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
Klinck, John M.	Old Dominion University (ODU)	Principal Investigator
Hofmann, Eileen E.	Old Dominion University (ODU)	Co-Principal Investigator
Allison, Dicky	Woods Hole Oceanographic Institution (WHOI BCO-DMO)	BCO-DMO Data Manager

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)

Table of Contents

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](#)$^{Â®}$ 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:
John M. Klinck
Center for Coastal Physical Oceanography
Department of Ocean, Earth and Atmospheric Sciences
Crittenton Hall
Old Dominion University
Norfolk, Virginia 23529

phone: 757 683-6005, fax: 757 683-5550
email: klinck@ccpo.odu.edu

File updated 01/04/2006; gfh

Acquisition Description

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.

[ ]

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

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 and permits scientists observe the physical properties in real time via a conducting cable connecting the CTD to a deck unit and computer on the 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 instrument designation is used when specific make and model are not known.

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	**Acquisition Description** 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	**Acquisition Description** 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.whoi.edu/so-dir/reports/nbp0202/nbp0202b.html
Start Date	2002-04-09
End Date	2002-05-21
Description	**Acquisition Description** 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.

NBP0204

Website	https://www.bco-dmo.org/deployment/57643
Platform	RVIB Nathaniel B. Palmer
Report	http://globec.whoi.edu/so-dir/reports/nbp0204/nbp0204b.html
Start Date	2002-07-31
End Date	2002-09-18

[table of contents | back to top]

Project Information

Description	**Acquisition Description** 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.

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.

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).

Funding

Funding Source	Award
NSF Antarctic Sciences (NSF ANT)	ANT-9909956