# Mooring bio-optical data from the Georges Crest mooring on Georges Bank from Apr - Sept. 1995

**Website**: https://www.bco-dmo.org/dataset/2508
**Data Type**: Cruise Results
**Version**: 1
**Version Date**: 2005-06-14

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

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

| Contributors | Affiliation | Role |
|---|---|---|
| Irish, Jim | Woods Hole Oceanographic Institution (WHOI) | Principal Investigator |

**Abstract**
Mooring bio-optical data from the Georges Crest mooring on Georges Bank from Apr - Sept. 1995

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## Coverage

**Spatial Extent**: **Lat**:41.4077 **Lon**:-67.5423
**Temporal Extent**: 1995-04-01 - 1995-09-03

## Dataset Description

### GLOBEC Georges Bank Long-term Moored Array Component

### CREST Mooring Site
### 41 24.461 N, 67 32.538 W

This deployment was between Apr 2, 1995 and Sep 30, 1995.

During this deployment the transmissometer record appears to decline at a steady rate during mid-record. This maybe due to biofouling, but this trend does not appear in the fluorometer.

**Data Submitted by:**

Jim Irish
Woods Hole Oceanographic Institution
Woods Hole, MA 02543

phone: 508 289 2732

fax: 508 457 2195
e-mail: jirish@whoi.edu

*updated 06/14/05; gfh*

### Methods & Sampling

Two deployments were made at this site. The first deployment was between Oct 28, 1994 and Jan 21, 1995. The second deployment was between Apr 2, 1995 and Sep 30, 1995.

### Data Processing Description

During the second deployment the transmissometer record appears to decline at a steady rate during mid-record. This maybe due to biofouling, but this trend does not appear in the fluorometer.

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## Data Files

| File |
|---|
| **crest.csv** (Comma Separated Values (.csv), 375.58 KB)<br>MD5:693eddc242eb6eaa9fa9a14bfd003a90<br>Primary data file for dataset ID 2508 |

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## Parameters

| Parameter | Description | Units |
|---|---|---|
| year_start | starting year of mooring deployment | |
| brief_desc | data type description | |
| lat | latitude, negative = South | decimal degrees |
| lon | longitude, negative = West | decimal degrees |
| depth | depth of instrument, negative = height above sea surf. | meters |
| hour_gmt | time GMT in hours (0-23) | whole hours |
| minute_gmt | time GMT in minutes (0-59) | whole minutes |
| seconds_gmt | time GMT in seconds | decimal seconds |

| | | |
|---|---|---|
| day_gmt | day of month GMT (1-31) | |
| month_gmt | month of year GMT (1-12) | |
| year | year | |
| julian_day | Julian day. In this convention, Julian day 2440000 begins at 0000 hours, May 23, 1968 | decimal day |
| flvolt | fluorescense | volts |
| trans | light transmission | percent |
| par_scalar | scalar PAR | microEinstein/meter^2/second |
| cond | conductivity | seimens/meter |
| sigma_0 | potential density | (kg/m^3) |
| sal | salinity PSU | |
| temp | water temperature | decimal deg. C |
| temp_air | air temperature | decimal deg. C |

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## Instruments

| | |
|---|---|
| **Dataset-specific Instrument Name** | Rotronics |
| **Generic Instrument Name** | Rotronics Temperature and Humidity Probe |
| **Dataset-specific Description** | Air Temperature |
| **Generic Instrument Description** | Rotronics device used to measure air temperature |

| | |
|---|---|
| **Dataset-specific Instrument Name** | SeaTech Fluorometer |
| **Generic Instrument Name** | Sea Tech Fluorometer |
| **Dataset-specific Description** | Sea Tech chlorophyll-a fluorometer |
| **Generic Instrument Description** | The Sea Tech chlorophyll-a fluorometer has internally selectable settings to adjust for different ranges of chlorophyll concentration, and is designed to measure chlorophyll-a fluorescence in situ. The instrument is stable with time and temperature and uses specially selected optical filters enabling accurate measurements of chlorophyll a. It can be deployed in moored or profiling mode. This instrument designation is used when specific make and model are not known. The Sea Tech Fluorometer was manufactured by Sea Tech, Inc. (Corvalis, OR, USA). |

| | |
|---|---|
| **Dataset-specific Instrument Name** | SeaTech Transmissometer |
| **Generic Instrument Name** | Sea Tech Transmissometer |
| **Dataset-specific Description** | Sea Tech 25-cm path-length transmissometer |
| **Generic Instrument Description** | The Sea Tech Transmissometer can be deployed in either moored or profiling mode to estimate the concentration of suspended or particulate matter in seawater. The transmissometer measures the beam attenuation coefficient in the red spectral band (660 nm) of the laser lightsource over the instrument's path-length (e.g. 20 or 25 cm). This instrument designation is used when specific make and model are not known. The Sea Tech Transmissometer was manufactured by Sea Tech, Inc. (Corvalis, OR, USA). |

| | |
|---|---|
| **Dataset-specific Instrument Name** | SBE-3 |
| **Generic Instrument Name** | Sea-Bird SBE-3 Temperature Sensor |
| **Dataset-specific Description** | SBE-3 Temperature |
| **Generic Instrument Description** | The SBE-3 is a slow response, frequency output temperature sensor manufactured by Sea-Bird Electronics, Inc. (Bellevue, Washington, USA). It has an initial accuracy of +/- 0.001 degrees Celsius with a stability of +/- 0.002 degrees Celsius per year and measures seawater temperature in the range of -5.0 to +35 degrees Celsius. More information from Sea-Bird Electronics: https://www.seabird.com/products/sbe-3-oceanographic-temperature-sensor |

| | |
|---|---|
| **Dataset-specific Instrument Name** | SBE-4 |
| **Generic Instrument Name** | Sea-Bird SBE-4 Conductivity Sensor |
| **Dataset-specific Description** | SBE-4 Conductivity |
| **Generic Instrument Description** | The Sea-Bird SBE-4 conductivity sensor is a modular, self-contained instrument that measures conductivity from 0 to 7 Siemens/meter. The sensors (Version 2; S/N 2000 and higher) have electrically isolated power circuits and optically coupled outputs to eliminate any possibility of noise and corrosion caused by ground loops. The sensing element is a cylindrical, flow-through, borosilicate glass cell with three internal platinum electrodes. Because the outer electrodes are connected together, electric fields are confined inside the cell, making the measured resistance (and instrument calibration) independent of calibration bath size or proximity to protective cages or other objects. |

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## Deployments

**Crest**

| | |
|---|---|
| **Website** | https://www.bco-dmo.org/deployment/57357 |
| **Platform** | GB Crest Mooring |
| **Report** | http://globec.whoi.edu/globec-dir/data_doc/WHOI-2005-11.pdf |
| **Start Date** | 1994-10-28 |
| **End Date** | 1995-09-30 |
| **Description** | U.S. GLOBEC Georges Bank Long-Term Moored Program<br><br>**Methods & Sampling**<br>Two deployments were made at this site. The first deployment was between Oct 28, 1994 and Jan 21, 1995. The second deployment was between Apr 2, 1995 and Sep 30, 1995.<br><br>**Processing Description**<br>During the second deployment the transmissometer record appears to decline at a steady rate during mid-record. This maybe due to biofouling, but this trend does not appear in the fluorometer. |

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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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