## **LLAMAS for Len's Study**

Located in the add\_functions branch of Josh's GitHub: <a href="https://github.com/jalevitt/">https://github.com/jalevitt/</a> EEG-LLAMAS/tree/add\_functions. Ask Josh to add you as a collaborator.

## Added files:

## Postprocessing functions:

- PlotSpectrogram: plots a spectrogram every ten minutes
- PlotDelpAndMovs: plots delp, movs and mags every ten minutes
- StimTracker: updates the number of stims sent every 3 minutes in a GUI
- AwakeSlowWavePhasePredict.m: plays stims every second for an awake participant; includes a block design if desired (though I do not think this will be used much again

## Other things added:

- SetValues.mlapp: place to set values such as delp, movs, and confidence thresholds prior to LLAMAS running. If you desire a block design and/or stims to only be sent a certain percentage of the time, these can be set here as well.
- A button was added to the LLAMAS.mlapp designer to lead to SetValues.mlapp.

Key differences between Len's and Josh's LLAMAS code in SlowWavePhasePredict.m and SlowWaveBaseline.m:

- Different fpz and c4 predictors
- delp, movs, and mags (confthreshold) are set with a GUI for Len
- 2.5 seconds between each stim for Len(compared to 2 seconds for josh)
- Differences in the bandpass filter for slow wave
- Len re-references EEG data to the mastoid
- Block design built into the script for phase prediction for Len
- Baseline code does not send any stims, but only stores mags, delp and movs values for Len