

# CTD data from R/V Endeavor and R/V Oceanus cruises EN307, EN330, EN331, OC332, and OC334 to the Gulf of Maine and Georges Bank in 1997-1999 (GB project)

Website: <https://www.bco-dmo.org/dataset/2300>

Version: 2004-10-01

## Project

» [U.S. GLOBEC Georges Bank](#) (GB)

## Program

» [U.S. GLOBal ocean ECosystems dynamics](#) (U.S. GLOBEC)

Contributors	Affiliation	Role
<a href="#">Greene, Charles H</a>	Cornell University (Cornell)	Principal Investigator
<a href="#">Allison, Dicky</a>	Woods Hole Oceanographic Institution (WHOI BCO-DMO)	BCO-DMO Data Manager

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## Dataset Description

### CTD Hydrography

### Endeavor 307, 330, 331 and Oceanus 332, 334

click [here](#) for additional sampling information (SeaBird System output).

Questions regarding these data should be directed to the US GLOBEC [Data Management Office](#).

#### DMO Notes:

The data reported here are from the primary CTD sensors. However, this data set also contains conductivity, temperature and related computed parameters from secondary sensors. If these data are of interest, please contact the Data Management Office at the above link.

\* Temperatures are reported in ITS90 scale except for Endeavor cruise 307 which are in the ITS68 scale.

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Woods Hole Oceanographic Institution

*prepared by: Dicky Allison, March 2003*

*updated: October 1, 2004; gfh*

## Methods & Sampling

The data reported here are from the primary CTD sensors. However, this data set also contains conductivity, temperature and related computed parameters from secondary sensors.

## Data Processing Description

### Header details:

```
# pr = pressure [db]
# t090 = temperature, pri, ITS-90 [deg C]
# c0S/m = conductivity, primary [S/m]
# t190 = temperature, sec, ITS-90 [deg C]
# c1S/m = conductivity, secondary [S/m]
# flS = fluorometer, sea tech
# xmiss = transmissometer
# sal00 = salinity, PSS-78 [PSU], T0, C0
# sal11 = salinity, PSS-78 [PSU], T1, C1
# potemp068 = potential temperature, pri, IPTS-68 [deg C]
# potemp090 = potential temperature, pri, ITS-90 [deg C]
# depS = depth, salt water [m]
# density00 = density [kg/m^3], T0, C0
# sigma-t00 = density, sigma-t [kg/m^3], T0, C0
# sigma-t100 = density, sigma-1 [kg/m^3], T0, C0
# sigma-200 = density, sigma-2 [kg/m^3], T0, C0
# sigma-400 = density, sigma-4 [kg/m^3], T0, C0
# oxsatML/L = oxygen saturation [ml/l]
# nbin = number of scans per bin
# interval = decibars: 1
# bad_flag = -9.990e-29
# sensor 0 = Frequency 0 temperature, primary, 2107, 03 FEB-99
# sensor 1 = Frequency 1 conductivity, primary, 1745, 05-FEB-99s, cpcor = -9.5700e-08
# sensor 2 = Frequency 2 pressure, 64853, 08-21-96
# sensor 3 = Frequency 3 temperature, secondary, 2034, 03-FEB-99s
# sensor 4 = Frequency 4 conductivity, secondary, 1749, 03-FEB-99s, cpcor = -9.5700e-08
# sensor 5 = Extrl Volt 0 transmissometer, 243D, 10 Jul 1999
# sensor 6 = Extrl Volt 1 fluorometer, sea tech, 30s, july 1987
# sensor 7 = Extrl Volt 2 oxygen, current, 130454, 18 AUG 1999
# sensor 8 = Extrl Volt 3 oxygen, temperature, 130454, 18 AUG 1999
# sensor 9 = Extrl Volt 4 irradiance (PAR), 4479, AUG 15, 1996
# sensor 10 = Extrl Volt 9 surface irradiance (SPAR), degrees = 0.0
```

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## Data Files

File
<b>ctd_cg.csv</b> (Comma Separated Values (.csv), 981.25 KB) MD5:a665c82a8492b7f949a4947a64d3857d
Primary data file for dataset ID 2300

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## Parameters

Parameter	Description	Units
cruiseid	Originator's cruise identification	
year	4-digit year (i.e. 1995)	
cast	CTD cast number	
lat	latitude, negative = south	decimal degrees
lon	longitude, negative = west	decimal degrees
month_gmt	month of year, gmt time	GMT
day_gmt	day of month, gmt time	GMT
time_gmt	time in gmt, reported as hhmm.mm	GMT
press	depth of sample, reported as pressure	decibars
cond	conductivity	siemens/meter
cond_mS	conductivity	millisiemens/centimeter
temp	temperature	deg. C*
potemp	potential temperature	deg. C*
trans	light transmission	percent
beam_c	beam attenuation coefficient	1/m
par_v	photosynthetically available radiation, asvolts	volts
par_s_v	surface photosynthetically available radiation, as volts	volts
flvolt	fluorescence, as volts	volts
turbid_v	turbidity	volts
density	density	kg/m <sup>3</sup>
depth	depth of sample	meters
sigma_0	potential density at surface (sigma theta)	kg/m <sup>3</sup> -1000
sigma_t	sigma-t	kg/m <sup>3</sup> -1000
O2_sat	oxygen saturation	milliliters/liter
sal	salinity	PSS-78

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## Instruments

<b>Dataset-specific Instrument Name</b>	Conductivity, Temperature, Depth
<b>Generic Instrument Name</b>	CTD - profiler
<b>Dataset-specific Description</b>	CTD measurements taken, CTD unit unidentified.
<b>Generic Instrument Description</b>	The Conductivity, Temperature, Depth (CTD) unit is an integrated instrument package designed to measure the conductivity, temperature, and pressure (depth) of the water column. The instrument is lowered via cable through the water column. It permits scientists to observe the physical properties in real-time via a conducting cable, which is typically connected to a CTD to a deck unit and computer on a ship. The CTD is often configured with additional optional sensors including fluorometers, transmissometers and/or radiometers. It is often combined with a Rosette of water sampling bottles (e.g. Niskin, GO-FLO) for collecting discrete water samples during the cast. This term applies to profiling CTDs. For fixed CTDs, see <a href="https://www.bco-dmo.org/instrument/869934">https://www.bco-dmo.org/instrument/869934</a> .

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## Deployments

### EN307

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57424">https://www.bco-dmo.org/deployment/57424</a>
<b>Platform</b>	R/V Endeavor
<b>Report</b>	<a href="http://globec.whoi.edu/globec-dir/reports/en307/greenrpt.html">http://globec.whoi.edu/globec-dir/reports/en307/greenrpt.html</a>
<b>Start Date</b>	1997-10-08
<b>End Date</b>	1997-10-17
<b>Description</b>	<p>process</p> <p><b>Methods &amp; Sampling</b> The data reported here are from the primary CTD sensors. However, this data set also contains conductivity, temperature and related computed parameters from secondary sensors.</p> <p><b>Processing Description</b> Header details: # pr = pressure [db] # c0S/m = conductivity, primary [S/m] # c1S/m = conductivity, secondary [S/m] # t068 = temperature, pri, IPTS-68 [deg C] # t168 = temperature, sec, IPTS-68 [deg C] # xmiss = transmissometer # bat = beam attenuation coefficient # par = irradiance (PAR) # spar = surface irradiance (SPAR) # fls = fluorometer, sea tech # sal00 = salinity, PSS-78 [PSU], T0, C0 # sal11 = salinity, PSS-78 [PSU], T1, C1 # density00 = density [kg/m<sup>3</sup>], T0, C0 # density11 = density [kg/m<sup>3</sup>], T1, C1 # sigma-é00 = density, sigma-theta [kg/m<sup>3</sup>], T0, C0 # sigma-é11 = density, sigma-theta [kg/m<sup>3</sup>], T1, C1 # flag = 0.000e+00 # nbin = number of scans per bin # interval = decibars: 1 # bad_flag = -9.990e-29 # sensor 0 = Frequency 0 temperature, primary, 2034, 06-Jul-96s # sensor 1 = Frequency 1 conductivity, primary, 1745, 23-Jul-96s, cpcor = -9.5700e-08 # sensor 2 = Frequency 2 pressure, 64853, 08-21-96 # sensor 3 = Frequency 3 temperature, secondary, 2107, 09-Jul-96s # sensor 4 = Frequency 4 conductivity, secondary, 200, 06-feb-97s, cpcor = -9.5700e-08 # sensor 5 = Extrnl Volt 0 transmissometer, 243D, 11 July 1996 # sensor 6 = Extrnl Volt 1 fluorometer, sea tech, 30s, july 1987 # sensor 7 = Extrnl Volt 2 oxygen, current, 130443, dec 23, 1996 # sensor 8 = Extrnl Volt 3 oxygen, temperature, 130443, dec 23, 1996 # sensor 9 = Extrnl Volt 4 irradiance (PAR), 4479, AUG 15, 1996 # sensor 10 = Extrnl Volt 9 surface irradiance (SPAR), degrees = 0.0</p>

**EN330**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57433">https://www.bco-dmo.org/deployment/57433</a>
<b>Platform</b>	R/V Endeavor
<b>Report</b>	<a href="http://globec.whoi.edu/globec-dir/reports/en330/en330new.htm">http://globec.whoi.edu/globec-dir/reports/en330/en330new.htm</a>
<b>Start Date</b>	1999-10-16
<b>End Date</b>	1999-10-26
<b>Description</b>	<p>process</p> <p><b>Methods &amp; Sampling</b> The data reported here are from the primary CTD sensors. However, this data set also contains conductivity, temperature and related computed parameters from secondary sensors.</p> <p><b>Processing Description</b> Header details: # pr = pressure [db] # t090 = temperature, pri, ITS-90 [deg C] # c0S/m = conductivity, primary [S/m] # t190 = temperature, sec, ITS-90 [deg C] # c1S/m = conductivity, secondary [S/m] # flS = fluorometer, sea tech # xmiss = transmissometer # sal00 = salinity, PSS-78 [PSU], T0, C0 # sal11 = salinity, PSS-78 [PSU], T1, C1 # potemp068 = potential temperature, pri, IPTS-68 [deg C] # potemp090 = potential temperature, pri, ITS-90 [deg C] # depS = depth, salt water [m] # density00 = density [kg/m<sup>3</sup>], T0, C0 # sigma-é00 = density, sigma-theta [kg/m<sup>3</sup>], T0, C0 # sigma-t00 = density, sigma-t [kg/m<sup>3</sup>], T0, C0 # sigma-100 = density, sigma-1 [kg/m<sup>3</sup>], T0, C0 # sigma-200 = density, sigma-2 [kg/m<sup>3</sup>], T0, C0 # sigma-400 = density, sigma-4 [kg/m<sup>3</sup>], T0, C0 # oxsatML/L = oxygen saturation [ml/l] # nbin = number of scans per bin # interval = decibars: 1 # bad_flag = -9.990e-29 # sensor 0 = Frequency 0 temperature, primary, 2107, 03 FEB-99 # sensor 1 = Frequency 1 conductivity, primary, 1745, 05-FEB-99s, cpcor = -9.5700e-08 # sensor 2 = Frequency 2 pressure, 64853, 08-21-96 # sensor 3 = Frequency 3 temperature, secondary, 2034, 03-FEB-99s # sensor 4 = Frequency 4 conductivity, secondary, 1749, 03-FEB-99s, cpcor = -9.5700e-08 # sensor 5 = Extrnl Volt 0 transmissometer, 243D, 10 Jul 1999 # sensor 6 = Extrnl Volt 1 fluorometer, sea tech, 30s, july 1987 # sensor 7 = Extrnl Volt 2 oxygen, current, 130454, 18 AUG 1999 # sensor 8 = Extrnl Volt 3 oxygen, temperature, 130454, 18 AUG 1999 # sensor 9 = Extrnl Volt 4 irradiance (PAR), 4479, AUG 15, 1996 # sensor 10 = Extrnl Volt 9 surface irradiance (SPAR), degrees = 0.0</p>

**EN331**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57434">https://www.bco-dmo.org/deployment/57434</a>
<b>Platform</b>	R/V Endeavor
<b>Report</b>	<a href="http://globec.who.edu/globec-dir/reports/en331/en331rpt.6sept2000.html">http://globec.who.edu/globec-dir/reports/en331/en331rpt.6sept2000.html</a>
<b>Start Date</b>	1999-12-04
<b>End Date</b>	1999-12-13
<b>Description</b>	<p>process</p> <p><b>Methods &amp; Sampling</b> The data reported here are from the primary CTD sensors. However, this data set also contains conductivity, temperature and related computed parameters from secondary sensors.</p> <p><b>Processing Description</b> Header details: # pr = pressure [db] # t090 = temperature, pri, ITS-90 [deg C] # c0S/m = conductivity, primary [S/m] # t190 = temperature, sec, ITS-90 [deg C] # c1S/m = conductivity, secondary [S/m] # fls = fluorometer, sea tech # xmiss = transmissometer # sal00 = salinity, PSS-78 [PSU], T0, C0 # sal11 = salinity, PSS-78 [PSU], T1, C1 # potemp068 = potential temperature, pri, IPTS-68 [deg C] # potemp090 = potential temperature, pri, ITS-90 [deg C] # depS = depth, salt water [m] # density00 = density [kg/m<sup>3</sup>], T0, C0 # sigma-é00 = density, sigma-theta [kg/m<sup>3</sup>], T0, C0 # sigma-t00 = density, sigma-t [kg/m<sup>3</sup>], T0, C0 # sigma-100 = density, sigma-1 [kg/m<sup>3</sup>], T0, C0 # sigma-200 = density, sigma-2 [kg/m<sup>3</sup>], T0, C0 # sigma-400 = density, sigma-4 [kg/m<sup>3</sup>], T0, C0 # oxsatML/L = oxygen saturation [ml/l] # nbin = number of scans per bin # interval = decibars: 1 # bad_flag = -9.990e-29 # sensor 0 = Frequency 0 temperature, primary, 2107, 03 FEB-99 # sensor 1 = Frequency 1 conductivity, primary, 1745, 05-FEB-99s, cpcor = -9.5700e-08 # sensor 2 = Frequency 2 pressure, 64853, 08-21-96 # sensor 3 = Frequency 3 temperature, secondary, 2034, 03-FEB-99s # sensor 4 = Frequency 4 conductivity, secondary, 1749, 03-FEB-99s, cpcor = -9.5700e-08 # sensor 5 = Extrnl Volt 0 transmissometer, 243D, 10 Jul 1999 # sensor 6 = Extrnl Volt 1 fluorometer, sea tech, 30s, july 1987 # sensor 7 = Extrnl Volt 2 oxygen, current, 130454, 18 AUG 1999 # sensor 8 = Extrnl Volt 3 oxygen, temperature, 130454, 18 AUG 1999 # sensor 9 = Extrnl Volt 4 irradiance (PAR), 4479, AUG 15, 1996 # sensor 10 = Extrnl Volt 9 surface irradiance (SPAR), degrees = 0.0</p>

OC332

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57456">https://www.bco-dmo.org/deployment/57456</a>
<b>Platform</b>	R/V Oceanus
<b>Report</b>	<a href="http://globec.whoi.edu/globec-dir/reports/oc332/oc332rpt.html">http://globec.whoi.edu/globec-dir/reports/oc332/oc332rpt.html</a>
<b>Start Date</b>	1998-10-19
<b>End Date</b>	1998-10-30
<b>Description</b>	<p>process</p> <p><b>Methods &amp; Sampling</b> The data reported here are from the primary CTD sensors. However, this data set also contains conductivity, temperature and related computed parameters from secondary sensors.</p> <p><b>Processing Description</b> Header details: # pr = pressure [db] # t090 = temperature, ITS-90 [deg C] # c0mS/cm = conductivity [mS/cm] # v1 = voltage, number 1 [V] (fluorometer) # v2 = voltage, number 2 [V] (transmissometer) # v5 = voltage, number 5 [V] (seapoint turbidity meter) # par = irradiance (PAR) # spar = surface irradiance (SPAR) # sal00 = salinity, PSS-78 [PSU] # density00 = density [kg/m<sup>3</sup>] # depS = depth, salt water [m] # flag = 0.000e+00 # nbin = number of scans per bin # interval = decibars: 1 # bad_flag = -9.990e-29 # sensor 0 = Frequency 0 temperature, 2265, 24-Apr-98 # sensor 1 = Frequency 1 conductivity, 1859, 24-Apr-98s, cpcor = -9.5700e-08 # sensor 2 = Frequency 2 pressure, 63505, 10-11-1996 # sensor 3 = Extrnl Volt 1 fluorometer, sea tech, 75S # sensor 4 = Extrnl Volt 2 transmissometer, 667 # sensor 5 = Extrnl Volt 4 altimeter # sensor 6 = Extrnl Volt 5 seapoint turbidity meter, 1391 # sensor 7 = Extrnl Volt 6 irradiance (PAR), 4550, 18sept98 # sensor 8 = Extrnl Volt 9 surface irradiance (SPAR), degrees = 0.0</p>

#### OC334

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57458">https://www.bco-dmo.org/deployment/57458</a>
<b>Platform</b>	R/V Oceanus
<b>Report</b>	<a href="http://globec.whoi.edu/globec-dir/reports/oc334/cruise-report.html">http://globec.whoi.edu/globec-dir/reports/oc334/cruise-report.html</a>
<b>Start Date</b>	1998-12-03
<b>End Date</b>	1998-12-13
<b>Description</b>	<p>process</p> <p><b>Methods &amp; Sampling</b> The data reported here are from the primary CTD sensors. However, this data set also contains conductivity, temperature and related computed parameters from secondary sensors.</p> <p><b>Processing Description</b> Header details: # pr = pressure [db] # t090 = temperature, ITS-90 [deg C] # c0mS/cm = conductivity [mS/cm] # v1 = voltage, number 1 [V] (fluorometer) # v2 = voltage, number 2 [V] (transmissometer) # v5 = voltage, number 5 [V] (seapoint turbidity meter) # par = irradiance (PAR) # spar = surface irradiance (SPAR) # sal00 = salinity, PSS-78 [PSU] # density00 = density [kg/m<sup>3</sup>] # depS = depth, salt water [m] # flag = 0.000e+00 # nbin = number of scans per bin # interval = decibars: 1 # bad_flag = -9.990e-29 # sensor 0 = Frequency 0 temperature, 2265, 24-Apr-98 # sensor 1 = Frequency 1 conductivity, 1859, 24-Apr-98s, cpcor = -9.5700e-08 # sensor 2 = Frequency 2 pressure, 63505, 10-11-1996 # sensor 3 = Extrnl Volt 1 fluorometer, sea tech, 75S # sensor 4 = Extrnl Volt 2 transmissometer, 667 # sensor 5 = Extrnl Volt 4 altimeter # sensor 6 = Extrnl Volt 5 seapoint turbidity meter, 1391 # sensor 7 = Extrnl Volt 7 irradiance (PAR), 4296, 10sept98 # sensor 8 = Extrnl Volt 9 surface irradiance (SPAR), degrees = 0.0</p>

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## Project Information

### U.S. GLOBEC Georges Bank (GB)

**Website:** [http://globec.who.edu/globec\\_program.html](http://globec.who.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



<b>Funding Source</b>	<b>Award</b>
National Science Foundation (NSF)	<a href="#">unknown GB NSF</a>
National Oceanic and Atmospheric Administration (NOAA)	<a href="#">unknown GB NOAA</a>

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