

Brain-Computer Interface

Motor Imagery Analysis

Subjects: 2

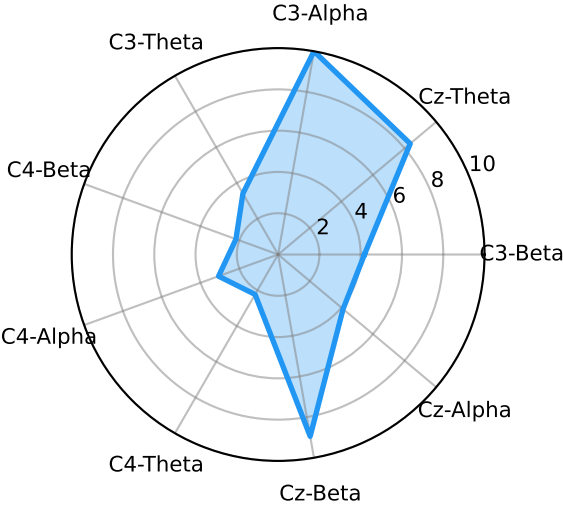
Task: Task4

Date: 2025-05-19

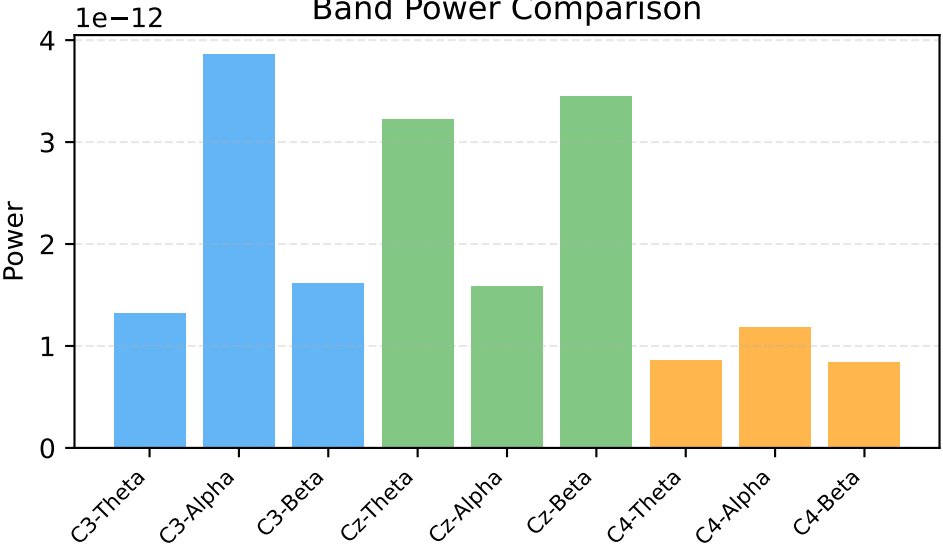
Brain-Computer Interface: Motor Imagery Analysis

EEG Feature Analysis - Subject 2, LEFT State

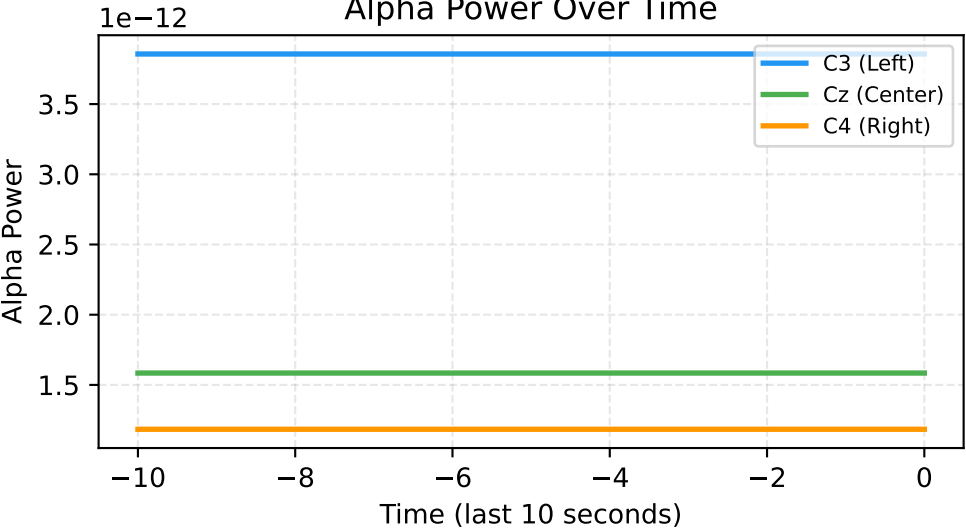
EEG Band Power Distribution



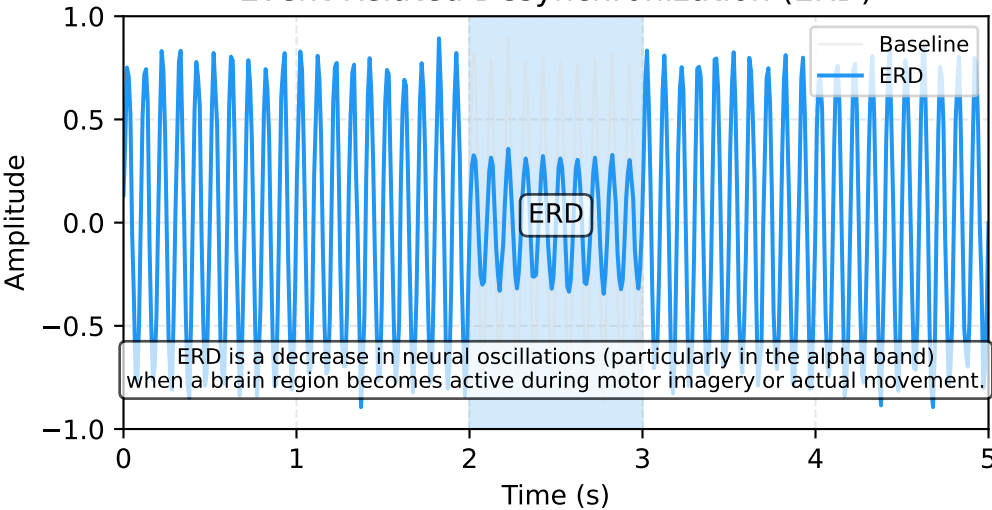
Band Power Comparison



Alpha Power Over Time



Event-Related Desynchronization (ERD)



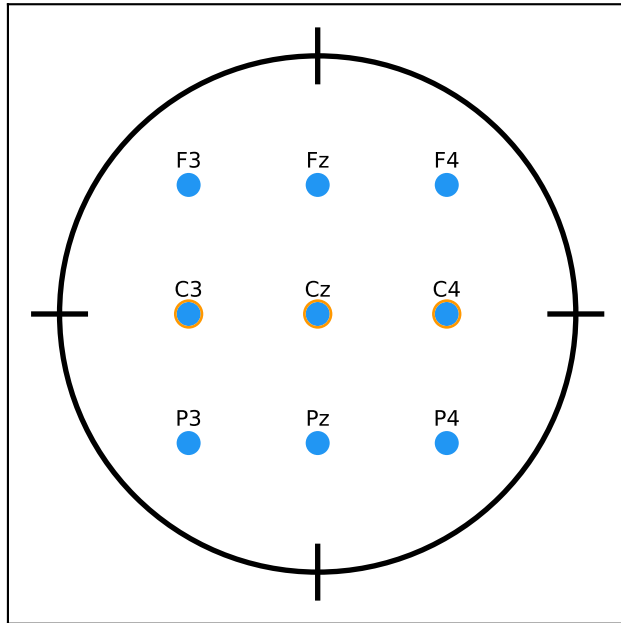
Mental Command: LEFT

LEFT HAND IMAGERY: Event-Related Desynchronization (ERD) in right motor cortex (C4).

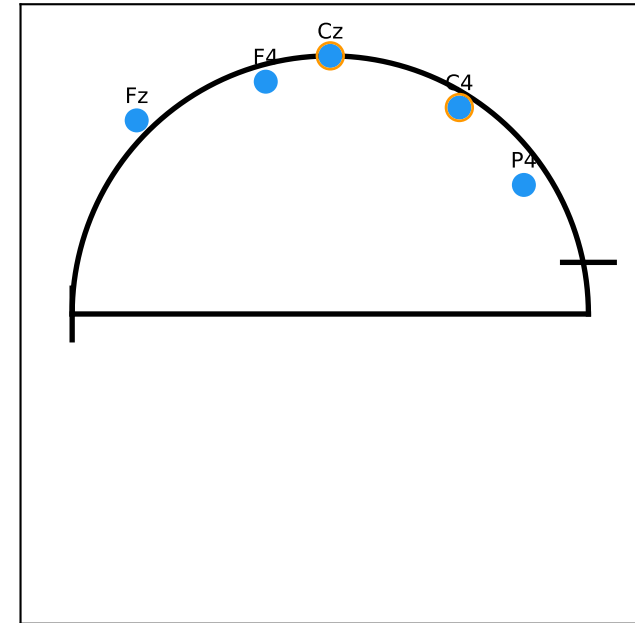
Brain Activity Topography

Subject 2, LEFT State

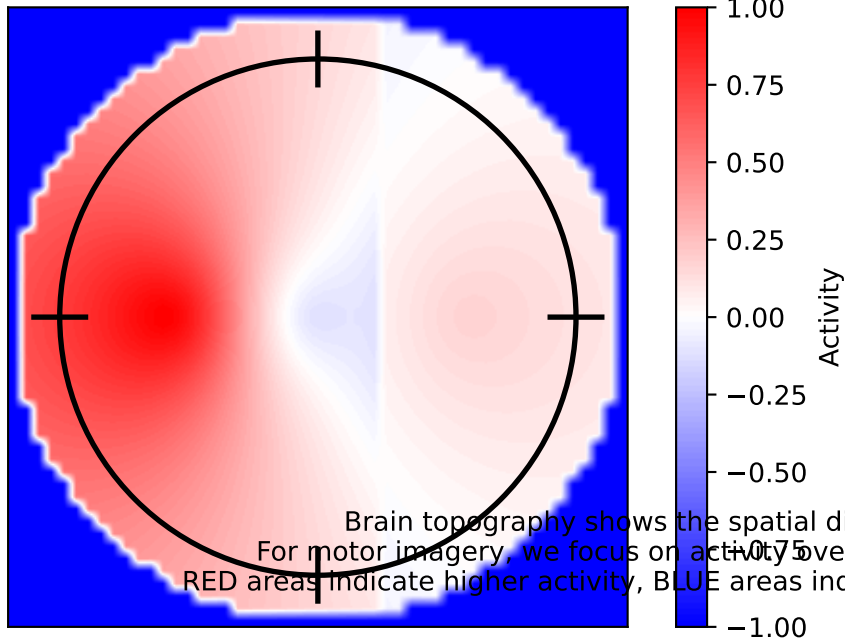
Top View



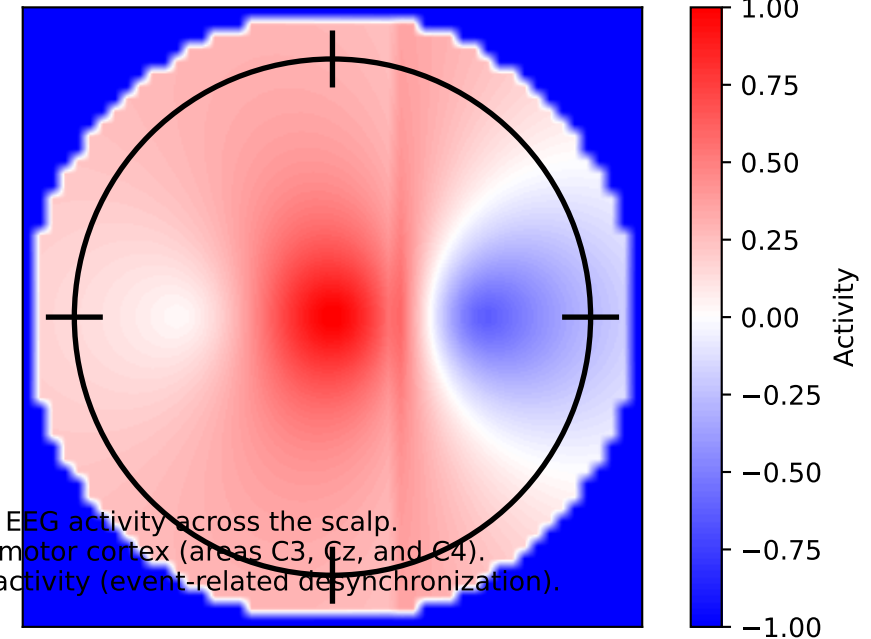
Side View



Alpha Band (8-13 Hz)



Beta Band (13-30 Hz)



Brain topography shows the spatial distribution of EEG activity across the scalp. For motor imagery, we focus on activity over the sensorimotor cortex (areas C3, Cz, and C4). RED areas indicate higher activity, BLUE areas indicate lower activity (event-related desynchronization).