(A) Methods schema

1: Schema of rhythm detection

2: Post-processing

3: Schema of different indices of rhythmic magnitude

(B) Methods validation

4: Simulation results

5: Resting state results

6: Task results

(C) Amplitude-abundance association

7: Magnitude-duration association resting state

8: Magnitude-duration association task

9: Magnitude-duration association schema

10: IAF-SNR link

(D) Proof-of-concept applications

11: Background-rhythm dissociation

12: Rhythm-conditional spectra

13: Arrhythmic bias

14: Single-episode characterization

15: Rhythm-evoked spectral fields

(Supplementary)

S1: Detection performance of alternative routines

S2: Power thresholds & Backgrounds

S3: Magnitude-duration during task

S4: Background-rhythm dissociation (multiple frequencies)

S5: Topographies of collinearity

S6: 3c simulation performance