



Presentation Abstract

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Program#/Poster#: 793.09/N24

Presentation Title: Laminar organization of visually evoked gamma power in area V4

Location: Hall A

Presentation time: Wednesday, Oct 21, 2015, 1:00 PM - 5:00 PM

Presenter at Poster: Wed, Oct. 21, 2015, 1:00 PM - 2:00 PM

Topic: ++D.04.n. Spatial and feature-based attention

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Abstract: Precision of spike times is crucial for information coding in the cortex. Gamma bursts (30-100 Hz) in cortical activity are thought to co-ordinate spike times, thus regulating information transmission. In the visual cortex, visual stimulation has been shown to elevate gamma power in the local field potentials (LFP) and spatial attention has been shown to further enhance this. In visual area V1, elevated gamma power shows a layer specific signature along the anatomically identified supra, input and deep layers that terminate and initiate distinct input and output pathways. However, the laminar

distribution of enhanced gamma power is not well understood in area V4. Also unknown is the layer specificity of attentional modulation of gamma. Using laminar array electrodes, we recorded electrophysiological activity while a monkey performed an attention-demanding task. We identified the three layers using current source density estimates and characterized visually induced gamma power in each. Understanding the layer specificity of attentional modulation of gamma power will facilitate a more complete understanding of their role in cortical processing.

Disclosures: **M.P. Jadi:** None. **A.S. Nandy:** None. **T.J. Sejnowski:** None. **J.H. Reynolds:** None.

Keyword (s): GAMMA

ATTENTION

VISUAL CORTEX

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