

M-C. Williamson Application for NRI Research Permit 2008: Project Summary

The field work will take place in July and August 2008 on Axel Heiberg Island, Nunavut. The 2008 field season represents the first instalment of a multiyear collaborative effort between the Canadian Space Agency (CSA) and the Department of Earth Sciences at Carleton University, and has long-term **geoscientific and technical objectives**. At the start of the field season in mid-July, the Principal Investigator (P.I.), Dr. Marie-Claude Williamson, will carry out geoscientific surveys with field assistants at the McGill Arctic Research Station, near Expedition Fiord. This part of the field program is an initiative of the CSA's Space Learning Program to bring northern geoscience into the classroom, and will directly benefit high-school students and educators in Nunavut and across Canada. In August, two research projects will be carried out in collaboration with Marianne Mader, PhD candidate at the University of Carleton. The scientific objectives at the first base camp near Lightfoot River are (1) to test out field methods and geophysical instruments that could be used in future exploration missions to the Moon, and (2) map the geology of the area in greater detail to increase our understanding of the volcanic and structural history of the region. The scientific objectives at the second base camp near East Fiord are to (1) test out field methods and geophysical instruments that could be used in future exploration missions to Mars, and (2) map the geology of the area in greater detail to increase our understanding of the volcanic and structural history of the region. These geoscientific projects build upon research that was accomplished by the P.I. while at the Geological Survey of Canada (GSC Atlantic) in 2003 and 2004, in collaboration with Prof. Marcos Zentilli, Dalhousie University. The results of field work were reported at conferences, workshops, in scientific publications, an outdoor magazine, and in the Nunatsiaq News. The same type of reporting will apply to the 2008 projects. Subsequent to their field experiments at the McGill Arctic Research Station on Axel Heiberg Island, the team participants will be expected to develop space-focused, polar learning content appropriate for expanding scientific literacy among youth in the North and across Canada. This project, and the research carried out at base camps 1 and 2 in August, will be described on the CSA website, at conferences, workshops, in scientific journals, and in the Nunatsiaq news.

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