

Category

CR Cryosphere

Session Number

CR-2

Session Title

Permafrost landforms in the two Poles as possible Mars analogue

Session Description

The session focuses on permafrost landforms and related geomorphic and weathering processes on the two Poles. Permafrost landforms but also their geomorphic processes and in some cases the weathering processes can be considered the best analogue of Mars. The session wants to encourage the comparison between similar permafrost landforms in the two Poles and within the different climatic areas of each Pole (i.e. Maritime Antarctica and Continental Antarctica) and the possible comparison with the Martian analogue. The session wants also to include the comparison between the different weathering processes and rates in different permafrost environments in the two Poles (rock weathering and cryosoils) and their possible interactions with living organisms and ecosystems. Transdisciplinary contributions from geomorphology, physical geography, ecology of permafrost areas, soils, microclimate, hydrology, geophysics and remote sensing are expected. The session aims to contribute to questions from the SCAR Horizon Scan and ICARP III report emphasizing the significance of fast changing terrestrial environments.

Keywords: Permafrost, Geomorphology, Physical Processes, Permafrost Ecosystems, Weathering

Lead Convener: Mauro Guglielmin

Email: mauro.guglielmin@uninsubria.it

Affiliation lead-convener: Insubria University

Co-convener 1: Kate Swanger

Email: Kate_Swanger@uml.edu

Affiliation: University of Massachusetts Lowell

Co-convener 2: Wayne Pollard

Email: wayne.pollard@mcgill.ca

Affiliation: McGill University

Co-convener 3: Tanya O'Neill

Email: tanya.o'neill@waikato.ac.nz

Affiliation: Waikato University