Nanoplankton abundance and biomass from RVIB Nathaniel B. Palmer NBP-97-3, NBP-97-8 cruises in the Southern Ocean in 1997 (U.S. JGOFS AESOPS project)

Website: https://www.bco-dmo.org/dataset/2753
Version: February 27, 2002
Version Date: 2002-02-27

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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Dataset Description

Nanoplankton abundance and biomass

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Data Files

File
nanoplankton_NBP-97-03.csv (Comma Separated Values (.csv), 1.51 KB) MD5:29f3aab328aa405a3eb3103b88fbf96e version February 27, 2002 (original version November 23, 1999) David Caron and Darcy Lonsdale Nanoplankton vertical profiles, abundance and biomass AESOPS/NBP97-3; Ross Sea Process cruise 3
nanoplankton_NBP-97-08.csv (Comma Separated Values (.csv), 2.79 KB) MD5:54c4a7b20fffd6234de16e9e1c749826 version February 27, 2002 (original version November 23, 1999) David Caron and Darcy Lonsdale Nanoplankton vertical profiles, abundance and biomass 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	
cast_type	CTD = CTD rosette TM = Trace Metal rosette	
bot	rosette bottle number	
depth_n	nominal sample depth	meters
pnp	phototrophic nanoplankton abundance	cells/milliliter
pnp_C	phototrophic nanoplankton biomass	micrograms carbon/liter
hnp	heterotrophic nanoplankton abundance	cells/milliliter
hnp_C	heterotrophic nanoplankton biomass	micrograms carbon/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.

Dataset-specific Instrument Name	Trace Metal Bottle
Generic Instrument Name	Trace Metal Bottle
Dataset-specific Description	Trace metal (TM) clean rosette bottles were used to collect water samples.
Generic Instrument Description	Trace metal (TM) clean rosette bottle used for collecting trace metal clean seawater samples.

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Deployments

NBP-97-03

Website	https://www.bco-dmo.org/deployment/57721
Platform	RVIB Nathaniel B. Palmer
Report	http://usjgofs.whoi.edu/aesops/p3.html
Start Date	1997-04-04
End Date	1997-05-11
Description	Ross Sea Process Study 3 **Methods & Sampling** PI: David Caron (Woods Hole Oceanographic Institution) and Darcy Lonsdale (State University of New York, Stony Brook) dataset: Nanoplankton abundance and biomass dates: April 14, 1997 to April 28, 1997 location: N: -74.0021 S: -77.9319 W: 168.9281 E: -176.1451 project/cruise: AESOPS/NBP-97-3 - Ross Sea Process Cruise 3 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** PI: David Caron (Woods Hole Oceanographic Institution) and Darcy Lonsdale (State University of New York, Stony Brook) dataset: Nanoplankton abundance and biomass dates: November 17, 1997 to December 11, 1997 location: N: -76.4427 S: -77.888 W: 168.9907 E: -177.9902 project/cruise: AESOPS/NBP-97-8 - Ross Sea Process Cruise 4 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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