

Alpha Power and Maintenance of Wakefulness Test
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Our aim is to develop methods to predict unintentional sleep onset caused by sleepiness. Most sleepiness tests studies are done using the Multiple Sleep Latency Test (MSLT). However the ability to maintain wakefulness is more relevant in many occupations e.g. professional drivers and industrial operators. Sleepiness was evaluated by calculating eyes open Alpha Power. Ability to maintain wakefulness was tested with Maintenance of Wakefulness Test (MWT). A total of 1076 MWT were recorded and analysed from train drivers and remote controllers. The shortest S1 latency was 1.5 min, mean 32.3 min and in 685 recordings no sleep epochs were detected during the 40 minute MWT test. Power spectrum from O1-A2 channel was calculated from the first minute of MWT recordings. Due to instructions to stay awake it was assumed that eyes were open during the analysed one minute period. A slight but significant correlation was observed between the S1 latency of MWT and the relative alpha power of the first minute of MWT.

Alpha power is associated with short sleep latency in the Maintenance of Wakefulness Test