

Simultaneous unitary neuronal activity in both superior colliculi and its relation to eye movements in the cat

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The analysis of simultaneous unitary neuronal activity related to eye movement and recorded in both superior colliculi has shown a mirror-functioning image. Increase of the frequency discharge in a collicular unit, was associated with a decrease of the frequency discharge in the contralateral superior colliculus unit. This unitary neuronal reciprocal behaviour was observed each time a horizontal or oblique eye movement was produced. It is possible that this reciprocal functioning between neurones in both superior colliculi could exert an important influence on oculomotor brainstem structures. These results give a better idea of the role played by both superior colliculi in the control of conjugate eye movements. © 1986.