IAF/IAA SPACE LIFE SCIENCES SYMPOSIUM (A1)
Interactive Presentations - IAF/IAA SPACE LIFE SCIENCES SYMPOSIUM (IP)

Author: Ms. Agata Mintus
Space is More, Poland

Mr. Leszek Orzechowski
Space is More, Poland
Ms. Zuzanna Paśko
Space is More, Poland
Ms. Paula Drozdowska
Space is More, Poland
Ms. Katarzyna Ignatowicz
Wroclaw University of Science and Technology, Poland
Ms. Karolina Komorowska
Space is More, Poland

LUNARES RESEARCH STATION DATABASE 2021-2023 FROM THE ANALOG RESEARCH AND MISSION SIMULATIONS - REPORT ON THE DEVELOPMENT OF THE DATABASE, CONDITIONS AND AVAILABILITY

Abstract

The paper presents the summary of all the LunAres Research Station (facility for analog research on human spaceflight) databases developed and gathered since 2021. The report shows the timeline of improvements and changes implemented with each mission. The basis of the collected data is formed with a set of human factor, environmental and mission architecture data collected by the LunAres Team. Due to the LunAres research station's constant growth, the database offer is gradually expanding. For that reason, the number of missions recorded with specific sensors and data points differs. Therefore LunAres provides complementary information about the specificity of selected mission characteristics.

The database may be used as a control group for experimental studies. By default, the LunAres database is commercially available. The report lists the available data, the conditions it was gathered and the amount of data points. Currently, there are essential environmental and human telemetry systems used for gathering constant information on the state of the habitat and the crew. Additionally, the mission architecture, scenario and schedule information is collected as part of the mission data available for researchers. The main categories are: - Human Factors - vital signs, health and well-being; body weight and body composition; diet, sleep, workout logs; mood, psychological state, sociology; team measures and crew characteristics - Environmental Data - indoor climate; emergency events logs; Resources management - Mission architecture Data

The data from LunAres mission simulations was already used for multiple significant studies conducted by external researchers. The sociological and psychological studies were mostly successful, resulting in the following complex grants and projects such as studies accepted for ISS flight or grants for a 1-month mission and scientific collaboration with institutions working on research related to human spaceflight.

The LunAres Research Station would like to present the results and share data and possibilities with the community. Discussing the values and limitations of analog research.