Paper ID: 63784
student

IAF/IAA SPACE LIFE SCIENCES SYMPOSIUM (A1)
Behaviour, Performance and Psychosocial Issues in Space (1)

Author: Dr. Benjamin Pothier
Plymouth University, France, Benjamin.pothier@Plymouth.ac.uk

Ms. Sara Sabry
Space Generation Advisory Council (SGAC), Germany, saraihab.sabry@mail.polimi.it
Mr. Leszek Orzechowski
Space is More, Poland, orzechleszek@gmail.com
Ms. Agata Mintus
Space is More, Poland, agata.mintus@gmail.com

NEUROFEEDBACK AND VIRTUAL REALITY EXPERIENCES TO INCREASE HUMAN ADAPTATION DURING LONG LENGTH SPACE MISSIONS, A CASE STUDY.

Abstract

The purpose of this paper is to present the most relevant results of the Human factors research conducted by the author during three analog Moon mission simulations: HI-SEAS habitat in Hawaii during an ILEWG and ESA mission, in isolation in Iceland on an active volcano to test a NASA/RISD MS-1 suit with the Iceland Space Agency, and during 15 days of isolation at Lunares habitat in Poland. The author coordinated human factor anthropological investigations during the missions, and acted as the Mission Commander on the latest mission. With focus on the most recent mission, this paper consists of a theoretical and practical study of the use of a portable EEG headset for neurofeedback experiments in Isolated, Confined and Extreme environments, as well as the use of VR goggles with meditation related content for future Long length Space Missions (LLSM). The aim of the research is to inquire new non intrusive methodologies to countermeasure stress in isolation to enhance Human Performance in future long term interplanetary missions. We present in this paper the results of those investigations.