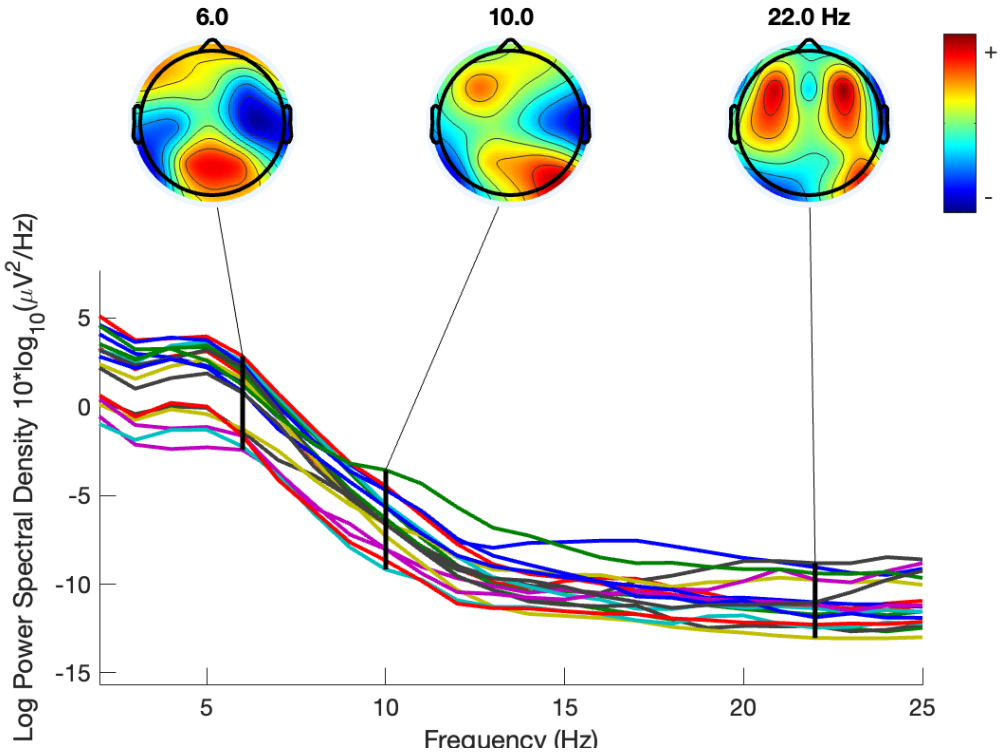
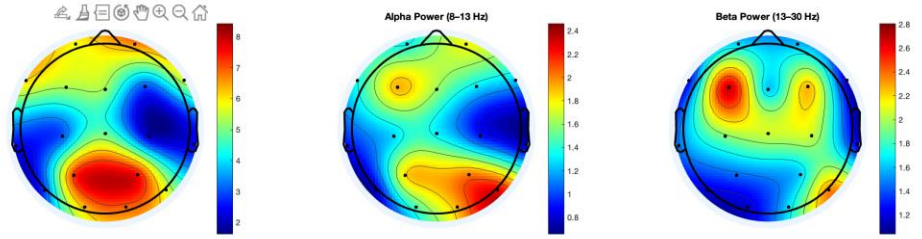
EEG Analysis: From ICA Cleaning to Bandpower Topomaps_v1.1

OpenNeuro Subject 001 (Resting-State, 19 Channels)

- **Tools Used:** MATLAB, EEGLAB
- **Dataset:** OpenNeuro ds004504 (Clinical, Eyes Closed)
- **Channels:** 19 electrodes, standard 10–20 layout
- **Pipeline Summary:**
  - Loaded .set file in EEGLAB
  - Automated artifact rejection via clean_rawdata() and ICLabel (e.g., blinks, muscle, ECG)
  - PSD computed (2–25 Hz)
  - Bandpower extracted (Theta, Alpha, Beta)
  - 3 scalp topographic maps visualized





Independent EEG preprocessing and analysis project using EEGLAB and MATLAB. Demonstrates artifact rejection, frequency-domain feature extraction, and spatial topographic visualization from clinical data.

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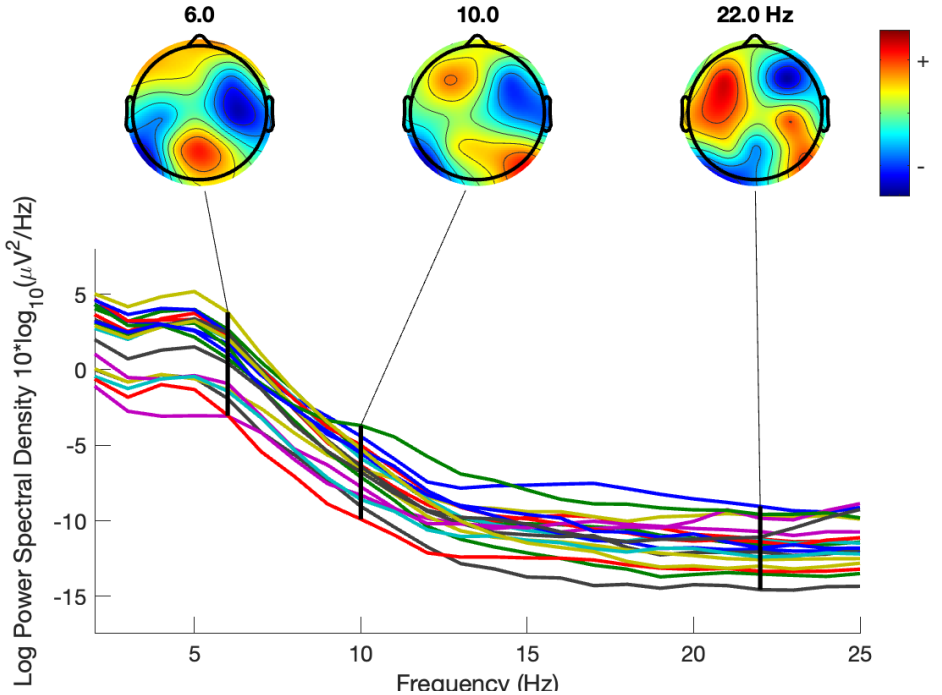
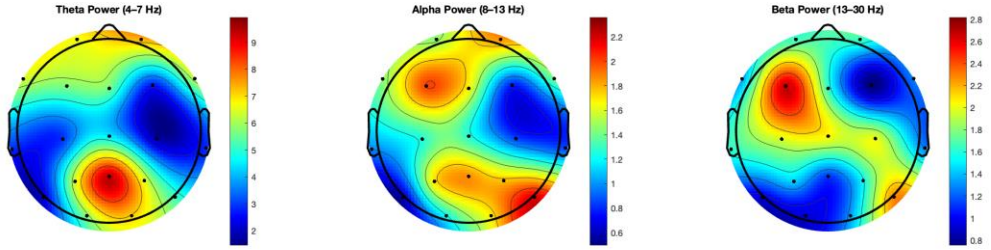
- **Dataset:** OpenNeuro ds004504 (Clinical, Eyes Closed)
- **Channels:** 19 electrodes, standard 10–20 layout
- **Pipeline Summary:**
  - Loaded .set file in EEGLAB
  - ICA-based artifact rejection (eye blinks, muscle)
  - PSD computed (2–25 Hz)
  - Bandpower extracted (Theta, Alpha, Beta)
  - 3 scalp topographic maps visualized





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