

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

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MISSION TO MARS: THE PSYCHOLOGICAL HURDLES

**Abstract**

**INTRODUCTION:** A mission to Mars will introduce a number of unique psychological and interpersonal stressors that will affect the crewmembers. In planning for such an expedition, it is important to understand and prepare for dealing with these stressors. **METHODS:** A review was made of recent on-orbit studies in space and Mars simulation experiments on Earth that addressed psychosocial factors that may occur during a Mars mission. **RESULTS:** A number of psychological and interpersonal issues emerged that are relevant in planning for such a planetary trip. Most of these issues are related to the extreme distances involved; the resulting delay in communication between the crewmembers and supportive personnel on Earth; the increased autonomy that the crew will experience; the sense of loneliness and isolation that will occur; and the possible negative effects of the Earth-out-of-view phenomenon. **CONCLUSIONS:** Possible countermeasures for dealing with psychological and interpersonal issues during a Mars expedition will be discussed. Ideas for future psychosocial research will be presented using a mission to the International Space Station as a simulation of the out-bound and return phases of a Mars expedition, and activities on the lunar surface or in a remote setting on Earth as a simulation of the planetary phase of a mission to Mars.