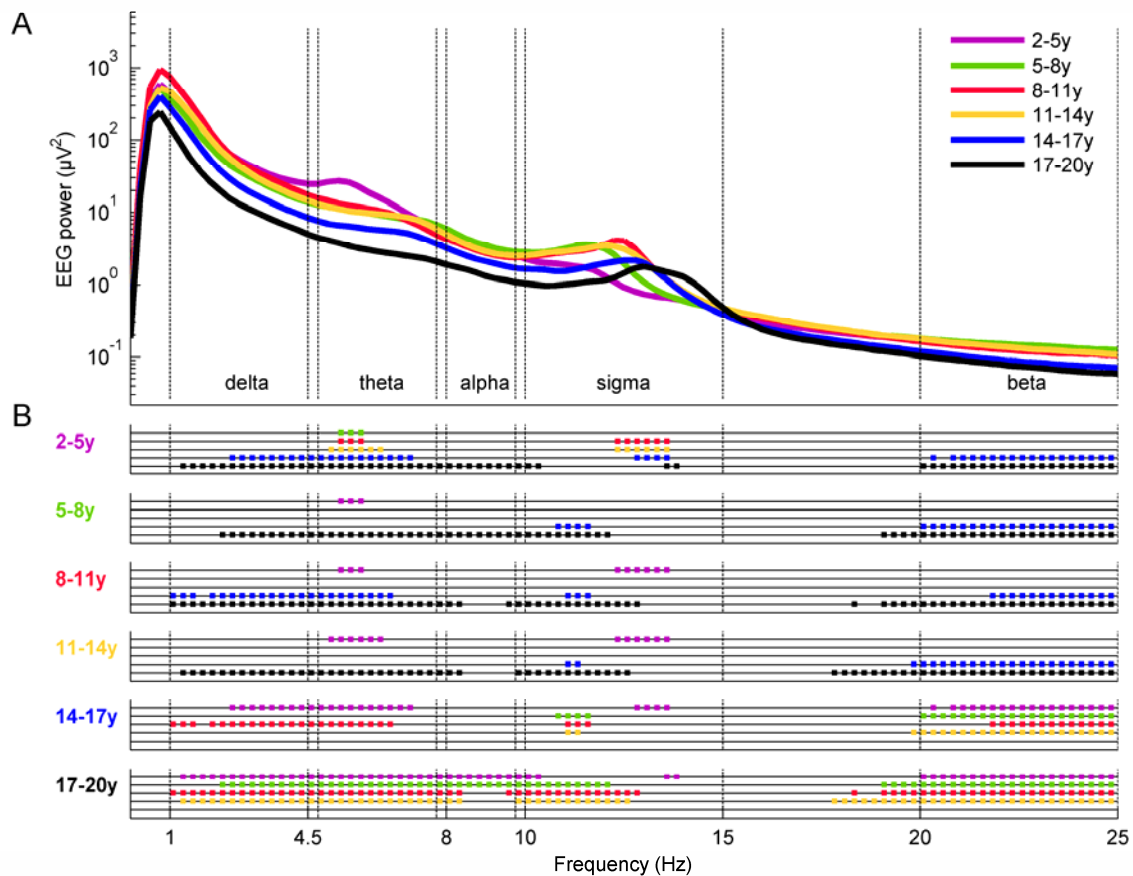
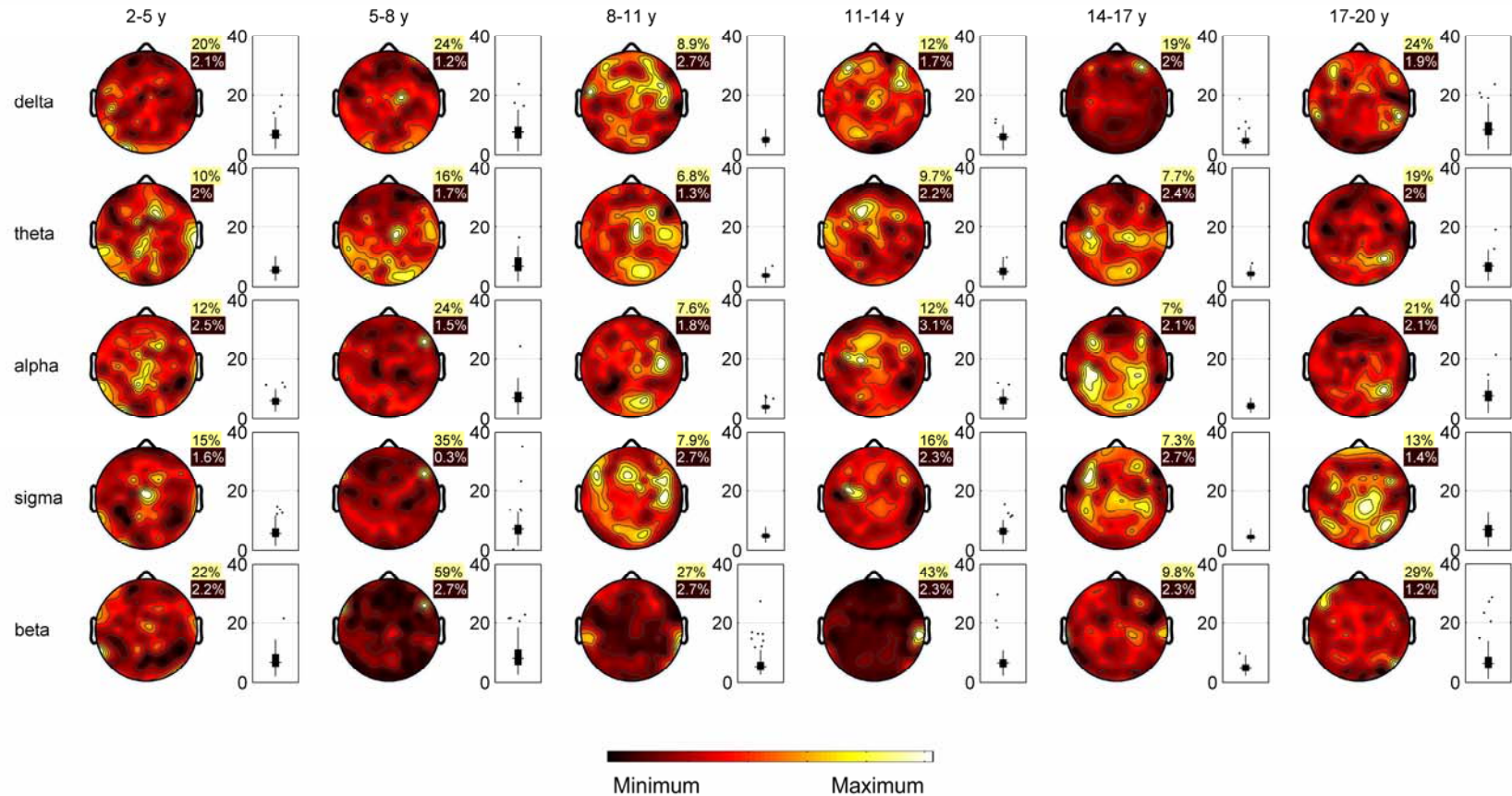


## Suppl. Figure S1



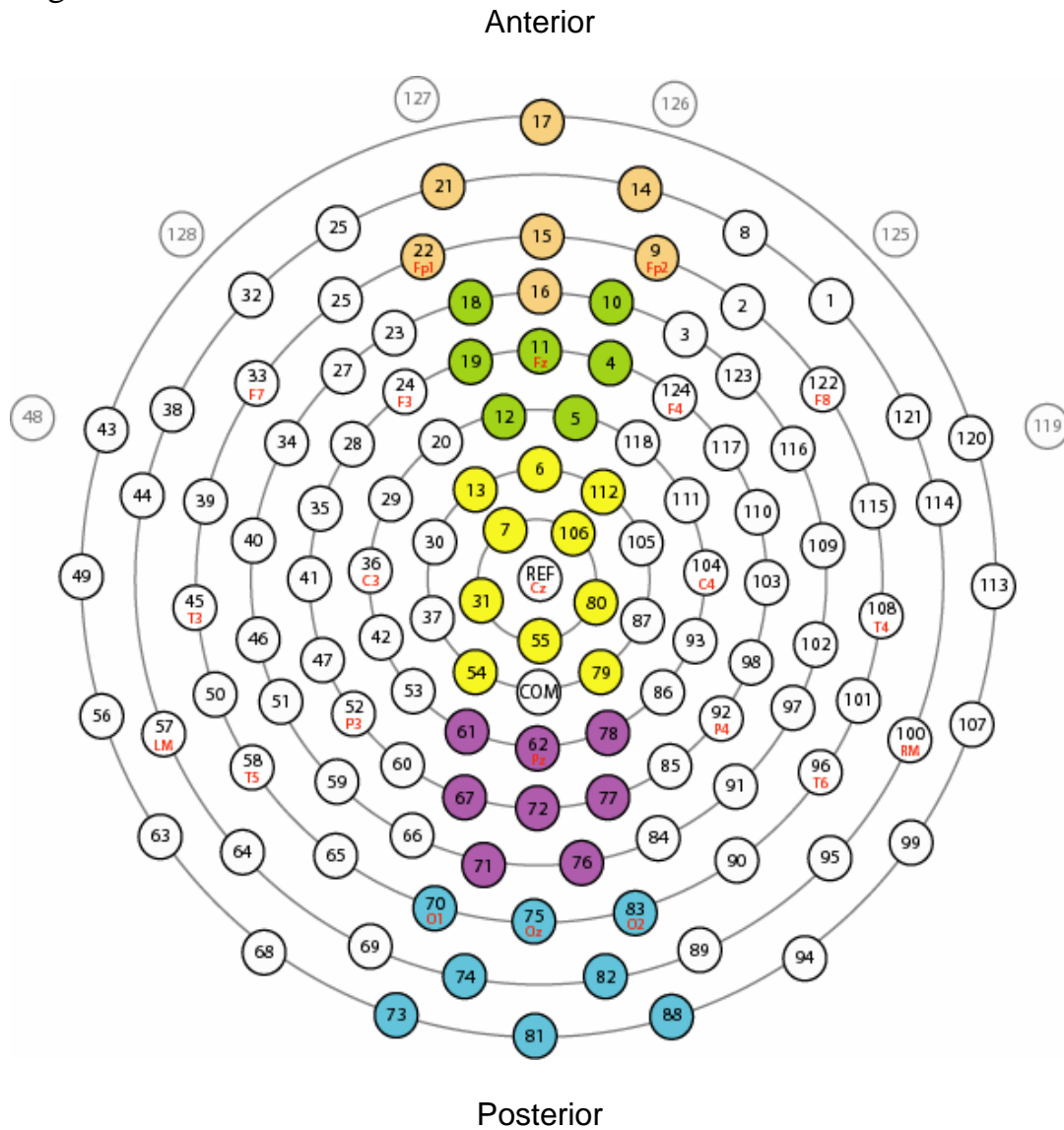
**Supplementary Figure S1. EEG power spectra during late NREM sleep.** A. EEG power spectra are presented for 6 age groups (purple 2-5y, green 5-8y, red 8-11y, yellow 11-14y, blue 14-17y, black 17-20y). Data include the latest possible 60 minutes of common NREM sleep across all subjects (i.e. 133rd - 193rd min of artifact-free NREM sleep stages 2 and 3; average of all electrodes). Data includes 52 subjects, one subject was excluded, because the electrodes were removed after five hours due to discomfort. Significance in ANOVAs (see Methods,  $F=2.8-21.0$ ,  $df=5$ ) were followed by group-wise comparisons as indicated in B: Post-hoc Scheffé testing calculated for each 0.25 Hz bin, significant group differences indicated as dots ( $p<0.05$ ). Comparisons are color coded: Groups labeled on the ordinate were compared with color-coded groups for each particular frequency bin.

Suppl. Figure S2



**Supplementary Figure S2. Topographical distribution of the relative variability of EEG power.** The standard error of the mean power is presented as a percentage of the mean power for each electrode, in all age groups and frequency bands. Maps are based on 109 derivations from the first 60 min of NREM sleep stages 2 and 3. Values are color coded (maxima in white/yellow, minima in brown) and plotted on the planar projection of the hemispheric scalp model. To optimize contrast, each map was proportionally scaled and values in between the electrodes were interpolated. At the top right of the maps numbers indicate maxima and minima (in %). Boxplots include values of 109 electrodes with central horizontal line representing the median, edges of the box are the 25th and 75th percentiles, the whiskers extend to the most extreme data points not considered outliers and outliers are represented as individual dots. The ordinate is limited to 0-25% for visualization purposes. The three outliers not presented are: 58% and 59% in 5-8y, 43% in 11-14y in the beta frequency band.

Suppl. Figure S3



Cluster Index	Electrode numbers
5	9 14 15 16 17 21 22
4	4 5 10 11 12 18 19
3	6 7 13 31 54 55 79 80 106 112
2	61 62 67 71 72 76 77 78
1	70 73 74 75 81 82 83 88
frontal	10 11 15 16 18
occipital	71 74 75 76 82
midline	17 15 16 11 6 Cz 55 62 72 75 81

**Supplementary Figure S3. Electrode information.** The high density electrode net layout is shown from top view, labeled with the numbers adapted from the Electrical Geodesics, Inc. layout. Colours refer to the five selected clusters of electrodes (details in the manuscript and in Figure 4), the table lists the electrode numbers of the clusters, and the electrodes used for the analysis of a frontal and an occipital cluster (see Figure 5). The electrodes termed 'midline' were used for anatomical electrode localisation (see Table 2). RM, LM: right and left mastoid. COM: special ground electrode (see Net Station Acquisition manual of Electrical Geodesics, Inc.).