

**Title:** Electroencephalographic correlates of prolonged locomotor performance of professional musicians

**Summary:** The aim of this work is to verify the presence of alpha activity in the electroencephalographic recording during prolonged (20 minute) violin play and compare its morphological and topical parameters with the native EEG record before and after the performance. Research sample consisted of five professional violinist in the age range of 25-60 years. The results showed the occurrence of alpha activity for four of five probands, in one case with a very low incidence. There has been also demonstrated changes in the distribution of alpha activity from parietooccipital areas before the performance to central areas during the play and immediately after finishing. All probands showed increased amplitude of the alpha activity immediately after finishing. The obtained results confirm the changes of morphology and the changes of topic alpha activity during cognitive activities and at the onset of central fatigue during physical activity described in literature. These changes were demonstrated by increasing the amplitude of alpha activity and the shift from parietooccipital areas to central areas.

**Keywords:** EEG, alpha activity, violin performance, brain mapping