

# Vertical Plankton Tow (VPT) data from 1997 - 2003 from multiple cruises from the Northeast Pacific, California Current System (NEP project)

**Website:** <https://www.bco-dmo.org/dataset/2453>

**Data Type:** Cruise Results

**Version:** 1

**Version Date:** 2010-08-16

## Project

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

## Program

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

Contributors	Affiliation	Role
<a href="#">Peterson, William T.</a>	Northwest Fisheries Science Center - Newport (NOAA NWFSC)	Principal Investigator
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## Abstract

Vertical Plankton Tow (VPT) data from 1997 - 2003 from multiple cruises from the Northeast Pacific, California Current System

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## Coverage

**Spatial Extent:** N:44.65 E:-123.44 S:38.29 W:-126.19

**Temporal Extent:** 1997 - 2003

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## Dataset Description

This project was designed to make a comparison of the effects of coastal upwelling on the population dynamics and vital rates of the euphausiids *Euphausia pacifica* and *Thysanoessa spinifera* in the Northern California Current, north and south of Cape Blanco, Oregon.

These data are part of a project which describes the population dynamics of these two GLOBEC target organisms. The nets sampled along several transect lines off the central Oregon coast for the purpose of describing temporal variations in euphausiid abundance, recruitment, vital rates and production. A high-frequency sampling program will be supplemented with bimonthly cruises sampling along four transect lines: two off Oregon (Newport and Coos Bay) and two off northern California (Crescent City and Eureka) during GLOBEC Long-Term Observations Program (L-TOP) cruises. Data from these survey cruises will provide information on spatial variations in euphausiid biomass, numerical abundance, vital rates and production in the

waters throughout the GLOBEC study region (Newport OR south to Eureka CA). The project proposed here has four objectives:

- (1) determine the seasonal cycles of abundance of the two euphausiid species in relation to interannual variations in circulation, hydrography and upwelling;
- (2) determine the seasonal, interannual and spatial variations in egg production rates, cohort development, and recruitment as a function of upwelling and phytoplankton blooms;
- (3) examine the seasonal, interannual and spatial variations in mortality rates and production as a means to develop a better understanding of euphausiid population dynamics; and
- (4) determine overwintering strategies and the role of seasonal reversals in circulation and the spring transition in redistributing euphausiids in shelf and slope waters.

All of the above data will be passed to one of the GLOBEC modelers (H. Batchelder, Univ. of California at Berkeley) who is developing an individual-based model for both euphausiid species; the proposed work is presented in the context of examining the relationship between the ecology of euphausiids and salmonid growth and survival.

The VPT data are organized on the GLOBEC server by cruise within year. The master page (Level 0) lists all of the cruises in chronological order. Clicking on a cruise will show all of the casts collected/processes from that cruise (Level 1). Clicking on a cast will bring up the Level 2 file that shows a single line with additional header information for a sample. Clicking on the sample\_id (always "1" for this type of data) will display the Level 3 data, which are the actual taxonomic categories and abundances for that particular sample. Additional info about the variables are described below.

<b>Program Codes</b>	<b>Description</b>
LTOP	samples collected on Long-term Observation Program Cruises (ca. 4-6 cruises per year; all sample the Newport Hydrographic (NH) Line; some sample other standard lines further south)
NH	more frequent, small vessel, nearshore sampling of Newport Hydrographic Line
MESO_1	samples collected from process cruise in June 2000
MESO_2	samples collected from process cruise in August 2000

<b>Life Stage Info Codes (partial listing)</b>	<b>Description</b>
most are self explanatory; Male, Female, CV => Copepodite 5, Zoea, Nauplii, N2 => Nauplius 2, Egg--a few are not, esp. for the euphausiids (Thysanoessa and Euphausia)	
F2	Second Stage Furcilia (aka Furcilia 2)
F3	Third Stage Furcilia (aka Furcilia 3)
F1_0	First Stage Furcilia with 0 legs
F2_32 or Furcilia_2_3L2S	Second Stage Furcilia with 3 pairs of legs total, with 2 pairs of legs having setae; this xLyS pattern is common, with x and y varying depending on stage of development

(See Hooff and Peterson, 2006)

## Methods & Sampling

"Zooplankton were collected using a 0.5 meter diameter, 202 micron mesh net towed vertically from within 5 meters of the bottom (to a maximum depth of 100 m) to the surface at a rate of 30 meters per minute. A TSK flowmeter was used to monitor the amount of water filtered. The samples were preserved in a 5% buffered formalin/seawater solution." (W.T. Peterson, et al., 2002 p. 392)

## Data Processing Description

"In the laboratory, the zooplankton samples were diluted and subsampled with a 1.1 ml Stempel pipette. Two to four such subsamples, about 2% of the total sample, were counted at 25-50x magnification. Copepods and Euphausiids were identified to species and developmental stage; other zooplankton were assigned to broad taxonomic groups (e.g. polychaetes, medusae, larvaceans, chaetognaths.) All euphausiids, pteropods, salps, and chaetognaths were measured. In each sample, the population density of each taxonomic group (number of individuals per cubic meter) was calculated. Copepod densities were converted to biomass estimates using dry weight/developmental-stage values found in the literature; biomasses of euphausiids, pteropods, salps, and chaetognaths were calculated from densities using length-weight regressions found in the literature." (W.T.Peterson, et al., 2002, p.392)

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## Data Files

File
<b>vpt.csv</b> (Comma Separated Values (.csv), 4.00 MB) MD5:385b5e3e28137dd54860d281f8a3563c Primary data file for dataset ID 2453

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## Related Publications

Hooff, R. C., & Peterson, W. T. (2006). Copepod biodiversity as an indicator of changes in ocean and climate conditions of the northern California current ecosystem. *Limnology and Oceanography*, 51(6), 2607-2620. *Methods*

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## Parameters

Parameter	Description	Units
year	Year	dimensionless
program	See codes in table above (under 'Dataset Description').	dimensionless
cruise_id	Cruise ID	dimensionless
cast	Cast number within the cruise.	dimensionless
station	Standard Station Name.	dimensionless
lat	Latitude (decimal degrees North).	decimal degrees
lon	Longitude (decimal degrees East).	decimal degrees
depth_w	Bottom depth at station location (in meters).	meters
sample_id	Always '1' for VPT casts, which have a single net only.	dimensionless
min_sample_depth	Always '0' for vertical tows (meters).	meters
max_sample_depth	Maximum depth of vertical tow (meters);estimated from wire out and wire angle.	meters
month_local	Month (local time).	dimensionless
day_local	Day (local time).	dimensionless
time_local	Time (local); 24 hour clock (HHMM).	dimensionless
d_n_flag	'DAY' or 'NIGHT' if flagged; many sampleswere not flagged	dimensionless
gear_type	Name of instrument; 'VPT' for this gear.	dimensionless
gear_area_m2	Mouth area of net (square meters).	m <sup>2</sup>
gear_mesh	Size of mesh of net (mm).	mm
vol_filt	Volume filtered (cubic meters).	meters <sup>3</sup>
counter_id	Initials of Plankton Taxonomist.	dimensionless
comments	Misc. comments pertaining to sample.	dimensionless
nodc_code	Standard NODC taxonomic code.	dimensionless
species	Genus and species.	dimensionless
life_stage	Life Stage info (see Life Stage Codes table above under 'Dataset Description').	dimensionless
abund	Density (individuals per cubic meter).	individuals per meter <sup>3</sup>
perc_counted	Percentage of sample evaluated for this taxon (0-100%).	0-100%

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## Instruments

<b>Dataset-specific Instrument Name</b>	Meter Net
<b>Generic Instrument Name</b>	Meter Net
<b>Dataset-specific Description</b>	This instrument is a variation on the Meter Net in that it is 0.5 m in diameter (1/2 meter) with a mesh of 202 microns.
<b>Generic Instrument Description</b>	A meter net is a plankton net with a one meter diameter opening and a mesh size of .333 mm, towed horizontally, obliquely or vertically, also known as a Ring Net.

## Deployments

### W9711C

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57622">https://www.bco-dmo.org/deployment/57622</a>
<b>Platform</b>	R/V Wecoma
<b>Start Date</b>	1997-11-15
<b>End Date</b>	1997-11-22
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

### W9801B

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57623">https://www.bco-dmo.org/deployment/57623</a>
<b>Platform</b>	R/V Wecoma
<b>Start Date</b>	1998-01-30
<b>End Date</b>	1998-02-02
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

### W9804A

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57624">https://www.bco-dmo.org/deployment/57624</a>
<b>Platform</b>	R/V Wecoma
<b>Start Date</b>	1998-04-04
<b>End Date</b>	1998-04-10
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

### AR9807

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57489">https://www.bco-dmo.org/deployment/57489</a>
<b>Platform</b>	R/V McArthur
<b>Start Date</b>	1998-06-02
<b>End Date</b>	1998-06-05
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

### W9808A

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57625">https://www.bco-dmo.org/deployment/57625</a>
<b>Platform</b>	R/V Wecoma
<b>Start Date</b>	1998-08-06
<b>End Date</b>	1998-08-14
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### W9809A

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57626">https://www.bco-dmo.org/deployment/57626</a>
<b>Platform</b>	R/V Wecoma
<b>Start Date</b>	1998-09-24
<b>End Date</b>	1998-09-26
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### W9811A

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57627">https://www.bco-dmo.org/deployment/57627</a>
<b>Platform</b>	R/V Wecoma
<b>Start Date</b>	1998-11-16
<b>End Date</b>	1998-11-20
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### W9902A

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57628">https://www.bco-dmo.org/deployment/57628</a>
<b>Platform</b>	R/V Wecoma
<b>Start Date</b>	1999-02-17
<b>End Date</b>	1999-02-18
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### W9904B

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57629">https://www.bco-dmo.org/deployment/57629</a>
<b>Platform</b>	R/V Wecoma
<b>Start Date</b>	1999-04-19
<b>End Date</b>	1999-04-22
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### SJ990401

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57578">https://www.bco-dmo.org/deployment/57578</a>
<b>Platform</b>	R/V Sacajawea
<b>Start Date</b>	1999-04-29
<b>End Date</b>	1999-04-29
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### SJ990501

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57579">https://www.bco-dmo.org/deployment/57579</a>
<b>Platform</b>	R/V Sacajawea
<b>Start Date</b>	1999-05-14
<b>End Date</b>	1999-05-14
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### SJ990601

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57580">https://www.bco-dmo.org/deployment/57580</a>
<b>Platform</b>	R/V Sacajawea
<b>Start Date</b>	1999-06-10
<b>End Date</b>	1999-06-10
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### W9907A

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57630">https://www.bco-dmo.org/deployment/57630</a>
<b>Platform</b>	R/V Wecoma
<b>Start Date</b>	1999-07-03
<b>End Date</b>	1999-07-09
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### SJ990701

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57581">https://www.bco-dmo.org/deployment/57581</a>
<b>Platform</b>	R/V Sacajawea
<b>Start Date</b>	1999-07-15
<b>End Date</b>	1999-07-15
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### SJ990702

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57582">https://www.bco-dmo.org/deployment/57582</a>
<b>Platform</b>	R/V Sacajawea
<b>Start Date</b>	1999-07-19
<b>End Date</b>	1999-07-19
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### SJ990703

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57583">https://www.bco-dmo.org/deployment/57583</a>
<b>Platform</b>	R/V Sacajawea
<b>Start Date</b>	1999-07-26
<b>End Date</b>	1999-07-26
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### SJ990801

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57584">https://www.bco-dmo.org/deployment/57584</a>
<b>Platform</b>	R/V Sacajawea
<b>Start Date</b>	1999-08-05
<b>End Date</b>	1999-08-05
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### SJ990802

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57585">https://www.bco-dmo.org/deployment/57585</a>
<b>Platform</b>	R/V Sacajawea
<b>Start Date</b>	1999-08-19
<b>End Date</b>	1999-08-19
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### W9909C

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57631">https://www.bco-dmo.org/deployment/57631</a>
<b>Platform</b>	R/V Wecoma
<b>Report</b>	<a href="http://globec.who.edu/nep/reports/ccs_cruises/sep99cr.pdf">http://globec.who.edu/nep/reports/ccs_cruises/sep99cr.pdf</a>
<b>Start Date</b>	1999-09-22
<b>End Date</b>	1999-09-27
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### W9911A



<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57632">https://www.bco-dmo.org/deployment/57632</a>
<b>Platform</b>	R/V Wecoma
<b>Report</b>	<a href="http://globec.who.edu/nep/reports/ccs_cruises/nov99cr.pdf">http://globec.who.edu/nep/reports/ccs_cruises/nov99cr.pdf</a>
<b>Start Date</b>	1999-11-03
<b>End Date</b>	1999-11-05
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### SJ991201

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57586">https://www.bco-dmo.org/deployment/57586</a>
<b>Platform</b>	R/V Sacajawea
<b>Start Date</b>	1999-12-20
<b>End Date</b>	1999-12-20
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### SJ000101

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57587">https://www.bco-dmo.org/deployment/57587</a>
<b>Platform</b>	R/V Sacajawea
<b>Start Date</b>	2000-01-20
<b>End Date</b>	2000-01-20
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### W0002A

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57596">https://www.bco-dmo.org/deployment/57596</a>
<b>Platform</b>	R/V Wecoma
<b>Report</b>	<a href="http://globec.who.edu/nep/reports/ccs_cruises/feb00cr.pdf">http://globec.who.edu/nep/reports/ccs_cruises/feb00cr.pdf</a>
<b>Start Date</b>	2000-02-01
<b>End Date</b>	2000-02-03
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### SJ000201

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57588">https://www.bco-dmo.org/deployment/57588</a>
<b>Platform</b>	R/V Sacajawea
<b>Start Date</b>	2000-02-16
<b>End Date</b>	2000-02-16
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**SJ000301**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57589">https://www.bco-dmo.org/deployment/57589</a>
<b>Platform</b>	R/V Sacajawea
<b>Start Date</b>	2000-03-07
<b>End Date</b>	2000-03-07
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**SJ000401**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57590">https://www.bco-dmo.org/deployment/57590</a>
<b>Platform</b>	R/V Sacajawea
<b>Start Date</b>	2000-04-06
<b>End Date</b>	2000-04-06
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**W0004B**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57597">https://www.bco-dmo.org/deployment/57597</a>
<b>Platform</b>	R/V Wecoma
<b>Report</b>	<a href="http://globec.who.edu/nep/reports/ccs_cruises/apr00cr.pdf">http://globec.who.edu/nep/reports/ccs_cruises/apr00cr.pdf</a>
<b>Start Date</b>	2000-04-11
<b>End Date</b>	2000-04-17
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**SJ000402**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57591">https://www.bco-dmo.org/deployment/57591</a>
<b>Platform</b>	R/V Sacajawea
<b>Start Date</b>	2000-04-30
<b>End Date</b>	2000-04-30
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**SJ000501**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57592">https://www.bco-dmo.org/deployment/57592</a>
<b>Platform</b>	R/V Sacajawea
<b>Start Date</b>	2000-05-17
<b>End Date</b>	2000-05-17
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**SJ000502**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57593">https://www.bco-dmo.org/deployment/57593</a>
<b>Platform</b>	R/V Sacajawea
<b>Start Date</b>	2000-05-22
<b>End Date</b>	2000-05-22
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**NH0005**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57557">https://www.bco-dmo.org/deployment/57557</a>
<b>Platform</b>	R/V New Horizon
<b>Report</b>	<a href="http://globec.who.edu/nep/reports/ccs_cruises/nh0005/nh0005cr.pdf">http://globec.who.edu/nep/reports/ccs_cruises/nh0005/nh0005cr.pdf</a>
<b>Start Date</b>	2000-05-28
<b>End Date</b>	2000-06-13
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**SJ000601**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57594">https://www.bco-dmo.org/deployment/57594</a>
<b>Platform</b>	R/V Sacajawea
<b>Start Date</b>	2000-06-23
<b>End Date</b>	2000-06-23
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**W0007A**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57599">https://www.bco-dmo.org/deployment/57599</a>
<b>Platform</b>	R/V Wecoma
<b>Report</b>	<a href="http://globec.who.edu/nep/reports/ccs_cruises/jul00cr.pdf">http://globec.who.edu/nep/reports/ccs_cruises/jul00cr.pdf</a>
<b>Start Date</b>	2000-07-07
<b>End Date</b>	2000-07-13
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**NH0007**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57558">https://www.bco-dmo.org/deployment/57558</a>
<b>Platform</b>	R/V New Horizon
<b>Report</b>	<a href="http://globec.who.edu/nep/reports/ccs_cruises/nh0007/nh0007cr.pdf">http://globec.who.edu/nep/reports/ccs_cruises/nh0007/nh0007cr.pdf</a>
<b>Start Date</b>	2000-07-27
<b>End Date</b>	2000-08-12
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### W0009A

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57601">https://www.bco-dmo.org/deployment/57601</a>
<b>Platform</b>	R/V Wecoma
<b>Report</b>	<a href="http://globec.who.edu/nep/reports/ccs_cruises/sep00cr.pdf">http://globec.who.edu/nep/reports/ccs_cruises/sep00cr.pdf</a>
<b>Start Date</b>	2000-09-07
<b>End Date</b>	2000-09-12
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL000901

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57769">https://www.bco-dmo.org/deployment/57769</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2000-09-25
<b>End Date</b>	2000-09-26
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL001001

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57770">https://www.bco-dmo.org/deployment/57770</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2000-10-06
<b>End Date</b>	2000-10-06
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL001002

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57771">https://www.bco-dmo.org/deployment/57771</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2000-10-23
<b>End Date</b>	2000-10-23
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**EL001101**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57772">https://www.bco-dmo.org/deployment/57772</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2000-11-07
<b>End Date</b>	2000-11-07
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**EL001201**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57773">https://www.bco-dmo.org/deployment/57773</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2000-12-06
<b>End Date</b>	2000-12-06
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**EL010101**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57774">https://www.bco-dmo.org/deployment/57774</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2001-01-16
<b>End Date</b>	2001-01-16
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**W0101C**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57602">https://www.bco-dmo.org/deployment/57602</a>
<b>Platform</b>	R/V Wecoma
<b>Report</b>	<a href="http://globec.who.edu/nep/reports/ccs_cruises/jan01cr.pdf">http://globec.who.edu/nep/reports/ccs_cruises/jan01cr.pdf</a>
<b>Start Date</b>	2001-01-27
<b>End Date</b>	2001-01-29
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**EL010201**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57775">https://www.bco-dmo.org/deployment/57775</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2001-02-14
<b>End Date</b>	2001-02-14
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**EL010202**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57776">https://www.bco-dmo.org/deployment/57776</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2001-02-28
<b>End Date</b>	2001-02-28
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**EL010301**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57777">https://www.bco-dmo.org/deployment/57777</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2001-03-12
<b>End Date</b>	2001-03-12
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**W0103B**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57603">https://www.bco-dmo.org/deployment/57603</a>
<b>Platform</b>	R/V Wecoma
<b>Report</b>	<a href="http://globec.who.edu/nep/reports/ccs_cruises/mar01cr.pdf">http://globec.who.edu/nep/reports/ccs_cruises/mar01cr.pdf</a>
<b>Start Date</b>	2001-03-20
<b>End Date</b>	2001-03-24
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**EL010401**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57778">https://www.bco-dmo.org/deployment/57778</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2001-04-03
<b>End Date</b>	2001-04-03
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**EL010402**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57779">https://www.bco-dmo.org/deployment/57779</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2001-04-11
<b>End Date</b>	2001-04-11
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**EL010403**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57780">https://www.bco-dmo.org/deployment/57780</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2001-04-25
<b>End Date</b>	2001-04-25
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**EL010501**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57781">https://www.bco-dmo.org/deployment/57781</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2001-05-09
<b>End Date</b>	2001-05-09
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**EL010601**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57782">https://www.bco-dmo.org/deployment/57782</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2001-06-04
<b>End Date</b>	2001-06-04
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**EL010602**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57783">https://www.bco-dmo.org/deployment/57783</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2001-06-16
<b>End Date</b>	2001-06-16
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**EL010603**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57784">https://www.bco-dmo.org/deployment/57784</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2001-06-26
<b>End Date</b>	2001-06-26
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**W0107A**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57604">https://www.bco-dmo.org/deployment/57604</a>
<b>Platform</b>	R/V Wecoma
<b>Report</b>	<a href="http://globec.who.edu/nep/reports/ccs_cruises/jul01cr.pdf">http://globec.who.edu/nep/reports/ccs_cruises/jul01cr.pdf</a>
<b>Start Date</b>	2001-07-06
<b>End Date</b>	2001-07-09
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL010701

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57785">https://www.bco-dmo.org/deployment/57785</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2001-07-18
<b>End Date</b>	2001-07-18
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL010702

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57786">https://www.bco-dmo.org/deployment/57786</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2001-07-30
<b>End Date</b>	2001-07-30
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL010801

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57787">https://www.bco-dmo.org/deployment/57787</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2001-08-05
<b>End Date</b>	2001-08-05
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL010802

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57788">https://www.bco-dmo.org/deployment/57788</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2001-08-09
<b>End Date</b>	2001-08-09
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL010803



<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57789">https://www.bco-dmo.org/deployment/57789</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2001-08-24
<b>End Date</b>	2001-08-24
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### W0109A

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57605">https://www.bco-dmo.org/deployment/57605</a>
<b>Platform</b>	R/V Wecoma
<b>Report</b>	<a href="http://globec.whoi.edu/nep/reports/ccs_cruises/sep01cr.pdf">http://globec.whoi.edu/nep/reports/ccs_cruises/sep01cr.pdf</a>
<b>Start Date</b>	2001-09-04
<b>End Date</b>	2001-09-10
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL010901

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57790">https://www.bco-dmo.org/deployment/57790</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2001-09-18
<b>End Date</b>	2001-09-18
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL010902

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57791">https://www.bco-dmo.org/deployment/57791</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2001-09-25
<b>End Date</b>	2001-09-25
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL011001

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57792">https://www.bco-dmo.org/deployment/57792</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2001-10-02
<b>End Date</b>	2001-10-02
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL011002

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57793">https://www.bco-dmo.org/deployment/57793</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2001-10-29
<b>End Date</b>	2001-10-29
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL011101

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57794">https://www.bco-dmo.org/deployment/57794</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2001-11-07
<b>End Date</b>	2001-11-07
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### W0111B

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57606">https://www.bco-dmo.org/deployment/57606</a>
<b>Platform</b>	R/V Wecoma
<b>Report</b>	<a href="http://globec.who.edu/nep/reports/ccs_cruises/nov01cr.pdf">http://globec.who.edu/nep/reports/ccs_cruises/nov01cr.pdf</a>
<b>Start Date</b>	2001-11-27
<b>End Date</b>	2001-11-29
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL020101

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57795">https://www.bco-dmo.org/deployment/57795</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2002-01-14
<b>End Date</b>	2002-01-14
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL020102

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57796">https://www.bco-dmo.org/deployment/57796</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2002-01-29
<b>End Date</b>	2002-01-29
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### W0202A

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57607">https://www.bco-dmo.org/deployment/57607</a>
<b>Platform</b>	R/V Wecoma
<b>Report</b>	<a href="http://globec.whoi.edu/nep/reports/ccs_cruises/feb02cr.pdf">http://globec.whoi.edu/nep/reports/ccs_cruises/feb02cr.pdf</a>
<b>Start Date</b>	2002-02-19
<b>End Date</b>	2002-02-21
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL020301

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57797">https://www.bco-dmo.org/deployment/57797</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2002-03-04
<b>End Date</b>	2002-03-04
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL020302

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57798">https://www.bco-dmo.org/deployment/57798</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2002-03-20
<b>End Date</b>	2002-03-20
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL020303

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57799">https://www.bco-dmo.org/deployment/57799</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2002-03-27
<b>End Date</b>	2002-03-27
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### W0204A

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57608">https://www.bco-dmo.org/deployment/57608</a>
<b>Platform</b>	R/V Wecoma
<b>Report</b>	<a href="http://globec.whoi.edu/nep/reports/ccs_cruises/apr02cr.pdf">http://globec.whoi.edu/nep/reports/ccs_cruises/apr02cr.pdf</a>
<b>Start Date</b>	2002-04-04
<b>End Date</b>	2002-04-10
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**EL020401**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57800">https://www.bco-dmo.org/deployment/57800</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2002-04-18
<b>End Date</b>	2002-04-18
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**EL020402**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57801">https://www.bco-dmo.org/deployment/57801</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2002-04-30
<b>End Date</b>	2002-04-30
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**EL020501**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57802">https://www.bco-dmo.org/deployment/57802</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2002-05-09
<b>End Date</b>	2002-05-09
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**EL020502**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57803">https://www.bco-dmo.org/deployment/57803</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2002-05-20
<b>End Date</b>	2002-05-20
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**W0205A**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57609">https://www.bco-dmo.org/deployment/57609</a>
<b>Platform</b>	R/V Wecoma
<b>Report</b>	<a href="http://globec.who.edu/nep/reports/ccs_cruises/w0205acr.pdf">http://globec.who.edu/nep/reports/ccs_cruises/w0205acr.pdf</a>
<b>Start Date</b>	2002-05-29
<b>End Date</b>	2002-06-18
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**EL020701**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57804">https://www.bco-dmo.org/deployment/57804</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2002-07-03
<b>End Date</b>	2002-07-03
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**W0207A**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57610">https://www.bco-dmo.org/deployment/57610</a>
<b>Platform</b>	R/V Wecoma
<b>Report</b>	<a href="http://globec.who.edu/nep/reports/ccs_cruises/jul02cr.pdf">http://globec.who.edu/nep/reports/ccs_cruises/jul02cr.pdf</a>
<b>Start Date</b>	2002-07-09
<b>End Date</b>	2002-07-15
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**EL020702**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57805">https://www.bco-dmo.org/deployment/57805</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2002-07-23
<b>End Date</b>	2002-07-23
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**NH0207**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57559">https://www.bco-dmo.org/deployment/57559</a>
<b>Platform</b>	R/V New Horizon
<b>Report</b>	<a href="http://globec.who.edu/nep/reports/ccs_cruises/nh0207acr.pdf">http://globec.who.edu/nep/reports/ccs_cruises/nh0207acr.pdf</a>
<b>Start Date</b>	2002-07-31
<b>End Date</b>	2002-08-19
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

**AT7-21**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57490">https://www.bco-dmo.org/deployment/57490</a>
<b>Platform</b>	R/V Atlantis
<b>Report</b>	<a href="http://globec.who.edu/nep/reports/ccs_cruises/sep02cr.pdf">http://globec.who.edu/nep/reports/ccs_cruises/sep02cr.pdf</a>
<b>Start Date</b>	2002-09-27
<b>End Date</b>	2002-10-03
<b>Description</b>	<p>funded by NSF OCE-0000733 UNOLS schedule link The original data from this cruise are available from the NSF R2R data catalog.</p> <p><b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson</p>

#### EL021001

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57806">https://www.bco-dmo.org/deployment/57806</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2002-10-15
<b>End Date</b>	2002-10-15
<b>Description</b>	<p><b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson</p>

#### EL021101

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57807">https://www.bco-dmo.org/deployment/57807</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2002-11-01
<b>End Date</b>	2002-11-01
<b>Description</b>	<p><b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson</p>

#### W0212A

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57611">https://www.bco-dmo.org/deployment/57611</a>
<b>Platform</b>	R/V Wecoma
<b>Report</b>	<a href="http://globec.who.edu/nep/reports/ccs_cruises/dec02cr.pdf">http://globec.who.edu/nep/reports/ccs_cruises/dec02cr.pdf</a>
<b>Start Date</b>	2002-12-03
<b>End Date</b>	2002-12-05
<b>Description</b>	<p><b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson</p>

#### EL030101

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57808">https://www.bco-dmo.org/deployment/57808</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2003-01-09
<b>End Date</b>	2003-01-09
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL030201

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57809">https://www.bco-dmo.org/deployment/57809</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2003-02-06
<b>End Date</b>	2003-02-06
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### W0302A

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57612">https://www.bco-dmo.org/deployment/57612</a>
<b>Platform</b>	R/V Wecoma
<b>Report</b>	<a href="http://globec.who.edu/nep/reports/ccs_cruises/feb03cr.pdf">http://globec.who.edu/nep/reports/ccs_cruises/feb03cr.pdf</a>
<b>Start Date</b>	2003-02-14
<b>End Date</b>	2003-02-16
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL030202

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57810">https://www.bco-dmo.org/deployment/57810</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2003-02-25
<b>End Date</b>	2003-02-25
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL030302

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57811">https://www.bco-dmo.org/deployment/57811</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2003-03-24
<b>End Date</b>	2003-03-24
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### W0304A

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57613">https://www.bco-dmo.org/deployment/57613</a>
<b>Platform</b>	R/V Wecoma
<b>Report</b>	<a href="http://globec.whoi.edu/nep/reports/ccs_cruises/apr03cr.pdf">http://globec.whoi.edu/nep/reports/ccs_cruises/apr03cr.pdf</a>
<b>Start Date</b>	2003-04-01
<b>End Date</b>	2003-04-06
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL030401

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57812">https://www.bco-dmo.org/deployment/57812</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2003-04-16
<b>End Date</b>	2003-04-16
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL030402

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57813">https://www.bco-dmo.org/deployment/57813</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2003-04-30
<b>End Date</b>	2003-04-30
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL030501

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57814">https://www.bco-dmo.org/deployment/57814</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2003-05-06
<b>End Date</b>	2003-05-06
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL030502

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57815">https://www.bco-dmo.org/deployment/57815</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2003-05-21
<b>End Date</b>	2003-05-21
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL030601



<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57816">https://www.bco-dmo.org/deployment/57816</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2003-06-05
<b>End Date</b>	2003-06-05
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL030602

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57817">https://www.bco-dmo.org/deployment/57817</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2003-06-25
<b>End Date</b>	2003-06-25
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### NH0307A

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57560">https://www.bco-dmo.org/deployment/57560</a>
<b>Platform</b>	R/V New Horizon
<b>Report</b>	<a href="http://globec.who.edu/nep/reports/ccs_cruises/jul03cr.pdf">http://globec.who.edu/nep/reports/ccs_cruises/jul03cr.pdf</a>
<b>Start Date</b>	2003-07-02
<b>End Date</b>	2003-07-08
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL030701

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57818">https://www.bco-dmo.org/deployment/57818</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2003-07-17
<b>End Date</b>	2003-07-17
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL030702

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57819">https://www.bco-dmo.org/deployment/57819</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2003-07-24
<b>End Date</b>	2003-07-24
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL030801

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57820">https://www.bco-dmo.org/deployment/57820</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2003-08-05
<b>End Date</b>	2003-08-05
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL030901

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57821">https://www.bco-dmo.org/deployment/57821</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2003-09-04
<b>End Date</b>	2003-09-04
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL030902

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57822">https://www.bco-dmo.org/deployment/57822</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2003-09-17
<b>End Date</b>	2003-09-17
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### W0309B

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57617">https://www.bco-dmo.org/deployment/57617</a>
<b>Platform</b>	R/V Wecoma
<b>Report</b>	<a href="http://globec.who.edu/nep/reports/ccs_cruises/sep03cr.pdf">http://globec.who.edu/nep/reports/ccs_cruises/sep03cr.pdf</a>
<b>Start Date</b>	2003-09-26
<b>End Date</b>	2003-10-01
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

#### EL031001

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57823">https://www.bco-dmo.org/deployment/57823</a>
<b>Platform</b>	R/V Elakha
<b>Start Date</b>	2003-10-23
<b>End Date</b>	2003-10-23
<b>Description</b>	<b>Methods &amp; Sampling</b> NEP-CCS VPT data collected by Bill Peterson

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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.

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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>
<a href="#">NSF Division of Ocean Sciences (NSF OCE)</a>	<a href="#">OCE-0000733</a>
<a href="#">NSF Division of Ocean Sciences (NSF OCE)</a>	<a href="#">OCE-9732386</a>
National Oceanic and Atmospheric Administration (NOAA)	<a href="#">NA67RJ0151 (NEP)</a>
National Oceanic and Atmospheric Administration (NOAA)	<a href="#">NA86OP0589 (NEP)</a>

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