



Geosciences Group (GSG)

2025 webinar series available online: (<https://scar.org/science/geo/geoscience>)



Scientific Research Programmes:

Integrated Science to Inform Antarctic and Southern Ocean Conservation - **Ant-ICON**

Antarctic Geospace and Atmosphere Research - **AGATA**

INStabilities & Thresholds in ANTarctica - **INSTANT**

(PPG) Antarctica Geospherical Evolution – AGE (Joachim Jakobs, UiB)

Expert groups:

Antarctic Digital Magnetic Anomaly Map Project - ADMAP

Antarctic Near-shore and Terrestrial Observing System - **ANTOS**

Antarctic Permafrost, Soils and Periglacial Environments - **ANTPAS**

Antarctic Volcanism - **ANTVolc**

Geodetic Infrastructure of Antarctica - GIANT

International Bathymetric Chart of the Southern Ocean - **IBCSO**

Geological Heritage and Geoconservation – GEOCON (Ane Engvik, NGU)

Action Groups:

Groundwater (new group)

Internal structure of ice sheets - **AntArchitecture**

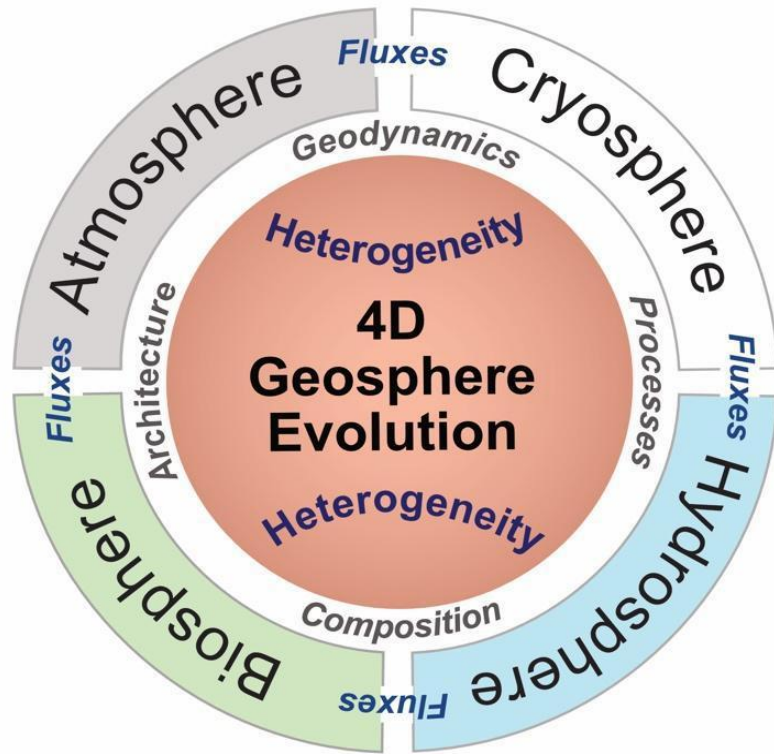
Paleoenvironmental studies - **ICEPRO**

Ice sheet margins - **RINGS** (Kenichi Matsuoka, NPI)

Antarctica Geosphere Evolution (AGE)

Earlier iteration: Antarctica Geological Evolution

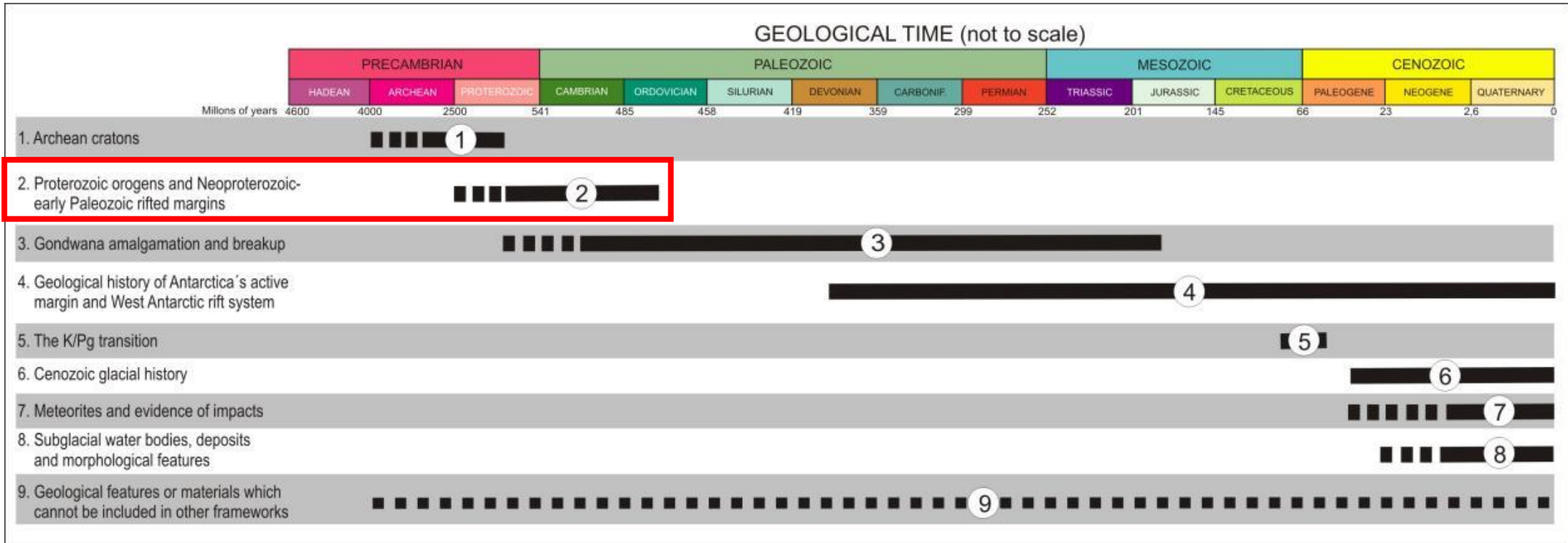
J. Jacobs, F. Ferraccioli, L. Crispini, A. Läufer, and project planning group



AGE is an international SCAR programme that integrates geological, geophysical, and geochemical data with modelling to understand Antarctica's 4D lithospheric evolution and quantify how solid-Earth processes—heat, sediments, nutrients, and dust—interact with the cryosphere, oceans, atmosphere, and biosphere to shape past, present, and future Earth-system dynamics.

Geological heritage and conservation (GEOCON)

A. Grunow, C. Atkins, E. Diaz-Martinez



2023: registration of framework 1 (**Archean cratons**) and 7 (**Meteorites**)

2026: **Proterozoic orogens** and **Neoproterozoic- early Paleozoic** rifted margins

Antarctic Digital Magnetic Anomaly Map Project (ADMMap)

G. Eagles, F. Ferraccioli, D. Damaske



PANGAEA.

Data Publisher for Earth & Environmental Science



Citation:

Eagles, Graeme; Golynsky, Alexander V; Kim, Hyung Rae; Paxman, Guy J G; Ferraccioli, Fausto (2024): ADMMap's Antarctic magnetic anomaly grids transformed for use with open source software [dataset]. PANGAEA, doi <https://doi.org/10.1594/PANGAEA.965433>

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- ADMMap 3 compilation building on several datasets.
- Pending: Access and utilization of Chinese magnetic data.

Geodetic Infrastructure of Antarctica - GIANT


A. Capra, M. Scheinert

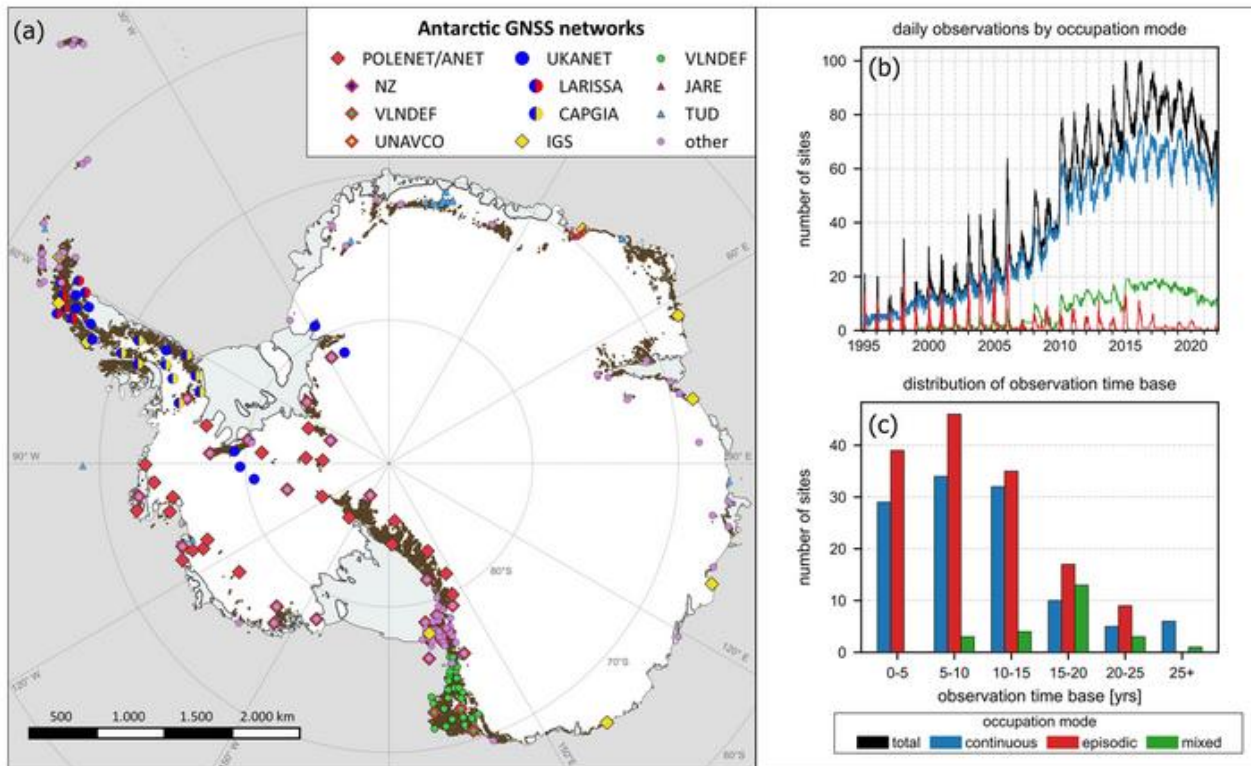
New dataset published May 2025

Buchta, Eric; Scheinert, Mirko; King, Matt; Wilson, Terry; Clarke, Peter J; Gómez, Demián; Kendrick, Eric; Knöfel, Christoph; Koulali, Achraf (2025): Daily coordinate time series for GPS stations on bedrock for Antarctica and the sub Antarctic sector, 1995-2021, reprocessed by the GIANT-REGAIN project [dataset bundled publication]. *PANGAEA*, <https://doi.org/10.1594/PANGAEA.967515>

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Groundwater

R. Westerhoff, B. Kulesa, J. Mikucki, S. Seabrook

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



- New action group (2025)
- Journal paper on the way: Overview and compilation of groundwater in Antarctica.
- Resulting in new datasets available for Quantarctica(?)
- Sidemeeting in SCAR OSC Oslo tentatively Saturday August 8th