

1–11 Pancake sea ice kinematics and dynamics using shipboard stereo video

Madison Smith and Jim Thomson

12–23 Measurements of turbulence transfer in the near-surface layer over the Antarctic sea-ice surface from April through November in 2016

Changwei Liu, Zhiqiu Gao, Qinghua Yang, Bo Han, Hong Wang, Guanghua Hao, Jiechen Zhao, Lejiang Yu, Linlin Wang and Yubin Li

24–39 Sea-ice freeboard and thickness in the Ross Sea from airborne (IceBridge 2013) and satellite (ICESat 2003–2008) observations

Liuxi Tian, Hongjie Xie, Stephen F. Ackley, Jiakui Tang, Alberto M. Mestas-Nuñez and Xianwei Wang

40–50 Consistent ice and open water classification combining historical synthetic aperture radar satellite images from ERS-1/2, Envisat ASAR, RADARSAT-2 and Sentinel-1A/B

A. Malin Johansson, Eirik Malnes, Sebastian Gerland, Anca Cristea, Anthony P. Doulgeris, Dmitry V. Divine, Olga Pavlova and Tom Rune Lauknes

51–72 Investigating controls on sea ice algal production using E3SMv1.1-BGC

Nicole Jeffery, Mathew E. Maltrud, Elizabeth C. Hunke, Shanlin Wang, Jon Wolfe, Adrian K. Turner, Susannah M. Burrows, Xiaoying Shi, William H. Lipscomb, Wieslaw Maslowski and Kate V. Calvin

73–77 Formation of sea ice ponds from ice-shelf runoff, adjacent to the McMurdo Ice Shelf, Antarctica

Grant J. Macdonald, Predrag Popović and David P. Mayer

78–85 Analyzing the impact of CryoSat-2 ice thickness initialization on seasonal Arctic Sea Ice prediction

Richard Allard, E. Joseph Metzger, Neil Barton, Li Li, Nathan Kurtz, Michael Phelps, Deborah Franklin, Ole Martin Smedstad, Julia Crout and Pamela Posey

86–96 Influence of the loading direction on the uniaxial compressive strength of sea ice based on field measurements

Shunying Ji, Xiaodong Chen and Anliang Wang

97–105 Impact of sea-ice thickness initialized in April on Arctic sea-ice extent predictability with the MIROC climate model

Jun Ono, Yoshiki Komuro and Hiroaki Tatebe

106–116 Carbon and nitrogen uptake rates and macromolecular compositions of bottom-ice algae and phytoplankton at Cambridge Bay in Dease Strait, Canada

Kwanwoo Kim, Sun-Yong Ha, Bo Kyung Kim, C. J. Mundy, Kathleen M. Gough, Nicole M. Pogorzelec and Sang Heon Lee

117–126 Surface flooding of Antarctic summer sea ice

S. F. Ackley, D. K. Perovich, T. Maksym, B. Weissling and H. Xie

127–138 The polar sea ice topography reconstruction system

Scott Sorensen, Vinit Veerendraveer, Wayne Treible, Andrew R. Mahoney and Chandra Kambhmettu

139–153 Impacts of synoptic-scale cyclones on Arctic sea-ice concentration: a systematic analysis

Erika A. P. Schreiber and Mark C. Serreze

154–163 Monitoring evolution of melt ponds on first-year and multiyear sea ice in the Canadian Arctic Archipelago with optical satellite data

Qing Li, Chunxia Zhou, Lei Zheng, Tingting Liu and Xiaotong Yang

164–170 Effect of frequent winter warming events (storms) and snow on sea-ice growth – a case from the Atlantic sector of the Arctic Ocean during the N-ICE2015 campaign

Ioanna Merkouriadi, Bin Cheng, Stephen R. Hudson and Mats A. Granskog

171–180 Mechanisms driving the asymmetric seasonal cycle of Antarctic Sea Ice in the CESM Large Ensemble

Clare Eayrs, Daiane Faller and David M. Holland

181–195 Sea-ice production and air/ice/ocean/biogeochemistry interactions in the Ross Sea during the PIPERS 2017 autumn field campaign

S. F. Ackley, S. Stammerjohn, T. Maksym, M. Smith, J. Cassano, P. Guest, J.-L. Tison, B. Delille, B. Loose, P. Sedwick, L. DePace, L. Roach and J. Parno

196–209 Observations of exponential wave attenuation in Antarctic sea ice during the PIPERS campaign

Alison L. Kohout, Madison Smith, Lettie A. Roach, Guy Williams, Fabien Montiel and Michael J. M. Williams

210–226 Ice extent in sub-arctic fjords and coastal areas from 2001 to 2019 analyzed from MODIS imagery

Megan O'Sadnick, Chris Petrich, Camilla Brekke and Jofrid Skarðhamar

227–239 Freeboard height and snow depth observed by floating GPS on land-fast sea ice in Nella Fjord, Antarctica

Qingchuan Zhang, Fei Li, Jintao Lei, Shengkai Zhang, Zhuoming Ding, Wu Chen and Wenhao Li

Published for the International Glaciological Society, Cambridge, UK

Cambridge Core
For further information about this journal
please go to the journal website at:
[cambridge.org/aog](https://www.cambridge.org/aog)



MIX
Paper from
responsible sources
FSC® C007785



Front cover
Sea ice meets the calving front of
Thwaites Glacier, West Antarctica.
Photo taken in January 2020, during
the Thwaites-Amundsen Regional
Survey and Network (TARSAN)
team on-ice field campaign with
the International Thwaites Glacier
Collaboration (ITGC). Photo credit:
Karen Alley; view courtesy of the
excellent pilots of Kenn Borek Air.