

1.06.2009

Visual information processing requires synchronous activation of a specific set of several cortical areas. The paper by Wróbel et al. (2009) shows that the two bands of beta (12-30Hz) oscillatory activity might spread this activation along two separate cortical pathways ascribed to different visual functions.

It is widely accepted that object perception is organized in the occipito-temporal (ventral) stream whereas visual information for action is elaborated in the occipito-parietal (dorsal) stream. The paper by Wróbel et al., which appeared in the February issue of *J. Neurosci.* (2007) adds two important discoveries to this scheme. The authors recorded electrical activity from many visual structures of the cats' visual system during a behavioral paradigm requiring visual attention. They have shown that attention-dependent beta activity of a specific frequency appears in selected parts of the visual system: beta 1 (12-18 Hz) activates ventral stream structures and beta 2 (19-26 Hz) - those belonging to the dorsal stream. Secondly, it appeared that these specific beta signals spread among different cortical areas via non-direct routes involving defined parts of the lateral posterior nucleus of thalamus.

Wróbel A, Ghazaryan A, Bekisz M, Bogdan W and Kamiński J (2007) **Two streams of attention dependent beta activity in the striate recipient zone of cat's lateral posterior - pulvinar complex.** *J. Neurosci.* 27, 2230-2240.