

# S4 current meter observations from MLML particle traps from R/V Atlantis II cruise AII-119-5 in the North Atlantic in 1989 (U.S. JGOFS NABE project)

Website: <https://www.bco-dmo.org/dataset/2579>

Version: August 1, 1995

Version Date: 1995-08-01

## Project

» [U.S. JGOFS North Atlantic Bloom Experiment](#) (NABE)

## Program

» [U.S. Joint Global Ocean Flux Study](#) (U.S. JGOFS)

Contributors	Affiliation	Role
<a href="#">Broenkow, William</a>	Moss Landing Marine Laboratories (MLML)	Principal Investigator
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## Dataset Description

S4 Current Meter Observations on MLML Particle Trap

## Methods & Sampling

**PI:** William Broenkow  
**of:** Moss Landing Marine Laboratory (MLML)  
**dataset:** S4 Current Meter Observations on MLML Particle Trap  
**dates:** May 18, 1989 to June 07, 1989  
**location:** N: 59.8117 S: 46.24 W: -20.7483 E: -17.68  
**project/cruise:** North Atlantic Bloom Experiment/Atlantis II 119, leg 5  
**ship:** R/V Atlantis II

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## Data Files

File
<b>current_meter.csv</b> (Comma Separated Values (.csv), 22.74 KB) MD5:a65f5d4357eb14471d4969bca166406a
Primary data file for dataset ID 2579

## Parameters

Parameter	Description	Units
date	Date of S4 time series, as YYYYMMDD	
time_dec	Time of day of S4 time series	GMT decimal hours
time_gmt	Time from Midnight 22 April 1989	GMT decimal hours
lat	North Latitude of Trap Mooring	decimal degrees
lon	West Longitude of Trap Mooring	decimal degrees
temp	Temperature	degrees C
press	Pressure	decibars
moor_vel_north	Mooring Velocity North (V) Component	cm/sec
moor_vel_east	Mooring Velocity East (U) Component	cm/sec
moor_speed	Mooring Speed	cm/sec
moor_dir	Mooring Direction	degrees Magnetic
curr_north	Relative Current North (V) Component, measured by S4 at 160 m	cm/sec
curr_east	Relative Current East (U) Component, measured by S4 at 160 m	cm/sec
curr_speed	Relative Current Speed, measured by S4 at 160 m	cm/sec
curr_dir	Relative Current Direction measured by S4 at 160 m	degrees Magnetic
curr_vel_north_abs	Absolute Velocity North (V) Component, sum S4 relative + mooring	cm/sec
curr_vel_east_abs	Absolute Velocity East (U) Component, sum S4 relative + mooring	cm/sec

curr_speed_abs	Absolute Current Speed, sum S4 relative + mooring	cm/sec
curr_dir_abs	Absolute Current Direction, sum S4 + mooring	degrees Magnetic

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## Instruments

<b>Dataset-specific Instrument Name</b>	S4 Current Meter
<b>Generic Instrument Name</b>	Interocean S4 Current Meter
<b>Dataset-specific Description</b>	An S4 Current Meter (InterOcean Systems, Inc) was mounted on the MLML Particle Trap.
<b>Generic Instrument Description</b>	The InterOcean S4 current meter is a basic electromagnetic current meter with two pairs of internal electrodes and a flux-gate compass with an integral data logger. The S4 current meter is designed to directly measure with high precision the true magnitude and direction of current motion using two pairs of titanium electrodes located symmetrically on the equator of the sensor. An internal flux-gate compass provides heading information, used to reference current direction to magnetic North or, for fixed installations, the instrument may be operated in an X-Y orthogonal mode whereby the current vector can be referenced to a landform or structure. For more info, see <a href="http://www.interoceansystems.com/s4main.htm">www.interoceansystems.com/s4main.htm</a> .

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## Deployments

### All-119-5

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57738">https://www.bco-dmo.org/deployment/57738</a>
<b>Platform</b>	R/V Atlantis II
<b>Start Date</b>	1989-05-15
<b>End Date</b>	1989-06-06
<b>Description</b>	late bloom cruise; 31 locations; 61N 22W to 41N 17W <b>Methods &amp; Sampling</b> PI: William Broenkow of: Moss Landing Marine Laboratory (MLML) dataset: S4 Current Meter Observations on MLML Particle Trap dates: May 18, 1989 to June 07, 1989 location: N: 59.8117 S: 46.24 W: -20.7483 E: -17.68 project/cruise: North Atlantic Bloom Experiment/Atlantis II 119, leg 5 ship: R/V Atlantis II

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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)	<a href="#">unknown NABE NSF</a>

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