Averages of EPSONDE Microstructure Profiles from the Shallow Site, R/V Seward Johnson cruise SJ9508 in the Gulf of Maine and Georges Bank in 1995 as part of the U.S. GLOBEC program (GB project)

Website: https://www.bco-dmo.org/dataset/2427
Data Type: Cruise Results
Version: 1
Version Date: 2004-09-10

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

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

Contributors	Affiliation	Role
Hebert, Dave	University of Rhode Island (URI-GSO)	Principal Investigator
Allison, Dicky	Woods Hole Oceanographic Institution (WHOI BCO-DMO)	BCO-DMO Data Manager

Abstract
Averages of EPSONDE Microstructure Profiles from the Shallow Site, R/V Seward Johnson cruise SJ9508 in the Gulf of Maine and Georges Bank in 1995 as part of the U.S. GLOBEC program.

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Coverage

Spatial Extent: **Lat**:41.13 **Lon**:-67.75
Temporal Extent: 1995-06-06 - 1995-06-16

Dataset Description

Averages of EPSONDE Microstructure Profiles

Shallow Site, Seward Johnson 95-08

Typically, an EPSONDE microstructure profile is the average of 10 deployments of the EPSONDE instrument. One microstructure profile per profile number. During Seward Johnson cruise SJ9508, 20 deployments were made during each sampling event resulting in 2 microstructure profiles per profile number.

DMO Note: This data set as submitted contained the parameter "station". In the context of our definition, station was used incorrectly. We have changed this parameter to "profile" with the definition of: consecutively

numbered averaged EPSONDE profile. Users consulting the GSO Tech. Report should equate profile number with station number.

Prepared by: Russ Burgett, University of Rhode Island, GSO
Reference: (S08 - GS1AVG)

Details of data processing are described in: U.S. GLOBEC Georges Bank microsturcture data. GSO Univ. Rhode Island Tech. report 96-6.

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Methods & Sampling

EPSONDE microstructure profile is the average of 10 deployments of the EPSONDE instrument. One microstructure profile per profile number. During Seward Johnson cruise SJ9508, 20 deployments were made during each sampling event resulting in 2 microstructure profiles per profile number.

Data Processing Description

This data set as submitted contained the parameter "station". In the context of our definition, station was used incorrectly. We have changed this parameter to "profile" with the definition of: consecutively numbered averaged EPSONDE profile. Users consulting the GSO Tech. Report should equate profile number with station number.

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Data Files

File
S08_rs.csv (Comma Separated Values (.csv), 60.66 KB) MD5:f1c04562358d9bac4c1505c114a973b6 Primary data file for dataset ID 2427

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Parameters

Parameter	Description	Units
cruiseid	cruise identification	
lat	latitude, negative = South	decimal degrees
lon	longitude, negative = West	decimal degrees
profile	consecutively numbered EPSONDE profile	
yrday_gmt	year day, Julian calender	decimal day, GMT
press	depth of sample, reported as pressure	decibars
temp	temperature	degrees C
sal	salinity	PSU
sigma_t	density	kilograms/meter3
eps	epsilon, turbulent kinetic energy dissipation	watts/kilogram
chi_t	chi_theta, temperature variance dissipation	degrees C2/second
k_t	K_t, vertical diffusivity for heat	meters2/second
k_rho	K_rho, vertical diffusivity for density	meters2/second

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Instruments

Dataset-specific Instrument Name	EPSONDE
Generic Instrument Name	EPSONDE
Dataset-specific Description	EPSONDE microstructure profile is the average of 10 deployments of the EPSONDE instrument. One microstructure profile per profile number. During Seward Johnson cruise SJ9508, 20 deployments were made during each sampling event resulting in 2 microstructure profiles per profile number.
Generic Instrument Description	An EPSONDE is a tethered free-fall profiling system used to obtain temperature microstructure and velocity turbulence data in the water column. The EPSONDE profiler carries a variety of slow and fast sensors for measuring temperature microstructure, velocity microstructure, conductivity and depth. These data yield turbulent kinetic energy dissipation rates and temperature variance dissipation rates as well as derived quantities such as turbulent diffusivity.

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Deployments

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** EPSONDE microstructure profile is the average of 10 deployments of the EPSONDE instrument. One microstructure profile per profile number. During Seward Johnson cruise SJ9508, 20 deployments were made during each sampling event resulting in 2 microstructure profiles per profile number. **Processing Description** This data set as submitted contained the parameter "station". In the context of our definition, station was used incorrectly. We have changed this parameter to "profile" with the definition of: consecutively numbered averaged EPSONDE profile. Users consulting the GSO Tech. Report should equate profile number with station number.

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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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