(A) Methods schema

1: Schema of rhythm detection

2: Schema of different indices of rhythmic magnitude

(B) Methods validation

3: Simulation results

4: Resting state results

5: Task results

(C) Amplitude-abundance association

6: Magnitude-duration association resting state

7: Magnitude-duration association task (single trial) + schema

(D) Proof-of-concept applications

8: Background-rhythm dissociation

9: Rhythm-conditional spectra, arrhythmic bias

10: Single-episode characterization

11: Working memory load effects

12: Rhythm rate, Theta frequency shift

(Supplementary)

S1: Post-processing method schema

S2: Detection performance of alternative routines

S3: Power thresholds & Backgrounds

S4: Magnitude-duration during task

S5: Background-rhythm dissociation (multiple frequencies)

S6: Topographies of collinearity

S7: 3c simulation performance

S8: IAF-SNR link

S9: Rhythm-evoked spectral fields