Underway chlorophyll data from RVIB Nathaniel B. Palmer and ARSV Laurence M. Gould cruises NBP0104, LMG0203, and NBP0204 in the Southern Ocean from 2001-2002 (SOGLOBEC project)

Website: https://www.bco-dmo.org/dataset/2358
Data Type: Cruise Results
Version: 1
Version Date: 2004-03-30

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
Underway chlorophyll data from RVIB Nathaniel B. Palmer and ARSV Laurence M. Gould cruises NBP0104, LMG0203, and NBP0204 in the Southern Ocean from 2001-2002 (SOGLOBEC project)

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Coverage

Spatial Extent: **N**:-58.217 **E**:-60.835 **S**:-69.04887 **W**:-76.59348
Temporal Extent: 2001 - 2002

Dataset Description

Underway Chloro and Phaeo Pigments, Hull Intake Sampling

Methods:
Surface chlorophyll samples were collected from the ship's flow-through seawater system, which has seawater intakes between 5 and 7 meter depths on both ships. About one liter of seawater was vacuum filtered onto GF/F filters and passively extracted in 7 ml of 90% acetone at -20deg C in the dark for at least 24 hours. Chlorophyll fluorescence was then measured on a Turner Design Digital 10-AU-05 fluorometer calibrated prior to the cruise.

Calibration Values

Southern Ocean GLOBEC II - Nathaniel B. Palmer 01-04

Notes:
Performed serial dilution calibration at start of cruise using Sigma Chemicals chl_a standard.

The following are the calibration values:

	Fd		tau
H	0.109	H	1.970
M	0.111	M	1.950
L	0.109	L	1.928

Southern Ocean GLOBEC III - Laurence M. Gould 02-03

Notes:
Performed serial dilution calibration at start of cruise using Sigma Chemicals chl_a standard.

The following are the calibration values:

	Fd		tau
H	0.145	H	2.301
M	0.143	M	2.317
L	0.145	L	2.501

Study area:
Mean: 1.15
SD:0.49
Median:1.10
Range:0.062-2.40

Southern Ocean GLOBEC IV - Nathaniel B. Palmer 02-04

Turner Designs 10-AU Fluorometer

Notes:
Performed serial dilution calibration at start of cruise using Sigma Chemicals chl_a standard.

The following are the calibration values:

	Fd		tau
H	0.089	H	2.276
M	0.086	M	2.270
L	0.090	L	2.384

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Last updated: December 16, 2005; gfh

Methods & Sampling

Surface chlorophyll samples were collected from the ship's flow-through seawater system, which has seawater intakes between 5 and 7 meter depths on both ships. About one liter of seawater was vacuum filtered onto GF/F filters and passively extracted in 7 ml of 90% acetone at -20deg C in the dark for at least 24 hours. Chlorophyll fluorescence was then measured on a Turner Design Digital 10-AU-05 fluorometer calibrated prior to the cruise.

Data Processing Description

Southern Ocean GLOBEC III - Laurence M. Gould 02-03

Notes:
Performed serial dilution calibration at start of cruise using Sigma Chemicals chl_a standard.

The following are the calibration values:

	Fd		tau
H	0.145	H	2.301
M	0.143	M	2.317
L	0.145	L	2.501

Study area:
Mean: 1.15
SD:0.49
Median:1.10
Range:0.062-2.40

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Data Files

File
uwchloro.csv (Comma Separated Values (.csv), 8.73 KB) MD5:02c284e19ce2358b4a252b7dfc9bbb76 Primary data file for dataset ID 2358

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Parameters

Parameter	Description	Units
cruiseid	cruise identifier. (e.g., LMG0103, NPB0104)	
year	year as a four digit entry	
yrday_local	year day, local time, based on Julian calendar	YYY
lat	latitude, negative = South	DD.D
lon	longitude, negative = West	DDD.D
chl_a	chlorophyll *a* concentration	micrograms/liter
phaeo	phaeopigment concentration	micrograms/liter

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Instruments

Dataset-specific Instrument Name	Turner Design Digital 10-AU-05 Fluorometer
Generic Instrument Name	Turner Designs Fluorometer 10-AU
Dataset-specific Description	Turner Design Digital 10-AU-05 fluorometer used to measure Chlorophyll fluorescencen data.
Generic Instrument Description	The Turner Designs 10-AU Field Fluorometer is used to measure Chlorophyll fluorescence. The 10AU Fluorometer can be set up for continuous-flow monitoring or discrete sample analyses. A variety of compounds can be measured using application-specific optical filters available from the manufacturer (read more from Turner Designs, turnerdesigns.com, Sunnyvale, CA, USA).

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Deployments

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** Surface chlorophyll samples were collected from the ship's flow-through seawater system, which has seawater intakes between 5 and 7 meter depths on both ships. About one liter of seawater was vacuum filtered onto GF/F filters and passively extracted in 7 ml of 90% acetone at -20deg C in the dark for at least 24 hours. Chlorophyll fluorescence was then measured on a Turner Design Digital 10-AU-05 fluorometer calibrated prior to the cruise. **Processing Description** Southern Ocean GLOBEC II - Nathaniel B. Palmer 01-04 Notes: Performed serial dilution calibration at start of cruise using Sigma Chemicals chl_a standard. The following are the calibration values: Fd tau H 0.109 H 1.970 M 0.111 M 1.950 L 0.109 L 1.928

LMG0203

Website	https://www.bco-dmo.org/deployment/57642
Platform	ARSV Laurence M. Gould
Report	http://www.ccpo.odu.edu/Research/globec/main_cruises02/lmg0203/menu.html
Start Date	2002-04-07
End Date	2002-05-20
Description	**Methods & Sampling** Surface chlorophyll samples were collected from the ship's flow-through seawater system, which has seawater intakes between 5 and 7 meter depths on both ships. About one liter of seawater was vacuum filtered onto GF/F filters and passively extracted in 7 ml of 90% acetone at -20deg C in the dark for at least 24 hours. Chlorophyll fluorescence was then measured on a Turner Design Digital 10-AU-05 fluorometer calibrated prior to the cruise. **Processing Description** Southern Ocean GLOBEC III - Laurence M. Gould 02-03 Notes: Performed serial dilution calibration at start of cruise using Sigma Chemicals chl_a standard. The following are the calibration values: Fd tau H 0.145 H 2.301 M 0.143 M 2.317 L 0.145 L 2.501 Study area: Mean: 1.15 SD: 0.49 Median: 1.10 Range: 0.062-2.40

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
Description	Also see NBP0204 Cruise Data Report **Methods & Sampling** Surface chlorophyll samples were collected from the ship's flow-through seawater system, which has seawater intakes between 5 and 7 meter depths on both ships. About one liter of seawater was vacuum filtered onto GF/F filters and passively extracted in 7 ml of 90% acetone at -20deg C in the dark for at least 24 hours. Chlorophyll fluorescence was then measured on a Turner Design Digital 10-AU-05 fluorometer calibrated prior to the cruise. **Processing Description** Southern Ocean GLOBEC IV - Nathaniel B. Palmer 02-04 Turner Designs 10-AU Fluorometer Notes: Performed serial dilution calibration at start of cruise using Sigma Chemicals chl_a standard. The following are the calibration values: Fd tau H 0.089 H 2.276 M 0.086 M 2.270 L 0.090 L 2.384

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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-0196489

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