

MAGNETOPHOSPHENE PERCEPTION AND EEG RESPONSE IN HUMANS EXPOSED TO 50 AND 60 HZ MAGNETIC FIELDS OF UP TO 50 mT

This work is aiming to establish magnetic flux density thresholds for systematic human neurophysiological responses to 50 and 60 Hz exposures. In order to do so, magnetophosphene perception and electroencephalographic responses are tested under 50 and 60 Hz magnetic field exposure conditions between 0 and 50 mT. So far, preliminary data indicate a lowest magnetophosphene perception threshold at 20 mT for a 60 Hz exposure, and suggest a decrease of associated EEG alpha activity (8-12 Hz) with higher flux densities. This protocol allows the detection, in humans, of systematic effects related to 50 and 60 Hz magnetic field exposures between 0 and 50 mT.