 μ V

Alpha

22.0 μ V

Alpha 1

19.5 μ V

Alpha 2

10.7 μ V

Low-Beta

6.1 μ V

Mid-Beta

7.6 μ V

High-Beta

9.6 μ V

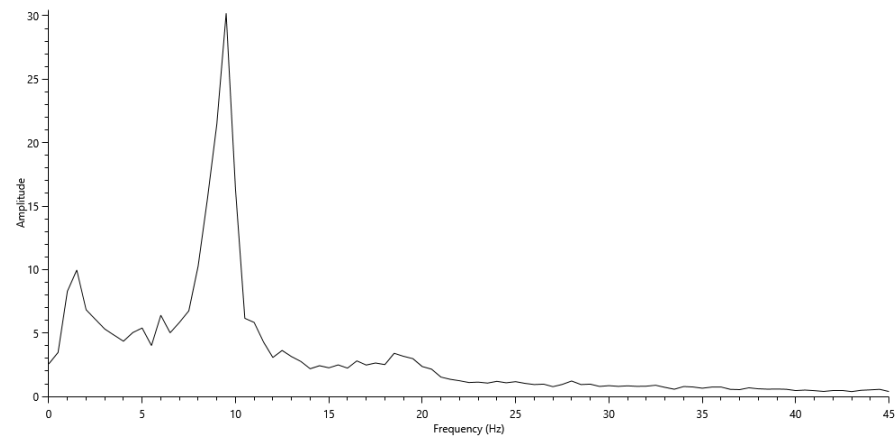
Gamma

6.4 μ V

EEG FFT Spectra

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

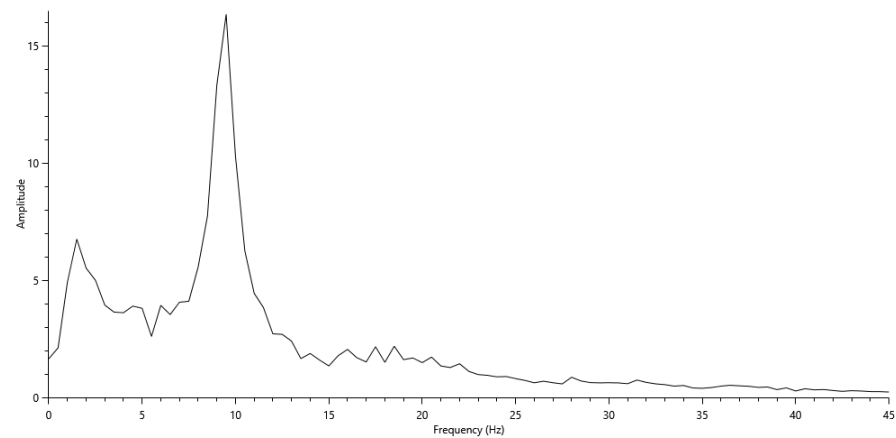
T5 FFT Analysis



Segment
EC
Position
T5
Alpha Peak (8-13 Hz)
9.5
Theta Beta Ratio
1.9

Delta	Theta	Alpha	Alpha 1	Alpha 2
19.2 μ V	23.9 μ V	51.2 μ V	48.8 μ V	16.9 μ V
Low-Beta	Mid-Beta	High-Beta	Gamma	
7.0 μ V	9.1 μ V	7.1 μ V	2.6 μ V	

P3 FFT Analysis



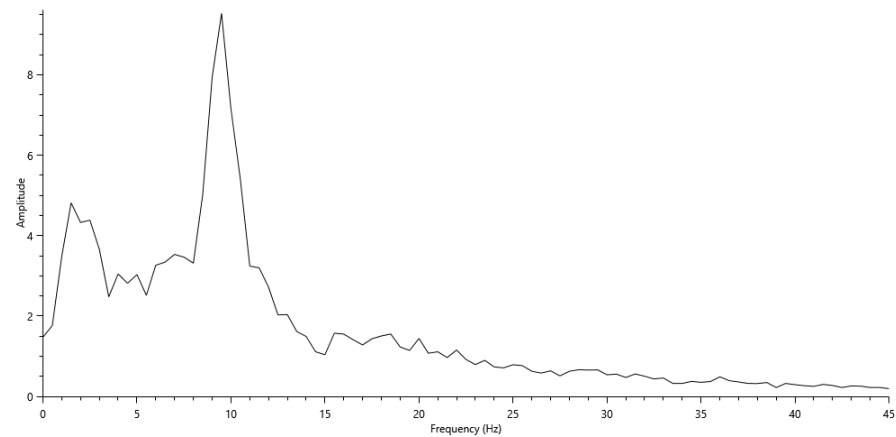
Segment
EC
Position
P3
Alpha Peak (8-13 Hz)
9.5
Theta Beta Ratio
1.6

Delta	Theta	Alpha	Alpha 1	Alpha 2
13.6 μ V	14.7 μ V	30.5 μ V	27.9 μ V	13.3 μ V
Low-Beta	Mid-Beta	High-Beta	Gamma	
5.7 μ V	6.1 μ V	5.4 μ V	1.8 μ V	

EEG FFT Spectra

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

Pz FFT Analysis



Segment

EC

Position

Pz

Alpha Peak (8-13 Hz)

9.5

Theta Beta Ratio

1.5

Delta

10.9 μ V

Theta

10.9 μ V

Alpha

19.4 μ V

Alpha 1

16.8 μ V

Alpha 2

10.2 μ V

Low-Beta

4.8 μ V

Mid-Beta

4.8 μ V

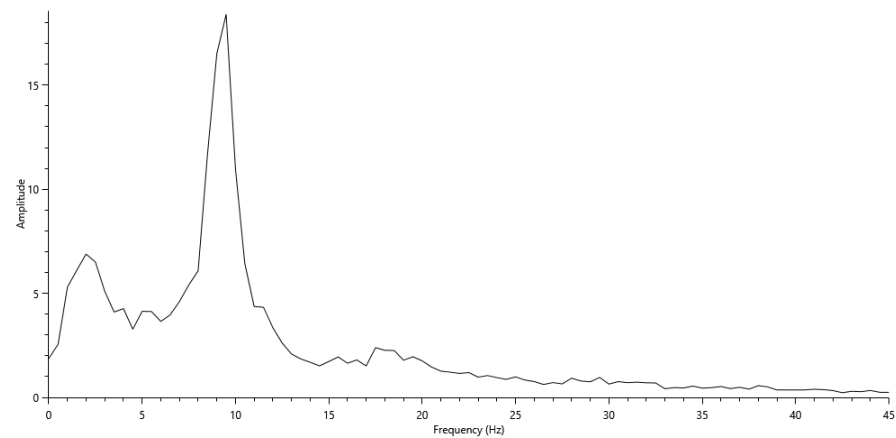
High-Beta

4.5 μ V

Gamma

1.5 μ V

P4 FFT Analysis



Segment

EC

Position

P4

Alpha Peak (8-13 Hz)

9.5

Theta Beta Ratio

1.7

Delta

15.2 μ V

Theta

17.3 μ V

Alpha

34.9 μ V

Alpha 1

32.6 μ V

Alpha 2

13.8 μ V

Low-Beta

5.7 μ V

Mid-Beta

6.7 μ V

High-Beta

5.8 μ V

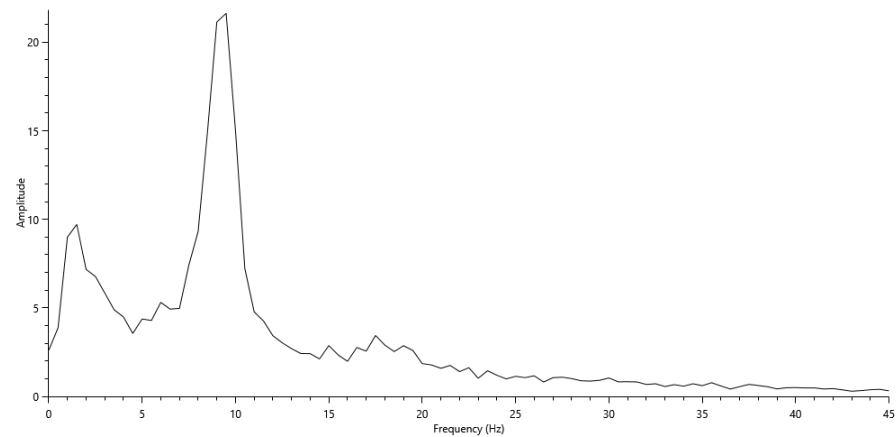
Gamma

1.9 μ V

EEG FFT Spectra

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

T6 FFT Analysis



Segment

EC

Position

T6

Alpha Peak (8-13 Hz)

9.5

Theta Beta Ratio

1.7

Delta

19.5 μ V

Theta

21.7 μ V

Alpha

43.3 μ V

Alpha 1

40.7 μ V

Alpha 2

16.1 μ V

Low-Beta

7.0 μ V

Mid-Beta

9.4 μ V

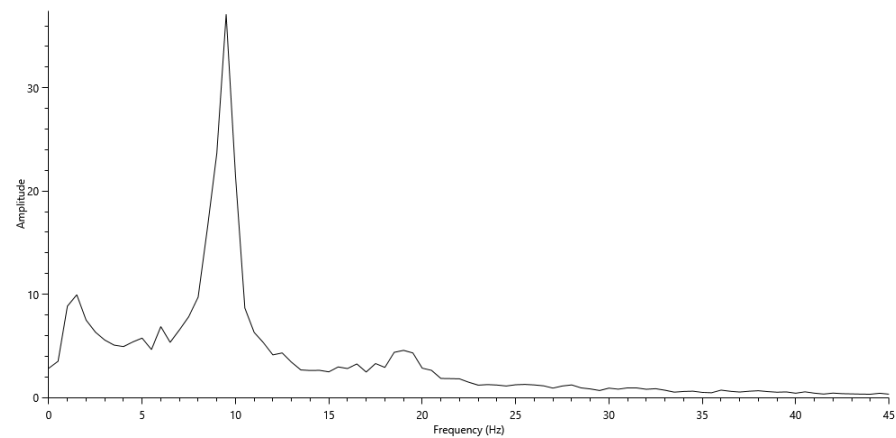
High-Beta

7.3 μ V

Gamma

2.4 μ V

O1 FFT Analysis



Segment

EC

Position

O1

Alpha Peak (8-13 Hz)

9.5

Theta Beta Ratio

1.7

Delta

19.9 μ V

Theta

26.1 μ V

Alpha

61.6 μ V

Alpha 1

58.1 μ V

Alpha 2

22.2 μ V

Low-Beta

8.0 μ V

Mid-Beta

11.5 μ V

High-Beta

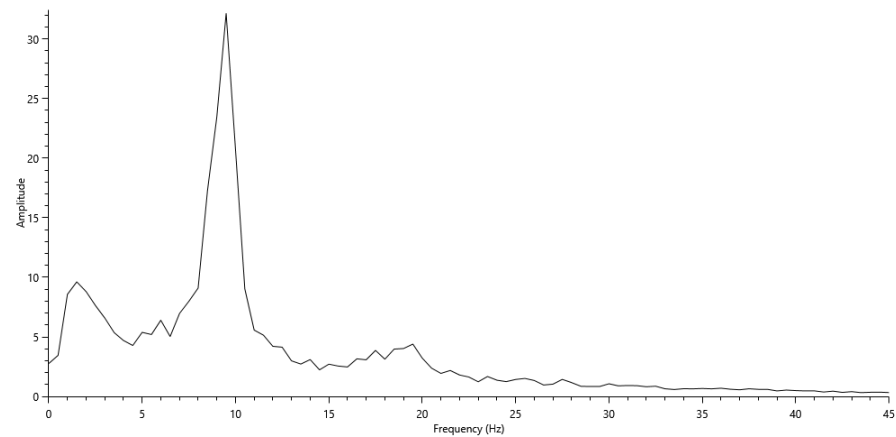
8.5 μ V

Gamma

2.2 μ V

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

O2 FFT Analysis



Segment

EC

Position

O2

Alpha Peak (8-13 Hz)

9.5

Theta Beta Ratio

1.6

Delta

21.0 μ V

Theta

25.4 μ V

Alpha

56.4 μ V

Alpha 1

52.8 μ V

Alpha 2

21.4 μ V

Low-Beta

8.0 μ V

Mid-Beta

11.7 μ V

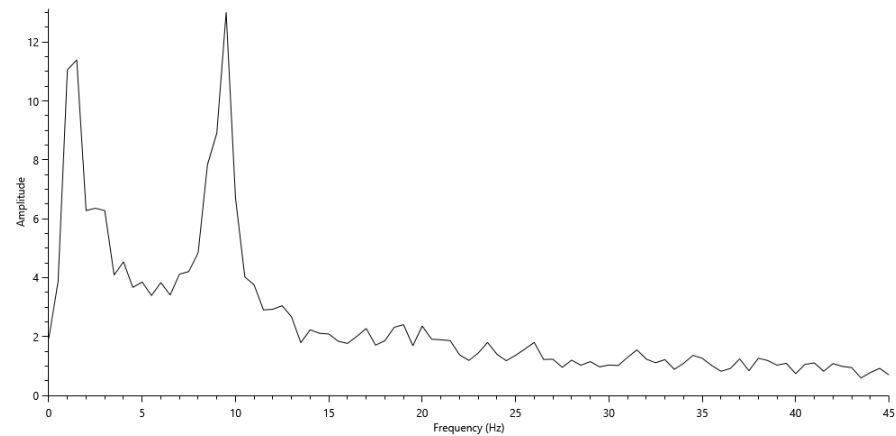
High-Beta

9.1 μ V

Gamma

2.3 μ V

T7 FFT Analysis



Segment

EC

Position

T7

Alpha Peak (8-13 Hz)

9.5

Theta Beta Ratio

1.4

Delta

21.0 μ V

Theta

14.0 μ V

Alpha

22.8 μ V

Alpha 1

21.2 μ V

Alpha 2

9.0 μ V

Low-Beta

6.2 μ V

Mid-Beta

7.1 μ V

High-Beta

8.5 μ V

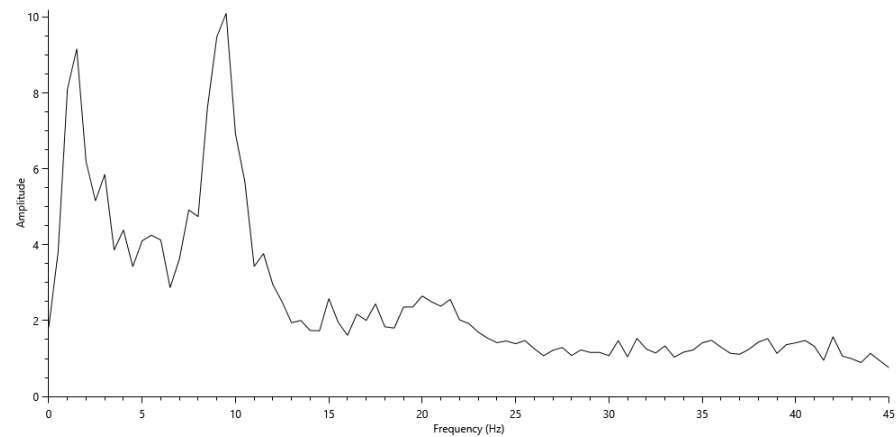
Gamma

5.0 μ V

EEG FFT Spectra

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

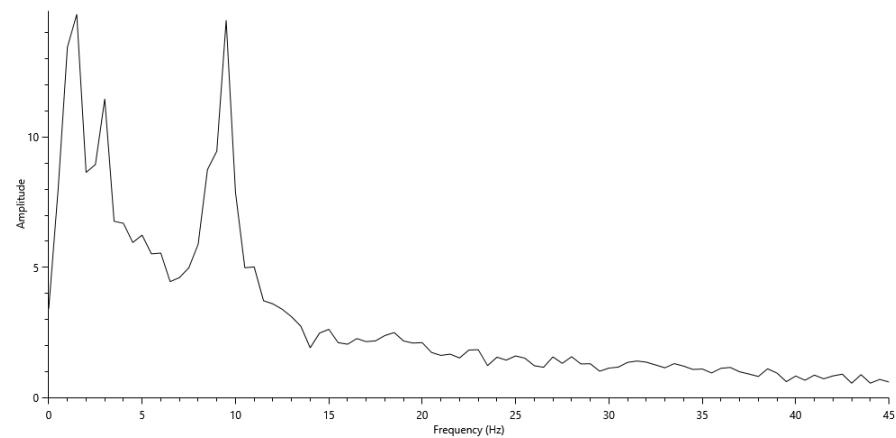
T8 FFT Analysis



Segment
EC
Position
T8
Alpha Peak (8-13 Hz)
9.5
Theta Beta Ratio
1.4

Delta	Theta	Alpha	Alpha 1	Alpha 2
17.4 μV	14.0 μV	22.0 μV	19.5 μV	10.7 μV
Low-Beta	Mid-Beta	High-Beta	Gamma	
6.1 μV	7.6 μV	9.6 μV	6.4 μV	

T9 FFT Analysis



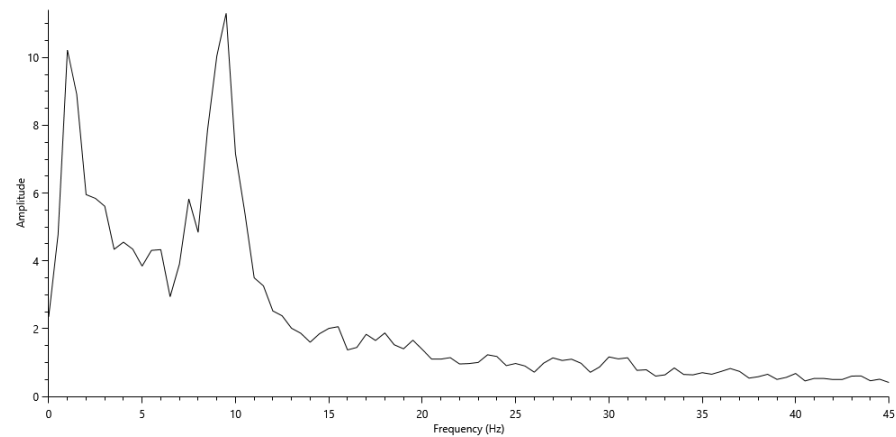
Segment
EC
Position
T9
Alpha Peak (8-13 Hz)
9.5
Theta Beta Ratio
1.6

Delta	Theta	Alpha	Alpha 1	Alpha 2
30.9 μV	19.2 μV	26.0 μV	23.8 μV	11.2 μV
Low-Beta	Mid-Beta	High-Beta	Gamma	
8.0 μV	8.2 μV	9.2 μV	4.5 μV	

EEG FFT Spectra

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

T10 FFT Analysis



Segment

EC

Position

T10

Alpha Peak (8-13 Hz)

9.5

Theta Beta Ratio

1.7

Delta

18.5 μ V

Low-Beta

5.6 μ V

Theta

15.1 μ V

Mid-Beta

5.8 μ V

Alpha

22.8 μ V

High-Beta

6.1 μ V

Alpha 1

20.7 μ V

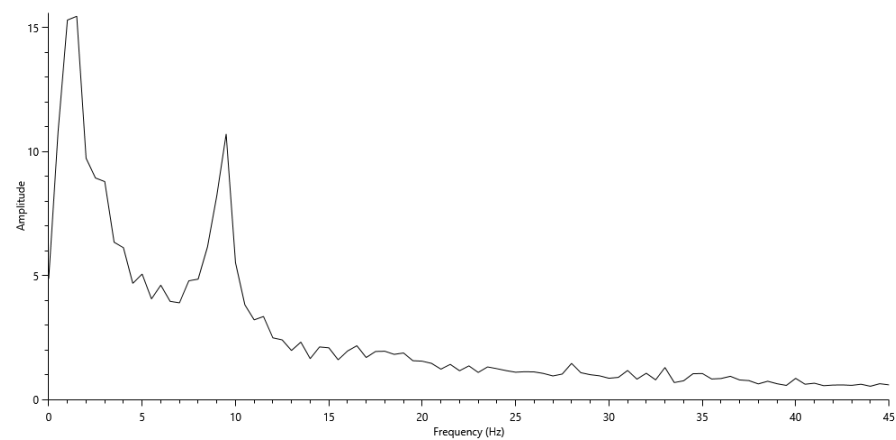
Gamma

3.0 μ V

Alpha 2

10.0 μ V

F9 FFT Analysis



Segment

EC

Position

F9

Alpha Peak (8-13 Hz)

9.5

Theta Beta Ratio

1.7

Delta

29.2 μ V

Low-Beta

5.5 μ V

Theta

15.3 μ V

Mid-Beta

6.4 μ V

Alpha

19.4 μ V

High-Beta

6.8 μ V

Alpha 1

17.8 μ V

Gamma

3.5 μ V

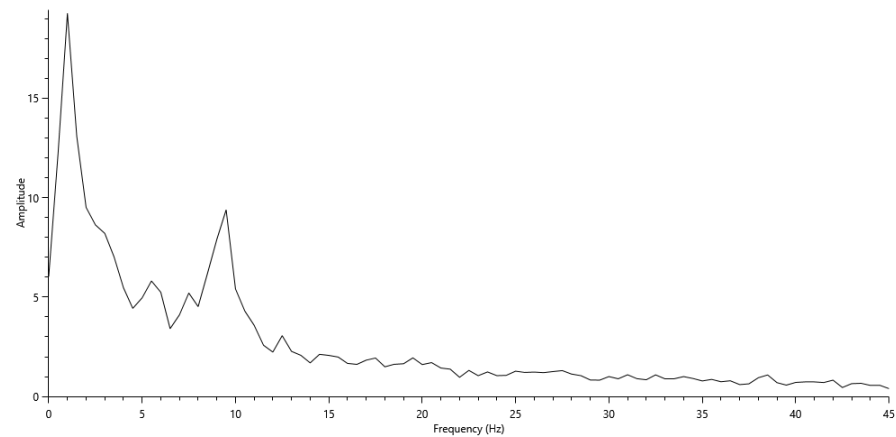
Alpha 2

8.1 μ V

EEG FFT Spectra

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

F10 FFT Analysis



Segment

EC

Position

F10

Alpha Peak (8-13 Hz)

9.5

Theta Beta Ratio

1.8

Delta

28.8 μ V

Low-Beta

6.1 μ V

Theta

16.0 μ V

Mid-Beta

6.2 μ V

Alpha

18.4 μ V

High-Beta

6.9 μ V

Alpha 1

16.3 μ V

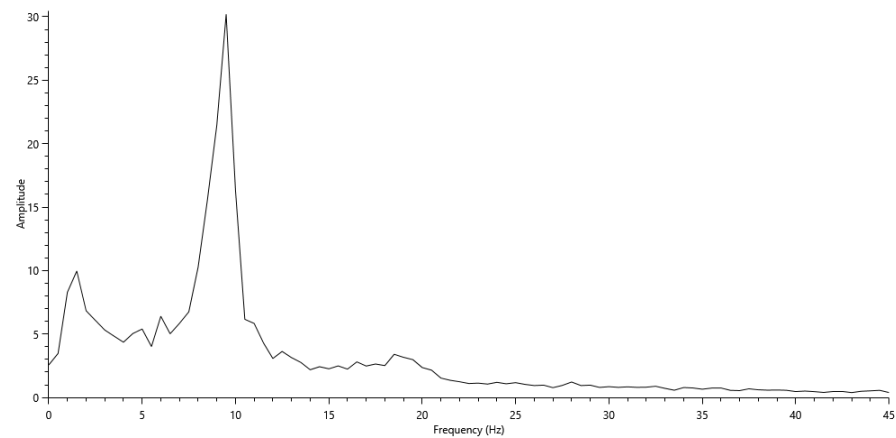
Gamma

3.5 μ V

Alpha 2

8.7 μ V

P7 FFT Analysis



Segment

EC

Position

P7

Alpha Peak (8-13 Hz)

9.5

Theta Beta Ratio

1.9

Delta

19.2 μ V

Low-Beta

7.0 μ V

Theta

23.9 μ V

Mid-Beta

9.1 μ V

Alpha

51.2 μ V

High-Beta

7.1 μ V

Alpha 1

48.8 μ V

Gamma

2.6 μ V

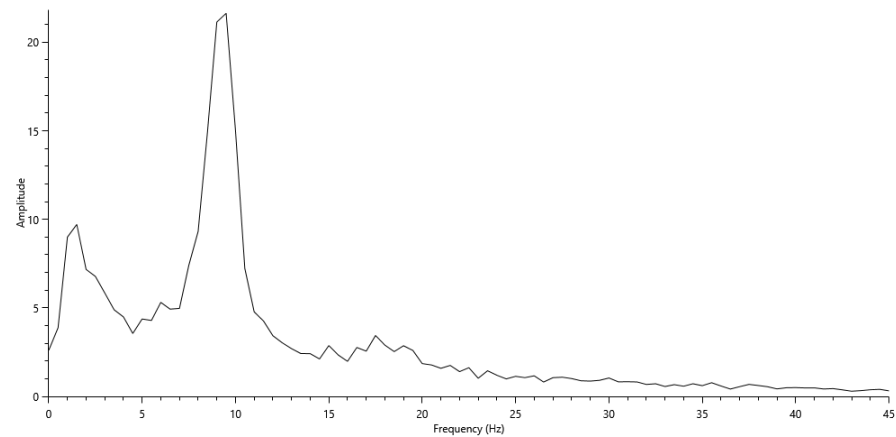
Alpha 2

16.9 μ V

EEG FFT Spectra

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

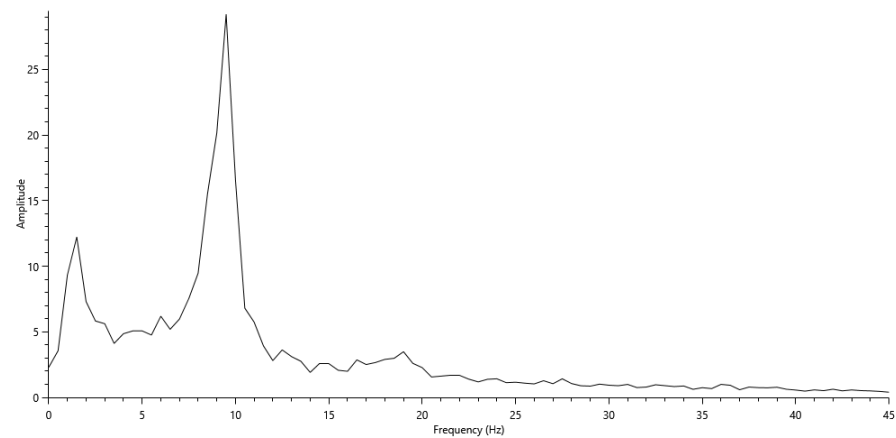
P8 FFT Analysis



Segment
EC
Position
P8
Alpha Peak (8-13 Hz)
9.5
Theta Beta Ratio
1.7

Delta	Theta	Alpha	Alpha 1	Alpha 2
19.5 μ V	21.7 μ V	43.3 μ V	40.7 μ V	16.1 μ V
Low-Beta	Mid-Beta	High-Beta	Gamma	
7.0 μ V	9.4 μ V	7.3 μ V	2.4 μ V	

P9 FFT Analysis



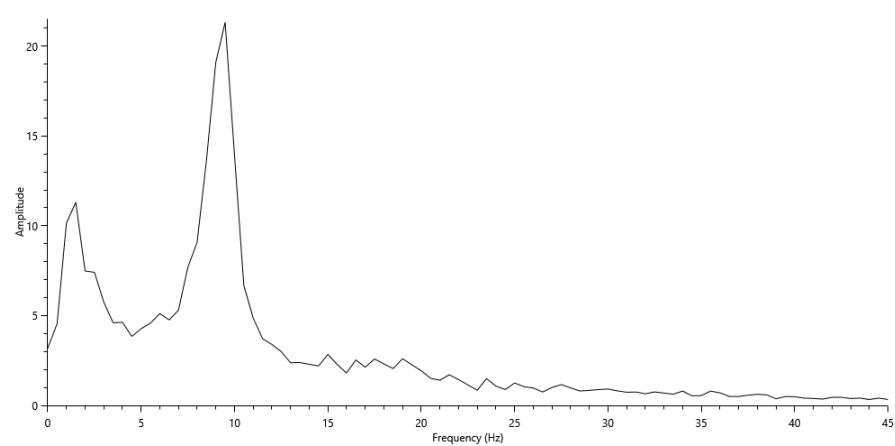
Segment
EC
Position
P9
Alpha Peak (8-13 Hz)
9.5
Theta Beta Ratio
1.8

Delta	Theta	Alpha	Alpha 1	Alpha 2
21.1 μ V	23.9 μ V	50.4 μ V	47.8 μ V	17.0 μ V
Low-Beta	Mid-Beta	High-Beta	Gamma	
7.2 μ V	9.1 μ V	7.7 μ V	3.2 μ V	

EEG FFT Spectra

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -

P10 FFT Analysis



Segment
EC

Position
P10

Alpha Peak (8-13 Hz)
9.5

Theta Beta Ratio
1.8

Delta	Theta	Alpha	Alpha 1	Alpha 2
21.4 μV	21.1 μV	41.4 μV	39.1 μV	14.8 μV
Low-Beta	Mid-Beta	High-Beta	Gamma	
6.7 μV	8.0 μV	6.6 μV	2.4 μV	

Name: John Sample		Info:	
Gender: Male	Weight:	Date: 07 Feb 2024	Duration: 00:04:14.0471714
Age: 27 (1/1/1997)	Height:	Time: 10:05	ID: -