

Supplementary Material

Supplementary Table 1. Log-transformed EC and EO rest absolute power in delta band (1 - 3.5 Hz) as M (SD) for each ROI and group.

| | | | CHI | | | pMCI | | | naMCI | | | aMCI | |
|----|-----------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | Left | Mid | Right |
| | Frontal | 0.74 (0.31) | 0.24 (0.28) | 0.72 (0.32) | 0.71 (0.33) | 0.25 (0.27) | 0.73 (0.36) | 0.66 (0.33) | 0.27 (0.34) | 0.65 (0.35) | 0.79 (0.34) | 0.28 (0.29) | 0.76 (0.37) |
| EC | Central | 0.33 (0.26) | 0.17 (0.31) | 0.31 (0.25) | 0.36 (0.28) | 0.16 (0.31) | 0.36 (0.37) | 0.24 (0.28) | 0.15 (0.28) | 0.24 (0.28) | 0.41 (0.33) | 0.25 (0.34) | 0.34 (0.35) |
| _3 | Posterior | 0.39 (0.25) | 0.25 (0.27) | 0.37 (0.25) | 0.42 (0.25) | 0.31 (0.29) | 0.41 (0.24) | 0.38 (0.28) | 0.30 (0.29) | 0.37 (0.26) | 0.46 (0.29) | 0.33 (0.30) | 0.46 (0.32) |
| | Frontal | 0.45 (0.29) | 0.15 (0.31) | 0.43 (0.25) | 0.47 (0.30) | 0.17 (0.27) | 0.48 (0.26) | 0.50 (0.32) | 0.18 (0.17) | 0.52 (0.33) | 0.61 (0.41) | 0.22 (0.29) | 0.58 (0.37) |
| ЕО | Central | 0.27 (0.24) | 0.13 (0.29) | 0.28 (0.24) | 0.31 (0.26) | 0.11 (0.28) | 0.29 (0.27) | 0.29 (0.26) | 0.08 (0.20) | 0.24 (0.26) | 0.40 (0.38) | 0.25 (0.37) | 0.37 (0.39) |
| | Posterior | 0.30 (0.25) | 0.19 (0.29) | 0.27 (0.22) | 0.33 (0.19) | 0.23 (0.29) | 0.33 (0.23) | 0.34 (0.29) | 0.26 (0.25) | 0.33 (0.25) | 0.44 (0.31) | 0.27 (0.31) | 0.43 (0.34) |

Note. CHI = cognitively healthy individuals, pMCI = possible mild cognitive impairments, naMCI = non-amnestic mild cognitive impairments, aMCI = amnestic mild cognitive impairments. EC = eyes closed, EO = eyes open.

Supplementary Table 2. Log-transformed EC and EO rest absolute power in theta band (4 - 7.5 Hz) as M (SD) for each ROI and group.

| _ | | | CHI | | | pMCI | | | naMCI | | | aMCI | |
|----|-----------|----------------|-----------------|----------------|----------------|-----------------|----------------|----------------|-----------------|-----------------|----------------|-----------------|----------------|
| | | Left | Mid | Right | Left | Mid | Right | Left | Mid | Right | Left | Mid | Right |
| | Frontal | 0.33 (0.32) | 0.13 (0.39) | 0.32 (0.33) | 0.30 (0.28) | 0.13 (0.33) | 0.31 (0.26) | 0.22 (0.22) | 0.17 (0.27) | 0.22 (0.24) | 0.34 (0.29) | 0.14 (0.34) | 0.32 (0.30) |
| EC | Central | 0.12 (0.35) | -0.03 (0.32) | 0.13 (0.35) | 0.14 (0.28) | 0.03 (0.36) | 0.18 (0.37) | 0.06 (0.30) | 0.01 (0.24) | 0.07 (0.27) | 0.18 (0.33) | 0.06 (0.34) | 0.19 (0.36) |
| | Posterior | 0.31 (0.38) | 0.08 (0.42) | 0.29 (0.40) | 0.35 (0.34) | 0.12 (0.37) | 0.34 (0.37) | 0.31 (0.34) | 0.07 (0.24) | 0.29 (0.33) | 0.35 (0.34) | 0.08 (0.34) | 0.36 (0.36) |
| | Frontal | 0.06 (0.27) | -0.06 (0.30) | 0.07 (0.26) | 0.09 (0.26) | -0.03 (0.30) | 0.11 (0.24) | 0.12 (0.26) | 0.07 (0.24) | 0.14 (0.28) | 0.18 (0.34) | 0.01 (0.32) | 0.15 (0.28) |
| ЕО | Central | 0.00 (0.28) | -0.18 (0.25) | 0.00 (0.29) | 0.02 (0.27) | -0.13 (0.31) | 0.01 (0.27) | 0.04 (0.31) | -0.11 (0.25) | -0.02 (0.26) | 0.08 (0.33) | -0.07 (0.31) | 0.05 (0.32) |
| | Posterior | 0.12 (0.28) | -0.10 (0.32) | 0.07 (0.27) | 0.16 (0.25) | -0.07 (0.33) | 0.12 (0.28) | 0.19 (0.32) | -0.02 (0.31) | 0.11 (0.25) | 0.19 (0.29) | -0.08 (0.33) | 0.16 (0.33) |

Note. CHI = cognitively healthy individuals, pMCI = possible mild cognitive impairments, naMCI = non-amnestic mild cognitive impairments, aMCI = amnestic mild cognitive impairments, EC = eyes closed, EO = eyes open.

Supplementary Table 3. Log-transformed EC and EO rest absolute power in alpha band (8 – 13 Hz) as M (SD) for each ROI and group.

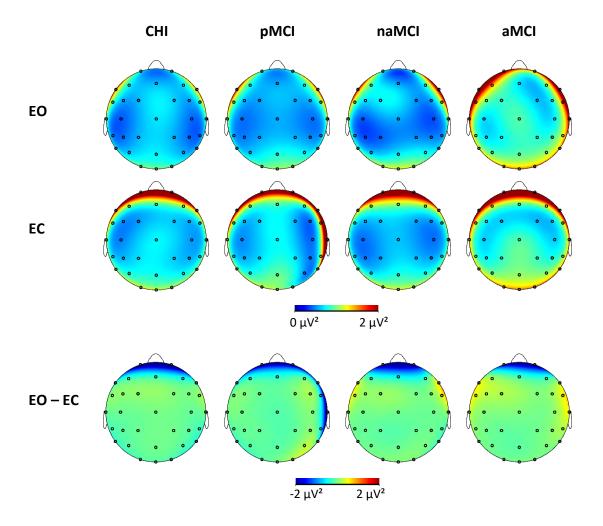
| | | | СНІ | | | pMCI | | | naMCI | | | aMCI | |
|----|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | Left | Mid | Right |
| | | | | | | | | | | | | | |
| | Frontal | 0.63 | 0.52 | 0.60 | 0.66 | 0.56 | 0.66 | 0.54 | 0.48 | 0.53 | 0.69 | 0.58 | 0.66 |
| | Tionai | (0.37) | (0.43) | (0.38) | (0.43) | (0.51) | (0.42) | (0.39) | (0.47) | (0.38) | (0.35) | (0.43) | (0.35) |
| EC | Control | 0.56 | 0.32 | 0.56 | 0.59 | 0.36 | 0.61 | 0.45 | 0.29 | 0.46 | 0.68 | 0.46 | 0.67 |
| EC | Central | (0.37) | (0.37) | (0.36) | (0.35) | (0.45) | (0.41) | (0.39) | (0.41) | (0.35) | (0.31) | (0.40) | (0.35) |
| | Dostanian | 0.90 | 0.63 | 0.94 | 0.94 | 0.68 | 0.96 | 0.80 | 0.55 | 0.82 | 1.00 | 0.66 | 1.07 |
| | Posterior | (0.44) | (0.50) | (0.46) | (0.51) | (0.57) | (0.54) | (0.52) | (0.48) | (0.56) | (0.44) | (0.45) | (0.46) |
| | | | | | | | | | | | | | |
| | Frontal | 0.27 | 0.08 | 0.26 | 0.31 | 0.17 | 0.31 | 0.27 | 0.15 | 0.27 | 0.34 | 0.14 | 0.31 |
| | rioiitai | (0.35) | (0.40) | (0.34) | (0.33) | (0.39) | (0.33) | (0.31) | (0.35) | (0.33) | (0.34) | (0.37) | (0.32) |
| EO | Control | 0.38 | -0.01 | 0.34 | 0.40 | 0.08 | 0.38 | 0.34 | 0.04 | 0.29 | 0.46 | 0.10 | 0.43 |
| ЕО | Central | (0.36) | (0.33) | (0.37) | (0.34) | (0.39) | (0.37) | (0.36) | (0.35) | (0.36) | (0.36) | (0.34) | (0.36) |
| | Posterior | 0.45 | 0.18 | 0.42 | 0.52 | 0.25 | 0.49 | 0.46 | 0.26 | 0.39 | 0.54 | 0.23 | 0.53 |
| | Fosterior | (0.38) | (0.46) | (0.39) | (0.38) | (0.45) | (0.40) | (0.39) | (0.42) | (0.39) | (0.36) | (0.40) | (0.37) |

Note. CHI = cognitively healthy individuals, pMCI = possible mild cognitive impairments, naMCI = non-amnestic mild cognitive impairments, aMCI = amnestic mild cognitive impairments, EC = eyes closed, EO = eyes open.

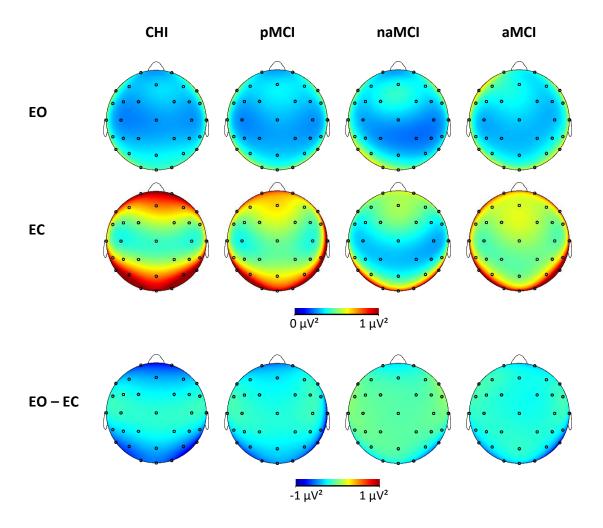
Supplementary Table 4. Log-transformed EC and EO rest absolute power in beta band (13.5 – 24 Hz) as M (SD) for each ROI and group.

| | | | CHI | | | pMCI | | | naMCI | | | aMCI | |
|----|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | Left | Mid | Right |
| | | | | | | | | | | | | | |
| | Frontal | 0.39 | 0.25 | 0.39 | 0.37 | 0.27 | 0.42 | 0.31 | 0.24 | 0.32 | 0.43 | 0.28 | 0.45 |
| | Homai | (0.25) | (0.29) | (0.26) | (0.28) | (0.32) | (0.29) | (0.29) | (0.31) | (0.31) | (0.24) | (0.28) | (0.23) |
| EC | Central | 0.45 | 0.20 | 0.43 | 0.45 | 0.26 | 0.44 | 0.29 | 0.23 | 0.34 | 0.48 | 0.30 | 0.47 |
| EC | Central | (0.30) | (0.30) | (0.29) | (0.31) | (0.38) | (0.32) | (0.30) | (0.38) | (0.32) | (0.29) | (0.31) | (0.27) |
| | Posterior | 0.51 | 0.27 | 0.51 | 0.52 | 0.30 | 0.49 | 0.40 | 0.23 | 0.40 | 0.54 | 0.30 | 0.52 |
| | Posterior | (0.29) | (0.31) | (0.29) | (0.30) | (0.33) | (0.31) | (0.30) | (0.30) | (0.30) | (0.27) | (0.29) | (0.27) |
| | | | | | | | | | | | | | |
| | Frontal | 0.39 | 0.19 | 0.40 | 0.40 | 0.22 | 0.42 | 0.37 | 0.23 | 0.39 | 0.43 | 0.22 | 0.45 |
| | riolitai | (0.26) | (0.29) | (0.29) | (0.34) | (0.33) | (0.30) | (0.24) | (0.31) | (0.30) | (0.31) | (0.28) | (0.29) |
| EO | Control | 0.49 | 0.12 | 0.45 | 0.43 | 0.16 | 0.43 | 0.39 | 0.18 | 0.41 | 0.45 | 0.21 | 0.46 |
| EO | Central | (0.30) | (0.30) | (0.28) | (0.29) | (0.39) | (0.27) | (0.32) | (0.40) | (0.36) | (0.27) | (0.33) | (0.25) |
| | Dostonian | 0.48 | 0.19 | 0.45 | 0.47 | 0.22 | 0.43 | 0.41 | 0.22 | 0.35 | 0.48 | 0.22 | 0.45 |
| - | Posterior | (0.29) | (0.31) | (0.26) | (0.28) | (0.35) | (0.29) | (0.25) | (0.29) | (0.28) | (0.25) | (0.32) | (0.23) |

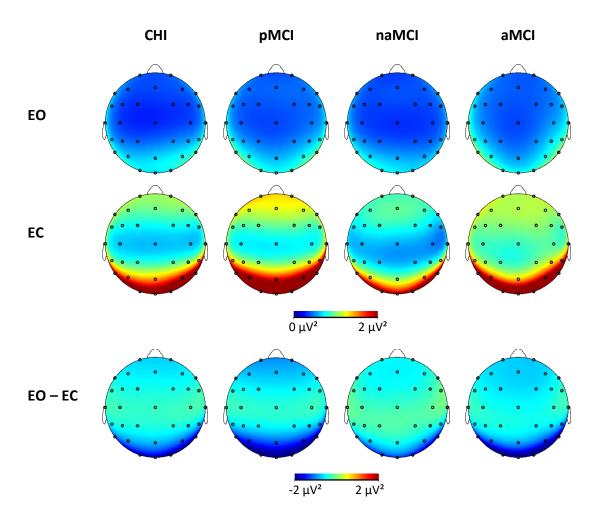
Note. CHI = cognitively healthy individuals, pMCI = possible mild cognitive impairments, naMCI = non-amnestic mild cognitive impairments, aMCI = amnestic mild cognitive impairments, EC = eyes closed, EO = eyes open.



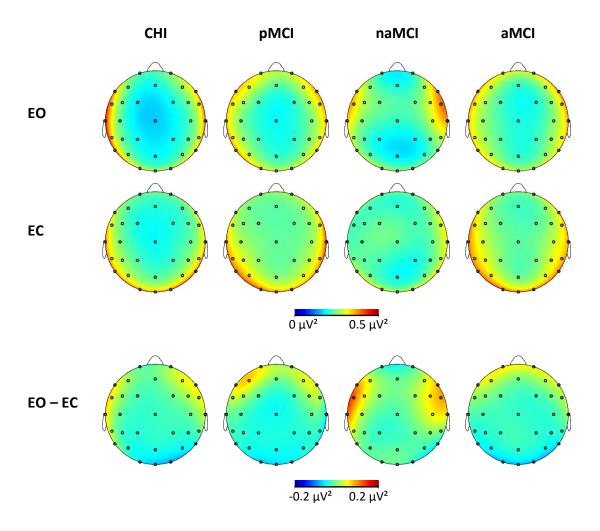
Supplementary Figure 1. Brain maps showing the mean absolute power in μV^2 (non-transformed) for delta activity (1 – 3.5 Hz) in both conditions and the difference maps separately for each group. CHI = cognitively healthy individuals, pMCI = possible mild cognitive impairments, naMCI = non-amnestic mild cognitive impairments, aMCI = amnestic mild cognitive impairments, EC = eyes closed, EO = eyes open.



Supplementary Figure 2. Brain maps showing the mean absolute power in μV^2 (non-transformed) for theta activity (4 – 7.5 Hz) in both conditions and the difference maps separately for each group. CHI = cognitively healthy individuals, pMCI = possible mild cognitive impairments, naMCI = non-amnestic mild cognitive impairments, aMCI = amnestic mild cognitive impairments, EC = eyes closed, EO = eyes open.



Supplementary Figure 3. Brain maps showing the mean absolute power in μV^2 (non-transformed) for alpha activity (8 – 13 Hz) in both conditions and the difference maps separately for each group. CHI = cognitively healthy individuals, pMCI = possible mild cognitive impairments, naMCI = non-amnestic mild cognitive impairments, aMCI = amnestic mild cognitive impairments, EC = eyes closed, EO = eyes open.



Supplementary Figure 4. Brain maps showing the mean absolute power in μV^2 (non-transformed) for beta activity (13.5 – 24 Hz) in both conditions and the difference maps separately for each group. CHI = cognitively healthy individuals, pMCI = possible mild cognitive impairments, naMCI = non-amnestic mild cognitive impairments, aMCI = amnestic mild cognitive impairments, EC = eyes closed, EO = eyes open.

Supplementary Table 5. Results of the 3 x 3 x 4 (Coronal x Sagittal x Group) mixed ANCOVA for absolute power (log-transformed) at rest with eyes closed (adjusted α -level = .017).

| | _ | D | DELTA | | Т | HETA | \ | A | LPHA | | В | ETA | |
|-----------------------|----------|-------|-------|------------|-------|-------|------------|-------|-------|------------|-------|-------|------------|
| | df | F | p | η_p^2 |
| S | (2,414) | 206.5 | <.001 | .50 | 196.4 | <.001 | .49 | 299.4 | <.001 | .59 | 106.2 | <.001 | .34 |
| C | (2,414) | 133.4 | <.001 | .39 | 73.3 | <.001 | .26 | 152.5 | <.001 | .42 | 13.7 | <.001 | .06 |
| G | (3,207) | 0.8 | .47 | .01 | 0.3 | .84 | .00 | 0.8 | .47 | .01 | 0.6 | .61 | .01 |
| SxC | (4,828) | 37.5 | <.001 | .15 | 4.5 | .003 | .02 | 34.1 | <.001 | .14 | 4.6 | .002 | .02 |
| S x G | (6,414) | 0.8 | .53 | .01 | 1.4 | .22 | .02 | 0.7 | .62 | .01 | 1.4 | .21 | .02 |
| C x G | (6,414) | 0.6 | .71 | .01 | 1.4 | .22 | .02 | 1.0 | .41 | .01 | 0.4 | .49 | .01 |
| $S \times C \times G$ | (12,828) | 0.7 | .73 | .01 | 1.0 | .41 | .02 | 1.6 | .14 | .02 | 1.3 | .24 | .02 |

Supplementary Table 6. Results of the 3 x 3 x 4 (Coronal x Sagittal x Group) mixed ANCOVA for absolute power (log-transformed) at rest with eyes open (adjusted α -level = .017).

| | _ | D | ELTA | | T | HETA | | A | LPHA | | F | BETA | |
|-------|----------|-------|-------|------------|-------|-------|------------|-------|-------|------------|-------|-------|-----------------------------|
| | df | F | p | η_p^2 | F | p | η_p^2 | F | p | η_p^2 | F | p | $\eta_p{}^{\boldsymbol{2}}$ |
| S | (2,414) | 124.7 | <.001 | .38 | 136.4 | <.001 | .40 | 318.9 | <.001 | .61 | 117.0 | <.001 | .36 |
| C | (2,414) | 44.6 | <.001 | .18 | 47.3 | <.001 | .19 | 50.4 | <.001 | .20 | 0.8 | .43 | .00 |
| G | (3,207) | 2.7 | .05 | .04 | 0.9 | .46 | .01 | 0.7 | .55 | .01 | 0.2 | .90 | .00 |
| SxC | (4,828) | 9.9 | <.001 | .05 | 6.7 | <.001 | .03 | 19.8 | <.001 | .09 | 3.7 | .01 | .02 |
| S x G | (6,414) | 0.8 | .56 | .01 | 0.7 | .63 | .01 | 1.7 | .15 | .02 | 1.3 | .27 | .02 |
| C x G | (6,414) | 0.9 | .52 | .01 | 0.0 | .48 | .01 | 1.0 | .42 | .01 | 0.5 | .82 | .01 |
| SxCxG | (12,828) | 0.9 | .50 | .01 | 1.2 | .28 | .02 | 0.7 | .69 | .01 | 0.8 | .59 | .01 |

Supplementary Table 7. Results of the 3 x 3 x 4 (Coronal x Sagittal x Group) mixed ANCOVA for absolute power reactivity (log EO – log EC; adjusted α -level = .017).

| | _ | Dl | ELTA | TH | IETA | ALPHA | \ | В | ETA |
|-------|----------|------|---------------------|------|-------------------|----------------------|------------|----------------|---------------------|
| | df | F | $p = \eta_p^2$ | F | $p = \eta_p^2$ | F p | η_p^2 | \overline{F} | $p = \eta_p^2$ |
| S | (2,412) | 2.3 | .10 .01 | 1.3 | .28 .01 | 13.3 < .001 | .06 | 11.8 | < .001 .05 |
| C | (2,412) | 23.7 | <.001 .10 | 11.4 | < .001 .05 | 81.0 <.001 | .28 | 12.7 | <.001 .06 |
| G | (3,206) | 1.2 | .31 .02 | 1.9 | .13 .03 | 0.8 .42 | .01 | 1.7 | .17 .02 |
| SxC | (4,824) | 7.3 | <.001 .03 | 3.8 | .01 .02 | 21.7 < .001 | .10 | 4.0 | .004 .02 |
| SxG | (6,412) | 1.3 | .26 .02 | 0.5 | .81 .01 | 1.4 .23 | .02 | 0.4 | .89 .01 |
| C x G | (6,412) | 0.4 | .89 .01 | 1.5 | .19 .02 | 0.6 .68 | .01 | 0.8 | .56 .01 |
| SxCxG | (12,824) | 0.6 | .81 .01 | 0.6 | .84 .01 | 1.3 .26 | .02 | 0.8 | .66 .01 |

Supplementary Table 8. Results of the 3 x 3 x 4 (Coronal x Sagittal x Group) mixed ANCOVA for relative power (log-transformed) at rest with eyes closed (adjusted α -level = .017).

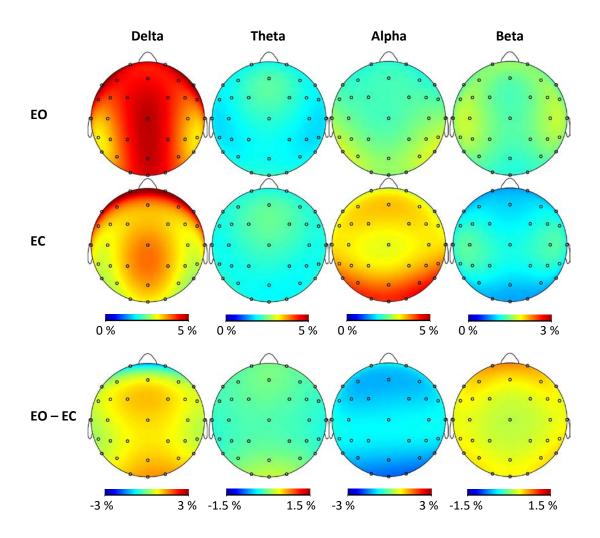
| | | D) | ELTA | T | HETA | | Al | LPHA | | Bl | ETA |
|-------|----------|-------|---------------------|------|-----------------|----------|----------------|-------|------------|------|-------------------|
| | df | F | $p = \eta_p^2$ | F | pη | 2 | \overline{F} | p | η_p^2 | F | $p = \eta_p^2$ |
| S | (2,414) | 5.9 | .003 .03 | 15.1 | < .001 . | 07 | 11.8 | <.001 | .05 | 2.2 | .12 .01 |
| C | (2,414) | 138.7 | <.001 .40 | 36.2 | < .001 . | 15 | 111.7 | <.001 | .35 | 81.9 | < .001 .28 |
| G | (3,207) | 0.2 | .92 .00 | 0.4 | .76 . | 01 | 0.4 | .75 | .01 | 0.3 | .85 .00 |
| SxC | (4,828) | 73.9 | <.001 .26 | 3.3 | .02 . | 02 | 40.9 | <.001 | .17 | 8.0 | < .001 .04 |
| SxG | (6,414) | 0.7 | .62 .01 | 0.2 | .97 . | 00 | 1.4 | .22 | .02 | 1.4 | .24 .02 |
| C x G | (6,414) | 1.0 | .39 .02 | 1.1 | .36 . | 02 | 1.1 | .36 | .02 | 0.7 | .66 .01 |
| SxCxG | (12,828) | 1.0 | .44 .01 | 1.0 | .43 . | 01 | 0.4 | .96 | .01 | 1.7 | .07 .02 |

Supplementary Table 9. Results of the 3 x 3 x 4 (Coronal x Sagittal x Group) mixed ANCOVA for relative power (log-transformed) at rest with eyes open (adjusted α -level = .017).

| | | D | ELTA | Tl | НЕТА | | AI | PHA | | B | ETA |
|-----------------------|----------|------|---------------------|------|-------|----------|------|-------|-------------|------|---------------------|
| | df | F | $p = \eta_p^2$ | F | p r | շ | F | p | ղթ 2 | F | $p = \eta_p^2$ |
| S | (2,414) | 5.1 | .01 .02 | 45.3 | <.001 | .18 | 17. | <.001 | .08 | 3.1 | .06 .02 |
| C | (2,414) | 40.7 | <.001 .16 | 19.9 | <.001 | .09 | 97.2 | <.001 | .32 | 12.8 | <.001 .06 |
| G | (3,207) | 0.7 | .55 .01 | 0.6 | .59 | .01 | 0.8 | .49 | .01 | 0.7 | .54 .01 |
| SxC | (4,828) | 23.7 | <.001 .10 | 22.1 | <.001 | .10 | 20.1 | <.001 | .09 | 2.1 | .09 .01 |
| SxG | (6,414) | 2.1 | .07 .03 | 0.1 | .98 | .00 | 0.9 | .46 | .01 | 2.6 | .03 .04 |
| C x G | (6,414) | 0.7 | .63 .01 | 0.3 | .94 | .00 | 1.5 | .19 | .02 | 0.5 | .78 .01 |
| $S \times C \times G$ | (12,828) | 1.6 | .09 .02 | 0.6 | .81 | .01 | 0.9 | .55 | .01 | 0.9 | .49 .01 |

Supplementary Table 10. Results of the 3 x 3 x 4 (Coronal x Sagittal x Group) mixed ANCOVA for relative power reactivity (log EO – log EC; adjusted α -level = .017).

| | _ | Dl | ELTA | , | THET | A | Al | LPHA | F | BETA |
|-------|----------|------|-------------------|-----|------------------|--------------|------|---------------------|------|---------------------|
| | df | F | $p = \eta_p^2$ | F | p | η_p^2 | F | $p = \eta_p^2$ | F | $p = \eta_p^2$ |
| S | (2,412) | 24.3 | < .001 .11 | 12. | 6 <.00 | 1 .06 | 3.7 | .03 .02 | 15.2 | <.001 .07 |
| C | (2,412) | 62.8 | < .001 .23 | 36. | 1 <.00 | 1 .15 | 21.0 | <.001 .09 | 50.3 | <.001 .20 |
| G | (3,206) | 0.5 | .68 .01 | 0. | 7 .5 | 4 .01 | 0.8 | .50 .01 | 0.7 | .54 .01 |
| SxC | (4,824) | 20.0 | <.001 .09 | 13. | 2 <.00 | 1 .06 | 5.9 | <.001 .03 | 3.2 | .02 .02 |
| SxG | (6,412) | 1.3 | .26 .02 | 0. | 4 .8 | 4 .01 | 2.8 | .02 .04 | 0.7 | .65 .01 |
| C x G | (6,412) | 0.5 | .79 .01 | 0. | 7 .6 | 5 .01 | 1.0 | .42 .01 | 0.9 | .47 .01 |
| SxCxG | (12,824) | 0.5 | .88 .01 | 0. | 6 .7 | 7 .01 | 0.4 | .92 .01 | 0.7 | .71 .01 |



Supplementary Figure 5. Brain maps showing the mean relative power in % for all frequency bands in both conditions and the difference maps. EO = eyes open, EC = eyes closed

Supplementary Table 11. Results of the contrast analysis in each frequency band for relative power (log-transformed) at rest with eyes closed.

| | D | ELTA | \ | T | HETA | | A | LPHA | | F | BETA | |
|--------------------------------|----------------|------------|------------|----------------|------------|------------|----------------|------------|------------|--------------|------------|------------|
| | \overline{F} | р | η_p^2 | \overline{F} | р | η_p^2 | \overline{F} | р | η_p^2 | F | р | η_p^2 |
| Main Effects | | | | | | | | | | | | |
| (adj. α -level = .025) | | | | | | | | | | | | |
| L > R | 7.4 | .01 | .04 | 3.1 | .08 | .02 | <u>4.5</u> | <u>.04</u> | <u>.02</u> | | | |
| L/R > M | 5.5 | .02 | .03 | 18.5 | <.001 | <u>.08</u> | 13.9 | <.001 | .06 | | | |
| F > P | 325.2 | <.001 | .61 | 94.4 | <.001 | .31 | 305.6 | <.001 | <u>.60</u> | <u>0.1</u> | .80 | .00 |
| F/P > C | 8.7 | .004 | .04 | <u>1.4</u> | <u>.24</u> | <u>.01</u> | 20.3 | <.001 | .09 | <u>161.2</u> | <.001 | <u>.44</u> |
| Interactions | | | | | | | | | | | | |
| (adj. α -level = .0125) |) | | | | | | | | | | | |
| $L > R \times F > P$ | 0.0 | <u>.87</u> | .00 | | | | 8.5 | .004 | .08 | 23.0 | <.001 | <u>.10</u> |
| $L > R \times F/P > C$ | <u>1.1</u> | .30 | <u>.01</u> | | | | 0.0 | .99 | .00 | 0.9 | .33 | .01 |
| $L/R > M \times F > P$ | 168.9 | <.001 | .45 | | | | 84.8 | <.001 | <u>.29</u> | 0.4 | <u>.55</u> | .00 |
| $L/R > M \times F/P > C$ | 18.6 | <.001 | .08 | | | | <u>17.2</u> | <.001 | <u>.08</u> | 14.2 | <.001 | <u>.06</u> |

Note. All test statistics are with (1, 207) degrees of freedom. Underlined effects are reversed in direction (i.e., the reversed effect from $L > R \times F > P$ is $L < R \times F > P$). Changing the direction of both directional indicators within a single effect is equivalent (i.e., $L > R \times F > P$ is the same as $L < R \times F < P$). L = left, R = right, M = midline, F = frontal, P = posterior, C = central.

Supplementary Table 12. Results of the contrast analysis in each frequency band for relative power (log-transformed) at rest with eyes open.

| | D | ELTA | <u> </u> | TH | HETA | <u> </u> | A | LPHA | \ | В | ETA | |
|--------------------------------|------------|------------|------------|-------------|------------|------------|--------------|-------|------------|-------------|-------|------------|
| | F | p | η_p^2 | F | p | η_p^2 | F | p | η_p^2 | F | p | η_p^2 |
| Main Effects | | | | | | | | | | | | |
| (adj. α -level = .025) | | | | | | | | | | | | |
| L > R | 0.7 | .39 | 00. | <u>0.4</u> | <u>.54</u> | .00 | 0.4 | .52 | .00 | | | |
| L/R > M | <u>6.4</u> | <u>.01</u> | .03 | <u>57.4</u> | <.001 | <u>.22</u> | 22.1 | <.001 | .10 | | | |
| F > P | 51.7 | <.001 | .20 | 10.5 | .001 | .05 | <u>190.8</u> | <.001 | <u>.48</u> | 0.9 | .35 | .00 |
| F/P > C | 28.1 | <.001 | .12 | 28.5 | <.001 | .12 | <u>1.6</u> | .20 | <u>.01</u> | <u>30.7</u> | <.001 | .13 |
| Interactions | | | | | | | | | | | | |
| (adj. α -level = .0125) | | | | | | | | | | | | |
| $L > R \times F > P$ | 5.0 | .39 | .00 | <u>0.9</u> | .34 | <u>.00</u> | 2.6 | .11 | .01 | | | |
| $L > R \times F/P > C$ | <u>3.1</u> | .08 | <u>.02</u> | 1.3 | .26 | .01 | 1.0 | .33 | .01 | | | |
| $L/R > M \times F > P$ | 46.5 | <.001 | .18 | <u>42.8</u> | <.001 | <u>.17</u> | 30.6 | <.001 | .13 | | | |
| $L/R > M \times F/P > C$ | 17.7 | <.001 | .08 | 15.4 | <.001 | .07 | <u>25.4</u> | <.001 | .11 | | | |

Note. All test statistics are with (1, 207) degrees of freedom. Underlined effects are reversed in direction (i.e., the reversed effect from L > R x F > P is L < R x F > P). Changing the direction of both directional indicators within a single effect is equivalent (i.e., L > R x F > P is the same as L < R x F < P). L = left, R = right, M = midline, F = frontal, P = posterior, C = central.

Supplementary Table 13. Results of the contrast analysis in each frequency band for reactivity (difference of relative power).

| | DELTA | | | THETA | | | ALPHA | | | BETA | | |
|--------------------------|----------------|------------|------------|----------------|-------|------------|-------------|------------|------------|------|------------|------------|
| | \overline{F} | p | η_p^2 | F | p | η_p^2 | F | p | η_p^2 | F | p | η_p^2 |
| Main Effects | | | | | | | | | | | | |
| L > R | <u>14.0</u> | <.001 | .06 | <u>4.8</u> | .03 | .02 | | | | 0.5 | <u>.46</u> | .00 |
| L/R > M | <u>27.5</u> | <.001 | .12 | <u> 16.1</u> · | <.001 | <u>.07</u> | | | | 20.7 | <.001 | .09 |
| F > P | <u>137.0</u> | <.001 | <u>.40</u> | <u>39.9</u> · | <.001 | <u>.16</u> | 3.9 | .05 | .02 | 1.9 | .17 | .01 |
| F/P > C | 0.9 | .35 | .00 | 33.7 | <.001 | .14 | <u>33.6</u> | <.001 | <u>.14</u> | 84.2 | <.001 | .29 |
| Interactions | | | | | | | | | | | | |
| $L > R \times F > P$ | 4.5 | .04 | .02 | 1.0 | .32 | .01 | 0.8 | .36 | .00 | | | |
| $L > R \times F/P > C$ | 0.5 | <u>.47</u> | .00 | <u>5.4</u> | .02 | .03 | 0.8 | .38 | .00 | | | |
| $L/R > M \times F > P$ | <u>48.9</u> | <.001 | .19 | <u>25.6</u> · | <.001 | <u>.11</u> | 13.3 | <.001 | .06 | | | |
| $L/R > M \times F/P > C$ | <u>0.0</u> | <u>.83</u> | .00 | 5.7 | .02 | .03 | <u>0.7</u> | <u>.42</u> | .00 | | | |

Note. All test statistics are with (1, 206) degrees of freedom. Underlined effects are reversed in direction (i.e., the reversed effect from L > R x F < P is L < R x F < P). Changing the direction of both directional indicators within a single effect is equivalent (i.e., L > R x F < P is the same as L < R x F > P). L = left, R = right, M = midline, F = frontal, P = posterior, C = central.

Supplementary Table 14. Mean (SD) of absolute reactivity values (log EO - log EC) for the whole sample (N = 211).

| | DELTA | | | THETA | | | ALPHA | | | BETA | | |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | L | M | R | L | M | R | L | M | R | L | M | R |
| F | -0.24 | -0.08 | -0.24 | -0.21 | -0.16 | -0.20 | -0.35 | -0.41 | -0.34 | 0.02 | -0.05 | 0.01 |
| | (0.40) | (0.26) | (0.39) | (0.23) | (0.20) | (0.23) | (0.26) | (0.31) | (0.26) | (0.18) | (0.10) | (0.20) |
| C | -0.03 | -0.04 | -0.07 | -0.11 | -0.15 | -0.14 | -0.19 | -0.31 | -0.22 | 0.01 | -0.09 | 0.01 |
| | (0.21) | (0.22) | (0.21) | (0.14) | (0.17) | (0.20) | (0.17) | (0.25) | (0.20) | (0.20) | (0.12) | (0.22) |
| P | -0.07 | -0.07 | -0.08 | -0.18 | -0.17 | -0.21 | -0.43 | -0.43 | -0.50 | -0.04 | -0.08 | -0.06 |
| | (0.21) | (0.21) | (0.21) | (0.21) | (0.21) | (0.23) | (0.33) | (0.34) | (0.35) | (0.13) | (0.13) | (0.14) |

Note. Positive values are printed in bold and indicate an increase in power from EC to EO. F = frontal, C = central, P = posterior, L = left, M = mid, R = right.