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
Hansell, Dennis	University of Miami Rosenstiel School of Marine and Atmospheric Science (UM-RSMAS)	Principal Investigator
Carlson, Craig A.	University of California-Santa Barbara (UCSB)	Co-Principal Investigator
Chandler, Cynthia L.	Woods Hole Oceanographic Institution (WHOI BCO-DMO)	BCO-DMO Data Manager

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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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.

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Data Files

File
DOC_NBP-96-04A.csv (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
DOC_NBP-97-01.csv (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
DOC_NBP-97-08.csv (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

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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

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Instruments

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

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Deployments

NBP-96-04A

Website	https://www.bco-dmo.org/deployment/57718
Platform	RVIB Nathaniel B. Palmer
Report	http://usjgofs.whoi.edu/aesops/p1.html
Start Date	1996-10-02
End Date	1996-11-08
Description	Ross Sea Process Study 1 **Methods & Sampling** 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

NBP-97-01

Website	https://www.bco-dmo.org/deployment/57720
Platform	RVIB Nathaniel B. Palmer
Report	http://usjgofs.whoi.edu/aesops/p2.html
Start Date	1997-01-13
End Date	1997-02-11
Description	Ross Sea Process Study 2 **Methods & Sampling** 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

NBP-97-08

Website	https://www.bco-dmo.org/deployment/57722
Platform	RVIB Nathaniel B. Palmer
Report	http://usjgofs.whoi.edu/aesops/p4.html
Start Date	1997-11-05
End Date	1997-12-13
Description	Ross Sea Process Study 4 SeaWiFS transmits images to U.S. JGOFS scientists aboard the Palmer, for first time on November 23, 1997. **Methods & Sampling** 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

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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.

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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).

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