Trace metals and water column data from R/V Endeavor, R/V Atlantis II cruises EN198, AII-119-5 in the North Atlantic in 1989 (U.S. JGOFS NABE project)

Website: https://www.bco-dmo.org/dataset/2574
Version: January 2, 2002
Version Date: 2002-01-02

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

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

Contributors	Affiliation	Role
Martin, John	Moss Landing Marine Laboratories (MLML)	Principal Investigator
Gordon, Mike	Moss Landing Marine Laboratories (MLML)	Co-Principal Investigator
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Dataset Description

Trace metals, water column

Methods & Sampling

PI: John Martin and Mike Gordon
of: Moss Landing Marine Laboratory
dataset: Trace metals, water column summary
project/cruise: North Atlantic Bloom Experiment cruises

Methodology:

Martin, J. H., S.E. Fitzwater, R.M. Gordon, C. N. Hunter and 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

DMO note:
The Atlantis II cruise data are reported as a summary at 59.5N 20.45W.
These Endeavor cruise data are reported as a summary at 59.5N 20.45W.

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Parameters

Parameter	Description	Units
lat_n	nominal latitude, minus notation = South	degrees
lon_n	nominal longitude, minus notation = West	degrees
depth_n	nominal depth	meters
Cd_diss_lt0d4	cadmium, dissolved lt0.4 microns	pico moles/kilogram
Co_diss_lt0d4	cobalt, dissolved lt0.4 microns	pico moles/kilogram
Cu_diss_lt0d4	copper, dissolved lt0.4 microns	nano moles/kilogram
Fe_diss_lt0d4	iron, dissolved lt0.4 microns	nano moles/kilogram
Fe_part_gt0d4_refrac	iron, particulate gt0.4 microns refactory fraction	nano moles/kilogram
Mn_diss_lt0d4	manganese, dissolved lt0.4 microns	nano moles/kilogram
Ni_diss_lt0d4	nickel, dissolved lt0.4 microns	nano moles/kilogram
Pb_diss_lt0d4	lead, dissolved lt0.4 microns	pico moles/kilogram
Zn_diss_lt0d4	zinc, dissolved lt0.4 microns	nano moles/kilogram

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Instruments

Dataset-specific Instrument Name	Go-flo Bottle
Generic Instrument Name	GO-FLO Bottle
Dataset-specific Description	Seawater samples for trace metal analyses were collected using Teflon-coated 30-t Go-flo bottles suspended on Kevlar line.
Generic Instrument Description	GO-FLO bottle cast used to collect water samples for pigment, nutrient, plankton, etc. The GO-FLO sampling bottle is specially designed to avoid sample contamination at the surface, internal spring contamination, loss of sample on deck (internal seals), and exchange of water from different depths.

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Deployments

EN198

Website	https://www.bco-dmo.org/deployment/57739
Platform	R/V Endeavor
Start Date	1989-06-28
End Date	1989-07-07
Description	post bloom cruise; 7 locations; 63°N 25°W to 59°N 14°W **Methods & Sampling** PI: John Martin and Mike Gordon of: Moss Landing Marine Laboratory dataset: Trace metals, water column, 59.5N 20.45W dates: June 28, 1989 to July 7, 1989 location: N: 59.5 S: 59.5 W: -20.45 E: -20.45 project/cruise: North Atlantic Bloom Experiment/Endeavor 198 ship: R/V Endeavor DMO note: These data are reported as a summary at 59.5N 20.45W

AII-119-5

Website	https://www.bco-dmo.org/deployment/57738
Platform	R/V Atlantis II
Start Date	1989-05-15
End Date	1989-06-06
Description	late bloom cruise; 31 locations; 61N 22W to 41N 17W **Methods & Sampling** PI: John Martin and Mike Gordon of: Moss Landing Marine Laboratory dataset: Trace metals, water column, 47N 20W dates: May 15, 1989 to June 8, 1989 location: N: 47 S: 47 W: -20 E: -20 project/cruise: North Atlantic Bloom Experiment/Atlantis II 119, leg 5 ship: R/V Atlantis II DMO note: These data are reported as a summary at 47N 20W

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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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