

## Supplementary Materials

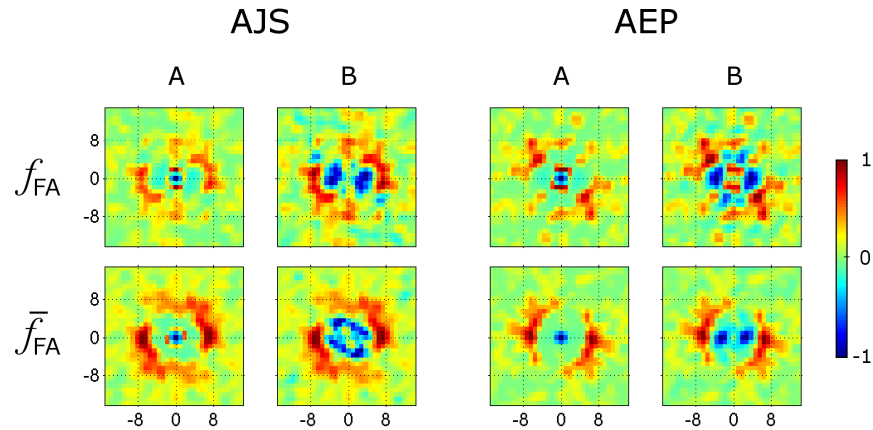


Figure SM1. Average difference spectra, smoothed and contrast-stretched for visual enhancement, are shown for observers AJS and AEP for all 1,400 trails, (A) without zeroing the DC and 1 c/deg components and (B) when the zeroing of the components is performed. Note that in (B) the positive peaks near the target frequency are somewhat enhanced and, moreover, clear negative regions are revealed.

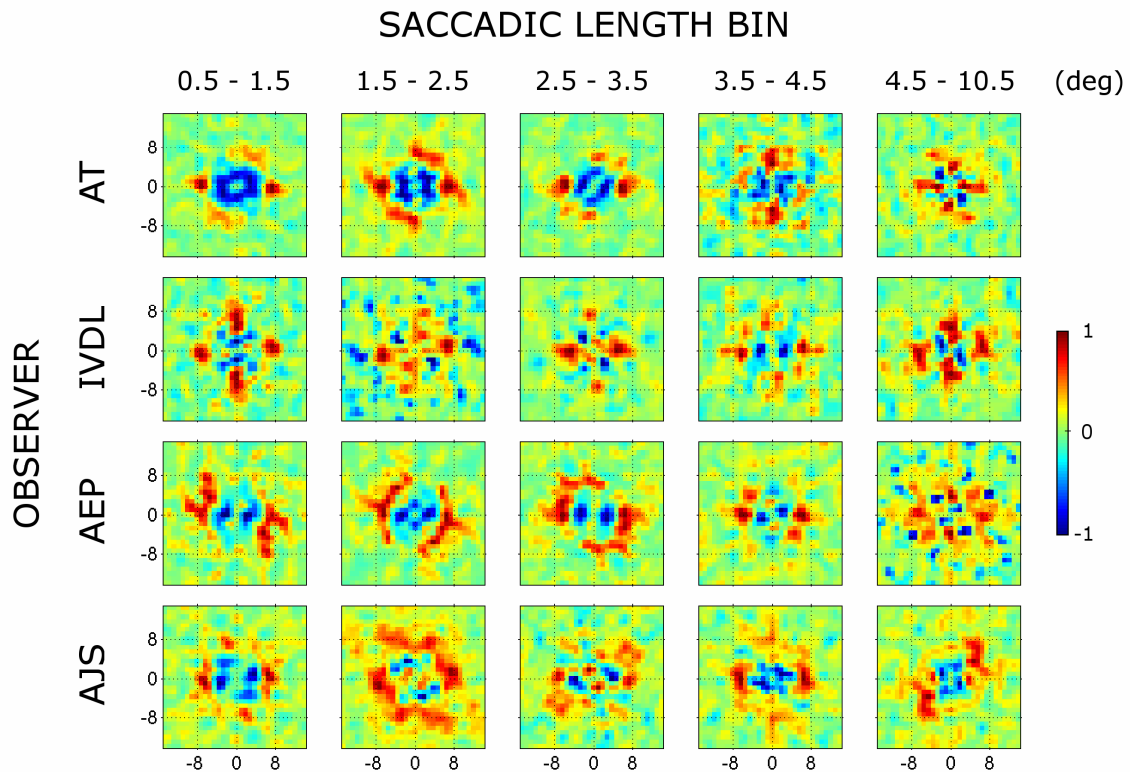


Figure SM2. Average difference spectra for the non-foveal false alarm category binned by eccentricity (columns) for each observer (rows). The first four bins are 1 deg wide and centered at 1, 2, 3 and 4 deg, and the fifth encompasses everything above 4.5 deg (because saccades that large were relatively rare). The spectra have been smoothed and contrast-stretched to emphasize the spatial structure. Regions in red and blue indicate amplitudes above and below the overall average noise spectrum ( $\sim 1/f$ ), respectively, whereas regions in green show frequency components close the overall average (indicating frequency components playing no role on attracting the observers' gaze). Note that, if so desired, the signal-to-noise ratio for the spectra from larger saccades could be further improved by filtering them with respect to the decrease in the resolution of the visual system as a function of eccentricity.