

# Dissolved organic carbon (DOC) from bottle casts from RVIB Nathaniel B. Palmer NBP-96-4A, NBP-97-1, NBP-97-8 cruises in the Southern Ocean in 1997 (U.S. JGOFS AESOPS project)

**Website:** <https://www.bco-dmo.org/dataset/2740>

**Data Type:** Cruise Results

**Version:** 1

**Version Date:** 1999-04-27

## Project

» [U.S. JGOFS Antarctic Environment and Southern Ocean Process Study](#) (AESOPS)

## Program

» [U.S. Joint Global Ocean Flux Study](#) (U.S. JGOFS)

Contributors	Affiliation	Role
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## Abstract

Dissolved organic carbon (DOC) from bottle casts from RVIB Nathaniel B. Palmer NBP-96-4A, NBP-97-1, NBP-97-8 cruises in the Southern Ocean in 1997.

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## Table of Contents

- [Dataset Description](#)
  - [Data Files](#)
  - [Parameters](#)
  - [Instruments](#)
  - [Deployments](#)
  - [Project Information](#)
  - [Program Information](#)
- 

## Dataset Description

Dissolved organic carbon (DOC) from bottle casts from RVIB Nathaniel B. Palmer NBP-96-4A, NBP-97-1, NBP-97-8 cruises in the Southern Ocean in 1997.

To access data, check the deployments below.

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

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## Data Files

File
<b>DOC_NBP-96-04A.csv</b> (Comma Separated Values (.csv), 7.51 KB) MD5:c8d085b02191c0d4dab63fea770760d4  version April 12, 1999 Dennis Hansell & Craig Carlson Dissolved Organic Carbon (DOC) from CTD casts RVIB N.B. Palmer (NBP96-4A), Process cruise 1
<b>DOC_NBP-97-01.csv</b> (Comma Separated Values (.csv), 10.48 KB) MD5:5ca1c2e9cb38d400e0f2e745ac163abc  version April 24, 1998 Dennis Hansell & Craig Carlson Dissolved Organic Carbon (DOC) from CTD casts RVIB N.B. Palmer (NBP97-1), Process cruise 2
<b>DOC_NBP-97-08.csv</b> (Comma Separated Values (.csv), 9.54 KB) MD5:6a0ea5c5beac1d972889edfb226b01c6  version April 27, 1999 Dennis Hansell & Craig Carlson Dissolved Organic Carbon (DOC) from CTD casts AESOPS NBP97-8, Ross Sea Process Cruise 4

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

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## Parameters

Parameter	Description	Units
event	event number, from event log	
sta	station number, from event log	
cast	CTD cast number consecutive within station	
bot	CTD rosette bottle number	
press_n	nominal pressure	decibars
DOC	dissolved organic carbon	micromoles C/liter
DOC_sd	DOC standard deviation	micromoles C/liter

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

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## Instruments

<b>Dataset-specific Instrument Name</b>	Niskin Bottle
<b>Generic Instrument Name</b>	Niskin bottle
<b>Dataset-specific Description</b>	CTD clean rosette (Niskin) bottles were used to collect water samples.
<b>Generic Instrument Description</b>	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.

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

## Deployments

### NBP-96-04A

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57718">https://www.bco-dmo.org/deployment/57718</a>
<b>Platform</b>	RVIB Nathaniel B. Palmer
<b>Report</b>	<a href="http://usjgofs.whoi.edu/aesops/p1.html">http://usjgofs.whoi.edu/aesops/p1.html</a>
<b>Start Date</b>	1996-10-02
<b>End Date</b>	1996-11-08
<b>Description</b>	<p>Ross Sea Process Study 1</p> <p><b>Methods &amp; Sampling</b>  PI: Dennis Hansell and Craig Carlson of: Bermuda Biological Station for Research dataset: Dissolved organic carbon (DOC) from CTD casts dates: October 11, 1996 to November 06, 1996 location: N: -68.3335 S: -76.562 W: 169.0185 E: -177.8953 project/cruise: AESOPS/NBP-96-4A - Ross Sea Process 1 Cruise ship: R/V Nathaniel B. Palmer Methodology</p>

### NBP-97-01

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57720">https://www.bco-dmo.org/deployment/57720</a>
<b>Platform</b>	RVIB Nathaniel B. Palmer
<b>Report</b>	<a href="http://usjgofs.whoi.edu/aesops/p2.html">http://usjgofs.whoi.edu/aesops/p2.html</a>
<b>Start Date</b>	1997-01-13
<b>End Date</b>	1997-02-11
<b>Description</b>	<p>Ross Sea Process Study 2</p> <p><b>Methods &amp; Sampling</b>  PI: Dennis Hansell and Craig Carlson of: Bermuda Biological Station for Research dataset: Dissolved organic carbon (DOC) from CTD casts dates: January 13, 1997 to February 06, 1997 location: N: -74.0029 S: -78.0414 W: 163.3383 E: -173.9992 project/cruise: AESOPS/NBP-97-1 - Ross Sea Process 2 Cruise ship: R/V Nathaniel B. Palmer Methodology</p>

### NBP-97-08

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57722">https://www.bco-dmo.org/deployment/57722</a>
<b>Platform</b>	RVIB Nathaniel B. Palmer
<b>Report</b>	<a href="http://usjgofs.whoi.edu/aesops/p4.html">http://usjgofs.whoi.edu/aesops/p4.html</a>
<b>Start Date</b>	1997-11-05
<b>End Date</b>	1997-12-13
<b>Description</b>	<p>Ross Sea Process Study 4 SeaWiFS transmits images to U.S. JGOFS scientists aboard the Palmer, for first time on November 23, 1997.</p> <p><b>Methods &amp; Sampling</b>  dataset: Dissolved organic carbon (DOC) from CTD casts dates: November 16, 1997 to December 11, 1997 location: N: -76.4637 S: -76.6252 W: 168.9907 E: -178.0022  project/cruise: AESOPS/NBP-97-8 - Ross Sea Process 4 Cruise ship: R/V Nathaniel B. Palmer  Methodology</p>

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

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## Project Information

### U.S. JGOFS Antarctic Environment and Southern Ocean Process Study (AESOPS)

**Website:** <http://usjgofs.whoi.edu/research/aesops.html>

**Coverage:** Southern Ocean, Ross Sea

The U.S. Southern Ocean JGOFS program, called Antarctic Environment and Southern Ocean Process Study (AESOPS), began in August 1996 and continued through March 1998. The U.S. JGOFS AESOPS program focused on two regions in the Southern Ocean: an east/west section of the Ross-Sea continental shelf along 76.5°S, and a second north/south section of the Southern Ocean spanning the Antarctic Circumpolar Current (ACC) at ~170°W (identified as the Polar Front). The science program, coordinated by Antarctic Support Associates (ASA), comprised eleven cruises using the R.V.I.B Nathaniel B. Palmer and R/V Roger Revelle as observational platforms and for deployment and recovery of instrumented moorings and sediment-trap arrays. The Ross-Sea region was occupied on six occasions and the Polar Front five times. Mapping data were obtained from SeaSoar, ADCP, and bathymetric systems. Satellite coverage was provided by the NASA SeaWiFS and the NOAA/NASA Pathfinder programs.

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

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## Program Information

### U.S. Joint Global Ocean Flux Study (U.S. JGOFS)

**Website:** <http://usjgofs.whoi.edu/>

**Coverage:** Global

The United States Joint Global Ocean Flux Study was a national component of international JGOFS and an integral part of global climate change research.

The U.S. launched the Joint Global Ocean Flux Study (JGOFS) in the late 1980s to study the ocean carbon cycle. An ambitious goal was set to understand the controls on the concentrations and fluxes of carbon and associated nutrients in the ocean. A new field of ocean biogeochemistry emerged with an emphasis on quality

measurements of carbon system parameters and interdisciplinary field studies of the biological, chemical and physical process which control the ocean carbon cycle. As we studied ocean biogeochemistry, we learned that our simple views of carbon uptake and transport were severely limited, and a new "wave" of ocean science was born. U.S. JGOFS has been supported primarily by the U.S. National Science Foundation in collaboration with the National Oceanic and Atmospheric Administration, the National Aeronautics and Space Administration, the Department of Energy and the Office of Naval Research. U.S. JGOFS, ended in 2005 with the conclusion of the Synthesis and Modeling Project (SMP).

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