# **MDRS**

## CREW

# RESEARCH



The Mars Desert Research Station (MDRS) situated near Hanksville Utah is the second of four analog stations by the Mars Society. In two week rotations crews are brought to field test technologies in an environment similar to the Mars terrain, experiencing many of the constraints that would come from living and working on Mars. The crew is made up of scientists and engineers that can promote the future habitation of Mars and use the simulation to test hypothesis and technologies.

The MDRS complex includes a Hab, where crew members live when not on an Extravehicular activities (EVA); it comprises of an EVA prep area with spacesuits and double airlocks. Also in the complex is the GreenHab which uses both conventional and aquaponic growing systems; it is climate controlled and has supplementary lights in the winter months to help maximise growing efforts. Two observatories are available to use: The Musk Observatory which is a solar observatory and the Robotic Observatory, which houses a 14 Celestron Schmidt-Cassegrain, it is automated and controlled within the Hab module. The final Module is the RAMM (Repair and Maintenance Module) used for repairs to rovers that will be used in missions.

The Mars Society is an international non-profit organisation that is dedicated to promoting the benefits of Mars exploration and travel. The MDRS achieves this by promoting experiments and field studies. During the last decade 1000 crew members have been hosted at this simulation laboratory.

Crew 212 is an international crew with five members representing four countries. It is a joint Latin American and European venture with multidisciplinary crew members showcasing the best in science and engineering. The crew is made up of both students and young professionals who have a background and interest in space exploration.



#### Mariona Badenas Agusti Commander and Astronomer

### Vittorio Netti

Commander and Health and Safety Officer



Paolo Guardabasso **Executive Officer** 

#### Marlen Castillo Vilcahuaman Crew Scientist







**Camilo Zorro** Crew Engineer

During the mission, each crewmember will conduct research in areas that will be critical to future space exploration. These are technologies, which could help to create a future base on another planet, or experiments, which would locate these planets and discover if they could be habitable.



#### Space Farming

Agriculture on Mars will require selected microbes capable to survive under hazardous environment. We will test microbes from radioactive zones in plants growing.



#### Drone Technology

Drones have the potential to revolution planetary exploration. Two experiments involving autonomous aerial vehicles will test the capabilities of such systems.



#### **Autonomous Rovers**

**Astrophysics Research** 

An autonomous rover and its drilling module will be tested during the mission to investigate the potential future of this platforms for exploration and exploitation.



The MDRS telescopes will be used to study selected star clusters, search for unknown minor bodies, perform astrophotography, and analyze the solar chromosphere



### we are MARS pioneers

"The future is in the hands of those who explore"

J.Y.Cousteau

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### ANALOG MARS MISSION

