

CORTICAL AREA DEPENDENCE OF NEURONAL SPIKING CHARACTERISTICS

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Abstract

Spiking characteristics of neurons in Middle Temporal (MT) area and Medial Superior Temporal (MST) area in the visual cortex are compared with the ones in Principal Sulcus (PS) area in the prefrontal cortex, on the basis of three inter-spike interval statistical measures: the coefficient of variation, the skewness coefficient, and the correlation coefficient of consecutive intervals. Even for the spike sequences recorded from the same neuron, three coefficients computed from one hundred intervals do not always exhibit similar values, but distribute rather widely. The distribution of three coefficients obtained from a single neuron in the MST area does not largely deviate from the distribution obtained from other neurons randomly sampled from MT and MST areas. Those distributions, however, largely deviate from the distribution obtained from neurons in the PS area. In this way the distribution of those statistical coefficients reflects the nature of the recording site.