**EEG Recordings:** EEG data was collected from 100 subjects. Out of this, data from 2 subjects were discarded without doing analysis because of excessive noise and technical issues with data extraction. Hence, the usable dataset consists of 98 subjects. The codes that were used to run the experiment will be made avilable in the "experimentCodes" folder later.

**Subjects:** We aimed to get ~30 subjects (both males and female combined) per group, uniformly spanning 20-65 years. The initial plan was to have three groups – advanced meditators (group 'A'; who have had >5 years of regular meditation practice), beginner meditators ('B'; who have been practicing meditation regularly but for <2 years), and their controls (group 'C'). However, it was difficult to find subjects in the beginners category, so this plan was shelved and we decided to proceed with only advanced meditators and their controls. Data from 20 beginners was collected but not subsequently used for further analysis. Data from 38 advanced meditators and 40 controls were used for further analysis.

Regarding appropriate control subjects, one option is to simply record from meditators and controls independently and then do a gender/age matching later. This strategy was employed in our previous large scale EEG study on (Tata Longitudinal Study of Aging) where ~280 subjects were recruited from the community, some of whom were later found to be with Mild Cognitive Impairment (MCI, N=14) or early Alzheimer’s Disease (AD, N=6). Since the number of cases (MCI/AD) was much smaller than controls, it was easy to find several control subjects per case subject who were of the same age and gender.

In this study, we first used the same strategy. Specifically, once we recorded from a meditator, we then looked for a control subject of the same gender and age (within +- 2 years). This pipeline is explained in the document and codes in the commonAnalysisCodes/informationFiles folder. For two meditators there was no control subject, and hence these two subjects were removed. For the remaining 76 subjects, data was segmented and preprocessed using codes in the preprocessingCodes folder.

Subsequently, we chose to pair one control subject with each meditator and do pairwise analysis. If there were multiple control subjects, we picked the one whose educational background was closest to the meditator. For female subjects, we also tried to schedule the EEG recording such that the phase in the menstrual cycle was comparable to the meditator, since brain oscillations in the alpha/gamma band have been shown to depend on the menstrual phase. If we found a control subject first, we tried to find an appropriate meditator in a similar fashion. More details of this matching procedure are found in commonAnalysisCodes/infromationFiles/BK1SubjectDetails.

For 1 male and 3 female meditators, there was no control within 2 years of age difference. In addition, we had 2 instances where a single control was available for 2 meditators, one of whom had to be removed based on the selection criteria described above. Therefore, out of 38 meditators, an appropriate matching control was found for 32 (Male=18; Female=14).

The folder commonAnalysisCodes/infromationFiles contains all details of all subjects. The file BK1SubjectDetails explains the selection criteria as well as how to use the codes in that folder.

**Preprocessing:** Data from the 32 matched pairs were subsequently analyzed and processed to find bad electrodes and data segments. Details of this procedure can be found within the "preprocessingCodes" folder.