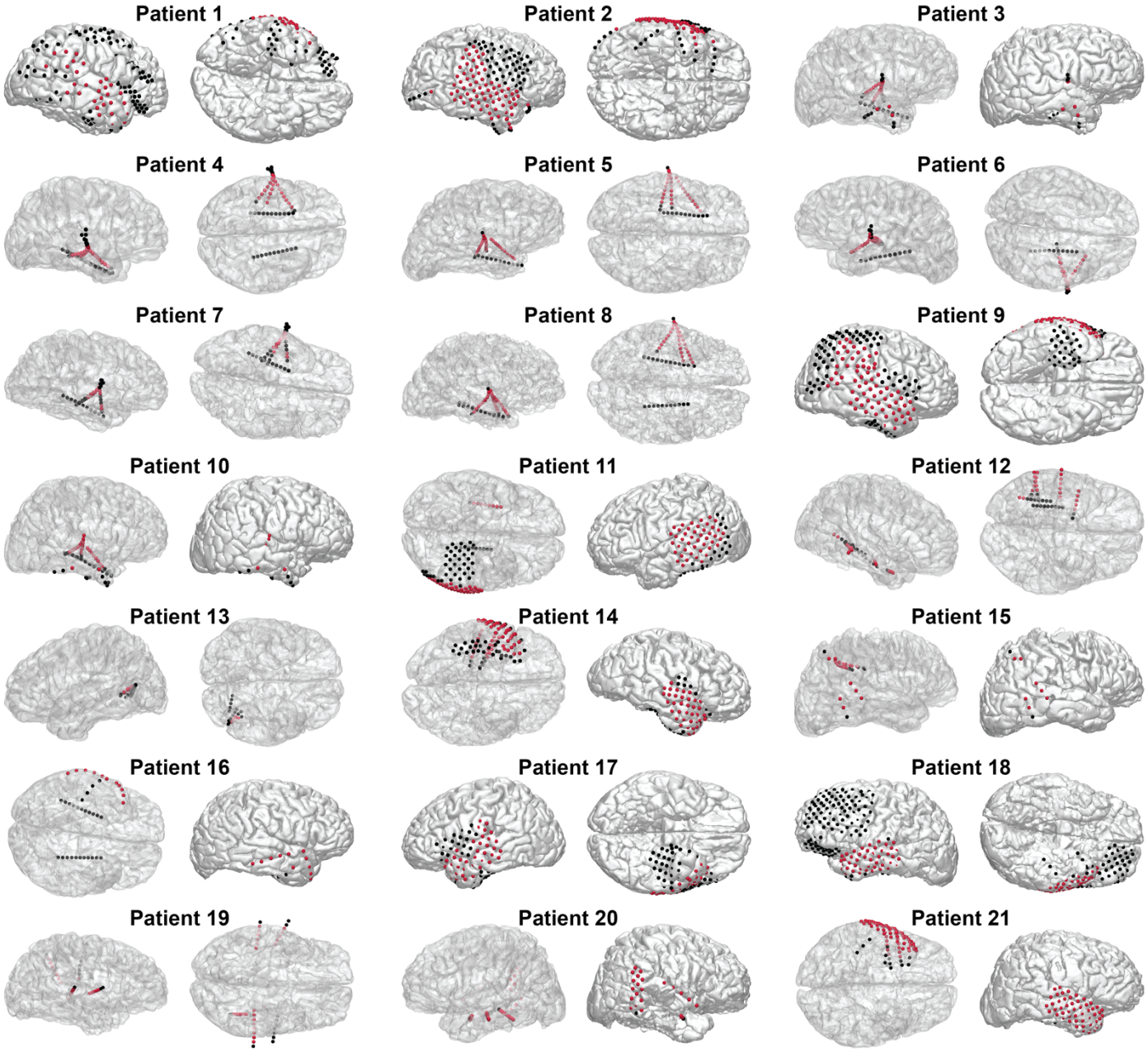
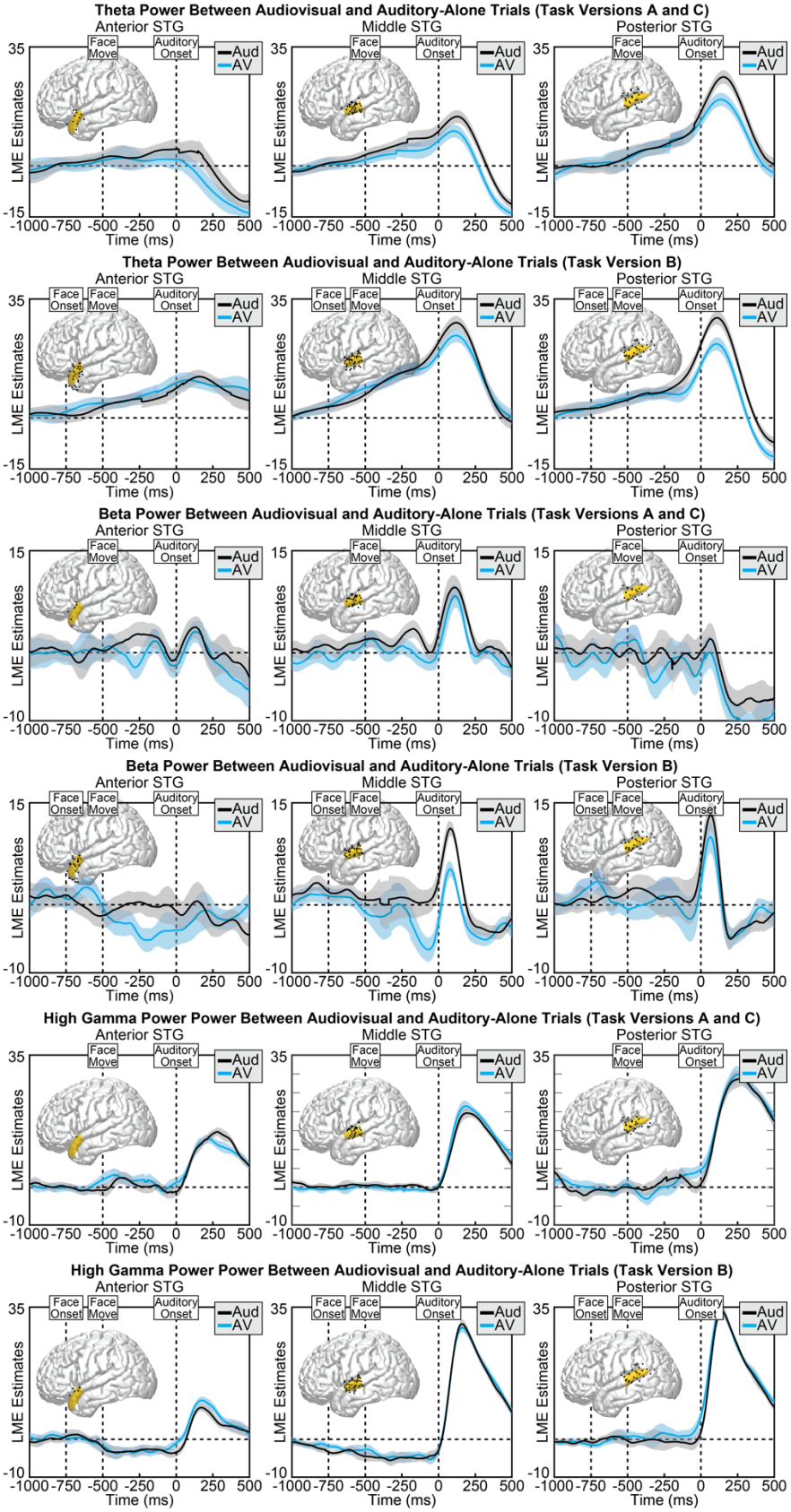
Visual speech differentially modulates beta, theta, and high gamma bands in auditory cortex

Supplemental Results

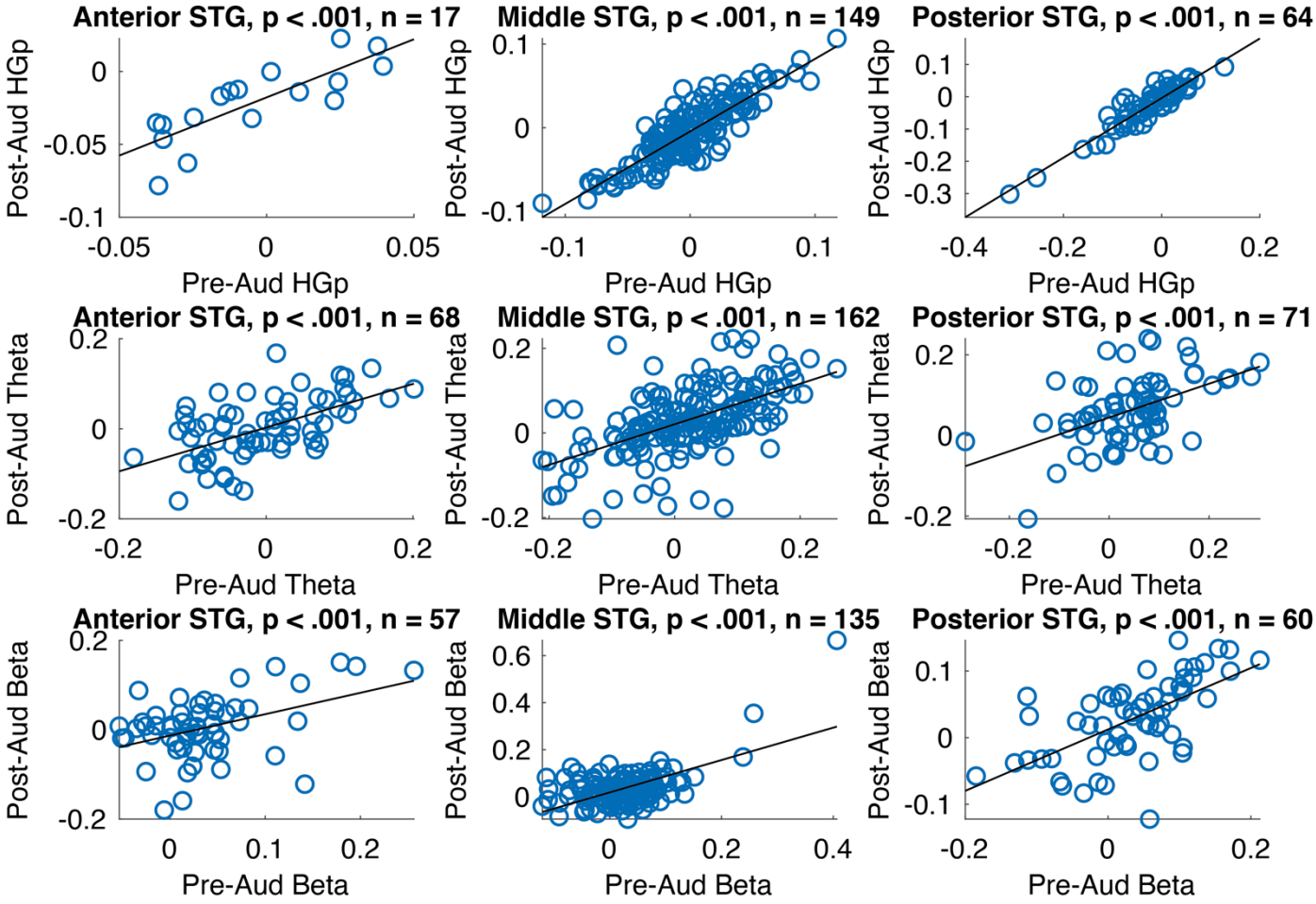
Supplementary Figure 1. Individual electrode maps for each patient. Red spheres reflect auditory electrodes that met anatomical criteria and that were not rejected during pre-processing for having excessive noise. Black spheres show remaining implanted electrodes that were not included in analyses.



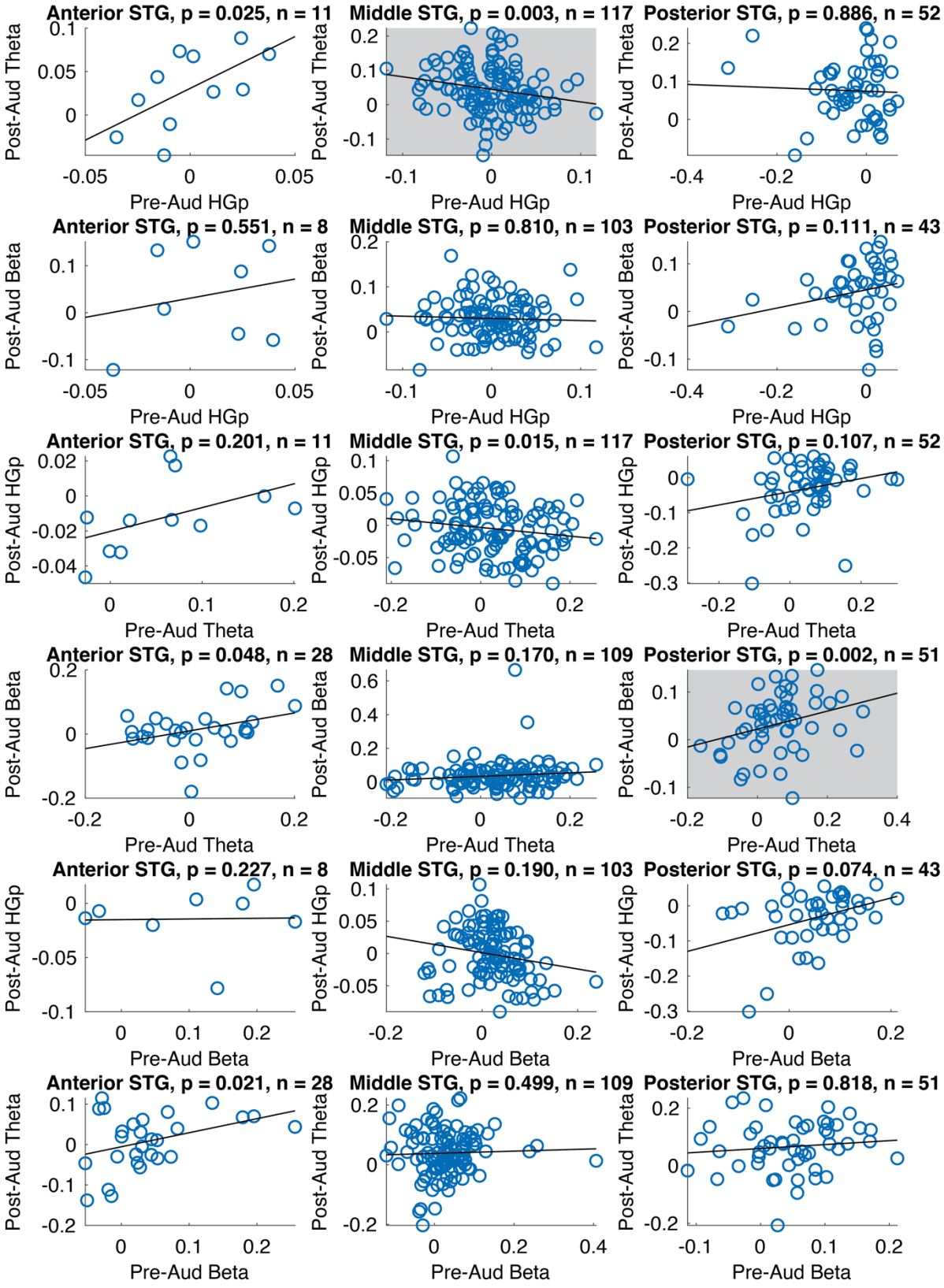
Supplementary Figure 2. Individual participant activity at audiovisual (blue) and auditory-alone (black) conditions separated by task variants and frequency bands. Task Variants A and C presented participants the moving face stimulus at 500 ms before auditory onset, whereas Task Variant B showed a static face beginning 750 ms before auditory onset (with motion starting at 500 ms before auditory onset). No clear differences across the task differences are present in the time series data.



Supplementary Figure 3: Scatterplots showing the magnitude of audiovisual effects (auditory-alone minus audiovisual) for the same frequency band, before (x-axis) or after (y-axis) auditory-onset. Columns reflect anatomical electrodes localized to the anterior STG (left), middle STG (middle), and posterior STG (right). Rows reflect separate frequency bands. Activity in each frequency band was averaged across time ranges to capture observed audiovisual effects (see methods). Subplot titles show linear mixed-effect modeled p-values (uncorrected) and the number of electrodes included. All 9 subplots showed significant positive relationships between audiovisual effects before and after auditory-onset.



Supplementary Figure 4: Scatterplots showing the magnitude of audiovisual effects (auditory-alone minus audiovisual) across pairs of frequency bands, before (x-axis) or after (y-axis) auditory-onset. Columns reflect anatomical electrodes localized to the anterior STG (left), middle STG (middle), and posterior STG (right). Rows reflect separate frequency band pairs. Activity in each frequency band was averaged across time ranges to capture observed audiovisual effects (see methods). Subplot titles show linear mixed-effect modeled p-values (uncorrected) and the number of electrodes included. Gray-shaded scatterplots highlight p<.01 significant relationships.



Supplementary Figure 5: Scatterplots showing the magnitude of audiovisual effects (auditory-alone minus audiovisual) across pairs of frequency bands in the same time windows, either before (A) or after (B) auditory-onset. Columns reflect anatomical electrodes localized to the anterior STG (left), middle STG (middle), and posterior STG (right). Rows reflect separate frequency band pairs. Activity in each frequency band was averaged across time ranges to capture observed audiovisual effects (see methods). Subplot titles show linear mixed-effect modeled p-values (uncorrected) and the number of electrodes included. Gray-shaded scatterplots highlight p<.01 significant relationships.