Particle Interceptor Sediment Trap data from R/V Atlantis II cruise AII-119-4 in the North Atlantic in 1989 (U.S. JGOFS NABE project)

Website: https://www.bco-dmo.org/dataset/2606
Version: May 10, 1995
Version Date: 1995-05-10

Project
» U.S. JGOFS North Atlantic Bloom Experiment (NABE)

Program
» U.S. Joint Global Ocean Flux Study (U.S. JGOFS)

Contributors	Affiliation	Role
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Dataset Description

Particle Interceptor Sediment Trap Data

Methods & Sampling

PI: John Martin
of: Moss Landing Marine Laboratory
dataset: Particle interceptor Sediment Trap Data
dates: April 24, 1989 to May 21, 1989
location: N: 47.0917 S: 46.4833 W: -19.925 E: -18.9729
project/cruise: North Atlantic Bloom Experiment/119, leg 4
ship: R/V Atlantis II

Sampling methodology and analytical procedures:
Martin, J.M., S.F. Fitzwater, R.M. Gordon, C.N. Hunter, S.J. Tanner, 1993. Iron, primary production and carbon-nitrogen flux studies during the JGOFS North Atlantic Bloom Experiment. Deep-Sea Research II, Vol. 40, No. 1/2, pp. 115-134.

ARGOS positions of MLML particle traps

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Data Files

File
pitdata.csv (Comma Separated Values (.csv), 1.23 KB) MD5:54a02030106b0a4b05683f153953514a Primary data file for dataset ID 2606

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Parameters

Parameter	Description	Units
trap	identifer for trap deployment	dimensionless
event	event number from event log composite of month, day, hour, minutes	MMDDhhmm
lat_n	nominal latitude of trap during deployment, (negative = south)	decimal degrees
lon_n	nominal longitude of trap during deployment, (negative = west)	decimal degrees
days_set	number of days trap deployed	decimal days
depth	depth of trap	meters
p_f_tot	total particulate flux	milligrams/meter^2/day
CaCO3_f	Calcium Carbonate particulate flux	milligrams/meter^2/day
C_f_tot	total Carbon particulate flux	millimoles/meter^2/day
pic_f	particulate inorganic Carbon flux	millimoles/meter^2/day
poc_f	particulate organic Carbon flux	millimoles/meter^2/day
pon_f	particulate organic Nitrogen flux	millimoles/meter^2/day

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Instruments

Dataset-specific Instrument Name	Particle Interceptor Trap
Generic Instrument Name	Sediment Trap - Particle Interceptor
Dataset-specific Description	MLML Particle Interceptor Sediment Trap (MLML = Moss Landing Marine Laboratory)
Generic Instrument Description	A Particle Interceptor Trap is a prototype sediment trap designed in the mid 1990s to segregate 'swimmers' from sinking particulate material sampled from the water column. The prototype trap used 'segregation plates' to deflect and segregate 'swimmers' while a series of funnels collected sinking particles in a chamber (see Dennis A. Hansell and Jan A. Newton. September 1994. Design and Evaluation of a "Swimmer"-Segregating Particle Interceptor Trap, Limnology and Oceanography, Vol. 39, No. 6, pp. 1487-1495).

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Deployments

AII-119-4

Website	https://www.bco-dmo.org/deployment/57737
Platform	R/V Atlantis II
Start Date	1989-04-17
End Date	1989-05-11
Description	early bloom cruise; 17 locations; 60N 21W to 46N 18W

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Project Information

U.S. JGOFS North Atlantic Bloom Experiment (NABE)

Website: http://usjgofs.whoi.edu/research/nabe.html

Coverage: North Atlantic

One of the first major activities of JGOFS was a multinational pilot project, North Atlantic Bloom Experiment (NABE), carried out along longitude 20° West in 1989 through 1991. The United States participated in 1989 only, with the April deployment of two sediment trap arrays at 48° and 34° North. Three process-oriented cruises where conducted, April through July 1989, from R/V *Atlantis II* and R/V *Endeavor* focusing on sites at 46° and 59° North. Coordination of the NABE process-study cruises was supported by NSF-OCE award # 8814229. Ancillary sea surface mapping and AXBT profiling data were collected from NASA's P3 aircraft for a series of one day flights, April through June 1989.

A detailed description of NABE and the initial synthesis of the complete program data collection efforts appear in: Topical Studies in Oceanography, JGOFS: The North Atlantic Bloom Experiment (1993), Deep-Sea Research II, Volume 40 No. 1/2.

The U.S. JGOFS Data management office compiled a preliminary NABE data report of U.S. activities: Slagle, R. and G. Heimerdinger, 1991. U.S. Joint Global Ocean Flux Study, North Atlantic Bloom Experiment, Process Study Data Report P-1, April-July 1989. NODC/U.S. JGOFS Data Management Office, Woods Hole Oceanographic Institution, 315 pp. (out of print).

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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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Funding

Funding Source	Award
National Science Foundation (NSF)	unknown NABE NSF

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