

Best bathymetry to date in the Southern Ocean from RVIB Nathaniel B. Palmer cruises NBP010, NBP0104, and NBP0202 from 2001-2002 (SOGLOBEC project)

Website: <https://www.bco-dmo.org/dataset/2351>

Version: 20 May 2011

Version Date: 2011-05-20

Project

» [U.S. GLOBEC Southern Ocean](#) (SOGLOBEC)

Program

» [U.S. GLOBal ocean ECosystems dynamics](#) (U.S. GLOBEC)

Contributors	Affiliation	Role
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Dataset Description

For additional description and documentation of the bathymetry data collected during Southern Ocean Globec, see [this website](#).

The data themselves are with BCO-DMO, so one can ignore the links at the above website. The documentation at the website is fairly complete and the supporting information about possible displays of the data is excellent. Contact the Data Management Office or the PI with any questions.

There are three DOIs related to this dataset. They refer to the original multibeam (seabeam) acoustic backscatter data and are as follows:

2006 Wiebe, P. (2006). Processed Multibeam Sonar Data (version 1) near the Antarctic Peninsula acquired during Nathaniel B. Palmer expedition NBP0103 (2001). IEDA: MGDS Data Collection. DOI: 10.1594/IEDA/100305.

2006 Wiebe, P. (2006). Processed Multibeam Sonar Data (version 1) near the Antarctic Peninsula acquired during Nathaniel B. Palmer expedition NBP0104 (2001). IEDA: MGDS Data Collection. DOI: 10.1594/IEDA/100306.

2006 Wiebe, P. (2006). Processed Multibeam Sonar Data (version 1) near the Antarctic Peninsula acquired during Nathaniel B. Palmer expedition NBP0202 (2002). IEDA: MGDS Data Collection. DOI: 10.1594/IEDA/100310.

Methods & Sampling

One objective of the SO GLOBEC program is to produce a better knowledge of the sea floor bathymetry in the program study area. Much of Marguerite Bay and the adjacent shelf was poorly charted when the program was started in 2000, so we first created a local area improved version (ETOPO8.2A) of the Sandwell and Smith ETOPO2 2-min digital gridded bathymetry for the SO GLOBEC study area. The first SO GLOBEC mooring cruise on the R/V Lawrence M. Gould in March 2001 quickly showed that the 2-min resolution of ETOPO8.2A does not resolve many of the canyons and abrupt changes in topography which characterize Marguerite Bay and the inner- to-mid shelf region, nor is it particularly accurate in even the more uniform terrain regions. To begin to improve this situation, high-quality swath bathymetry data were collected during both SO GLOBEC broadscale surveys using the SeaBeam system aboard the *R/VIB Nathaniel B. Palmer* in 2001. In addition, an extensive multibeam survey was conducted along the deep trough leading into Marguerite Bay aboard the *R/VIB James Clark Ross* in 2001. While the 2001 *R/VIB Nathaniel B. Palmer* SeaBeam data may need some adjustment for sound speed corrections, an initial attempt has been made to merge these new data sets with all existing center trackline and multibeam data available at the U.S. Geophysical Data Center (NGDC) or provided by other investigators.

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Data Files

File
bathy.csv (Comma Separated Values (.csv), 2.80 KB) MD5:64a4b4f3df81c1b5ebc588f8cd3b0938
Primary data file for dataset ID 2351

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Parameters

Parameter	Description	Units
data_link	Complete ftp link to the data.	unitless
brief_desc	Very brief indication of what data are being linked to.	none

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Instruments

Dataset-specific Instrument Name	Multibeam
Generic Instrument Name	Multibeam Echosounder
Dataset-specific Description	Multibeam system was used to measure the bathymetry data
Generic Instrument Description	A Multibeam Echosounder system is used to measure bathymetry (depth of the ocean). The resultant data can be used to map large areas of the seafloor.

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Deployments

NBP0103

Website	https://www.bco-dmo.org/deployment/57636
Platform	RVIB Nathaniel B. Palmer
Report	http://globec.whoi.edu/so-dir/reports/nbp0103/nbp0103.html
Start Date	2001-04-24
End Date	2001-06-05
Description	<p>Methods & Sampling</p> <p>One objective of the SO GLOBEC program is to produce a better knowledge of the sea floor bathymetry in the program study area. Much of Marguerite Bay and the adjacent shelf was poorly charted when the program was started in 2000, so we first created a local area improved version (ETOPO8.2A) of the Sandwell and Smith ETOPO2 2-min digital gridded bathymetry for the SO GLOBEC study area. The first SO GLOBEC mooring cruise on the R/V Lawrence M. Gould in March 2001 quickly showed that the 2-min resolution of ETOPO8.2A does not resolve many of the canyons and abrupt changes in topography which characterize Marguerite Bay and the inner- to-mid shelf region, nor is it particularly accurate in even the more uniform terrain regions. To begin to improve this situation, high-quality swath bathymetry data were collected during both SO GLOBEC broadscale surveys using the SeaBeam system aboard the R/VIB Nathaniel B. Palmer in 2001. In addition, an extensive multibeam survey was conducted along the deep trough leading into Marguerite Bay aboard the R/VIB James Clark Ross in 2001. While the 2001 R/VIB Nathaniel B. Palmer SeaBeam data may need some adjustment for sound speed corrections, an initial attempt has been made to merge these new data sets with all existing center trackline and multibeam data available at the U.S. Geophysical Data Center (NGDC) or provided by other investigators.</p>

NBP0104

Website	https://www.bco-dmo.org/deployment/57638
Platform	RVIB Nathaniel B. Palmer
Report	http://www.ccpo.odu.edu/Research/globec/cruises01/nbp0104_menu.html
Start Date	2001-07-22
End Date	2001-08-31
Description	<p>Methods & Sampling</p> <p>To begin to improve this situation, high-quality swath bathymetry data were collected during both SO GLOBEC broadscale surveys using the SeaBeam system aboard the R/VIB Nathaniel B. Palmer in 2001. In addition, an extensive multibeam survey was conducted along the deep trough leading into Marguerite Bay aboard the R/VIB James Clark Ross in 2001. While the 2001 R/VIB Nathaniel B. Palmer SeaBeam data may need some adjustment for sound speed corrections, an initial attempt has been made to merge these new data sets with all existing center trackline and multibeam data available at the U.S. Geophysical Data Center (NGDC) or provided by other investigators.</p>

NBP0202

Website	https://www.bco-dmo.org/deployment/57641
Platform	RVIB Nathaniel B. Palmer
Report	http://globec.whoi.edu/so-dir/reports/nbp0202/nbp0202b.html
Start Date	2002-04-09
End Date	2002-05-21
Description	<p>Methods & Sampling</p> <p>To begin to improve this situation, high-quality swath bathymetry data were collected during both SO GLOBEC broadscale surveys using the SeaBeam system aboard the R/VIB Nathaniel B. Palmer in 2001. In addition, an extensive multibeam survey was conducted along the deep trough leading into Marguerite Bay aboard the R/VIB James Clark Ross in 2001. While the 2001 R/VIB Nathaniel B. Palmer SeaBeam data may need some adjustment for sound speed corrections, an initial attempt has been made to merge these new data sets with all existing center trackline and multibeam data available at the U.S. Geophysical Data Center (NGDC) or provided by other investigators.</p>

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Project Information

U.S. GLOBEC Southern Ocean (SOGLOBEC)

Website: http://www.ccpo.odu.edu/Research/globec_menu.html

Coverage: Southern Ocean

The fundamental objectives of United States Global Ocean Ecosystems Dynamics (U.S. GLOBEC) Program are dependent upon the cooperation of scientists from several disciplines. Physicists, biologists, and chemists must make use of data collected during U.S. GLOBEC field programs to further our understanding of the interplay of physics, biology, and chemistry. Our objectives require quantitative analysis of interdisciplinary data sets and, therefore, data must be exchanged between researchers. To extract the full scientific value, data must be made available to the scientific community on a timely basis.

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Program Information

U.S. GLOBAL ocean ECosystems dynamics (U.S. GLOBEC)

Website: <http://www.usglobec.org/>

Coverage: Global

U.S. GLOBEC (GLOBAL ocean ECosystems dynamics) is a research program organized by oceanographers and fisheries scientists to address the question of how global climate change may affect the abundance and production of animals in the sea.

The U.S. GLOBEC Program currently had major research efforts underway in the Georges Bank / Northwest Atlantic Region, and the Northeast Pacific (with components in the California Current and in the Coastal Gulf of Alaska). U.S. GLOBEC was a major contributor to International GLOBEC efforts in the Southern Ocean and Western Antarctic Peninsula (WAP).

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Funding

Funding Source	Award
NSF Antarctic Sciences (NSF ANT)	ANT-0234163

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