

Modulatory dynamics of periodic and aperiodic activity in respiration-brain coupling

Supplementary Information

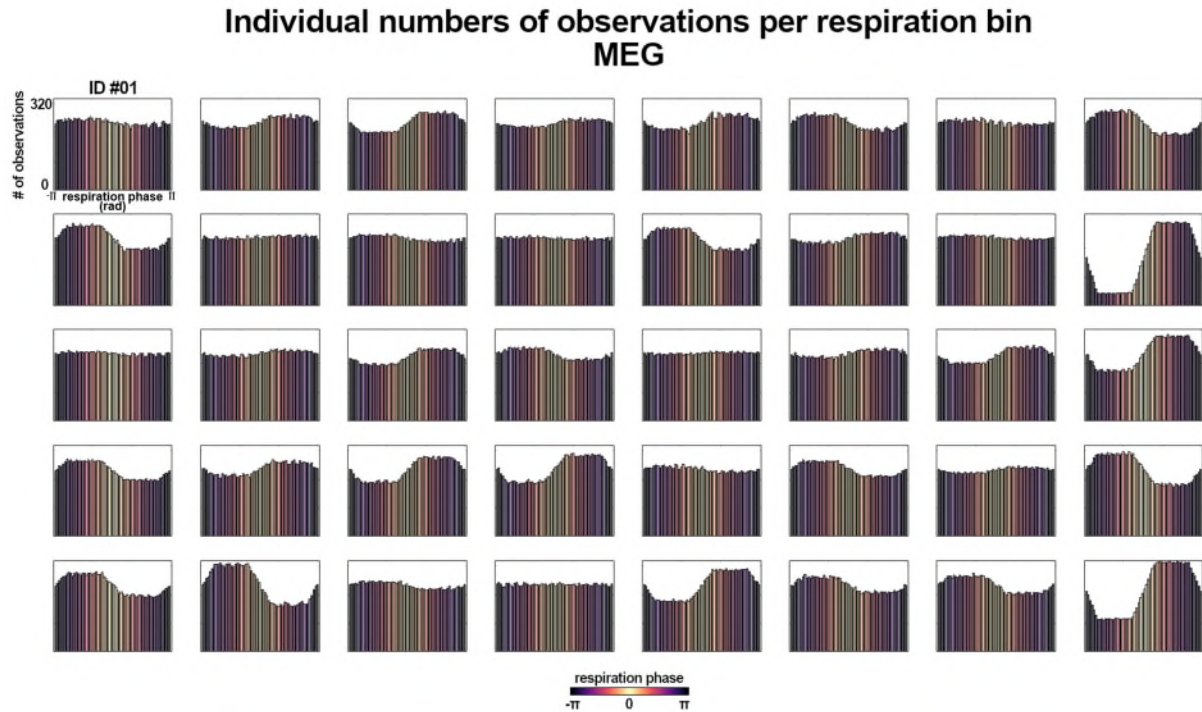


Fig. S1. Individual numbers of observations per respiration phase bin in the MEG sample (N = 40). Continuous respiration phase was partitioned into $k = 60$ phase bins (x-axis) to determine the number of $1/f$ slope estimations (yielded by the SPRiNT algorithm) per respiration phase (y-axis). For details on respiration phase-locked slope estimations, see Fig. 1 and Methods. Respiration phase is colour-coded in accordance with main figures.

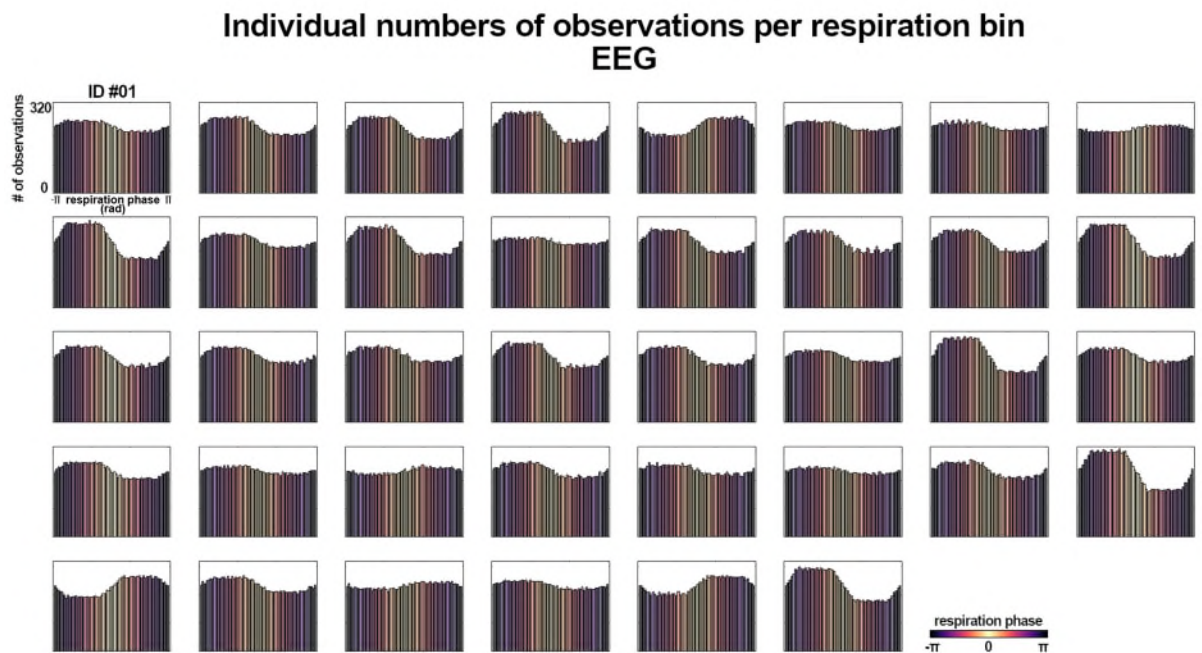


Fig. S2. Individual numbers of observations per respiration phase bin in the EEG sample (N = 38). Continuous respiration phase was partitioned into $k = 60$ phase bins (x-axis) to determine the number of $1/f$ slope estimations (yielded by the SPRiNT algorithm) per respiration phase (y-axis). For details on respiration phase-locked slope estimations, please Fig. 1 and Methods. Respiration phase is colour-coded in accordance with main figures.

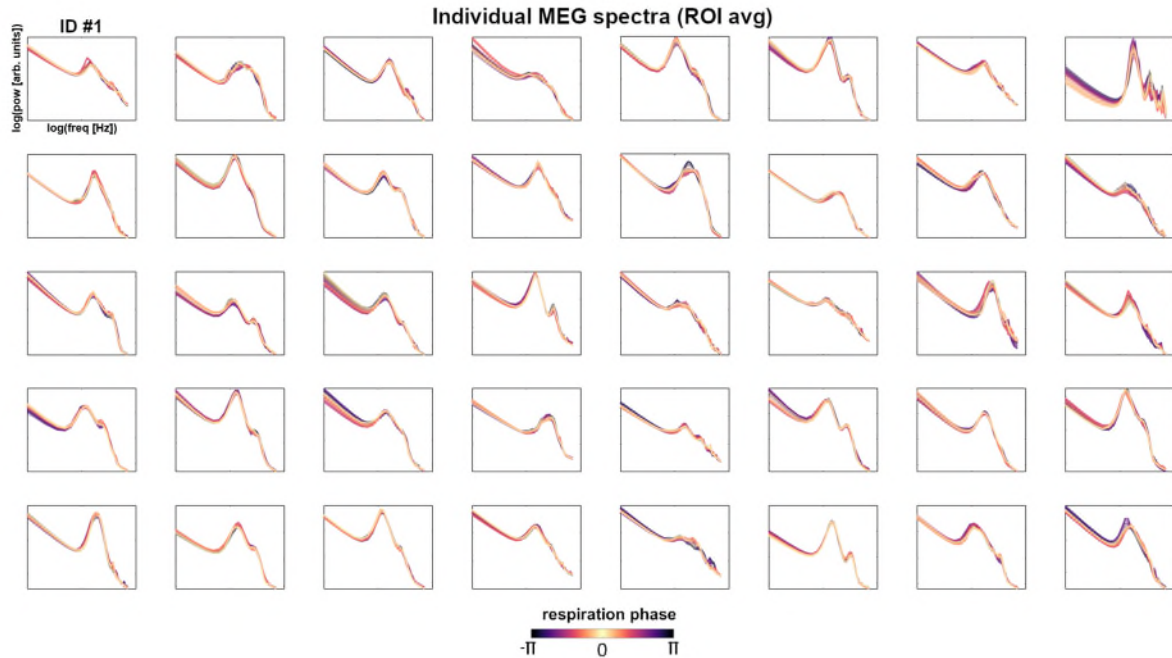


Fig. S3. Individual MEG power spectra (averaged across sensors within the parieto-occipital ROI) in log-log transform. For each participant, we show power spectra in the frequency range from 1 Hz to 40 Hz for each of the 60 respiratory phase bins (colour-coded).

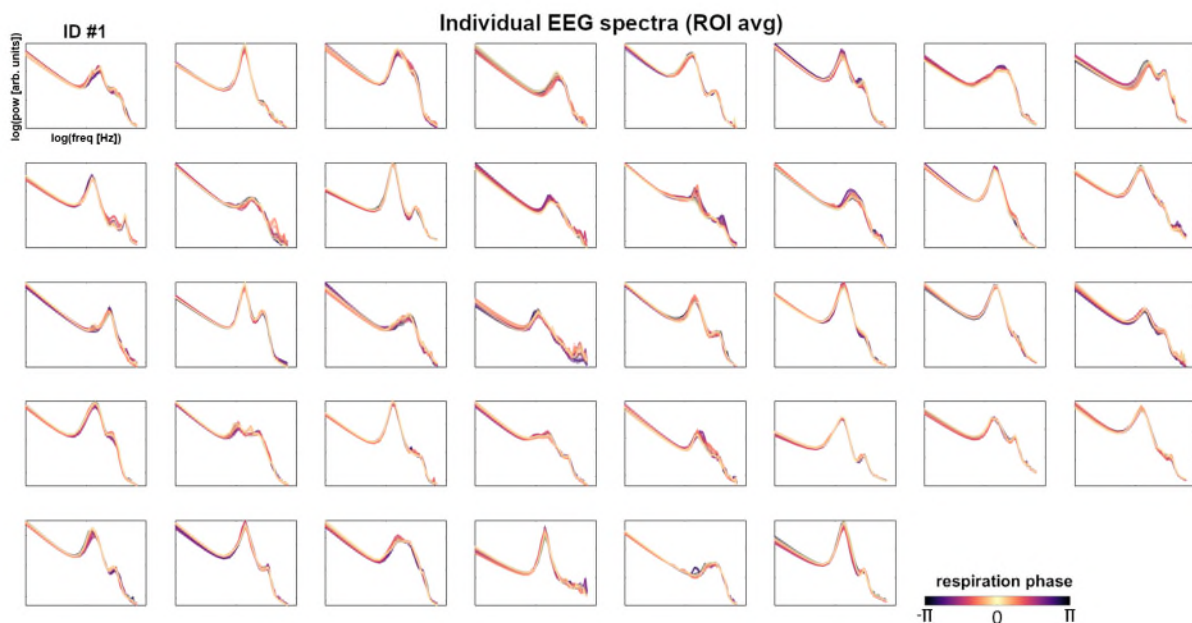


Fig. S4. Individual EEG power spectra (averaged across channels within the parieto-occipital ROI) in log-log transform. For each participant, we show power spectra for each of the 60 respiratory phase bins (colour-coded).