

Nutrient pump observations from R/V Atlantis II cruise All-119-5 in the North Atlantic in 1989 (U.S. JGOFS NABE project)

Website: <https://www.bco-dmo.org/dataset/2602>

Version: final

Version Date: 2002-10-29

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

Nutrient pump observations merged w/ MLML CTD data

Methods & Sampling

PI: Christopher Garside
of: Bigelow Laboratory for Ocean Science
dataset: Nutrient pump observations merged w/ MLML CTD data
dates: May 18, 1989 to May 31, 1989
location: N: 46.8317 S: 46.24 W: -18.3717 E: -17.68
project/cruise: North Atlantic Bloom Experiment/Atlantis II 119, leg 5
ship: R/V Atlantis II

Note:
Garside - Bloom nutrients

Methods are continuous flow colorimetric procedures modified from Whitley et al., 1981. Automated Nutrient Analysis in Seawater, Brookhaven National Laboratory Pub. No. 51398

Nutrient profile data. All data were taken on MLML (Moss Landing) BOPS casts from which correlated CTD data have been submitted by MLML. MLML reports that its CTD Oxygen data should be used with caution.

DMO Note:
These data are presented as received from Chris Garside. However, we suggest that you use the MLML CTD data within this file with CAUTION. It is unclear whether values in

this file are the final calibrated version of the CTD data.
We therefore recommend using the [CTD data](#) as supplied by
Moss Landing Marine Laboratory (MLML).

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Data Files

File
nutrients.csv (Comma Separated Values (.csv), 31.82 KB) MD5:b747be860d93c297459c0e64628fcf37
Primary data file for dataset ID 2602

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Parameters

Parameter	Description	Units
sta	station number from event log	dimensionless
cast	cast number, numbered consecutively within station, from event log	dimensionless
event	event number from event log	dimensionless
year	year reported as YYYY	dimensionless
lat	latitude, minus equals South	degrees
lon	longitude, minus equals West	degrees
depth_n	nominal sample depth	meters
sal	salinity (from MLML CTD)	dimensionless
temp	temperature (from MLML CTD)	degrees C
sigma_t	sigma-t (calculated by Garside)	
NH4_umol_kg	ammonium	micromoles/kilogram
NO3_umol_kg	nitrate	micromoles/kilogram
NO2_umol_kg	nitrite	micromoles/kilogram
PO4_umol_kg	phosphate	micromoles/kilogram
Urea_umol_kg	urea	micromoles N/kilogram
O2	oxygen (from MLML CTD)	milliliters/liter
beam_cp	beam attenuation coefficient due to particles (from MLML CTD)	1/meter
fluor_re	rescaled fluorescence (numerically equivalent to chlorophyll-a), (from MLML CTD)	micrograms chl_a/liter

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Instruments

Dataset-specific Instrument Name	Conductivity, Temperature, Depth
Generic Instrument Name	CTD - profiler
Dataset-specific Description	MLML CTD
Generic Instrument Description	The Conductivity, Temperature, Depth (CTD) unit is an integrated instrument package designed to measure the conductivity, temperature, and pressure (depth) of the water column. The instrument is lowered via cable through the water column. It permits scientists to observe the physical properties in real-time via a conducting cable, which is typically connected to a CTD to a deck unit and computer on a ship. The CTD is often configured with additional optional sensors including fluorometers, transmissometers and/or radiometers. It is often combined with a Rosette of water sampling bottles (e.g. Niskin, GO-FLO) for collecting discrete water samples during the cast. This term applies to profiling CTDs. For fixed CTDs, see https://www.bco-dmo.org/instrument/869934 .

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Deployments

All-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

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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 were 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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