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Simulating Space Habitation: Habitats, Design and Simulation Missions (6)

Author: Ms. Karen Rucker
United States, karen.rucker4@gmail.com

A STUDY OF SPACE ANALOG COMMUNICATIONS SYSTEMS

Abstract

Communication is as essential in remote Earth environments as it is for space exploration, for both nominal operations and emergency scenarios. Habitats for analog terrestrial environments are commonly in remote areas, with frequent turnover of crew that may not receive extensive training on habitat systems. It is essential that communications methods are user-friendly enough for conducting everyday operations by an interdisciplinary crew and robust enough to be reliable in an emergency. The Hawaii Space Exploration Analog and Simulation (HI-SEAS), operated by the International MoonBase Alliance, and the Mars Desert Research Station (MDRS), owned and operated by the Mars Society, are two such space analogs considered in this study. An examination of communications systems presently used at both facilities will be conducted, and potential alternative explored.