

# Polar Ice, Polar Climate, Polar Change

## Remote sensing and modelling advances in understanding the cryosphere

### Call for Papers

The International Glaciological Society (IGS) will publish a special issue of the *Annals of Glaciology* with the theme 'Polar Ice, Polar Climate, Polar Change'. The issue will be part of Annals Volume 59 and will be issue number 76.

Mark Serreze from University of Colorado at Boulder has agreed to be Associate Chief Editor for this issue. Associate Editors are Ted Scambos, Allen Pope, Sharon Stammerjohn, Walt Meier, Anna Hogg, Julienne Stroeve, Brent Minchew, Martin Sharp, Dirk van As.

This is a thematic issue so we must insist on strict adherence to deadlines.

- 30 June 2017 – deadline for submitting a manuscript for this Annals.
  - <https://mc.manuscriptcentral.com/AOG>
- 1 October 2017 – deadline for supply of final accepted paper.
- Accepted papers will be published online as soon as authors have returned their proofs and all corrections have been made.
- The hard copy is scheduled for publication early 2018

### Topics

The theme of the issue is 'Polar Ice, Polar Climate, Polar Change' and is global in scope with a focus on the changes of the past 15 years in Arctic and Antarctic and how 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 modelling of the geophysical basis for observed changes.

Topics of interest 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

Other relevant topic suggestions are welcome. If you have such a suggestion, or if you have any questions about the suitability of your paper for this Annals issue, please contact the Associate Chief Editor at [serreze@kryos.colorado.edu](mailto:serreze@kryos.colorado.edu).

The *Annals of Glaciology* is listed on the 'Web of Science'.

Please note the usual high standards of IGS publications apply and authors are expected to contribute towards the publication of the issue through page charges. For further details on page charges please view the 'Annals instruction' on the website <https://www.cambridge.org/core/journals/annals-of-glaciology/information/open-access-article-processing-charges>