

Processed one meter (decibar) CTD data from RVIB Nathaniel B. Palmer cruises NBP0103, NBP0104, NBP0202, and NBP0204 in the Southern Ocean from 2001-2002 (SOGLOBEC project)

Website: <https://www.bco-dmo.org/dataset/2359>

Data Type: Cruise Results

Version: 1

Version Date: 2009-11-24

Project

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

Program

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

| Contributors | Affiliation | Role |
|------------------------------------|---|---------------------------|
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Abstract

Processed one meter (decibar) CTD data from RVIB Nathaniel B. Palmer cruises NBP0103, NBP0104, NBP0202, and NBP0204 in the Southern Ocean from 2001-2002 (SOGLOBEC project)

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Coverage

Spatial Extent: N:-64.0063 E:-61.754 S:-70.6332 W:-77.7745

Temporal Extent: 2001 - 2002

Dataset Description

CTD profile data from the Southern Ocean

Note:

Some variables have been eliminated from the display but are nevertheless available. These variables include: Temperature0, Temperature1, Salinity0 and Salinity1. These variables are reported from the primary (0) and secondary (1) temperature and conductivity sensors.

John Klinck has provided [Matlab](#)® routines to use to read and display the data. When you use his routines you'll need to use the data in the format he provided or alter the routines to suit the data format you have. His routines are available in a package or individually.

[NBP0103.event.tar.gz](#) and [NBP0104.event.tar.gz](#) and [NBP0202.event.tar.gz](#):

These have event files for all hydrographic events as well as separate files for ctd, xctd and xbt events. [**NB:** This data is also available directly [on-line](#)]

[NBP0103.ctd.tar.gz](#) and [NBP0104.ctd.tar.gz](#) and [NBP0202.ctd.tar.gz](#):

These files have two subdirectories (OneMeter and StdDepth) with ascii files for casts with the resolution indicated by the directory name. The files are ctdxxx.dat where xxx is the cast number, with leading zeros if necessary. The data in these files is self describing. The readctd routine in the matlab package will read these files. The first line in the file tells how many data items in the file (all ctd files have identical structure).

(Package) [soglobec.matlab.tar.gz](#):

This file has 5 subdirectories (Ctd, General, Grid, Oceans, SeaWater) with a bunch of tools for plotting the above ctd data. It uses the oceans and seawater routines that are widely available (but copies are included). There is also a set of routines to convert between lat-lon and a universal transverse mercator mapping that we use for station location. There is a startup.m file in "Ctd" to point to General, Oceans and SeaWater. In "Ctd" is a subdirectory (matlab) with various routines. The routines in the main directory are drivers to make multiple figures. There is documentation of these routines in the files and in the folders.

(Individual routines) [soglobec.matlab](#). Hint: Read routines in "General" first, then go to "Ctd" for startup.m file.

New Hint (6/13/03): There is a new SetupPlots.m file in the "General" m-files folder. "This file chooses stations from the four cruises for the various plots. Since there was so little data from the 0204 cruise, individual lines across the grid were not specified(they may be later). A subset of the stations were chosen that are the "official" casts at each station occupied." *J.Klinck*

Data and Software provided by:

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File updated 01/04/2006; gfh

Methods & Sampling

Some variables have been eliminated from the display but are nevertheless available. These variables include: Temperature0, Temperature1, Salinity0 and Salinity1. These variables are reported from the primary (0) and secondary (1) temperature and conductivity sensors.

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Data Files

| File |
|---|
| ctd_JK_one_meter.csv (Comma Separated Values (.csv), 35.97 MB) MD5:f336f543842d941e39dc9a33a861cc22 |
| Primary data file for dataset ID 2359 |

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Parameters

| Parameter | Description | Units |
|------------|---|-----------------|
| cruiseid | cruise identifier. (e.g., LMG0103, NPB0104) | |
| event | event or operation number, a unique ID | |
| cast | CTD cast number, generally consecutive within cruise | |
| year | year, GMT time | |
| yrday_gmt | year day, GMT, based on Julian calendar, whole day | YYY |
| time_gmt | time, GMT time | HHmm |
| lat | latitude, negative = South | DD.D |
| lon | longitude, negative = West | DDD.D |
| xgrid | Distance from the grid origin in the northeast direction in kilometers.(xgrid,ygrid) define a point. Complete explanation of the Southern Ocean grid system | |
| ygrid | Distance from the grid origin in the northeast direction in kilometers.(xgrid,ygrid) define a point. | |
| depth_w | depth of water | meters |
| depth_cast | max. depth of cast | meters |
| station | station number, some stations have multiple casts | |
| press | depth of data point or sample reported as pressure | decibars |
| temp | water temperature, average of the primary and secondary temp. sensors | degrees C. |
| sal | salinity, average of salinities calculated from the primary and secondary conductivity sensors, PSU | |
| potemp | potential temperature | degrees C |
| sigma_0 | potential density at surface (0 decibars) | kg/m3minus 1000 |
| sigma_1000 | potential density at 1000 decibars | kg/m3minus 1000 |
| bvfq | buoyancy frequency, N squared | 1/seconds2 |
| o2 | dissolved oxygen | umol/kg |
| par | down welled Photosynthetically Available Radiation (PAR) | uE/cm2/sec |
| trans | light transmission | percent |
| flvolt | fluorescence | volts |

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Instruments

| | |
|---|---|
| Dataset-specific Instrument Name | Conductivity, Temperature, Depth |
| Generic Instrument Name | CTD - profiler |
| Dataset-specific Description | CMiPS and FRRF added to instrument column,coupled with CTD when appropriate. |
| Generic Instrument Description | The Conductivity, Temperature, Depth (CTD) unit is an integrated instrument package designed to measure the conductivity, temperature, and pressure (depth) of the water column. The instrument is lowered via cable through the water column. It permits scientists to observe the physical properties in real-time via a conducting cable, which is typically connected to a CTD to a deck unit and computer on a ship. The CTD is often configured with additional optional sensors including fluorometers, transmissometers and/or radiometers. It is often combined with a Rosette of water sampling bottles (e.g. Niskin, GO-FLO) for collecting discrete water samples during the cast. This term applies to profiling CTDs. For fixed CTDs, see https://www.bco-dmo.org/instrument/869934 . |

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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 | Methods & Sampling Some variables have been eliminated from the display but are nevertheless available. These variables include: Temperature0, Temperature1, Salinity0 and Salinity1. These variables are reported from the primary (0) and secondary (1) temperature and conductivity sensors. |

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 | Methods & Sampling Some variables have been eliminated from the display but are nevertheless available. These variables include: Temperature0, Temperature1, Salinity0 and Salinity1. These variables are reported from the primary (0) and secondary (1) temperature and conductivity sensors. |

NBP0202

| | |
|--------------------|--|
| Website | https://www.bco-dmo.org/deployment/57641 |
| Platform | RVIB Nathaniel B. Palmer |
| Report | http://globec.who.edu/so-dir/reports/nbp0202/nbp0202b.html |
| Start Date | 2002-04-09 |
| End Date | 2002-05-21 |
| Description | <p>Methods & Sampling</p> <p>Some variables have been eliminated from the display but are nevertheless available. These variables include: Temperature0, Temperature1, Salinity0 and Salinity1. These variables are reported from the primary (0) and secondary (1) temperature and conductivity sensors.</p> |

NBP0204

| | |
|--------------------|---|
| Website | https://www.bco-dmo.org/deployment/57643 |
| Platform | RVIB Nathaniel B. Palmer |
| Report | http://globec.who.edu/so-dir/reports/nbp0204/nbp0204b.html |
| Start Date | 2002-07-31 |
| End Date | 2002-09-18 |
| Description | <p>Also see NBP0204 Cruise Data Report</p> <p>Methods & Sampling</p> <p>Some variables have been eliminated from the display but are nevertheless available. These variables include: Temperature0, Temperature1, Salinity0 and Salinity1. These variables are reported from the primary (0) and secondary (1) temperature and conductivity sensors.</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-9909956 |

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