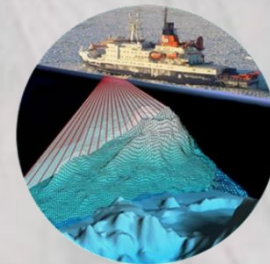
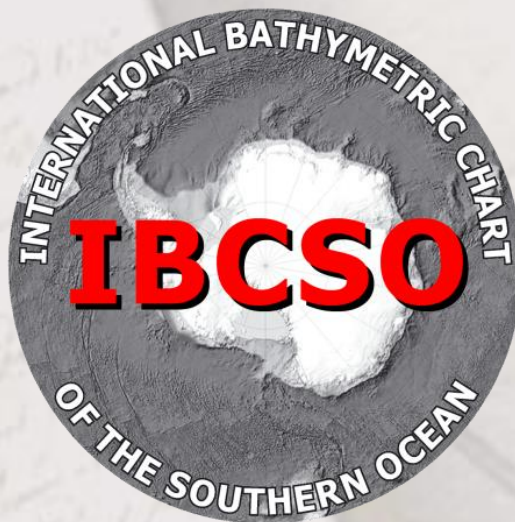


International Bathymetric Chart of the Southern Ocean IBCSO



- Report 2012-

HCA12-07.3A



Hans Werner Schenke

Alfred Wegener Institute for Polar and Marine Research

10/4/2012

Report to GEBCO-SCRUM



Technical Support



Intergovernmental Oceanographic Commission (IOC)



Scientific Committee on Antarctic Research (SCAR)



Hydrographic Committee on Antarctica (HCA) of IHO



General Bathymetric Chart of the Oceans (GEBCO)



Alfred Wegener Institute for Polar and Marine Research

Review

2007-2010

Design of IBCSO

Data collection → Database
Workshops and Reports

2011-2012

September 2011

Re-start IBCSO

GEBCO – AWI support

target: IBCSOv1 Sept. 2012 ready
grid: finished

Actions

May 2011

Arctic/Antarctic Mapping WS
Stockholm: GEBCO support
involve GEBCO alumni

Sept. 2011

Report to GEBCO-GC
- continuation approved

April 2012

WS Editorial Board @ AWI
grid, completed map specs

July 2012

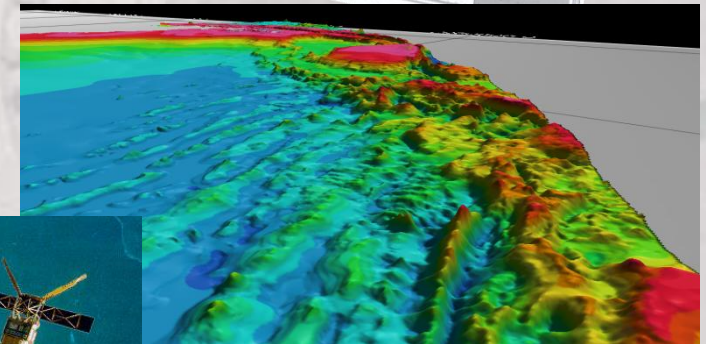
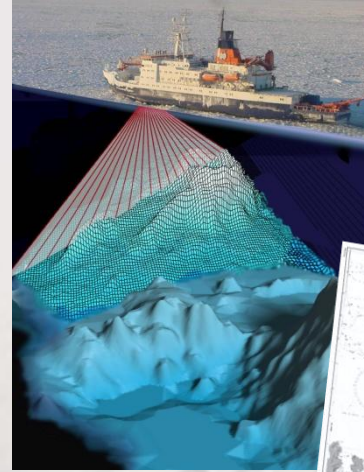
Report & paper to SCAR OSC

Data Originator and Provider

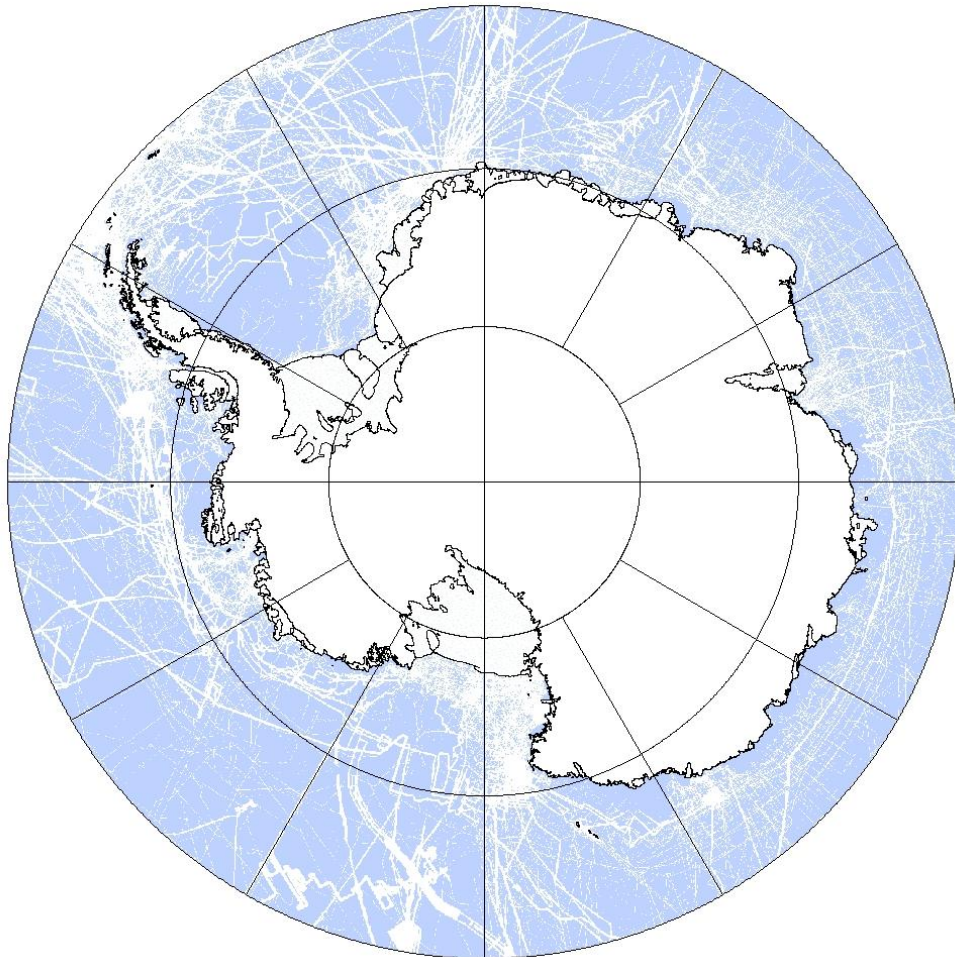
Australia:	Australian Antarctic Division: Brolsma, H. Geoscience Australia James Cook University: Beaman, R.
Chile:	Servicio Hidrográfico y Oceanográfico
France:	Institut français de recherche pour l'exploitation de la mer: Louis Geli
Germany:	Alfred Wegener Institut
Italy:	Istituto di Scienze Marine: Zitellini, N. Instituto Nazionale di Oceanografia e di Geofisica Sperimentale: Böhm, G.; Busetti, M.; Cova, A.; De Santis, L.; Tinivella, U., Marina Difesa Università degli Studi di Trieste: Della Vedova, B.
Japan:	National Institute of Polar Research
Korea:	Korean Polar Research Institute
New Zealand:	Institute of Geological and Nuclear Sciences,
Russia:	Vernadsky Institute of Geochemistry and Analytical Chemistry VNNIIOkeangeologia
Spain:	Instituto Geológico y Minero de España Universidad de Granada: Galindo-Zaldivar, J.
South Africa:	South African Navy Hydrographic Office
Sweden:	Stockholm University
Ukraine:	Institute of Geological Sciences
United Kingdom:	British Antarctic Survey United Kingdom Hydrographic Office
United States of America:	Lamond-Doherty Earth Observatory National Geospatial-Intelligence Agency: von Rosenberg, J. W. National Oceanic and Atmospheric Administration National Science Foundation US Geological Survey Scripps Institution of Oceanography Woods Hole Oceanographic Institution

IBCSO Database

- Soundings
 - Multibeam
 - Singlebeam
- Nautical Charts
- Bathymetric Compilations
- Predicted bathymetry from satellite altimetry

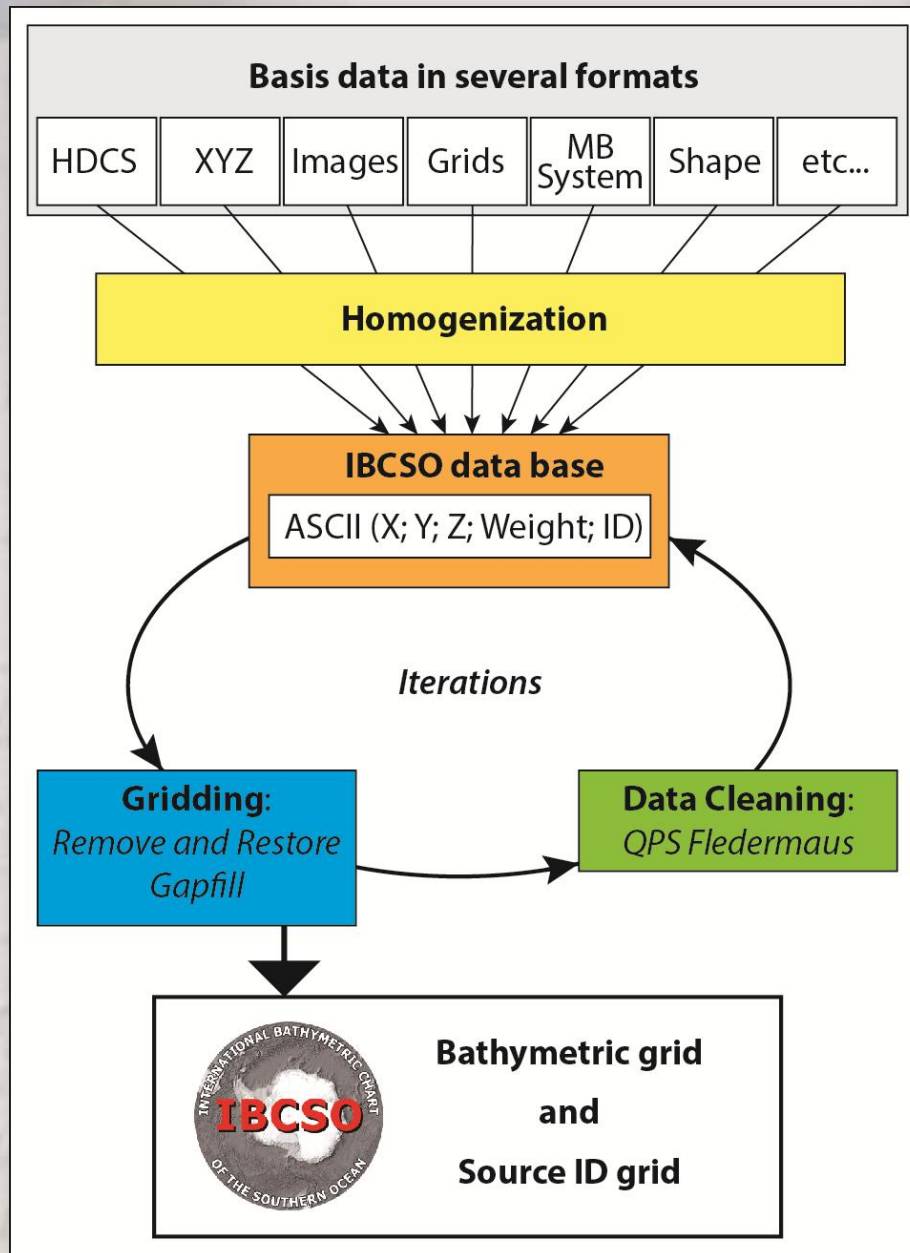


Sounding Data



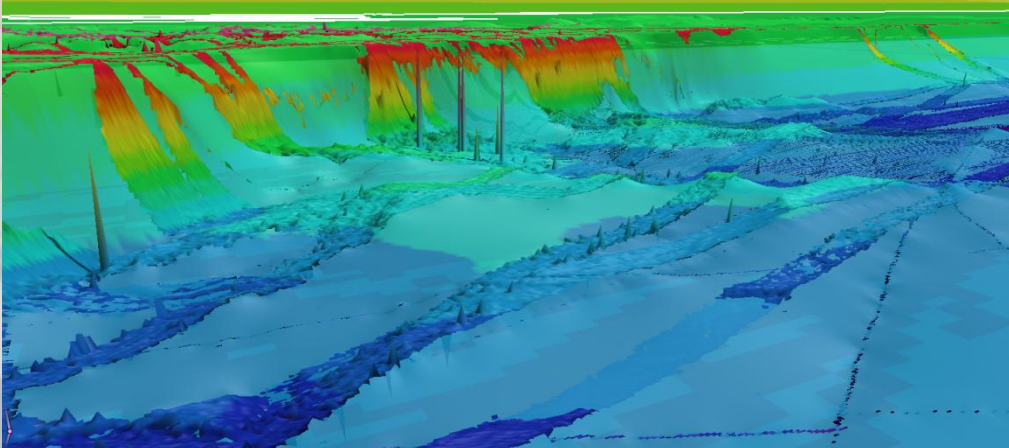
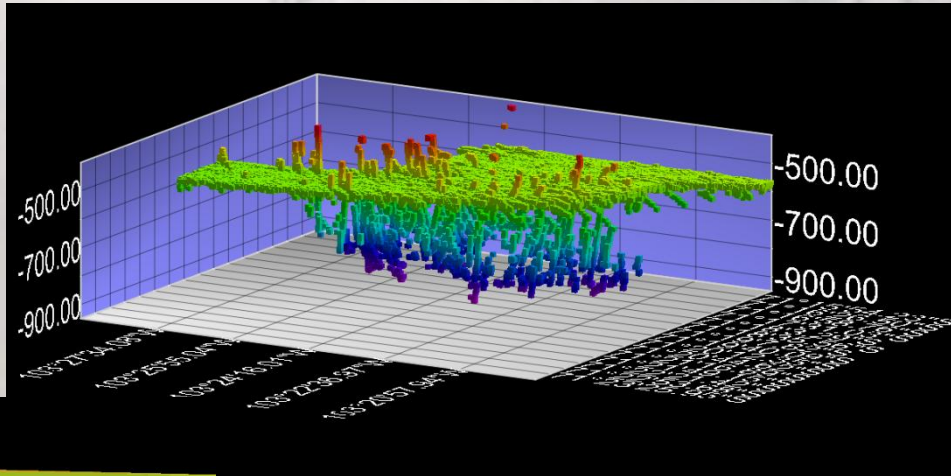
Current Dataset

Datasource	Points
Singlebeam	≈ 16.5 Million
Multibeam	≈ 3.8 Billion
Nautical Charts	≈ 17.000
Total	≈ 3.9 Billion



Data Cleaning

Visual Check of data
and gridded results in
QPS ,Fledermaus‘



Elimination of Errors
in ,3D Editor‘

Cartographic Specifications

Area covered: 60° to 90° S (Southern Ocean)

Projection: Polarstereographic
true scale @ 65° S

Scale: 1 : 7,000,000

sheet size: 1.00 m x 1.20 m

Map Content

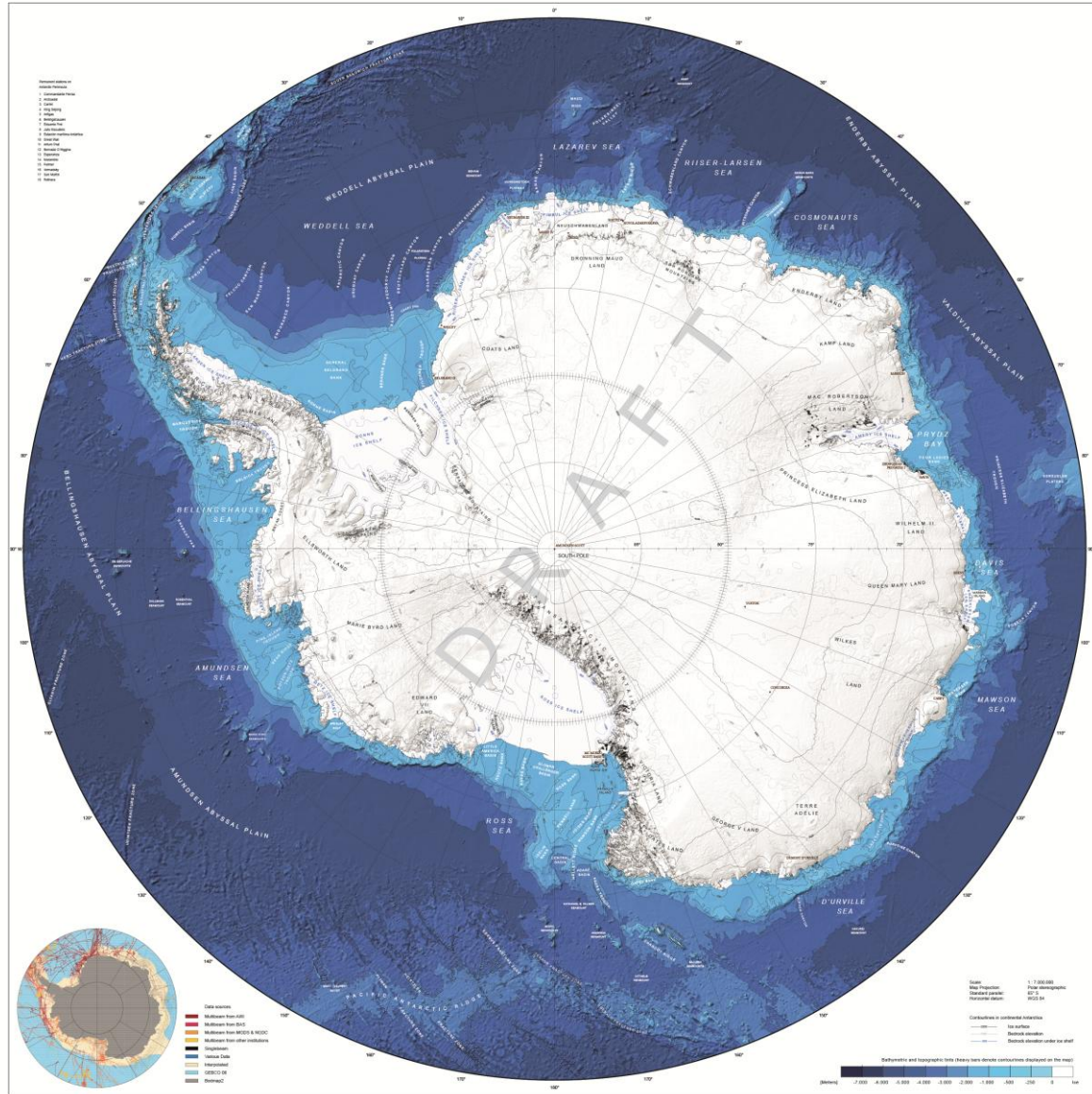
Bathymetry: grid 500 m x 500 m, shaded
1000 m contour lines

Topography: ADD-6

Nomenclature: GEBSCO/SCUFN Gazetteer
SCAR/CGA
IHO S-23

Bedrock Topo: BEDMAP 2

IBCSO (draft) Sept. 12



THE INTERNATIONAL BATHYMETRIC CHART OF THE SOUTHERN OCEAN (IBCSO)

General information
The IBCSO program is managed by the International Oceanographic Commission (IOC) of UNESCO, the International Hydrographic Organization (IHO) and the Scientific Committee on Antarctic Research (SCAR). Since 2006, IBCSO is an IHO project under the IHO Strategic Plan. The project is a response to the requirements of the United Nations Convention on the Law of the Sea (UNCLOS) and the Antarctic Treaty System. The project is a response to the requirements of the United Nations Convention on the Law of the Sea (UNCLOS) and the Antarctic Treaty System. The project is a response to the requirements of the United Nations Convention on the Law of the Sea (UNCLOS) and the Antarctic Treaty System.

Geographic grid generation
The IBCSO grid covers an area of more than 4,000 million square kilometers, including the entire Southern Ocean. The grid is based on the Antarctic continent and extends to the 60°S latitude. The grid is based on the Antarctic continent and extends to the 60°S latitude. The grid is based on the Antarctic continent and extends to the 60°S latitude.

Chart generation
The IBCSO chart is a bathymetric chart of the Southern Ocean. It is based on the IBCSO grid and includes depth contours and other bathymetric information. The chart is based on the IBCSO grid and includes depth contours and other bathymetric information. The chart is based on the IBCSO grid and includes depth contours and other bathymetric information.

Chart retrieval
The IBCSO chart is available in digital format. It can be retrieved from the IBCSO website. The chart is available in digital format. It can be retrieved from the IBCSO website. The chart is available in digital format. It can be retrieved from the IBCSO website.

Key Application Partners
The IBCSO chart is used by various organizations for navigation and research. The chart is used by various organizations for navigation and research. The chart is used by various organizations for navigation and research.

10/4/2012

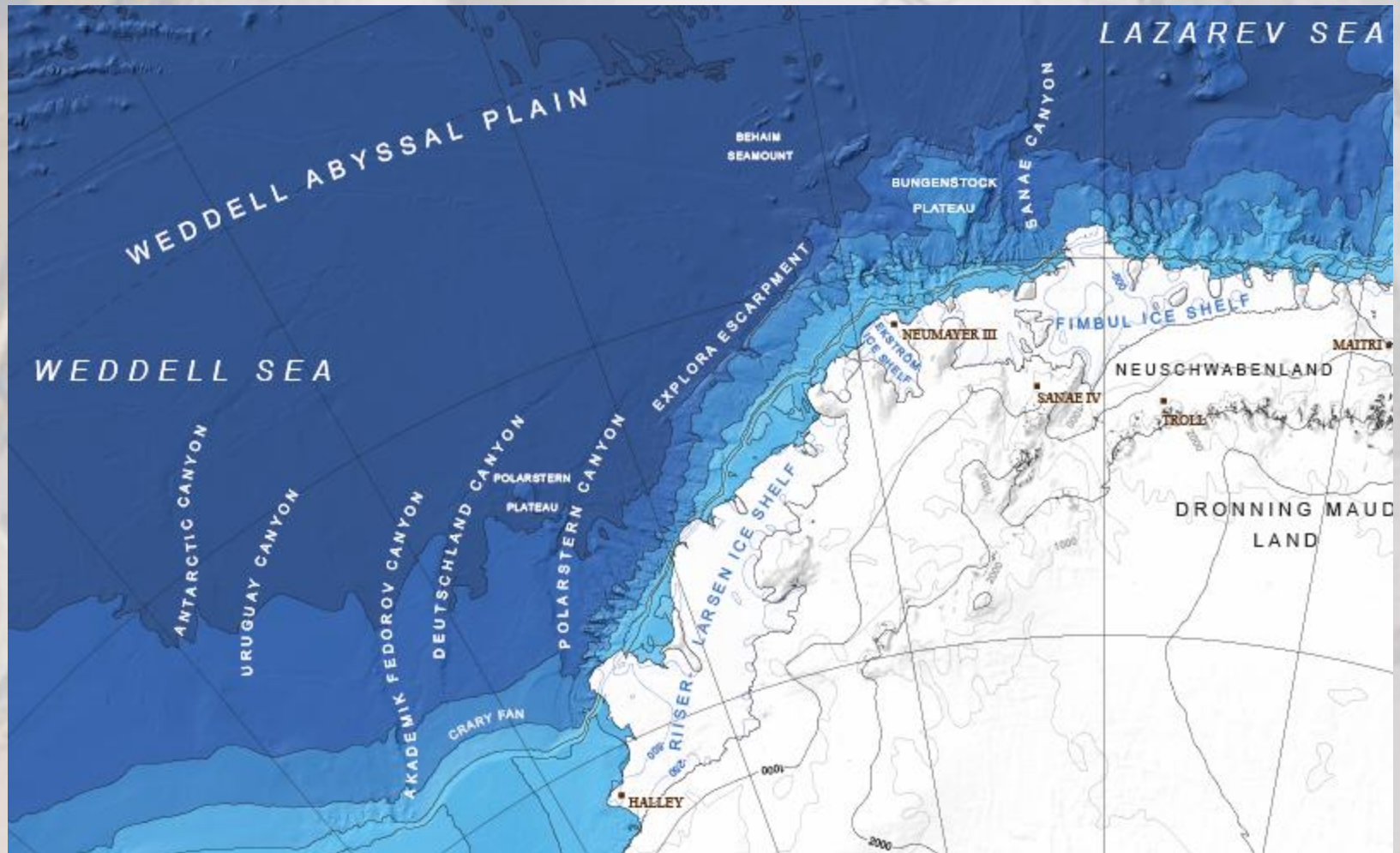


Editorial Board:

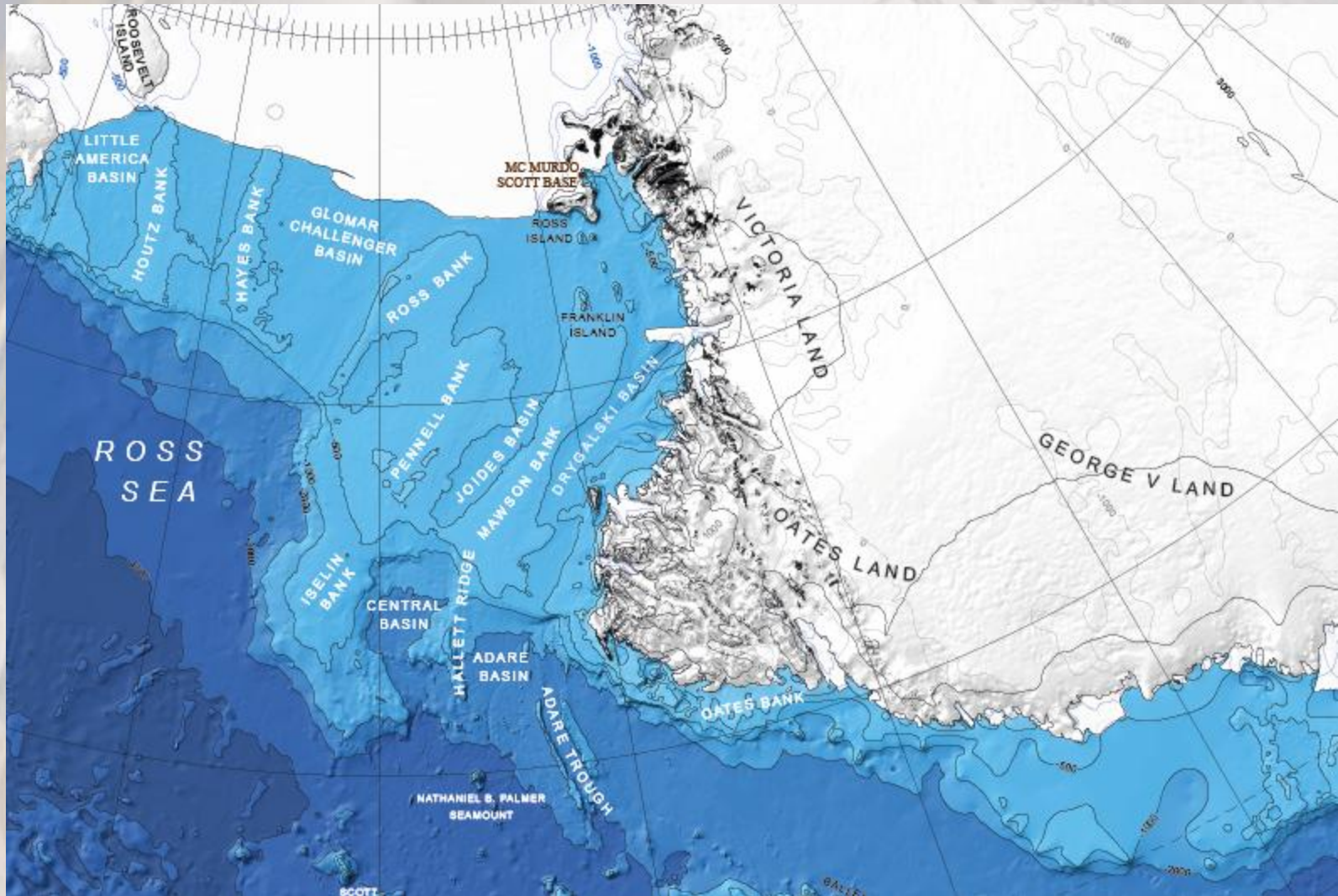
Hans Werner Schenke (Chair), Alfred Wegener Institute, Germany
Jan Erik Arndt (Editor), Alfred Wegener Institute, Germany
Fernando Bohoyo Muñoz, Instituto Geológico y Minero de España, Spain
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Walter Reynoso-Peralta, Servicio de Hidrografía Naval, Argentina
Olivia Wilson, Geoscience Australia, Australia
Rochelle Wigley, University of New Hampshire, USA

THIS CHART IS NOT TO BE USED FOR NAVIGATION

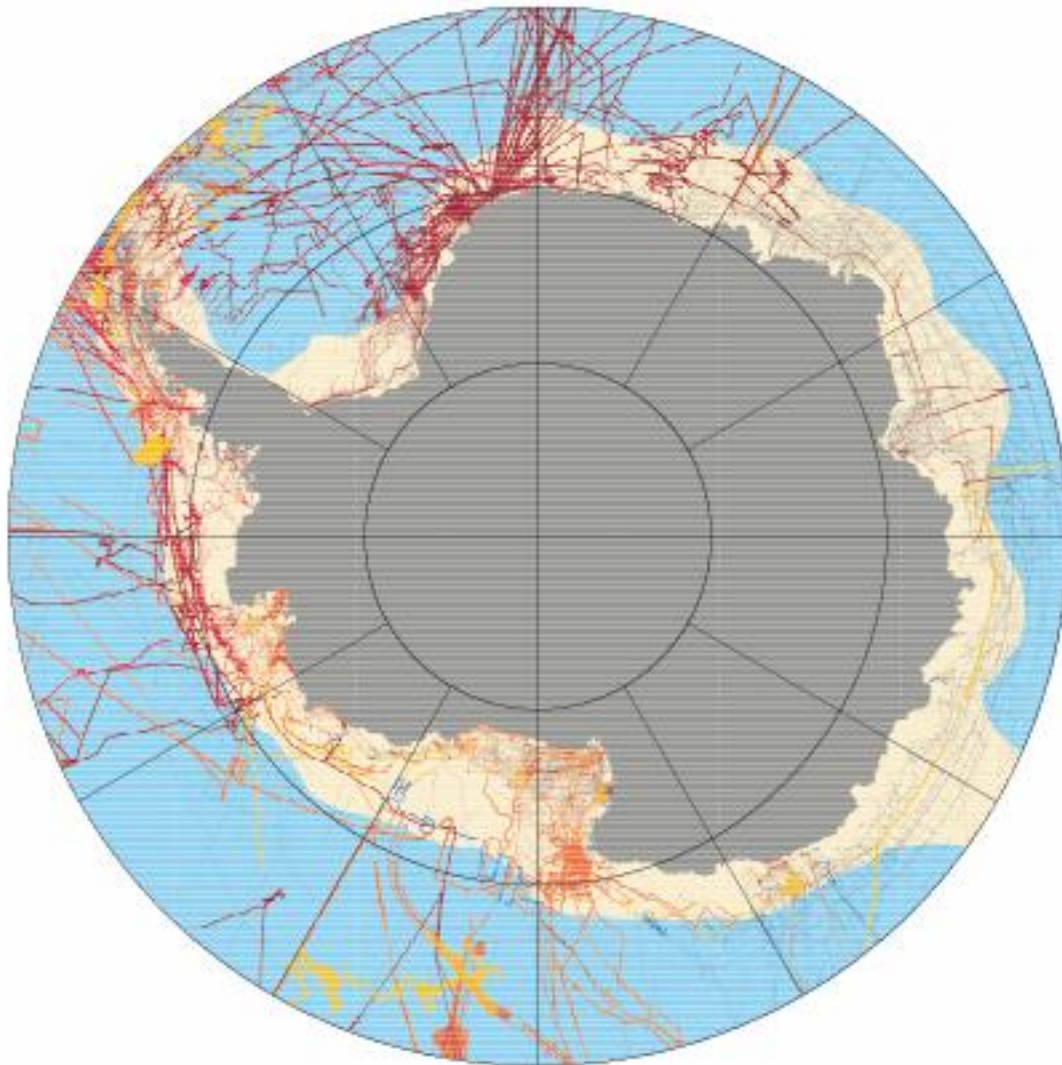
Eastern Weddell Sea












Ross Sea



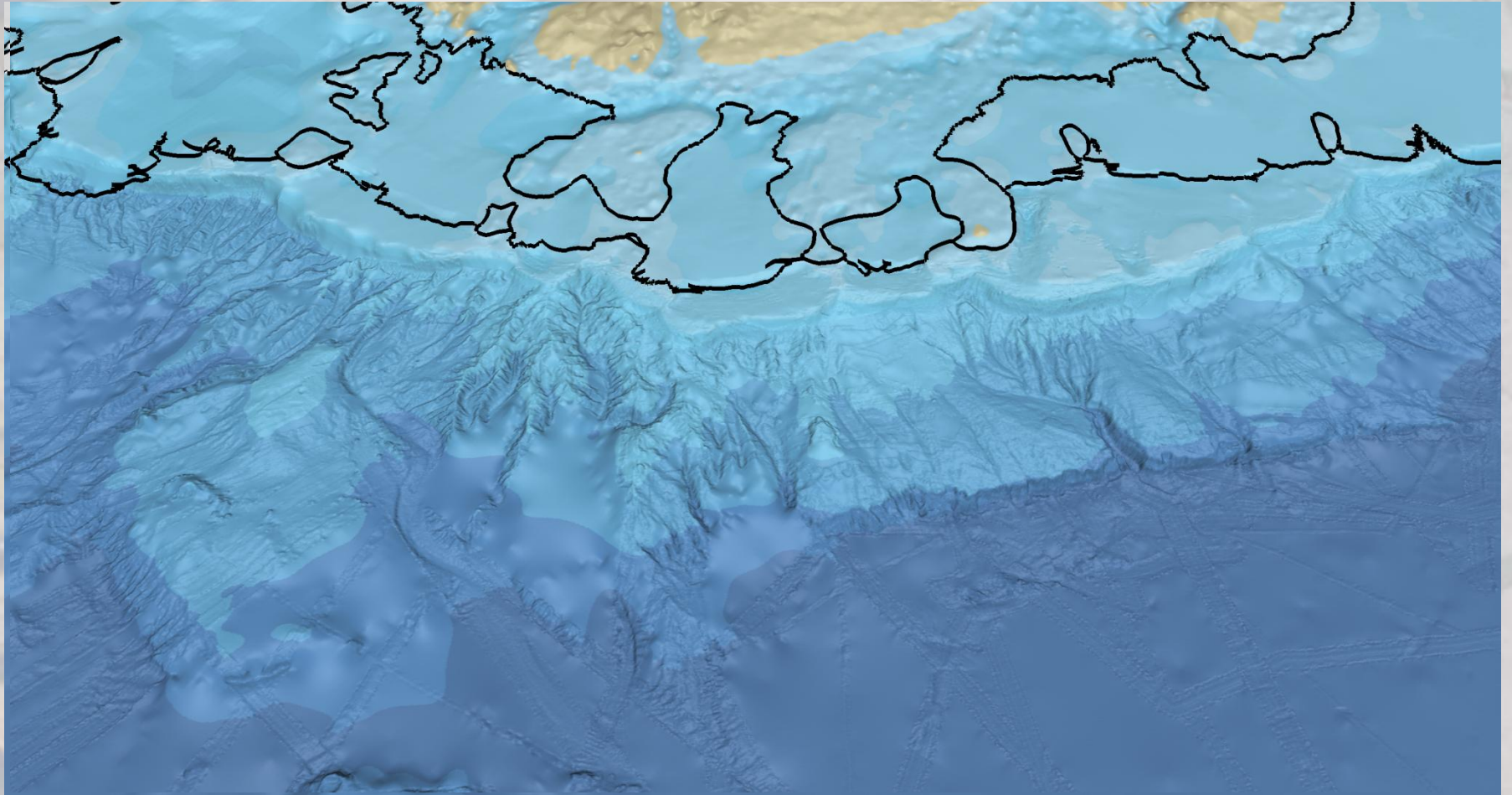
Data Sources



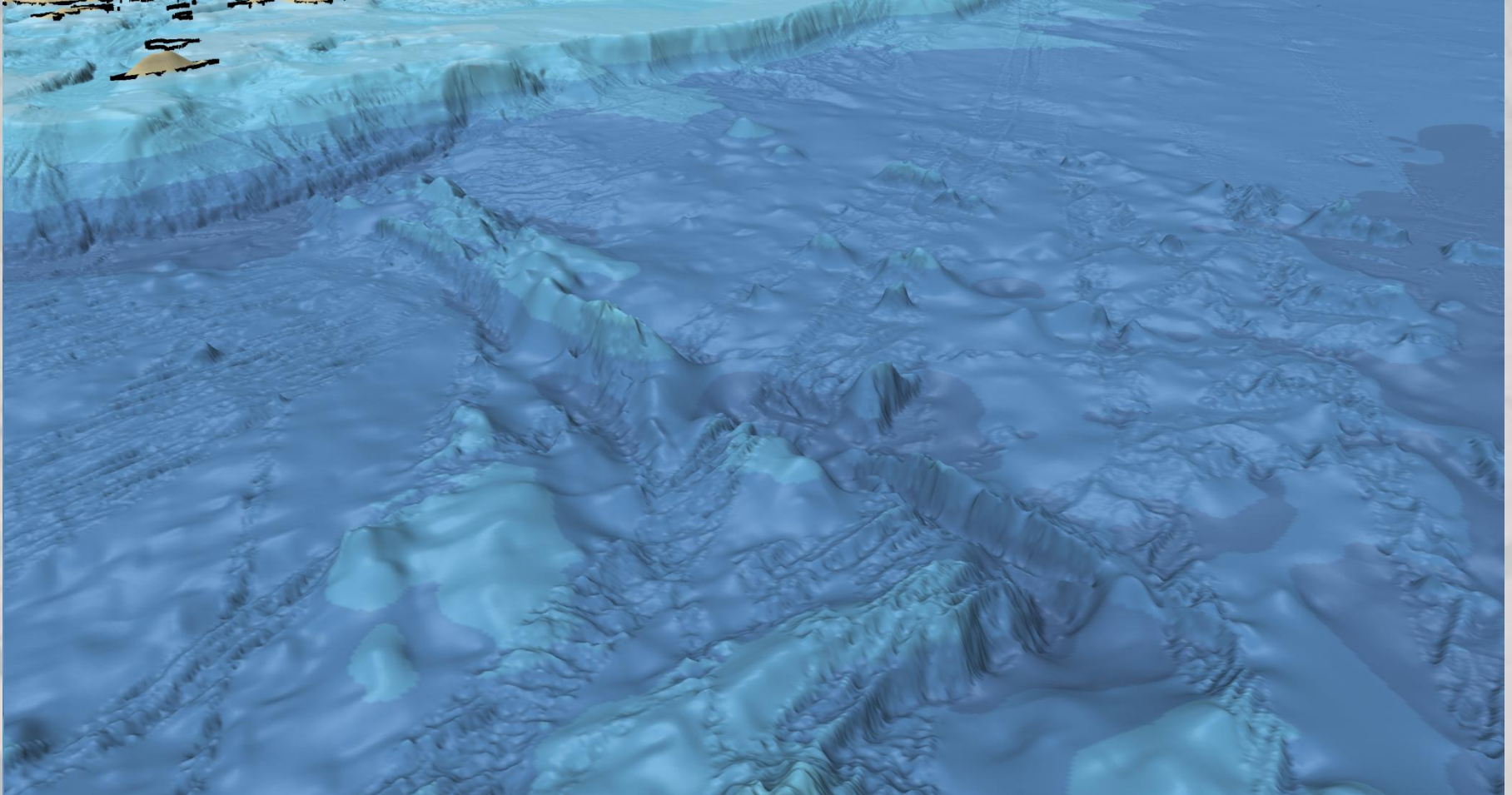
Data sources	
	Multibeam from AWI
	Multibeam from BAS
	Multibeam from MGDS & NGDC
	Multibeam from other institutions
	Singlebeam
	Various Data
	Interpolated
	GEBCO 08
	Bedmap2

Comparison

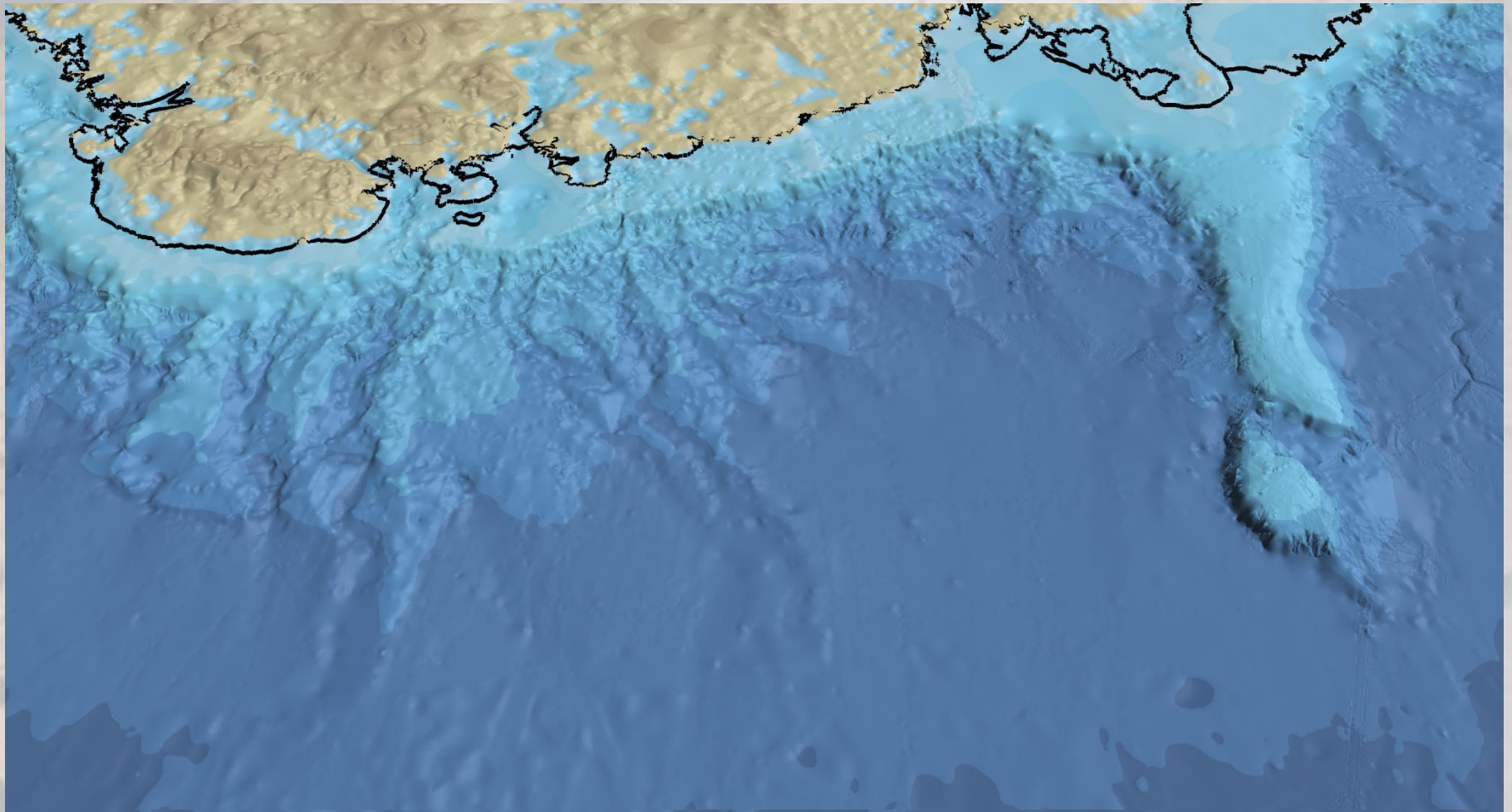
Ekstroem Ice Shelf



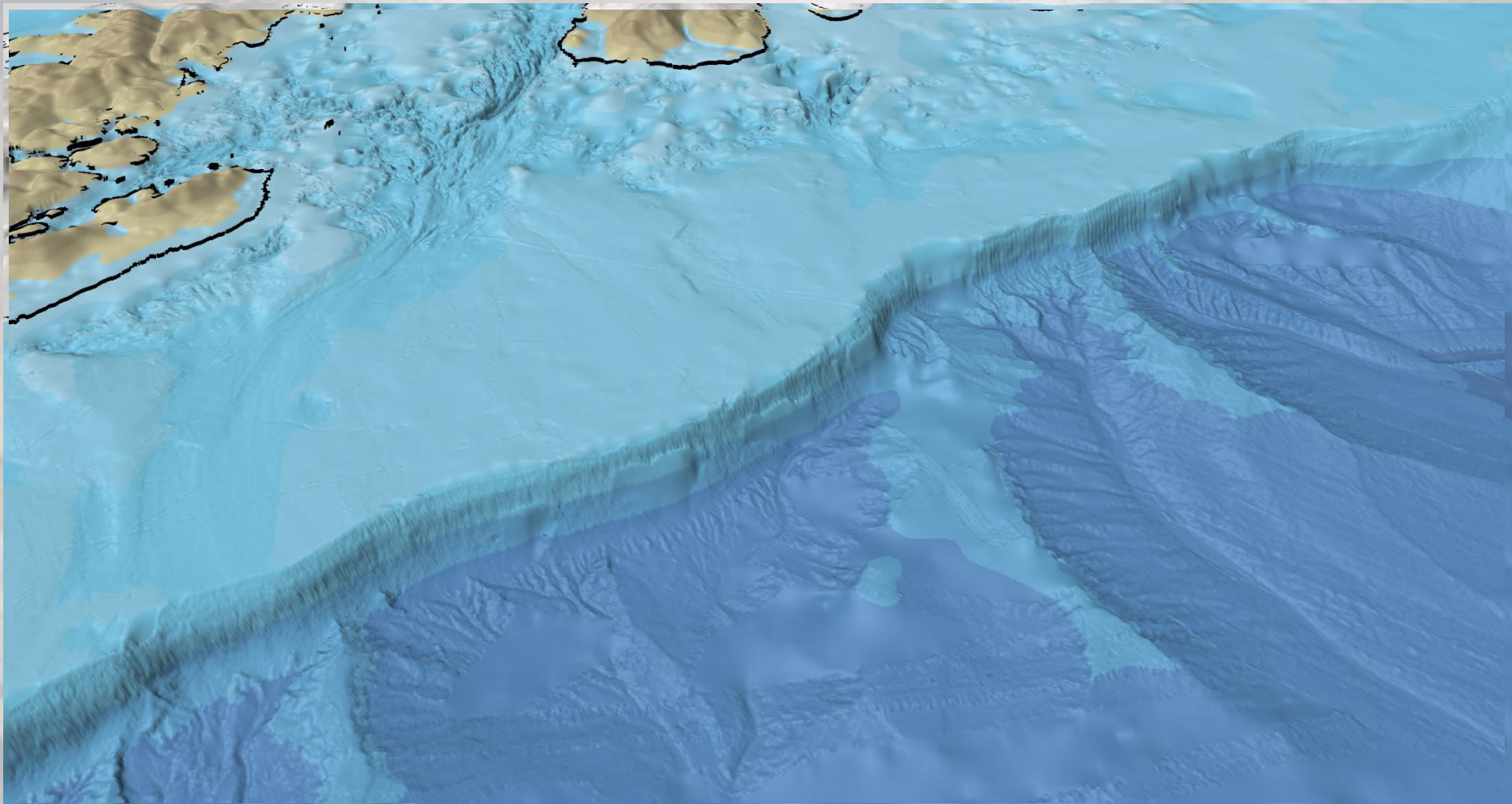
Hero Fracture Zone



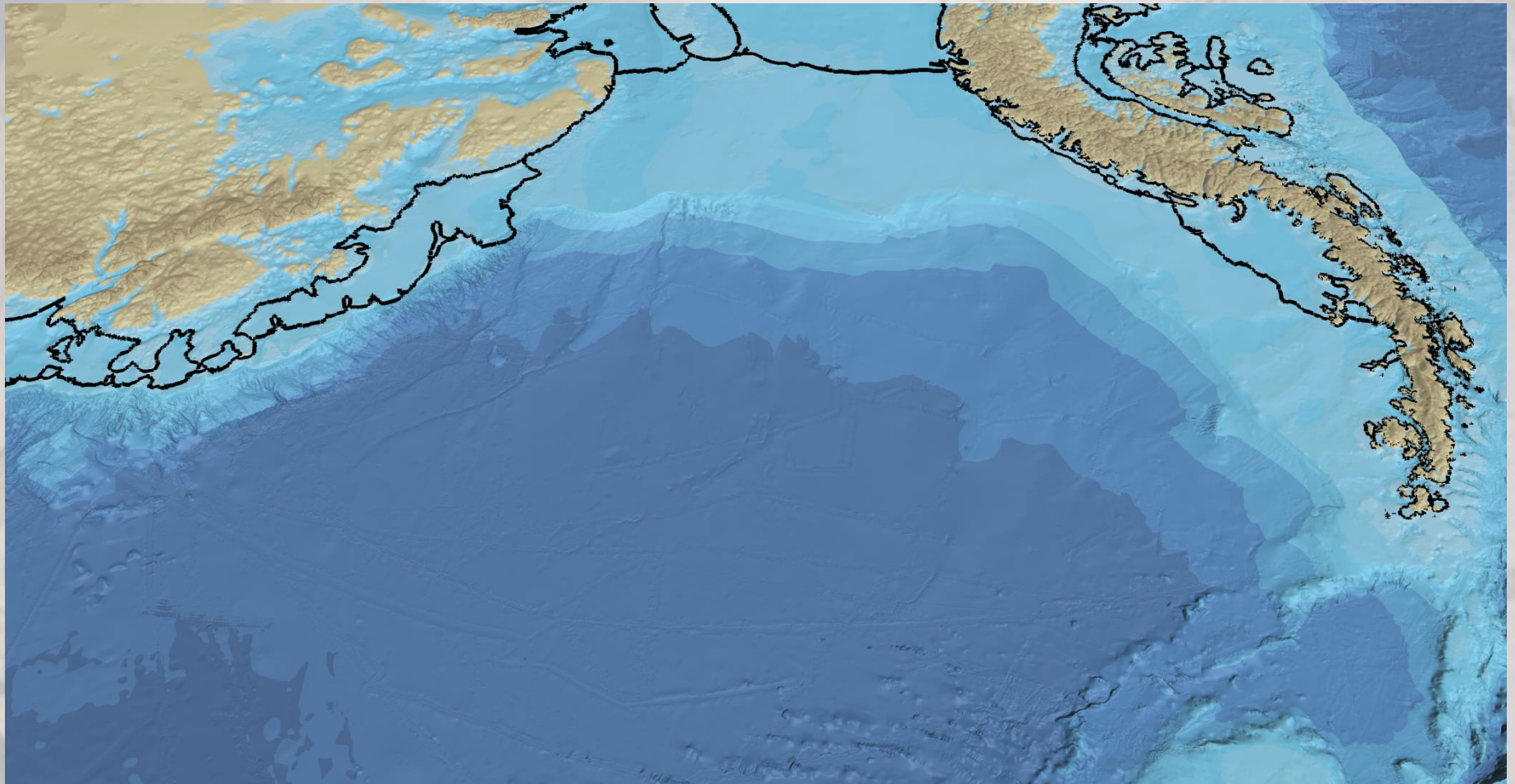
Kosmonaut Sea



Marguerite Bay



Weddell Sea



Status and Perspectives

Dead-line for data:	15 June 2012
DTM modelling IBCSO v1:	finished
Map compilation:	from September
Map & Grid Publication:	AGU/FM 2012
IBCSO v2:	?



Thank you!

Zoom in for details

