Step0: Sort the raw data

This overlap with EDA process.
/Users/jingyiwang/Dropbox/LEAP_Neuro_Lab/researchProjects/jingyi_documents/EmotionBoundaryInteraction/EB_psychopyz_analyses/EB_psychopyz/EDA/ExportDataToCSV.m

Step1: Get the EKG time series and sort the event code

Run:
/Users/jingyiwang/Dropbox/LEAP_Neuro_Lab/researchProjects/jingyi_documents/EmotionBoundaryInteraction/EB_psychopyz_analyses/EB_psychopyz/HRV/EventCodes_EKG.py

This will provide a spreadsheet with an EKG column, and an event code column.

If do not want to split encoding and task
Run: EventCodes_EKG_whole_cluster.py and EventCodes_EKG_whole_cluster.slurm

Step2: Get the RR time series with event code using NeuroKit

Run:
/Users/jingyiwang/Dropbox/LEAP_Neuro_Lab/researchProjects/jingyi_documents/EmotionBoundaryInteraction/EB_psychopyz_analyses/EB_psychopyz/HRV/HRV_CreatRRtimepoints_NeuroKit.py

This will create four column data frames for each subject each run. The four columns are: EKG_RR, TimePoint, EventCode, TrialNum

And a spreadsheet with HeartRate info (e.g., 006_encodingEKG_ECode_HeartRate1.csv).

Step3: Run the PPHRV software tools with Matlab

For individual run: Matlab code: HRV_PPHRV_EB.m. (if in cluster use the sbatch: HRV_PPHRV_EB.slurm).

To run batch: /zwork/jingyi/EB/EBpsychopyz_NegNeu/HRV/HRV_PPHRV_EB/HRV_PPHRV_EB_runall.sh

This will produce HF power and Low power for all the R-R interval “timepoints” for each subject and each run.

Step 4: Get the heart rate-related metrics per trial

GetTrialWiseHRV_cluster.py

ECG exclusion

068 cannot use