The International Bathymetric Chart of the Southern Ocean Version 1.0

New ‘classic’ and lenticular Maps of Antarctica for Science and Outreach

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Antarctica


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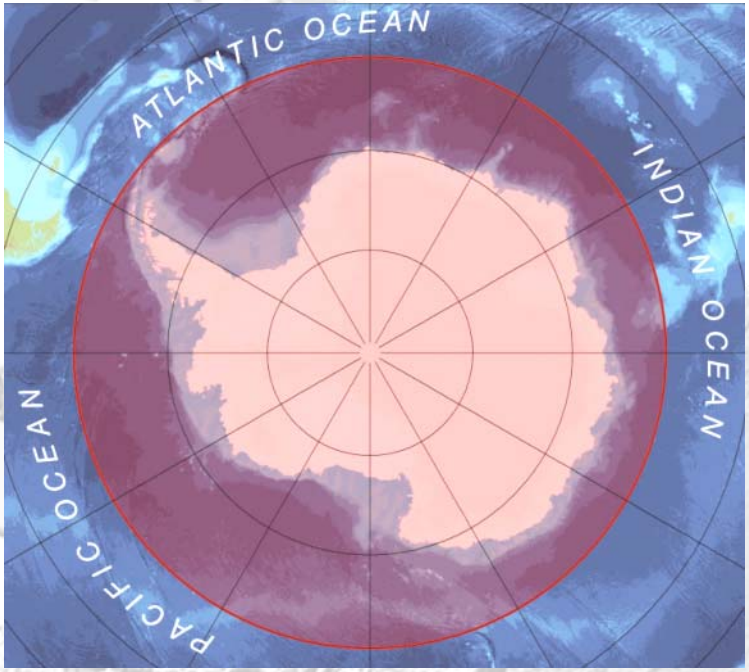
What is IBCSO?

- International Regional Seafloor Mapping Project
- Goal:
  - Collect all available data
  - Create a first seamless bathymetric grid for Antarctica
  - Visualization of the grid

Map products



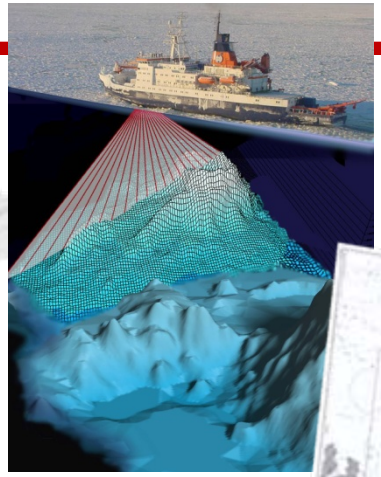
Organization of the IBCSO

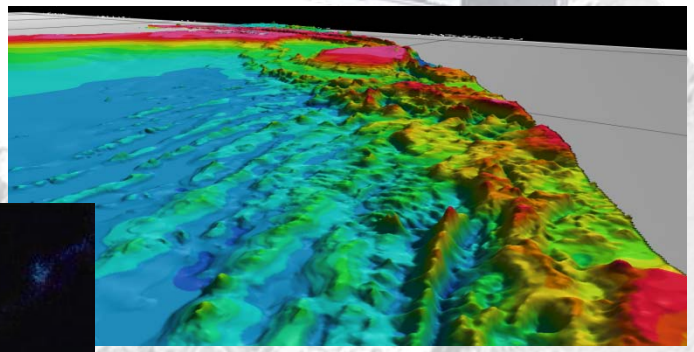
- Expert Group of SCAR since 2004
- Regional Mapping project of General Bathymetric Chart of the Oceans (GEBCO)
- Operates under the joint auspices of the Intergovernmental Oceanographic Commision (IOC) (of UNESCO) and the International Hydrographic Organization (IHO)
- Cooperation with the IHO Hydrographic Commision on Antarctica (HCA)
- Located at the Alfred Wegener Institute (AWI)

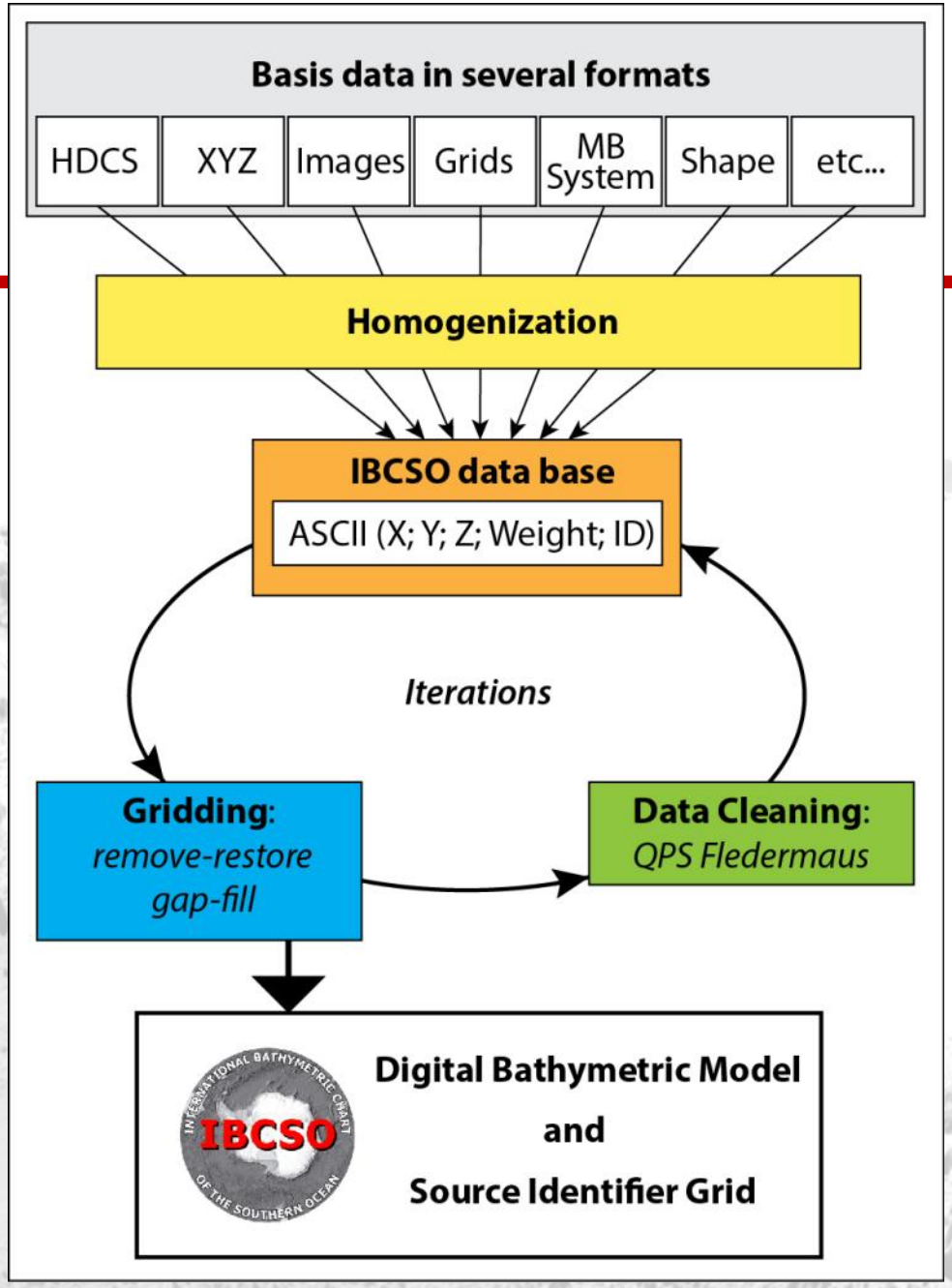
Data Contributors

IBCSO Database

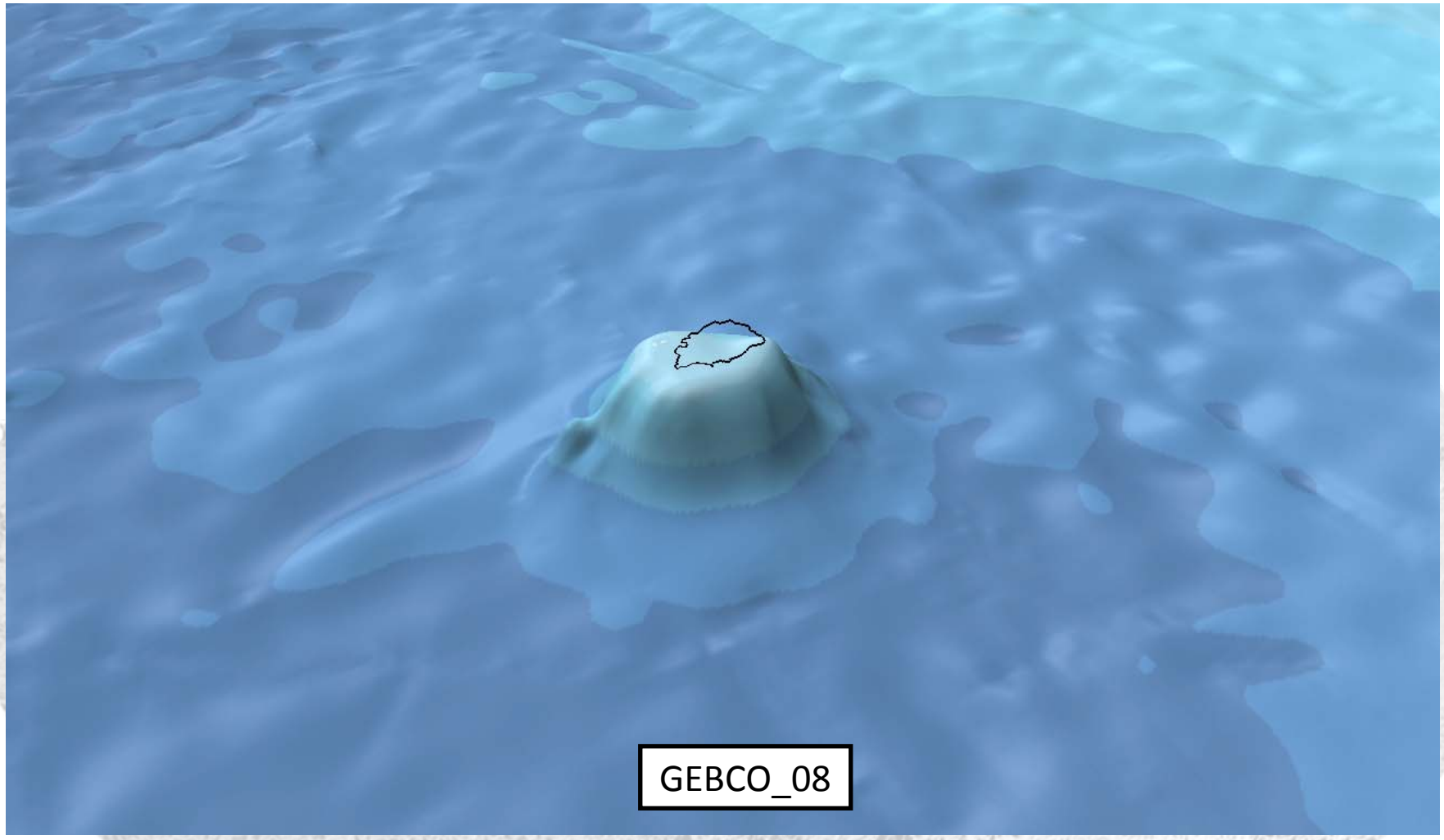
- Soundings
  - Multibeam
  - Singlebeam
- Nautical Charts
- Bathymetric Compilations
- Predicted bathymetry from satellite altimetry
- Continental Data






Basis data in several formats
HDCS
XYZ
Images
Grids
MB System
Shape
etc...
Homogenization
IBCSO data base
ASCII (X; Y; Z; Weight; ID)
Iterations
Gridding:
remove-restore
gap-fill
Data Cleaning:
QPS Fledermaus
Digital Bathymetric Model
and
Source Identifier Grid

Comparison to GEBCO_08



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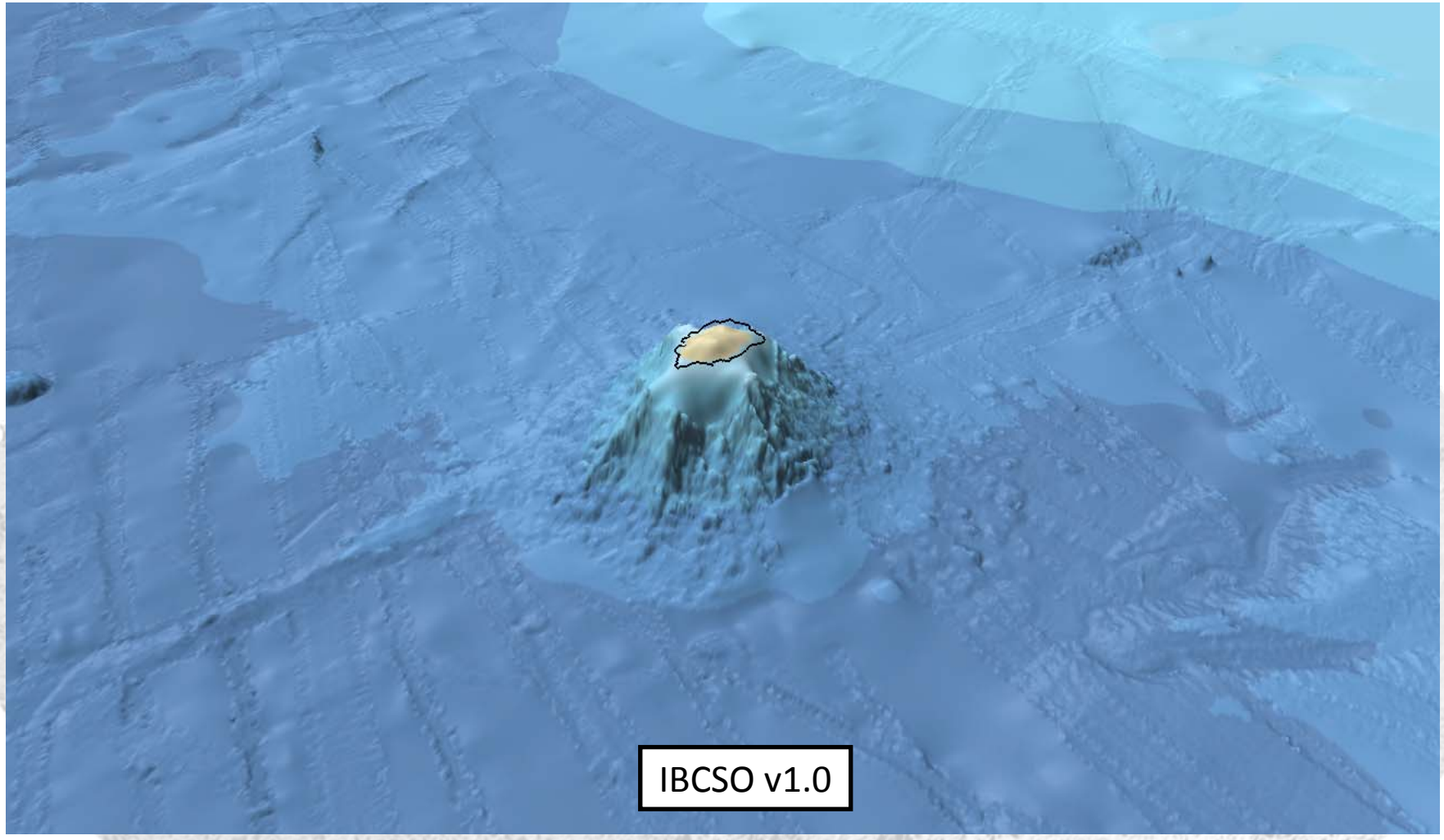

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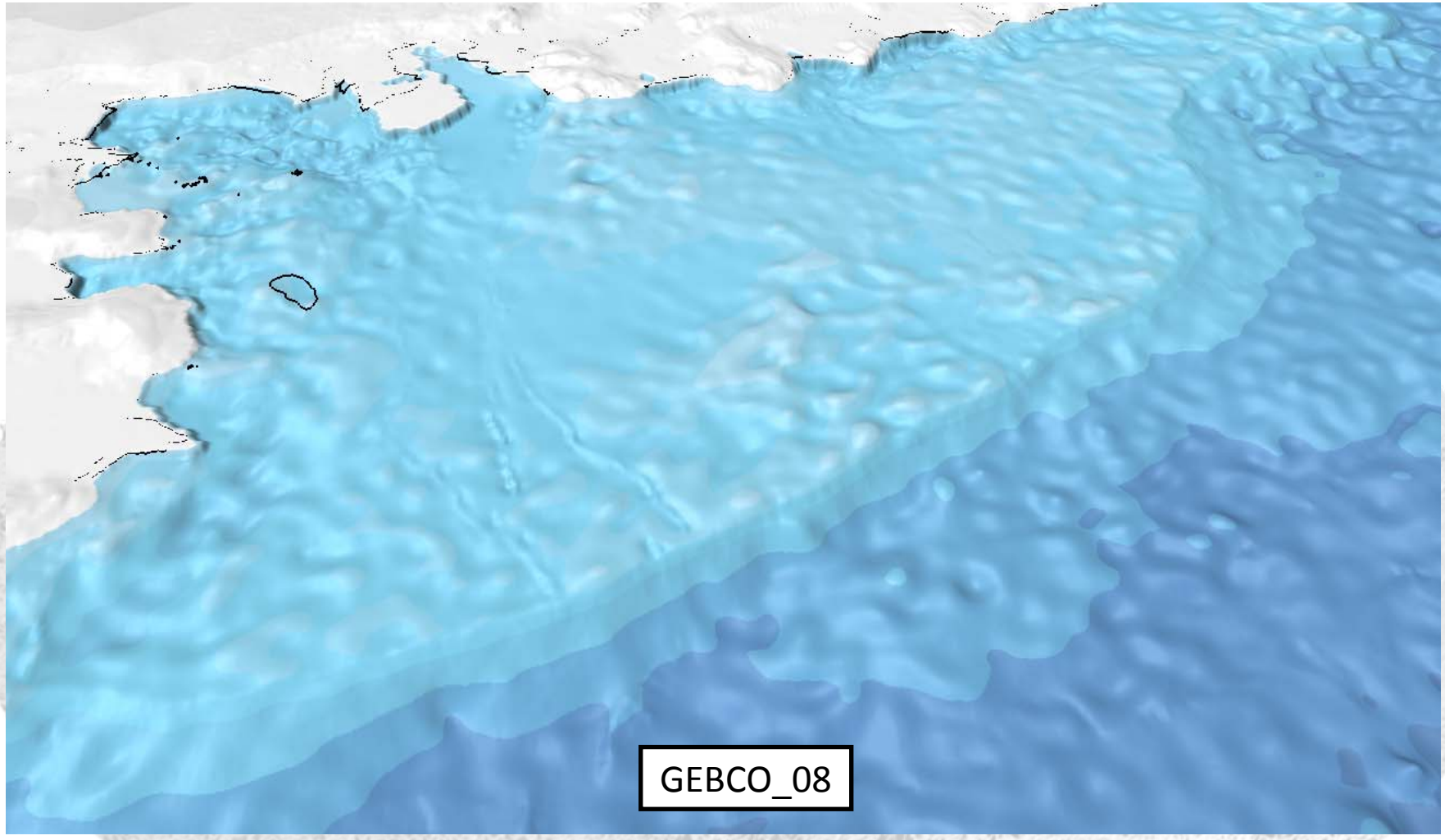

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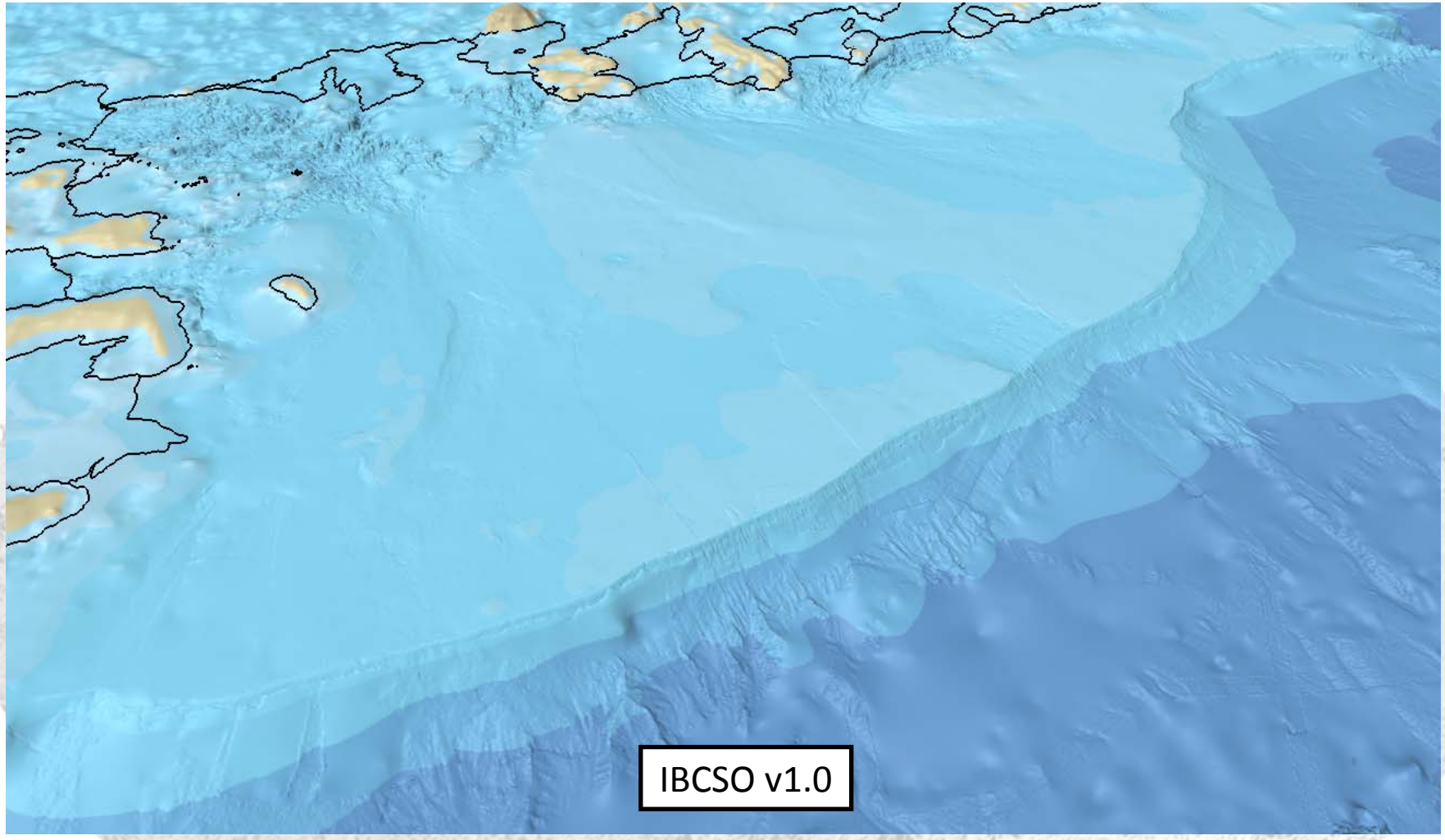

IBCSO Version 1.0

(Arndt et al. 2013, GRL)

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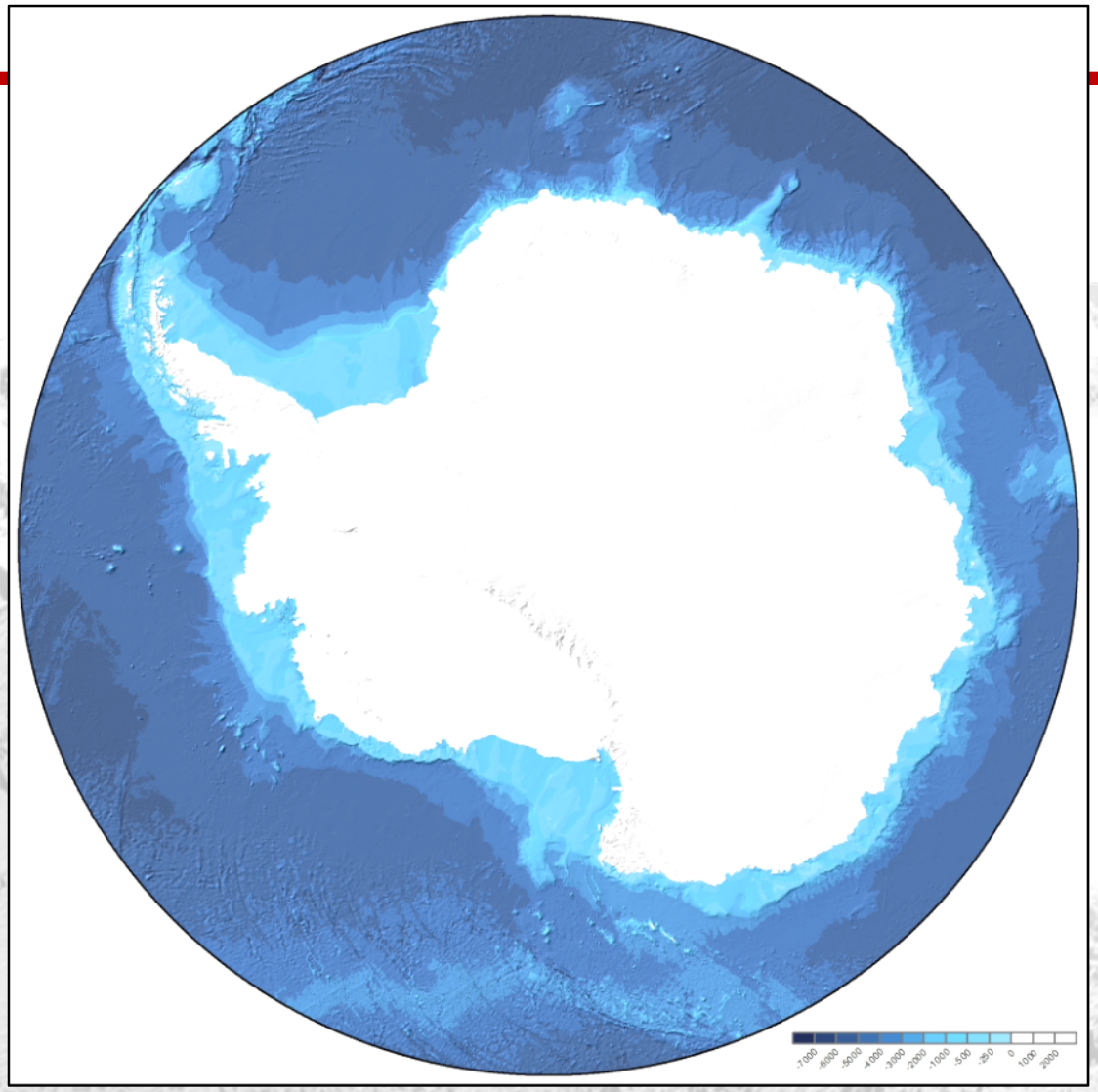

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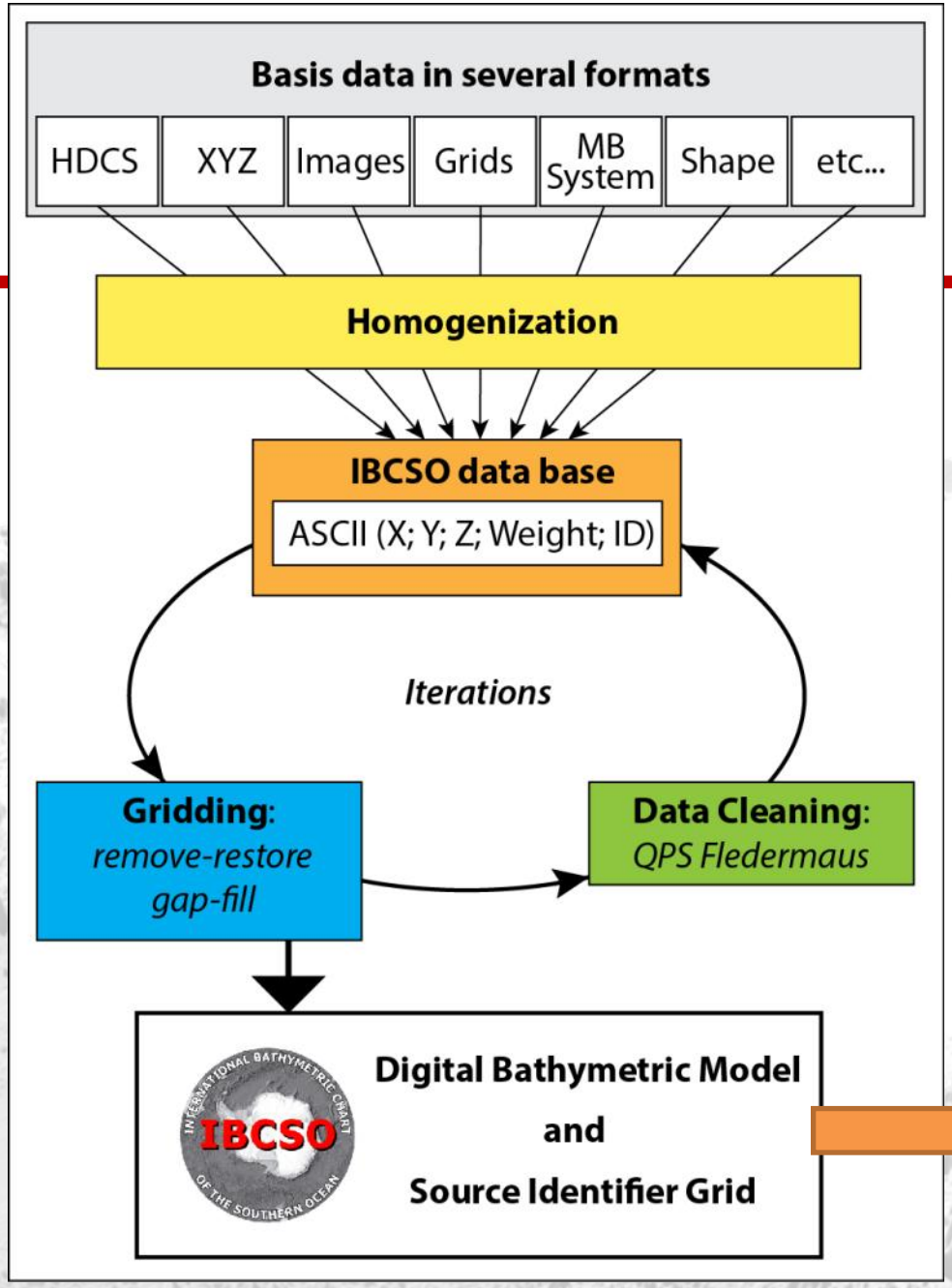
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Maps

Map products

Science

Outreach

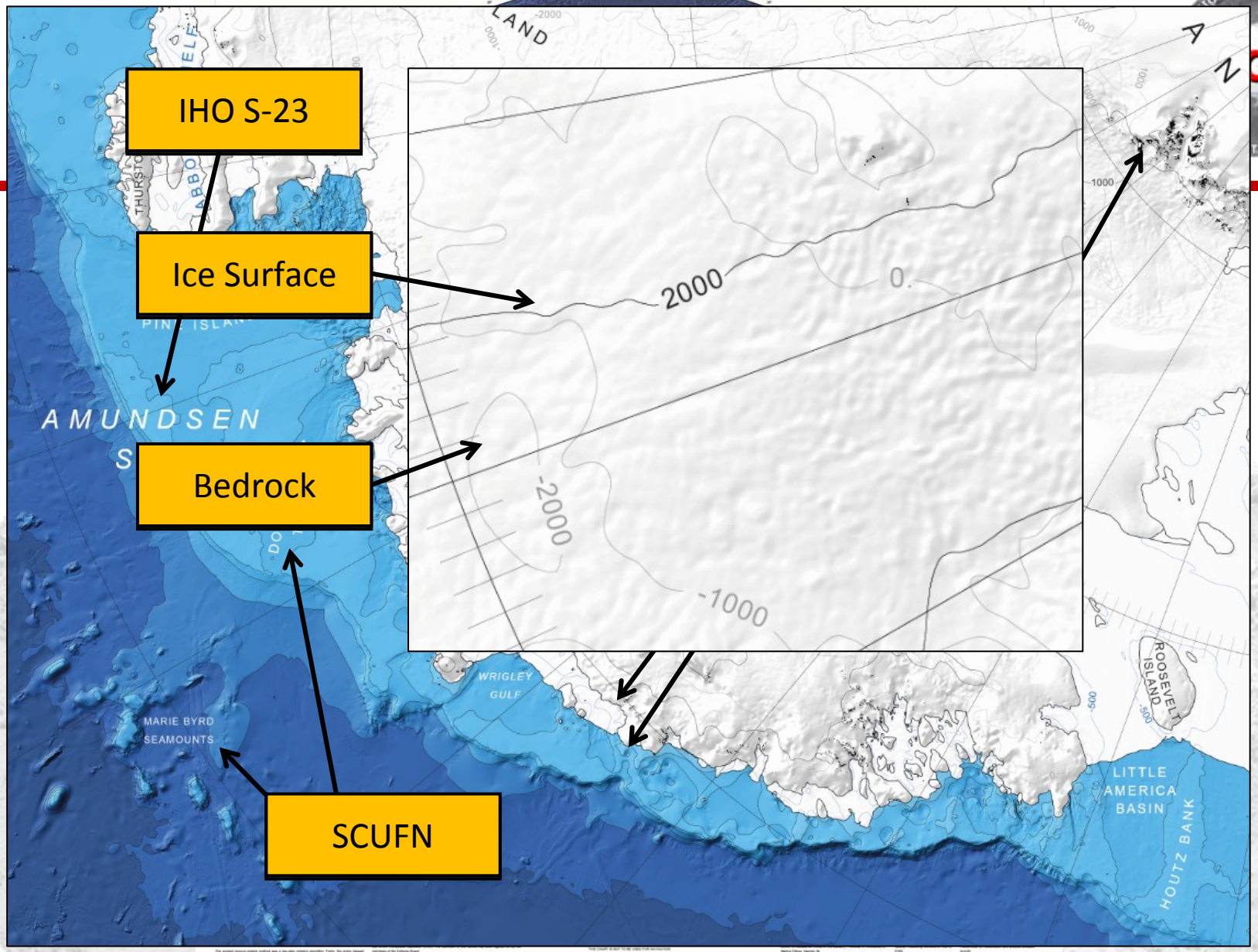
GIS Background GeoTiff

Wallpaper Chart

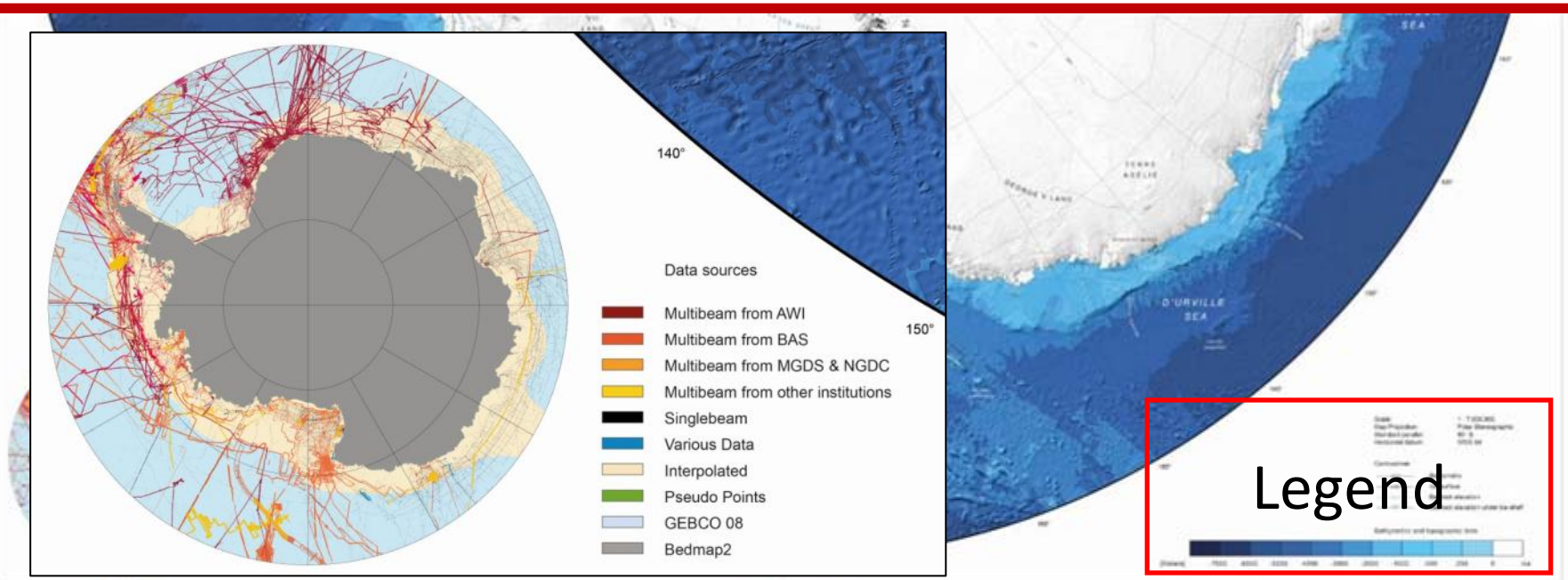
Foldable IBCSO – IBCAO map

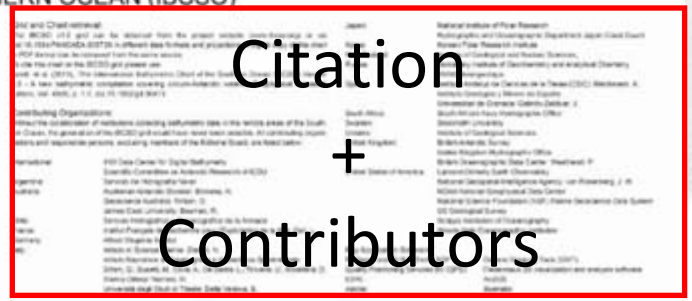
Planned

Lenticular Map


IHO S-23
Ice Surface
Bedrock
SCUFN
2000
0
-2000
-1000
AMUNDSEN
WRIGLEY GULF
MARIE BYRD SEAMOUNTS
ROOSEVELT ISLAND
LITTLE AMERICA BASIN
HOUTZ BANK

Wallpaper Chart





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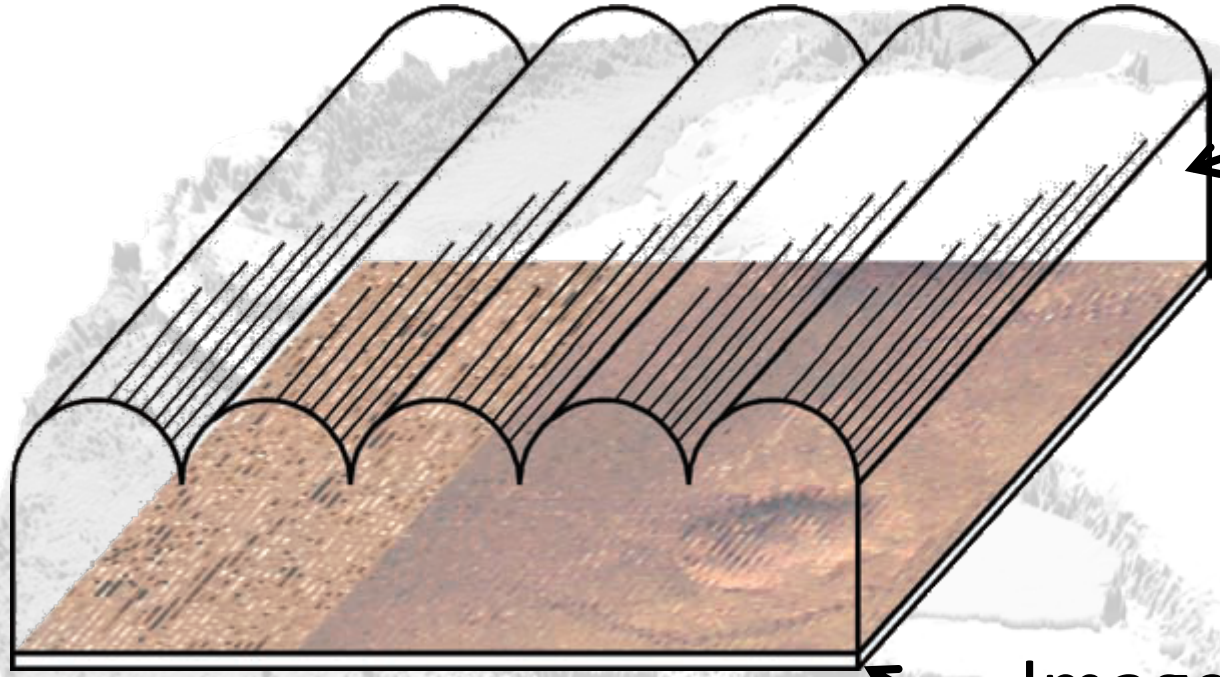
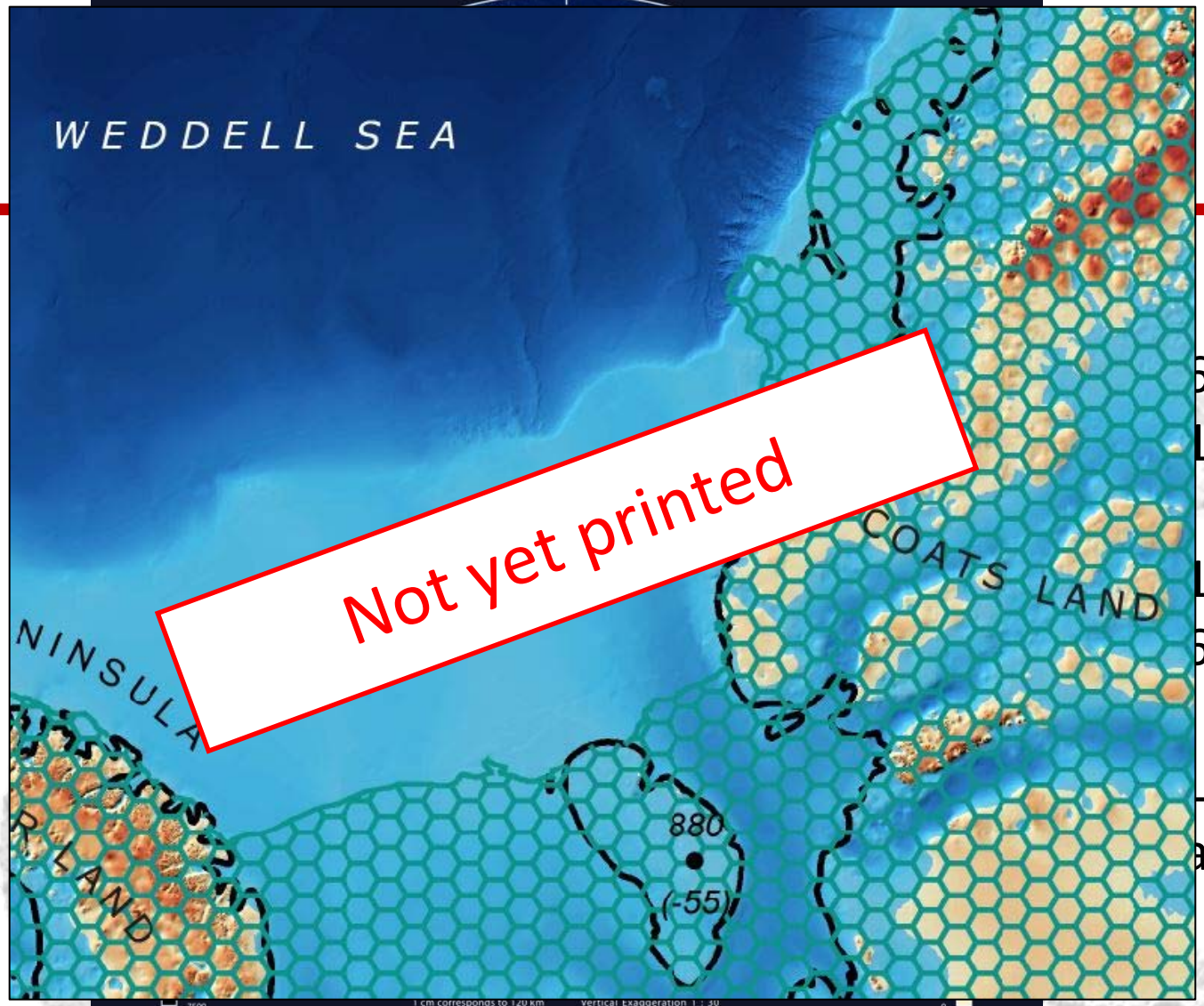


Foil with micro-lenses on top

Image with multiple synthetic views

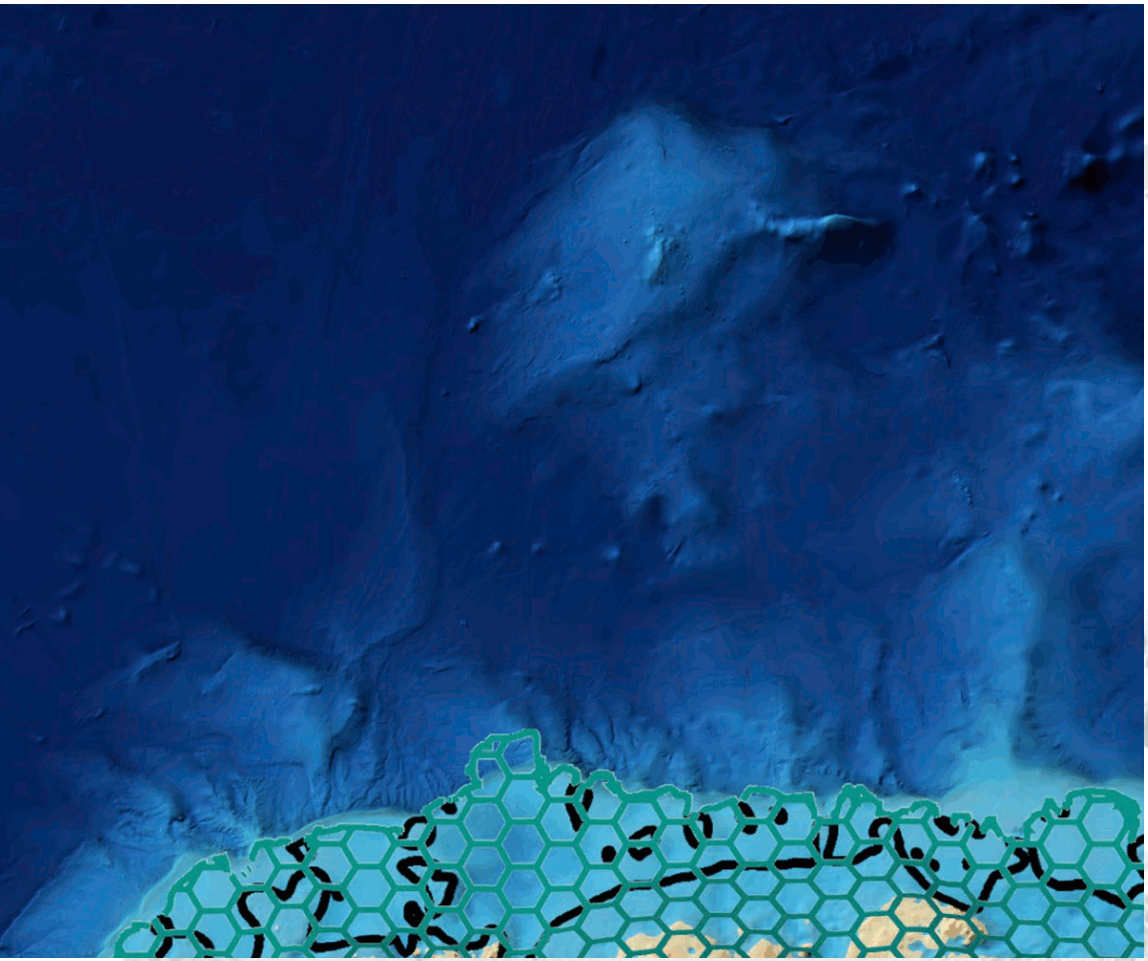


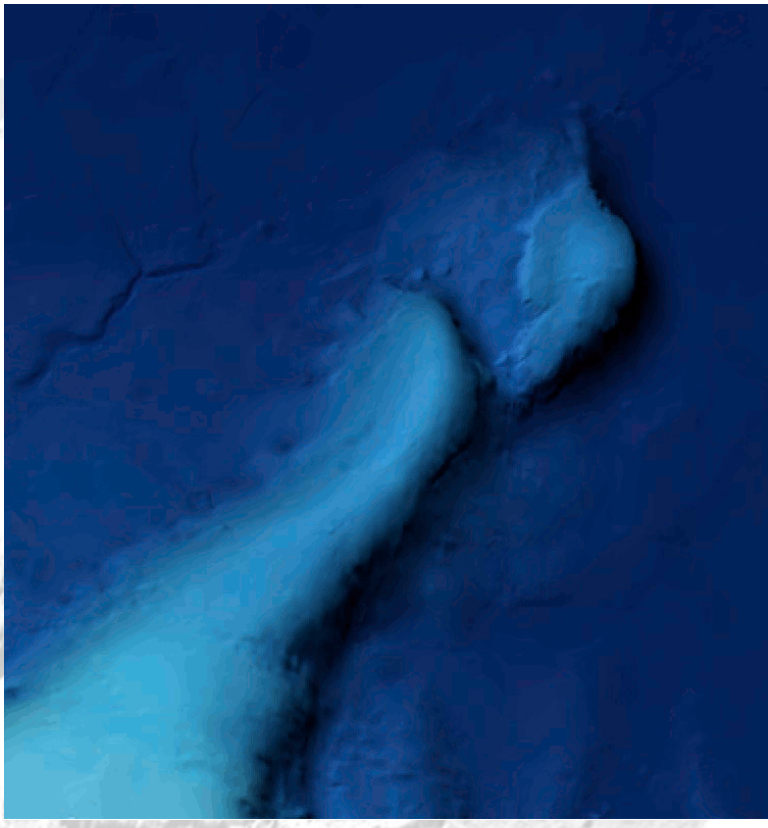
64 x 81 cm
1 : 12 000 000

19 stereomates
62 lpi

Legend and names
as separate layer

Lenticular Map – Preview 3D





Thanks for your attention!

For further information visit
www.ibcso.org
or contact me via
Jan.Erik.Arndt@awi.de