

HUMAN SPACEFLIGHT SYMPOSIUM (B3)
Poster Session (P)

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THE PLANNING OF AN ANALOGUE MANNED MISSION TO MARS AS A HIGHLIGHT OF
ACTIVITIES DURING WORLD SPACE WEEK 2013

Abstract

For World Space Week (WSW) in October 2013, the Austrian Space Forum (OeWF) partnered with the Space Generation Advisory Council, the Mars Society and the Kiwispac Foundation to prepare a Mars Analogue Simulation conducted by a crew of five people at the Mars Desert Research Station (MDRS) in USA, and a Mission Control Center (MCC) located in Austria.

Although the main focus of the mission was outreach activities conducted by other partner organizations, one of the major objectives of the mission was to improve the protocols for mission design, activity planning and scheduling, as well as the study of the communication between field crew in MDRS and MCC.

The WSW Mission was different from previous OeWF missions since the various outreach activities required many teleconferences to be set up with the field crew as well as with the MCC. The Flight Plan team needed to carefully apply thoughtful time management in order to schedule all of the scientific experiments for the crew at MDRS as well as allocate time-slots for outreach events.

The Flight Plan team developed the Mission Plan giving a rough overview of daily activities for the duration of the mission. This plan served as the basis for the team to schedule and update the activities during the mission in order to create the Daily Activity Package (DAP). After receiving the data from the field, the team planned to analyze and interpret it to allocate the necessary resources and prioritize activities for further DAPs. The DAP was created one day in advance to be flexible enough to include the latest information in the scheduling and to provide a reliable schedule. This way it was possible to adjust subsequent activities to the needs of the field crew and the partner organizations. Every evening the Flight Plan team shared the DAP for the next day with the crew, so each crew member could review the activities scheduled for them.

For the outreach activities a similar approach was used to stay flexible enough for last minute changes.

Different rules applied here such as contacting clients in advance at a certain time before the activity, as well as having a feedback session, which was taken into consideration for the scheduling process.

In this paper, we will describe the results of the methods used during this mission to plan the activities of the crew, the challenges and lessons learned from this approach.