



IBCSO v1.0

A new view on Antarctic bathymetry

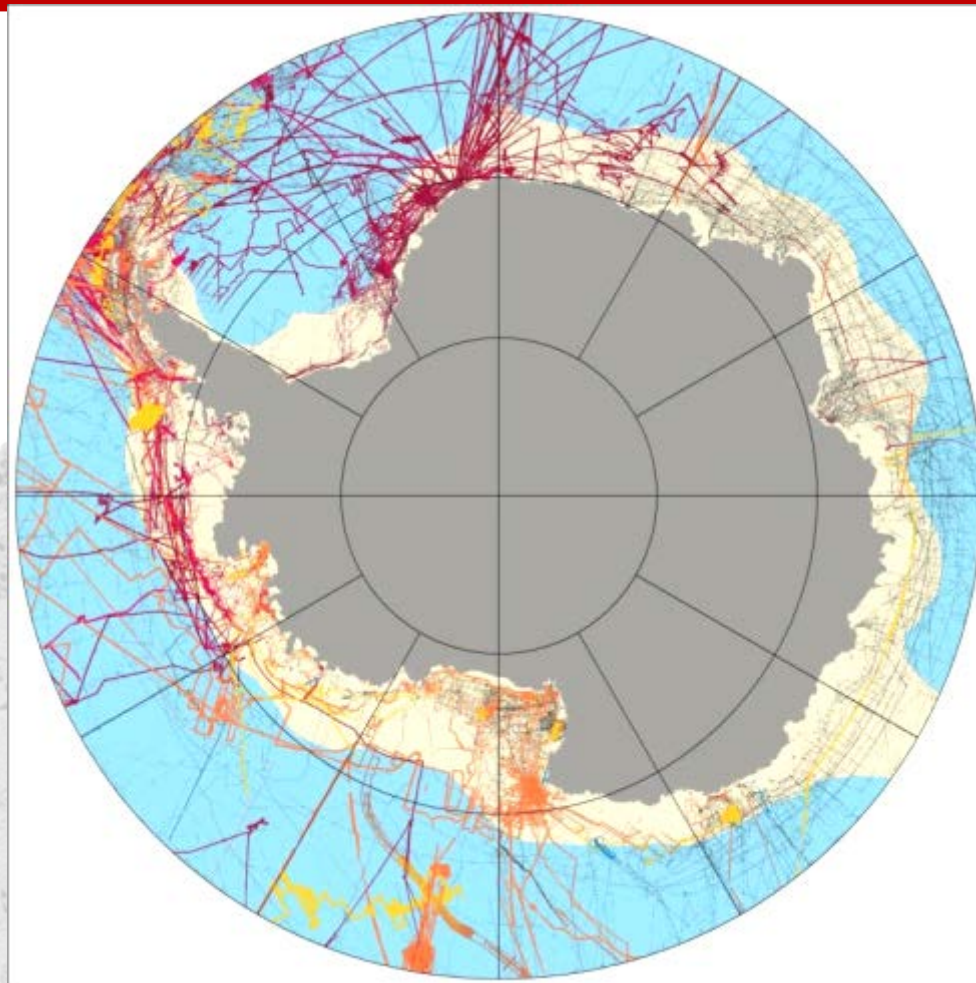
Arndt, Jan Erik¹⁾; Schenke, Hans Werner¹⁾; Jakobsson, Martin²⁾; Nitsche, Frank O. ³⁾; Buys, Gwen⁴⁾; Goleby, Bruce⁵⁾; Rebesco, Michele⁶⁾; Bohoyo, Fernando ⁷⁾; Hong, Jong-Kuk ⁸⁾; Black, Jenny ⁹⁾; Greku, Rudolf ¹⁰⁾; Udintsev, Gleb ¹¹⁾; Barrios, Felipe ¹²⁾; Reynoso-Peralta, Walter ¹³⁾; Taisei, Morishita ¹⁴⁾; Wigley, Rochelle ¹⁵⁾;

¹⁾ Alfred-Wegener-Institute; ²⁾ Stockholm University; ³⁾ Lamont-Doherty Earth Observatory; ⁴⁾ British Antarctic Survey; ⁵⁾ Geoscience Australia; ⁶⁾ Istituto Nazionale di Oceanografia e di Geofisica Sperimentale; ⁷⁾ Instituto Geológico y Minero de España; ⁸⁾ Korean Polar Research Institute; ⁹⁾ Institute of Geological and Nuclear Sciences; ¹⁰⁾ Institute of Geological Sciences; ¹¹⁾ Vernadsky Institute of Geochemistry and Analytical Chemistry; ¹²⁾ Department of Hydrography, Chile; ¹³⁾ Navy Hydrographic Service, Argentina; ¹⁴⁾ Japan Coast Guard; ¹⁵⁾ University of New Hampshire

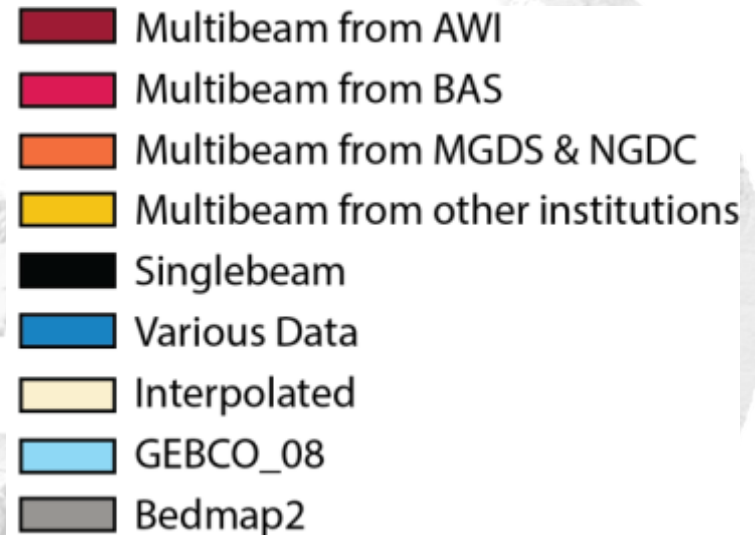
Data Contributors



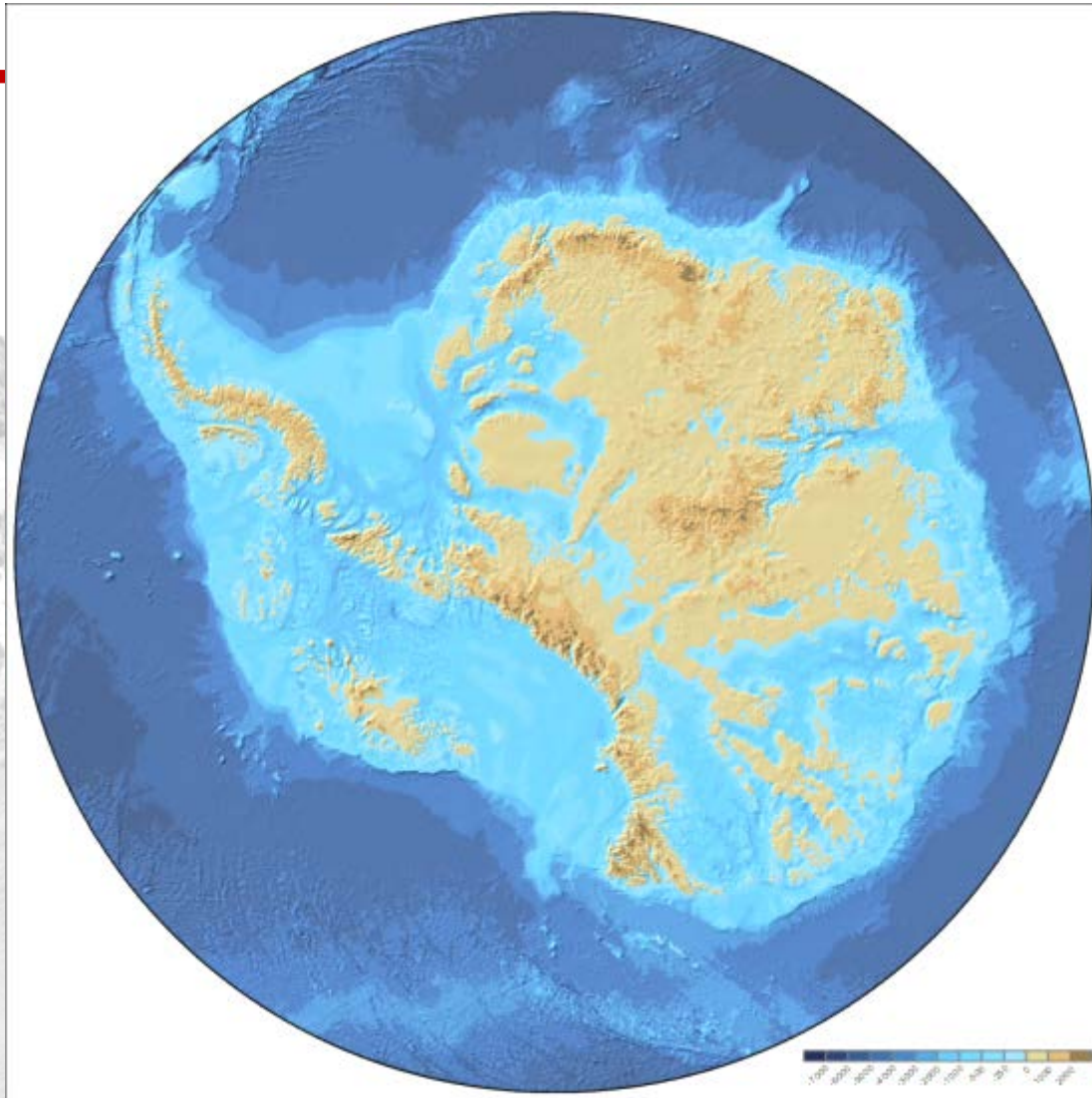
Data Distribution



- More than 4200 million soundings
- 15.4 % Multibeam
- 1.4 % Singlebeam

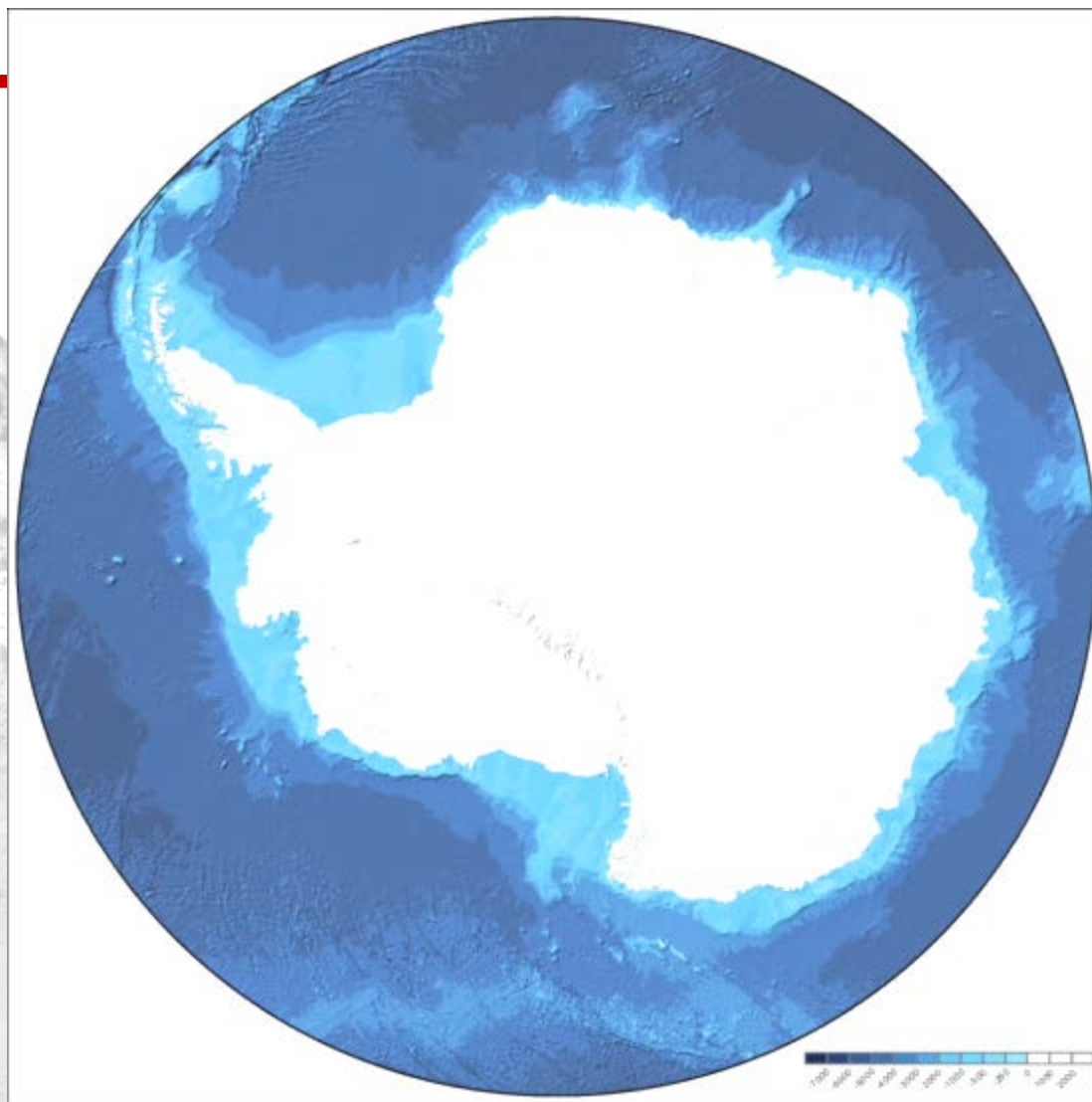


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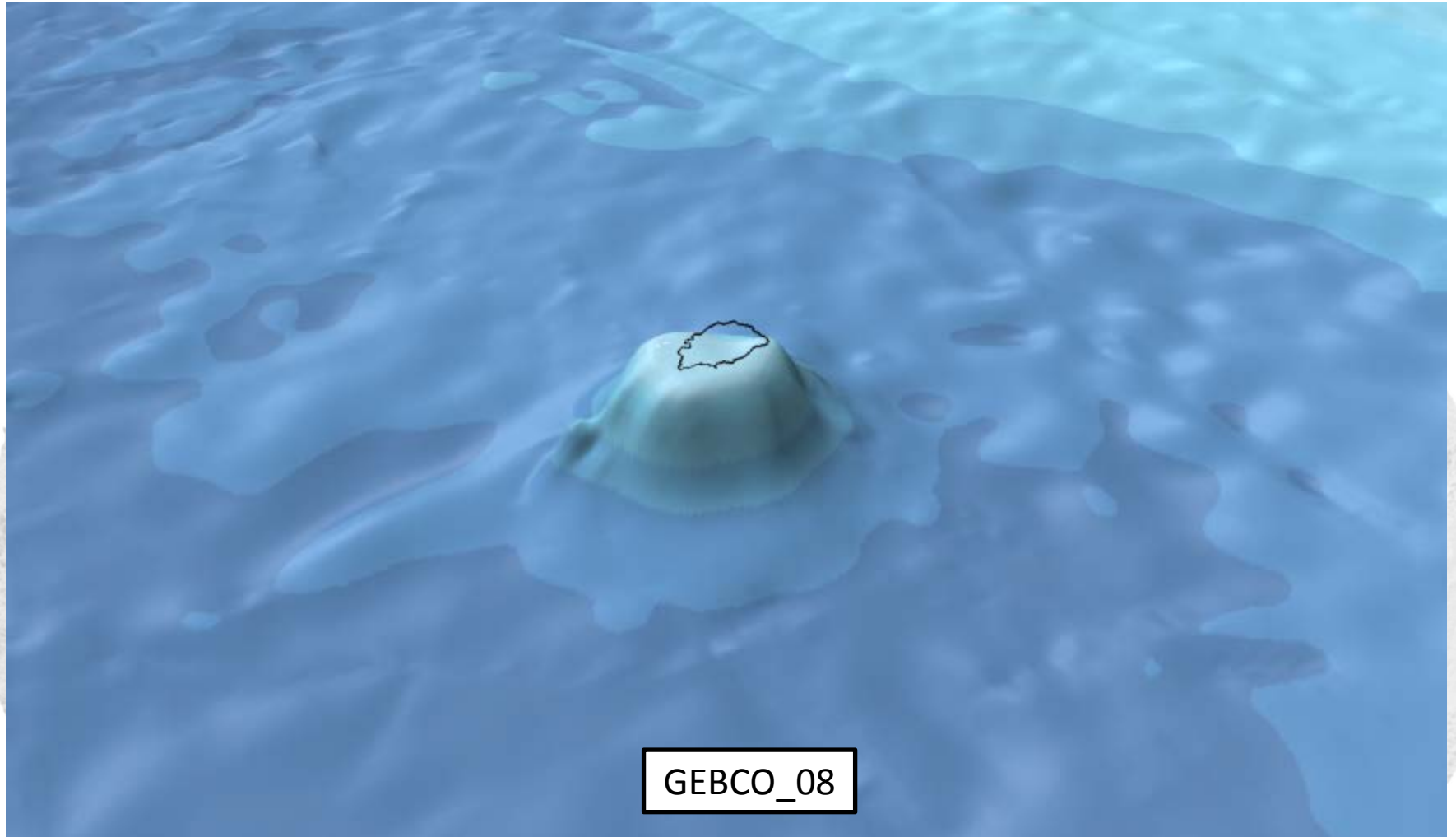




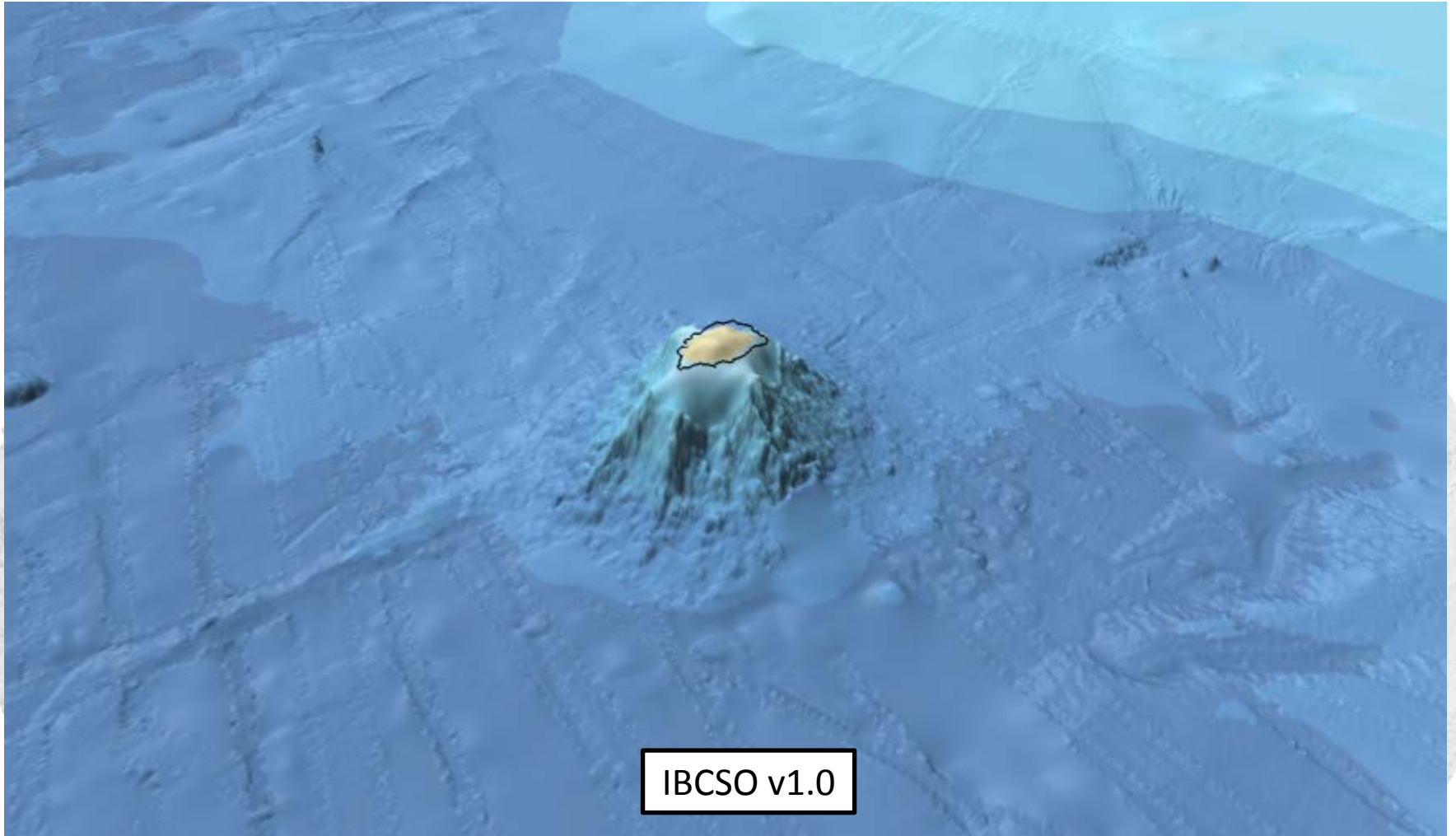
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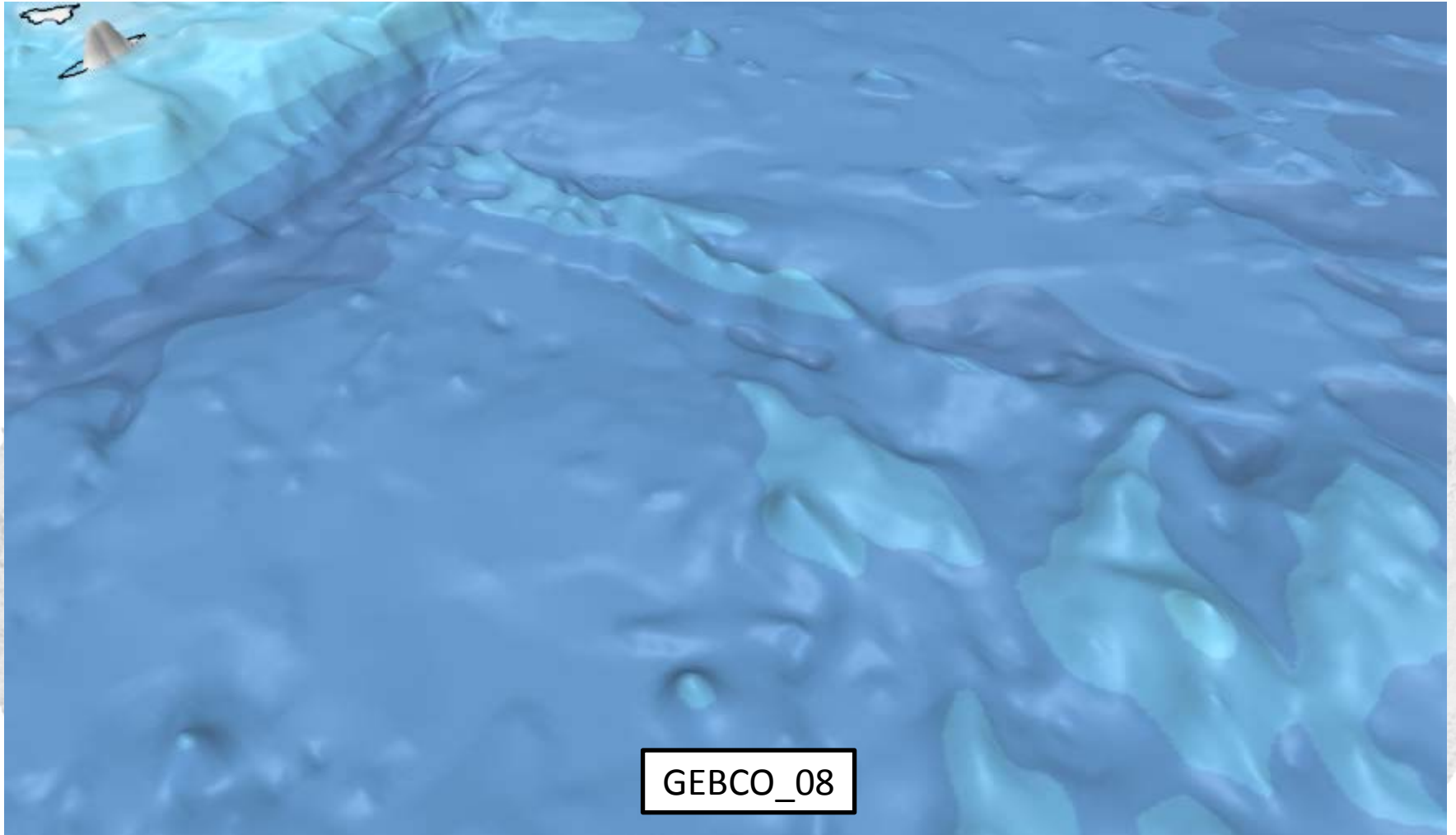
Comparison to GEBCO_08



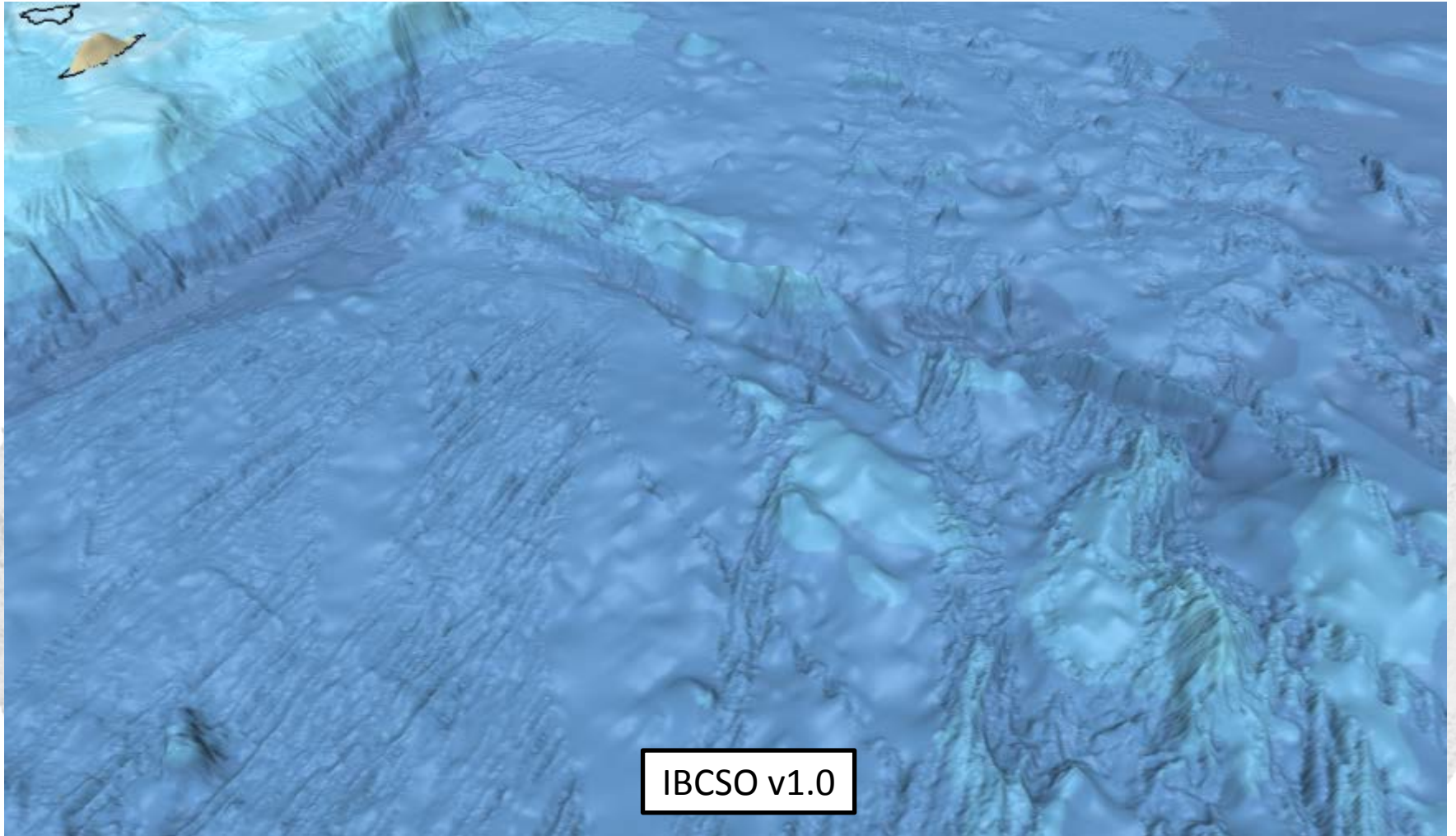
Comparison to GEBCO_08



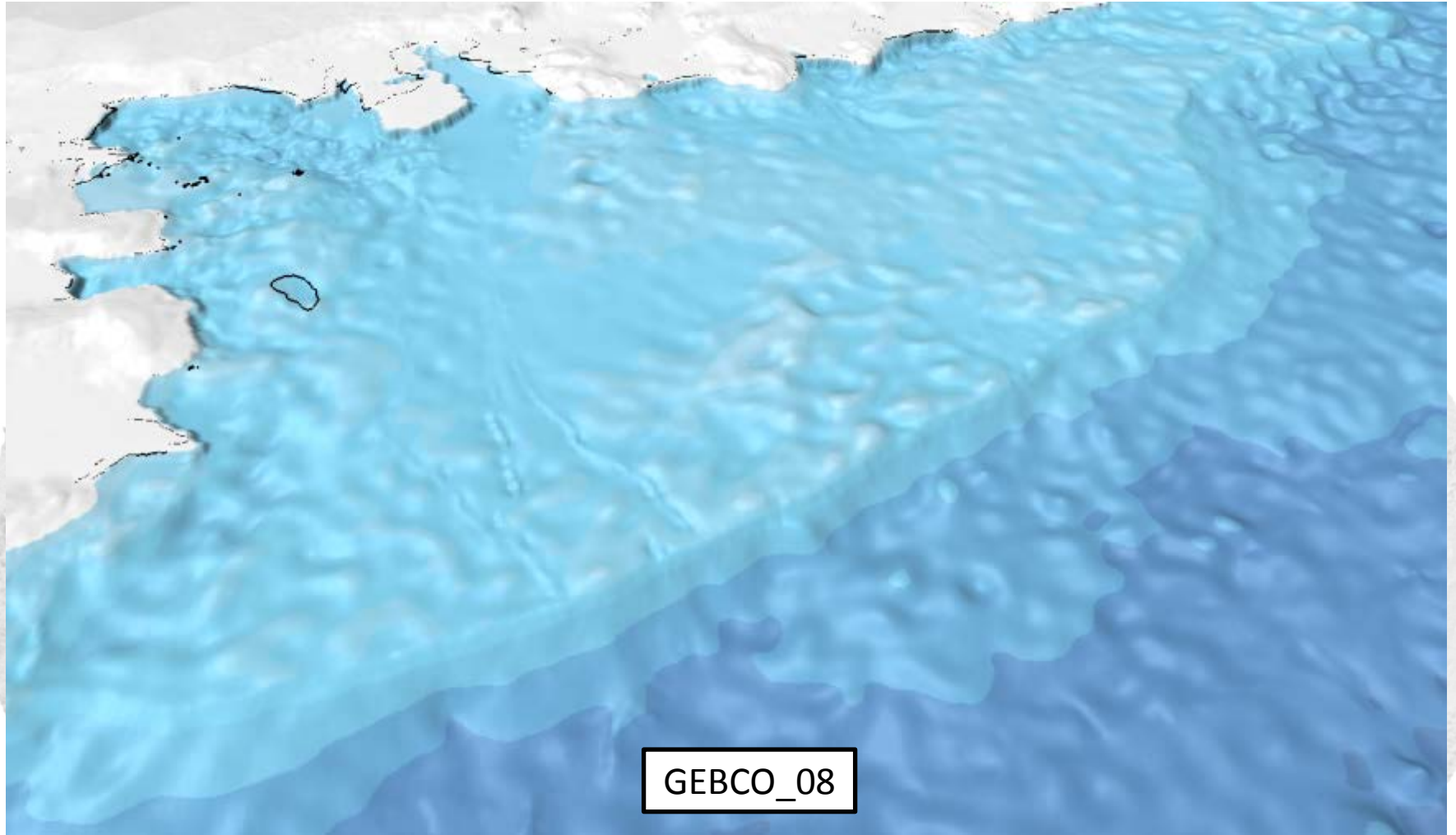
Comparison to GEBCO_08



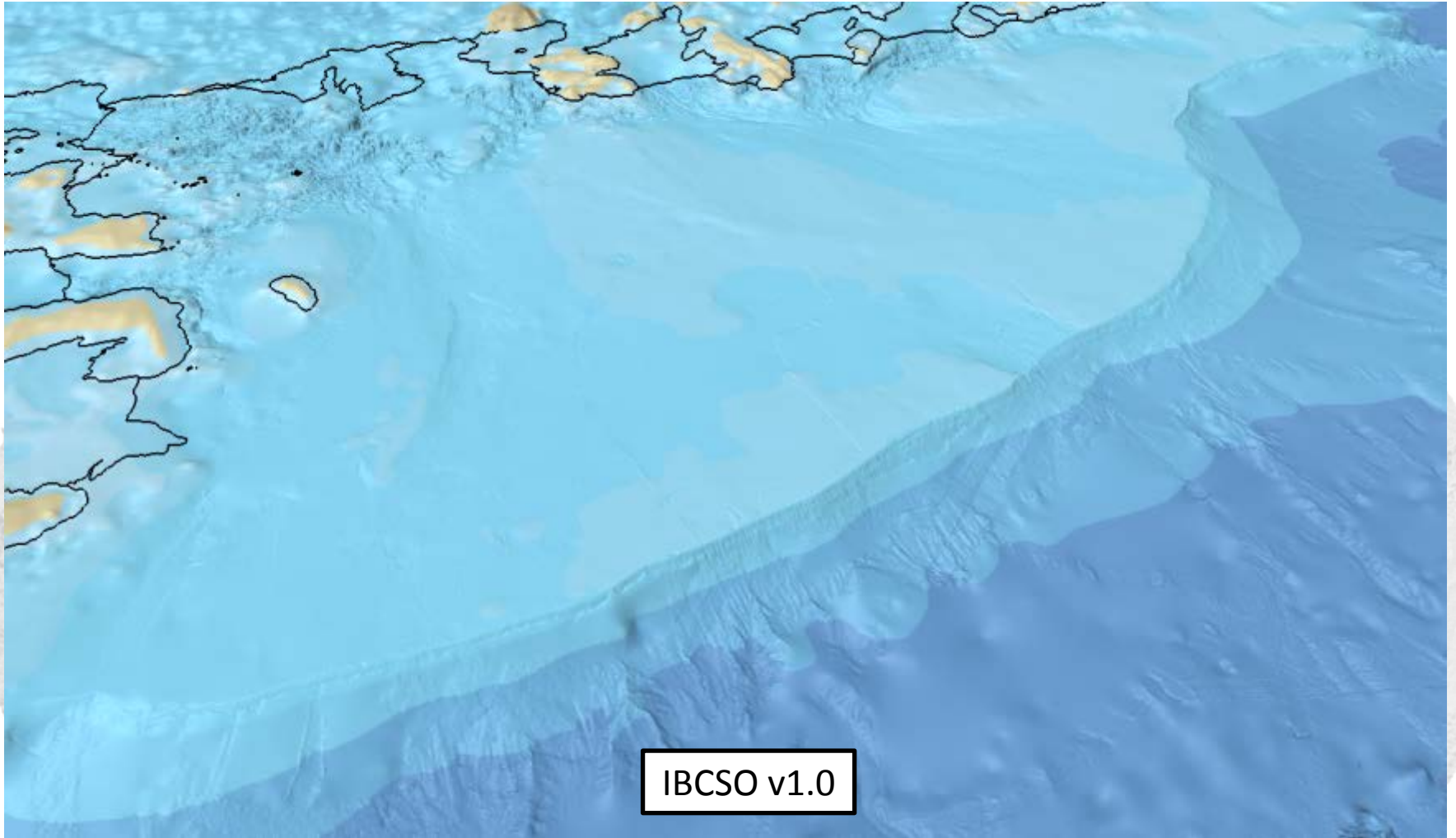
Comparison to GEBCO_08



Comparison to GEBCO_08



Comparison to GEBCO_08



Data retrieval

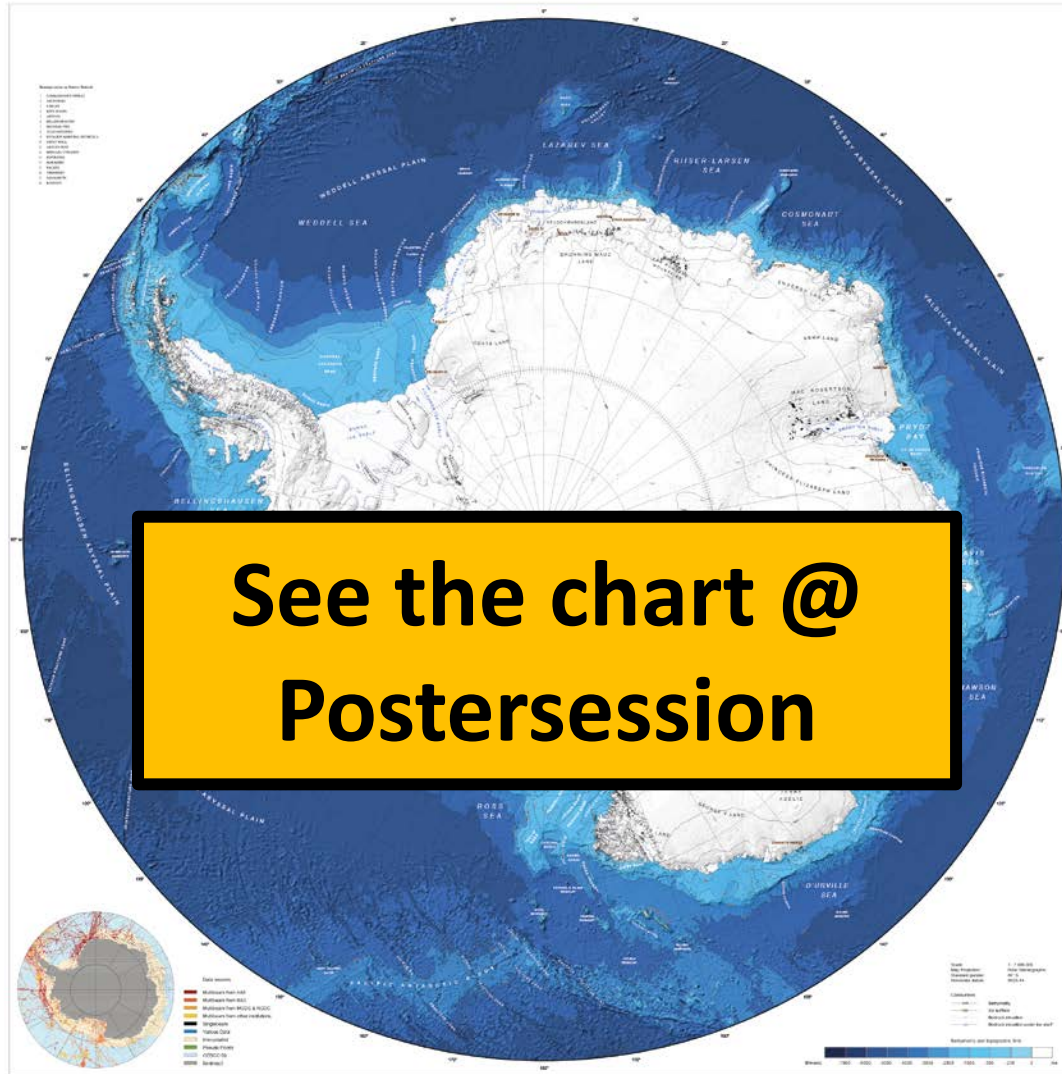
www.ibcso.org -> Data

www.pangaea.de -> IBCSO

Available Data Versions

Projections	<ul style="list-style-type: none"> Polar stereographic with truescale 65° S Polar stereographic with truescale 71° S Geographic WGS84
Resolution	<ul style="list-style-type: none"> 500 x 500 m 1 x 1 min
Dataformats	<ul style="list-style-type: none"> GeoTiff (ArcGIS) NetCDF (GMT) SD (Eledormaus)

Arndt et al. (2013) *Geophys. Res. Lett.* (in review)



See the chart @
Postersession

THE INTERNATIONAL BATHYMETRIC CHART OF THE SOUTHERN OCEAN (IBCSO)

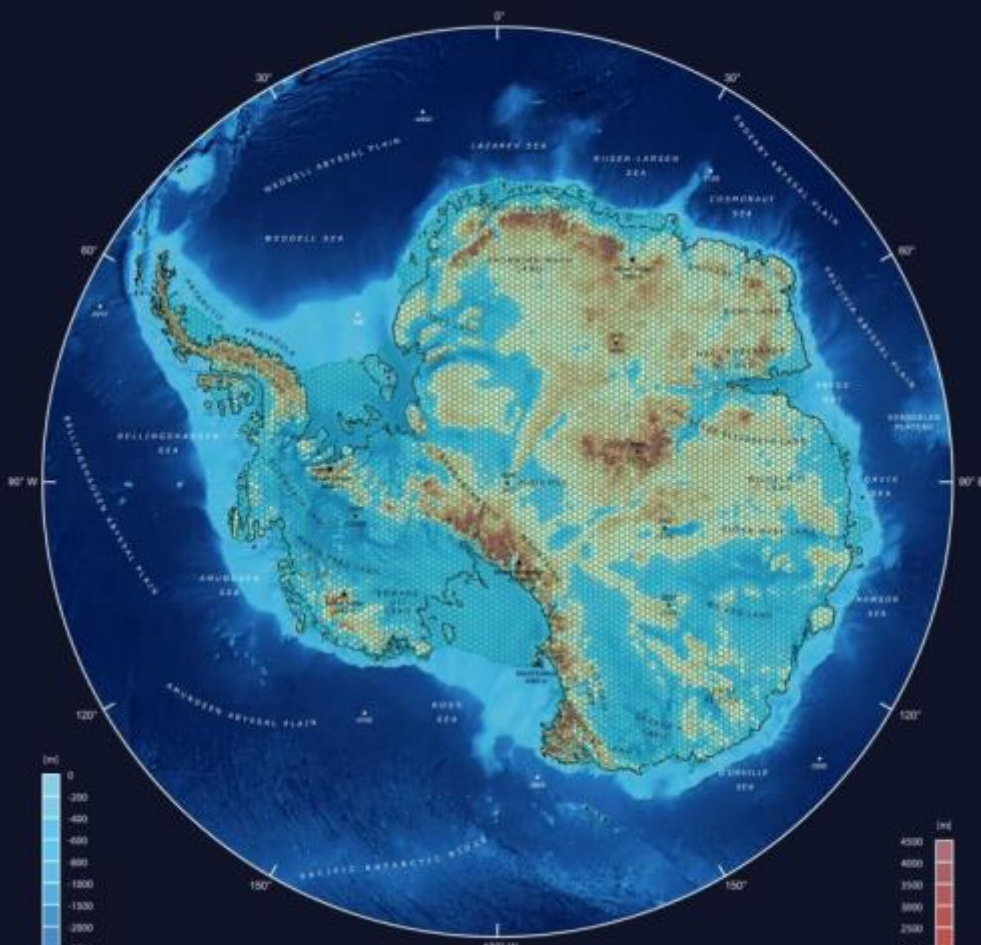
General Information
The IBCSO is a project of the International Hydrographic Organization (IHO) and the International Geographical Organization (IGO). It is a collaborative effort between the IHO and the IGO to create a comprehensive bathymetric chart of the Southern Ocean. The chart is based on data from various sources, including satellite altimetry, shipborne bathymetry, and other hydrographic data. The chart is available in both digital and printed formats.

Legend
The legend provides information on the data sources and the color coding used in the chart. It includes categories such as Bathymetry from IHO, Bathymetry from IGO, Bathymetry from other hydrographic, Topography, and Bathymetry from other sources.

Scale
The scale bar indicates the distance in kilometers and nautical miles. The scale is 1:100,000,000.

Logos
The logos of the participating organizations are displayed, including the IHO, IGO, and various national hydrographic offices.

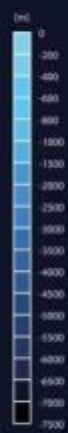
Additional Information
This section contains detailed information about the chart, including the data sources, the chart's history, and the organizations involved in its development.



Antarctica and the Southern Ocean Seafloor

with ice and bedrock topography

Based on the International Bathymetric Chart of the Southern Ocean (IBCSO)



Height above sea level (bedrock)

Depth below sea level (bedrock)

Scale 1 : 12,000,000



Map Projection: IBCSO Antarctic Polar Stereographic, Standard Parallel: 65°S, Ellipsoid: WGS 84
 Databases: IBCSO V1.0. Digital Bathymetric Model (2011), GBL, doi: 10.1002/gbt.50413, with continental data of Bedrock (2013), The Cryosphere, doi: 10.5194/tc-7-375-2013

The light turquoise wireframe grid represents the ice surface. The hexagon edge length is 50 Kilometers. Grounding line is represented in black. Seafloor, ice and bedrock surface are vertically exaggerated by a factor of 30.



Future of IBCSO!?

A collage of four images: top-left shows a large ice shelf in Antarctica; top-right shows a snowy mountain range; bottom-left shows a lush green tree; bottom-right shows a view of Auckland, New Zealand, featuring the Auckland Harbour Bridge and the Sky Tower.


**SCAR OPEN SCIENCE
CONFERENCE, XXXIII SCAR
BIENNIAL MEETINGS,
AND XXVI COMNAP AGM**
23 August to 3 September 2014,
New Zealand

Image: Rob Suisted / www.naturespic.com

Thanks for your attention!

For further information visit

www.ibcso.org

or contact me via

Jan.Erik.Arndt@awi.de

Auxiliary Slide I



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