

Predicted contextual modulation varies with distance from pinwheel centers in the orientation preference map

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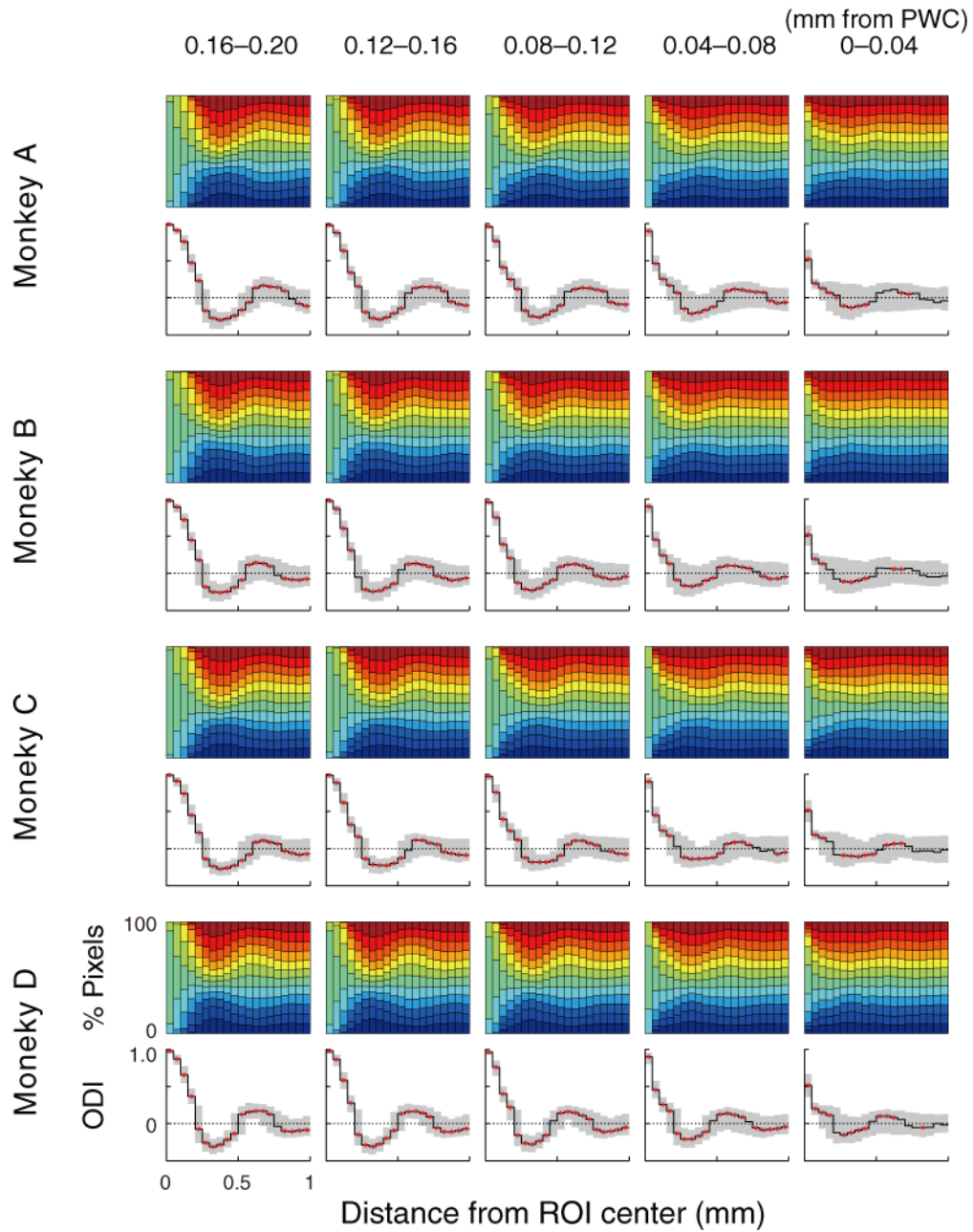
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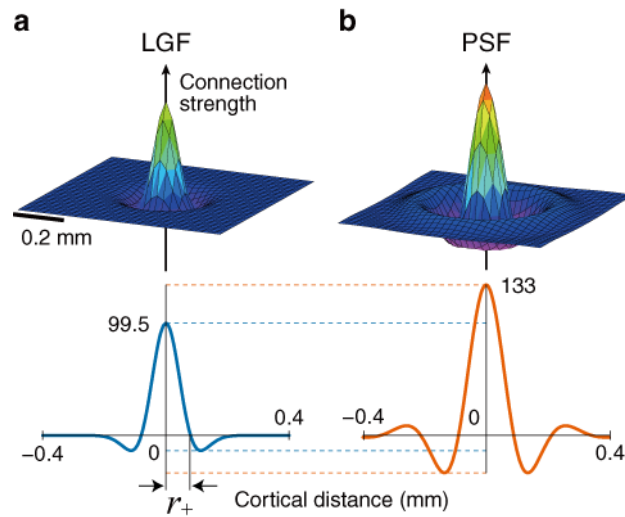
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Supplementary Information**Supplementary Figure S1**

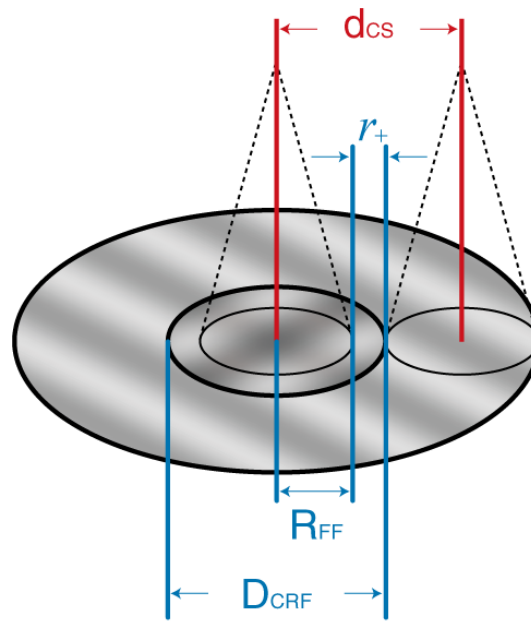
Spatial distribution of orientation preference obtained in V1 of four monkeys, plotted in the same format as in **Fig. 1c**.



Supplementary Figure S2

Weighting profiles of Laplacian-of-Gaussian function (LGF) as a model for monosynaptic connections, and cortical point-spread function (PSF) as a model for polysynaptic connections. Examples of three-dimensional view (upper) and two-dimensional view (lower) of LGF (**a**) and PSF (**b**) are illustrated. A model parameter for spatial scale of monosynaptic connections, r_+ , is depicted in the lower panel of (**a**).

$$d_{CS} = 2R_{FF} + r_+ = D_{CRF} - r_+$$



$$D_{CRF} = 2(R_{FF} + r_+)$$

Supplementary Figure S3

Schematic diagram of the relationship between visual field and cortical field, with regard to contextual stimuli.