

Raw drifter data from RVIB Nathaniel B. Palmer and ARSV Laurence M. Gould cruises NBP0103, LMG0103, LMG0201A, and NBP0202 in the Southern Ocean from 2001-2002 (SOGLOBEC project)

Website: <https://www.bco-dmo.org/dataset/2365>

Data Type: Cruise Results

Version: 1

Version Date: 2012-06-18

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

The following was extracted from the Cruise Report of the N.B. Palmer Cruise 01-03: 2.0 Drifter Measurements (Bob Beardsley and Dick Limeburner) Surface drifters are being deployed and tracked via satellite to study the near surface Lagrangian currents in the SO GLOBEC study area on the western Antarctic Peninsula Shelf. Each drifter has a small (~ 30 cm diameter) surface float with ARGOS transmitter and batteries tethered to a holey sock drogue centered at 15 m below the surface. The drogue, about 10 m tall and 1 m in diameter, is designed to "lock" itself to the water so that the surface float follows the mean water motion at 15 m depth with very little slippage even in high winds. Thus measuring the drifter's position as a function of time provides a Lagrangian measurement of the 15-m ocean current.

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Coverage

Spatial Extent: N:-60.282 E:-60.319 S:-70.457 W:-77.556

Temporal Extent: 2001-03-26 - 2002-04-16

Dataset Description

ARGOS Tracked Near Surface Drifter Data

The following was extracted from the Cruise Report of the N.B. Palmer Cruise 01-03. The complete cruise report can be seen [here](#) or on the [SO GLOBEC web site](#) under the object "Inventory"

2.0 Drifter Measurements (Bob Beardsley and Dick Limeburner)

Surface drifters are being deployed and tracked via satellite to study the near surface Lagrangian currents in the SO GLOBEC study area on the western Antarctic Peninsula Shelf. Each drifter has a small (~ 30 cm diameter) surface float with ARGOS transmitter and batteries tethered to a holey sock drogue centered at 15 m below the surface. The drogue, about 10 m tall and 1 m in diameter, is designed to "lock" itself to the water so that the surface float follows the mean water motion at 15 m depth with very little slippage even in high winds. Thus measuring the drifter's position as a function of time provides a Lagrangian measurement of the 15-m ocean current.

Data contributed by:

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file updated June 18 2012; smr.

Data Processing Description

BCO-DMO made the following changes to the formatting of the data: Calculated actual 'yrday_gmt' values from the original 'yrday_special' column; Added cruiseid; Re-formatted all values from scientific notation to integers; Added month_gmt, day_gmt, and time_gmt.

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Data Files

File
drifters_argos.csv (Comma Separated Values (.csv), 3.75 MB) MD5:ce510d3eda10b8c86355a55c0ff9bca9 Primary data file for dataset ID 2365

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Parameters

Parameter	Description	Units
year	Four-digit year.	dimensionless
drifterid	PI assigned drifter identification number.	dimensionless
argosid	ARGOS assigned drifter identification.	dimensionless
date_start_gmt	Date the drifter was initially deployed; reported as month/day/year, i.e. 3/26/01, GMT.	dimensionless
time_gmt	Time of day as hours and minutes (HHMM format), GMT.	dimensionless
lat_start	Latitude where drifter was deployed, negative = South.	decimal degrees
lon_start	Longitude where drifter was deployed, negative = West.	decimal degrees
comments	If drifter was deployed at a mooring site, mooring name is reported.	N/A
yrday_gmt	Decimal year day (January 1, at 1200 hr. = year day 1.5).	Decimal year day
lon	Longitude, negative = West.	decimal degrees
lat	Latitude, negative = South.	decimal degrees
temp_ss	Sea surface temperature; depth of sensor unknown or variable; temp data uncorrected, has errors.	degrees C
depth_drifter	Drifter submergence in meters - uncorrected, has errors.	meters
year_start	Year when the drifter was initially deployed.	dimensionless
cruise_id	Identifier for the cruise on which the drifter was initially deployed.	dimensionless
time_start_gmt	Time at which the drifter was initially deployed as hours and minutes (HHMM), GMT.	dimensionless
month_gmt	Month of year (01 to 12); calculated from yrday_gmt.	dimensionless
day_gmt	Day of month (01 to 31); calculated from yrday_gmt.	dimensionless

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Instruments

Dataset-specific Instrument Name	Drifter Buoy
Generic Instrument Name	Beardsley Drifter
Dataset-specific Description	Each drifter has a small (~ 30 cm diameter) surface float with ARGOS transmitter and batteries tethered to a holey sock drogue centered at 15 m below the surface.
Generic Instrument Description	Beardsley Drifters are near-surface satellite-tracked drifters used for observations of circulation patterns. They are WOCE-style drifters featuring holey sock drogues. Each drifter has a small (~ 30 cm diameter) surface float with ARGOS transmitter and batteries tethered to a holey sock drogue centered at 15 m below the surface. The drogue, about 10 m tall and 1 m in diameter, is designed to "lock" itself to the water so that the surface float follows the mean water motion at 15 m depth with very little slippage even in high winds. Thus measuring the drifter's position as a function of time provides a Lagrangian measurement of the 15-m ocean current.

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 2.0 Drifter Measurements (Bob Beardsley and Dick Limeburner) Surface drifters are being deployed and tracked via satellite to study the near surface Lagrangian currents in the SO GLOBEC study area on the western Antarctic Peninsula Shelf. Each drifter has a small (~ 30 cm diameter) surface float with ARGOS transmitter and batteries tethered to a holey sock drogue centered at 15 m below the surface. The drogue, about 10 m tall and 1 m in diameter, is designed to "lock" itself to the water so that the surface float follows the mean water motion at 15 m depth with very little slippage even in high winds. Thus measuring the drifter's position as a function of time provides a Lagrangian measurement of the 15-m ocean current.

LMG0103

Website	https://www.bco-dmo.org/deployment/57635
Platform	ARSV Laurence M. Gould
Report	http://www.ccpo.odu.edu/Research/globec/cruises01/mooringcruise/lmg0103_menu.html
Start Date	2001-03-18
End Date	2001-04-13
Description	Methods & Sampling 2.0 Drifter Measurements (Bob Beardsley and Dick Limeburner) Surface drifters are being deployed and tracked via satellite to study the near surface Lagrangian currents in the SO GLOBEC study area on the western Antarctic Peninsula Shelf. Each drifter has a small (~ 30 cm diameter) surface float with ARGOS transmitter and batteries tethered to a holey sock drogue centered at 15 m below the surface. The drogue, about 10 m tall and 1 m in diameter, is designed to "lock" itself to the water so that the surface float follows the mean water motion at 15 m depth with very little slippage even in high winds. Thus measuring the drifter's position as a function of time provides a Lagrangian measurement of the 15-m ocean current.

LMG0201A

Website	https://www.bco-dmo.org/deployment/57640
Platform	ARSV Laurence M. Gould
Report	http://www.ccpo.odu.edu/Research/globec/main_cruises02/lmg0201a/LMG02-01A_Report.pdf
Start Date	2002-02-06
End Date	2002-03-03
Description	<p>Methods & Sampling</p> <p>2.0 Drifter Measurements (Bob Beardsley and Dick Limeburner) Surface drifters are being deployed and tracked via satellite to study the near surface Lagrangian currents in the SO GLOBEC study area on the western Antarctic Peninsula Shelf. Each drifter has a small (~ 30 cm diameter) surface float with ARGOS transmitter and batteries tethered to a holey sock drogue centered at 15 m below the surface. The drogue, about 10 m tall and 1 m in diameter, is designed to "lock" itself to the water so that the surface float follows the mean water motion at 15 m depth with very little slippage even in high winds. Thus measuring the drifter's position as a function of time provides a Lagrangian measurement of the 15-m ocean current.</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>2.0 Drifter Measurements (Bob Beardsley and Dick Limeburner) Surface drifters are being deployed and tracked via satellite to study the near surface Lagrangian currents in the SO GLOBEC study area on the western Antarctic Peninsula Shelf. Each drifter has a small (~ 30 cm diameter) surface float with ARGOS transmitter and batteries tethered to a holey sock drogue centered at 15 m below the surface. The drogue, about 10 m tall and 1 m in diameter, is designed to "lock" itself to the water so that the surface float follows the mean water motion at 15 m depth with very little slippage even in high winds. Thus measuring the drifter's position as a function of time provides a Lagrangian measurement of the 15-m ocean current.</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.

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
National Science Foundation (NSF)	unknown GB NSF
NSF Antarctic Sciences (NSF ANT)	unknown SOGLOBEC NSF ANT