



MARS SOCIETY CANADA LA SOCIÉTÉ POUR MARS DU CANADA

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Expedition Delta: Eight Canadians Head to Utah to Perform Research In Support of Human Mars Missions

January 18, 2008

Mars Society Canada (MSC) is preparing for its fourth Mars analogue training mission in their Exploration Mars Training Series (ExMATS). Expedition Delta (ExDelta) is scheduled to take place from Feb. 3rd to Feb. 16th, 2008 in southern Utah at the International Mars Society's Mars Desert Research Station (MDRS). ExDelta's all-Canadian eight-person crew will be the 66th crew to conduct Mars related research activities at the MDRS facilities.

The MDRS is a facility intended to support Mars analogue field studies. A Mars analogue is any environment that has features similar to what is found on Mars (in terms of geology and topography). MDRS is one of a series of stations offering researchers the opportunity to carry out their work in a remote, Mars-like environment to better understand how people will be able to live and work effectively on the Red Planet.

Expedition Delta plans to build on the success of the three previous ExMATS missions to MDRS: Expeditions Alpha (2004), Beta (2006) and Gamma (2007). These missions featured studies in numerous fields including geology, biology, crewmember physiology, crew dynamics, operational protocols, extra vehicular activity traverse planning, and procedure analysis.

The eight-person crew of Expedition Delta will be led by Commander John Thaler of New Hamburg, ON and Executive Officer Anna Grinberg of Toronto, ON. John Thaler, previously the crew biologist for ExBeta and Executive Officer of ExGamma, is a Masters student at the University of Calgary in the Faculty of Medicine. Anna Grinberg, who served as ExGamma's field engineer, is a Masters student at the University of Waterloo studying human physiology.

Three crew members will make up the engineering team and will work in tandem with the scientists while ensuring the habitat's systems, such as power generation, communications, and water management, are operational. Perry Edmundson, ExDelta's Chief Engineer, is an engineer at COM DEV in Cambridge, ON. The extravehicular activity (EVA) engineer will be Michele Faragalli, a graduate student specializing in robotics at McGill's Centre for Intelligent Machines in Montreal, QC. Nasim Kaveh-Moghaddam, the crew's Field Engineer, is completing her undergraduate degree in Mechanical Engineering at McGill University.

Expedition Delta will also have three research scientists who will ensure the completion of the various research projects. Kerry Cupit, who will work as the crew's geologist, is completing his undergraduate degree in earth sciences at Simon Fraser University in Surrey, BC. Cheryl Wartman is completing her PhD in biology at the University of Prince Edward Island and joins Expedition Delta as the crew's biologist. Arthur Guest, who is a visiting student at MIT focusing on space systems engineering, will perform the logistical research at MDRS as the crew's open-ended researcher. The crewmembers were chosen during an open selection process to Canadian researchers and engineers.

During Expedition Delta, research projects will be carried out in the fields of geology, biology and logistics. One project will focus on testing methods for analyzing the concentrations of certain gases in the soil. By analyzing these gases, future astronauts may be able to quickly locate useful resources such as methane on the surface of Mars. Another project will be performed in order to conduct water quality testing on human habitat and surface water samples in the analog Martian environment. The logistics project will analyze the operational benefits and limitations regarding the use of small logistics containers to store supplies in Martian habitats and the use of radio-frequency identification (RFID) technology to better track these supplies in real-time.

The field training program and the field research program of Expedition Delta are described more fully at the Expedition Mars <http://www.expedition-mars.org> website. Click on the ExDelta mission patch to go to ExDelta website.

MSC is a space-advocacy group dedicated to promoting, within Canada, the exploration of Mars by implementing public-outreach programs, by lobbying governments and by carrying out its own scientific research and technical projects. More information can be found at <http://www.marssociety.ca>. MSC has also completed three Expedition Mars Research Series (ExMARS) missions including Expedition One at MDRS, Expedition Two in Arkaroola, Australia and Expedition Three at MDRS. Successful participants of the ExMATS expeditions will have the opportunity to contribute to similar large-scale expeditions being planned for the Canadian Arctic, Iceland, Australia and Chile's Atacama Desert, among other locations.