

SeaSoar CTD Data from R/V Wecoma cruise W0008 in the Northeast Pacific in 2000 as part of the U.S. GLOBEC program (NEP project)

Website: <https://www.bco-dmo.org/dataset/2468>

Data Type: Cruise Results

Version: 1

Version Date: 2007-04-16

Project

» [U.S. GLOBEC Northeast Pacific](#) (NEP)

Program

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

| Contributors | Affiliation | Role |
|--------------------------------|---|------------------------|
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Abstract

SeaSoar CTD data from R/V Wecoma cruise W0008 in the Northeast Pacific in 2000 as part of the U.S. GLOBEC-NEP program.

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Coverage

Spatial Extent: N:44.6528 E:-124.1588 S:41.8997 W:-126.049

Temporal Extent: 2000-07-29 - 2000-08-17

Dataset Description

W0008 R/V Wecoma 29 July - 17 August 2000

SeaSoar data from the U.S. GLOBEC Northeast Pacific Program are available from the SeaSoar Web Site at Oregon State University.

Contact Jack Barth at OSU (Phone: 541-737-1607; email barth@oce.orst.edu)

Data may be downloaded from the Data Files link, below.

Processing Description

SeaSoar data are available in two formats:

"1Hz data" or "gridded".

Each of these is described below.

1Hz Data

The *.dat2c files give final 1Hz SeaSoar CTD data.

Here is the first line of inshore.line1.dat2c:

```
44.65232 -125.07752 50.1 8.6245 32.6936 25.3705 8.6194 25.3713 217.77238
000804183214 0000 0.033 0.000 0.552 0.50
```

The format of the *.dat2c files is given by:

```
col 1: latitude (decimal degrees)
col 2: longitude (decimal degrees)
col 3: pressure (dbars)
col 4: temperature (C)
col 5: salinity (psu)
col 6: Sigma-t (kg/cubic meter)
col 7: potential temperature (C)
col 8: sigma-theta (kg/cubic meter)
col 9: time (decimal year-day of 2000)
col 10: date and time (integer year, month, day, hour, minute, second)
col 11: flag
col 12: PAR (volts)
col 13: FPK010 FL (violet filter) (volts)
col 14: FPK016 FL (green filter) (volts)
col 15: chlorophyl-a (micro g/liter)
```

The ones place of the flags variable indicates which of the two sensor pairs was selected as the preferred sensor, giving the values for T, S, and sigma-t:

0 indicates use of sensor pair 1 (T1, C1)
1 indicates use of sensor pair 2 (T2, C2)

Voltage values (columns 12 - 14) are in the range of 0-5 volts.
A value of 9.999 indicates "no value" for those columns

Chlorophyll was calculated based on the voltage values of the green filtered FPK016; if that FPAK was 9-filled, then the chlorophyll value was set at 999.99; if the calibrated value was negative (due to noise in the calibration) the chlorophyll value was set at 0.00; otherwise the calibration equation used was:

$$\text{chl_a} = 8.8862(\text{volts}) - 4.4040$$

Gridded Data

The *1.25km files give the final SeaSoar CTD data gridded at a spacing of 1.25 km in the horizontal, and 2 db in the vertical. In general this was used for the mapping surveys that were on the continental shelf.

The *2.5km files give the final SeaSoar CTD data gridded at a spacing of 2.5 km in the horizontal (and 2 db in the vertical). These were used for the deeper, offshore survey.

Here is the first line of inshore.line1.1.25km:

```
13.75  217.96827      44.649242      -124.23634      1.0  46  9.2308340
    33.271366      25.728455      225.50270      9.2307272
0.22550270E-01  2.7879565      0.      0.94823903
```

The format of the *km files is given by:

```
col 1 = distance          (km)
col 2 = julian day + fractional day (noon, Jan 1 = 1.5)
col 3 = latitude          (decimal degrees)
col 4 = longitude         (decimal degress)
col 5 = pressure          (dbar)
col 6 = count
col 7 = temperature       (degrees C)
col 8 = salinity          (psu)
col 9 = density (sigma-t) (kg/cubic meter)
col 10 = specific vol anomaly (1.0E-8 cubic meter/kg)
col 11 = potential temperature (degrees C)
col 12 = dynamic height  (dynamic meters)
col 13 = PAR              (volts)
col 14 = FPK010           (volts)   (violet filter)
col 15 = FPK016           (volts)   (green filter)
```

"missing data" was set at 1.0e35

columns 1 - 4 give the average location and time of the values contained in the column at that location. The column gives values for every two dbars of depth, starting at 1db and extending down to a value at 121 db. The column then shifts to the next location, 1.25km further along the line. If we are working with the 2.5km sections, then the column goes down to a value of 329 db, and the next column then shifts 2.5km further along the line.

For the E-W lines, column 1 gives the distance from the coastline;
for the N-S lines, column 1 gives the distance from southernmost point.

column 6 (count) gives the number of samples in that 2db bin

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Data Files

| File | Version |
|--|---------|
| SeaSoar CTD Data from R/V Wecoma cruise W0008 (GZIP (.gz), 43.05 MB) MD5:3b49a43bb8127a9fe7f9f57078c95889 <i>Compressed tar.gz file containing SeaSoar CTD data in two formats, "1Hz data" and "gridded".</i> | 1 |

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Parameters

| Parameter | Description | Units |
|-------------|---|-------|
| link | Link to U.S. GLOBEC Data Acknowledgement Policy page. | |
| description | Dataset brief description. | |

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Instruments

| | |
|---|--|
| Dataset-specific Instrument Name | CTD SeaSoar |
| Generic Instrument Name | CTD SeaSoar |
| Dataset-specific Description | CTD measurements taken during a SeaSoar tow. |
| Generic Instrument Description | CTD measurements taken during a SeaSoar tow. |

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Deployments

W0008

| | |
|-------------------|---|
| Website | https://www.bco-dmo.org/deployment/57600 |
| Platform | R/V Wecoma |
| Report | http://globec.who.edu/nep/reports/ccs_cruises/w0008acr.pdf |
| Start Date | 2000-07-29 |
| End Date | 2000-08-17 |

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Project Information

U.S. GLOBEC Northeast Pacific (NEP)

Website: <http://nepglobec.bco-dmo.org>

Coverage: Northeast Pacific Ocean, Gulf of Alaska

Program in a Nutshell Goal: To understand the effects of climate variability and climate change on the distribution, abundance and production of marine animals (including commercially important living marine resources) in the eastern North Pacific. To embody this understanding in diagnostic and prognostic ecosystem models, capable of capturing the ecosystem response to major climatic fluctuations. Approach: To study the effects of past and present climate variability on the population ecology and population dynamics of marine biota and living marine resources, and to use this information as a proxy for how the ecosystems of the eastern North Pacific may respond to future global climate change. The strong temporal variability in the physical and biological signals of the NEP will be used to examine the biophysical mechanisms through which zooplankton and salmon populations respond to physical forcing and biological interactions in the coastal regions of the two gyres. Annual and interannual variability will be studied directly through long-term observations and detailed process studies; variability at longer time scales will be examined through retrospective analysis of directly measured and proxy data. Coupled biophysical models of the ecosystems of these regions will be developed and tested using the process studies and data collected from the long-term observation programs, then further tested and improved by hindcasting selected retrospective data series.

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).

Funding

| Funding Source | Award |
|--|----------------------------------|
| NSF Division of Ocean Sciences (NSF OCE) | OCE-0001035 |
| National Oceanic and Atmospheric Administration (NOAA) | unknown NEP NOAA |