## **Supporting Information**



*Figure S1.* Time-frequency spectrograms with time (s) shown on the x-axis and frequency (Hz) denoted on the y-axis. For each gradiometer in the sensor array, percent power change was computed for each time-frequency bin relative to the respective bin's baseline power (-0.4 to 0.0 s) for frequencies ranging from 4 to 90 Hz. Left: The spectrogram from the peak sensor, which was located near the parietal cortices. Note that this spectrogram is from the same sensor as that shown in Figure 2 of the main text; the only difference is that the y-axis is expressed all the way to 90 Hz (Figure 2 stops at 30 Hz to highlight the response). Significant decreases in alpha (8-11 Hz) and beta (15-20 Hz) activity spanned from 0.4 s to 4.0 s. These significant responses were observed in multiple sensors located near occipital, parietal, and temporal regions (see 2D sensor map included in Figure 2 of the main text). **Right:** A grand average spectrogram is shown. This spectrogram was computed by collapsing across all sensors in which the significant responses of interest were observed (see 2D sensor map included in Figure 2 of the main text). Relative to the peak sensor spectrogram, the alpha and beta responses shown in the grand average spectrogram were of reduced magnitude (note the color scale bar change). This, of course, was to be expected, as the peak sensor was that in which these responses were of greatest magnitude, whereas the grand average was the average of all sensors in which these responses were significant but of varying magnitudes. Importantly, the responses shown in the peak and grand average spectrograms were remarkably similar with regards to direction, frequency, and temporal characteristics. Thus, these data demonstrate that the peak sensor spectrogram provided an accurate representation of the data at large.