



INTERNATIONAL GLACIOLOGICAL SOCIETY

International Symposium on

Polar Ice, Polar Climate, Polar Change

Remote sensing and modeling advances in understanding the cryosphere



University Memorial Center, University of Colorado at Boulder,
Boulder, Colorado, USA, 14–19 August 2017

Co-sponsored by:

- ❁ National Snow and Ice Data Center
- ❁ Cooperative Institute for Research in Environmental Sciences
- ❁ Institute of Arctic and Alpine Research
- ❁ National Center for Atmospheric Research

FIRST CIRCULAR

April 2016

<http://www.igsoc.org/symposia/2017/boulder>

The International Glaciological Society will hold an International Symposium on 'Polar Ice, Polar Climate, Polar Change' in 2017. The symposium will be held on the University of Colorado Boulder campus at the University Memorial Center and other campus venues on 14–19 August 2017.

THEMES

The changes of the past 15 years in Arctic and Antarctic sea ice and the ice sheets appear to be a prelude to new levels of impact of the polar regions on global climate and sea level. The single-year ice system is expanding in the Arctic, with processes comparable to those of Antarctic sea ice. Antarctic sea ice extent is highly variable, and is responding to shifts in ocean circulation and wind patterns. Both polar sea ice systems interact in important ways with climate and with the adjacent ice sheets.

Much of this growing awareness and understanding has come from the tremendous success of satellite and airborne remote sensing, supporting both process studies and modeling of the geophysical basis for observed changes. The proposed symposium would both summarize new, high-profile results from the international research communities and provide a synthesis of current understanding as climate change impacts continue.

The goals of this symposium are:

- (1) to provide a forum for presenting the current best observational data of all aspects of sea ice and polar ice sheets in both hemispheres, and their ongoing changes
- (2) to present and discuss results from models of ongoing polar climate and cryosphere processes, and interactions between sea ice and the climate system
- (3) to examine the likely future course of the sea ice, ice sheet and polar climate systems as revealed by coupled models
- (4) to entrain the global polar science community, at all stages of career development, in discussing the state and direction of the Earth's polar regions

SUGGESTED TOPICS

We welcome all submissions for presentations under the broad topics of polar remote sensing and polar cryospheric and climate system modeling. The key focus areas are:

1. Sea ice mapping and observations of sea-ice–climate–ocean processes and interactions; remote determination of snow cover on sea ice or sea-ice thickness; sea-ice models; past, present and future evolution of the Arctic or Antarctic sea-ice system; studies combining field and remote observations
2. Satellite or airborne observations of ice-sheet mass balance, glacier flow, ice-sheet accumulation, surface melting, melt ponds and streams; remote sensing of ice–ocean interaction and ocean circulation near the ice front; new observational techniques; historical records of ice flow and thickness

3. Model studies of ice-sheet and ice–ocean processes; polar climate models; coupled models of the polar atmosphere–ice–ocean–land system; predictive models of the evolution of the ice-sheet system or ice–ocean system over the next few decades to centuries
4. Trends in snow cover over the Northern Hemisphere; snow albedo, dust and soot in snow; new technologies for mapping snow cover; remote sensing (satellite and airborne) studies of permafrost, new methods of observation of permafrost
5. Calibration and validation studies of polar remote sensing data
6. Information on the polar cryosphere, especially sea ice extents, from early satellite or other remote sensing records; data rescue
7. Data management and informatics as they apply to polar remote sensing data, calibration–validation data sets

PROGRAM

A mixture of oral and poster sessions, interlaced with ample free time, forms the general framework of the symposium, which is intended to facilitate exchange of scientific information between participants in an informal manner. Additional activities include an opening icebreaker, a symposium banquet and a selection of activities during a Thursday (16 August) afternoon mid-symposium break. There is a pre-symposium geology and landscape excursion planned, and a post-symposium excursion to the path of a solar eclipse on Monday 21 August.

ABSTRACT AND PAPER PUBLICATION

Participants wishing to present a paper (either oral or poster) at the symposium will be required to submit an abstract by 1 April 2017. A collection of submitted abstracts will be provided for all participants at the symposium. The Council of the International Glaciological Society has decided to publish a thematic issue of the *Annals of Glaciology* on topics consistent with the symposium themes. Submissions to this issue will not be contingent on presentation at the symposium, and material presented at the symposium is not necessarily affirmed as being suitable for consideration for this issue of the *Annals*. Participants are encouraged, however, to submit manuscripts for this *Annals* volume. The deadline for submission of *Annals* papers will be published at a later date.

LOCAL ORGANIZING COMMITTEE

Ted Scambos, Tad Pfeffer, John Cassano; additional members may be appointed.

SCIENCE STEERING AND EDITORIAL COMMITTEE

Mark Serreze, University of Colorado at Boulder (chair), Ted Scambos, Allen Pope, Sharon Stammerjohn, Walt Meier, Marijke Holland, Noah Moltoch.

VENUE

The symposium will be held at the University Memorial Center, located near the center of the Boulder Campus, with dining facilities just a short walk away and a large patio area with a view of the famous Flatiron mountain ridge. A number of hotels are within reasonable walking distance, and Boulder has an excellent bus system and bike path network for getting around.

LOCATION

Late summer in the Colorado Rockies is spectacular, with reliably warm, generally dry weather, magnificent mountains, awe-inspiring evening thunderstorms and excellent hiking and climbing possibilities. Boulder is a city of about 100 000 people, renowned for its restaurants, walking mall and biking- and walking-friendly layout, and its beautiful University campus. Nearby is Denver, a city of 2 million inhabitants, with sports, museums and other points of interest. Boulder is about 90 minutes' drive from Rocky Mountain National Park, or 45 minutes from trails that lead to the Continental Divide in the Indian Peaks Wilderness. Microbreweries abound

FURTHER INFORMATION

If you wish to attend the symposium please register your interest online at <http://www.igsoc.org/symposia/2017/boulder/>. The Second Circular will give further information about accommodation, the general scientific programme, additional activities, preparation of abstracts and final papers. Members of the International Glaciological Society will automatically receive one, as will all those who have pre-registered. Information will also be updated on the IGS conference website, <http://www.igsoc.org/symposia/2017/boulder/> as it becomes available. A local website will open later in 2016.