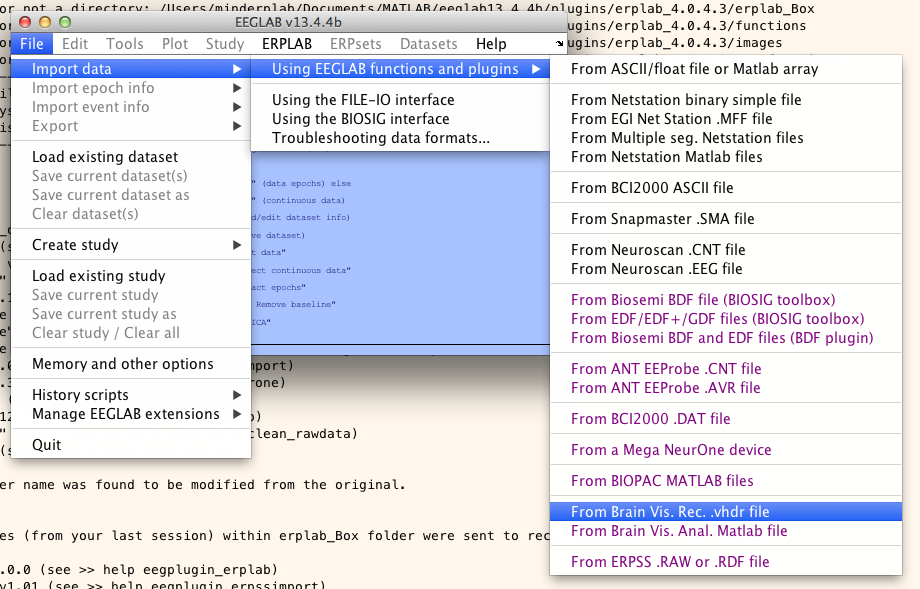
In the matlab command line type “eeglab” and press enter

To extract eeglab data from the Brain Products recording files:

Select File > Import Data > Using EEGLAB functions and plugins > From Brain Vis. Rec. .vhdr file



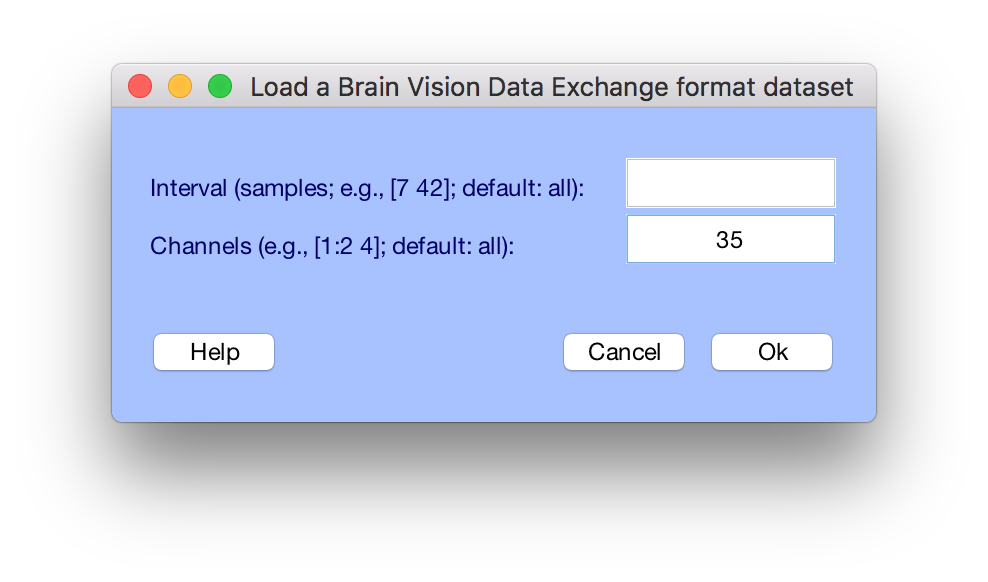
Navigate to the appropriate folder:

* For Resting State: REDWOOD/Blackbird/Intern Folder/ERP/resting\_state/[participant id number, i.e., 180]
* For DT: REDWOOD/Blackbird/Intern Folder/ERP/160907-/DT/[participant id number, i.e., 173]
* For eDT\_angry: REDWOOD/Blackbird/Intern Folder/ERP/160907-/eDT\_angry/[participant id number, i.e., 173]
* For eDT\_happy: REDWOOD/Blackbird/Intern Folder/ERP/160907-/eDT\_happy/[participant id number, i.e., 173]
* For eDT\_calm: REDWOOD/Blackbird/Intern Folder/ERP/160907-/eDT\_calm/[participant id number, i.e., 173]
* For eGNG\_faces\_angry: REDWOOD/Blackbird/Intern Folder/ERP/160907-/eGNG\_faces\_angry/[participant id number, i.e., 173]
* For eGNG\_faces\_happy: REDWOOD/Blackbird/Intern Folder/ERP/160907-/eGNG\_faces\_happy/[participant id number, i.e., 173]
* For eGNG\_IAPS\_negative: REDWOOD/Blackbird/Intern Folder/ERP/160907-/eGNG\_IAPS\_negative/[participant id number, i.e., 173]
* For eGNG\_IAPS\_positive: REDWOOD/Blackbird/Intern Folder/ERP/160907-/eGNG\_IAPS\_positive/[participant id number, i.e., 173]
* For GNG: REDWOOD/Blackbird/Intern Folder/ERP/160907-/GNG/[participant id number, i.e., 173]

Select the file:

* For Resting State there is only one file
* For DT start with: DT\_blue\_session1\_[participant id number, i.e., 173]
* For eDT\_angry start with: eDT\_Angry\_Session1\_[participant id number, i.e., 173]
* For eDT\_calm start with: eDT\_Calm\_Session1\_[participant id number, i.e., 173]
* For eDT\_happy start with: eDT\_Happy\_Session1\_[participant id number, i.e., 173]
* For eGNG\_faces\_angry start with: eGNG\_Angry\_Session1\_[participant id number, i.e., 173]
* For eGNG\_faces\_happy start with: eGNG\_Happy\_Session1\_[participant id number, i.e., 173]
* For eGNG\_IAPS\_negative start with: eGNG\_IAPS\_negative\_Session1\_[participant id number, i.e., 173]
* For eGNG\_IAPS\_positive start with: eGNG\_IAPS\_positive\_Session1\_[participant id number, i.e., 173]
* For GNG start with: GNG\_Session1\_[participant id number, i.e., 173]

The “Load a Brain Vision Data Exchange format dataset” window appears. Enter nothing beside Interval, and 35 beside Channels.



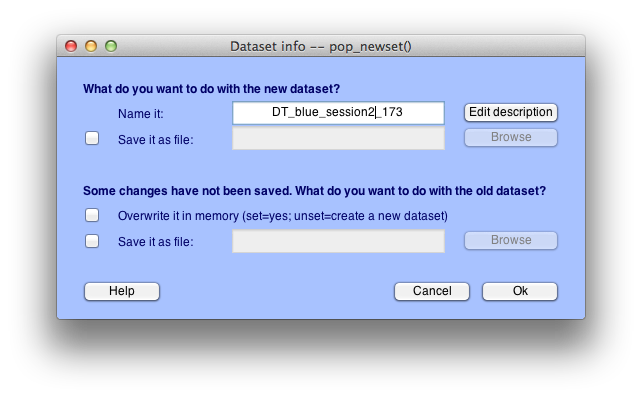
You will be asked to name the dataset, give it the same name it previously had (i.e., “eDT\_Happy\_Session1\_[participant id number, i.e., 173]”)

SKIP STEPS BETWEEN THE GREEN LINES FOR RESTING STATE

Repeat for all sessions in folder.

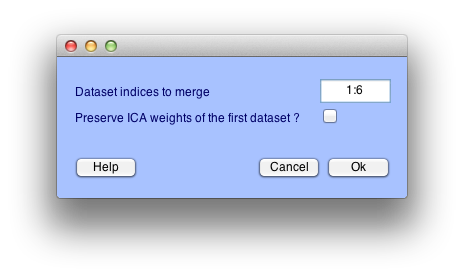
* For DT there are 6 sessions
* For eDT\_angry there are 2 sessions
* For eDT\_calm there are 2 sessions
* For eDT\_happy there are 2 sessions
* For eGNG\_faces\_angry there are 5 sessions for CARPP participants, 2 sessions for BETTA participants
* For eGNG\_faces\_happy there are 5 sessions for CARPP participants, 2 sessions for BETTA participants
* For eGNG\_IAPS\_negative there are 2 sessions
* For eGNG\_IAPS\_positive there are 2 sessions
* For GNG there are 5 sessions for CARPP participants, 2 sessions for BETTA participants

Note, after the first file the name dataset dialogue box will look like this. You only need to fill out the first field.

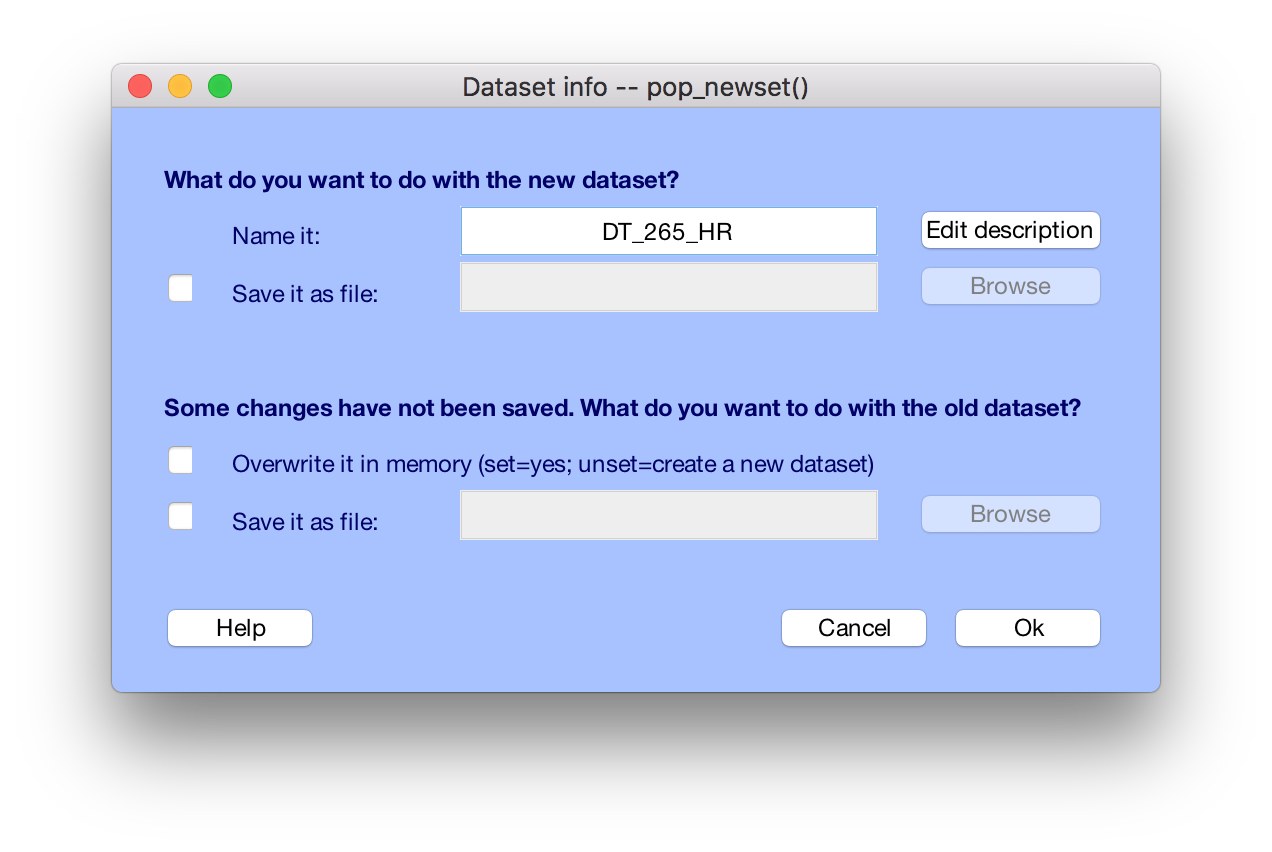


Go to edit > append datasets

* For DT enter 1:6 in the dialogue box and press “okay”
* For eDT\_angry enter 1:2 in the dialogue box and press “okay”
* For eDT\_calm enter 1:2 in the dialogue box and press “okay”
* For eDT\_happy enter 1:2 in the dialogue box and press “okay”
* For eGNG\_faces\_angry enter 1:5 or 1:2 (depending on number of sessions) in the dialogue box and “okay”
* For eGNG\_faces\_happy enter 1:5 or 1:2 (depending on number of sessions)in the dialogue box and “okay”
* For eGNG\_IAPS\_negative enter 1:2 in the dialogue box and press “okay”
* For eGNG\_IAPS\_positive enter 1:2 in the dialogue box and press “okay”
* For GNG enter 1:5, or 1:2 (depending on number of sessions)in the dialogue box and press “okay”



Name it with the [task]\_[participant id]\_HR, e.g., DT\_173\_HR



BEGIN AGAIN HERE FOR RESTING STATE

IMPORTANT!!! File > Save Current Dataset As

Name after [task]\_[participant id]\_HR i.e., DT\_173\_HR

click okay

Tools > Remove Baseline

IMPORTANT!!! File > Save Current Dataset As

Name after [task]\_[participant id]\_HR\_rmbl i.e., DT\_173\_HR\_rmbl

click okay

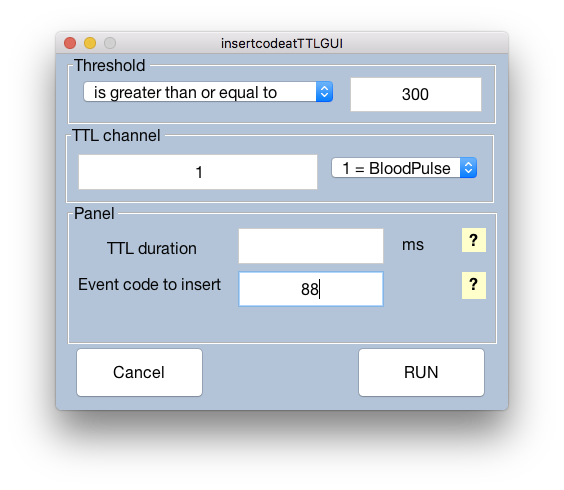
ERPLAB > Utilities > Insert event codes > Insert event codes at TTL onsets (continuous EEG)

Threshold you will be playing around with to find the right value, you can start at 300 if you like

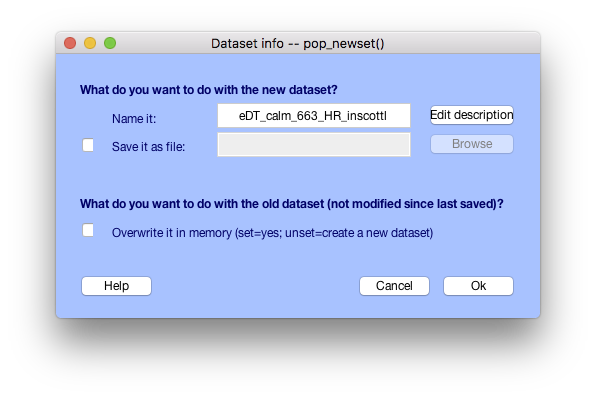
For TTL channel select 1 = BloodPulse

For Event code to insert enter 88

Click Run

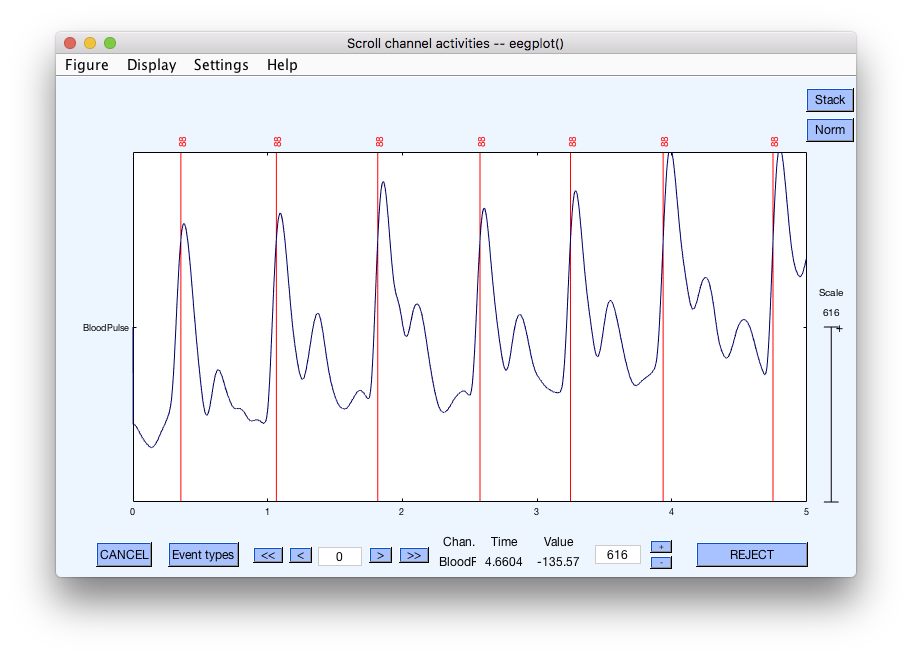


Name it [task]\_[participant id]\_HR\_inscottl, don’t save it yet, click ok



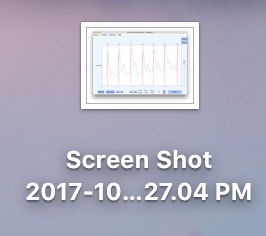
Plot > Channel data (scroll)

It should look about like this:

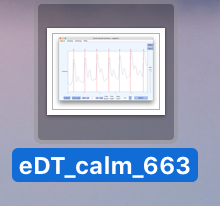


Scroll through the entire dataset, check that the lines tend to intersect with the large R waves, not he smaller waves. If there are many false positives (intersections with smaller waves) make you threshold larger. If there are many misses (R waves without lines through them) make you threshold smaller. Once you have settled on a threshold ask Abbie for approval.

Take a screen shot of a typical frame of HR data by pressing command + shift + 4 then the space bar on the keyboard, then click the heart rate image. This will generate a desktop icon like this:



Click the icon to select it, then click space to rename it, change the name to the [task]\_[participant id] e.g., eDT\_calm\_663

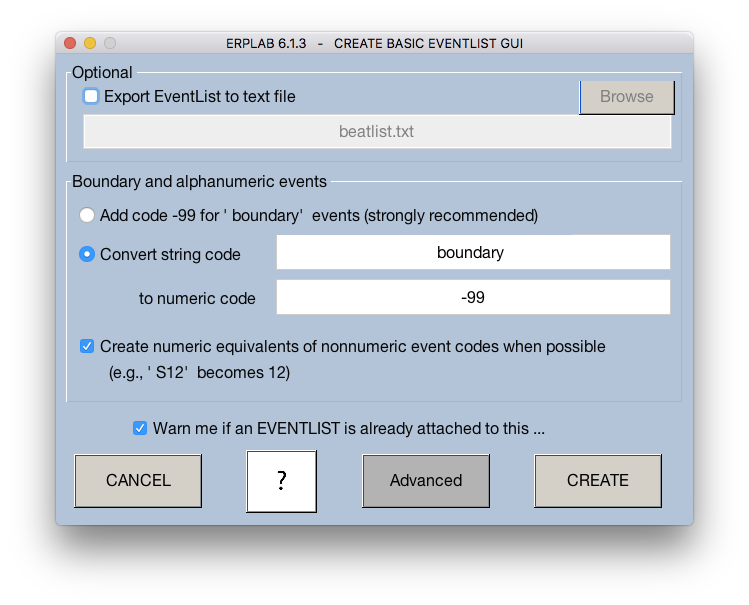


drag and drop the icon to the participants folder e.g., REDWOOD/Blackbird/Intern Folder/ERP/160907-/eDT\_calm/663

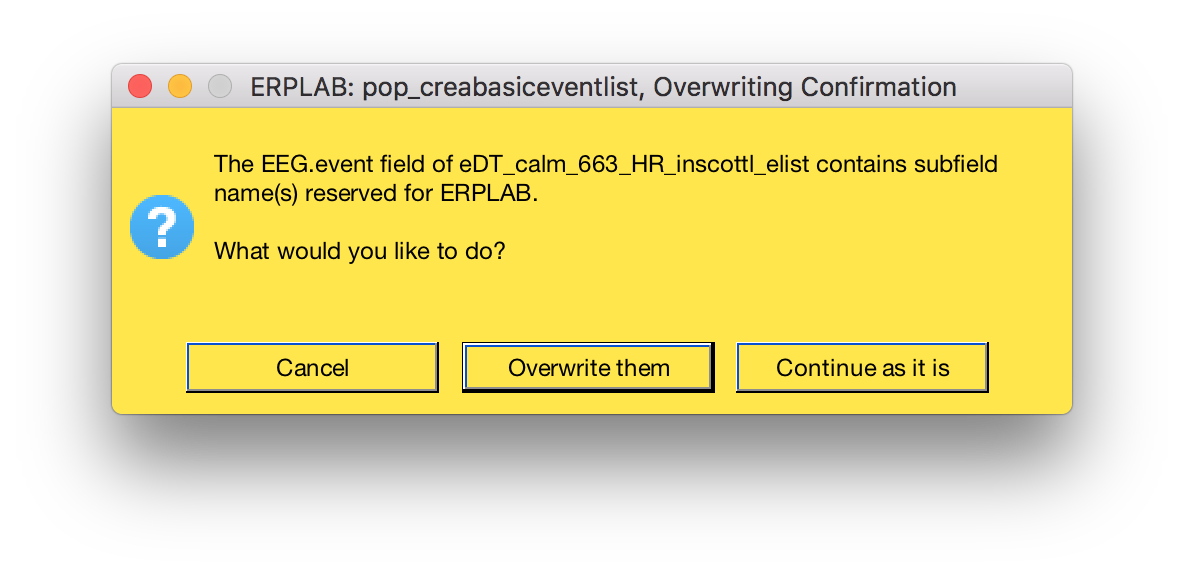
close the plot

ERPLAB > Eventlist > Create EEG Eventlist

Leave the defaults, click “create”



When prompted select “overwrite”



Then name it [task]\_[participant id]\_HR\_inscottle\_elist

IMPORTANT!!! File > Save Current Dataset As

Name after [task]\_[participant id]\_HR\_rmbl i.e., DT\_173\_HR\_rmbl\_inscottle\_elist

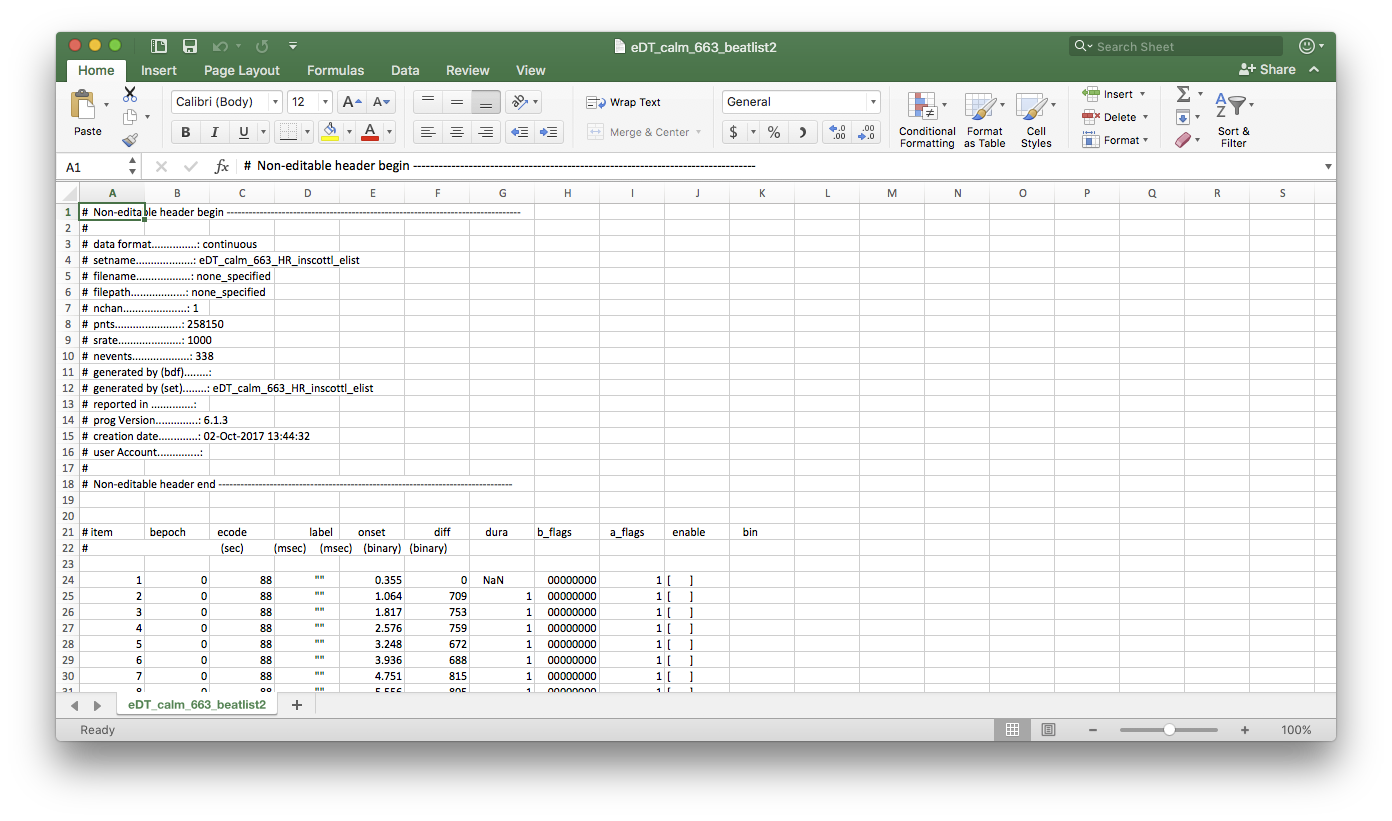
click okay

ERPLAB > EventList > Export EEG EVENTLIST to text file

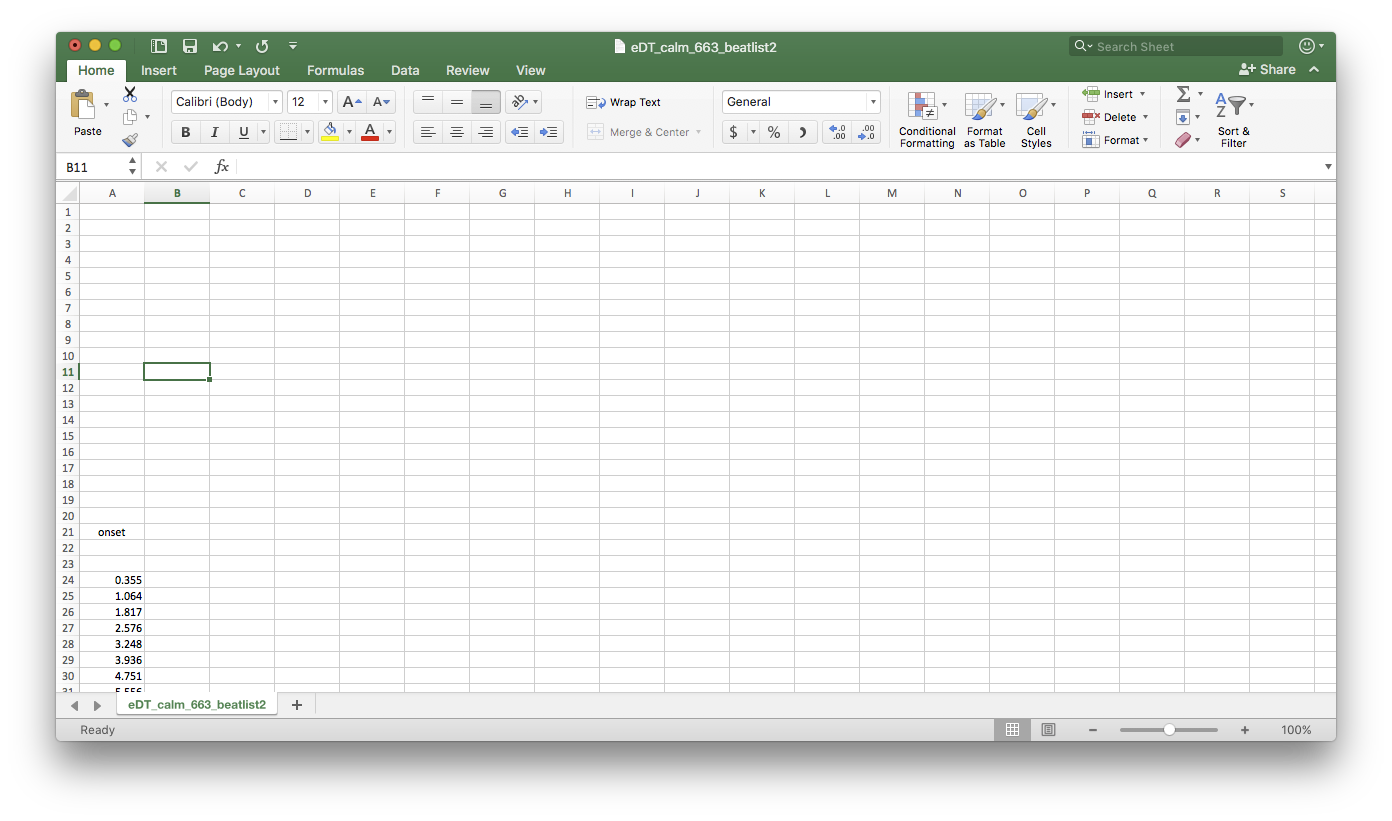
Name after [task]\_[participant id]\_beatlist.txt

In finder, navigate to your beatlist, right click > open with > Microsoft excel

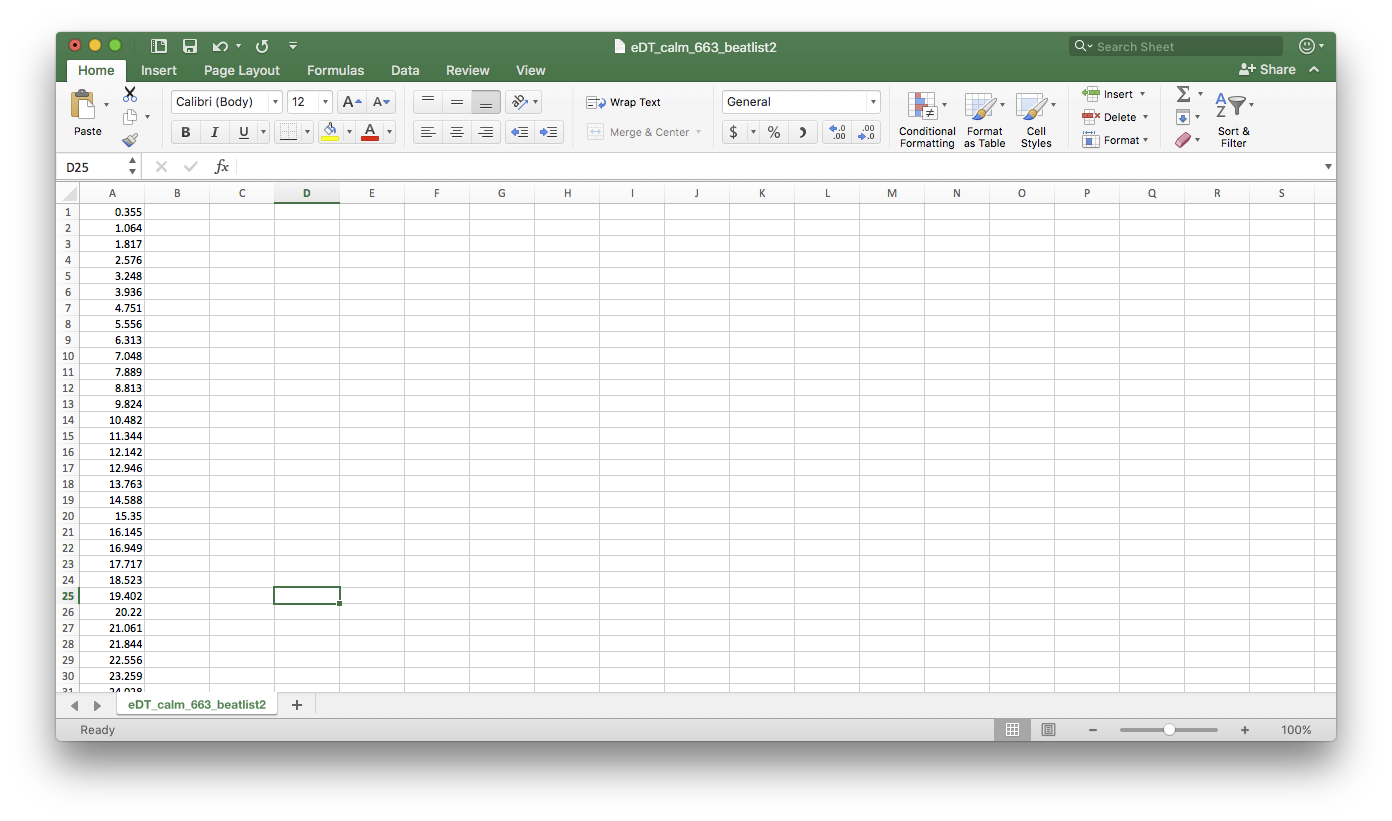
First it will look like this:



delete columns so only the column where row 21 is “onset” is left



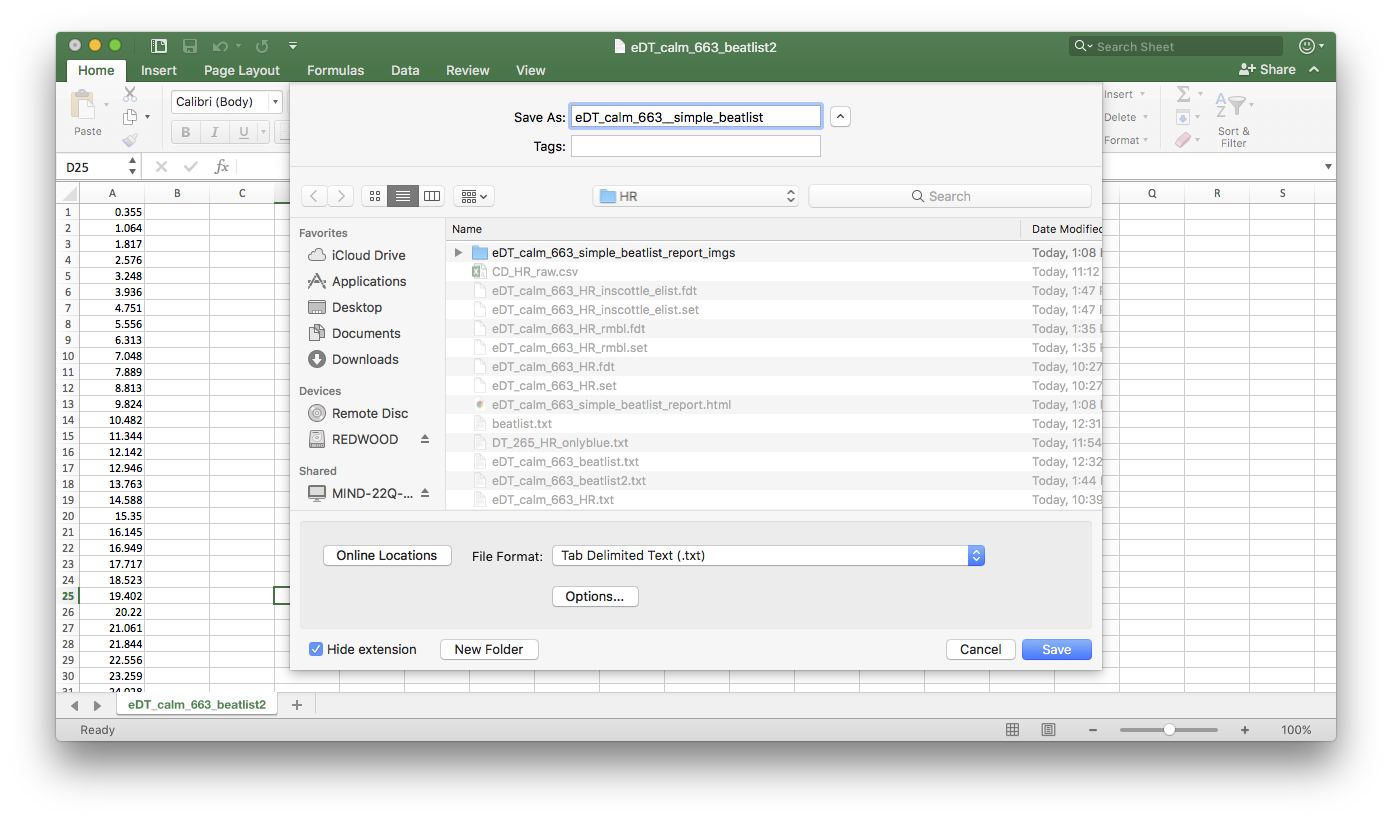
delete rows 1 – 23 (so it starts with the first numeric row)



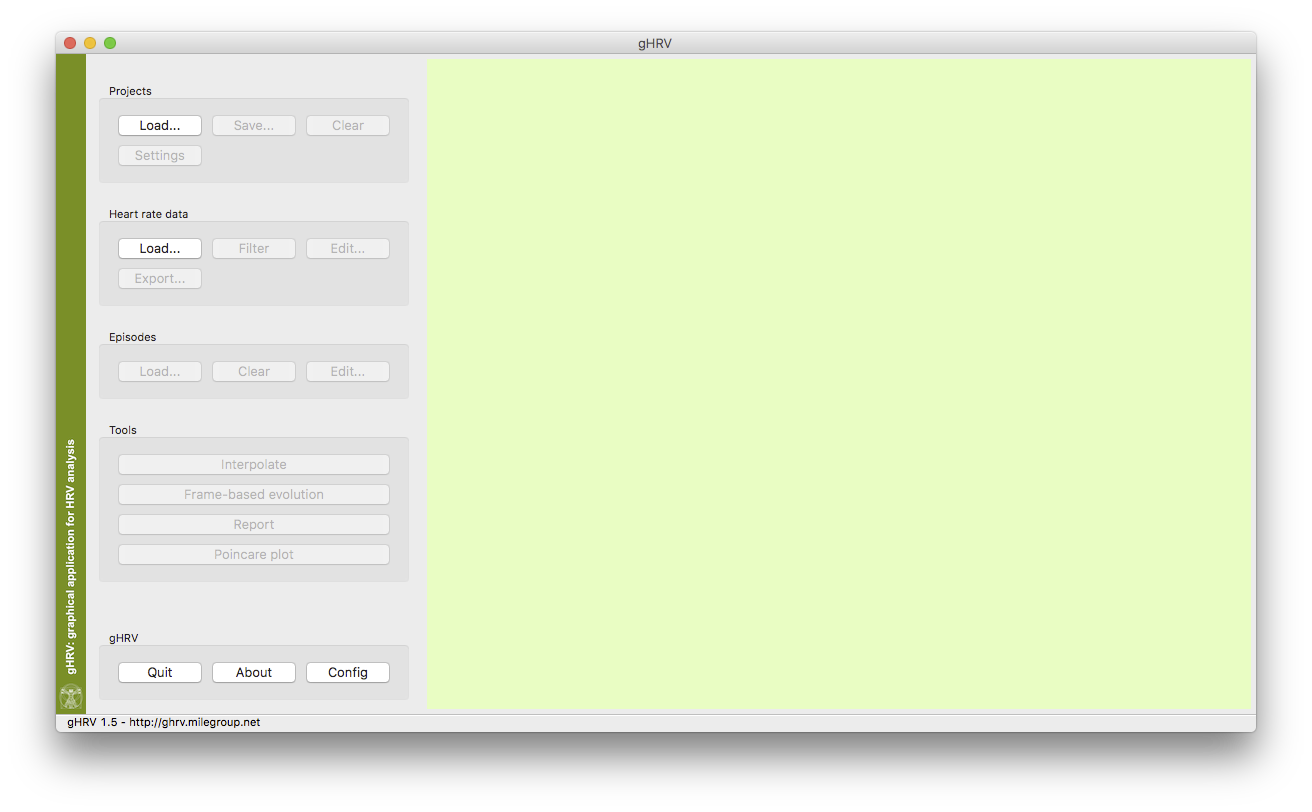
File > Save As…

Save as [task]\_[participant id] \_beatlist\_simple

File Format should be tab delimited text (.txt)



in gHRV under Heart rate data click “Load…”



select your beatlist\_simple file and click “open”

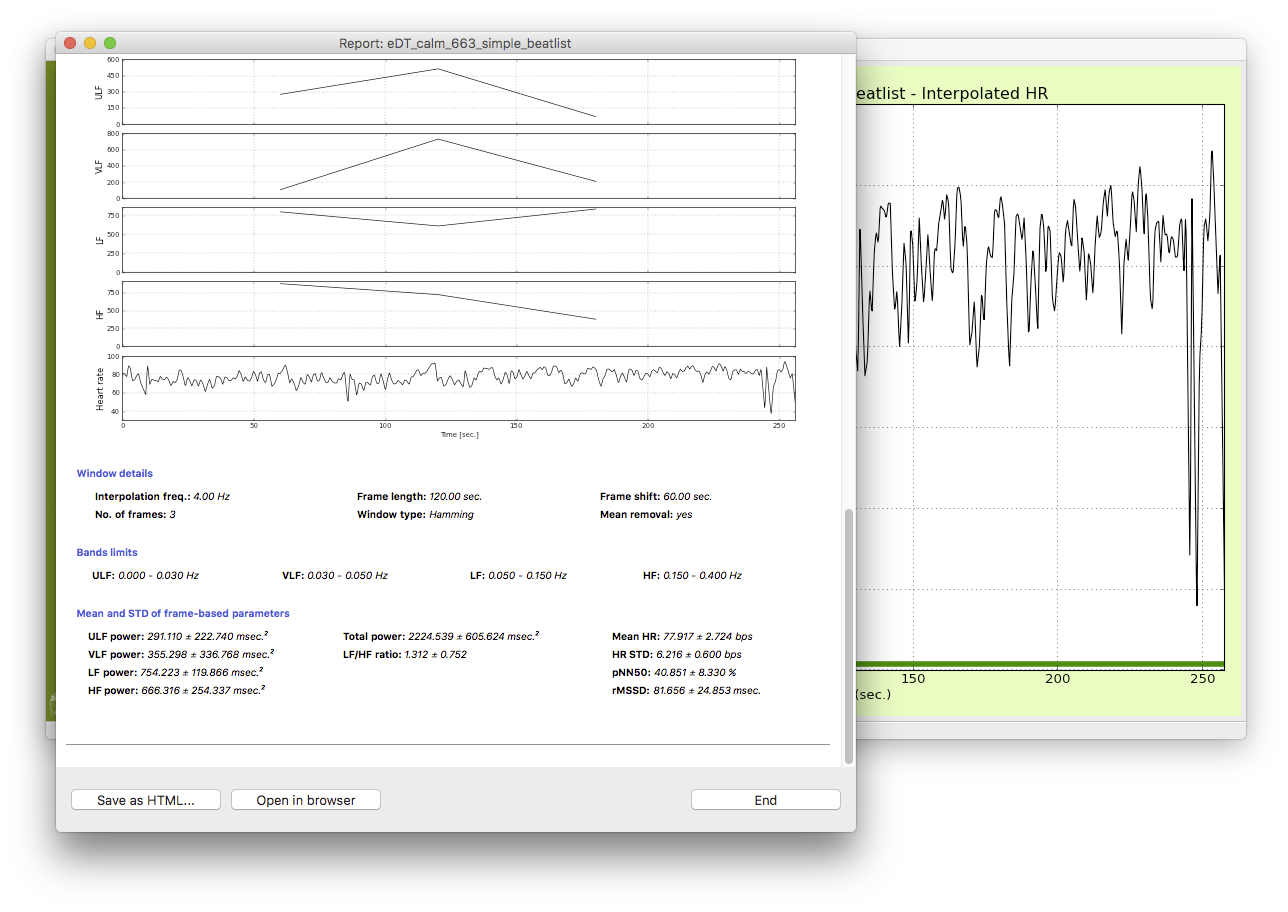
click “Filter”

click “Edit”

* Draw a rectangle to remove any spurious peaks

click “Interpolate”

click “Report”



Click “Save as HTML”

Name [task]\_[participant id]\_ beatlist\_ simple\_report

Export… probably the beat locations but maybe the RRs or both

close eeglab and repeat for next participant