

25th IAA SYMPOSIUM ON HUMAN EXPLORATION OF THE SOLAR SYSTEM (A5)  
Late breaking abstracts (LBA)

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NEUROFEEDBACK EEG LOWERS THE STRESS REACTION IN PSYCHOMOTORIC ABILITIES  
EXECUTION LEVEL DURING ANALOG MOON MISSION

**Abstract**

There is a tendency for multiple cases in the human body where the stressors might affect the body function. Stressor usage appears as a more beneficial due to reduction of the negative stress exposure, which can be achieved through neurofeedback training. Twenty analog astronauts (female and male) was exposed to two weeks isolation stressor. During analog moon mission neurofeedback EEG was used in half of the subjects (experimental group). Preflight and postflight measurements included selected Vienna System Tests: CORSI - measures the storage capacity of spatial working memory; SIGNAL - measures long-term focused attention and the visual differentiation of a relevant signal when distractor signals are present, signal detection theory describes the perception of weak signals against a constantly changing background. Achieved results allow us to incorporate neurofeedback EEG in psychomotoric abilities execution level during prolonged isolation as a method of lowering the stressor effects influence (maintaining the execution efficiency).