

ESA Polar Science Collocation Meeting

Posters

67 poster entries grouped by Theme

Antarctica and the Southern Ocean

11 entries

Antarctic Ice Shelf Coastline delineation by combining Sentinel-1 and CryoSat-2 data using Deep Learning

No.: 1 Presenting Author: Jacob Alexander Hay
Organization: S&t Norway

AI4IS - Predicting calving events from Antarctic Ice Shelves using Machine Learning

No.: 2 Presenting Author: Jacob Alexander Hay
Organization: S&T Norway

Towards a Comprehensive Low-Latency Polar Observing System for Ice Velocity, Solid Ice Discharge and IOM Mass Balance

No.: 3 Presenting Author: Jan Wuite
Organization: ENVEO

Meltbelt: Turning the Tide on Antarctic Ice Loss

No.: 4 Presenting Author: Christian Wild
Organization: University of Innsbruck

High-Resolution TanDEM-X DEM Time Series Reveal Sustained Glacier Thinning in the Former Wordie Ice Shelf Basin (2014-2025)

No.: 5 Presenting Author: Antonia Warnstedt
Organization: FAU Erlangen-Nuremberg

Resistance of Antarctic extremophilic lichens to freeze-thaw cycles, photoinhibition, and drought stress. Photosynthetic study of photosystem II functioning

No.: 6 Presenting Author: Josef Hájek
Organization: Masaryk University, Faculty of Science

Quantifying Grounding Line Migration Across Different Time Scales

No.: 7 Presenting Author: Dana Floricioiu
Organization: German Aerospace Center (DLR)

Integrated Satellite and In Situ Investigation of Southern Ocean Mesoscale Eddies within the ACCESS Project

No.: 8 Presenting Author: Roberta Saul Porrino

Organization: Cà Foscari University of Venice

An improved Basal Melt Rate Dataset for Understanding the Key Drivers of Ice Sheet Loss in Antarctica

No.: 9 Presenting Author: John Palmer

Organization: Earthwave

Remote sensing of Antarctic sea ice drift: tracking sea ice from decadal to sub-daily scales

No.: 10 Presenting Author: Thomas Lavergne

Organization: Norwegian Meteorological Institute

Imaging the heterogeneity in the crust, lithosphere and geothermal heat flow beneath Antarctic subglacial lake districts

No.: 11 Presenting Author: Fausto Ferraccioli

Organization: National Institute Of Oceanography And Applied Geophysics

Glaciers

7 entries

Examining the differences between glacier elevation change estimated from radar altimetry and DEM differencing.

No.: 12 Presenting Author: Anne Guyez

Organization: Cnrs

Elevation Change of Icelandic Glaciers from TanDEM-X DEM Differencing for the GlaMBIE Intercomparison Exercise

No.: 13 Presenting Author: Lukas Krieger

Organization: Deutsches Zentrum für Luft- und Raumfahrt

New Austrian glacier inventory shows 31% area loss in two decades

No.: 14 Presenting Author: Lea Hartl

Organization: Austrian Academy Of Sciences

Cloud-Based Multi-Temporal Mapping of Glacier Snow Cover and Snow Line Altitude from Optical Satellite Data

No.: 15 Presenting Author: Christian Sommer

Organization: Friedrich-Alexander-University of Erlangen-Nuremberg

Radar altimetry beyond ice sheets: opportunities and remaining challenges for glacier monitoring

No.: 16 Presenting Author: Livia Jakob

Organization: Earthwave

Accelerating Glacier Mass Loss in the Southern Andes revealed by Interferometric Radar

No.: 17 Presenting Author: Christian Sommer

Organization: Friedrich-Alexander-University of Erlangen-Nuremberg

Combining GRACE/GRACE-FO and ESA CCI Permafrost to link Arctic glacier and permafrost change

No.: 18 Presenting Author: Ingo Sasgen

Organization: Alfred Wegener Institute

Greenland and the Arctic

11 entries

An Updated Year-Round CryoSat-2 Sea Ice Thickness Dataset for the Arctic Ocean: 2010-2024, and its Applications in the ERC SI/3D Project

No.: 19 Presenting Author: Jack Landy

Organization: UiT The Arctic University of Norway

Cyclone-Induced Sea Ice Deformation and Ridging Revealed by Satellite Synergy of SAR and Altimetry

No.: 20 Presenting Author: Shiming Xu

Organization: Tsinghua University

Classifying sea ice type with Machine Learning in the SAGE (Sea Ice Age and Drift) project.

No.: 21 Presenting Author: Jacob Alexander Hay

Organization: S&T Norway

The role of solid earth properties for the onset of Greenland ice streams

No.: 22 Presenting Author: Jörg Ebbing

Organization: Kiel University

The Arctic Sea Ice and Land Parameter Correlations (ASILaC) dataset similarities in sea ice area and permafrost, vegetation and snow water equivalent variability

No.: 23 **Presenting Author:** Annett Bartsch
Organization: b.geos GmbH

Assessment of snow depth products on Arctic summer sea ice

No.: 24 **Presenting Author:** Anne Braakmann-Folgmann
Organization: UiT, The Arctic University Of Norway

Greenland-wide Mapping of Subglacial Discharge Plumes in Fjords Using Remote Sensing and Machine Learning

No.: 25 **Presenting Author:** Anna Kirk Deichmann
Organization: Geological Survey of Denmark and Greenland (GEUS)

Svalbard Integrated Arctic Earth Observing System

No.: 26 **Presenting Author:** Ashley Morris
Organization: Svalbard Integrated Arctic Earth Observing System (SIOS)

Understanding spatial and temporal salinity variability in the gateway to the Arctic Ocean by comparing new observations, satellite products and reanalysis outputs

No.: 27 **Presenting Author:** Ilona Goszczko
Organization: Institute Of Oceanology, PAN

Exploring Calving and Dynamic Changes on a Floating Ice Shelf in Northern Greenland

No.: 28 **Presenting Author:** Molly Hammond
Organization: University Of Leeds

A Greenland Ice Sheet drainage basin data set combining supraglacial and subglacial routing

No.: 29 **Presenting Author:** Nanna Karlsson
Organization: Geus

Methodological Advances (New methods and products)

24 entries

SBAS-InSAR Based Investigation of Earthquake-Induced Deformation in Rock Glacier and Permafrost Terrain

No.: 30 **Presenting Author:** Ajay Kumar
Organization: Indian Institute Of Technology Bombay

Synergistic use of altimeter backscatter to improve radiometer thin sea ice thickness retrieval

No.: 31 **Presenting Author:** Ferran Hernández-Macià
Organization: Institute of Marine Sciences (ICM-CSIC) & isardSAT

Towards automated and dynamic compilation of Antarctic gravity and magnetic data with equivalent source inversion

No.: 32 **Presenting Author:** Matthew Tankersley
Organization: Kiel University

Permafrost Thaw in the Northern Hemisphere and Antarctica documented through ESA CCI+ Permafrost climate data records

No.: 33 **Presenting Author:** Chiara Gruber
Organization: b.geos

CLEV2ER: Development of the CRISTAL Level-2 Prototype Processor for Land Ice

No.: 34 **Presenting Author:** Karla Boxall
Organization: Lancaster University

The potential of Sentinel-1 InSAR for permafrost monitoring across the Arctic

No.: 35 **Presenting Author:** Annett Bartsch
Organization: b.geos GmbH

LiMOSAT: A system for deriving Lagrangian sea-ice motion from satellite data

No.: 36 **Presenting Author:** Sean Chua
Organization: Nersc

Antarctic Regolith as a Lunar Regolith Simulant for Space Agriculture: Effects of Native Soil Bacteria on Model Plants Growth, Photosynthesis, Biomass and Element Allocation

No.: 37 **Presenting Author:** Milos Bartak
Organization: Masaryk University

A NOVEL METHOD FOR IDENTIFYING HIGH-SALINITY WATER IN PERMAFROST THAW LAKES LINKED TO BEDFAST ICE MAPPING

No.: 38 **Presenting Author:** Helena Bergstedt
Organization: B.geos GmbH

Observing Ice Sheet Melt and Refreeze Extent using Active Microwave Satellite Data

No.: 39 **Presenting Author:** Beat Haslinger
Organization: Enveo It GmbH

Mapping Arctic Sea Ice Freeboard Using High-Resolution GNSS Reflectometry

No.: 40 **Presenting Author:** Felix Müller
Organization: Technical University of Munich (DGFI-TUM)

ESA-FMI Arctic-Boreal Earth Science, Calibration and Validation Supersite

No.: 41 **Presenting Author:** Anna Kontu
Organization: Finnish Meteorological Institute

A Deep Learning Approach to estimating Antarctic Supraglacial Lake Depths

No.: 42 **Presenting Author:** Frank Donachie
Organization: Lancaster University

Multifrequency ice-velocity measurements of Pine Island glacier, Antarctica

No.: 43 **Presenting Author:** John Peter Merryman Boncori
Organization: Technical University Of Denmark

Preparing for future Sentinels with focus on snow

No.: 44 **Presenting Author:** Juha Lemmetyinen
Organization: Finnish Meteorological Institute

CryoTEMPO-EOLIS Baseline 3: Latest advancements and looking ahead to CRISTAL

No.: 45 **Presenting Author:** Carolyn Michael
Organization: Earthwave

Multi-sensor satellite-based snow monitoring in mountain and Arctic regions

No.: 46 **Presenting Author:** Maria Heinrich
Organization: Enveo It GmbH

New Opportunities for Antarctic Science with ESA's BIOMASS Mission

No.: 47 Presenting Author: Georg Fischer
Organization: German Aerospace Center (DLR)

Englacial temperature monitoring from microwave radiometric observations: from single to multifrequencies

No.: 48 Presenting Author: Marion Leduc-Leballeur
Organization: IFAC-CNR

Scalable Ice Velocity Analysis Using Modern, Cloud-Optimised Data Formats

No.: 49 Presenting Author: Ross Slater
Organization: University Of Leeds

High resolution Antarctic sea ice thickness and snow depth from merged multi- mission altimetry

No.: 50 Presenting Author: Marion Bocquet
Organization: Norce Research As

Antarctic Sea Ice Thickness from 1995 to 2025 in Sea Ice Climate Change Initiative (CCI+) Phase 2.

No.: 51 Presenting Author: Marion Bocquet
Organization: Norce Research As

Cryo-TEMPO: Delivering CryoSat-2 radar altimetry thematic products over Land Ice, Sea Ice and the Polar Oceans

No.: 52 Presenting Author: Malcolm McMillan
Organization: CPOM Lancaster University

Automatic detection of glacier surges from ICESat-2 altimetry in Svalbard

No.: 53 Presenting Author: Désirée Treichler
Organization: University Of Oslo

Methodological Synergies (Earth Observation, In-situ, modelling, AI, Digital Twins)

14 entries

Upscaling Antarctic snow over sea ice through transfer learning

No.: 54 Presenting Author: Lu Zhou
Organization: Utrecht University

Constraining Surface Energy Fluxes with Satellite Observations of the Cryosphere

No.: 55 **Presenting Author:** Susanna Winkelbauer

Organization: University Of Vienna

Deep-Learning Assisted Quantification of Monthly Frontal Ablation Across 147 Svalbard Tidewater Glaciers from 2015 to 202

No.: 56 **Presenting Author:** Thorsten Seehaus

Organization: Friedrich-Alexander-Universität

Freshwater ice cryospheric component. From in situ observations to long-term satellite monitoring

No.: 57 **Presenting Author:** Elena Zakharova

Organization: EOLA

Assimilating Sentinel-1 and ICESat-2 Grounding Lines to Resolve Tidal Migration Patterns

No.: 58 **Presenting Author:** Sindhu Ramanath

Organization: Deutsches Zentrum fuer Luft-und Raumfahrt

Digital Glacier Twins for the European Alps: Seamlessly Linking Present Observations and Future Projections

No.: 59 **Presenting Author:** Johannes Fürst

Organization: Fau Erlangen-nürnberg

Reconstructing Tundra Lake Change from Historical Maps and Satellite Records

No.: 60 **Presenting Author:** Ivan Sudakow

Organization: The Open University, UK

TanDEM-X: Contribution to Cryospheric Applications

No.: 61 **Presenting Author:** Georg Fischer

Organization: DLR

Real Time Prediction of September Arctic Sea Ice from Regional Satellite Records

No.: 62 **Presenting Author:** Ivan Sudakow

Organization: The Open University, UK

The Arctic Methane and Permafrost Challenge Network

No.: 63 **Presenting Author:** Annett Bartsch
Organization: b.geos GmbH

Large-scale monitoring of supraglacial hydrology across Greenland and Antarctica: optical and emerging SAR approaches

No.: 64 **Presenting Author:** Amber Leeson
Organization: Lancaster University

Linking In Situ Bio-Optical Measurements with Ocean Colour Remote Sensing for Marine Biodiversity Assessment in the European Arctic

No.: 65 **Presenting Author:** Katarzyna Dragańska-Deja
Organization: IOPAN

Comparison of GRACE/GFO- and RACMO-based mass anomalies over the coastal zone of Greenland

No.: 66 **Presenting Author:** Weiran Li
Organization: TU Delft

An Iterative Solution in the Snow Microwave Radiative Transfer Model: A Tool for Understanding and Exploring Radar Interactions for Future Radar Missions

No.: 67 **Presenting Author:** Julien Meloche
Organization: Earth System Research and Integration Division, Environnement et Changement Climatique Canada