

Category

AC Atmosphere, Climate

Session Number

AC-3

Session Title

High-Latitude Boundary Layers and Model Evaluation

Session Description

Given dramatic changes in the Polar Regions and a new focus on the Year of Polar Prediction (YOPP), this session addresses key physical and chemical processes, in oceanic and atmospheric boundary layers. The representation in models of these processes is needed to improve predictability of weather, sea ice, and of longer term variability and changes in the Polar Regions. Particularly challenging are the representation and assessment of clouds and surface exchange processes in next generation global and regional models. Of interest are the exchanges of heat, momentum, moisture and chemical constituents over increasingly complex ocean-ice-snow-land surfaces. Ongoing observations and field studies such as MOSAiC may provide advances in time for POLAR2018. Data analyses, model assessments, as well as studies of northern and southern high latitude surface processes and associated dynamical connections of Polar Regions to the mid-latitudes are welcome. A part of this session is also dedicated to polar climate model evaluation conducted at the SCAR-AntClim21 Workshop in October 2017. The main goal of the workshop is to provide a wide audience with hands-on experience with AntClim21 and broader Antarctic climate data products. The event will bring together senior scientists and early career researchers in areas of climate modeling, biology, atmospheric science, hydrology, and glaciology. Contributions from other studies conducting climate model evaluation are also welcome.

Keywords: Arctic, Antarctic, Boundary Layer, Weather and Climate Models, Observations and Assessments

Lead Convener: William Neff

Email: william.neff@colorado.edu

Affiliation lead-convener: CIRES University of Colorado

Co-convener 1: Alia Khan

Email: alia.khan@colorado.edu

Affiliation: NSIDC University of Colorado

Co-convener 2: Ian Renfrew

Email: I.Renfrew@uea.ac.uk

Affiliation: School of Environmental Sciences at the University of East Anglia

Co-convener 3: Timo Vihma

Email: Timo.Vihma@fmi.fi

Affiliation: Finnish Meteorological Institute