OPSCEA ingredients

Seizure data

**PatientName/PatientName\_01/** – Folder containing

* **PatientName\_01.mat** – matlab data file containing two items:
  + **d** – matrix of clipped peri-ictal seizure ICEEG data (channels by samples), already. Should already be pre-processed (e.g. notch filter, CAR, etc).
  + **sfx** – sampling frequency (in units of Hz; e.g. 512)
* **PatientName\_01\_badch.mat** – matlab data file containing logical index of bad (artifact-ridden) channels (bad=1, 0=good)

Imaging data

**PatientName/PatientName\_01/Imaging/** – Folder containing these subfolders and files:

* **MRI/** -- MRI data
  + **brain.mgz.gz** – file containing
  + **aparc+aseg.mgz.gz** – file containing
* **Meshes/** – Processed surface mesh data (via FreeSurfer, Curry, etc.)
  + pial cortex files
    - **PatientName\_rh\_pial.mat** – right hemisphere
    - **PatientName\_lh\_pial.mat** – left hemisphere
* **Meshes/subcortical** – Similar meshes to above, for hippocampus and amygdala
  + - **rHipp\_subcort.mat** – right hippocampus
    - **lHipp\_subcort.mat** – left hippocampus
    - **rAmgd\_subcort.mat** – right amygdala
    - **lAmgd\_subcort.mat** – left amygdala
* **Elecs/** – Electrode information
  + **Electrodefile.mat** – file containing two items:
    - elecmatrix – XYZ coordinates (units: mm; electrode rows by XYZ columns; numeric)
    - eleclabels – electrode labels (single column; cell array of strings)

Additional files

Main programs , among other included, are:

* OPSCEA.m – main program
* OPSCEAparams.xlsx – spreadsheet with parameter information for video (i.e. patient, seizure, color axis, size of linelength window, plotting parameters)
* litebrain – simple function that rotates brain into desired position and adds lighting
* OPSCEAsurfslice.m – create omni-planar slices with rest of brain behind them
* toasterj.m – adds heatmap to omni-planar slice
* Colormaps modified from Matlab’s colormaps: cmOPSCEAcool.m, cmOPSCEAjet.m