



INFORMATION & SPONSORSHIP KIT

EXPEDITION BETA (ExBETA)



MARS SOCIETY CANADA'S SECOND TRAINING EXPEDITION

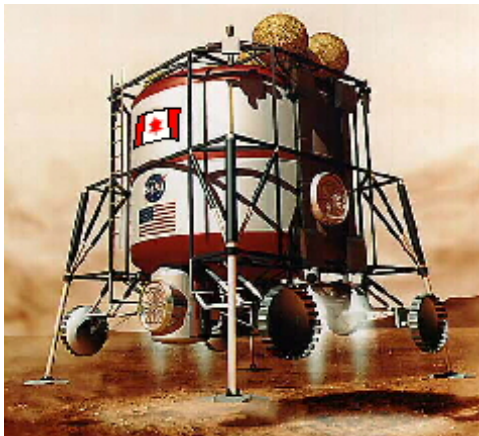
**Geology, Biology, Technology, Operations
and Human Factors Research at the
Mars Desert Research Station in Utah**



INTRODUCTION

Internationally, there is considerable interest for conducting the human exploration of Mars within the next twenty to fifty years. The European Space Agency has stated this as a goal of its *Aurora* Program, while the U.S. is redirecting its space agency NASA towards the human and robotic exploration of the solar system, beginning with the exploration of the Moon as an operational analog for Mars and other bodies. Russia similarly has Mars expedition aspirations.

A Mars analog is an environment or situation on Earth with characteristics, in nature or by simulation, for which there are, or could be, analogous characteristics on Mars. This definition covers both the physical setting of Mars, as well as design considerations for technological challenges and scenarios for human activity.



Plans for mission architectures like the NASA Reference Mission do not consider how exploration would be done most efficiently on Mars to maximize the science return. Rather, engineering constraints determine what the scientist-astronauts may do. A better approach would be to research what the requirements for the scientific exploration of Mars would be, and use them to design exploration strategies that inform engineering decisions and expedition planning. From an operational perspective, we do not yet know how to conduct a Mars expedition so that it maximizes the scientific output. This research needs to begin now, as the process for learning all we need to discover will take between 15 to 20 years prior to a first human Mars expedition.

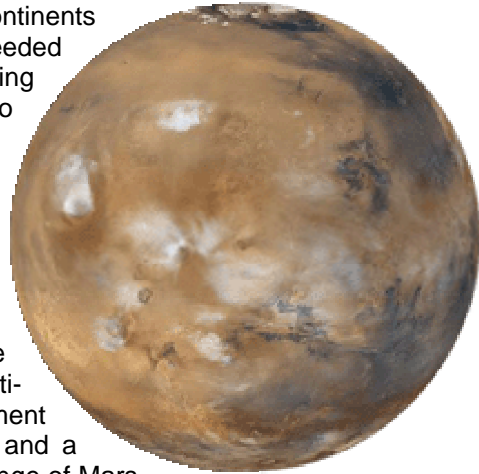
This rich area of study includes operational research, exploration technology, human factors and work-process efficiency studies adapted from industrial engineering techniques, while simultaneously studying the conduct of field science such a geological, geophysical and biological investigation of a Mars analog setting.

Support for this project will be beneficial for the Canadian space science program by establishing a structure for research to advance the technology and expertise within Canada for human Mars exploration. It would also enhance Mars Society Canada's and the Canadian Space Agency's engagement with the Canadian and international public to promote Canadian technical strengths and academic expertise. New niches, from which Canadian industries may benefit, will emerge from the successful conduct of these series of expeditions. New partnerships between Canadian and international parties will also be fostered.



WHY MARS?

A world with a surface area the size of the combined continents of the Earth, the Red Planet contains all the elements needed to support life. As such it is the Rosetta stone for revealing whether the phenomenon of life is something unique to the Earth, or prevalent in the universe. The exploration of Mars may also tell us whether life as we find it on Earth is the model for life elsewhere, or whether we are just a small part of a much vaster and more varied tapestry. Moreover, as the nearest planet with all the required resources for technological civilization, Mars will be the decisive trial that will determine whether humanity can expand from its globe of origin to enjoy the open frontiers and unlimited prospects available to multi-planet spacefaring species. Offering profound enlightenment to our science, inspiration and purpose to our youth, and a potentially unbounded future for our posterity, the challenge of Mars is one that we must embrace.



EXBETA

Expedition Beta (ExBeta) is a two-week training and research mission to the Mars Desert Research Station (MDRS) in Utah. The purpose of ExBeta is to certify new recruits for participation in future large-scale research expeditions, to expose researchers to the facilities and environment typically available in a Mars analog setting, and to cross-train participants in several areas including geology, biology, technology and operations as they pertain to human Mars exploration. The two-week expedition will take place from February 11th to 26th of 2006.



ExBeta will be the Mars Society of Canada's second training mission, building on the success of last year's [Expedition Alpha](#) to MDRS that featured studies involving the local geology, crewmember physiology, field-testing of new fieldwork protocols, EVA traverse planning, and work-study task and procedure analysis. Featured studies for ExBeta include analogue reconnaissance mapping, a survey of halophilic microorganisms, and an assessment of energy utilization. With both [Expedition One](#) to MDRS and [Expedition Two](#) to Arkaroola, Australia having been successfully completed, successful participants of ExBeta will have the chance to contribute to future large-scale expeditions being planned for the Canadian Arctic, Iceland and the Atacama Desert in Chile, among other locations.



Selected crew members of ExBeta include:

Commander, Research manager -- Melissa Battler (*Fredericton, New Brunswick, Canada*)

Executive Officer -- Ryan Kobrick (*Boulder, CO, USA*)

Chief Engineer -- Danielle Cormier (*Montreal, Quebec, Canada*)

Field Engineer / Health and Safety Officer -- Kevin Sandell (*Ottawa, Ontario, Canada*)

Field Engineer -- Lealem Mulugeta (*Winnipeg, Manitoba, Canada*)

Geologist -- Andre Dunford (*Vienna, Austria*)

Biologist -- John Thaler (*Sackville, NB, Canada*)

Researcher, Energy Utilization -- Jonathan Martin (*Vancouver, BC, Canada*)

For more information about ExBeta and other Mars analog expeditions organized by Mars Society Canada, visit <http://www.expedition-mars.org/>

BENEFITS OF SPONSORING

Organizations wishing to sponsor any of the projects of the Mars Society will have their logo displayed on our website [expedition-mars.org](http://www.expedition-mars.org), in our press releases, and on any equipment or structures where logo space is available. Publicity photographs and video will be obtained and worked into stories by professional media organizations to maximize the sponsor's positive corporate exposure.

Not all equipment and parts can be donated. In many cases, we need cash to purchase items directly, to pay for travel costs for crewmembers, to pay for food, fuel, water, power and more.

You don't have to be a high-technology, aerospace, or otherwise specialized company or individual. Any organization can help us make these projects a reality. In fact, donating to our projects is a fantastic way to advertise and support new target groups.

Whether you're an individual or corporation thinking about donating \$100, \$1000, or \$100,000, we'd be happy to work with you. Let us know.

DONATION WISH LIST

- Cash donation – \$8,000
- Food – for 8 people for 15 days.
- 3 digital cameras (5 Mega pixels, and 5-10x optical zoom or better)
- Air travel to Salt Lake City
- Freight shipping
- Computers – laptops/notebooks
- Rechargeable batteries and Battery chargers
- Digital Voice Recorders
- Geophysical instruments
- Geological tools
- Biological lab equipment
- Geochemical instruments
- General Outdoor Gear (sleeping bags, thermal underwear, boots, etc.)



CURRENT SPONSORS OF EXBETA



Make all donations payable to:

Mars Society of Canada
P.O. Box 19015
360-A Bloor Street West
Toronto, Ontario
M5S 1X0

Email: info@expedition-mars.org

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