ANECDOtal REPORT OF MAGNETOPHOSPHENE PERCEPTION IN 50 MT 20, 50 AND 60 HZ MAGNETIC FIELDS

Magnetophosphenes are described as flickering lights appearing in the visual field, due to retinal exposure to time-varying magnetic fields (MF). Human magnetophosphene perception (MP) serves as a scientific basis for international guidelines intending to limit exposure to electromagnetic fields in the extremely low frequency range. However, the flux density threshold at which MP occurs, as well as the dose and frequency responses of the phenomenon, are not clearly experimentally established. The 50–60 Hz threshold is extrapolated from data in the lower frequency range. The objective of this paper is to provide a descriptive anecdotal report of MP from 8 individuals exposed to 50 mT MF at 20, 50 and 60 Hz. They describe variations of flickering light perceptions in the visual field, matching the description by D’Arsonval (1896). This preliminary testing introduces a new experimental protocol, which will test the threshold for MP and other associated neurophysiological responses in humans.