

COSPAR

Moon-Mars Analogue Mission Crew 91, EuroMoonMars 1 at the Mars Desert Research Station

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The Mars Desert Research Station (MDRS) is situated in an analogue habitat-based Martian environment, designed for missions to determine the knowledge and equipment necessary for successful future planetary exploration. For this purpose, a crew of six people worked and lived together in a closed-system environment. They performed habitability experiments within the dwelling and conducted Extra-Vehicular Activities (EVAs) for two weeks (20 Feb to 6 Mar 2010) and were guided externally by mission support, called "Earth" within the simulation.

Crew 91, an international, mixed-gender, and multidisciplinary group, has completed several studies during the first mission of the EuroMoonMars campaign. The crew is composed of an Italian designer and human factors specialist, a Dutch geologist, an American physicist, and three French aerospace engineering students from Ecole de l'Air, all with differing ages between 21 and 31. Each crewmember worked on personal research and fulfilled a unique role within the group: commander, executive officer, engineer, health and safety officer, scientist, and journalist.

The expedition focused on human factors, optimal performance and communication, health and safety protocols, and EVA procedures. The engineers' projects aimed to improve rover maneuverability, far-field communication, and data exchanges between the base and the rover or astronaut. The crew physicist evaluated dust control methods inside and outside the habitat. The geologist tested planetary geological sampling procedures. The crew designer investigated performance and overall habitability in the context of the Mars Habitability Experiment from the Extre-design group. During the mission the crew also participated in a food study and an ethospace study, managed by external groups.

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