

SCAR Norway Physical Sciences



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Image credit: Google Gemini

FRISP: Forum for research on Ice Shelf Processes

The Forum for Research into Ice Shelf Processes (FRISP) aims to coordinate the community engaged in research on the glaciological, oceanic and atmospheric processes governing the behavior of ice shelves that are key to the ice sheet contribution to sea level change. We arrange annual workshops:

2025

FRISP NH: Rovaniemi, Finland 16-18/6

FRISP SH: Queensland, Australia 7-10/7

2026

FRISP: Gothenburg, Sweden 17-19/8

Chair: Elin Darelius (UiB)





ISMASS

Ice Sheet Mass Balance and Sea Level

Expert Group on **Ice Sheet Mass Balance and Sea Level** co-sponsored by the [Scientific Committee on Antarctic Research \(SCAR\)](#), the [International Arctic Science Committee \(IASC\)](#) and the [WCRP Climate and Cryosphere Project \(CliC\)](#)

Roots of the activity go back to 1993 and it had existed in its recent form since 2012.

ISMASS has promoted research on the **estimation of the mass balance** of ice sheets and their **contribution to sea level**, integrating observations and modelling efforts. It has proposed **directions for future research**, and attracted new generations of scientists into this field of research.

Note of project end:

Over the period of activity of ISMASS, the scientific landscape around ice sheet mass balance and sea-level has developed substantially, the scientific subject has grown in importance and new activities have emerged.

It is with the intention to give room for those and other new activities that we are ending the ISMASS expert as of 15. September 2025.

Team:

Heiko Goelzer (chair)
Frank Pattyn (representing SCAR)
Edward Hanna (representing CliC)
Shawn Marshall (representing IASC)
+ SSC members for different communities

Recent publication:

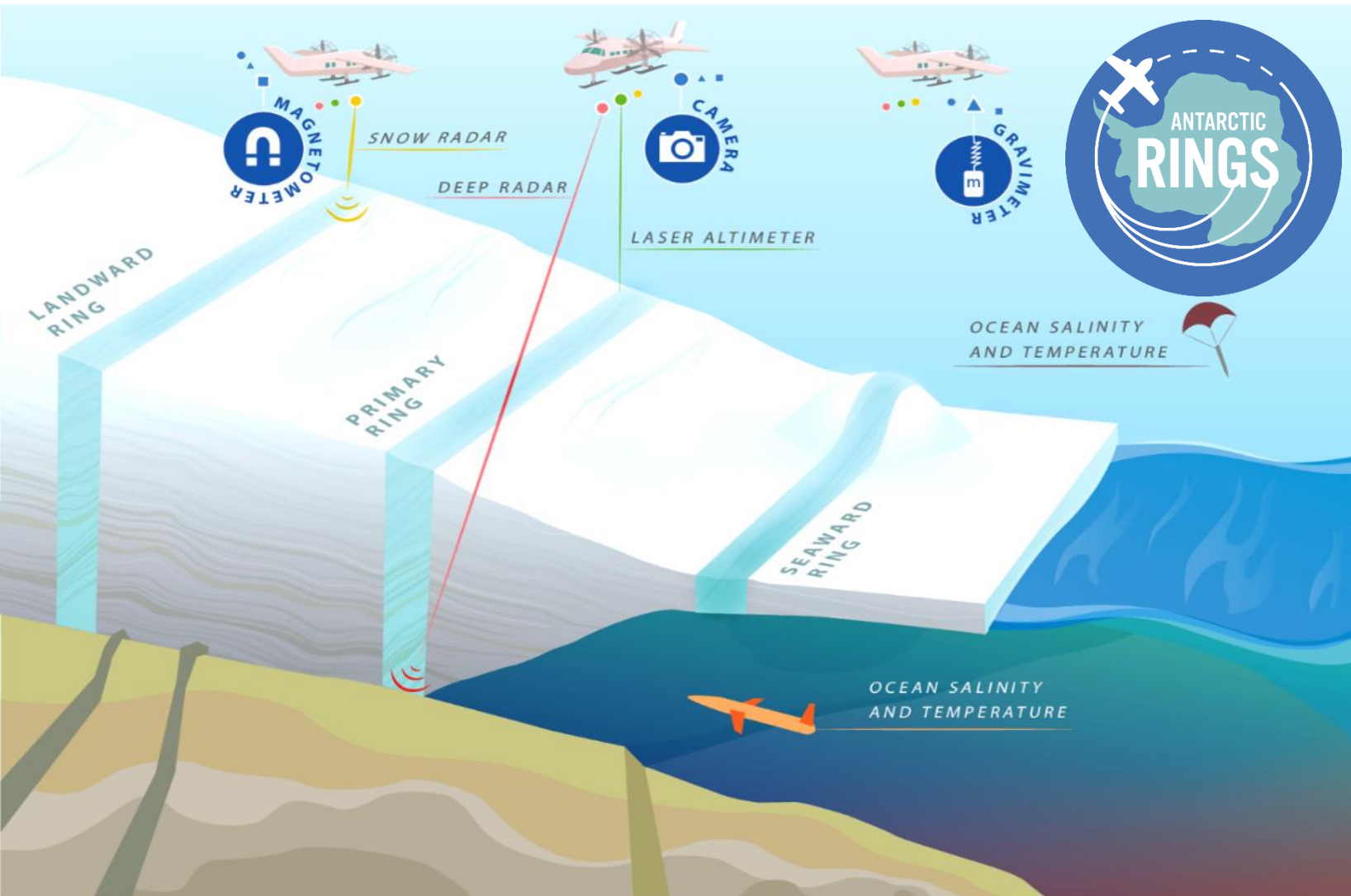
Review Article | Published: 08 February 2024

Short- and long-term variability of the Antarctic and Greenland ice sheets

[Edward Hanna](#) , [Dániel Topál](#), [Jason E. Box](#), [Sammie Buzzard](#), [Frazer D. W. Christie](#), [Christine Hvidberg](#), [Mathieu Morlighem](#), [Laura De Santis](#), [Alessandro Silvano](#), [Florence Colleoni](#), [Ingo Sasgen](#), [Alison F. Banwell](#), [Michiel R. van den Broeke](#), [Robert DeConto](#), [Jan De Rydt](#), [Heiko Goelzer](#), [Alexandra](#)

!!! We would like to thank everybody who has contributed to ISMASS activities over the years !!!

RINGS (co-sponsored with Geoscience)



- **Filling topographical and other data gaps** in the ice-sheet margin, the location that most matters for sea-level projections in the coming centuries.
- **International efforts** are a key component and are being actively coordinated through SCAR and COMNAP (Council of Managers of National Antarctic Programs).
- **Coordinating individual surveys** is a primary focus to ensure no critical data gaps are left between separate research campaigns.
- **Recently published** a comprehensive review paper authored by **over 80 experts** in *Reviews of Geophysics*.

Chair: Kenny Matsuoka (NPI)

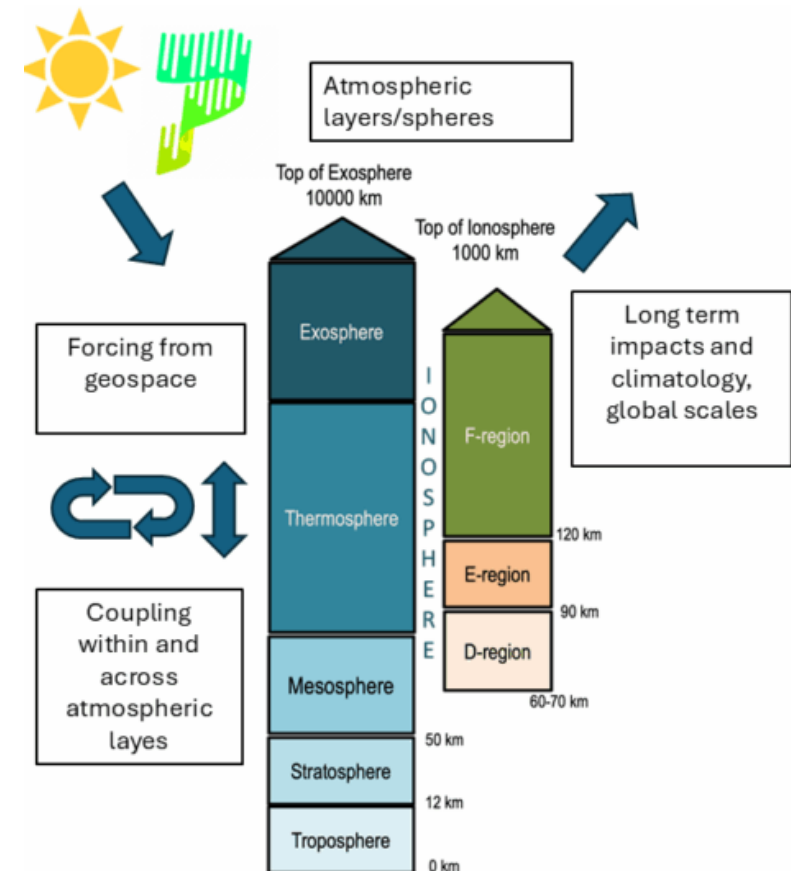
SRP AGATA



AGATA focuses on understanding:

- coupling between different atmospheric layers (i.e., different “spheres”, such as troposphere, stratosphere, ionosphere)
- coupling between the neutral and ionized atmospheric components within the respective atmospheric layers
- coupling between the atmosphere and the geospace and processes in the magnetosphere

Chief Officer: Wojciech Miloch (UiO).



Bedmap3

(directly under SAR executive, but within the PSG science domain)

scientific data

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Data Descriptor | [Open access](#) | Published: 10 March 2025

Bedmap3 updated ice bed, surface and thickness gridded datasets for Antarctica

[Hamish D. Pritchard](#) , [Peter T. Fretwell](#) , [Alice C. Fremand](#), [Julien A. Bodart](#), [James D. Kirkham](#), [Alan Aitken](#), [Jonathan Bamber](#), [Robin Bell](#), [Cesidio Bianchi](#), [Robert G. Bingham](#), [Donald D. Blankenship](#), [Gino Casassa](#), [Knut Christianson](#), [Howard Conway](#), [Hugh F. J. Corr](#), [Xiangbin Cui](#), [Detlef Damaske](#), [Volkmar Damm](#), [Boris Dorschel](#), [Reinhard Drews](#), [Graeme Eagles](#), [Olaf Eisen](#), [Hannes Eisermann](#), [Fausto Ferraccioli](#), ... [Achille Zirizzotti](#) [+ Show authors](#)

[Scientific Data](#) **12**, Article number: 414 (2025) | [Cite this article](#)

49k [Accesses](#) | **55** [Citations](#) | **942** [Altmetric](#) | [Metrics](#)

- A single entry to access ice thickness and bed topography data collected over the past six decades.
- A new bed topography under the ice sheet, connected to the latest seabed topography by IBCSO.



Recently Established «Groundwater Action Group»

The aim of this Action Group is to bring the international scientific communities together to better address this cross-disciplinary topic.

- **Significant Reservoir Potential:** Subglacial groundwater may store liquid water equivalent to **0.1 – 1.0 m of global sea-level rise**, along with vast reserves of greenhouse gases.
- **Basal Lubrication & Ice Dynamics:** Groundwater systems modulate subglacial hydrology, directly impacting **ice flow velocity** and the stability of the Antarctic Ice Sheet.
- **Interactions with the lithosphere**
- **Unique Microbial Habitats**
- **Biogeochemical Forcing**
- **Ecological Connectivity**