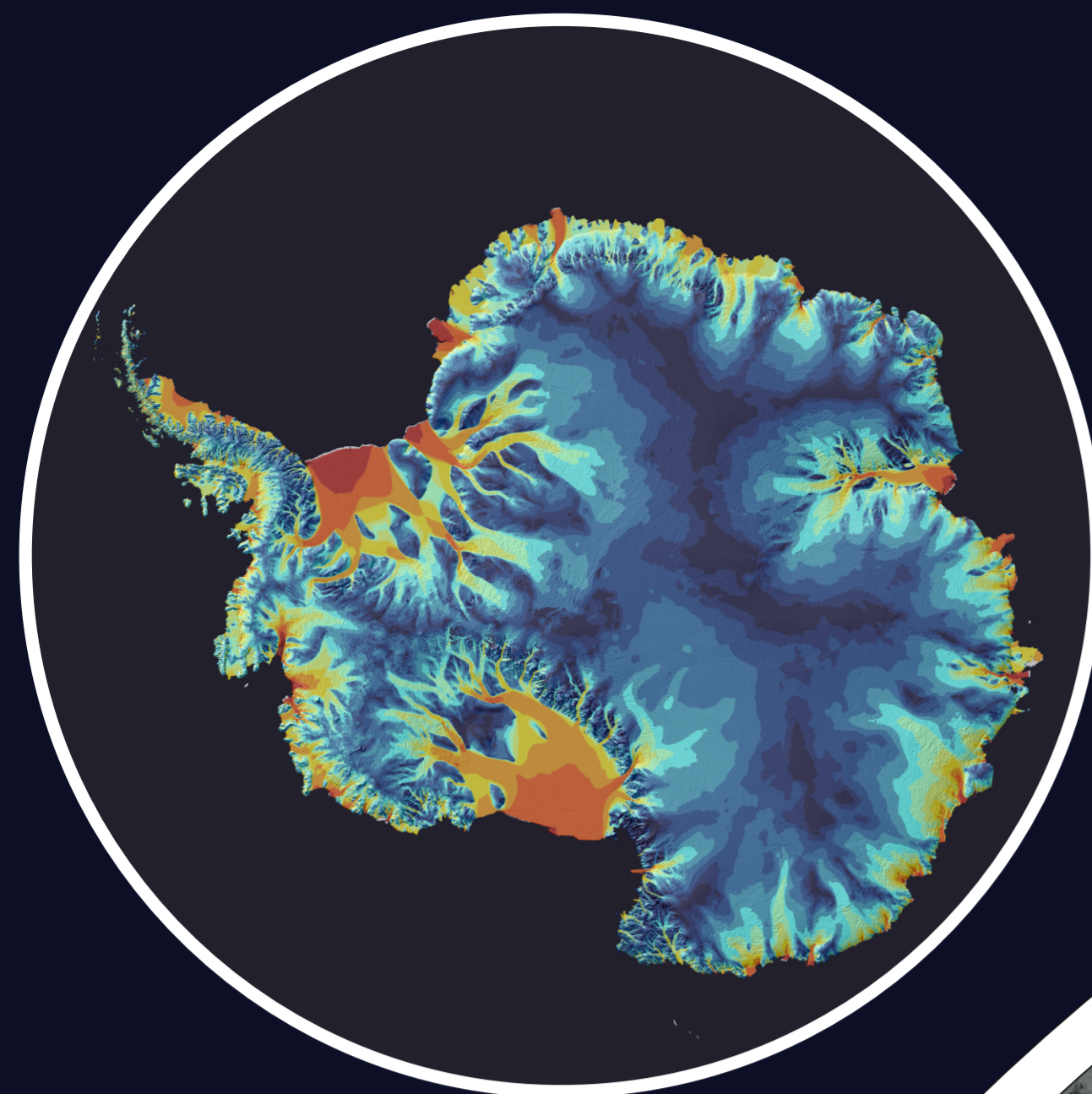
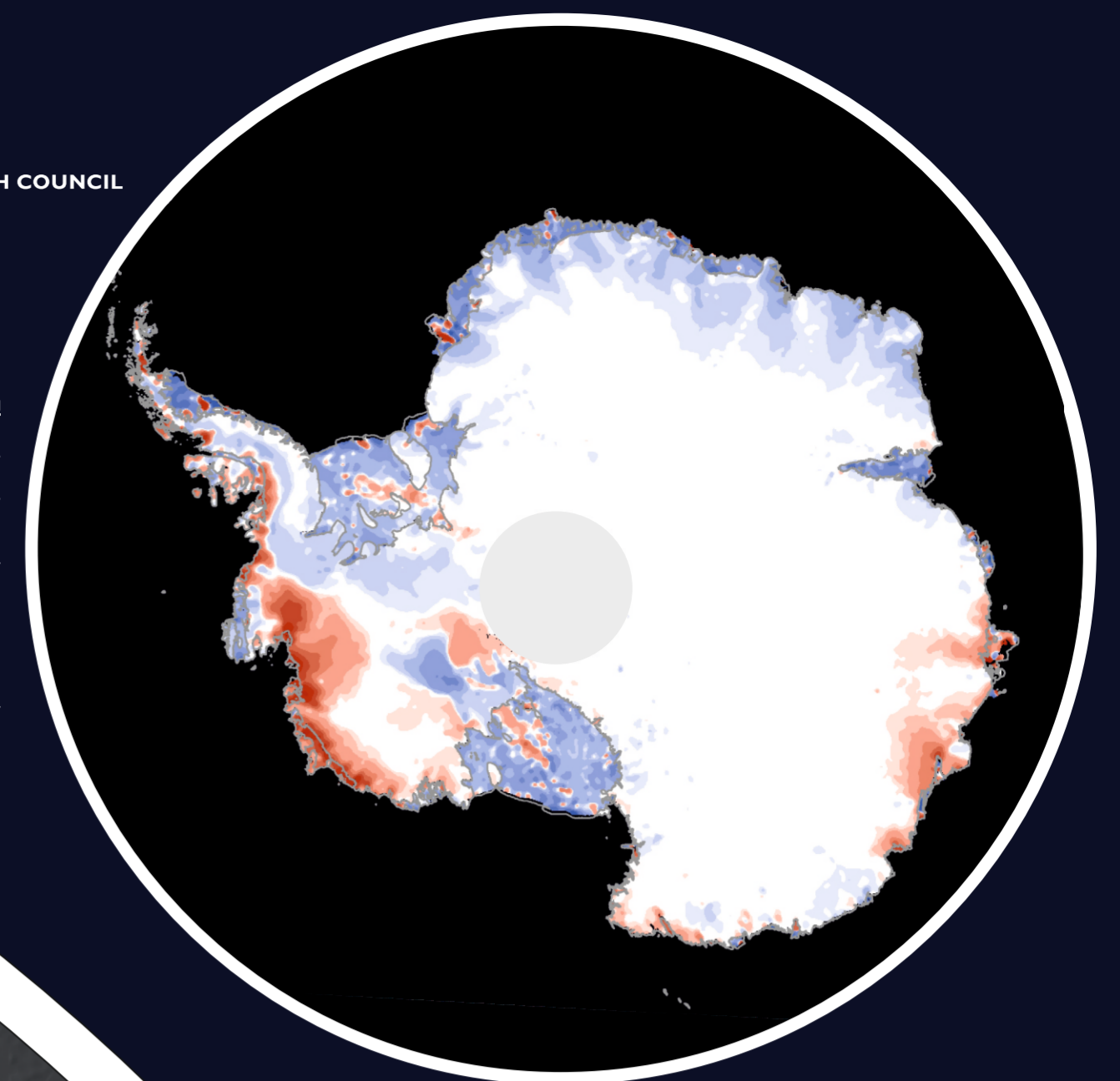
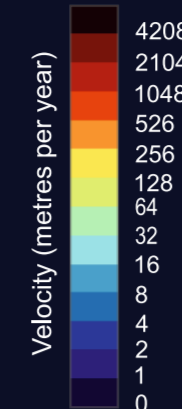


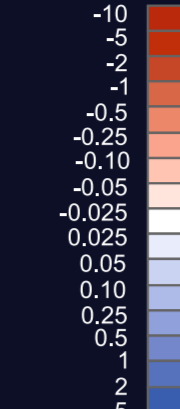
Side 2: Catchments, Hydrology and Drainage Network



Ice Velocity



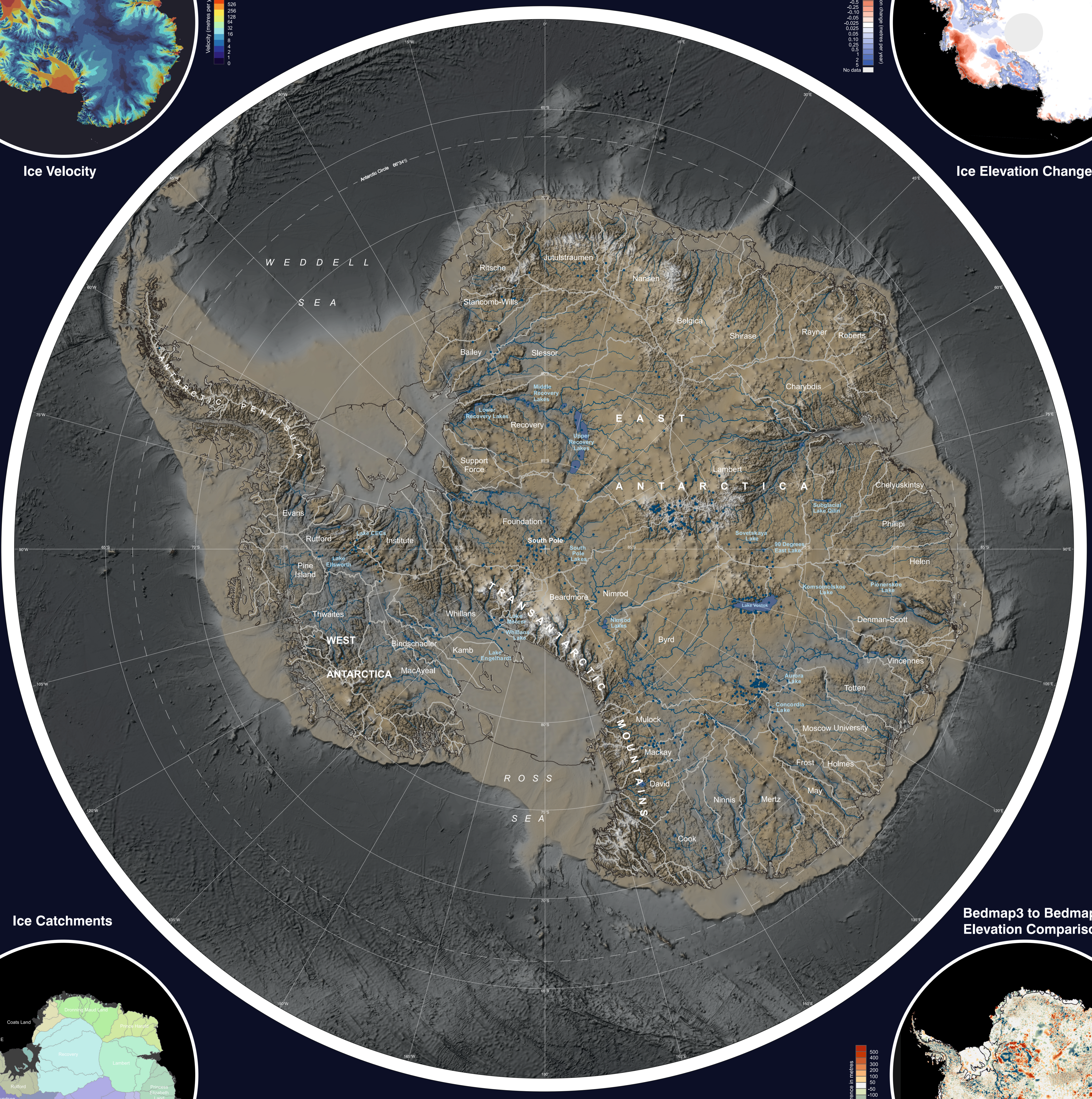
Ice Elevation Change



- Antarctic coastline
- Glacial catchment
- Subglacial lake (large)
- Stable subglacial lake
- Active subglacial lake
- Hydraulic potential flow pathway



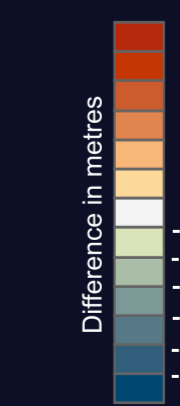
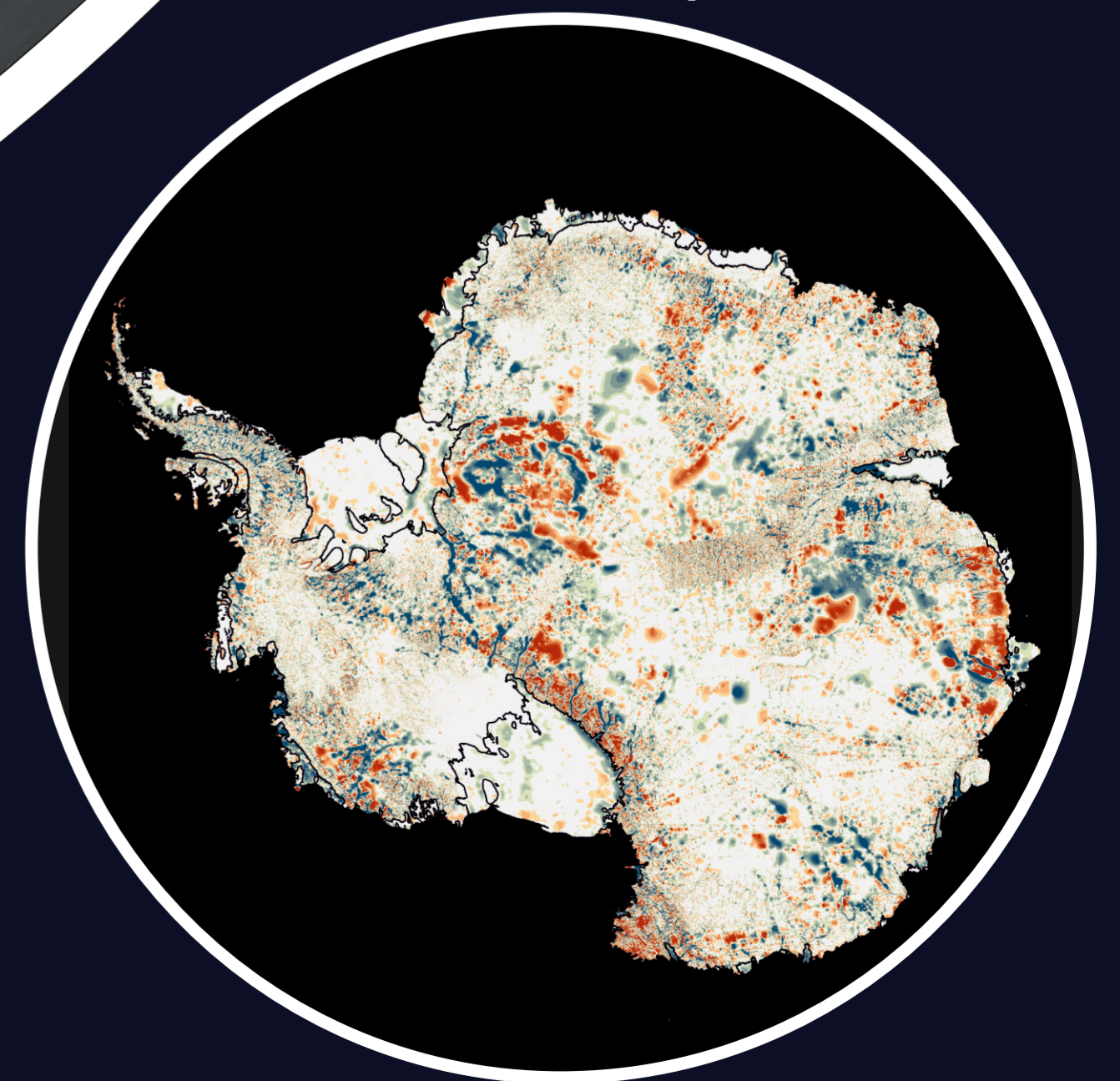
Scale 1:10 000 000
Projection: WGS84 Antarctic Polar Stereographic
EPSG: 3031
Scale correct at 71°S
Geoid: g104c



Ice Catchments



Bedmap3 to Bedmap2 Elevation Comparison



These maps showcase **Bedmap3**, the latest suite of gridded products describing the surface elevation, ice-thickness and the seafloor and subglacial bed elevation of Antarctica south of 60° S. Bedmap3 incorporates and adds to all of the post-1950s datasets previously used for Bedmap1 and Bedmap2, including 64 new aerogeophysical surveys by 15 data providers that represent an additional 52 million data points and 1.9 million line kilometres of measurement. The two sides of this map show the bed elevation in different colour schemes to highlight different features.

Side 1 displays a cartographic colour scheme, highlighting the elevation of the bed beneath the ice and which parts of subglacial Antarctica rest beneath sea level. Side 2 shows ice catchments, subglacial lakes beneath the ice and the drainage network and hydrology that drains meltwater from the interior of the continent to the ocean. Theoretical routes that subglacial water would take beneath the ice, calculated according to subglacial water flow theory beneath gradients of subglacial hydraulic potential (Shreve, 1972) derived from the new Bedmap3 bed and ice surface. Lake symbols denote active and stable lakes, active lakes periodically drain, changing their shape, whilst stable lakes remain constant.

Sources: Elevation model: Pritchard, H.D. & Fretwell, P.T., *et al.* (2024). Bedmap3 updated ice bed, surface and thickness gridded datasets for Antarctica Catchments and potential flowlines: Kirkham, J., *et al.* (2024) in prep Subglacial lakes: Livingston *et al.* *Nature* (2022) doi:10.1038/s43247-021-00246-9 Place names: SCAR Composite Gazetteer <https://data.ant.gov.au/aandc/gaz/scar/search.cfm> Surrounding region map and oceanic names taken from IBCSO v2 Dorschel, B., *et al.* (2022) Ice velocity roundel data: Eric Rignot *et al.* *Science* (2017) doi:10.1126/science.1208336 Ice Elevation Change data: Ben Smith *et al.* *Science* (2020). doi:10.1126/science.aaz5845 Coastline: Gerrish, L., *et al.* (2024). Medium resolution vector polylines of the Antarctic coastline (7.9) doi:10.5285/2792d06-1e9d-4e00-a5c6-37d443bee5297

This map was compiled as part of the SCAR Bedmap3 Action Group. Map design and compilation by P.T. Fretwell with the help of the BAS Mapping And Geographic Information Centre (MAGIC) 2024. ISBNs flat 978-0-85665-236-3, folded 978-0-85665-235-6 © NERC-UKRI 2024. Printed by Dennis Maps