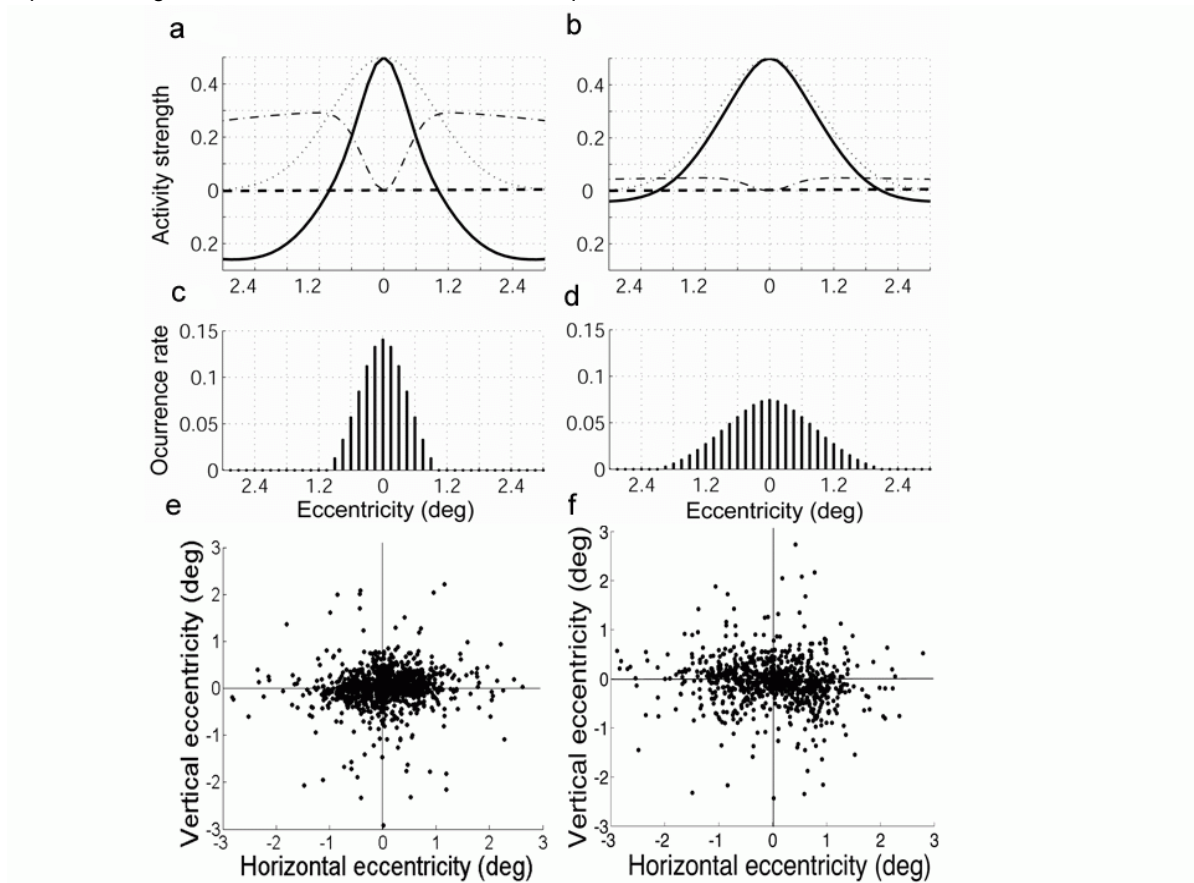


Caption: Changes in activities of SC result in altered spatial distribution of FS occurrence.



a-d: Model analysis of FS generation determined by SC activities under normal versus amblyopic viewing conditions. e-f: FS endpoint scatter plot of normal eye (a) and amblyopic eye (c) as measured in subjects. a-b: The activity strength distribution along with eccentricity under normal viewing condition (a) and amblyopic viewing condition (b). The size of the simulated SC activity map is up to 12-degree eccentricity, but only the eccentricity range within 3-degrees is shown here. The dot, dash dot and solid lines describe the excitatory activity level, the inhibitory activity level and the difference of both, respectively. The dashed lines represent the threshold for eliciting FSs. c-d: Simulated spatial distributions of the probability of FS occurrence as a function of endpoint eccentricity. Given that the occurrence rate is positively and linearly correlated with suprathreshold SC activity, the spatial distributions of FS occurrence probability in normal condition (c) and amblyopic condition (d) are shown here. Bin size = 0.15°. e-f: Each dot represents the endpoint spatial locus of a FS event in real subjects. The scatter points spreads more widely in panel (f) than those in panel (e). This indicates that the amblyopic eye has less focused fixational eye movements, reflecting less fixational saccadic control.