EEG Sample Data folder contents:
- Each EPOC/MN8/INSIGHT folder contains data from participants undertaking 'Cerebral Circles' task on EmotivLABS.
- Each folder contains
    - a sample data file exported in either .csv format or .edf format
    - details of events, survey data and demographic data contained in .json file
    - Timestamped event marker label details contained in .csv file named '_intervalMarker'

- The raw EEG data files contains columns for
    - Timestamps
    - raw EEG data by channel (e.g. EEG.F7, EEG.F3) performance metrics and any motion data
    - Performance metrics (e.g. PM.Attention, PM.CogStress)
    - Motion data (e.g. MOT.Q1, MOT.Q2)
    - Contact quality by sensor (e.g. CQ.T7) and EEG quality by sensor (e.g. EQ.F7)

'Cerebral Circles' game on EmotivLABS:

All participants see an EEG quality gate (Figure 1) prior to beginning the game. This event is marked as 'sensor_check' in the interval marker file.
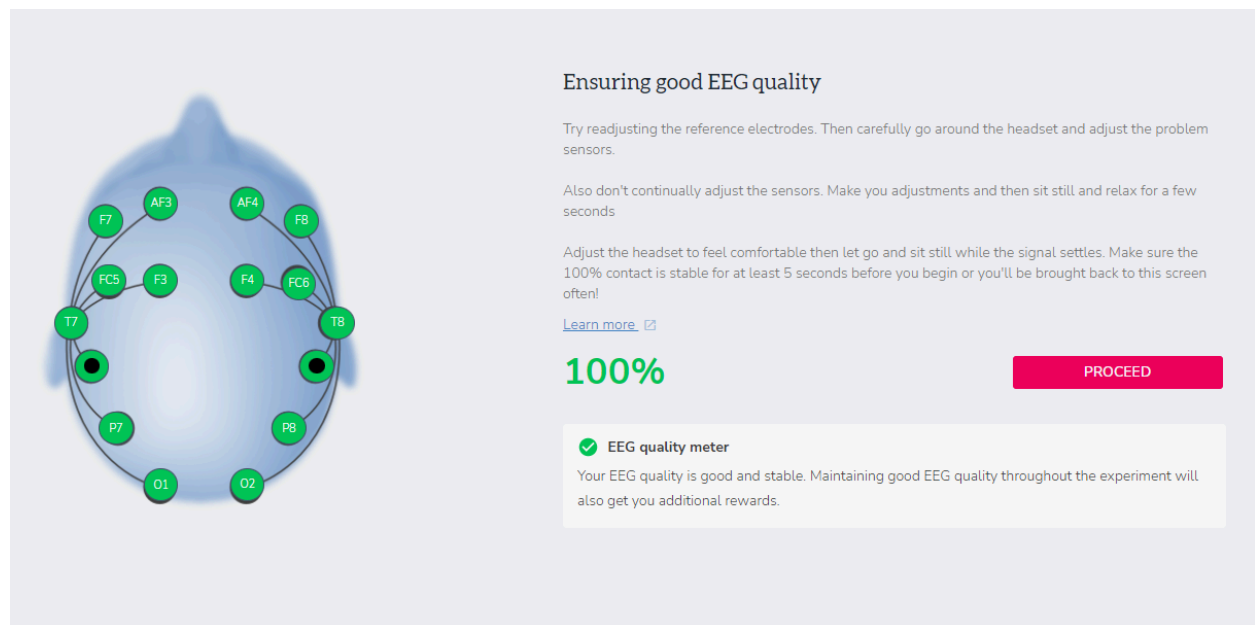

Figure 1. EEG Quality gate

The Cerebral Circles game includes a resting 'eyes open' and/or 'eyes closed' phase, and a Go-No-Go task (start of this in marker file is labeled as: 'phase_Stimuli_phase_1') in which participants are instructed to press the spacebar when they see a plain green circle but not a patterned green circle (See Figure 2).

Each stimuli event the participant viewed during the Go-No-Go task can be found in the marker file as plaint_hit (plain green circle) or pattern. And key presses are recorded as keydown in the marker file.

This game is all about reaction time and response control. See how quickly you can respond.

Press the **SPACE BAR** when you see the **PLAIN** green circle.

But be careful! Don't respond when you see the patterned green circle!

Figure 2: Cerebral Circles - Go No Go phase task instruction

Sample EmotivPRO view:

Sample EmotivPRO views of MN8 record of participant undertaking 'Cerebral Circles' task:
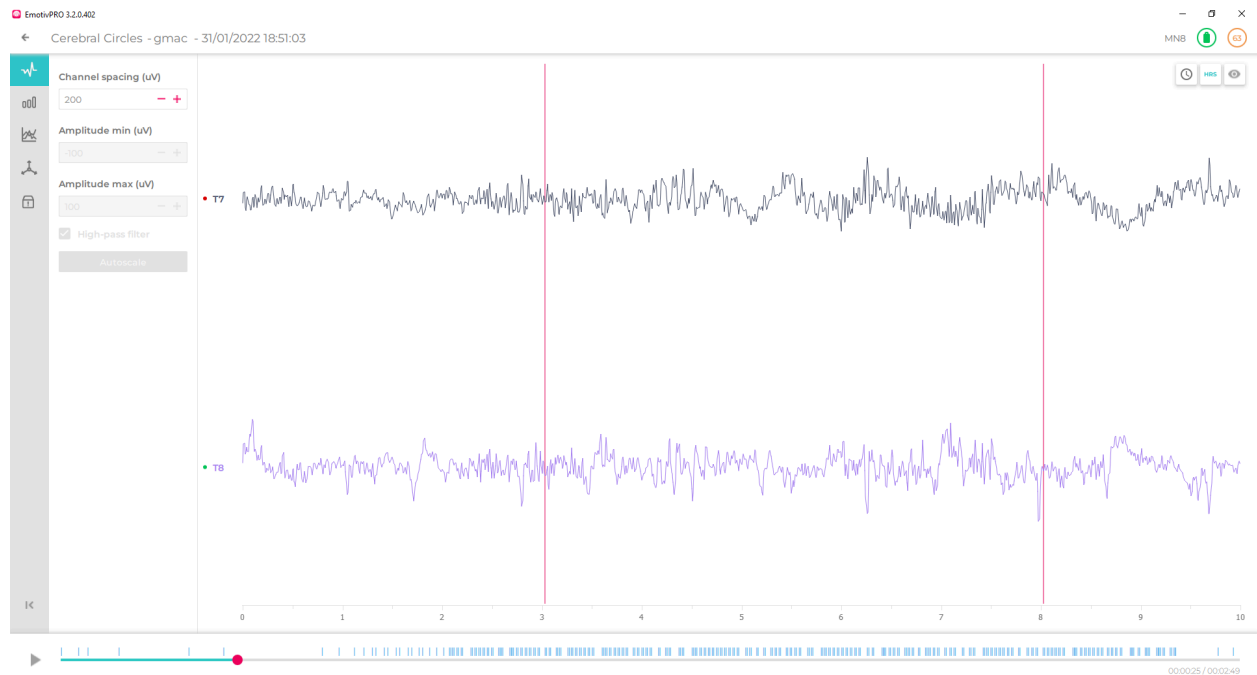

Figure 3. Raw EEG viewed in EmotivPRO during Cerebral Circles Game. Horizontal red lines are event markers. Current view shown is during baseline resting condition.
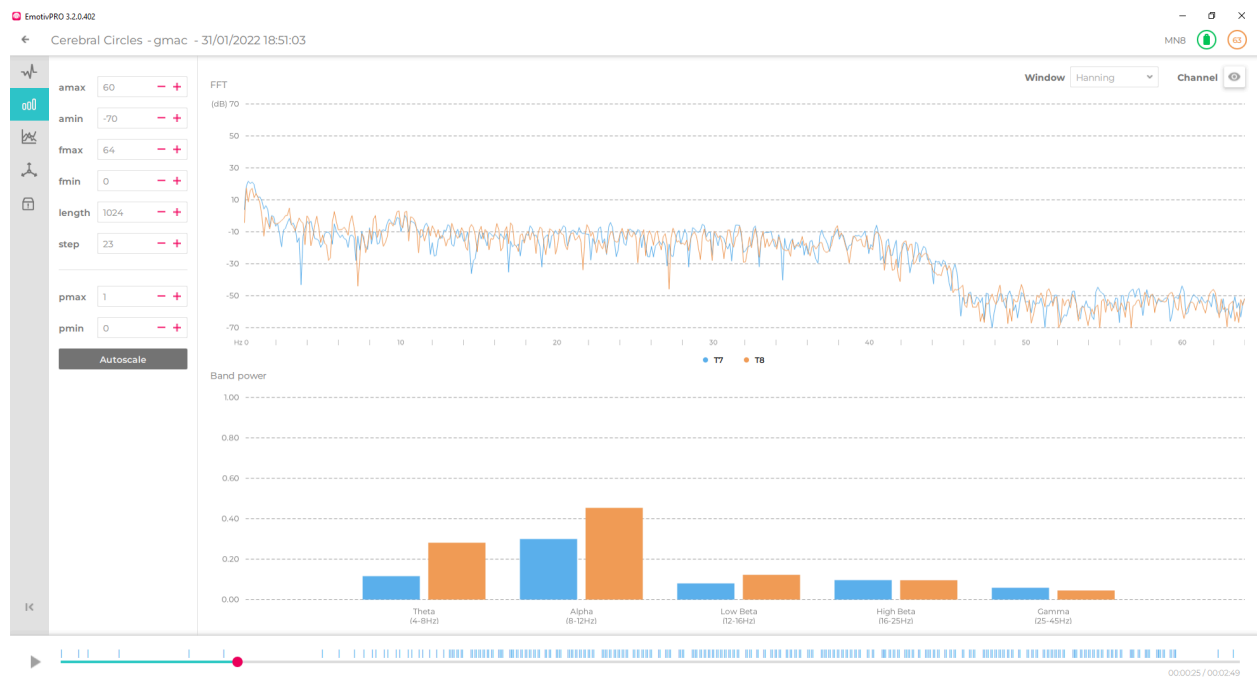

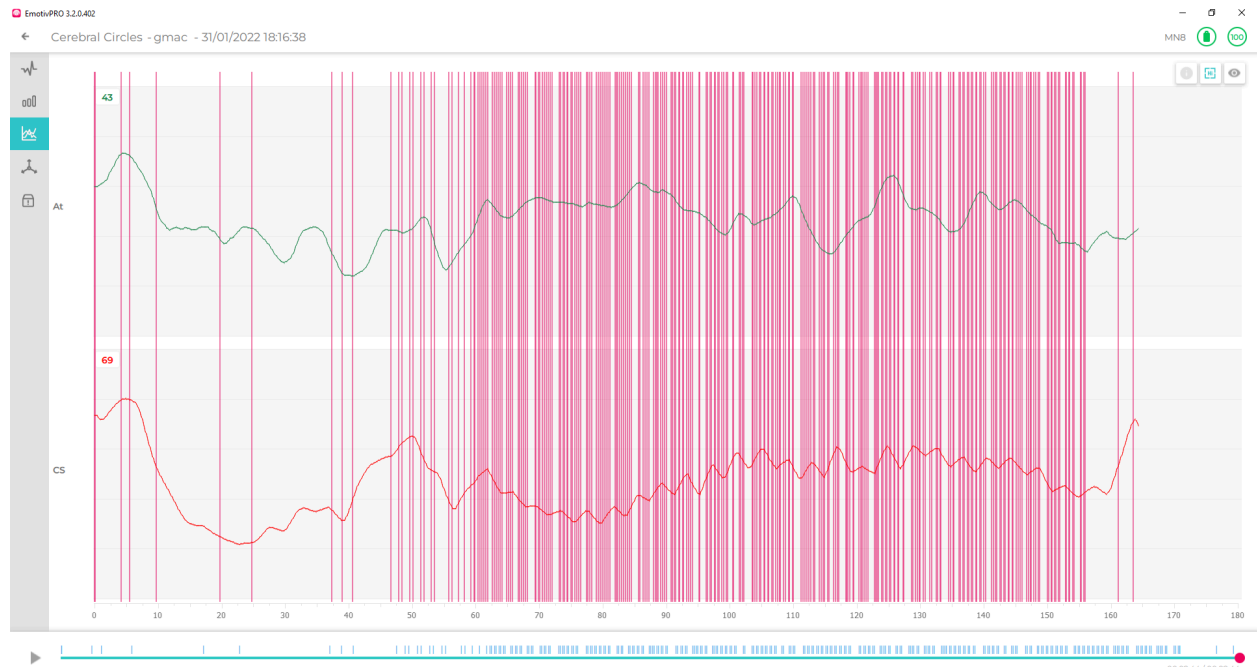Figure 4. Frequency bands view. Peak alpha waves can be seen during calibration phase.

Figure 5. Performance Metrics during Go-No-Go Phase in the Cerebral Circles Task. Attention (At) and Cognitive Stress (CS) across time. Vertical red lines are event markers (plain circle or patterned circle)