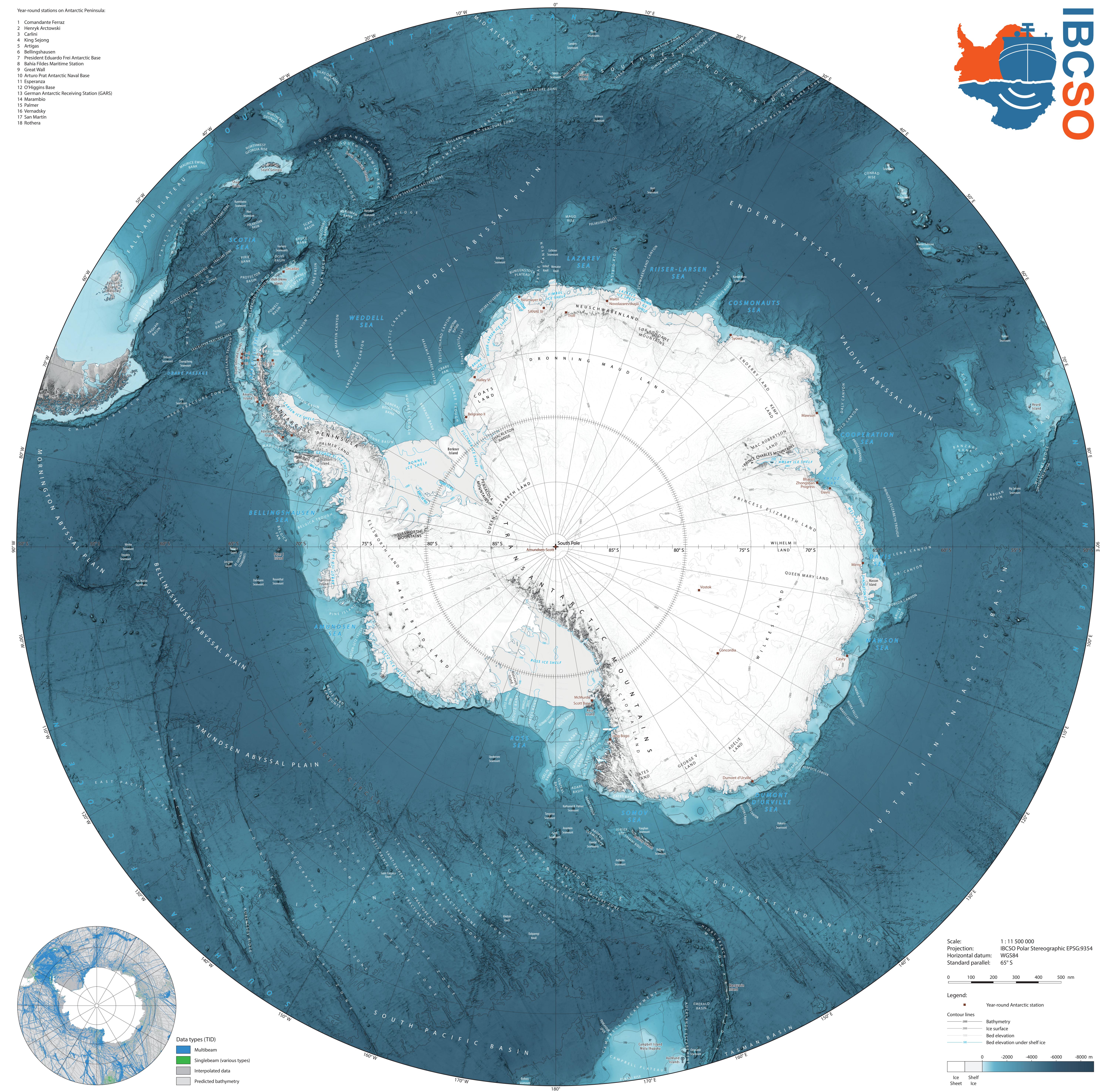




Year-round stations on Antarctic Peninsula:

- 1 Comandante Ferraz
- 2 Henryk Arctowski
- 3 Goudier
- 4 King Sejong
- 5 Artigas
- 6 Bellingshausen
- 7 President Eduardo Frei Antarctic Base
- 8 Bahia Fildes Maritime Station
- 9 Great Wall
- 10 Chinese Antarctic Naval Base
- 11 Esperanza
- 12 O'Higgins Base
- 13 German Antarctic Receiving Station (GARS)
- 14 Marambio
- 15 Palmer
- 16 Vernadsky
- 17 San Martin
- 18 Rothera



## INTERNATIONAL BATHYMETRIC CHART OF THE SOUTHERN OCEAN (IBCSO)

Version 2



**Authors**  
 Boris Dorschel<sup>1</sup>, Laura Hehemann<sup>1</sup>, Sacha Viquerat<sup>1</sup>, Flynn Warnke<sup>1,2</sup>, Simon Dreutter<sup>1</sup>, Yvonne Schulze Tenberge<sup>1</sup>, Daniela Accettella<sup>1</sup>, Lu An<sup>3</sup>, Felipe Barrios<sup>1</sup>, Eugenia Bazelevna<sup>1</sup>, Jenny Black<sup>1</sup>, Fernando Bohoyo<sup>1</sup>, Craig Davey<sup>1</sup>, Laura De Santis<sup>1</sup>, Carlota Escutia Dotti<sup>1</sup>, Alice C. Fremant<sup>1</sup>, Peter T. Fretwell<sup>1</sup>, Jenny A. Gaines<sup>1</sup>, Jiminy Gao<sup>4</sup>, Luca Gasparini<sup>5</sup>, James S. Green<sup>1</sup>, Ursula Harnies<sup>1</sup>, Jeffrey Hines<sup>1</sup>, Michael Hopp<sup>6</sup>, Emily Howard<sup>1</sup>, Luca Iaccarino<sup>7</sup>, Michael J. McPhile<sup>8</sup>, Sophie Mille<sup>9</sup>, Yoshifumi Mayer<sup>10</sup>, Romain Millet<sup>11</sup>, Mathieu Morlighem<sup>12</sup>, Francisco Navidad<sup>13</sup>, Frank O. Nitsche<sup>14</sup>, Kevin Mackay<sup>15</sup>, Larry Nogi<sup>16</sup>, Cécile Pertusot<sup>17</sup>, Alexandra L. Post<sup>18</sup>, Hamish D. Pritchard<sup>19</sup>, Autun Purse<sup>1</sup>, Michele Rebesci<sup>20</sup>, Eric Rignot<sup>21,22</sup>, Jason L. Roberts<sup>23</sup>, Marzia Rovere<sup>1</sup>, Ivan Ryzhov<sup>24</sup>, Chiara Sauli<sup>25</sup>, Thierry Schmitt<sup>17</sup>, Alessandro Silvano<sup>26</sup>, Jodie Smith<sup>27</sup>, Helen Sneth<sup>28</sup>, Alex J. Tate<sup>29</sup>, Kirsty Tinto<sup>29</sup>, Phillipine Vandembosch<sup>29</sup>, Paul Wintersteller<sup>1</sup>, Chunguo Yang<sup>1</sup>, Tao Zhang<sup>1</sup>, Jan Erik Arndt<sup>1</sup>

**Organizations**  
 1 Alfred-Wegener-Institut, Helmholtz-Zentrum für Polar- und Meeresforschung, Bremerhaven, Germany  
 2 Royal Holloway, University of London, Egham, Surrey, United Kingdom  
 3 National Institute of Oceanography and Applied Geophysics OGS, Trieste, Italy  
 4 Department of Earth System Science, University of California Irvine, Irvine, CA, USA  
 5 College of Surveying and Geo-Information Sciences, Tongji University, China  
 6 Scott Polar Research Institute, University of Cambridge, Cambridge, United Kingdom  
 7 Polar Marine Geosurvey Expedition, Punta Arenas, Chile  
 8 GNS Science, Lower Hutt, New Zealand  
 9 Geodetic Institute, University of Cologne, Cologne, Germany  
 10 National Collections and Marine Infrastructure, CSIRO, Hobart, Tasmania, Australia  
 11 Instituto Andaluz de Ciencias de la Tierra (CSIC-UGR), Granada, Spain  
 12 British Antarctic Survey, Cambridge, United Kingdom  
 13 British Oceanographic Data Centre, National Oceanography Centre, Southampton, United Kingdom  
 14 Key Lab of Submarine Geosciences, State Key Laboratory of Oceanography, MNR, Hangzhou, China  
 15 Institut für Geographie und Ökologie, Bremen, Germany  
 16 Scripps Institution of Oceanography, University of California, San Diego, La Jolla, USA  
 17 Australian Antarctic Division, Kingston, Tasmania, Australia

18 IHO Data Centre for Digital Bathymetry, NOAA's National Centers for Environmental Information, Boulder, Colorado, USA  
 19 Korea Polar Research Institute, Incheon, Korea  
 20 Department of Geological Sciences, Stockholm University, Stockholm, Sweden  
 21 UniversityCity of Hamburg, Hamburg, Germany  
 22 All Russian Research Institute of Geology and Mineral Resources of the World Ocean, St.Petersburg, Russian Federation  
 23 PREMEX, Centre Bertrage, Plouzané, France  
 24 National Institute of Water and Atmospheric Research Ltd (NIWA), Wellington, New Zealand  
 25 Center for Coastal and Ocean Mapping, University of New Hampshire, Durham, NH, USA  
 26 Institut des Géosciences de l'Environnement, Grenoble, France  
 27 Lamont-Doherty Earth Observatory, Palisades, NY, USA  
 28 Lamont-Doherty Earth Observatory of Columbia University, Palisades, NY, USA  
 29 National Institute of Polar Research, Tokyo, Japan  
 30 National Institute of Polar Research, Tokyo, Japan  
 31 Australian Antarctic Program Partnership, Institute for Marine and Antarctic Studies, University of Tasmania, Hobart, Tasmania, Australia  
 32 California Institute of Technology's Jet Propulsion Laboratory, Pasadena, CA, USA  
 33 University of New South Wales, Sydney, NSW, Australia  
 34 Arctic and Antarctic Research Institute, St Petersburg, Russian Federation  
 35 Service Hydrographique et Océanographique de la Marine, Brest, Bretagne, France  
 36 National Oceanic and Atmospheric Administration, Woods Hole, Massachusetts, MA, USA  
 37 British Oceanographic Data Centre, National Oceanography Centre, Southampton, United Kingdom  
 38 British Oceanographic Data Centre, National Oceanography Centre, Liverpool, United Kingdom  
 39 MARUM and Faculty of Geosciences, University of Bremen, Bremen, Germany

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**Further information:** [www.ibcso.org](http://www.ibcso.org)  
**Contact:** [ibcso@awi.de](mailto:ibcso@awi.de)

### General information

The Southern Ocean surrounding Antarctica is a region that is key to a range of climatic and oceanographic processes with worldwide effects, and is characterised by high biological productivity and biodiversity. Since 2013, the International Bathymetric Chart of the Southern Ocean (IBCSO) is the most comprehensive compilation of bathymetry for the Southern Ocean.

IBCSO is a product of the International Bathymetric Chart of the Southern Ocean (IBCSO) Project, which is a project under the auspices of the International Hydrographic Organization (IHO) and the International Oceanographic Commission (IOC) with the goal to produce the authoritative map of the world's oceans. Furthermore, IBCSO has combined its efforts with and is supported by the Nippon Foundation – GEBCO Seabed 2030 Project launched in 2017 by the Nippon Foundation and GEBCO. The GEBCO Seabed 2030 Project is also an integral part of the Antarctic research community and an expert group of the Scientific Committee on Antarctic Research (SCAR).

**About the map**  
 The IBCSO v2 map is based on the IBCSO v2 digital bathymetric model (DBM). This DBM covers the area south of 50° S. The grid spacing is 500 m × 500 m in IBCSO Polar Stereographic Projection (EPSG: 9354) with a resolution of ~100 m. Contour lines are drawn every 200 m. The map is available in two versions: one with ice surface elevation and one with bedrock elevation. The latter is the version shown here. The IBCSO v2 map is available in two topographic versions: one with its surface elevation on the Antarctic continent (represented in this map) and one with bedrock elevation, including sub-ice topography. Furthermore, a Type Identifier (TID) grid is available that indicates the type of data that composes each grid cell. In addition, a unique Regional Identifier (RID) grid links each data cell to the corresponding metadata information, and thus the DBM's cell value origin. For a detailed description and dataset download please see DOI: <https://doi.org/10.1594/PANGAEA.937574>

**Data sources**  
 IBCSO v2 comprises a variety of datasets ranging from digitised contours and lead line soundings to high-resolution multibeam data. High-resolution multibeam datasets make up the basis of the compilation with a total of 464 datasets. In addition, 766 singlebeam datasets provide measured bathymetric

information. SRTM15+ v2.2 was used as predicted bathymetry for seafloor areas without direct measurements. Sub-ice bathymetry is constrained by direct measurements, bathymetry inversions, and artificial steering lines. Ice surface and sub-ice sheet topography is from BedMachine.

For IBCSO v2 more than 50 billion soundings have been processed. This amount of data resulted in a large computing workload at all levels from data submission to product generation. The main processing pipeline developed to cope with this workload is called SEAHORSE. All relevant code related to the main SEAHORSE workflow is available at: [https://github.com/SeahorseIBCSO\\_v2\\_Dorschel\\_et\\_al\\_2022](https://github.com/SeahorseIBCSO_v2_Dorschel_et_al_2022)

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