Category
OS Ocean, Sea Ice

Session Number
OS-5

Session Title
The role of snow on sea ice for sea-ice parameter retrieval and variability

Session Description
Snow on sea ice and its properties are important for sea ice mass balance, net surface radiation balance of sea ice and for various ocean-sea ice-atmosphere interactions. Snow on sea ice influences retrieval of sea ice parameters from remote sensing observations. Variability in snow properties causes noise in sea-ice concentration products and leads to erroneous sea-ice type discrimination. For sea-ice thickness retrieval accurate snow depth is among the most needed parameters.
Despite its relevance less emphasis has been put on derivation of snow parameters and their quality assessment. These parameters include, but are not limited to, snow depth, snow grain size, snow density, snow wetness, snow salinity, presence of ice lenses, presence of flooding and its impact on sea-ice surface topography.
How well do we know snow on sea ice? How well do we understand the role snow on sea ice has for the observed variability in sea-ice cover and thickness in both Polar Regions? Do you feel able to contribute to answering these questions? Then please consider submitting an abstract to our session. We invite studies dealing with in situ observations, satellite data retrieval, modeling and combinations thereof of snow parameters on sea ice. We also invite studies on methods for quantifying the influence of (unknown) snow properties on the satellite retrieval of sea-ice parameters and on reducing the noise and improving the accuracy of retrieved sea-ice parameters due to snow properties.

Keywords: Antarctic, Arctic, sea ice, snow cover, snow depth, snow properties, flooding, snow metamorphism, snow-sea ice-interaction, methods, observations, modeling, remote sensing

Lead Convener: Stefan Kern
Email: stefan.kern@uni-hamburg.de
Affiliation lead-convener: Integrated Climate Data Center, CEN, University of Hamburg, Hamburg, Germany

Co-convener 1: Burcu Özsoy
Email: ozsoybu@gmail.com
Affiliation: Polar Research Center, Istanbul Technical University, Istanbul, Turkey

Co-convener 2: Georg Heygster
Email: heygster@uni-bremen.de
Affiliation: Institute of Environmental Physics, University of Bremen, Bremen, any

Co-convener 3: Leif T. Pedersen
Email: elmltp@gmail.com
Affiliation: Danish Technical University, Lyngby, Denmark