Mooring data from the Eastern Flank Mooring (EF) on Georges Bank from 1998-1999 as part of the U.S. GLOBEC Georges Bank project (GB project)

Website: https://www.bco-dmo.org/dataset/2408
Data Type: Cruise Results
Version: 1
Version Date: 2010-03-12

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

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

Contributors	Affiliation	Role
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Abstract
Mooring data from the Eastern Flank Mooring (EF) on Georges Bank from 1998-1999 as part of the U.S. GLOBEC Georges Bank project (GB project)

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Coverage

Spatial Extent: **N**:42.1298 **E**:-66.0151 **S**:40.5 **W**:-70
Temporal Extent: 1998 - 1999

Dataset Description

Georges Bank Eastern Flank Mooring Arrays 1998-1999

Array Summary:
The Georges Bank moored instrument array (East Flank) was moored at ~41.7N and 66.1W in ~90m of water. The array consisted of a Toroid mooring (EFT) Nov 98 - Mar 99, an instrumented Guard mooring (EFG) Mar 99 - Aug 99, and a replacement Discus mooring (EFD) for the Toroid Mar 99 - August 99. The Toroid and Discus moorings were instrumented with temperature sensors at 10, 20, 45 meters; CTD units at 1, 15, 80 meters; and current meter units at 5 and 25 meters. The Guard mooring was instrumented with a temperature sensor at 1 meter.

DMO Notes:
1.. On mooring EFT (East Flank Toroid) yearday values are numbered consecutively from Nov 1998 to Mar 1999.
2.. At the present time, the values for u and v are not available.
3..These data are served from the orginal Matlab binary files. But for performance reasons, a cached version of these data (in JGOFS/GLOBEC format) is used. Missing data are represented as either "nd" or as "NaN".

Questions regarding these data should be directed to:
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PI Notes:
The original processing comments from the file readme.txt are show below:

For edited raw data at EF mooring
R. Limeburner 7/30/01
```

Input - Galbraith's *s.mat converted ascii raw data, time corrected
Output - *se.mat, with start/stop time in phase, big spikes interpolated

See plots eftraw.jpg, efsraw.jpg, eftlp.jpg, efslp.jpg

NEP Edited Raw Data 2001

```
Filename   Start time  Stop Time  Comment


EFTbt10m1800se.mat 111798 140000 031199 190000 ok
EFTbt20m1800se.mat 111798 140000 031199 190000 ok
EFTbt45m1800se.mat 111798 140000 031199 190000 ok

EFTsc1m300se.mat 111798 140000 031199 190000 ok, may need Flagg editing
EFTsc15m450se.mat 111798 140000 031199 190000 ok, may need Flagg editing
EFTsc80m450se.mat 111798 140000 031199 190000 ok, may need Flagg editing

EFTvm5m450se.mat 111798 140000 031199 190000 ok
EFTvm25m450se.mat 111798 140000 031199 190000 ok


EFDbt10m900se.mat 033099 020000 080399 160000 ok
EFDbt20m900se.mat 033099 020000 080399 160000 ok
EFDbt45m900se.mat 033099 020000 080399 160000 ok
EFDbt60m900se.mat 033099 020000 042799 044500 may need more editing

EFDsc2m120se.mat 033099 020000 073199 065600 ok, may need Flagg editing
EFDsc15m225se.mat 033099 020000 062799 110000 ok, may need Flagg editing
EFDsc35m225se.mat 033099 020000 071099 183000 ok, may need Flagg editing
EFDsc80m225se.mat 033099 020000 080399 160000 ok, may need Flagg editing

EFDvm5m450se.mat 033099 020000 080399 160000 temp much shorter than velocity
EFDvm25m450se.mat 033099 020000 051999 223730 ok
```

Editing EF history

```
1. Input GAlbraiths 7/26/01 data set with correct time
2. ETTsc1m330s.mat,
 fix cond spike at cond(12638), cond(18798)
 delete data(32895:32919), delete data(1)
 corrects the start time.
3  EFTsc15m450s.mat ok
4. EFTsc80m450s.mat data(21930:21945)=[] fixes time
 b=wild(temp,200,5.0);
 b=wild(sal,200,5.0);
 b=wild(sigma,200,5.0);10m
5. EFTbt

5. EFTvm25m450s.mat
 b=wild(north,200,3.0);
 temp(15033:21929)=[];
7. EFDsc2m120s.mat
 data(88710:91141)=[];
8. EFDsc15m225s.mat
 temp(34322:48609)=[];
 b=wild(sal,200,5.0);
 ;b=wild(sigma,200,5.0);
8. EFTsc35m225s.mat
 b=wild(temp,200,5);
 b=wild(temp,100,9);
```

```
b=wild(sal,200,5);
b=wild(sal,200,7);
b=wild(sigma,200,7);
b=wild(sigma,200,7);
```

Last updated April 6, 2006

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Parameters

Parameter	Description	Units
datatype	The processing stage of the data, such as raw, edited, filtered, etc.	
type_depth	Data key, made up of the mooring type, instrument depth, and sampling interval	
depth	Instrument depth	meters
lat	latitude, negative = South, decimal degrees	dd.d
lon	longitude, negative = West, decimal degrees	ddd.d
sampling_interval	sampling interval/rate	seconds
inst	Instrument type, where:sc = SeaCat, SeaBird CTD unit bt = temperature, tpod unit vm = VMCM, Standard Vector Measuring Current Meter	
mooring	Mooring type/location, such as EFD = East Flank Discus EFG = East Flank Guard EFT = East Flank Toroid	
year	starting year the data were collected	YYYY
inst_serial_numb	instrument serial number	
comments	comments	n/a
yrday_gmt	Year day/time, GMT, as decimal year1	YYY.Y
temp	temperature	Deg. Centigrade
cond	conductivity	tbd
sal	salinity	
sigma_t	density	kg/m3-1000
u	east component of current velocity 2	tbd
v	north component of current velocity 2	tbd
press	pressure	decibars

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Instruments

Dataset-specific Instrument Name	Standard Vector Measuring Current Meter
Generic Instrument Name	Vector Measuring Current Meter
Dataset-specific Description	Standard Vector Measuring Current Meter
Generic Instrument Description	The Vector Measuring Current Meter (VMCM) is an instrument for obtaining ocean current data. It is often deployed on moorings for long periods of time (years). The VMCM employs biaxial propellers and has undergone extensive tests and calibrations (Weller and Davis 1980). It is a well-characterized mechanical current meter and has been used for benchmarking other current meters (e.g., Dickey et al. 1998a). The two sets of orthogonal cosine response propeller sensors directly measure components of horizontal velocity, and direction is determined with a flux-gate compass (estimated resolution of 1.4 and accuracy of 5) to allow rotation of components into geographical coordinates. References: Dickey, TD, AJ Plueddemann, and RA Weller, 1998a: Current and water property measurements in the coastal ocean. The Sea, KH Brink and AR Robinson, Eds., Vol. 10, John Wiley and Sons, 367-398. Emery, WJ and Thomson, RE. 2004. Data Analysis Methods in Physical Oceanography. 638pp. Weller, R. A., and R. E. Davis, 1980: A vector measuring current meter. Deep-Sea Res., 27A, 565-582. Gilboy, TP, TD Dickey, DE Sigurdson, X. Yu, and D. Manov. 2000. An Intercomparison of Current Measurements Using a Vector Measuring Current Meter, an Acoustic Doppler Current Profiler, and a Recently Developed Acoustic Current Meter

Dataset-specific Instrument Name	Sea-Bird Seacat CTD
Generic Instrument Name	CTD Sea-Bird SEACAT
Dataset-specific Description	SeaCat, SeaBird CTD unit
Generic Instrument Description	The CTD SEACAT recorder is an instrument package manufactured by Sea-Bird Electronics. The first Sea-Bird SEACAT Recorder was the original SBE 16 SEACAT developed in 1987. There are several model numbers including the SBE 16plus (SEACAT C-T Recorder (P optional))and the SBE 19 (SBE 19plus SEACAT Profiler measures conductivity, temperature, and pressure (depth)). More information from Sea-Bird Electronics.

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Deployments

East_Flank

Website	https://www.bco-dmo.org/deployment/57358
Platform	GB EFlank Mooring
Start Date	1998-11-21
End Date	1999-07-31
Description	Eastern Flank Mooring (EF) deployed by R. Limeburner Frontal Exchange Processes Over Eastern Georges Bank mooring.

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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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