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

Author: Ms. Celia Avila-Rauch
ILEWG "EuroMoonMars", Germany

Dr. Gabriel G. De la Torre
University of Cádiz, Spain
Prof. Bernard Foing
ILEWG "EuroMoonMars", The Netherlands
Mr. Henk Rogers
International MoonBase Alliance, United States
Ms. Kato Claeys
International MoonBase Alliance, Belgium

PREVENTION OF BEHAVIORAL DISRUPTION IN ANALOG ASTRONAUTS MISSIONS

Abstract

The human research program helps us identify and reduce behavioral disruptions crucial for the success of future long-duration space missions, where crews will face long periods of Isolation and confinement. Scientific simulation provides researchers and technology developers with the right conditions for tests or studies, offers a challenge that requires us to step out of our comfort zone and encourages us to re-evaluate certain aspects of our lives. Behavior refers to a person's actions or reactions, often in response to external stimuli, and is observable by others and can vary according to context and situation. Comprehending the relationship between behavior and personality is crucial in psychology, sociology, and education, as it helps assess and support individual development, mental health, and social interactions. Our research started in 2020 in some analog astronaut missions focusing on emotional intelligence and cognitive processes, and we have been extending it to disruptive behavior and personality. We observed that personality traits could be relevant to behavior, and behavior to personality. We start by questioning to what extent emotional regulation can help with disruptive behavior and how we can modify dysfunctional parts of our personality. Behavioral disruption is a condition that affects a person's ability to regulate their behavior in a socially acceptable manner. Crew members must balance the needs for affiliation and support with those for autonomy and privacy. Psychological strategies include carefully selecting crew members based on psychological compatibility, training in conflict resolution and stress management techniques, training in emotional intelligence skills and designing habitats to enhance privacy and personal space, and ensuring various stimulating activities to reduce monotony, reducing the mental demands of teams working in extreme environments. Behavior is systematically related to the tools, tasks, and characteristics of people's operating environment and human factors, information on how people have learned to cope successfully or unsuccessfully with the complexities and contradictions of actual work. In the aerospace industry, behavioral disruption can seriously affect the ability of a ground or spaceflight professional to ensure safe operations. The ideal personality of the "analog astronaut" depends on the mission, equipment, and space exploration demands. Psychology focuses on how brain structures and functions are related to behavior and cognition. We will, therefore, analyse the environments in which disruptive behavior occurs and facilitate its regulation, ensuring the safety, well-being, and success of space missions. Keywords: Human behavior, disruptive behavior, human factors, personality, safety environment.