

Fast activity and oscillatory potential of carp retina in the frequency domain

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There are two kinds of fast activity in the ERG: fast retinal potentials (FRP), an irregular series of spiky wavelets and oscillatory potentials (OP), a rhythmic sequence of events. Corneal ERG from nine intact young carps, evoked by extended pulses of diffuse white light under mesopic adaptation, displayed two different groups of wavelets related to ON and OFF, respectively. Stimulation and recording conditions were established to permit separate Fourier analysis of both groups of wavelets. Power distributions of normalized ON spectra showed both a wide dispersion and a high inter-subject variability. All normalized OFF spectra showed, instead, components within a narrow band from 52 to 56 Hz, most of them maximum relative power peaks. It is concluded that FRP originating in highly labile sources dominate ON fast activity, while the predominant OFF fast activity are OP originating in a stable discrete source. © 1989.