

Mars Desert Research Station (MDRS) Call for Proposals



I am an Engineering Science DPhil student and have been selected to travel to the MDRS for a two-week mission as part of Expedition 184 to help conduct research in preparation for future human space exploration. As part of my mission, I am seeking proposals for experiments that can be conducted during the two-week period by myself and my crew including: a medical doctor,

a filmmaker and journalist, a spacecraft engineer for Sierra Nevada's Dreamchaser, a satellite operations manager, and a flight controller for the International Space Station.

Some examples of previous research conducted include: geological and astrobiological surveying of the Martian analogue surface, growing of crops for food production and oxygen generation, psychological assessments of crew behaviour and interactions, communication delay studies on human task performance, and extraction of amino acids from geological samples. Many of the results from these studies have been published in peer-reviewed journals such as *Acta Astronautica* and the *International Journal of Astrobiology*.

To submit your research proposal, include: a brief outline of the research idea; what equipment you anticipate it requiring; how many crewmembers would be required and their time investment; a detailed guide on how you expect the project to be completed in the 2 week timeframe; and any crew training or debriefing requirements before or after the mission.

I would be more than happy to discuss your proposals before the deadline on Friday 20th October by which date, you should send the proposal documents to akash.trivedi@wolfson.ox.ac.uk. I look forward to hearing about your research proposals!

What is MDRS?

The Mars Desert Research Station (MDRS), owned and operated by the Mars Society, is a full-scale analogue facility in the Utah desert that supports Earth-based research in pursuit of the technology, operations, and science required for human space exploration.

Over 170 crews of six-person teams have undertaken two-week field visits at MDRS to simulate life on the Martian surface. Researchers and students alike have explored the Mars-like terrain in the area surrounding the station in full "spacesuits", maintained the station's systems, grown plants in the GreenHab to support themselves and even recycled their waste water.

The activities at MDRS are not only about informing the public, but also conducting real research to bring humanity that much closer to the reality of human exploration on the planet Mars.

More information: <http://mdrs.marssociety.org/program-information/>