

Particulate Organic Carbon and Nitrogen 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/2374>

Data Type: Cruise Results

Version: 1

Version Date: 2005-11-30

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

Particulate Organic Carbon and Nitrogen from RVIB Nathaniel B. Palmer cruises NBP0103, NBP0104, NBP0202, and NBP0204 in the Southern Ocean from 2001-2002 (SOGLOBEC project)

Table of Contents

- [Coverage](#)
 - [Dataset Description](#)
 - [Acquisition Description](#)
 - [Processing Description](#)
 - [Parameters](#)
 - [Instruments](#)
 - [Deployments](#)
 - [Project Information](#)
 - [Program Information](#)
 - [Funding](#)
-

Coverage

Spatial Extent: N:-64.129 E:-65.51 S:-70.325 W:-77.762

Temporal Extent: 2001 - 2002

Dataset Description

Particulate Organic Carbon and Nitrogen from Ice and Water Samples

Data Note:

This data set consists of samples derived from a variety of substrates, depths within substrates and sampling devices: ice, slush, brine, water, ice core, bottles, buckets etc. The user may want to out edit the file(s) before use.

Methods:

Weight percent carbon, hydrogen, and nitrogen were determined by combustion analysis at the UCSB Marine Science Institute Analytical Laboratory (www.msi.ucsb.edu/Analab/index.html), using automated organic elemental analyzers (CHNs) manufactured by Exeter Analytical (www.eai1.com) (formerly Control Equipment Corp.), Model 440XA. Instruments were operated following manufacturer-recommended settings and procedures, and calibrated using acetanilide, with performance being monitored to achieve an analytical precision of 0.3 wt. %. (per Wendy Kozlowski, e-mail 11/23/03)

POC and PON values have been corrected for a filtered sea water blank value of: 10.32 μg for POC and 1.59 μg for PON.

A short note on the "grid": The grid is a Cartesian plane covering the sample region in which distances are easy to calculate. The grid system used for SOGLOBEC is a universal transverse mercator (UTM) projection with a certain base point and rotation. The base point was chosen in the far south and the rotation was chosen to create one axis along the peninsula, and the other offshore. The units of UTM are meters, but the points are chosen in km rounded to the nearest km. Negative numbers mean that samples were taken southwest of the y axis or southeast of the x axis. For more details see: [Complete explanation of the Southern Ocean grid system.](#)

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Last updated: December 13, 2005; gfh

Acquisition Description

This data set consists of samples derived from a variety substrats, depths within substrats and sampling devices: ice, slush, brine, water, ice core, bottles, buckets etc.

Processing Description

Weight percent carbon, hydrogen, and nitrogen were determined by combustion analysis at the UCSB Marine Science Institute Analytical Laboratory (www.msi.ucsb.edu/Analab/index.html), using automated organic elemental analyzers (CHNs) manufactured by Exeter Analytical (www.eai1.com) (formerly Control Equipment Corp.), Model 440XA. Instruments were operated following manufacturer-recommended settings and procedures, and calibrated using acetanilide, with performance being monitored to achieve an analytical precision of 0.3 wt. %. (per Wendy Kozlowski, e-mail 11/23/03)

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[[table of contents](#) | [back to top](#)]

Parameters

Parameter	Description	Units
cruiseid	Cruise Identifier. (e.g., LMG0103, NPB0104)	
year	year, i.e. 2001	
station_desc	station description, as defined in a grid system or plain text	
station	station number, generally numbered consecutively within cruise	
cast	CTD rosette cast number, bucket or ice observation	
grid_line	standard grid line, a location term used by grid system	
grid_sta	a grid location for a sampling observation or station, used with the grid_line, see grid description below	
yrday_gmt	year day based on Julian calendar	YYY.Y
lat	latitude, negative = South	DD.D
lon	longitude, negative = West	DDD.D
event	sampling event or operation number, a unique ID.	
bottle	bottle number, unique within cast	
depth	depth of sample in water (m) / in ice (cm)	meters/centimeters
POC	particulate organic carbon	ug/l
PON	particulate organic nitrogen	ug/l

[[table of contents](#) | [back to top](#)]

Instruments

Dataset-specific Instrument Name	Niskin Bottle
Generic Instrument Name	Niskin bottle
Dataset-specific Description	Niskin bottle cast used to collect water samples for pigment, nutrient, plankton, etc. analysis
Generic Instrument Description	A Niskin bottle (a next generation water sampler based on the Nansen bottle) is a cylindrical, non-metallic water collection device with stoppers at both ends. The bottles can be attached individually on a hydrowire or deployed in 12, 24 or 36 bottle Rosette systems mounted on a frame and combined with a CTD. Niskin bottles are used to collect discrete water samples for a range of measurements including pigments, nutrients, plankton, etc.

Dataset-specific Instrument Name	bucket
Generic Instrument Name	bucket
Generic Instrument Description	A bucket used to collect surface sea water samples.

[[table of contents](#) | [back to top](#)]

Deployments

NBP0103

Website	https://www.bco-dmo.org/deployment/57636
Platform	RVIB Nathaniel B. Palmer
Report	http://globec.who.edu/so-dir/reports/nbp0103/nbp0103.html
Start Date	2001-04-24
End Date	2001-06-05
Description	<p>Acquisition Description</p> <p>This data set consists of samples derived from a variety substrats, depths within substrats and sampling devices: ice, slush, brine, water, ice core, bottles, buckets etc.</p> <p>Processing Description</p> <p>Weight percent carbon, hydrogen, and nitrogen were determined by combustion analysis at the UCSB Marine Science Institute Analytical Laboratory (www.msi.ucsb.edu/Analab/index.html), using automated organic elemental analyzers (CHNs) manufactured by Exeter Analytical (www.eai1.com) (formerly Control Equipment Corp.), Model 440XA. Instruments were operated following manufacturer-recommended settings and procedures, and calibrated using acetanilide, with performance being monitored to achieve an analytical precision of 0.3 wt. %. (per Wendy Kozlowski, e-mail 11/23/03) POC and PON values have been corrected for a filtered sea water blank value of: 10.32 ug for POC and 1.59 ug for PON.</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>Acquisition Description</p> <p>This data set consists of samples derived from a variety substrats, depths within substrats and sampling devices: ice, slush, brine, water, ice core, bottles, buckets etc.</p> <p>Processing Description</p> <p>Weight percent carbon, hydrogen, and nitrogen were determined by combustion analysis at the UCSB Marine Science Institute Analytical Laboratory (www.msi.ucsb.edu/Analab/index.html), using automated organic elemental analyzers (CHNs) manufactured by Exeter Analytical (www.eai1.com) (formerly Control Equipment Corp.), Model 440XA. Instruments were operated following manufacturer-recommended settings and procedures, and calibrated using acetanilide, with performance being monitored to achieve an analytical precision of 0.3 wt. %. (per Wendy Kozlowski, e-mail 11/23/03) POC and PON values have been corrected for a filtered sea water blank value of: 10.32 ug for POC and 1.59 ug for PON.</p>

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>Acquisition Description This data set consists of samples derived from a variety substrats, depths within substrats and sampling devices: ice, slush, brine, water, ice core, bottles, buckets etc.</p> <p>Processing Description Weight percent carbon, hydrogen, and nitrogen were determined by combustion analysis at the UCSB Marine Science Institute Analytical Laboratory (www.msi.ucsb.edu/Analab/index.html), using automated organic elemental analyzers (CHNs) manufactured by Exeter Analytical (www.eai1.com) (formerly Control Equipment Corp.), Model 440XA. Instruments were operated following manufacturer-recommended settings and procedures, and calibrated using acetanilide, with performance being monitored to achieve an analytical precision of 0.3 wt. %. (per Wendy Kozlowski, e-mail 11/23/03) POC and PON values have been corrected for a filtered sea water blank value of: 10.32 ug for POC and 1.59 ug for PON.</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>Acquisition Description</p> <p>This data set consists of samples derived from a variety of substrates, depths within substrates and sampling devices: ice, slush, brine, water, ice core, bottles, buckets etc.</p> <p>Processing Description</p> <p>Weight percent carbon, hydrogen, and nitrogen were determined by combustion analysis at the UCSB Marine Science Institute Analytical Laboratory (www.msi.ucsb.edu/Analab/index.html), using automated organic elemental analyzers (CHNs) manufactured by Exeter Analytical (www.eai1.com) (formerly Control Equipment Corp.), Model 440XA. Instruments were operated following manufacturer-recommended settings and procedures, and calibrated using acetanilide, with performance being monitored to achieve an analytical precision of 0.3 wt. %. (per Wendy Kozlowski, e-mail 11/23/03) POC and PON values have been corrected for a filtered sea water blank value of: 10.32 ug for POC and 1.59 ug for PON.</p>

[[table of contents](#) | [back to top](#)]

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.

[[table of contents](#) | [back to top](#)]

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).

[[table of contents](#) | [back to top](#)]

Funding

Funding Source	Award
NSF Antarctic Sciences (NSF ANT)	ANT-9910175

[[table of contents](#) | [back to top](#)]