ADCP 600 and 150 KHz 5 minute and 1 hour averages; along track and shallow and deep sites; from R/V Seward Johnson SJ9506 and SJ9508 cruises?in the Gulf of Maine and Georges Bankareas during 1995 (GB project)

Website: https://www.bco-dmo.org/dataset/2412
Data Type: Cruise Results
Version: 1
Version Date: 2004-08-27

Project
» U.S. GLOBEC Georges Bank (GB)

Program
» U.S. GLOBal ocean ECosystems dynamics (U.S. GLOBEC)

Contributors	Affiliation	Role
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Groman, Robert C.	Woods Hole Oceanographic Institution (WHOI BCO-DMO)	BCO-DMO Data Manager

Abstract
ADCP 600 and 150 KHz 5 minute and 1 hour averages; along track and shallow and deep sites; from R/V Seward Johnson SJ9506 and SJ9508 cruises?in the Gulf of Maine and Georges Bankareas during 1995 (GB project)

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Coverage

Spatial Extent: **N**:41.52 **E**:-67.14 **S**:40.57 **W**:-70.59
Temporal Extent: 1995 - 1995

Dataset Description

Acoustic Doppler Current Profiler Observations

Current Vectors, April - June 1995

Ship: R/V Seward Johnson

Cruises/Dates: SJ9506/April 26 - May 2, 1995
SJ9508/June 6 - 16, 1995
Instruments: RDI, broadband 150 and 600 kHz ADCP units
RDI, narrowband 150 kHz ADCP unit
obs. modes: on-station and along track

See file comments for specifics on instruments used, observational modes and data averaging intervals.

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Updated: August 27, 2004; gfh

Methods & Sampling

SJ9508 NB 150 kHz ADCP 5 minute average

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Data Files

File
allADCP.csv (Comma Separated Values (.csv), 107.11 MB) MD5:a2e1d405a9c4ee8550ef7c202d2628c7 Primary data file for dataset ID 2412

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Parameters

Parameter	Description	Units
cruiseid	cruise/file identification	
year	year	
yrday_gmt	year day and decimal time, Jan 1 is year day 0	GMT
lat	latitude, negative = South	degrees
lon	longitude, negative = West	degrees
press	depth of observation, reported as pressure	decibars
u	east component of currents, east = positive	centimeters/second
v	north component of current, north = positive	centimeters/second
beam		unknown
frequency		
site		
bin		

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Instruments

Dataset-specific Instrument Name	Acoustic Doppler Current Profiler
Generic Instrument Name	Acoustic Doppler Current Profiler
Dataset-specific Description	Acoustic Doppler Current Profiler, encompasses an array of band widths and frequencies. RDI, broadband 150 and 600 kHz ADCP units.RDI, narrowband 150 kHz ADCP unit.
Generic Instrument Description	The ADCP measures water currents with sound, using a principle of sound waves called the Doppler effect. A sound wave has a higher frequency, or pitch, when it moves to you than when it moves away. You hear the Doppler effect in action when a car speeds past with a characteristic building of sound that fades when the car passes. The ADCP works by transmitting "pings" of sound at a constant frequency into the water. (The pings are so highly pitched that humans and even dolphins can't hear them.) As the sound waves travel, they ricochet off particles suspended in the moving water, and reflect back to the instrument. Due to the Doppler effect, sound waves bounced back from a particle moving away from the profiler have a slightly lowered frequency when they return. Particles moving toward the instrument send back higher frequency waves. The difference in frequency between the waves the profiler sends out and the waves it receives is called the Doppler shift. The instrument uses this shift to calculate how fast the particle and the water around it are moving. Sound waves that hit particles far from the profiler take longer to come back than waves that strike close by. By measuring the time it takes for the waves to bounce back and the Doppler shift, the profiler can measure current speed at many different depths with each series of pings. (More from WHOI instruments listing).

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Deployments

SJ9506

Website	https://www.bco-dmo.org/deployment/57485
Platform	R/V Seward Johnson
Report	http://globec.whoi.edu/globec-dir/reports/sj9506.html
Start Date	1995-04-25
End Date	1995-05-03
Description	this was a process cruise. Process turbulence. **Methods & Sampling** SJ9506 BB 600 kHz ADCP 5 minute average

SJ9508

Website	https://www.bco-dmo.org/deployment/57487
Platform	R/V Seward Johnson
Start Date	1995-06-06
End Date	1995-06-16
Description	This was a process type cruise. Process turbulence. Note: Twenty one navigation records in the evenlog were corrected on February 3, 2011 to fix errors in the latitude, from 41 to 40, for the inclusive dates of 6/11/1995: 0218 - 1536 (GMT). [MDA and RCG] **Methods & Sampling** SJ9508 NB 150 kHz ADCP 5 minute average

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Project Information

U.S. GLOBEC Georges Bank (GB)

Website: http://globec.whoi.edu/globec_program.html

Coverage: Georges Bank, Gulf of Maine, Northwest Atlantic Ocean

The U.S. GLOBEC Georges Bank Program is a large multi- disciplinary multi-year oceanographic effort. The proximate goal is to understand the population dynamics of key species on the Bank - Cod, Haddock, and two species of zooplankton (*Calanus finmarchicus* and *Pseudocalanus*) - in terms of their coupling to the physical environment and in terms of their predators and prey. The ultimate goal is to be able to predict changes in the distribution and abundance of these species as a result of changes in their physical and biotic environment as well as to anticipate how their populations might respond to climate change.

The effort is substantial, requiring broad-scale surveys of the entire Bank, and process studies which focus both on the links between the target species and their physical environment, and the determination of fundamental aspects of these species' life history (birth rates, growth rates, death rates, etc).

Equally important are the modelling efforts that are ongoing which seek to provide realistic predictions of the flow field and which utilize the life history information to produce an integrated view of the dynamics of the populations.

The U.S. GLOBEC Georges Bank Executive Committee (EXCO) provides program leadership and effective communication with the funding agencies.

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Program Information

U.S. GLOBal ocean ECosystems dynamics (U.S. GLOBEC)

Website: http://www.usglobec.org/

Coverage: Global

U.S. GLOBEC (GLOBal ocean ECosystems dynamics) is a research program organized by oceanographers and fisheries scientists to address the question of how global climate change may affect the abundance and production of animals in the sea.

The U.S. GLOBEC Program currently had major research efforts underway in the Georges Bank / Northwest Atlantic Region, and the Northeast Pacific (with components in the California Current and in the Coastal Gulf of Alaska). U.S. GLOBEC was a major contributor to International GLOBEC efforts in the Southern Ocean and Western Antarctic Peninsula (WAP).

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Funding

Funding Source	Award
National Science Foundation (NSF)	unknown GB NSF
National Oceanic and Atmospheric Administration (NOAA)	unknown GB NOAA

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