

UNIVERSITY OF CALIFORNIA SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

1983

PHYSICAL, CHEMICAL AND BIOLOGICAL DATA

from

CalCOFI Line 90

SIO Reference 86-3
27 February 1986

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SCRIPPS INSTITUTION OF OCEANOGRAPHY

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Approved for distribution:


W. A. Nierenberg, Director

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INTRODUCTION

The data in this report were collected in 1983 for a study on the warming of the California Current system associated with the major 1982-83 El Niño — Southern Oscillation (ENSO) event. CalCOFI line 90 (Figure 1) was selected for the study because of the large historical data base available to make assessments of anomalous conditions present in 1983. The line of stations was occupied 16 times during 1983, nine by Scripps Institution of Oceanography vessels RV *Ellen B. Scripps* and RV *New Horizon* (sponsored by the Marine Life Research Group and the Office of Naval Research), five times by National Marine Fisheries Service vessels RV *David Starr Jordan* and RV *Townsend Cromwell*, once by the Oregon State University vessel RV *Wecoma*, and once by the Pacific Scientific Research Institute of Fisheries and Oceanography, Vladivostok vessel RV *Ekvator*. Table 1 summarizes the 1983 line 90 observations made on each cruise. A time series of temperature anomalies from a few representative stations is illustrated in Figure 2. The contrast in summer zooplankton abundance between the historical 1949 to 1969 non-El Niño years and the 1983 summer observations can be seen in Figure 3 (from McGowan, 1985).

A list of papers resulting from or incorporating data from these cruises is given on page 8.

STANDARD PROCEDURES

Data in this report were obtained by wire hydrographic casts, CTD lowerings, rosette casts, or oblique net tows. Table 1 identifies the specific type of sampling done on each cruise.

Hydrographic Cast Data

The hydrographic casts consisted of 18 or fewer Nansen bottles usually lowered to a maximum sampling depth of 600 meters, bottom depth permitting. A few casts were lowered to 800 meters. Temperature, salinity, oxygen and nutrients were usually determined for all depths sampled. Chlorophyll-*a* and phaeopigments were usually determined from the top 12 depths.

Paired protected reversing thermometers were used to determine temperatures which are recorded to hundredths of a degree Celsius. Sampling bottles used below a depth of 100 meters were equipped with unprotected thermometers for determination of the depth of sampling.

Salinity samples were analyzed at sea using inductive-type salinometers. Salinometers were standardized with sub-standard seawater. The sub-standard water was prepared from filtered seawater collected in 30-liter Niskin bottles from a depth of 400 m, gently evaporated to increase the salinity to near 35. Periodic checks on the concentration of the substandard were made by comparison with Wormley Standard Seawater. The salinity values are reported to three decimal places.

Dissolved oxygen was determined by the Winkler method as modified by Carpenter (1965), using the equipment and procedure outlined by Anderson (1971). Percent oxygen saturation was calculated from the equations of Weiss (1970).

Silicate, phosphate, nitrate and nitrite nutrients were acidified in 50 ml polyethylene bottles and returned to Scripps for analysis. The samples were run within two weeks of collection using an automated analyzer. The procedures used are similar to those described in Atlas *et al.* (1971). A discussion of this method of nutrient preservation may be found in Venrick and Hayward (1985).

Chlorophyll was measured with a fluorometric technique (Yentsch and Menzel, 1963; Holm-Hansen *et al.*, 1965). Subsamples (65 or 140 ml) were drawn from the Nansen bottles and filtered onto GF/C filters. The filters were placed in scintillation vials containing 10 ml of 90% acetone and the pigments were extracted in the dark in a refrigerator for a period of about one day. The samples were then brought to room temperature and the fluorescence of the sample was determined before and after acidification with a Turner 111 fluorometer. The potential biases in this technique are discussed in Venrick and Hayward (1984).

The observed data have been evaluated using the methodology described by Klein (1973). This involves consideration of their variation as functions of density or depth and their relations to each other, and comparisons with adjacent observations.

Rosette Cast Data

A rosette frame holding 10 to 12 Niskin bottles was lowered with the CTD probe; the bottles were closed during the up cast by the CTD operator. The maximum sampling depth was 500 to 1000 meters, bottom depth permitting. Salinity, oxygen and nutrient samples were taken from each rosette bottle; chlorophyll-a and phaeopigments were usually determined from the bottles tripped within the photic zone. Temperature data are from the CTD sensor and are listed to two places. Where rosette bottles were tripped far apart, additional data extracted from the CTD have been added to fill in the gaps. These data are identified by the footnote letter D listed after the depth.

Conductivity/Temperature/Depth Recorder (CTD) Data

CTD data were collected on the RV *Townsend Cromwell* and RV *David Starr Jordan* cruises (Table 1), and processed by the National Marine Fisheries Service, Southwest Fisheries Center. CTD data collected on the RV *Wecoma* (Cruise 8304) were processed by Oregon State University and appear in an OSU data report (Fleischbein *et al.*, 1985).

Macrozooplankton Net Tows

Macrozooplankton was sampled with a 71 cm mouth diameter paired net (bongo net) equipped with 0.505 mm plankton mesh. Bottom depth permitting, the nets were towed obliquely from 210 m to the surface. The tow time for a standard tow was 21.5 minutes. Volumes filtered were determined from flowmeter readings and the mouth area of the net. Samples from both nets were retained and preserved on most cruises; zooplankton samples were not taken on the RV *Wecoma* or RV *Jordan*. The biomass, as wet displacement volume, after removal of large (> 5 ml) organisms, was determined in the laboratory ashore. These procedures are summarized in greater detail in Kramer *et al.* (1972).

TABULATED DATA

The reported hydrographic cast time is the Greenwich Mean Time (GMT) of the messenger release. For CTD lowerings the time is the "start down" time, and for rosette casts it is the "start up" time. Bottom depths, determined acoustically, have been corrected using Matthews (1939) tables and are reported in meters. Weather conditions have been coded using WMO code 4051.

Data tabulations are presented in the following forms:

Hydrographic or Rosette Cast Data

Observed and interpolated standard depth data have been interspersed and are presented together sequentially by depth. Interpolated or extrapolated standard level data are noted by the footnote "ISL" printed after the depth. Density-related parameters have been calculated from the International Equation of State of Seawater 1980 (EOS80, UNESCO, 1981). Some of the differences between EOS80 and the older equations-of-state are discussed in the introduction to SIO Ref. 84-18. Computed values of potential temperature, sigma-theta, specific volume anomaly (SVA), dynamic height or geopotential anomaly, and pressure are included with both observed and interpolated standard depth levels.

Conductivity/Temperature/Depth (CTD) Data

Data from CTD lowerings are listed in the same format as for the hydrographic or rosette cast data. Temperature and salinity are tabulated at closer "standard" intervals than the interpolated standard depth bottle data. The computed values are the same as for the bottle data.

Macrozooplankton Data

Macrozooplankton biomass volumes are tabulated as total biomass volume ($\text{cm}^3/1000 \text{ m}^3$ strained) and as the total volume minus the volume of larger organisms under the heading "Small." Data from both nets of the paired bongo nets are tabulated separately under columns headed by "Port" and "Starboard." When only one sample is preserved, it is usually from the starboard side.

FOOTNOTES

In addition to footnotes, special notations are used without footnotes because the meaning is always the same.

D: Additional CTD data listed with rosette cast tabulations.

ISL: After depth values indicates interpolated or extrapolated standard level.

U: Uncertain value. Values which are not used in interpolation because they seem to be in error without apparent reason.

TABLE 1

1983 Line 90 Cruise Dates, Stations, and Observations

CRUISE	DATES	STATIONS	OBSERVATIONS	COMMENTS
8301 TC	23-27 January	90.30,37,50,60,70,80,90, 100,120	CTD-rosette, temperature, salinity, oxygen, nutrients, chlorophyll, macrozooplankton.	Stations done at end of Pacific Central Gyre study cruise. Inshore stations not done because of poor weather conditions.
8302-3 TC	4-6 March	90.28,30,37,45,50,55,60	CTD, temperature, salinity, macrozooplankton.	Line 90 stations occupied as part of annual NMFS pelagic fish stock assess- ment cruise.
8303 EB	18-19 March	90.28,30,32,35,37,45,53, 62	Nansen hydro casts, temperature, salinity, oxygen, nutrients, chlorophyll, macrozooplankton.	Special ENSO study cruise. Station 90.42 deleted due to rough weather. Stations 90.55 and 90.60 deleted, and 90.62 replaced 90.65 due to ship's schedule limitations.
8303 EK	21-23 March	90.30,37,44,53,60,70,80, 90,100,110	Nansen bottle casts, temperature, salinity, oxygen, macrozooplankton.	Soviet vessel - Line 90 occupied as part of ichthyoplankton survey.
8304 WE	6-7 April	90.28,30,32,35,37,42,45, 53,55,60,65	CTD-rosette, temperature, salinity, oxygen, nutrients, chlorophyll.	Oregon State University vessel - Line 90 occupied as part of cruise WELOC 83. CTD data and plots appear in OSU Ref. 85-11.
8305 JD	3-7 May	90.28,30,33,35,37,42,45, 53,55,60,65,70	CTD, temperature, salinity.	Line 90 stations occupied on equipment test cruise.
8305 EB	12 May	90.28,30,32,35,37,42,45	Nansen hydro casts, temperature, salinity, oxygen, nutrients, chlorophyll, macrozooplankton.	Special ENSO study cruise. Stations 90.53,55,60,65 - Hydrocasts deleted due to poor weather conditions.
8306 EB	14-15 June	90.28,30,32,35,42,48,53	Nansen hydro casts, temperature, salinity, oxygen, nutrients, chlorophyll, macrozooplankton.	Special ENSO study cruise. Station 90.55 deleted completely. Hydrocast stations 90.60 and 90.65 deleted due to rough weather.
8307 EB	16 July	90.28,30,32	Nansen hydro casts, temperature, salinity, oxygen, nutrients, chlorophyll, macrozooplankton.	Special ENSO study cruise. Remainder of cruise aborted due to ship's mechanical difficulties.
8308 EB	17-19 August	90.28,30,32,35,37,42,45, 53,55,60,65	Nansen hydro casts, temperature, salinity, oxygen, nutrients, chlorophyll, macrozooplankton.	Special ENSO study cruise.
8309 EB	13-14 September	90.28,30,32,35,37,42,45, 53,55,60,65	Nansen hydro casts, temperature, salinity, oxygen, nutrients, chlorophyll, macrozooplankton.	Special ENSO study cruise.
8309 JD	24-27 September	90.28,30,33,35,37,45,53, 55,60,65,70	CTD, temperature, salinity.	Line 90 stations occupied on equipment test cruise.
8310 EB	10-12 October	90.28,30,32,35,37,42,45, 53,55,60,65,70	Nansen hydro casts, temperature, salinity, oxygen, nutrients, chlorophyll, macrozooplankton.	Special ENSO study cruise.
8311 EB	5-6 November	90.28,30,32,35,37,42,45, 53,55,60,65,70	Nansen hydro casts, temperature, salinity, oxygen, nutrients, chlorophyll, macrozooplankton.	Special ENSO study cruise.
8311 JD	15-17 November	90.28,30,33,35,37,40,42, 45,53,55,60,65	CTD, temperature, salinity.	Line 90 stations occupied on equipment test cruise.
8312 NH	6-8 December	90.28,30,32,35,37,42,53, 55,60,65,70,75,80,85, 90,100,110	Nansen hydro casts, temperature, salinity, oxygen, nutrients, chlorophyll, macrozooplankton.	Special ENSO study cruise.

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- Scripps Institution of Oceanography, University of California, 1984. Physical, Chemical and Biological Data, CalCOFI Cruise 8401, 4-27 January 1984. SIO Ref. No. 84-18, 120 pp.
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PUBLICATIONS UTILIZING 1983 CALCOFI LINE 90 DATA

The following is a list of publications resulting from the data collected during this series of cruises:

- Davidson, Keay, 1983. Ship probes the mystery of El Niño. *Los Angeles Times* (San Diego County Edition), Monday, 17 October 1983, Part II, pp. 1 and 2.
- Lynn, R. J., 1983a. Anomalous steric height in the California Current during the 1982-83 warm episode. *Trop. Ocean-Atmos. Newsl.*, 21: 23-24.
- _____, 1983b. The 1982-83 warm episode in the California Current. *Geophys. Res. Lett.*, 10: 1093-1095.
- Matrai, P. A., 1984. The distribution of the dinoflagellate *Ceratium* along 28°N in the eastern North Pacific. M.S. Dissertation, Univ. California, San Diego, 46 pp.
- McGowan, J. A., 1983. El Niño and biological production in the California Current. *Trop. Ocean-Atmos. Newsl.*, 21: 23.
- _____, 1984. The Californian El Niño, 1983. *Oceanus*, 27(2): 48-51.
- _____, 1985. El Niño 1983 in the Southern California bight. In: *El Niño North: Niño Effects in the Eastern Subarctic Pacific Ocean* (W. Wooster and D. Fluharty, Eds.), Washington Sea Grant Program, Univ. Washington, Seattle, WA, pp. 166-184.
- Reid, F. M. H., C. B. Lange, and M. M. White, 1985. Microplankton spatial assemblages at the Scripps Pier from March to November 1983 during the 1982-1984 El Niño event. *Botanica Marina*, 28: 443-452.
- Simpson, J. J., 1983a. Large-scale thermal anomalies in the California Current during the 1982-83 El Niño. *Geophys. Res. Lett.*, 10(10): 937-940.
- _____, 1983b. Anomalous thermal structure in the California Current during the 1982-83 El Niño. *Trop. Ocean-Atmos. Newsl.*, 21: 22.
- _____, 1984a. El Niño-induced onshore transport in the California Current during 1982-83. *Geophys. Res. Lett.*, 11(3): 233-236.
- _____, 1984b. A simple model of the 1982-83 California "El Niño." *Geophys. Res. Lett.*, 11(3): 237-240.
- _____, 1986a. Processes affecting upper ocean chemical structure in an Eastern Boundary Current. Accepted as a chapter in the NATO Science Series book on chemical variability in the upper ocean; to be published by NATO Advanced Research Institute on Dynamic Processes in the Chemistry of the Upper Ocean. In Press.
- _____, 1986b. The Pacific — North American teleconnection between equatorial ENSO and mid-latitude North Pacific warming events. Submitted to *J. Geophys. Res.*

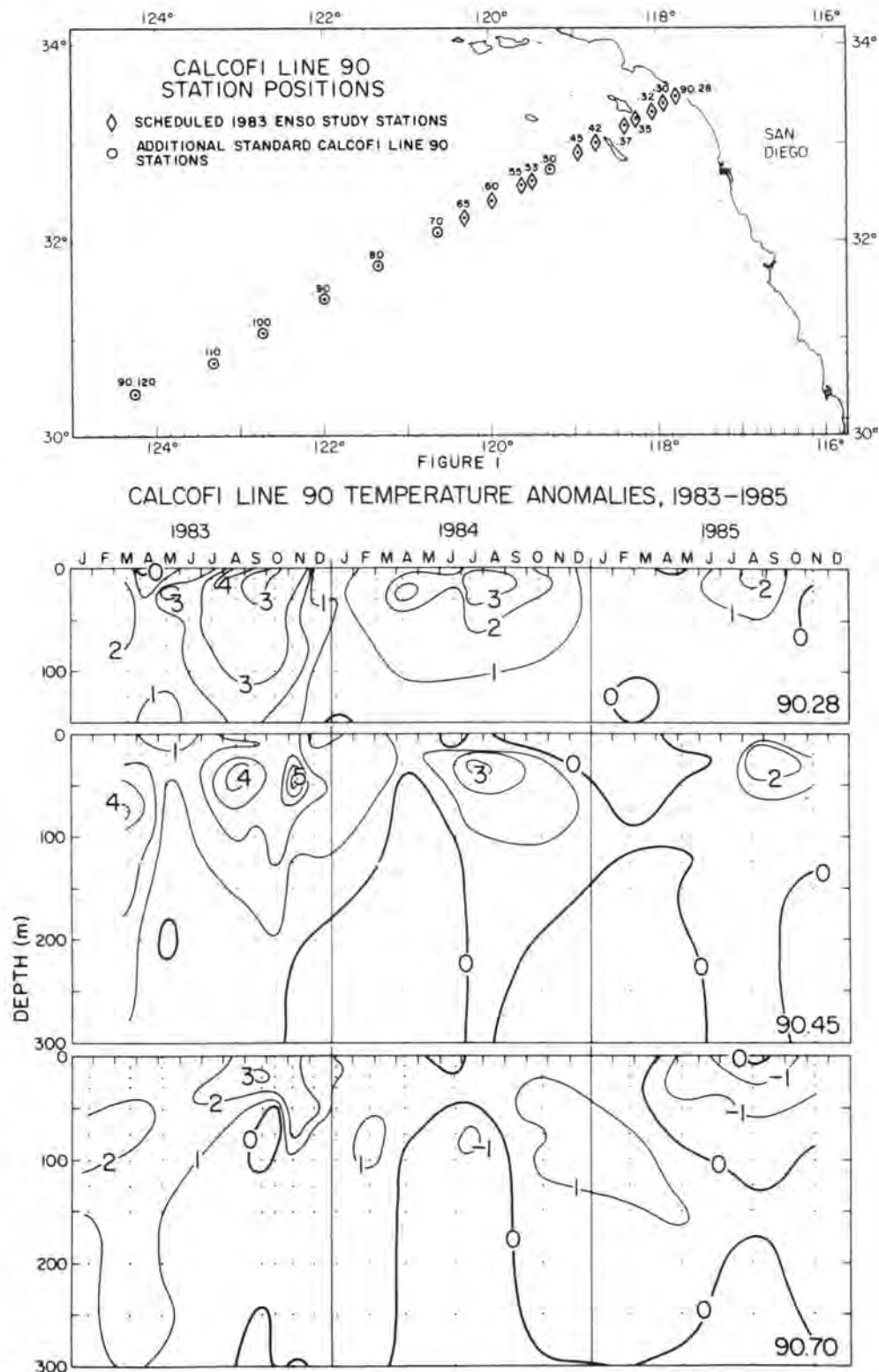


Figure 2. The decay of the California Current warming event associated with the major 1982-83 El Niño — Southern Oscillation event is illustrated by a time series of temperature anomalies ($^{\circ}\text{C}$) observed on CalCOFI Line 90 during 25 cruises between January, 1983 and November, 1985. The three CalCOFI Stations 90.28, 90.45, and 90.70 show that the warmest anomalies were below the surface and peaked in 1983 at all three stations. The offshore station returned to near-normal temperature in 1984 and 1985. However, after cooling to near-normal temperatures in the winter of 1983-84 and 1984-85, the warm temperature anomaly returned to the two inshore stations in the summers of 1984 and 1985, but the magnitude of the warm anomaly has decreased each year. Both inshore stations are influenced by the northward limb of the Southern California Eddy.

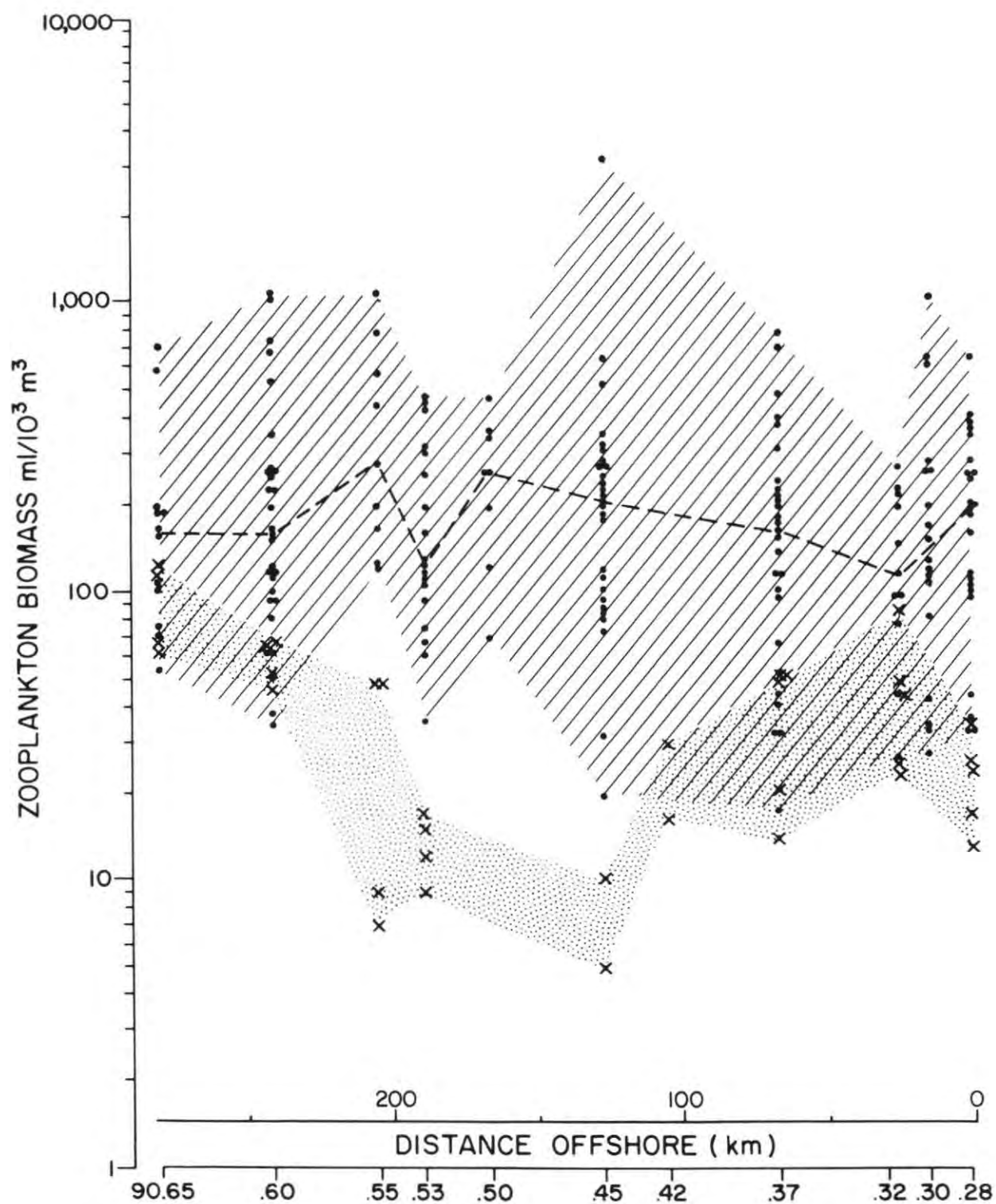


Figure 3. Zooplankton abundance along Line 90. The dots are values for cruises made in July, August, and September of the years 1949 to 1969; the El Niño years of 1958-1959 are not included. The cross hatching covers the range of all values. The dashed line connects the median values. "x" = values for the same months of 1983, and stipples cover the range of those data. Please note log scale on the vertical axis. (From McGowan, 1985)

CRUISE 8301-TC PERSONNEL

Ship's Captain

Rousch, Robert, RV *Townsend Cromwell*

Smith, Paul E. (Chief Scientist)	Fishery Biologist, NMFS
Charter, Richard L.	Computer Specialist, NMFS
Flerx, William C.	Fishery Biologist, NMFS
Genin, Amatzia	Graduate Student, SIO
Hester, Arthur W.	Staff Research Associate, SIO
Slater, Edward G.	Staff Research Associate, SIO
Venrick, Elizabeth L.	Assoc. Research Oceanographer, SIO

CRUISE 8302-3-TC PERSONNEL

Ship's Captain

Rousch, Robert, RV *Townsend Cromwell*

Flerx, William C. (In Charge)	Fishery Biologist, NMFS
Brownell, Kurt A.	Biological Technician, NMFS
Dotson, Ronald C.	Fishery Biologist, NMFS
Gleason, Janice M.	Student, UCSB
Metoyer, Jack D.	Biological Technician, NMFS
Radloff, David	Biological Technician, NMFS
Raffetto, Joseph III	Biological Technician, NMFS

CRUISE 8303-EB PERSONNEL

Ship's Captain

Beattie, Thomas T., RV *Ellen B. Scripps*

Bryan, Walter R. (In Charge)	Marine Technician, SIO
Bos, David L.	Staff Research Associate, SIO
Costello, James P.	Staff Research Associate, SIO
Cummings, Sherry L.	Student, UCSB
Hester, Arthur W.	Staff Research Associate, SIO
Urbach, P. Cristine	Student, SDSU
Venrick, Elizabeth L.	Assoc. Research Oceanographer, SIO

CRUISE 8303-EK PERSONNEL

Ship's Captain

Capt. Varziev, RV *Ekvator*

Stepamenko, Michael (Chief Scientist) Abramenkoff, Dimitry Leopold, Scott W. and Soviet Scientific Staff	Pacific Scientific Research Institute of Fisheries and Oceanography, Vladivostok, USSR Biological Technician, NMFS Biological Technician, Univ. of Washington
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CRUISE 8304-WE PERSONNEL

Ship's Captain

Dietrichson, Warren D., RV *Wecoma*

Huyer, Adriana Smith, Robert L. (Co-Chief Scientists) Cummings, Sherry L. Fleischbein, Jane Ismael, Norhadi Masten, Douglas M. Miller, Mirth Schramm, Rich	Professor, OSU Professor, OSU Student, UCSB Marine Technician, OSU Student, UCSB Marine Technician, SIO Marine Technician, OSU Marine Technician, OSU
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CRUISE 8305-JD PERSONNEL

Ship's Captain

Roll, Milton, RV *David Starr Jordan*

Smith, Paul E. (Chief Scientist) Flerx, William C. (In Charge) Abramenkoff, Dimitry N. Bliss, Kenneth A. Charter, Richard L. Eber, Lawrence E. Lynn, Eric A. Methot, Richard D.	Fishery Biologist, NMFS Fishery Biologist, NMFS Biological Technician, NMFS Oceanographer, NMFS Computer Specialist, NMFS Oceanographer, NMFS Biological Technician, NMFS Fishery Biologist, NMFS
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CRUISE 8305-EB PERSONNEL

Ship's Captain

Beattie, Thomas T., RV *Ellen B. Scripps*

Bryan, Walter R. (In Charge)	Marine Technician, SIO
Bluestone, Simon	Student Volunteer, UCSB
Hester, Arthur W.	Staff Research Associate, SIO
Masten, Douglas M.	Marine Technician, SIO
Ray, Todd M.	Student Volunteer, UCSB
Wells, James A.	Marine Technician, SIO

CRUISE 8306-EB PERSONNEL

Ship's Captain

Beattie, Thomas T., RV *Ellen B. Scripps*

Bryan, Walter R. (In Charge)	Marine Technician, SIO
Brooks, George B., Jr.	Graduate Student, SDSU
Costello, James P.	Staff Research Associate, SIO
Field, Timothy J.	Marine Technician, SIO
Mead, Richard V.	Marine Technician, SIO
Smidt, Robert L., Jr.	Graduate Student, SDSU
Wells, James A.	Marine Technician, SIO

CRUISE 8307-EB PERSONNEL

Ship's Captain

Beattie, Thomas T., RV *Ellen B. Scripps*

Bryan, Walter R. (In Charge)	Marine Technician, SIO
Bos, David L.	Staff Research Associate, SIO
Carson, Thomas L.	Student, Rice Univ.
Casey, Richard E.	Professor, Rice Univ.
Hester, Arthur W.	Staff Research Associate, SIO
Norton, Elizabeth	Student, UCSB
Ryburn, Steven W.	Student, UCSB
Sweet, Paul E.	Staff Research Associate, SIO

CRUISE 8308-EB PERSONNEL

Ship's Captain

Beattie, Thomas T., RV *Ellen B. Scripps*

Bryan, Walter R. (In Charge)	Marine Technician, SIO
Casey, Richard E.	Professor, Rice Univ.
Field, Timothy J.	Marine Technician, SIO
Griffith, David	Graduate Student, SDSU
Kemper, Cecelia A.	Staff Research Associate, SIO
Mendez, Leticia	Graduate Student, SDSU
Weinheimer, Amy	Graduate Student, Rice Univ.
Williams, Robert T.	Principal ADP Systems Analyst, SIO

CRUISE 8309-EB PERSONNEL

Ship's Captain

Beattie, Thomas T., RV *Ellen B. Scripps*

Bryan, Walter R. (In Charge)	Marine Technician, SIO
Billon, Stephanie	Graduate Student, SDSU
Bos, David L.	Staff Research Associate, SIO
Hargreaves, Geoffrey M.	Resident Technician, SIO
Hester, Arthur W.	Staff Research Associate, SIO
Johnson, Janice A.	Graduate Student, SDSU
Kemper, Cecelia A.	Staff Research Associate, SIO
Muus, David A.	Staff Research Associate, SIO

CRUISE 8309-JD PERSONNEL

Ship's Captain

Roll, Milton, RV *David Starr Jordan*

Parrish, Richard (Chief Scientist)	Fishery Biologist, NMFS
Abramenkoff, Dimitry N.	Biological Technician, NMFS
Bliss, Kenneth A.	Oceanographer, NMFS
Cowen, Robert	Graduate Student, SIO
Echeverria, Tina	Fishery Biologist, NMFS
Flerx, William C.	Fishery Biologist, NMFS
Husby, Dave	Oceanographer, NMFS
Matrai, Patricia	Graduate Student, SIO
Smith, Paul E.	Fishery Biologist, NMFS
Wakefield, Waldo	Graduate Student, SIO

CRUISE 8310-EB PERSONNEL

Ship's Captain

Beattie, Thomas T., RV *Ellen B. Scripps*

Bryan, Walter R. (In Charge)	Marine Technician, SIO
Davidson, John Keay	Reporter, <i>Los Angeles Times</i>
Fargion, Giulietta S.	Graduate Student, SIO
Hanna, Richard E.	Graduate Student, SDSU
Hester, Arthur W.	Staff Research Associate, SIO
Masten, Douglas M.	Marine Technician, SIO
Patrick, Ronald G.	Staff Research Associate, SIO
Venrick, Elizabeth L.	Assoc. Research Oceanographer, SIO

CRUISE 8311-EB PERSONNEL

Ship's Captain

Beattie, Thomas T., RV *Ellen B. Scripps*

Bryan, Walter R. (In Charge)	Marine Technician, SIO
Atwood, Elizabeth R.	Student, UCSB
Carson, Thomas L.	Graduate Student, Rice Univ.
Cummings, Sherry L.	Staff Research Associate, SIO
Hester, Arthur W.	Staff Research Associate, SIO
Masten, Douglas M.	Marine Technician, SIO
Patrick, Ronald G.	Staff Research Associate, SIO
Weinheimer, Amy	Graduate Student, Rice Univ.

CRUISE 8311-JD PERSONNEL

Ship's Captain

Roll, Milton, RV *David Starr Jordan*

Methot, Richard D. (Chief Scientist)	Fishery Biologist, NMFS
Abramenkoff, Dimitry N.	Biological Technician, NMFS
Butler, John L.	Fishery Biologist, NMFS
Charter, Richard L.	Computer Specialist, NMFS
Genin, Amatzia	Graduate Student, SIO
Hamner, Margaret	Visiting Research Scientist, UCLA
Hamner, William	Visiting Research Scientist, UCLA
Hoffman, Claire	Student, UCSB
Iacometti, Susan	Computer Programmer, NMFS
Lynn, Ronald J.	Oceanographer, NMFS
Napp, Jeff	Graduate Student, SIO
Norton, Beth	Student, UCSB
Wakefield, Waldo	Graduate Student, SIO

CRUISE 8312-NH PERSONNEL

Ship's Captain

Desjardins, Thomas J., RV *New Horizon*

Bryan, Walter R. (In Charge)	Marine Technician, SIO
Costello, James P.	Staff Research Associate, SIO
Cummings, Sherry L.	Staff Research Associate, SIO
Davis, Roy T.	Marine Technician, SIO
Hargreaves, Geoffrey M.	Marine Technician, SIO
Hayward, Thomas L.	Asst. Research Oceanographer, SIO
Kemper, Cecelia A.	Staff Research Associate, SIO
Pillard, Eugene G.	Marine Technician, SIO
Schmitt, James A.	Sr. Electronics Technician, SIO
Washington, Jean	Staff Research Associate, SIO
Wells, James A.	Marine Technician, SIO

RV TOWNSEND CROMWELL					CRUISE #301					STATION 90 30									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE					
33 25.0 N	117 54.3 W	27/01/83	1150 GMT	594 M															
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS				
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR				
0	15.32	16.32	33.692	24.669	326.2	0.000													0
10	15.33	16.33	33.696	24.667	327.2	0.033													10
20	15.29	16.29	33.677	24.666	327.3	0.065													20
30	15.14	16.14	33.651	24.650	326.2	0.098													30
40	15.02	16.01	33.635	24.645	325.0	0.131													40
50	14.10	16.09	33.674	24.708	324.2	0.163													50
75	14.98	14.97	33.648	24.937	307.0	0.241													75
100	13.87	13.56	33.890	25.360	263.4	0.312													100
125	13.15	13.16	33.946	25.544	246.5	0.376													125
150	11.91	11.89	33.943	25.789	223.5	0.435													150
175	11.50	11.48	34.068	25.965	207.6	0.449													175
200	10.93	10.91	34.118	26.106	194.4	0.530													200
225	10.34	10.31	34.122	26.215	184.6	0.586													225
250	10.10	10.07	34.227	26.337	173.4	0.631													250
275	9.62	9.59	34.210	26.404	167.3	0.674													275
300	8.97	8.94	34.185	26.490	159.3	0.714													300
350	8.25	8.21	34.193	26.605	148.6	0.791													350
400	7.71	7.67	34.197	26.692	141.1	0.864													400
450	7.21	7.17	34.233	26.792	132.0	0.932													450
500	6.88	6.83	34.283	26.877	124.5	0.996													500

RV TOWNSEND CROMWELL					CRUISE #301					STATION 90 37									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE					
33 11.3 N	118 22.8 W	27/01/83	0455 GMT	1158 M															
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS				
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR				
0	15.91	15.91	33.521	24.631	329.9	0.000													0
10	15.92	15.92	33.524	24.632	330.2	0.033													10
20	16.00	16.00	33.563	24.644	329.3	0.066													20
30	16.03	16.03	33.599	24.665	327.6	0.099													30
40	15.98	15.97	33.610	24.685	326.0	0.132													40
50	16.09	16.08	33.673	24.709	324.1	0.164													50
75	14.48	14.47	33.688	25.075	289.8	0.241													75
100	13.65	13.64	33.779	25.319	267.3	0.310													100
125	12.36	12.34	33.752	25.555	245.2	0.374													125
150	11.30	11.28	33.893	25.863	216.4	0.432													150
175	10.72	10.70	34.024	26.069	197.2	0.484													175
200	10.16	10.14	34.070	26.203	184.9	0.532													200
225	9.68	9.65	34.112	26.317	174.5	0.577													225
250	10.03	10.00	34.291	26.398	167.5	0.619													250
275	9.42	9.39	34.240	26.460	161.8	0.660													275
300	8.99	8.96	34.258	26.544	154.2	0.700													300
350	8.34	8.30	34.219	26.615	148.0	0.775													350
400	7.77	7.73	34.229	26.708	139.6	0.847													400
450	7.16	7.12	34.242	26.806	130.7	0.915													450
500	6.78	6.73	34.273	26.883	123.8	0.979													500

RV TOWNSEND CROMWELL					CRUISE #301					STATION 90 50									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE					
32 43.5 N	119 17.0 W	26/01/83	0822 GMT	594 M															
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS				
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR				
0 ISL	15.64	15.64	33.479	24.659	327.3	0.000	5.77	101.7											0
2	15.64	15.64	33.479	24.659	327.3	0.007	5.77	101.7	3.5	0.30	0.1	0.00	0.28	0.01					2
10 ISL	15.62	15.62	33.478	24.663	327.2	0.033	5.78	101.8											10
17	15.61	15.61	33.478	24.666	327.1	0.056	5.78	101.9	3.6	0.30	0.0	0.00	0.29	0.06					17
20 ISL	15.61	15.61	33.477	24.666	327.2	0.065	5.78	101.9											20
30 ISL	15.61	15.61	33.478	24.668	327.4	0.098	5.79	102.0											30
33	15.61	15.60	33.480	24.668	327.4	0.108	5.79	102.0	3.3	0.32	0.0	0.00	0.37	0.04					33
47	15.55	15.54	33.482	24.683	326.4	0.154	5.69	100.1	3.6	0.32	0.1	0.00	0.34	0.06					47
50 ISL	15.51	15.50	33.479	24.693	325.6	0.164	5.68	100.0											50
63	15.32	15.31	33.481	24.734	322.1	0.206	5.64	98.8	3.5	0.34	0.5	0.04	0.24	0.06					63
75 ISL	13.79	13.78	33.439	25.030	294.0	0.242	5.44	92.4											75
78	13.37	13.36	33.437	25.111	286.4	0.251													78
100 ISL	12.38	12.37	33.458	25.325	266.5	0.312	4.87	80.2											100
102	12.35	12.34	33.466	25.354	265.6	0.317	4.81	79.3	9.4	0.84	8.6	0.01	0.11	0.13					102
125 ISL	11.72	11.70	33.570	25.537	246.8	0.376	4.31	70.1											125
128	11.64	11.62	33.590	25.565	244.2	0.384	4.24	68.6	13.5	1.12	13.4	0.01	0.05	0.06					128
150 ISL	10.80	10.78	33.702	25.806	221.6	0.435	3.77	60.2											150
153	10.69	10.67	33.722	25.839	218.5	0.442	3.71	59.1	19.1	1.39	18.0	0.00	0.02	0.04					153
200 ISL	9.69	9.67	33.965	26.203	184.7	0.536	2.82	43.9											200
201	9.68	9.66	33.974	26.208	184.2	0.539	2.80	43.7	28.4	1.79	23.6	0.00							201
2500	9.11	9.08	34.079	26.384	168.3	0.625													2500
300 ISL	8.26	8.23	34.126	26.558	152.4	0.705	1.83	27.7											300
302	8.23	8.20	34.134	26.564	151.8	0.708	1.82	27.5	44.2	2.23	30.2	0.00							302
3500	7.72	7.68	34.175	26.672	142.1	0.778													3500
4000	7.47	7.43	34.219	26.743	136.0	0.848													4000
4500	7.17	7.13	34.239	26.802	131.1	0.915													4500
500 ISL	6.90	6.85	34.260	26.863	125.8	0.979	0.63	9.2											500
503	6.88	6.83	34.270	26.867	125.5	0.983	0.62	9.1	65.4	2.74	36.6	0.00							503

RV TOWNSEND CROMWELL				CRUISE 8301				STATION 90 50									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 43.5 N	119 17.0 W	26/01/83	1949 GMT	619 M													
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	15.72	15.72	33.478	24.641	329.0	0.000	5.79	102.3								0	
2	15.72	15.72	33.478	24.641	329.0	0.007	5.79	102.3	2.6	0.30	0.01	0.000	0.19	0.02		2	
10 ISL	15.66	15.66	33.473	24.652	329.2	0.033	5.84	103.1								10	
17	15.64	15.64	33.478	24.659	327.7	0.056	5.86	103.3	3.0	0.32	0.1	0.00	0.22	0.04		17	
20 ISL	15.65	15.64	33.481	24.660	327.7	0.066	5.86	103.3								20	
30 ISL	15.70	15.69	33.503	24.667	327.4	0.098	5.82	102.7								30	
33	15.72	15.71	33.514	24.670	327.3	0.108	5.80	102.4	2.9	0.31	0.1	0.00	0.42	0.05		33	
47	15.80	15.79	33.579	24.702	324.6	0.154	5.72	101.2	3.0	0.32	0.1	0.02	0.58	0.11		47	
50 ISL	15.83	15.82	33.583	24.701	324.8	0.164	5.71	101.2								50	
60	15.91	15.90	33.606	24.699	325.3	0.196			3.4	0.33	0.2	0.04	0.58	0.09		60	
75 ISL	15.04	15.03	33.500	24.812	314.9	0.244	5.58	97.2								75	
78	14.80	14.79					5.55	96.3	4.4	0.46	1.8	0.16	0.18	0.12		78	
100 ISL	13.15	13.14	33.417	25.143	283.9	0.318	5.14	86.1								100	
102	13.00	12.99	33.426	25.177	280.7	0.323	5.09	85.0	7.9	0.71	5.8	0.06	0.17	0.14		102	
125 ISL	11.66	11.65	33.573	25.550	245.5	0.384	4.34	70.5								125	
127	11.56	11.54	33.595	25.583	242.4	0.389	4.27	69.2	14.3	1.19	13.8	0.02	0.04	0.06		128	
150 ISL	10.46	10.44	33.767	25.917	211.0	0.441	3.54	56.1								151	
154	10.31	10.29	33.801	25.966	206.3	0.449	3.42	54.0	22.7	1.60	20.5	0.01	0.01	0.02		155	
200 ISL	9.87	9.84	34.031	26.226	182.6	0.539	2.53	39.6								201	
203	9.86	9.84	34.045	26.234	181.9	0.544	2.49	39.0	31.5	1.95	25.5	0.01				204	
2500	8.60	8.57	34.101	26.481	158.9	0.625										252	
300 ISL	8.05	8.02	34.156	26.613	147.0	0.701	1.74	26.2								302	
303	8.03	8.00	34.165	26.618	146.6	0.705	1.73	26.0	46.7	2.34	31.3	0.00				305	
3500	7.61	7.58	34.190	26.700	139.4	0.773										352	
4000	7.44	7.40	34.221	26.749	135.4	0.841										403	
4500	7.27	7.23	34.230	26.781	133.2	0.909										453	
500 ISL	7.09	7.04	34.242	26.822	129.9	0.974	0.78	11.5								504	
503	7.08	7.03	34.252	26.825	129.6	0.978	0.77	11.3	62.7	2.69	35.9	0.01				507	

RV TOWNSEND CROMWELL				CRUISE 8301				STATION 90 60									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 25.4 N	119 59.3 W	26/01/83	0254 GMT	943 M													
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	15.75	15.75	33.508	24.657	327.5	0.000	5.79	102.3								0	
2	15.75	15.75	33.508	24.657	327.5	0.007	5.79	102.3	3.8	0.29	0.0	0.00	0.35	0.04		2	
10 ISL	15.68	15.68	33.506	24.672	326.3	0.033	5.83	102.9								10	
17	15.64	15.64	33.508	24.682	325.5	0.056	5.84	103.0	3.6	0.29	0.0	0.00	0.39	0.07		17	
20 ISL	15.64	15.63	33.507	24.683	325.5	0.065	5.84	102.9								20	
30 ISL	15.63	15.63	33.508	24.686	325.6	0.098	5.81	102.4								30	
32	15.63	15.63					5.80	102.3	3.5	0.30	0.0	0.00	0.47	0.08		32	
47	15.61	15.60	33.509	24.691	325.7	0.153	5.75	101.3	3.3	0.31	0.0	0.00	0.54	0.10		47	
50 ISL	15.55	15.54	33.496	24.695	325.3	0.163	5.73	100.9								50	
62	15.32	15.31	33.521	24.765	319.1	0.202	5.67	99.4	3.6	0.34	0.5	0.03	0.29	0.10		62	
75 ISL	14.06	14.05	33.478	25.004	296.6	0.241	5.22	89.1								75	
77	13.84	13.83	33.476	25.045	292.6	0.247	5.14	87.4	6.6	0.64	4.8	0.04	0.24	0.14		77	
100 ISL	12.44	12.43	33.509	25.353	263.8	0.311	4.63	76.4								100	
102	12.35	12.34	33.520	25.376	261.7	0.317	4.59	75.7	11.2	0.98	10.4	0.01	0.12	0.11		102	
125 ISL	11.16	11.15	33.632	25.687	232.4	0.374	4.13	66.4								125	
128	11.03	11.01	33.653	25.724	228.9	0.381	4.07	65.3	15.6	1.24	15.2	0.01	0.04	0.05		129	
150	10.31	10.29	33.762	25.936	209.1	0.429	3.60	56.9	21.0	1.49	19.1	0.00	0.02	0.03		151	
200 ISL	9.09	9.06	33.978	26.312	174.2	0.525	2.96	45.5								201	
202	9.05	9.03	33.990	26.323	173.1	0.528	2.94	45.2	31.4	1.87	24.8	0.00				203	
2500	8.62	8.59	34.118	26.491	157.9	0.608										252	
300 ISL	8.02	7.99	34.163	26.622	146.1	0.684	1.74	26.2								302	
301	8.01	7.98	34.169	26.625	145.9	0.685	1.73	26.0	46.3	2.35	30.9	0.00				303	
3500	7.42	7.39	34.185	26.723	137.0	0.754										352	
4000	6.86	6.82	34.191	26.806	129.5	0.821										403	
4500	6.38	6.34	34.212	26.886	122.2	0.884										453	
498	6.15	6.11	34.248	26.945	117.2	0.941	0.52	7.5	75.3	2.92	39.0	0.00				502	
500 ISL	5.14	6.10	34.249	26.947	117.0	0.944										504	

RV TOWNSEND CROMWELL				CRUISE 8301				STATION 90 70									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	POTTEM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 5.0 N	120 38.1 W	25/01/83	0909 GMT	3717 M													
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	15.80	15.80	33.526	24.660	327.2	0.000	5.72	101.2								0	
2	15.80	15.80	33.526	24.660	327.2	0.007	5.72	101.2								2	
10 ISL	15.81	15.81	33.525	24.657	327.8	0.033	5.73	101.3	3.5	0.29	0.4	0.01	0.16	0.03		10	
17	15.82	15.82	33.525	24.655	328.1	0.056	5.73	101.4								17	
20 ISL	15.82	15.82	33.525	24.656	328.2	0.066	5.73	101.5	3.5	0.30	0.2	0.01	0.17	0.02		20	
30 ISL	15.82	15.82	33.526	24.657	328.4	0.098	5.74	101.6								30	
33	15.82	15.81	33.528	24.658	328.4	0.108	5.74	101.6								33	
48	15.82	15.81	33.528	24.658	328.8	0.158	5.71	101.1	3.4	0.29	0.1	0.00	0.19	0.03		48	
50 ISL	15.82	15.81	33.525	24.659	328.8	0.164	5.71	101.0								50	
85	15.76	15.78	33.528	24.666	328.6	0.207	5.71	101.0								85	
75 ISL	14.59	14.58	33.437	24.903	306.2	0.245	5.55	95.5	3.7	0.29	0.2	0.00	0.28	0.05		75	
90	13.69	13.68	33.418	25.031	294.0	0.260	5.42	91.8								90	
100 ISL	12.01	11.99	33.593	25.500	249.8	0.314	4.18	68.4	5.6	0.50	2.9	0.05	0.33	0.19		100	
103	11.81	11.80	33.629	25.563	243.8	0.322	4.00	65.2	14.8	1.16	13.8	0.02	0.04	0.04		103	
125 ISL	10.55	10.54	33.651	25.910	220.6	0.373	4.00	63.5								125	
128	10.42	10.40	33.657	25.834	218.3	0.379	4.00	63.3	18.4	1.30	17.5	0.01	0.03	0.04		128	
150 ISL	9.78	9.76	33.842	26.090	194.4	0.425	3.36	52.5								150	
153	9.72	9.70	33.874	26.123	191.3	0.431	3.26	50.9	25.5	1.60	22.0	0.01	0.00	0.01		153	
200 ISL	8.91	8.89	34.072	26.413	164.5	0.514	2.50	38.4								200	
205	8.86	8.84	34.096	26.428	163.1	0.523	2.45	37.5	35.5	1.96	26.9	0.00				205	
2500	8.65	8.62	34.138	26.502	156.9	0.595										250	
300 ISL	8.03	8.00	34.178	26.634	145.0	0.670	1.58	23.8								300	
372	8.00	7.97	34.186	26.639	144.6	0.673	1.57	23.6	47.2	2.32	31.1	0.00				372	
3500	7.56	7.53	34.222	26.732	136.3	0.740										350	
4000	7.08	7.04	34.244	26.818	128.7	0.807										400	
4500	6.48	6.44	34.255	26.907	120.4	0.869										450	
500	5.14	6.10	34.274	26.967	115.1	0.928	0.47	6.8	76.5	2.83	39.1	0.00				500	

RV TOWNSEND CROMWELL				CRUISE 8301				STATION 90 70									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	POTTEM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 5.0 N	120 38.1 W	25/01/83	1622 GMT	3643 M													
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	15.79	15.79	33.522	24.659	327.3	0.000	5.74	101.5								0	
2	15.79	15.79	33.522	24.659	327.3	0.007	5.74	101.5								2	
10 ISL	15.79	15.79	33.522	24.660	327.4	0.033	5.73	101.5	2.8	0.29	0.0	0.00	0.21	0.04		10	
18	15.79	15.79	33.523	24.660	327.7	0.059	5.73	101.4								18	
20 ISL	15.79	15.79	33.522	24.660	327.7	0.065	5.73	101.4	2.8	0.29	0.0	0.00	0.22	0.04		20	
30 ISL	15.79	15.79	33.519	24.659	328.2	0.098	5.75	101.8								30	
34	15.79	15.78	33.520	24.658	328.3	0.111	5.76	101.9								34	
48	15.79	15.78	33.520	24.659	328.7	0.157	5.75	101.7	2.8	0.30	0.0	0.00	0.23	0.04		48	
50 ISL	15.79	15.78	33.517	24.660	328.8	0.164	5.75	101.7								50	
84	15.77	15.76	33.518	24.663	328.9	0.210	5.75	101.7								84	
75 ISL	14.55	14.54	33.463	24.888	307.7	0.245	5.64	97.3	3.3	0.31	0.4	0.00	0.26	0.04		75	
77	14.30	14.29	33.458	24.936	303.1	0.251	5.61	96.3								77	
100 ISL	12.81	12.79	33.499	25.274	271.3	0.317	4.89	81.5	4.2	0.44	1.6	0.05	0.35	0.15		100	
104	12.58	12.57	33.517	25.330	266.1	0.328	4.75	78.7	9.7	0.89	9.3	0.02	0.11	0.13		104	
125 ISL	10.55	10.56	33.560	25.741	227.1	0.380	4.23	67.2								125	
127	10.42	10.40	33.581	25.775	223.9	0.384	4.19	66.3	15.8	1.58	15.3	0.01	0.06	0.05		128	
150	10.42	10.40	33.707	25.874	215.0	0.455	3.80	60.1	19.9	1.44	18.3	0.00	0.02	0.02		151	
199	9.20	9.18	33.792	26.301	175.2	0.530	2.86	44.1	30.6	1.82	24.7	0.00				200	
200 ISL	9.19	9.16	33.992	26.306	174.7	0.532	2.85	44.0								201	
2500	8.66	8.63	34.140	26.502	156.9	0.615										252	
3100	8.06	8.03	34.176	26.623	146.1	0.691										302	
3500	7.56	7.56	34.231	26.735	136.1	0.761										352	
4000	7.17	7.13	34.259	26.817	128.8	0.828										403	
4500	6.62	6.58	34.260	26.893	121.9	0.890										453	
496	6.17	6.09	34.284	26.976	114.2	0.945	0.44	6.3	74.1	2.84	38.5	0.00				500	
500 ISL	5.10	6.06	34.286	26.981	113.7	0.949										504	

RV TOWNSEND CROMWELL				CRUISE 8301						STATION 90 80					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
31 45.1 N	121 20.0 W	25/01/83	0325 GMT	4759 M											
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0 ISL	15.55	15.55	33.356	24.585	334.4	0.000	5.79	101.8							0
3	15.55	15.55	33.356	24.585	334.4	0.010	5.79	101.8	2.9	0.31	0.4	0.01	0.10	0.01	3
10 ISL	15.52	15.52	33.349	24.587	334.4	0.033	5.79	101.8							10
18	15.50	15.50	33.346	24.589	334.5	0.060	5.80	101.9	3.0	0.31	0.3	0.00	0.12	0.02	18
20 ISL	15.50	15.50	33.347	24.590	334.4	0.067	5.80	102.0							20
30 ISL	15.50	15.50	33.357	24.599	333.9	0.100	5.82	102.3							30
34	15.50	15.49	33.364	24.603	333.6	0.114	5.83	102.4	3.1	0.31	0.3	0.00	0.12	0.02	34
48	15.04	15.03	33.258	24.623	332.1	0.160	5.86	102.0	3.0	0.32	0.2	0.00	0.14	0.03	48
50 ISL	14.99	14.98	33.254	24.632	331.3	0.167	5.86	101.9							50
59	14.75	14.74	33.259	24.686	326.4	0.196	5.87	101.5	3.0	0.32	0.2	0.00	0.19	0.04	59
75 ISL	14.07	14.06	33.249	24.824	313.6	0.248	5.86	100.0							75
77	13.96	13.95	33.249	24.845	311.7	0.254	5.86	99.8	3.6	0.32	0.7	0.11	0.28	0.07	77
100 ISL	11.99	11.98	33.144	25.154	282.6	0.322	5.68	92.7							100
102	11.83	11.82	33.147	25.185	279.7	0.328	5.65	91.9	5.7	0.60	4.4	0.01	0.13	0.08	102
125	11.26	11.24	33.460	25.533	247.0	0.388	4.99	80.3	10.1	0.86	9.5	0.00	0.05	0.04	125
150	9.30	9.28	33.642	25.912	211.3	0.446	4.03	63.0	20.1	1.41	18.6	0.00	0.01	0.01	151
200 ISL	8.76	8.74	33.912	26.311	174.1	0.542	3.28	50.1							201
205	8.71	8.69	33.935	26.333	172.0	0.551	3.25	49.6	30.6	1.75	24.3	0.00			206
2500	8.02	7.99	34.052	26.530	153.9	0.624									252
300 ISL	7.30	7.27	34.048	26.636	144.4	0.699	2.29	33.8							302
303	7.26	7.23	34.052	26.640	143.9	0.703	2.26	33.4	48.4	2.22	31.2	0.00			305
3500	6.77	6.74	34.104	26.749	134.1	0.769									352
4000	6.49	6.45	34.180	26.846	125.4	0.834									403
4500	5.98	5.94	34.179	26.911	119.5	0.895									453
500 ISL	5.96	5.92	34.248	26.974	114.2	0.953	0.48	6.9							504
505	5.96	5.92	34.262	26.980	113.7	0.959	0.44	6.3	78.4	2.92	39.6	0.00			509

RV TOWNSEND CROMWELL				CRUISE 8301						STATION 90 90					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
31 24.8 N	121 58.9 W	24/01/83	0527 GMT	3828 M											
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	S103	P04	N03	N02	CHL A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0 ISL	15.73	15.73	33.365	24.552	337.5	0.000									0
3	15.73	15.73	33.365	24.552	337.6	0.010			3.4	0.31	0.0	0.01	0.08	0.01	3
10 ISL	15.70	15.70	33.366	24.559	337.1	0.034									10
20	15.66	15.66	33.370	24.572	336.2	0.067	5.80	102.2	3.3	0.31	0.0	0.00	0.09	0.01	20
30 ISL	15.66	15.66	33.370	24.573	336.4	0.101	5.79	102.0							30
34	15.66	15.65	33.372	24.574	336.4	0.114	5.78	101.9	3.3	0.31	0.0	0.00	0.09	0.02	34
50	15.66	15.65	33.403	24.598	334.6	0.168	5.76	101.6	3.3	0.31	0.0	0.00	0.10	0.01	50
65	14.52	14.51	33.285	24.756	319.9	0.217	5.87	101.1	3.2	0.34	0.0	0.01	0.26	0.13	65
75 ISL	14.46	14.45	33.268	24.758	320.0	0.249	5.88	101.1							75
80	14.43	14.42	33.264	24.759	320.1	0.265	5.88	101.1	3.3	0.34	0.0	0.04	0.33	0.12	80
100 ISL	12.47	12.46	33.138	25.060	291.6	0.326	5.85	96.4							100
105	11.90	11.89	33.124	25.154	282.7	0.341	5.84	95.1	5.0	0.53	2.8	0.02	0.08	0.07	105
125 ISL	10.89	10.87	33.174	25.380	261.5	0.395	5.45	86.8							125
131	10.70	10.68	33.229	25.452	254.7	0.410	5.24	83.2	10.1	0.88	9.4	0.01	0.03	0.03	132
150 ISL	10.19	10.18	33.565	25.805	221.5	0.456	4.17	65.6							151
152	10.15	10.13	33.607	25.842	218.0	0.460	4.05	63.7	18.6	1.36	18.0	0.00	0.01	0.02	153
200 ISL	8.85	8.83	33.908	26.293	175.8	0.555	3.26	49.8							201
204	8.76	8.74	33.917	26.311	174.1	0.562	3.25	49.6	30.0	1.75	24.8	0.00			205
2500	8.29	8.26	34.025	26.469	159.9	0.639									252
297	7.49	7.46	34.079	26.629	145.1	0.710	2.08	30.9	47.1	2.24	31.8	0.00			299
300 ISL	7.46	7.43	34.074	26.634	144.6	0.715	2.05	30.4							302
3500	6.99	6.96	34.076	26.697	139.2	0.786									352
4000	6.48	6.44	34.110	26.792	130.5	0.853									403
4500	6.03	5.99	34.151	26.883	122.2	0.916									453
491	5.62	5.58	34.182	26.958	115.2	0.965	0.65	9.2	80.0	2.86	40.8	0.00			495
500 ISL	5.60	5.56	34.188	26.966	114.6	0.975									504

RV TOWNSEND CROMWELL				CRUISE P301				STATION 90 90									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
31 24.8 N	121 58.9 W	24/01/83	1655 GMT	3910 M													
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	15.75	15.75	33.388	24.565	336.3	0.000	5.77	101.9							0		
2	15.75	15.75	33.388	24.565	336.3	0.007	5.77	101.9	2.7	0.30	0.0	0.00	0.11	0.01	2		
10 ISL	15.76	15.76	33.387	24.562	336.8	0.034	5.78	102.1							10		
16	15.77	15.77	33.388	24.561	337.1	0.054	5.78	102.1	2.7	0.30	0.0	0.00	0.12	0.01	16		
20 ISL	15.77	15.77	33.388	24.562	337.1	0.067	5.78	102.1							20		
30 ISL	15.77	15.77	33.390	24.564	337.2	0.101	5.78	102.1							30		
32	15.77	15.76	33.392	24.564	337.2	0.108	5.78	102.1	2.8	0.30	0.0	0.00	0.11	0.02	32		
47	15.75	15.74	33.401	24.576	336.6	0.158	5.77	101.9	2.8	0.31	0.0	0.00	0.12	0.02	47		
50 ISL	15.73	15.72	33.406	24.587	335.7	0.168	5.77	101.9							50		
61	15.50	15.49	33.425	24.651	329.9	0.205	5.78	101.6	3.0	0.31	0.0	0.00	0.23	0.10	61		
75	14.71	14.70	33.393	24.799	316.2	0.250	5.85	101.2	3.4	0.33	0.0	0.02	0.34	0.15	75		
99	13.68	13.67	33.393	25.015	296.1	0.324	5.76	97.6	3.7	0.36	0.3	0.03	0.16	0.09	99		
100 ISL	13.60	13.59	33.380	25.024	295.3	0.327	5.75	97.3							100		
123	11.74	11.72	33.230	25.266	272.4	0.392	5.39	97.6	7.9	0.76	6.3	0.01	0.07	0.05	123		
125 ISL	11.62	11.61	33.237	25.296	269.6	0.397	5.32	86.3							125		
150	10.45	10.43	33.475	25.688	232.7	0.460	4.42	69.9	15.9	1.29	15.5	0.00	0.03	0.03	151		
200	8.72	8.70	33.467	26.278	177.1	0.563	3.23	49.3	29.5	1.80	24.6	0.00			201		
250	8.25	8.22	34.034	26.472	158.4	0.646									252		
298	7.49	7.46	34.079	26.629	145.1	0.716	2.08	30.9	47.1	2.24	31.8	0.00			298		
300 ISL	7.43	7.40	34.074	26.638	144.2	0.722	2.04	30.2							302		
350	6.77	6.74	34.090	26.738	135.1	0.792									352		
400	6.31	6.27	34.141	26.839	125.9	0.857									403		
450	5.91	5.87	34.147	26.895	120.9	0.919									453		
500 ISL	5.53	5.54	34.165	26.954	115.6	0.978	0.65	9.2	81.2	2.88	40.9	0.00			504		
508	5.54	5.50	34.177	26.964	114.8	0.987	0.62	8.8							512		

RV TOWNSEND CROMWELL				CRUISE R301				STATION 90 100									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
31 3.9 N	122 41.4 W	23/01/83	2055 GMT	3720 M													
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	16.05	16.05	33.418	24.521	340.4	0.000	5.66	100.6	2.7	0.29	0.2	0.00	0.08	0.02	0		
10 ISL	15.94	15.94	33.417	24.545	338.4	0.034	5.70	101.1							10		
15	15.91	15.91	33.418	24.552	337.8	0.051	5.72	101.4	2.6	0.29	0.1	0.00	0.09	0.01	15		
20 ISL	15.91	15.91	33.418	24.554	337.9	0.068	5.73	101.5							20		
30	15.91	15.91	33.422	24.556	338.0	0.102	5.74	101.7	2.5	0.29	0.1	0.00	0.09	0.02	30		
46	15.88	15.87	33.423	24.564	337.7	0.156	5.75	101.8	2.5	0.29	0.1	0.00	0.10	0.02	46		
50 ISL	15.85	15.84	33.415	24.566	337.7	0.169	5.75	101.8							50		
61	15.69	15.68	33.376	24.571	337.5	0.206	5.76	101.6	2.5	0.30	0.1	0.00	0.15	0.05	61		
75 ISL	15.23	15.22	33.367	24.668	328.7	0.253	5.80	101.3							75		
77	15.15	15.14	33.374	24.689	324.7	0.259	5.80	101.2	2.5	0.31	0.1	0.02	0.25	0.11	77		
92	14.43	14.42	33.452	24.904	308.6	0.307	5.76	99.1	3.0	0.32	0.3	0.09	0.21	0.14	92		
100 ISL	14.01	14.00	33.436	24.992	299.4	0.331	5.71	97.5							100		
102	13.90	13.89	33.433	25.000	297.6	0.337	5.69	96.8	3.6	0.37	0.9	0.09	0.19	0.13	102		
112	13.20	13.18	33.405	25.121	286.3	0.366	5.42	90.9					0.15	0.11	112		
123	12.61	12.59	33.437	25.262	273.0	0.397	5.22	86.5					0.08	0.08	123		
125 ISL	12.50	12.49	33.436	25.286	270.9	0.402	5.19	85.8							125		
132	12.14	12.12	33.453	25.365	262.4	0.421	5.11	83.8					0.05	0.06	133		
143	11.57	11.55	33.478	25.491	251.5	0.450	5.00	81.0					0.04	0.04	144		
150 ISL	11.15	11.16	33.520	25.598	241.4	0.467	4.74	76.2							151		
154	10.96	10.94	33.557	25.663	235.3	0.476	4.57	73.1	12.7	1.05	12.9		0.03	0.03	155		
179	9.86	9.84	33.753	26.005	203.0	0.531	3.73	58.3	21.4	1.51	20.4		0.01	0.01	180		
200 ISL	9.24	9.22	33.848	26.184	186.3	0.572	3.54	54.7							201		
204	9.16	9.14	33.868	26.210	183.9	0.579	3.51	54.1	26.0	1.66	22.8				205		
229	8.94	8.92	33.989	26.340	172.0	0.624	2.76	42.3	31.5	1.92	26.2				230		
250 ISL	8.66	8.64	34.031	26.421	164.6	0.659	2.55	38.9							252		
255	8.59	8.56	34.044	26.438	163.0	0.667	2.53	38.5	35.5	2.03	28.0				257		
300 ISL	7.95	7.92	34.105	26.587	149.4	0.738	2.02	30.3							302		
303	7.91	7.88	34.114	26.596	148.6	0.742	1.98	29.7	44.2	2.30	30.9				305		
354	7.33	7.30	34.162	26.718	137.5	0.815	1.36	20.1	53.2	2.54	34.1				356		
400 ISL	7.00	6.96	34.179	26.783	131.9	0.877	1.14	16.7							403		
403	6.98	6.94	34.187	26.786	131.6	0.881	1.13	16.6	59.7	2.71	36.0				406		
500 ISL	5.73	5.68	34.168	26.940	117.1	1.002	0.67	9.5							504		
502	5.70	5.66	34.175	26.943	116.8	1.004	0.66	9.4	77.7	2.92	40.2				506		
600 ISL	5.36	5.31	34.269	27.065	106.2	1.113	0.33	4.6							605		
603	5.36	5.31	34.280	27.068	105.9	1.117	0.32	4.5	87.9	3.06	42.0				608		
700 ISL	4.99	4.92	34.339	27.167	97.2	1.215	0.31	4.3							706		
799	4.59	4.53	34.397	27.250	89.8	1.308	0.29	4.0	106.3	3.14	43.9				806		
800 ISL	4.52	4.52	34.389	27.251	89.8	1.309	0.29	4.0							807		
1000 ISL	4.00	3.93	34.468	27.378	78.6	1.478	0.51	7.0							1009		
1005	3.99	3.91	34.479	27.381	78.6	1.482	0.52	7.1	120.0	3.15	44.3				1014		

RV TOWNSEND CROMWELL				CRUISE 8301				STATION 90 120										
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE				
30 26.6 N	124 13.8 W	23/01/83	D927 GMT	3920 M														
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAE0	PRESS			
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR			
0 ISL	16.73	16.73	33.553	24.468	345.5	0.000	5.65	101.8							0			
1	16.73	16.73	33.553	24.468	345.5	0.003	5.65	101.8							1			
10 ISL	16.74	16.73	33.551	24.466	346.0	0.035	5.65	101.8	3.2	0.29	0.1	0.01	0.06	0.00	10			
15	16.74	16.74	33.551	24.465	346.2	0.052	5.65	101.8							15			
20 ISL	16.91	16.91	33.623	24.480	344.9	0.069	5.63	101.8	3.2	0.29	0.1	0.00	0.06	0.00	20			
30	17.27	17.26	33.776	24.513	342.2	0.104	5.58	101.7							30			
45	17.33	17.32	33.799	24.517	342.3	0.155	5.59	102.0	3.0	0.24	0.0	0.00	0.07	0.00	45			
50 ISL	17.34	17.33	33.801	24.519	342.3	0.172	5.59	101.9							50			
61	17.35	17.34	33.813	24.523	342.2	0.210	5.57	101.7	3.0	0.23	0.1	0.00	0.08	0.02	61			
75 ISL	17.39	17.37	33.879	24.569	338.1	0.257	5.55	101.5							75			
76	17.39	17.38	33.892	24.575	337.9	0.261	5.55	101.4	3.0	0.22	0.1	0.00	0.13	0.05	76			
91	16.11	16.10	33.768	24.779	318.7	0.310	5.65	100.7	3.3	0.24	0.0	0.02	0.21	0.14	91			
100 ISL	15.74	15.73	33.771	24.868	310.5	0.338	5.61	99.2							100			
101	15.71	15.69	33.778	24.877	309.7	0.341	5.60	99.0	3.5	0.25	0.1	0.07	0.21	0.14	101			
111	15.36	15.34	33.800	24.972	300.9	0.372	5.52	96.9	3.5	0.27	0.5	0.11	0.17	0.11	111			
121	14.95	14.93	33.813	25.072	291.6	0.401	5.37	93.6	4.2	0.33	1.6	0.03	0.12	0.07	121			
125 ISL	14.12	14.10	33.664	25.138	285.2	0.413	5.40	92.3							125			
130	13.14	13.12	33.524	25.226	276.8	0.427	5.41	90.7	5.4	0.48	3.5	0.02	0.07	0.07	131			
140	13.27	13.25	33.740	25.367	263.7	0.454	5.12	86.2	6.4	0.53	5.0	0.01	0.05	0.03	141			
150 ISL	12.74	12.71	33.772	25.502	251.0	0.480	4.91	81.7							151			
160	11.98	11.96	33.745	25.623	239.6	0.504	4.76	78.0	10.7	0.80	9.6	0.01	0.02	0.03	161			
186	10.76	10.74	33.729	25.833	219.9	0.564	4.62	73.7	14.2	1.03	13.3	0.00	0.01	0.01	187			
200 ISL	10.00	9.97	33.766	25.997	204.3	0.594	4.41	69.2							201			
210	9.52	9.50	33.812	26.108	193.8	0.614	4.26	66.1	20.7	1.35	18.5	0.00			211			
234	9.03	9.00	33.982	26.242	181.4	0.659	4.06	62.4	24.9	1.48	20.8	0.00			235			
250 ISL	8.77	8.74	33.918	26.316	174.6	0.687	3.85	58.8							252			
262	8.59	8.56	33.951	26.365	170.0	0.708	3.66	55.7	29.8	1.65	23.3	0.00			264			
300 ISL	8.00	7.97	34.012	26.506	157.0	0.770	2.89	43.4							302			
310	7.85	7.82	34.029	26.538	154.1	0.786	2.70	40.4	40.7	2.04	28.5	0.00			312			
358	7.10	7.07	34.039	26.653	143.6	0.857	2.27	33.4	49.7	2.26	31.8	0.00			361			
400 ISL	6.56	6.52	34.047	26.737	135.7	0.916	1.78	25.8							403			
409	6.46	6.42	34.058	26.754	134.2	0.928	1.67	24.2	59.8	2.52	35.3	0.00			412			
500 ISL	5.93	5.89	34.160	26.908	120.4	1.044	0.74	10.5							504			
507	5.91	5.87	34.177	26.919	119.4	1.052	0.68	9.7	75.5	2.87	39.3	0.00			511			
600 ISL	5.39	5.34	34.272	27.064	106.3	1.157	0.32	4.6							605			
603	5.37	5.32	34.282	27.069	105.9	1.160	0.32	4.5	89.0	3.04	41.4	0.00			608			
700 ISL	4.96	4.90	34.342	27.172	96.7	1.259	0.31	4.3							706			
794	4.62	4.56	34.394	27.245	90.3	1.348	0.30	4.2	106.3	3.21	43.7	0.00			801			
800 ISL	4.59	4.53	34.387	27.250	89.9	1.353	0.30	4.2							807			
997	3.94	3.86	34.459	27.370	79.2	1.520	0.55	7.5	120.5	3.14	44.3	0.00			1006			
1000 ISL	3.94	3.86	34.460	27.371	79.2	1.522									1009			

RV TOWNSEND CROMWELL						CRUISE 8302-3						STATION 90 28					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 29.1 N	117 46.1 W	04/03/83	1936	63 M	280	8 KT	280 3 8	1	1007.5 MB	16.0 C	13.2 C	3/8		CC			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	15.92	15.92	32.636	23.949	394.9	0.000										0	
10	16.00	16.00	33.429	24.541	338.9	0.037										10	
20	15.94	15.94	33.522	24.626	331.0	0.070										20	
30	15.94	15.94	33.526	24.629	331.0	0.103										30	
40	15.94	15.91	33.527	24.630	331.2	0.136										40	
50	15.92	15.91	33.526	24.635	331.1	0.170										50	
70	15.83	15.82	33.520	24.651	330.2	0.236										70	

RV TOWNSEND CROMWELL						CRUISE 8302-3						STATION 90 30					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 25.1 N	117 54.3 W	04/03/83	2219	600 M	300	10 KT	280 4 8	1	1008.1 MB	16.0 C	13.0 C	2/8		CU			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	15.95	15.95	33.504	24.609	332.0	0.000										0	
10	15.90	15.90	33.512	24.627	330.6	0.033										10	
20	15.85	15.85	33.517	24.642	329.5	0.066										20	
30	15.86	15.86	33.531	24.651	328.9	0.099										30	
40	15.87	15.86	33.541	24.657	328.7	0.132										40	
50	15.76	15.75	33.568	24.703	324.6	0.165										50	
75	14.40	14.39	33.606	25.029	294.2	0.242										75	
100	13.20	13.19	33.648	25.309	268.2	0.312										100	
125	12.58	12.56	33.882	25.613	239.8	0.376										125	
150	11.54	11.52	33.985	25.891	213.8	0.432										151	
175	10.79	10.77	34.120	26.132	191.4	0.483										176	
200	10.32	10.30	34.182	26.263	179.3	0.529										201	
225	9.96	9.93	34.248	26.376	169.0	0.573										226	
250	9.59	9.56	34.240	26.432	164.1	0.615										252	
275	9.16	9.13	34.247	26.508	157.2	0.655										277	
300	8.70	8.67	34.247	26.581	150.5	0.693										302	
350	7.97	7.93	34.222	26.673	142.3	0.766										352	
400	7.48	7.44	34.246	26.763	134.2	0.836										403	
450	7.07	7.03	34.283	26.850	126.4	0.901										453	
500	6.52	6.47	34.359	26.985	113.9	0.961										504	

RV TOWNSEND CROMWELL						CRUISE 8302-3						STATION 90 37					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 11.1 N	118 23.2 W	05/03/83	0450	1165 M	310	18 KT			1012.2 MB	15.8 C	13.8 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	15.89	15.89	33.442	24.575	335.2	0.000										0	
10	15.89	15.89	33.443	24.576	335.4	0.034										10	
20	15.90	15.90	33.455	24.583	335.1	0.067										20	
30	15.96	15.96	33.521	24.621	331.8	0.100										30	
40	15.97	15.96	33.569	24.656	328.8	0.133										40	
50	15.77	15.76	33.616	24.738	321.3	0.166										50	
75	14.68	14.67	33.619	24.979	299.0	0.243										75	
100	13.09	13.08	33.669	25.347	264.5	0.314										100	
125	12.58	12.56	33.790	25.542	246.5	0.378										125	
150	11.60	11.58	33.850	25.775	224.8	0.437										151	
175	10.66	10.64	33.982	26.047	199.3	0.490										176	
200	10.14	10.12	34.004	26.155	189.5	0.538										201	
225	9.91	9.88	34.038	26.220	183.7	0.585										226	
250	9.23	9.20	34.110	26.389	167.9	0.629										252	
275	8.86	8.83	34.110	26.448	162.6	0.670										277	
300	8.35	8.32	34.141	26.552	153.0	0.710										302	
350	7.76	7.72	34.203	26.688	140.6	0.783										352	
400	7.47	7.43	34.233	26.754	135.0	0.852										403	
450	7.01	6.97	34.269	26.847	126.6	0.917										453	
500	6.53	6.48	34.303	26.939	118.2	0.979										504	

RV TOWNSEND CROMWELL				CRUISE 8302-3				STATION 90 45									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 55.1 N	118 56.1 W	05/03/83	1826 GMT	1664 M	320	8 KT	280 9 8	1	1017.9 MB	16.5 C	13.9 C	4/R		CU			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	15.37	15.37	33.519	24.750	318.5	0.000										0	
10	15.36	15.36	33.515	24.750	318.9	0.032										10	
20	15.33	15.33	33.521	24.761	318.2	0.064										20	
30	14.97	14.97	33.532	24.848	310.1	0.095										30	
40	14.03	14.02	33.545	25.058	290.4	0.125										40	
50	13.28	13.27	33.557	25.221	275.1	0.153										50	
75	12.74	12.73	33.668	25.415	257.3	0.220										75	
100	12.02	12.01	33.770	25.633	237.1	0.282										100	
125	11.29	11.27	33.864	25.842	217.8	0.339										125	
150	10.79	10.77	33.934	25.986	204.5	0.391										151	
175	10.24	10.22	33.998	26.132	191.1	0.441										176	
200	10.19	10.17	34.215	26.311	174.7	0.487										201	
225	9.84	9.81	34.245	26.394	167.2	0.529										226	
250	9.55	9.52	34.256	26.451	162.2	0.571										252	
275	9.12	9.09	34.260	26.524	155.6	0.610										277	
300	8.47	8.44	34.228	26.602	148.4	0.648										302	
350	7.80	7.76	34.199	26.679	141.5	0.721										352	
400	7.40	7.36	34.241	26.771	133.4	0.789										403	
450	6.92	6.88	34.291	26.877	123.7	0.854										453	
500	6.54	6.49	34.324	26.955	116.8	0.914										504	

RV TOWNSEND CROMWELL				CRUISE 8302-3				STATION 90 50									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 45.1 N	119 16.6 W	05/03/83	2326 GMT	255 M	240	10 KT	280 7 8	2	1016.6 MB	15.7 C	14.2 C	5/8		CC			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	15.39	15.39	33.511	24.740	319.6	0.000										0	
10	15.40	15.40	33.508	24.735	320.3	0.032										10	
20	15.34	15.34	33.514	24.753	318.8	0.064										20	
30	15.32	15.32	33.511	24.756	319.0	0.094										30	
40	15.31	15.30	33.514	24.761	318.8	0.128										40	
50	15.31	15.30	33.512	24.760	319.2	0.160										50	
75	15.00	14.99	33.562	24.866	309.8	0.238										75	
100	13.31	13.30	33.697	25.325	266.7	0.310										100	
125	12.30	12.28	33.747	25.563	244.5	0.374										125	
150	11.72	11.70	33.823	25.731	229.0	0.433										151	
175	10.92	10.90	33.920	25.953	208.3	0.488										176	
190	10.16	10.14	34.038	26.178	187.1	0.518										191	

RV TOWNSEND CROMWELL				CRUISE 8302-3				STATION 90 55									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 35.1 N	119 37.0 W	06/03/83	0445 GMT	1003 M	250	12 KT			1017.3 MB	16.2 C	14.0 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	15.76	15.76	33.447	24.608	332.1	0.000										0	
10	15.76	15.76	33.449	24.610	332.2	0.033										10	
20	15.73	15.73	33.450	24.618	331.8	0.066										20	
30	15.68	15.68	33.449	24.628	331.1	0.100										30	
40	15.68	15.67	33.451	24.630	331.2	0.133										40	
50	15.67	15.66	33.452	24.634	331.2	0.166										50	
75	14.74	14.73	33.431	24.822	314.0	0.246										75	
100	12.48	12.47	33.492	25.329	266.0	0.319										100	
125	11.86	11.84	33.664	25.581	242.6	0.383										125	
150	11.58	11.56	33.830	25.763	225.9	0.441										151	
175	10.60	10.58	33.940	26.025	201.4	0.495										176	
200	10.18	10.16	33.953	26.108	193.9	0.544										201	
225	9.62	9.59	34.023	26.257	180.1	0.591										226	
250	8.89	8.86	34.112	26.445	162.5	0.633										252	
275	8.36	8.33	34.020	26.455	161.7	0.674										277	
300	8.02	7.99	34.054	26.532	154.6	0.714										302	
350	7.84	7.80	34.204	26.677	141.7	0.788										352	
400	7.45	7.41	34.217	26.745	135.9	0.857										403	
450	7.04	7.00	34.260	26.836	127.7	0.923										453	
500	6.56	6.51	34.293	26.927	119.3	0.985										504	

RV TOWNSEND CROMWELL

CRUISE 8302-3

STATION 90 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
32 25.1 N	119 57.6 W	06/03/83	1055 GMT	832 M	320	17 KT			1017.9 MB	15.5 C	13.5 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	DOY	SI03	P04	NO3	NO2	CHL A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	16.01	16.01	33.565	24.643	328.8	0.000									0
10	16.01	16.01	33.563	24.641	329.2	0.033									10
20	16.02	16.02	33.565	24.641	329.6	0.066									20
30	16.02	16.02	33.563	24.640	330.0	0.099									30
40	16.02	16.01	33.562	24.639	330.4	0.132									40
50	16.01	16.00	33.560	24.640	330.6	0.165									50
75	14.43	14.42	33.450	24.902	306.3	0.245									75
100	12.86	12.85	33.484	25.250	273.7	0.317									100
125	11.24	11.22	33.557	25.612	239.5	0.381									125
150	10.10	10.08	33.752	25.964	206.4	0.437									151
175	9.52	9.50	33.851	26.138	190.3	0.486									176
200	8.90	8.88	33.945	26.312	174.1	0.532									201
225	8.70	8.68	34.050	26.425	163.7	0.574									226
250	8.65	8.62	34.139	26.503	156.8	0.614									252
275	8.21	8.18	34.180	26.603	147.6	0.652									277
300	7.91	7.88	34.201	26.664	142.1	0.689									302
350	7.48	7.45	34.195	26.722	137.2	0.758									352
400	7.14	7.10	34.245	26.810	129.4	0.825									403
450	6.88	6.84	34.266	26.863	125.0	0.889									453
500	6.48	6.43	34.296	26.940	118.0	0.949									504

RV ELLEN B. SCRIPPS				CRUISE 8303						STATION 90 28					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 28.3 N	117 47.0 W	18/03/83	0021 GMT	185 M	240	06 KT	250 05	5	1008.0 MB	15.3 C	13.3 C		7/8	CB	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PD4	NO3	NO2	CHL A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	0. BAR
0	16.32	16.32	33.365	24.418	350.2	0.000	5.90	105.4	3.1	0.34	0.3	0.00	0.17	0.19	0
9	16.01	16.01	33.377	24.498	342.8	0.031	5.94	105.4	3.1	0.33	0.2	0.00	0.40	0.07	9
10 ISL	15.96	15.96	33.382	24.513	341.4	0.035	5.92	105.1							10
20 ISL	15.50	15.49	33.450	24.670	326.8	0.068	5.69	100.1							20
29	15.08	15.08	33.529	24.822	312.6	0.097	5.37	93.7	4.8	0.54	2.5	0.01	0.64	0.21	29
30 ISL	15.05	15.05	33.537	24.835	311.4	0.100	5.33	93.0							30
40	14.73	14.72	33.606	24.958	300.0	0.130	4.99	86.5	6.7	0.68	4.7	0.00	0.22	0.16	40
50 ISL	14.12	14.11	33.585	25.073	289.5	0.160	4.82	82.5							50
53	13.90	13.89	33.578	25.111	285.7	0.168	4.77	81.3	7.3	0.77	6.5	0.00	0.22	0.18	53
69	12.77	12.76	33.650	25.395	259.1	0.212	4.14	68.9	11.5	1.06	11.0	0.00	0.06	0.08	69
75 ISL	12.34	12.33	33.696	25.515	247.7	0.227	3.92	64.6							75
82	11.91	11.90	33.754	25.641	235.9	0.244	3.70	60.5	15.8	1.32	15.2	0.00	0.03	0.06	82
100 ISL	11.42	11.41	33.797	25.767	224.3	0.286	3.56	57.6							100
101	11.41	11.40	33.802	25.771	223.9	0.288	3.55	57.5	18.4	1.46	17.6	0.00	0.01	0.04	101
125 ISL	10.82	10.81	34.028	26.056	197.3	0.338	2.52	40.3							125
127	10.78	10.76	34.051	26.079	195.2	0.342	2.43	38.9	26.7	1.90	22.9	0.00	0.00	0.05	128
150 ISL	10.53	10.51	34.097	26.162	187.8	0.387	2.24	35.7							151
153	10.52	10.50	34.113	26.173	186.8	0.392	2.22	35.3	29.6	2.02	24.2	0.00	0.01	0.05	154

RV ELLEN B. SCRIPPS				CRUISE 8303						STATION 90 30					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 24.9 N	117 53.0 W	18/03/83	0253 GMT	583 M	280	08 KT	270 05	6	1007.0 MB	14.7 C	12.1 C	6/8		NS	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PD4	NO3	NO2	CHL A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	0. BAR
0 ISL	16.33	16.33	33.389	24.434	348.7	0.000	5.97	106.6							0
1	16.33	16.33	33.389	24.434	348.7	0.003	5.97	106.6	2.1	0.34	0.3	0.00	0.36	0.04	1
10	16.33	16.33	33.402	24.445	348.0	0.035	5.94	106.1	2.1	0.35	0.2	0.00	0.25	0.09	10
20 ISL	16.32	16.32	33.415	24.457	347.1	0.070									20
28	15.67	15.67	33.505	24.674	326.7	0.097	5.52	97.4	3.2	0.46	0.4	0.01	1.29	0.23	28
30 ISL	15.55	15.54	33.522	24.715	322.9	0.103	5.45	95.9							30
42	14.93	14.92	33.611	24.918	303.8	0.141	4.95	86.1	5.9	0.66	4.3	0.02	0.37	0.24	42
50 ISL	14.52	14.51	33.658	25.045	292.0	0.165	4.62	79.8							50
51	14.46	14.45	33.666	25.062	290.3	0.167	4.58	79.0	7.8	0.80	6.9	0.00	0.21	0.17	51
66	13.01	13.00	33.755	25.429	255.8	0.208	3.68	61.6	13.6	1.22	13.2	0.00	0.04	0.09	66
75 ISL	12.59	12.58	33.810	25.556	243.9	0.231	3.40	56.4							75
79	12.46	12.45	33.834	25.598	240.0	0.241	3.31	54.8	16.9	1.37	15.7	0.00	0.02	0.11	79
93	12.00	11.99	33.882	25.723	228.3	0.273	3.02	49.5	19.3	1.55	18.0	0.00	0.02	0.09	93
100 ISL	11.66	11.65	33.922	25.821	219.2	0.289	2.84	46.2							100
116	10.92	10.91	34.035	26.041	198.5	0.322	2.44	39.1	26.2	1.85	22.5	0.00	0.02	0.06	116
125 ISL	10.68	10.67	34.080	26.121	191.1	0.340	2.28	36.3							125
134	10.50	10.48	34.120	26.182	185.5	0.357	2.15	34.2	29.3	2.01	24.4	0.00	0.01	0.06	135
150 ISL	10.16	10.15	34.122	26.245	179.8	0.386	2.02	31.9							151
162	9.92	9.90	34.123	26.284	176.3	0.408	1.96	30.8	33.6	2.03	26.1	0.00	0.01	0.06	163
190	9.33	9.31	34.213	26.452	160.8	0.455	1.81	28.0	37.5	2.22	27.7	0.00	0.00	0.04	191
200 ISL	9.22	9.20	34.233	26.489	157.4	0.471	1.76	27.2							201
219	9.04	9.02	34.262	26.538	153.1	0.500	1.68	25.9	40.2	2.32	29.0	0.00			220
250 ISL	8.58	8.55	34.214	26.578	149.7	0.547	1.64	25.0							252
256	8.48	8.45	34.209	26.584	149.2	0.556	1.63	24.9	44.3	2.33	30.1	0.00			256
300 ISL	7.93	7.90	34.221	26.682	140.5	0.620	1.27	19.1							302
314	7.77	7.74	34.242	26.717	137.3	0.639	1.13	16.9	53.6	2.51	32.6	0.00			316
366	7.18	7.14	34.286	26.836	126.4	0.708	0.72	10.6	62.5	2.76	35.0	0.00			369
400 ISL	6.78	6.75	34.305	26.911	119.6	0.750	0.54	7.9							403
425	6.53	6.49	34.410U				0.45		73.7	2.94	37.4	0.00			428
485	6.22	6.18	34.386	27.045	107.7	0.847	0.33	4.8	78.6	2.87	37.7	0.00			489
500 ISL	6.17	6.13	34.392	27.056	106.8	0.863									504

RV ELLEN R. SCRIPPS

CRUISE 8303

STATION 90 32

LATITUDE	LONGITUDE	DAY/MO/YR	MESSANGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE		
33 19.6 N	118 2.6 W	18/03/83	D519 GMT	713 M	280	04 KT	270		1007.0 MB	14.3 C	12.8 C		7/8			
DEPTH	TEMP	POT	TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL A	PHAEO	PRESS
M	DEG C	DEG C			THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	16.57	16.57		33.280	24.295	361.9	0.000	6.04	108.3	1.4	0.26	0.3	0.00	0.43	0.04	0
10	16.13	16.13		33.376	24.470	345.5	0.035	5.93	105.5	2.0	0.27	0.1	0.00	0.65	0.04	10
20 ISL	15.40	15.39		33.498	24.730	321.1	0.069	5.38	94.4							20
29	14.87	14.87		33.571	24.900	305.1	0.097	4.89	85.0	6.4	0.77	4.4	0.29	0.34	0.09	29
30 ISL	14.85	14.85		33.571	24.905	304.8	0.100									30
39	14.73	14.72						4.79	83.0	6.7	0.76	5.3	0.11	0.11	0.08	39
50	14.63	14.62		33.589	24.966	299.5	0.161	4.74	82.0	6.9	0.73	5.9	0.17	0.11	0.11	50
63	14.24	14.23		33.640	25.088	288.2	0.199	4.45	76.4	8.5	0.81	7.6	0.05	0.11	0.09	63
75 ISL	13.00	12.99		33.744	25.424	256.5	0.231	3.73	62.4							75
77	12.78	12.77		33.768	25.485	250.7	0.237	3.60	60.0	14.6	1.16	13.7	0.00	0.05	0.07	77
96	11.82	11.81		33.915	25.783	222.7	0.282	2.96	48.4	20.4	1.49	18.6	0.00	0.02	0.06	96
100 ISL	11.58	11.56		33.915	25.831	218.2	0.290	2.93	47.6							100
119	10.59	10.58		33.934	26.021	200.5	0.330	2.86	45.5	24.8	1.63	21.4	0.00	0.00	0.05	119
125 ISL	10.44	10.43		33.968	26.075	195.4	0.342	2.75	43.6							125
139	10.27	10.25		34.068	26.181	185.6	0.369	2.45	38.7	28.1	1.81	23.7	0.00	0.00	0.05	140
150 ISL	10.26	10.24		34.116	26.223	181.9	0.389	2.22	35.1							151
167	10.25	10.23		34.175	26.269	178.0	0.420	1.93	30.5	31.7	1.95	25.5	0.00	0.00	0.04	168
195	9.87	9.80		34.234	26.388	167.1	0.468	1.76	27.6	34.7	2.07	26.6	0.00	0.00	0.03	196
200 ISL	9.71	9.69		34.227	26.405	165.6	0.476	1.76	27.5							201
223	9.17	9.15		34.212	26.478	158.9	0.514	1.78	27.5	38.8	2.16	28.1	0.00			224
250 ISL	8.65	8.62		34.210	26.563	151.1	0.556	1.64	25.0							252
260	8.47	8.44		34.220	26.594	148.3	0.571	1.56	23.7	44.2	2.26	30.0	0.00			262
300 ISL	7.80	7.77		34.240	26.715	137.2	0.628	1.19	17.8							302
316	7.58	7.55		34.258	26.757	133.4	0.649	1.04	15.5	55.6	2.54	33.3	0.00			318
386	7.01	6.97		34.298	26.870	123.5	0.739	0.64	9.4	64.8	2.69	35.4	0.00			389
400 ISL	6.88	6.84		34.296	26.891	121.6	0.757	0.58	8.5							403
459	6.37	6.33		34.400U				0.39		76.4	2.86	37.3	0.00			462
500 ISL	6.10	6.05		34.335	27.027	109.6	0.873	0.35	5.0							504
539	5.89	5.84		34.368	27.073	105.4	0.914	0.31	4.4	85.4	2.94	37.0	0.00			543

RV ELLEN R. SCRIPPS

CRUISE F303

STATION 90 35

LATITUDE	LONGITUDE	DAY/MO/YR	MESSANGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 14.1 N	118 13.8 W	19/03/83	D838 GMT	880 M	220	20 KT			1007.0 MB	14.7 C	13.0 C		4/9		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY PCT	SI03	PO4	NO3	NO2	CHL A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L		UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	15.91	15.91	33.423	24.556	337.0	0.000	5.87	104.0	3.2	0.20	0.2	0.00	0.39	0.10	0
8	15.90	15.90	33.423	24.558	337.1	0.027	5.89	104.4	3.3	0.17	0.1	0.00	0.41	0.08	8
10 ISL	15.90	15.90	33.423	24.559	337.1	0.034									10
20 ISL	15.89	15.89	33.423	24.561	337.2	0.067									20
25	15.52 A	15.52	33.524	24.722	322.1	0.084	5.53	97.3	3.5	0.27	0.9	0.00	1.29	0.21	25
30 ISL	15.26	15.26	33.564	24.811	313.7	0.100	5.33	93.3							30
33	15.15	15.14	33.573	24.841	310.9	0.109	5.22	91.2				0.00	0.41	0.16	33
41	14.98	14.97	33.574	24.879	307.5	0.134	5.18	90.2	4.7	0.37	3.2	0.00	0.38	0.15	41
50 ISL	14.40	14.39	33.541	24.980	298.1	0.161	5.04	86.7							50
55	14.05	14.04	33.539	25.050	291.6	0.176	4.96	84.7	6.7	0.52	5.5	0.00	0.26	0.12	55
67	13.71	13.70	33.654	25.209	276.7	0.210	4.19	71.1	10.5	0.78	9.5	0.00	0.08	0.09	67
75 ISL	13.52	13.51	33.703	25.289	269.4	0.232	3.96	67.0							75
84	13.24	13.23	33.752	25.381	260.8	0.256	3.79	63.8	13.1	1.01	12.3	0.00	0.03	0.05	84
100 ISL	12.30	12.28	33.840	25.637	236.8	0.295	3.21	53.0							100
104	12.05	12.04	33.862	25.699	231.0	0.305	3.10	50.9	18.7	1.28	17.5	0.00	0.02	0.06	104
120	11.41	11.39	33.876	25.829	218.9	0.341	3.18	51.5	19.9	1.32	18.6	0.00	0.01	0.04	120
125 ISL	11.24	11.22	33.882	25.868	215.2	0.352	3.14	50.7							125
142	10.72	10.70	33.936	26.000	203.0	0.387	2.91	46.4	23.1	1.43	21.2	0.00	0.01	0.04	143
150 ISL	10.50	10.48	33.964	26.064	197.0	0.403	2.76	43.9							151
164	10.15	10.13	34.025	26.169	187.4	0.430	2.52	39.7	28.5	1.63	23.8	0.00	0.01	0.04	165
185	9.76	9.74	34.085	26.281	177.0	0.468	2.32	36.3	31.9	1.81	25.5	0.00			186
200 ISL	9.49	9.47	34.126	26.362	169.6	0.494	2.21	34.3							201
211	9.31	9.29	34.159	26.414	164.9	0.513	2.13	33.0	34.8	1.88	27.1	0.00			212
245	8.81	8.78	34.174	26.504	156.6	0.568	1.90	29.1	39.3	1.97	28.7	0.00			247
250 ISL	8.79	8.77	34.174	26.513	156.0	0.575	1.85	28.3							252
280	8.49	8.46	34.235	26.604	147.8	0.621	1.58	24.0	43.9	2.11	30.3	0.00			282
283	8.41	8.38	34.243	26.622	146.1	0.625	1.56	23.7	44.3	2.13	30.5	0.12U			285
300 ISL	8.24	8.21	34.234	26.645	144.1	0.650	1.45	22.0							302
361B	7.65	7.61	34.232	26.727	137.0	0.736	1.17	17.4							364

A) MEAN VALUE OF 15.49 AND 15.55 DEGREES CELSIUS.

B) THE SHIP APPARENTLY DRIFTED INTO SHALLOW WATER WHILE OCCUPYING THIS STATION. THE WATER SAMPLES FROM THE LAST NANSEN BOTTLE CONTAINED PARTICULATE MATTER INDICATING THE BOTTLE MAY HAVE TOUCHED BOTTOM DURING THE CAST.

RV ELLEN B. SCRIPPS

CRUISE 8303

STATION 90 37

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 8.4 N	118 23.3 W	18/03/83	1145 GMT	1203 M	270	20 KT	280 06 04		1006.0 MB	14.1 C	12.3 C		6/8		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0 ISL	15.98	15.98	33.57	24.653	327.8	0.000	5.79	102.8	2.2	0.32	0.1	0.00	0.21	0.01	0
8	15.98	15.98	33.571	24.654	327.9	0.026	5.80	103.0	3.1	0.36	0.1	0.00	0.20	0.04	8
10 ISL	15.97	15.97	33.569	24.655	327.9	0.033	5.81	103.2							10
20 ISL	15.91	15.90	33.555	24.660	327.8	0.066	5.87	104.0							20
24	15.87	15.87	33.548	24.662	327.8	0.079	5.89	104.4	3.0	0.39	0.0	0.00	0.33	0.07	24
30 ISL	15.82	15.82	33.550	24.675	326.7	0.098									30
48	14.23	14.22	33.593	25.054	291.0	0.154	4.85	83.2	8.5	0.78	6.1	0.00	0.45	0.16	48
50 ISL	14.16	14.15	33.594	25.071	289.5	0.160	4.80	82.3							50
56	14.00	13.99	33.603	25.110	286.0	0.177	4.68	79.9	8.8	0.82	7.0	0.00	0.30	0.17	56
67	13.70	13.69	33.630	25.193	278.3	0.208	4.44	75.3	10.2	0.94	8.7	0.00	0.15	0.12	67
75 ISL	13.36	13.35	33.643	25.274	270.8	0.230	4.23	71.3							75
78	13.23	13.22	33.653	25.306	267.8	0.238	4.15	69.8	11.8	1.01	10.5	0.00	0.10	0.10	78
90	12.82	12.81	33.706	25.429	256.4	0.270	3.87	64.5	14.2	1.14	12.4	0.00	0.07	0.07	90
100 ISL	12.29	12.28	33.747	25.565	243.5	0.294	3.69	60.9							100
107	11.91	11.90	33.785	25.665	234.2	0.311	3.56	58.2	17.9	1.35	15.4	0.00	0.03	0.06	107
122	11.29	11.27	33.881	25.855	216.4	0.345	3.16	51.0	21.2	1.57	18.6	0.00	0.01	0.04	122
125 ISL	11.18	11.16	33.893	25.887	213.4	0.351	3.10	49.9							125
144	10.54	10.52	33.982	26.067	196.6	0.390	2.74	43.6	25.8	1.66	21.6	0.00	0.00	0.03	145
150 ISL	10.36	10.34	34.009	26.123	191.4	0.402	2.61	41.3							151
165	9.98	9.96	34.081	26.241	180.4	0.430	2.33	36.6	30.7	1.85	24.1	0.00	0.00	0.04	166
186	9.75	9.73	34.133	26.321	173.3	0.467	2.20	34.4	33.0	2.05	25.1	0.00			187
200 ISL	9.57	9.54	34.148	26.367	169.1	0.491	2.12	33.0							201
222	9.25	9.23	34.174	26.435	163.0	0.528	1.99	30.8	37.0	2.16	26.5	0.00			223
250 ISL	8.82	8.79	34.191	26.522	155.1	0.572	1.85	28.3							252
262	8.63	8.60	34.204	26.557	151.9	0.591	1.73	27.1	42.1	2.17	28.1	0.00			264
300 ISL	8.08	8.05	34.213	26.653	143.2	0.647	1.50	22.5							302
328	7.72	7.69	34.225	26.711	138.0	0.686	1.27	19.0	52.6	2.60	31.7	0.00			330
400 ISL	7.09	7.06	34.231	26.811	129.3	0.783	0.76	11.2							403
402	7.08	7.04	34.239	26.814	129.0	0.785	0.75	11.0	63.0	2.69	34.4	0.00			405
481	6.44	6.40	34.316	26.961	115.7	0.882	0.43	6.2	74.1	2.89	36.6	0.00			495
500 ISL	6.30	6.25	34.327	26.988	113.3	0.904									504

RV ELLEN B. SCRIPPS

CRUISE 8303

STATION 90 45

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
32 56.0 N	118 55.7 W	18/03/83	1943 GMT	1756 M	260	14 KT	270 06 05		1007.0 MB	15.2 C	12.4 C		6/8		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	15.46	15.46	33.501	24.716	321.8	0.000	5.87	103.2	2.2	0.38	0.1	0.01	0.25	0.06	0
9	15.47	15.47	33.494	24.709	322.8	0.029	5.89	103.5	2.2	0.34	0.1	0.00	0.28	0.07	9
10 ISL	15.47	15.47	33.494	24.709	322.8	0.032	5.89	103.5							10
20 ISL	15.46	15.46	33.491	24.710	323.0	0.065	5.88	103.3							20
30 ISL	15.45	15.45	33.488	24.710	323.3	0.097	5.87	103.2							30
32	15.45	15.45	33.489	24.710	323.3	0.103	5.87	103.1	2.0	0.34	0.1	0.00	0.30	0.04	32
50 ISL	15.40	15.39	33.474	24.713	323.6	0.162	5.84	102.4							50
59	15.37	15.36	33.470	24.714	323.8	0.191	5.81	101.9	2.0	0.34	0.1	0.00	0.36	0.08	59
67	15.29	15.28	33.485	24.744	321.2	0.216	5.78	101.2	2.1	0.35	0.1	0.00	0.39	0.15	67
75 ISL	14.72	14.71	33.482	24.865	309.8	0.242									75
86	13.94	13.93	33.479	25.027	294.6	0.275	5.24	89.3	5.1	0.59	4.0	0.03	0.20	0.12	86
100	12.41	12.40	33.453	25.313	267.6	0.314	4.92	81.2	7.9	0.81	7.9	0.00	0.09	0.12	100
114	12.40	12.38	33.676	25.488	251.3	0.351	4.00	66.1	13.2	1.16	12.7	0.00	0.03	0.07	114
125 ISL	12.29	12.28	33.736	25.558	245.0	0.378	3.70	60.9							125
141	11.94	11.92	33.771	25.650	236.6	0.417	3.50	57.3	16.9	1.36	16.2	0.00	0.02	0.06	142
150 ISL	11.59	11.57	33.805	25.745	227.7	0.437	3.35	54.1							151
159	11.21	11.19	33.853	25.848	217.9	0.457	3.16	50.9	20.7	1.55	19.2	0.00	0.01	0.06	160
186	10.30	10.28	34.023	26.142	190.4	0.513	2.70	42.7	26.5	1.80	22.9	0.00	0.00	0.06	187
200 ISL	10.04	10.01	34.094	26.246	180.8	0.539	2.39	37.7							201
218	9.79	9.76	34.164	26.339	172.3	0.571	2.08	32.6	32.7	2.06	25.8	0.00	0.00	0.04	219
245	9.37	9.34	34.159	26.405	166.4	0.616	2.06	31.9	35.5	2.14	27.0	0.00			247
250 ISL	9.29	9.26	34.155	26.420	165.0	0.625	2.05	31.7							252
291	8.56	8.53	34.183	26.552	152.9	0.690	1.89	28.8	41.4	2.24	29.2	0.00			293
300 ISL	8.38	8.35	34.177	26.579	150.4	0.703	1.83	27.7							302
351	7.48	7.45	34.196	26.723	137.1	0.777	1.41	20.9	53.3	2.33	32.0	0.00			353
400 ISL	7.03	6.99	34.274	26.854	125.1	0.841	1.01	14.8							403
444	6.74	6.70	34.353	26.950	116.5	0.895	0.70	10.2	67.0	2.81	36.6	0.00			447
500 ISL	6.19	6.14	34.339	27.018	110.4	0.959	0.46	6.7							504
530	5.91	5.86	34.337	27.046	107.8	0.991	0.39	5.6	81.2	3.01	39.3	0.00			514
600 ISL	5.51	5.46	34.379	27.134	100.0	1.064	0.33	4.7							605
604	5.50	5.45	34.391	27.140	99.5	1.068	0.33	4.7	88.6	3.06	40.5	0.00			609

RV ELLEN B. SCRIPPS				CRUISE R303							STATION 90 53				
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
32 37.6 N	119 29.0 W	19/03/83	0230 GMT	1331 M	250	15 KT	270 10 06	1	1006.0 MB	13.9 C	12.0 C		7/8	CB	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0 ISL	15.87	15.87	33.505	24.628	330.2	0.000	5.84	103.5							0
1	15.87	15.87	33.505	24.628	330.2	0.003	5.84	103.5	2.0	0.32	0.1	0.00	0.15	0.02	1
10	15.86	15.86	33.541U				5.80		2.1	0.33	0.0	0.00	0.14	0.02	10
20 ISL	15.87	15.86	33.500	24.626	331.0	0.066	5.80	102.7							20
28	15.87	15.87	33.501	24.626	331.3	0.093	5.80	102.7	2.0	0.39	0.0	0.00	0.14	0.04	28
30 ISL	15.86	15.86	33.500	24.627	331.2	0.099	5.80	102.7							30
50 ISL	15.81	15.81	33.516	24.653	329.4	0.165	5.81	102.8							50
55	15.80	15.79	33.527	24.663	328.6	0.182	5.81	102.8	2.4	0.36	0.0	0.00	0.20	0.06	55
64	15.65	15.64	33.507	24.681	327.1	0.211	5.83	102.8	2.8	0.36	0.0	0.01	0.26	0.09	64
75 ISL	15.41	15.40	33.510	24.737	322.2	0.247									75
78	15.34	15.33	33.512	24.754	320.6	0.257	5.76	101.0	2.7	0.38	0.3	0.00	0.58	0.22	78
92	13.79	13.78	33.583	24.984	298.9	0.300	5.54	94.0	5.0	0.41	2.4	0.01	0.32	0.20	92
100 ISL	13.48	13.47	33.460	25.110	287.1	0.323	5.08	85.7							100
104	13.38	13.37	33.516	25.171	281.4	0.335	4.83	81.4	7.8	0.83	7.1	0.00	0.13	0.12	104
125 ISL	12.15	12.13	33.573	25.460	254.2	0.391	4.29	70.5							125
126	12.08	12.06	33.578	25.473	253.0	0.394	4.28	70.2	12.7		12.3	0.00	0.03	0.07	126
144	11.08	11.04	33.657	25.719	229.3	0.437	3.98	63.9	16.4		15.8	0.00	0.02	0.08	145
150 ISL	10.03	10.01	33.708	25.788	223.3	0.451	3.76	60.1							151
170	10.44	10.62	33.899	25.986	205.0	0.493	3.00	47.8	23.4		20.9	0.00	0.00	0.04	171
197	10.01	9.89	34.018	26.188	186.2	0.546	2.60	40.9	28.5		23.8	0.00	0.00	0.04	198
200 ISL	9.91	9.91	34.020	26.207	184.4	0.552	2.59	40.7							201
224	9.27	9.25	34.060	26.343	171.8	0.595	2.53	39.1	32.6		25.8	0.00			225
250 ISL	8.52	8.49	34.062	26.463	160.6	0.638									252
269	8.06	8.03	34.063	26.533	154.0	0.668	2.45	36.8	40.6		28.9	0.00			271
300 ISL	7.71	7.68	34.084	26.605	147.5	0.715	2.17	32.3							302
321	7.59	7.56	34.112	26.641	144.4	0.745	1.93	28.7	47.8	2.39	31.3	0.00			323
400	6.92	6.88	34.177	26.787	131.4	0.854	1.16	17.0	59.9		35.2	0.00			403
481	6.41	6.37	34.266	26.926	119.1	0.956	0.62	9.0	70.4	2.92	38.1	0.03			485
500 ISL	6.28	6.23	34.274	26.955	116.4	0.978	0.54	7.8							504
564	5.81	5.76	34.321	27.046	108.2	1.050	0.40	5.7	80.3		39.8	0.00			569

RV ELLEN B. SCRIPPS				CRUISE R303						STATION 90 62					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
32 19.9 N	120 7.5 W	19/03/83	0952 GMT	2595 M	300	20 KT	270 08 05		1010.0 MB	14.7 C	11.7 C		7/8		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	15.37	15.37	33.360	24.627	330.2	0.000	5.93	103.9	2.3	0.34	0.3	0.03	0.10	0.02	0
7	15.36	15.36	33.361	24.631	330.1	0.023	5.86	102.7	2.2	0.33	0.1	0.00	0.10	0.02	7
10 ISL	15.36	15.36	33.361	24.630	330.3	0.033	5.86	102.7							10
20 ISL	15.37	15.37	33.360	24.629	330.7	0.066	5.86	102.6							20
30 ISL	15.38	15.37	33.359	24.627	331.2	0.099	5.85	102.6							30
41	15.39	15.38	33.361	24.625	331.7	0.136	5.85	102.6	2.2	0.37	0.0	0.01	0.11	0.02	41
50 ISL	15.37	15.36	33.369	24.638	328.7	0.165	5.84	102.4							50
70	15.33	15.32	33.487	24.737	322.0	0.230	5.83	102.2	1.9	0.33	0.0	0.00			70
75 ISL	15.07	15.06	33.470	24.784	317.6	0.246	5.77	100.5							75
84	14.42	14.41	33.445	24.901	306.7	0.274	5.57	95.8	3.1	0.45	1.6	0.01	0.35	0.21	84
96	13.23	13.22	33.440	25.142	283.9	0.310	5.07	85.1	6.7	0.72	6.1	0.02	0.18	0.14	96
100 ISL	12.93	12.92	33.448	25.211	277.4	0.321	4.93	82.3							100
111	12.20	12.19	33.490	25.382	261.3	0.351	4.64	76.2	10.0	0.93	10.2	0.00	0.08	0.10	111
125 ISL	11.25	11.23	33.507	25.574	243.1	0.386	4.51	72.6							125
126	11.19	11.17	33.513	25.587	242.0	0.388	4.50	72.4	12.9	1.09	13.2	0.00	0.06	0.08	126
141	10.71	10.69	33.621	25.756	226.1	0.424	4.11	65.4	16.6	1.27	16.3	0.00	0.04	0.05	142
150 ISL	10.49	10.47	33.678	25.842	218.1	0.444	3.90	61.8							151
162	10.24	10.22	33.760	25.947	208.4	0.469	3.63	57.2	20.9	1.50	19.5	0.02	0.01	0.03	163
183	9.80	9.78	33.887	26.120	192.2	0.511	3.17	49.5	25.5	1.65	22.2	0.02	0.00	0.03	184
200 ISL	9.25	9.23	33.935	26.251	180.0	0.543	3.13	48.3							201
202	9.19	9.17	33.944	26.265	178.7	0.547	3.12	48.1	29.5	1.77	24.3	0.01	0.00	0.02	203
227	8.73	8.71	33.999	26.381	168.0	0.590	2.99	45.6	32.6	1.85	25.6	0.02			228
250 ISL	8.32	8.29	34.010	26.456	161.1	0.628	2.96	44.8							252
259	8.19	8.16	34.022	26.481	158.8	0.642	2.95	44.5	37.1	1.94	27.0	0.00			261
299	8.03	8.00	34.143	26.601	148.1	0.703	1.87	28.1	45.1	2.28	30.6	0.00			301
300 ISL	8.02	7.99	34.139	26.604	147.9	0.705	1.85	27.8							302
363	7.47	7.43	34.226	26.748	134.9	0.794	1.15	17.1	55.5	2.58	33.8	0.00			366
400 ISL	7.19	7.15	34.244	26.807	129.7	0.843	0.94	13.8							403
439	6.93	6.89	34.266	26.856	125.5	0.893	0.80	11.7	64.4	2.77	36.2	0.00			442
500 ISL	6.57	6.53	34.278	26.920	120.1	0.968	0.60	8.7							504
508	6.53	6.48	34.287	26.927	119.5	0.978	0.58	8.4	70.9	2.89	37.7	0.05			512

RV EKVATOR				CRUISE R303										STATION 90 30			
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 25.1 N	117 54.3 W	23/03/83	1325 GMT	580 M	240	4 KT	220 2		1023.2 MB	16.0 C							
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	16.30	16.30	33.47	24.503	342.0	0.000	5.57	99.5							0		
10	15.85	15.85	33.41	24.560	337.0	0.034									10		
20	15.55	15.55	33.44	24.650	328.7	0.067									20		
30	14.88	14.88	33.52	24.859	309.1	0.099	4.97	86.3							30		
50	13.42	13.41	33.60	25.226	274.6	0.158	4.10	69.2							50		
75	12.20	12.19	33.89	25.691	231.0	0.221									75		
100	11.84	11.83	33.98	25.830	218.4	0.277	2.85	46.6							100		
125 ISL	11.60	11.58	34.04	25.925	210.0	0.331	2.50	40.7							125		
150	11.41	11.39	34.09	25.996	203.8	0.382									151		
200	11.03	11.01	34.14	26.121	193.1	0.492	1.95	31.4							201		
250	9.16	9.13	34.25	26.510	156.5	0.569									252		
300	8.43	8.40	34.29	26.656	143.2	0.644	1.60	24.3							302		
400	7.06	7.02	34.37	26.920	119.1	0.775	0.94	13.8							403		
500	6.09	6.05	34.41	27.081	104.4	0.887									504		

RV EKVATOR				CRUISE 8303										STATION 90 37				
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE				
33 11.1 N	118 23.1 W	23/03/83	1020 GMT	1180 M	270	8 KT	250 3		1024.4 MB	16.3 C								
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAEO	PRESS			
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR			
0	15.83	15.83	33.61	24.718	321.6	0.000	5.93	105.0							0			
10	15.81	15.81	33.57	24.692	324.4	0.032									10			
20	15.70	15.70	33.57	24.717	322.4	0.065									20			
30	15.52	15.52	33.54	24.734	321.0	0.097	5.88	103.5							30			
50	14.22	14.21	33.57	25.038	292.6	0.158	5.43	93.1							50			
75	12.75	12.74	33.68	25.422	256.6	0.227									75			
100	12.01	12.00	33.75	25.619	238.4	0.289	3.73	61.1							100			
125 ISL	11.18	11.17	33.82	25.827	219.1	0.346	3.24	52.2							125			
150	10.37	10.35	33.90	26.033	200.0	0.398									151			
200	9.09	9.07	34.10	26.403	165.5	0.490	2.42	37.3							201			
250	8.89	8.86	34.12	26.451	161.9	0.572									252			
300	8.36	8.33	34.19	26.589	149.6	0.649	1.81	27.4							302			
400	7.30	7.26	34.26	26.800	130.6	0.789	0.95	14.1							403			

RV EKVATOR				CRUISE R303										STATION 90 44				
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE				
32 56.6 N	118 53.9 W	23/03/83	0620 GMT	1200 M	230	10 KT	260 4		1023.5 MB	15.0 C								
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAEO	PRESS			
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR			
0	15.23	15.23	33.54	24.797	314.1	0.000	5.87	102.7							0			
10	15.03	15.03	33.50	24.810	313.1	0.031									10			
20	15.11	15.11	33.50	24.793	315.1	0.063									20			
30	15.27	15.27	33.50	24.758	318.7	0.094	5.65	98.9							30			
50	15.23	15.22	33.50	24.768	318.4	0.158	5.69	99.5							50			
75	14.73	14.72	33.52	24.892	307.3	0.236									75			
100	13.46	13.45	33.64	25.250	273.8	0.309	4.66	78.7							100			
125 ISL	12.35	12.34	33.74	25.551	245.7	0.374	4.32	71.3							125			
150	11.43	11.41	33.84	25.798	222.6	0.433									151			
200	10.21	10.19	34.01	26.147	190.2	0.536	3.40	53.7							201			
250	9.41	9.38	34.16	26.399	167.1	0.626									252			
300	8.75	8.72	34.24	26.568	151.8	0.705	1.67	25.5							302			
400	7.48	7.44	34.30	26.806	130.2	0.846	0.88	13.1							403			
500	6.44	6.39	34.33	26.972	115.0	0.969									504			

RV EKVATOR				CRUISE R303								STATION 90 53					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 38.9 N	119 28.8 W	23/03/83	0245 GMT	1098 M	250	8 KT			1022.1 MB	14.2 C							
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	15.45	15.45	33.52	24.733	320.1	0.000	5.53	97.2							0		
10	15.43	15.43	33.54	24.753	318.6	0.032									10		
20	15.36	15.36	33.58	24.800	314.5	0.064									20		
30	15.47	15.47	33.56	24.760	318.5	0.095	5.06	89.0							30		
50	15.44	15.43	33.57	24.776	317.7	0.159	5.39	94.7							50		
75	14.72	14.71	33.57	24.933	303.4	0.236									75		
100	12.53	12.52	33.66	25.450	254.6	0.306	4.20	69.6							100		
125 ISL	11.29	11.28	33.71	25.722	229.1	0.368	3.85	62.1							125		
150	10.57	10.55	33.76	25.889	213.6	0.423									151		
200	9.53	9.51	34.04	26.285	176.9	0.521	3.08	47.9							201		
250	8.93	8.90	34.14	26.460	161.0	0.605									252		
300	8.27	8.24	34.13	26.555	152.6	0.684	1.81	27.4							302		
400	7.11	7.07	34.18	26.763	133.8	0.827	1.10	16.2							403		
500	6.24	6.19	34.35	27.014	110.8	0.949									504		

RV EKVATOR					CRUISE 8303					STATION 90 60						
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE		
32 24.8 N	119 56.8 W	22/03/83	2235 GMT	1555 M	040	8 KT			1023.2 MB	14.2 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS	
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR	
0	15.36	15.36	33.44	24.691	324.1	0.000	5.72	100.3								0
10	15.30	15.30	33.40	24.674	326.1	0.033										10
20	15.22	15.22	33.40	24.692	324.7	0.065										20
30	15.34	15.34	33.40	24.666	327.5	0.098	5.61	98.3								30
50	15.32	15.31	33.40	24.671	327.6	0.163	5.54	97.0								50
75	14.71	14.70	33.40	24.804	315.6	0.244										75
100	12.73	12.72	33.37	25.186	279.7	0.318	5.08	84.4								100
125 ISL	11.58	11.57	33.49	25.497	250.5	0.385	4.74	76.9								125
150	10.86	10.84	33.65	25.753	226.7	0.445										151
200	9.58	9.56	33.86	26.136	191.0	0.549	3.54	55.0								201
250	8.65	8.62	34.07	26.449	161.9	0.637										252
300	8.09	8.06	34.08	26.543	153.7	0.716	1.83	27.5								302
400	6.96	6.92	34.12	26.736	136.2	0.861	1.20	17.6								403
500	6.07	6.03	34.25	26.957	116.0	0.987										504

RV EKVATOR					CRUISE 8303					STATION 90 70						
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE		
32 5.7 N	120 37.2 W	22/03/83	1805 GMT	2300 M	260	16 KT	290 6		1022.1 MB	15.7 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS	
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR	
0	15.61	15.61	33.50	24.682	325.0	0.000	5.28	93.1								0
10	15.54	15.54	33.47	24.675	326.0	0.033										10
20	15.46	15.46	33.47	24.693	324.6	0.065										20
30	15.59	15.59	33.48	24.672	326.9	0.098	5.86	103.2								30
50	15.56	15.55	33.48	24.680	326.8	0.163	5.74	101.0								50
75	14.51	14.50	33.48	24.908	305.7	0.242										75
100	12.64	12.63	33.60	25.382	261.1	0.313	5.38	89.3								100
125 ISL	11.64	11.62	33.76	25.702	231.2	0.375	4.79	77.9								125
150	11.05	11.03	33.92	25.929	210.0	0.431										151
200	9.89	9.87	34.10	26.272	178.3	0.528	2.80	43.9								201
250	9.07	9.04	34.17	26.461	161.0	0.613										252
300	8.27	8.24	34.16	26.579	150.4	0.690	1.53	23.1								302
400	7.27	7.23	34.14	26.709	139.0	0.835	0.97	14.3								403
500	6.59	6.54	34.31	26.937	118.5	0.964										504

RV EKVATOR					CRUISE 8303					STATION 90 80						
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE		
31 45.1 N	121 18.9 W	22/03/83	1315 GMT	3685 M	300	16 KT	270 8		1022.2 MB	16.2 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS	
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR	
0	15.87	15.87	33.53	24.647	328.4	0.000	5.53	98.0								0
10	15.81	15.81	33.51	24.646	328.8	0.033										10
20	15.77	15.77	33.51	24.655	328.3	0.066										20
30	15.86	15.86	33.52	24.643	329.8	0.099	5.57	98.7								30
50	15.82	15.81	33.52	24.652	329.4	0.165	5.53	97.9								50
75	13.86	13.85	33.42	24.998	297.1	0.243										75
100	11.43	11.42	33.43	25.478	251.7	0.311	5.19	83.9								100
125 ISL	10.27	10.26	33.56	25.788	222.7	0.371	4.75	74.8								125
150	9.74	9.72	33.72	25.999	203.0	0.425										151
200	8.82	8.80	33.94	26.320	173.2	0.519	3.29	50.3								201
250	8.14	8.11	34.04	26.503	156.5	0.602										252
300	7.46	7.43	34.04	26.603	147.6	0.678	2.35	34.8								302
400	6.32	6.28	34.09	26.797	129.8	0.816	1.12	16.2								403
500	5.72	5.68	34.28	27.024	109.3	0.936										504

RV EKVATOR					CRUISE 8303					STATION 90 90						
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE		
31 25.6 N	122 0.5 W	22/03/83	0820 GMT	3600 M	200	8 KT	180 3		1022.4 MB	16.5 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS	
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR	
0	15.32	15.32	33.35	24.631	329.9	0.000	5.67	99.3								0
10	15.30	15.30	33.30	24.597	333.4	0.033										10
20	15.18	15.18	33.31	24.631	330.5	0.066										20
30	15.34	15.34	33.31	24.597	334.1	0.100	5.62	98.4								30
50	15.40	15.39	33.32	24.592	335.2	0.167	5.68	99.6								50
75	15.54	15.53	33.30	24.546	340.3	0.251										75
100	13.67	13.66	33.30	24.945	302.8	0.331	5.23	88.5								100
125 ISL	12.33	12.31	33.32	25.232	275.9	0.404	5.08	83.6								125
150	11.33	11.31	33.39	25.466	254.0	0.471										151
200	9.84	9.82	33.66	25.937	210.0	0.587	4.34	67.8								201
250	9.57	9.54	33.96	26.217	184.5	0.685										252
300	7.67	7.64	34.17	26.675	140.9	0.766	1.89	28.2								302
400	6.58	6.54	34.25	26.890	121.4	0.898	1.20	17.5								403
500	5.92	5.88	34.30	27.015	110.3	1.014										504

RV EKVATOR				CRUISE 8303				STATION 90 100									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
31 5.7 N	122 42.1 W	22/03/83	0320 GMT	4250 M	020	6 KT			1022.1 MB	14.6 C							
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	15.37	15.37	33.36	24.627	330.2	0.000	5.53	96.9								0	
10	15.34	15.34	33.31	24.596	333.5	0.033										10	
20	15.23	15.23	33.31	24.620	331.5	0.066										20	
30	15.41	15.41	33.31	24.581	335.6	0.100	5.61	98.4								30	
50	15.25	15.24	33.32	24.625	332.0	0.167	5.56	97.2								50	
75	14.27	14.26	33.35	24.859	310.4	0.247										75	
100	13.92	13.91	33.37	24.948	302.6	0.323	5.57	94.8								100	
125 ISL	12.88	12.86	33.39	25.180	280.9	0.396	5.16	85.9								125	
150	11.97	11.95	33.51	25.442	256.5	0.463										151	
200	12.73	12.70	34.09	25.747	229.2	0.585	3.62	60.3								201	
250	9.46	9.43	33.91	26.195	186.4	0.689										252	
300	9.06	9.03	33.95	26.292	178.0	0.780	2.65	40.7								302	
400	7.07	7.03	34.17	26.761	134.0	0.936	1.42	20.9								403	
500	5.97	5.93	34.28	26.993	112.5	1.059										504	

RV EKVATOR				CRUISE 8303				STATION 90 110									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
30 45.0 N	123 20.0 W	21/03/83	2230 GMT	3800 M	010	6 KT			1022.3 MB	14.7 C							
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	15.68	15.68	33.39	24.582	334.5	0.000	6.21	109.5								0	
10	15.66	15.66	33.37	24.572	335.9	0.034										10	
20	15.68	15.68	33.37	24.567	336.6	0.067										20	
30	15.68	15.68	33.37	24.568	336.9	0.101	5.75	101.4								30	
50	15.57	15.56	33.39	24.608	333.6	0.168										50	
75	14.79	14.78	33.41	24.795	316.6	0.249										75	
100	13.34	13.33	33.42	25.104	287.6	0.325	6.09	102.4								100	
125 ISL	11.89	11.87	33.48	25.435	256.5	0.393	5.97	97.5								125	
150	10.62	10.60	33.60	25.756	226.3	0.453										151	
200	9.11	9.09	33.95	26.282	177.0	0.554	5.62	86.5								201	
250	8.34	8.31	34.13	26.543	152.8	0.636										252	
300	7.53	7.50	34.10	26.640	144.1	0.711	3.06	45.5								302	
400	6.41	6.37	34.17	26.849	125.1	0.845	2.08	30.1								403	

RV WECOMA				CRUISE 8304				STATION 90 28									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 28.5 N	117 46.7 W	07/04/83	1539 GMT	158 M			300 03	0	1015.0 MB	15.0 C	10.9 C	0/8		CI			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	14.84	14.84	33.496	24.848	309.3	0.000	6.11	106.1							0		
1	14.84	14.84	33.496	24.848	309.3	0.003	6.11	106.1	3.6	0.49	0.7	0.02	5.96	0.55	1		
5	14.84	14.84	33.498	24.849	309.2	0.015	6.09	105.7	3.6	0.50	0.6	0.00	5.85	0.72	5		
10	14.84	14.84	33.501	24.852	309.2	0.031	6.09	105.7	3.4	0.54	0.6	0.00	6.01	0.64	10		
20 ISL	14.06	14.05	33.583	25.083	287.5	0.060	5.06	86.9							20		
30	13.01	13.01	33.703	25.387	258.7	0.088	3.83	64.1	13.6	1.15	12.0	0.03	0.41	0.26	30		
50	12.00	11.99	33.825	25.678	231.5	0.137	3.21	52.6	19.4	1.46	16.7	0.05	0.08	0.12	50		
65	11.36	11.35	33.891	25.849	215.6	0.170	2.96	47.9	22.1	1.59	19.2	0.01	0.04	0.11	65		
75 ISL	11.18	11.17	33.911	25.898	211.2	0.192	2.89	46.5							75		
80	11.12	11.11	33.924	25.918	209.4	0.202	2.85	45.9	23.8	1.72	20.3	0.01	0.03	0.09	80		
100	10.68	10.67	34.027	26.077	194.7	0.243	2.45	39.1	27.7	1.88	22.5	0.02	0.02	0.06	100		
104	10.62	10.61	34.032	26.092	193.4	0.250	2.45	39.0	28.0	1.89	22.9	0.02	0.02	0.07	104		
125 ISL	10.32	10.30	34.083	26.188	184.9	0.290	2.37	37.5							125		
149	9.91	9.89	34.146	26.303	174.2	0.333	2.12	33.3	33.7	2.10	25.3	0.00	0.00	0.04	150		
150 ISL	9.89	9.87	34.147	26.308	173.8	0.335									151		

RV WECOMA				CRUISE 8304				STATION 90 30									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 25.0 N	117 53.5 W	07/04/83	1407 GMT	627 M			510 03	0	1014.9 MB	15.0 C	12.2 C	0/8		CI			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	15.82	15.82	33.475	24.616	331.3	0.000	5.97	105.6							0		
1	15.82	15.82	33.475	24.616	331.3	0.003	5.97	105.6	2.4	0.29	0.0	0.00	0.70	0.10	1		
10	15.84	15.84	33.475	24.612	332.0	0.033	5.98	105.9	2.4	0.30	0.0	0.00	0.70	0.09	10		
20 ISL	15.04	15.04	33.545	24.844	310.3	0.065	5.16	89.9							20		
30	13.94	13.94	33.648	25.156	280.7	0.094	4.14	70.6	9.9	0.97	9.5	0.02	0.58	0.32	30		
50	12.31	12.30	33.784	25.587	240.2	0.147	3.33	54.9	17.0	1.40	15.6	0.02	0.08	0.15	50		
65	11.52	11.51	33.876	25.808	219.6	0.181	3.10	50.3	20.9	1.58	18.5	0.01	0.04	0.10	65		
75 ISL	11.17	11.17	33.921	25.907	210.3	0.203	2.90	46.8							75		
80	11.03	11.02	33.944	25.950	206.4	0.213	2.80	45.0	24.3	1.74	20.4	0.01	0.03	0.10	80		
100	10.44	10.43	34.044	26.132	189.5	0.253	2.46	39.0	29.2	1.96	22.8	0.02	0.02	0.10	100		
125 ISL	10.08	10.07	34.129	26.263	177.6	0.299	2.12	33.4							125		
129	10.05	10.03	34.142	26.276	176.4	0.306	2.07	32.6	32.4	2.07	25.1	0.00	0.02	0.05	130		
1500	9.85	9.83	34.172	26.334	171.3	0.342									151		
2000	9.03	9.01	34.202	26.492	157.1	0.424									201		
2500	8.28	8.25	34.198	26.606	146.9	0.500									252		
3000 ISL	7.76	7.73	34.217	26.702	138.4	0.572	1.16	17.3							302		
323	7.58	7.55	34.238	26.741	134.9	0.603	1.12	16.7	55.4	2.59	32.7	0.00	0.00	0.03	325		
4000	7.06	7.02	34.292	26.858	124.9	0.703									403		
499	6.12	6.08	34.351	27.030	109.2	0.819	0.31	4.5	83.0	3.06	37.3	0.00	0.00	0.02	503		
500 ISL	6.11	6.07	34.352	27.032	109.9	0.820									504		

RV WECOMA				CRUISE 8304				STATION 90 32									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 20.6 N	118 2.9 W	07/04/83	1227 GMT	744 M			320 05	0	1014.0 MB	15.5 C	13.1 C	0/8		CI			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	14.71	14.71	33.561	24.926	301.8	0.000	6.05	104.8							0		
1	14.71	14.71	33.561	24.926	301.8	0.003	6.05	104.8	2.3	0.35	0.1	0.03	5.51	0.64	1		
10	14.71	14.71	33.559	24.925	302.2	0.030	6.07	105.1	1.7	0.34	0.1	0.01	5.78	0.41	10		
20 ISL	14.11	14.11	33.575	25.064	289.3	0.060	5.31	90.9							20		
30	13.34	13.34	33.619	25.256	271.2	0.088	4.34	73.1	9.8	0.95	9.4	0.06	1.74	1.92	30		
50	12.43	12.42	33.775	25.557	243.1	0.139	3.39	56.1	16.8	1.34	15.5	0.03	0.53	0.63	50		
65	11.89	11.88	33.831	25.704	229.5	0.174	3.24	53.0	19.4	1.45	17.4	0.00	0.17	0.39	65		
75 ISL	11.70	11.69	33.848	25.754	225.0	0.197	3.16	51.5							75		
80	11.62	11.61	33.861	25.778	222.8	0.208	3.11	50.6	20.7	1.53	18.4	0.00	0.16	0.35	80		
100	11.00	10.99	33.971	25.977	204.3	0.251	2.66	42.7	25.4	1.76	21.8	0.00	0.06	0.24	100		
1250	10.26	10.25	34.057	26.174	186.0	0.300									125		
1500	9.74	9.72	34.114	26.307	173.8	0.345									151		
194	8.89	8.87	34.137	26.463	159.6	0.418	2.11	32.4	39.3	2.13	28.3	0.00	0.01	0.06	195		
200 ISL	8.82	8.80	34.140	26.479	158.2	0.428	2.05	31.5							201		
2500	8.38	8.35	34.206	26.597	147.8	0.504									252		
3000	7.75	7.72	34.235	26.714	137.2	0.575									302		
373	7.04	7.00	34.297	26.865	123.8	0.671	0.62	9.1	66.8	2.79	36.1	0.00	0.00	0.03	376		
400 ISL	6.84	6.80	34.301	26.901	120.6	0.704	0.56	8.2							403		
497	6.21	6.17	34.344	27.013	110.8	0.816	0.34	4.9	81.6	2.95	38.4	0.00	0.00	0.02	501		
500	6.19	6.14	34.346	27.017	110.4	0.820									504		

RV WECOMA				CRUISE 8304								STATION 90 35			
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 14.0 N	118 15.0 W	07/04/83	1024 GMT	985 M	310	08 KT	320 05	0	1013.5 MB	16.4 C	11.9 C		0/8	CI	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0 ISL	14.95	14.95	33.516	24.840	310.1	0.000	6.33	110.1							0
1	14.95	14.95	33.516	24.840	310.1	0.003	6.33	110.1	0.7	0.30	0.1	0.01	2.16	0.75	1
10	14.94	14.94	33.515	24.841	310.2	0.031	6.31	109.8	0.5	0.30	0.1	0.00	2.90	0.70	10
20 ISL	14.82	14.82	33.516	24.868	308.0	0.062	6.20	107.7							20
30	14.71	14.71	33.518	24.894	305.8	0.093	6.10	105.6	0.7	0.37	0.2	0.00	4.92	1.38	30
50	13.76	13.75	33.569	25.133	283.5	0.152	4.72	80.2	7.4	0.84	7.1	0.08	3.16	1.32	50
65	12.78	12.77	33.712	25.441	254.6	0.192	3.80	63.3	14.1	1.19	13.2	0.02	0.66	0.42	65
75 ISL	12.33	12.32	33.757	25.564	243.0	0.217	3.54	58.4							75
80	12.14	12.13	33.776	25.614	238.4	0.229	3.46	56.9	17.7	1.38	16.1	0.00	0.40	0.32	80
100	11.37	11.36	33.871	25.832	218.1	0.275	3.05	49.3	22.4	1.61	19.4	0.02	0.23	0.22	100
1250	10.70	10.68	34.008	26.059	197.0	0.326									125
1500	10.18	10.16	34.098	26.220	182.1	0.374									151
2000	9.04	9.02	34.127	26.432	162.8	0.460									201
2500	8.27	8.24	34.157	26.575	149.8	0.538									252
3000	7.69	7.66	34.202	26.697	138.8	0.610									302
343	7.31	7.28	34.206	26.755	133.9	0.669	1.15	17.0	58.0	2.55	34.2	0.01	0.01	0.05	345
4000	5.90	6.86	34.264	26.858	124.7	0.743									403
464	6.45	6.41	34.294	26.942	117.3	0.820	0.51	7.4	74.9	2.91	38.4	0.02	0.00	0.02	468
497	6.17	6.13	34.319	26.999	112.1	0.858	0.39	5.6	79.0	2.95	39.4	0.00	0.00	0.02	501
500 ISL	6.14	6.10	34.322	27.005	111.6	0.861									504

RV WECOMA				CRUISE 8304								STATION 90 37				
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE		
33 11.1 N	118 22.5 W	07/04/83	0847 GMT	1168 M	310	14 KT	320 05	0	1014.1 MB	15.6 C	13.0 C	0/8		CI		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS	
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR	
0 ISL	14.92	14.92	33.477	24.816	312.3	0.000	6.11	106.2							0	
1	14.92	14.92	33.477	24.816	312.3	0.003	6.11	106.2	3.0	0.35	0.2	0.00	0.76	0.34	1	
10	14.92	14.92	33.480	24.819	312.3	0.031	6.11	106.2	2.8	0.35	0.1	0.00	0.73	0.28	10	
20 ISL	14.23	14.22	33.474	24.963	298.9	0.062	5.53	94.8							20	
30	13.37	13.37	33.488	25.149	281.4	0.091	4.82	81.2	8.6	0.80	6.9	0.00	0.70	0.84	30	
50	12.65	12.64	33.591	25.372	260.7	0.145	4.24	70.4	12.4	1.06	11.3	0.14	0.40	0.60	50	
65	11.89	11.88	33.595	25.521	246.8	0.183	4.13	67.5	14.3	1.15	13.5	0.16	0.31	0.48	65	
75 ISL	11.71	11.70	33.629	25.583	241.2	0.207	3.97	64.6							75	
80	11.65	11.64	33.658	25.615	238.3	0.219	3.86	62.7	16.1	1.29	15.1	0.08	0.16	0.42	80	
100	11.15	11.14	33.826	25.837	217.6	0.265	3.21	51.7	21.4	1.54	19.2	0.07	0.06	0.16	100	
1250	10.00	9.99	33.892	26.090	193.9	0.316									125	
1500	9.57	9.55	33.986	26.235	180.6	0.363									151	
2000	8.45	8.43	34.066	26.476	158.3	0.448									201	
2500	8.15	8.12	34.178	26.610	146.4	0.524									252	
3000	7.82	7.79	34.227	26.698	138.9	0.595									302	
361	7.28	7.24	34.250	26.794	130.5	0.677	0.90	13.3	60.3	2.64	34.9	0.00	0.00	0.06	364	
400 ISL	7.00	6.96	34.257	26.844	126.1	0.728	0.73	10.8							403	
442	6.70	6.66	34.281	26.899	121.3	0.779	0.58	8.5	69.7	2.83	37.2	0.00	0.00	0.04	445	
497	6.22	6.18	34.317	26.990	113.0	0.844	0.37	5.3	78.2	2.92	39.1	0.00	0.00	0.04	501	
500 ISL	6.20	6.15	34.319	26.995	112.6	0.847									504	

RV WECOMA				CRUISE 8304								STATION 90 42					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 0.5 N	118 43.3 W	07/04/83	0610 GMT	1005 M	310	20 KT	320 05	0	1014.4 MB	16.6 C	12.4 C		0/8	CI			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	14.75	14.75	33.397	24.791	314.7	0.000	6.09	105.5							0		
1	14.75	14.75	33.397	24.791	314.7	0.003	6.09	105.5	2.0	0.34	0.0	0.00	0.40	0.08	1		
10	14.78	14.78	33.397	24.785	315.6	0.032	6.09	105.5	2.0	0.33	0.0	0.00	0.44	0.06	10		
20 ISL	14.72	14.72	33.394	24.796	314.8	0.063	6.06	105.0							20		
30	14.61	14.61	33.396	24.821	312.7	0.094	6.04	104.3	1.7	0.34	0.0	0.01	1.23	0.23	30		
50	14.36	14.35	33.430	24.901	305.7	0.156	5.66	97.2	4.0	0.47	1.6	0.03	0.80	0.28	50		
65	13.41	13.40	33.588	25.219	275.7	0.200	4.36	73.5	10.3	0.94	9.3	0.15	0.61	0.38	65		
75 ISL	12.29	12.28	33.490	25.364	262.0	0.227	4.50	74.2							75		
80	11.78	11.77	33.445	25.425	256.3	0.240	4.65	75.7	11.5	0.97	10.7	0.02	0.22	0.34	80		
100	11.49	11.48	33.662	25.647	235.7	0.289	3.93	63.7	16.3	1.24	15.3	0.00	0.07	0.19	100		
1250	10.37	10.36	33.838	25.984	204.0	0.344									125		
1500	10.28	10.26	33.995	26.123	191.4	0.393									151		
2000	9.46	9.44	34.102	26.345	171.2	0.484									201		
233	8.83	8.80	34.115	26.456	161.0	0.539	2.27	34.8	37.5	2.07	27.4	0.00	0.00	0.06	234		
250 ISL	8.60	8.59	34.121	26.500	157.1	0.566	2.08	31.7							252		
3000	8.08	8.05	34.169	26.614	146.9	0.642									302		
341	7.65	7.62	34.213	26.712	138.1	0.700	1.22	18.2	53.8	2.50	33.1	0.00	0.00	0.02	343		
4000	6.92	6.88	34.266	26.857	124.8	0.778									403		
498	6.18	6.14	34.303	26.985	113.5	0.895	0.41	5.9	76.9	2.97	39.0	0.00	0.00	0.02	502		
500 ISL	6.16	6.12	34.305	26.989	113.1	0.897									504		

RV WECOMA				CRUISE 8304				STATION 90 45									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 54.5 N	118 55.5 W	07/04/83	0412 GMT	1695 M	320	20 KT	320 05	0	1014.0 MB	15.7 C	12.1 C	0/8		CI			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	15.08	15.08	33.465	24.772	316.5	0.000	6.07	105.8							0		
1	15.08	15.08	33.465	24.772	316.5	0.003	6.07	105.8	2.6	0.33	0.1	0.00	1.03	0.08	1		
10	15.07	15.07	33.465	24.774	316.5	0.032	6.07	105.8	2.2	0.32	0.0	0.00	1.08	0.00	10		
20 ISL	15.10	15.10	33.484	24.782	316.1	0.063	5.91	103.2							20		
30	15.14	15.14	33.511	24.795	315.2	0.095	5.79	101.1	3.1	0.34	0.4	0.00	0.61	0.13	30		
50	14.29	14.28	33.331	24.839	311.5	0.157	6.18	106.0	1.3	0.31	0.0	0.00	2.38	0.33	50		
54	14.24	14.23	33.329	24.848	310.8	0.170	6.00	102.8	2.6	0.45	0.4	0.00	3.94	0.27	54		
65	14.27	14.26	33.411	24.906	305.6	0.204	5.63	96.5	4.1	0.46	1.9	0.00	1.86	0.36	65		
75 ISL	13.33	13.32	33.476	25.151	282.4	0.233	5.00	84.2							75		
80	12.79	12.78	33.512	25.284	269.9	0.247	4.70	78.2	9.5	0.85	8.5	0.00	0.12	0.12	80		
100	12.21	12.20	33.562	25.436	255.9	0.300	4.40	72.1	11.9	1.00	11.3	0.00	0.08	0.08	100		
1250	11.21	11.19	33.820	25.822	219.6	0.359									125		
1500	10.35	10.33	33.991	26.108	192.9	0.411									151		
2000	9.39	9.37	34.116	26.367	169.1	0.501									201		
2500	8.68	8.65	34.187	26.536	153.7	0.582									252		
3000	7.93	7.90	34.182	26.646	143.8	0.656									302		
357	7.27	7.24	34.205	26.760	133.5	0.735	1.13	16.7	57.3	2.55	34.2	0.00			360		
4000	6.99	6.95	34.236	26.824	128.0	0.791									403		
497	6.31	6.26	34.288	26.956	116.3	0.910	0.50	7.2	75.4	2.87	38.5	0.00			501		
500 ISL	6.29	6.24	34.290	26.960	115.9	0.913									504		

RV WECOMA				CRUISE 8304				STATION 90 53									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 39.0 N	119 28.4 W	07/04/83	0039 GMT	1294 M	320	15 KT	320 05	0	1014.0 MB	16.3 C	13.2 C	0/9		CI			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	14.90	14.90	33.313	24.694	323.9	0.000	6.03	104.7							0		
1	14.90	14.90	33.313	24.694	323.9	0.003	6.03	104.7	2.7	0.32	0.0	0.00	0.21	0.17	1		
10	14.88	14.88	33.303	24.691	324.5	0.032	6.01	104.3	2.8	0.32	0.0	0.00	0.91	0.17	10		
20 ISL	14.71	14.71	33.307	24.731	321.0	0.065	6.04	104.4							20		
50	14.50	14.50	33.315	24.782	316.4	0.097	6.08	104.7	3.9	0.36	0.0	0.00	0.25	0.22	30		
50	14.21	14.20	33.296	24.829	312.5	0.159	6.11	104.6	2.7	0.34	0.0	0.00	1.66	0.11	50		
65	13.99	13.98	33.287	24.868	309.2	0.206	5.96	101.5	3.2	0.38	0.5	0.00	1.21	0.21	65		
75 ISL	13.87	13.86	33.300	24.905	305.9	0.237	5.79	98.5							75		
80	13.76	13.75	33.313	24.936	303.1	0.252	5.70	96.7	4.5	0.46	1.9	0.00	0.56	0.14	80		
1000	12.47	12.46	33.346	25.218	276.6	0.310									100		
1250	11.31	11.29	33.387	25.467	253.3	0.376									125		
1500	10.04	10.02	33.685	25.922	210.4	0.434									151		
2000	9.08	9.06	33.936	26.276	177.5	0.531									201		
2500	8.48	8.45	34.083	26.485	158.4	0.615									252		
293	7.90	7.87	34.125	26.606	147.4	0.681	2.03	30.4	45.8	2.20	30.1	0.00			295		
300 ISL	7.82	7.79	34.125	26.622	146.0	0.691	1.95	29.1							302		
3500	7.29	7.26	34.163	26.724	136.8	0.762									352		
398	6.73	6.69	34.192	26.824	127.7	0.825	1.01	14.7	64.5	2.68	36.2	0.00			401		
400 ISL	6.71	6.68	34.188	26.828	127.3	0.828	1.00	14.5							403		
497	6.12	6.08	34.290	26.992	111.7	0.945	0.48	6.9	77.8	2.92	39.3	0.00			501		
500 ISL	6.10	6.06	34.292	26.986	113.3	0.948									504		

RV WECOMA				CRUISE 8304				STATION 90 55									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 35.0 N	119 37.0 W	06/04/83	2253 GMT	1052 M	330	14 KT	320 05	0	1014.4 MB	16.5 C	12.6 C	0/8		CI			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	15.22	15.22	33.344	24.648	328.3	0.000	5.93	103.6							0		
1	15.22	15.22	33.344	24.648	328.3	0.003	5.93	103.6	2.7	0.38	0.3	0.00	0.20	0.03	1		
10	15.14	15.14	33.343	24.665	326.9	0.033	5.93	103.5	2.4	0.35	0.1	0.00	0.20	0.04	10		
20 ISL	15.07	15.07	33.342	24.680	325.8	0.065	5.95	103.6							20		
30	15.01	15.01	33.342	24.693	324.9	0.098	5.96	103.7	2.5	0.37	0.0	0.00	0.22	0.04	30		
50	14.85	14.84	33.337	24.725	322.5	0.163	5.94	103.0	2.4	0.34	0.0	0.00	0.19	0.24	50		
65	14.84	14.83	33.338	24.728	322.6	0.211	5.92	102.6	2.9	0.37	0.0	0.00	0.18	0.29	65		
75 ISL	14.83	14.82	33.336	24.730	322.7	0.243	5.93	102.7							75		
80	14.83	14.82	33.339	24.731	322.7	0.259	5.93	102.8	3.6	0.39	0.0	0.00	0.35	0.06	80		
100	13.02	13.01	33.300	25.075	290.3	0.321	5.73	95.7	4.8	0.59	3.6	0.03	0.16	0.12	100		
1250	11.38	11.36	33.514	25.553	245.2	0.388									125		
1500	11.00	10.98	33.671	25.744	227.5	0.447									151		
2000	9.42	9.40	33.972	26.250	180.2	0.549									201		
2500	8.04	8.01	34.032	26.511	155.7	0.633									252		
3000	7.72	7.69	34.136	26.641	144.1	0.708									302		
400 ISL	6.90	6.86	34.219	26.828	127.5	0.845									403		
497	6.10	6.06	34.261	26.962	115.5	0.963	0.57	8.2	76.6	2.88	38.8	0.00			501		
500 ISL	6.08	6.04	34.263	26.966	115.2	0.967									504		

RV WECOMA				CRUISE 8304								STATION 90 60				
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WFT	CLOUD	AMT	TYPE		
32 25.0 N	119 57.3 W	06/04/83	1916 GMT	915 M	360	12 KT	320 05	0	1014.2 MB	16.9 C	11.6 C		0/8	CI		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS	
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR	
0 ISL	15.19	15.19	33.296	24.618	331.2	0.000	5.90	103.0							0	
1	15.19	15.19	33.296	24.618	331.2	0.003	5.90	103.0	2.0	0.32	0.0	0.00	0.17	0.03	1	
10	15.06	15.06	33.293	24.644	328.9	0.033	5.92	103.1	2.2	0.38	0.2	0.01	0.22	0.03	10	
20 ISL	15.03	15.03	33.292	24.651	328.6	0.066	5.92	103.1							20	
30	15.00	15.00	33.294	24.659	328.2	0.099	5.93	103.1	2.0	0.32	0.0	0.00	0.18	0.04	30	
50	15.00	14.99	33.296	24.661	328.6	0.164	5.92	103.0	2.2	0.33	0.0	0.00	0.23	0.04	50	
65	14.98	14.97	33.302	24.670	328.1	0.214	5.98	104.0	2.0	0.31	0.0	0.00	0.27	0.05	65	
75 ISL	14.97	14.96	33.323	24.692	326.3	0.246	5.93	103.1							75	
80	14.96	14.95	33.338	24.703	325.5	0.263	5.91	102.7	2.2	0.32	0.0	0.01	0.29	0.06	80	
100	13.52	13.51	33.427	25.073	290.6	0.324	5.32	99.8	5.5	0.58	4.0	0.02	0.14	0.36	100	
1250	11.78	11.76	33.517	25.482	252.0	0.392									125	
1500	10.64	10.62	33.674	25.810	221.2	0.451									151	
2000	9.18	9.16	33.933	26.258	179.3	0.551									201	
2500	8.46	8.43	34.049	26.462	160.6	0.636									252	
3000	7.71	7.68	34.107	26.619	146.2	0.713									302	
4000	6.67	6.63	34.160	26.807	129.3	0.851									403	
5000	5.96	5.94	34.241	26.961	115.5	0.973									504	
600 ISL	5.52	5.46	34.335	27.100	103.2	1.083	0.97	13.7							605	
679	5.14	5.08	34.388	27.180	96.0	1.162	0.28	3.9	96.8	3.06	42.4	0.02			685	
699	5.01	4.95	34.385	27.193	94.8	1.182	0.29	4.1	99.3	3.12	42.5	0.02			705	
700 ISL	5.00	4.95	34.377	27.194	94.8	1.182	0.29	4.1							706	
796	4.64	4.58	34.423	27.266	88.5	1.270	0.35	4.9	107.0	3.17	43.5	0.00			803	

RV WECOMA				CRUISE 8304								STATION 90 65					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 14.6 N	120 18.0 W	06/04/83	1548 GMT	3036 M	350	15 KT	320 05	0	1013.5 MB	15.8 C	12.6 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	15.24	15.24	33.402	24.688	324.4	0.000	5.93	103.7							0		
1	15.24	15.24	33.402	24.688	324.4	0.003	5.93	103.7	3.2	0.35	0.2	0.01	0.33	0.03	1		
10	15.23	15.23	33.409	24.696	324.0	0.032	5.88	102.8	2.3	0.32	0.0	0.01	0.27	0.04	10		
20 ISL	15.23	15.23	33.408	24.696	324.1	0.065	5.89	103.0							20		
30	15.23	15.23	33.408	24.696	324.6	0.097	5.90	103.1	2.3	0.33	0.0	0.02	0.35	0.02	30		
50	15.22	15.21	33.405	24.697	325.2	0.162	5.94	103.8	2.1	0.35	0.0	0.01	0.39	0.05	50		
65	15.15	15.14	33.420	24.724	323.0	0.211	5.85	102.1	2.3	0.38	0.2	0.00	0.21	0.28	65		
75 ISL	13.86	13.85	33.412	24.995	297.4	0.242	5.51	93.6							75		
80	13.14	13.13	33.419	25.143	283.3	0.256	5.32	89.1	5.5	0.72	5.0	0.01	0.30	0.22	80		
100	12.17	12.16	33.419	25.332	265.7	0.311	5.04	82.7	8.8	0.81	8.0	0.02	0.17	0.20	100		
1250	11.11	11.09	33.643	25.702	230.9	0.373									125		
1500	10.48	10.46	33.831	25.960	206.9	0.428									151		
2000	9.57	9.55	34.053	26.288	176.6	0.524									201		
2500	8.85	8.82	34.092	26.435	163.4	0.609									252		
3000	8.28	8.25	34.174	26.588	149.5	0.687									302		
4000	7.33	7.29	34.245	26.784	132.1	0.828									403		
5000	6.48	6.43	34.273	26.922	119.7	0.954									504		
600 ISL	5.75	5.70	34.301	27.045	108.7	1.069	0.68	9.6							605		
685	5.29	5.23	34.347	27.131	101.0	1.158	0.44	6.2	92.2	3.08	41.9	0.00	0.00	0.02	691		
700 ISL	5.23	5.17	34.346	27.143	99.9	1.173	0.41	5.8							706		
709	5.20	5.14	34.359	27.151	99.3	1.182	0.40	5.6	94.2	3.13	42.5	0.01	0.00	0.02	715		
800 ISL	4.85	4.78	34.392	27.225	92.7	1.270	0.45	6.3							807		
992	4.07	3.99	34.478	27.372	79.3	1.435	0.57	7.8	118.1	3.18	44.4	0.00	0.00	0.02	1001		

RV DAVID STARR JORDAN				CRUISE 8305								STATION 90 28				
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE		
33 29.1 N	117 46.1 W	03/05/83	0420 GMT													
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAE0	PRESS	
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR	
0	16.99	16.99	33.303	24.215	369.5	0.000									0	
10	16.97	16.97	33.309	24.225	368.9	0.037									10	
20	16.19	16.19	33.362	24.446	348.2	0.073									20	
30	14.24	14.24	33.453	24.943	301.1	0.105									30	
40	13.18	13.17	33.414	25.130	283.4	0.134									40	
50	12.95	12.94	33.463	25.214	275.7	0.162									50	

RV DAVID STARR JORDAN				CRUISE 8305							STATION 90 30				
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 25.1 N	117 54.3 W	03/05/83	1407 GMT												
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	16.87	16.87	33.429	24.340	357.6	0.000									0
10	16.88	16.88	33.431	24.340	357.9	0.036									10
20	15.97	15.97	33.496	24.599	333.6	0.070									20
30	13.68	13.68	33.561	25.143	282.1	0.101									30
40	12.98	12.97	33.599	25.313	266.0	0.129									40
50	12.58	12.57	33.690	25.462	252.1	0.154									50
75	11.53	11.52	33.820	25.762	224.1	0.214									75
100	10.96	10.95	33.854	25.893	212.3	0.269									100
125	10.67	10.65	33.929	26.003	202.3	0.320									125
150	10.00	9.98	33.956	26.140	189.7	0.369									151
175	9.44	9.42	33.976	26.249	179.7	0.416									176
200	9.40	9.38	34.096	26.350	170.7	0.459									201
225	9.17	9.15	34.135	26.418	164.7	0.501									226
250	8.75	8.72	34.143	26.491	158.0	0.542									252
275	8.49	8.46	34.166	26.550	152.9	0.580									277
300	7.89	7.86	34.124	26.607	147.5	0.618									302
350	7.62	7.59	34.187	26.696	139.7	0.690									352
400	7.25	7.21	34.213	26.770	133.3	0.758									403
450	6.84	6.80	34.249	26.855	125.7	0.823									453
500	6.51	6.46	34.276	26.921	119.9	0.884									504
546	6.29	6.24	34.301	26.969	115.7	0.938									550

RV DAVID STARR JORDAN				CRUISE 8305							STATION 90 33				
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETFR	DRY	WET	CLOUD	AMT	TYPE	
33 18.5 N	118 7.0 W	04/05/83	0130 GMT												
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	17.68	17.68	33.472	24.181	372.8	0.000									1
10	16.86	16.86	33.473	24.376	354.5	0.036									10
20	15.08	15.08	33.481	24.785	315.9	0.070									20
30	13.51	13.51	33.564	25.180	278.5	0.100									30
40	12.68	12.67	33.595	25.369	260.7	0.127									40
50	12.18	12.17	33.600	25.469	251.4	0.152									50
75	11.42	11.41	33.819	25.782	222.3	0.211									75
100	10.83	10.82	33.935	25.979	204.1	0.265									100
125	10.36	10.35	34.005	26.116	191.5	0.314									125
150	9.77	9.75	34.067	26.265	177.8	0.360									151
175	9.24	9.22	34.074	26.358	169.3	0.404									176
200	8.49	8.47	34.030	26.441	161.6	0.445									201
225	8.25	8.23	34.042	26.488	157.6	0.485									226
250	8.11	8.08	34.081	26.540	153.1	0.524									252
275	8.13	8.10	34.162	26.601	147.8	0.561									277
300	7.72	7.69	34.148	26.650	143.3	0.598									302
350	7.54	7.51	34.198	26.716	137.8	0.668									352
400	6.99	6.95	34.223	26.813	129.0	0.735									403
450	6.59	6.55	34.261	26.898	121.4	0.797									453
500	6.24	6.19	34.304	26.978	114.7	0.856									504
550	6.08	6.03	34.314	27.007	112.0	0.913									554
600	5.76	5.71	34.339	27.067	106.6	0.967									605
700	5.21	5.15	34.377	27.164	98.0	1.070									706
746	5.14	5.08	34.381	27.176	97.3	1.115									752

RV DAVID STARR JORDAN				CRUISE 8305								STATION 90 35			
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 15.1 N	118 15.0 W	04/05/83	1505 GMT												
DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SI03 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL.A UG/L	PHAEO UG/L	PRESS D.BAR
0	16.02	16.02	33.316	24.449	347.2	0.000									0
10	15.74	15.74	33.315	24.511	341.6	0.034									10
20	14.83	14.83	33.343	24.733	320.8	0.068									20
30	14.66	14.66	33.392	24.807	314.0	0.099									30
40	13.52	13.51	33.454	25.093	287.0	0.129									40
50	12.95	12.94	33.455	25.208	276.3	0.158									50
75	11.88	11.87	33.717	25.617	238.0	0.222									75
100	10.98	10.97	33.885	25.912	210.5	0.278									100
125	10.46	10.45	33.968	26.070	195.9	0.329									125
150	9.95	9.93	34.042	26.216	182.5	0.376									151
175	9.48	9.46	34.093	26.334	171.7	0.420									176
200	9.30	9.28	34.119	26.384	167.4	0.463									201
225	9.03	9.01	34.154	26.455	161.1	0.504									226
250	8.64	8.61	34.174	26.532	154.1	0.543									252
275	8.26	8.23	34.176	26.592	148.7	0.581									277
300	7.85	7.82	34.176	26.653	143.1	0.617									302
350	7.37	7.34	34.209	26.749	134.6	0.687									352
400	6.94	6.90	34.237	26.831	127.3	0.752									403
450	6.58	6.54	34.271	26.907	120.5	0.814									453
500	6.18	6.13	34.301	26.983	113.6	0.873									504
550	5.89	5.84	34.330	27.043	108.3	0.926									554
600	5.65	5.60	34.346	27.086	104.7	0.981									605
700	5.20	5.14	34.379	27.167	97.7	1.083									706

RV DAVID STARR JORDAN				CRUISE 8305				STATION 90 37							
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 11.1 N	118 23.2 W	05/05/83	0127 GMT												
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL.A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	15.62	15.62	33.230	24.472	345.0	0.000									0
10	15.67	15.62	33.232	24.474	345.1	0.035									10
20	15.44	15.44	33.222	24.507	342.4	0.069									20
30	14.73	14.73	33.243	24.677	326.4	0.102									30
40	14.74	14.73	33.273	24.699	324.6	0.135									40
50	13.23	13.22	33.293	25.027	293.6	0.166									50
75	11.56	11.55	33.467	25.483	250.7	0.234									75
100	10.85	10.84	33.619	25.729	227.7	0.294									100
125	10.40	10.39	33.888	26.018	200.8	0.347									125
150	9.42	9.40	33.877	26.174	186.3	0.396									151
175	9.74	9.72	34.099	26.296	175.4	0.441									176
200	9.38	9.36	34.150	26.395	166.4	0.484									201
225	8.82	8.80	34.156	26.490	157.7	0.524									226
250	8.41	8.38	34.168	26.563	151.1	0.563									252
275	7.93	7.90	34.166	26.634	144.5	0.600									277
300	7.83	7.80	34.199	26.674	141.1	0.635									302
350	7.34	7.31	34.220	26.762	133.3	0.704									352
400	6.96	6.92	34.230	26.823	128.1	0.769									403
450	6.51	6.47	34.270	26.915	119.7	0.831									453
500	6.17	6.13	34.292	26.977	114.2	0.890									504
550	6.01	5.96	34.319	27.020	110.7	0.946									554
600	5.64	5.59	34.347	27.088	104.5	1.000									605
700	5.10	5.04	34.388	27.185	95.8	1.100									706
800	4.63	4.57	34.421	27.265	88.5	1.192									807
900	4.32	4.25	34.444	27.318	84.1	1.278									908
1000	4.14	4.06	34.458	27.348	81.7	1.361									1009
1100	4.01	3.92	34.469	27.372	80.2	1.442									1111

RV DAVID STARR JORDAN				CRUISE 8305				STATION 90 42									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 1.1 N	118 43.8 W	05/05/83	1320 GMT														
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	15.06	15.06	33.302	24.651	328.0	0.000									0		
10	15.06	15.06	33.302	24.651	328.3	0.033									10		
20	15.06	15.06	33.303	24.652	328.5	0.066									20		
30	13.49	13.49	33.340	25.010	294.6	0.097									30		
40	12.62	12.61	33.369	25.206	276.2	0.125									40		
50	12.00	11.99	33.400	25.348	262.9	0.152									50		
75	10.97	10.96	33.556	25.658	233.9	0.214									75		
100	10.28	10.27	33.720	25.907	210.7	0.270									100		
125	9.90	9.89	33.891	26.105	192.4	0.320									125		
150	9.61	9.59	33.983	26.226	181.4	0.367									151		
175	9.05	9.03	34.018	26.344	170.5	0.411									176		
200	8.53	8.51	34.075	26.471	158.9	0.452									201		
225	8.11	8.09	34.067	26.528	153.6	0.491									226		
250	8.01	7.98	34.131	26.594	147.9	0.529									252		
275	7.81	7.78	34.146	26.635	144.3	0.566									277		
300	7.64	7.61	34.172	26.681	140.3	0.601									302		
350	7.10	7.07	34.214	26.791	130.4	0.669									352		
400	6.81	6.77	34.231	26.844	125.9	0.733									403		
450	6.36	6.32	34.264	26.930	118.1	0.794									453		
500	5.98	5.94	34.286	26.997	112.2	0.851									504		
550	5.67	5.62	34.311	27.055	106.9	0.906									554		
600	5.50	5.45	34.333	27.094	103.7	0.959									605		
700	4.88	4.82	34.393	27.214	92.7	1.057									706		
800	4.59	4.53	34.415	27.265	88.5	1.148									807		
900	4.23	4.16	34.447	27.330	82.8	1.233									908		
1000	3.93	3.85	34.471	27.380	78.2	1.314									1009		
1040	3.86	3.78	34.478	27.393	77.2	1.345									1050		

RV DAVID STARR JORDAN				CRUISE 8305				STATION 90 45									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 53.6 N	118 54.6 W	06/05/83	0038 GMT														
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	15.29	15.29	33.312	24.608	332.0	0.000									0		
10	15.23	15.23	33.306	24.617	331.5	0.033									10		
20	14.97	14.97	33.309	24.676	326.2	0.066									20		
30	14.85	14.85	33.313	24.706	323.7	0.099									30		
40	14.62	14.61	33.304	24.748	319.9	0.131									40		
50	14.28	14.27	33.317	24.830	312.4	0.162									50		
75	11.26	11.25	33.498	25.561	243.2	0.232									75		
100	10.48	10.47	33.692	25.856	215.7	0.289									100		
125	9.63	9.62	33.823	26.097	193.1	0.340									125		
150	9.34	9.32	33.896	26.202	183.6	0.387									151		
175	9.04	9.02	33.998	26.330	171.9	0.432									176		
200	8.59	8.57	34.020	26.418	163.8	0.474									201		
225	8.41	8.39	34.085	26.497	156.8	0.514									226		
250	8.17	8.14	34.101	26.546	152.4	0.552									252		
275	7.91	7.88	34.126	26.605	147.2	0.590									277		
300	7.71	7.68	34.142	26.647	143.6	0.626									302		
350	7.35	7.32	34.183	26.731	136.2	0.696									352		
400	6.97	6.93	34.223	26.816	128.7	0.762									403		
450	6.70	6.66	34.260	26.882	123.0	0.825									453		
500	6.26	6.21	34.291	26.965	115.4	0.885									504		
550	5.76	5.71	34.323	27.054	107.2	0.941									554		
600	5.38	5.33	34.360	27.129	100.2	0.992									605		
700	4.82	4.76	34.406	27.231	91.0	1.088									706		
800	4.33	4.27	34.443	27.315	83.3	1.175									807		
900	4.08	4.01	34.464	27.359	79.7	1.257									908		
1000	3.88	3.80	34.479	27.392	77.1	1.335									1009		
1100	3.80	3.72	34.486	27.406	76.4	1.412									1111		
1200	3.75	3.66	34.489	27.414	76.4	1.488									1212		
1300	3.73	3.63	34.491	27.419	76.8	1.565									1313		
1400	3.70	3.59	34.493	27.424	77.1	1.642									1415		
1500	3.67	3.55	34.495	27.429	77.3	1.719									1516		

RV DAVID STARR JORDAN				CRUISE 8305				STATION 90 53									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 39.1 N	119 28.9 W	06/05/83	1330 GMT														
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	15.13	15.13	33.022	24.420	350.0	0.000										0	
10	15.13	15.13	33.020	24.419	350.4	0.035										10	
20	15.13	15.13	33.020	24.419	350.7	0.070										20	
30	15.12	15.12	33.031	24.430	350.0	0.105										30	
40	15.14	15.13	33.142	24.511	342.5	0.140										40	
50	14.99	14.98	33.234	24.615	332.9	0.174										50	
75	13.87	13.86	33.232	24.851	311.1	0.254										75	
100	12.21	12.20	33.223	25.172	280.9	0.328										100	
125	10.64	10.62	33.431	25.620	238.6	0.393										125	
150	9.44	9.42	33.786	26.100	193.3	0.447										151	
175	9.05	9.03	33.877	26.234	181.0	0.494										176	
200	8.74	8.72	33.909	26.308	174.3	0.538										201	
225	8.48	8.46	33.966	26.393	166.6	0.581										226	
250	8.15	8.12	34.006	26.475	159.2	0.621										252	
275	7.76	7.73	34.024	26.547	152.6	0.660										277	
300	7.54	7.51	34.038	26.590	148.9	0.698										302	
350	7.03	7.00	34.107	26.716	137.4	0.770										352	
400	6.62	6.58	34.166	26.818	128.2	0.836										403	
450	6.42	6.38	34.207	26.877	123.1	0.899										453	
500	6.10	6.06	34.237	26.943	117.4	0.959										504	
550	5.79	5.74	34.267	27.006	111.7	1.016										554	
600	5.46	5.41	34.304	27.075	105.4	1.071										605	
700	4.87	4.81	34.355	27.185	95.4	1.171										706	
800	4.60	4.54	34.397	27.249	90.0	1.264										807	
900	4.18	4.11	34.428	27.320	83.6	1.350										908	
1000	3.88	3.80	34.462	27.378	78.3	1.431										1009	
1100	3.75	3.67	34.471	27.399	76.9	1.509										1111	
1200	3.70	3.61	34.475	27.408	76.8	1.586										1212	

RV DAVID STARR JORDAN				CRUISE 8305				STATION 90 55									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 35.0 N	119 37.0 W	06/05/83	1740 GMT														
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	15.37	15.37	33.109	24.434	348.6	0.000										0	
10	15.32	15.32	33.110	24.447	347.8	0.035										10	
20	15.30	15.30	33.111	24.452	347.6	0.070										20	
30	15.36	15.36	33.161	24.478	345.4	0.104										30	
40	15.44	15.43	33.248	24.527	341.0	0.139										40	
50	15.32	15.31	33.256	24.560	338.2	0.173										50	
75	15.13	15.12	33.359	24.682	327.3	0.256										75	
100	12.88	12.87	33.215	25.037	293.9	0.333										100	
125	11.04	11.02	33.343	25.481	251.9	0.402										125	
150	10.04	10.02	33.608	25.862	216.1	0.460										151	
175	9.36	9.34	33.783	26.111	192.7	0.511										176	
200	8.82	8.80	33.951	26.329	172.4	0.557										201	
225	8.48	8.46	33.971	26.397	166.2	0.599										226	
250	8.20	8.17	34.004	26.466	160.1	0.640										252	
275	7.87	7.84	34.030	26.535	153.8	0.679										277	
300	7.64	7.61	34.048	26.583	149.6	0.717										302	
350	7.07	7.04	34.101	26.706	138.4	0.789										352	
400	6.62	6.58	34.163	26.816	128.4	0.856										403	
450	6.35	6.31	34.185	26.869	123.9	0.919										453	
500	6.02	5.98	34.233	26.949	116.6	0.979										504	
550	5.71	5.66	34.268	27.016	110.7	1.036										554	
600	5.45	5.40	34.295	27.070	105.9	1.090										605	
700	4.90	4.84	34.349	27.177	96.2	1.191										706	
800	4.46	4.40	34.392	27.260	88.6	1.283										807	
900	4.19	4.12	34.421	27.313	84.2	1.370										908	
1000	3.95	3.87	34.447	27.359	80.3	1.452										1009	

RV DAVID STARR JORDAN				CRUISE 8305								STATION 90 60			
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
32 25.1 N	119 57.5 W	07/05/83	1330 GMT												
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	DRY	SI03	P04	N03	N02	CHL A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	15.70	15.70	33.290	24.501	342.3	0.000									0
10	15.71	15.71	33.291	24.500	342.7	0.034									10
20	15.71	15.71	33.292	24.501	342.9	0.069									20
30	15.70	15.70	33.293	24.504	343.0	0.103									30
40	15.71	15.70	33.292	24.501	343.5	0.137									40
50	15.29	15.28	33.257	24.567	337.5	0.171									50
75	14.78	14.77	33.255	24.677	327.7	0.254									75
100	13.81	13.80	33.280	24.901	307.0	0.334									100
125	11.64	11.62	33.328	25.361	263.5	0.405									125
150	10.47	10.45	33.571	25.759	225.9	0.466									151
175	9.84	9.82	33.750	26.006	202.9	0.520									176
200	9.32	9.30	33.859	26.177	187.0	0.569									201
225	8.73	8.71	33.947	26.340	171.9	0.613									226
250	8.50	8.47	34.021	26.434	163.3	0.655									252
275	8.10	8.07	34.048	26.516	155.8	0.695									277
300	7.85	7.82	34.071	26.571	150.8	0.733									302
350	7.10	7.07	34.092	26.694	139.5	0.806									352
400	6.75	6.71	34.130	26.772	132.6	0.874									403
450	6.30	6.26	34.163	26.858	124.8	0.938									453
500	5.94	5.90	34.213	26.944	117.1	0.999									504
550	5.65	5.60	34.276	27.030	109.3	1.055									554
600	5.37	5.32	34.291	27.076	105.2	1.109									605
700	4.97	4.91	34.338	27.160	97.9	1.211									706
800	4.59	4.53	34.377	27.234	91.3	1.305									807
900	4.15	4.08	34.419	27.315	83.9	1.393									908
1000	3.78	3.70	34.470	27.395	76.5	1.473									1009

RV DAVID STARR JORDAN				CRUISE #305				STATION 90 65							
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
32 15.1 N	120 18.0 W	07/05/83	1910 GMT												
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	15.74	15.74	33.287	24.490	343.4	0.000									0
10	15.73	15.73	33.289	24.493	343.3	0.034									10
20	15.73	15.73	33.287	24.492	343.7	0.069									20
30	15.72	15.72	33.286	24.494	343.9	0.103									30
40	15.54	15.53	33.317	24.558	338.1	0.137									40
50	15.19	15.18	33.298	24.621	332.4	0.171									50
75	14.40	14.39	33.293	24.787	317.2	0.252									75
100	13.62	13.61	33.294	24.950	302.3	0.329									100
125	11.90	11.88	33.381	25.354	264.2	0.400									125
150	10.99	10.97	33.535	25.640	237.4	0.463									151
175	10.26	10.24	33.717	25.910	212.1	0.519									176
200	9.55	9.53	33.814	26.105	193.9	0.570									201
225	8.87	8.85	33.928	26.303	175.3	0.616									226
250	8.44	8.41	34.001	26.427	163.9	0.658									252
275	8.08	8.05	34.049	26.519	155.4	0.698									277
300	7.88	7.85	34.079	26.573	150.7	0.736									302
350	7.40	7.37	34.144	26.694	139.8	0.809									352
400	7.07	7.03	34.200	26.784	131.8	0.877									403
450	6.64	6.60	34.221	26.860	125.1	0.941									453
500	6.24	6.19	34.247	26.933	118.4	1.002									504
550	6.07	6.02	34.290	26.989	113.7	1.060									554
600	5.70	5.65	34.292	27.037	109.3	1.116									605
700	5.05	4.99	34.326	27.142	99.7	1.220									706
800	4.67	4.61	34.381	27.229	92.0	1.316									807
900	4.30	4.23	34.414	27.296	86.0	1.405									908
1000	4.13	4.05	34.452	27.345	82.1	1.489									1009
1100	3.82	3.74	34.475	27.395	77.5	1.569									1111
1200	3.54	3.45	34.495	27.439	73.4	1.645									1212
1300	3.29	3.19	34.514	27.479	69.8	1.716									1313
1400	3.05	2.95	34.529	27.514	66.5	1.784									1415
1500	2.88	2.77	34.543	27.547	64.1	1.850									1516

RV DAVID STARR JORDAN				CRUISE 8305				STATION 90 70									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	ANT	TYPE			
32 5.1 N	120 38.3 W	07/05/83	2052 GMT														
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SW	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	15.79	15.79	33.320	24.503	342.0	0.000										0	
10	15.79	15.79	33.322	24.505	342.2	0.034										10	
20	15.79	15.79	33.322	24.506	342.5	0.068										20	
30	15.78	15.78	33.320	24.507	342.7	0.103										30	
40	15.75	15.74	33.320	24.514	342.3	0.137										40	
50	15.60	15.59	33.329	24.555	338.7	0.171										50	
75	14.10	14.09	33.304	24.859	310.4	0.252										75	
100	12.32	12.31	33.384	25.276	271.1	0.325										100	
125	11.46	11.44	33.573	25.584	242.2	0.389										125	
150	10.36	10.34	33.719	25.894	213.1	0.446										151	
175	9.75	9.73	33.914	26.149	189.3	0.496										176	
200	9.38	9.36	34.019	26.293	176.1	0.542										201	
225	9.26	9.23	34.076	26.357	170.4	0.585										226	
250	8.99	8.96	34.112	26.429	164.0	0.627										252	
275	8.56	8.53	34.135	26.514	156.2	0.667										277	
300	8.22	8.19	34.149	26.577	150.5	0.705										302	
350	7.74	7.70	34.185	26.677	141.6	0.778										352	
400	7.34	7.30	34.216	26.760	134.4	0.847										403	
450	6.99	6.95	34.236	26.824	128.8	0.913										453	
500	6.57	6.52	34.249	26.892	122.8	0.976										504	
550	6.32	6.27	34.275	26.945	118.1	1.036										554	
600	5.90	5.85	34.290	27.011	112.1	1.094										605	
700	5.36	5.30	34.336	27.114	102.9	1.201										706	
800	4.84	4.77	34.367	27.199	95.1	1.300										807	
900	4.50	4.43	34.413	27.274	88.6	1.392										908	
1000	4.10	4.02	34.432	27.332	83.2	1.478										1009	
1100	3.81	3.73	34.472	27.394	77.6	1.558										1111	
1200	3.55	3.46	34.491	27.435	73.9	1.634										1212	
1300	3.33	3.23	34.507	27.470	70.8	1.707										1313	
1400	3.13	3.03	34.520	27.499	68.1	1.776										1415	
1500	2.94	2.83	34.537	27.531	65.2	1.843										1516	

RV ELLEN B. SCHIPPS

CRUISE 8305

STATION 90 28

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WFT	CLOUD	AMT	TYPE	
33 28.0 N	117 46.5 W	12/05/83	0034 GMT	127 M	300	06 KT	300 01 03	4	1015.9 MB	19.0 C	17.8 C		0/8		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	16.91	16.91	33.478	24.368	354.9	0.000	5.94	107.4	3.5	0.33	0.2	0.01	0.34	0.01	0
10 ISL	16.56	16.55	33.469	24.444	348.0	0.035	6.02	108.1							10
11	16.52	16.52	33.469	24.452	347.3	0.039	6.03	108.2	4.6	0.34	0.1	0.09	0.32	0.02	11
20 ISL	16.20	16.20	33.470	24.527	340.5	0.070									20
30	13.63	13.63	33.538	25.135	282.7	0.101	4.92	83.3	9.1	0.78	5.9	0.26	4.79	1.46	30
39	12.70	12.69	33.703	25.449	253.1	0.125	3.89	64.7	12.8	1.10	13.1	0.12	0.80	0.18	39
50 ISL	11.80	11.80	33.751	25.659	233.3	0.152	3.13	51.2							50
53	11.62	11.61	33.755	25.695	230.0	0.159	3.03	49.3	20.2	1.62	18.6	0.02	0.14	0.12	53
67	11.28	11.27	33.853	25.834	217.1	0.190	3.16	51.0	21.6	1.55	19.7	0.06	0.13	0.15	67
75 ISL	11.10	11.09	33.881	25.890	212.0	0.207	3.00	48.2							75
81	10.98	10.97	33.904	25.928	208.5	0.220	2.86	45.9	23.4	1.33	21.1	0.01	0.06	0.09	81
100	10.66	10.65	34.015	26.071	195.3	0.258	2.86	45.6	24.3	1.67	22.3	0.01	0.03	0.13	100
124	10.19	10.18	34.069	26.195	183.9	0.304	2.75	43.4	27.0	1.86	23.4	0.00	0.02	0.09	124
125 ISL	10.17	10.15	34.066	26.200	183.5	0.305	2.75	43.4							125
148	9.66	9.64	34.067	26.293	176.0	0.347	2.80	43.7	28.9	1.78	24.4	0.00	0.02	0.06	148
150 ISL	9.63	9.61	34.067	26.288	175.5	0.350	2.80	43.6							151

RV ELLEN B. SCHIPPS

CRUISE 8305

STATION 90 30

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 23.9 N	117 52.5 W	12/05/83	0341 0428 GMT	611 M	300	06 KT	300 02 07	4	1015.2 MB	16.9 C	15.2 C	0/8			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	16.72	16.72	33.423	24.370	354.7	0.000	5.82	104.8	2.5	0.27	0.1	0.01	0.20	0.02	0
10	16.64	16.64	33.422	24.389	353.3	0.035	6.00	107.8	2.6	0.29	0.1	0.02	0.16	0.03	10
20 ISL	15.15	15.15	33.426	24.727	321.3	0.069	5.58	97.3							20
28	13.74	13.74	33.472	25.061	289.7	0.093	5.05	85.7	4.9	0.43	0.1	0.01	1.08	0.32	28
30 ISL	13.54	13.53	33.493	25.119	284.3	0.099	4.96	83.8							30
37			33.493				4.56	77.4	12.7	0.93	10.0	0.07	0.74	0.26	37
47	12.36	12.35	33.681	25.498	248.6	0.144	3.53	58.3	15.2	1.18	14.7	0.00	0.47	0.17	47
50 ISL	12.22	12.21	33.700	25.541	244.6	0.152	3.49	57.5							50
61	11.76	11.75	33.760	25.673	232.3	0.178	3.35	54.6	18.6	1.39	17.4	0.01	0.16	0.14	61
75	11.11	11.10	33.817	25.836	217.0	0.210	3.17	51.0	21.3	1.31	19.4	0.01	0.04	0.08	75
93	10.96	10.95	33.935	25.956	206.1	0.248	2.75	44.1	23.7	1.64	21.5	0.01	0.03	0.08	93
100 ISL	10.81	10.80	33.953	25.998	202.2	0.262	2.73	43.7							100
117	10.38	10.37	33.981	26.094	193.4	0.296	2.69	42.6	26.2	1.78	22.8	0.01	0.02	0.07	117
125 ISL	10.18	10.16	33.988	26.137	189.5	0.311	2.69	42.3							125
135	9.93	9.91	34.006	26.190	184.6	0.330	2.67	41.9	27.9	1.80	24.0	0.01	0.01	0.06	135
150 ISL	9.61	9.59	34.043	26.276	176.7	0.357	2.57	40.1							151
163	9.38	9.36	34.081	26.341	170.7	0.379	2.47	38.3	32.0	1.78	25.8	0.00	0.01	0.04	164
191	9.07	9.05	34.109	26.413	164.4	0.426	2.30	35.4	35.5	1.80	26.9	0.00	0.01	0.04	192
200 ISL	8.96	8.94	34.118	26.440	161.9	0.441	2.22	34.1							201
219	8.75	8.73	34.151	26.497	156.9	0.471	1.480		39.3	2.15	28.4	0.00			220
250 ISL	8.51	8.48	34.178	26.559	151.4	0.519	1.77	26.9							252
257	8.46	8.43	34.189	26.572	150.4	0.530	1.70	25.8	43.2	2.14	30.1	0.01			259
300 ISL	7.99	7.96	34.209	26.663	142.2	0.592	1.40	21.1							302
313	7.84	7.81	34.221	26.690	139.8	0.611	1.32	19.8	50.5	2.37	32.4	0.00			315
387	7.16	7.12	34.257	26.816	128.6	0.710	0.79	11.6	61.5	2.57	35.3	0.00			390
400 ISL	7.04	7.00	34.257	26.838	126.7	0.727	0.72	10.6							403
461	6.53	6.49	34.299	26.936	117.9	0.801	0.48	7.0	72.7	2.73	37.4	0.00			465
500 ISL	6.26	6.22	34.323	26.996	112.6	0.846	0.38	5.4							504
541	6.03	5.98	34.369	27.056	107.2	0.891	0.31	4.5	81.0	2.82	38.8	0.00			545

RV ELLEN B. SCRIPPS				CRUISE 8305				STATION 90 32									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSANGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 20.5 N	119 3.0 W	12/05/83	0639 0742 GMT	778 M	300	04 KT			1015.2 MB	16.2 C	15.1 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL-A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	16.77	16.77	33.421	24.357	356.0	0.000									0		
1	16.77	16.77	33.465U				6.00		2.3	0.26	0.1	0.00	0.22	0.03	1		
10	16.76	16.76	33.421	24.360	356.0	0.036	6.00	108.1	1.9	0.24	0.0	0.00	0.24	0.01	10		
20	15.33	15.33	33.408	24.673	326.5	0.069	6.17	108.0							20		
28	13.87	13.87	33.413	24.989	296.6	0.094	6.30	107.2	4.5	0.40	0.0	0.01	0.36	0.07	28		
30	13.60	13.59	33.412	25.046	291.3	0.100	6.10	103.2							30		
37	12.77	12.76	33.427	25.271	274.7	0.120	5.30	88.1	6.7	0.64	5.2	0.00	1.03	0.34	37		
50	12.01	12.01	33.522	25.442	254.0	0.154	4.24	69.4							50		
52	11.96	11.95	33.546	25.469	251.5	0.160	4.11	67.2	13.9	1.08	13.2	0.00	0.26	0.12	52		
65	11.78	11.77	33.737	25.651	234.4	0.191	3.50	57.1	16.6	1.34	16.5	0.01	0.09	0.10	65		
75	11.48	11.47	33.810	25.766	223.7	0.214	3.20	51.9							75		
89	11.05	11.04	33.878	25.895	211.8	0.245	2.92	46.9	21.7	1.43	20.6	0.00	0.03	0.08	89		
100	10.92	10.91	33.943	25.971	204.8	0.268	2.74	43.9							100		
109	10.81	10.80	33.991	26.026	199.8	0.286	2.64	42.2	25.1	1.71	22.3	0.00	0.02	0.07	109		
125	10.30	10.29	34.014	26.136	189.6	0.317	2.59	41.0							125		
127	10.24	10.23	34.019	26.148	188.5	0.321	2.59	40.9	27.4	1.78	23.9	0.00	0.01	0.06	127		
146	9.94	9.92	34.050	26.273	181.7	0.356	2.39	37.5	29.8	1.87	25.1	0.00	0.01	0.06	146		
150	9.87	9.86	34.057	26.243	179.9	0.363	2.35	36.8							150		
176	9.42	9.40	34.127	26.370	168.2	0.408	2.14	33.2	34.7	1.90	27.0	0.00	0.01	0.04	176		
200	8.98	8.96	34.157	26.468	159.3	0.448	2.09	32.1							200		
210	8.81	8.79	34.167	26.500	156.4	0.464	2.08	31.8	38.7	2.00	28.4	0.00	0.01	0.04	210		
239	8.39	8.36	34.148	26.550	152.0	0.508	1.98	30.0	42.3	2.17	29.6	0.00			239		
250	8.30	8.27	34.155	26.573	150.0	0.525	1.85	28.0							250		
286	8.05	8.02	34.212	26.652	143.1	0.578	1.39	20.9	48.8	2.30	31.9	0.01			286		
300	7.89	7.86	34.210	26.679	140.6	0.598	1.30	19.6							300		
340	7.41	7.38	34.220	26.752	134.7	0.653	1.13	16.8	56.2	2.49	34.1	0.00			340		
400	6.93	6.89	34.249	26.847	125.7	0.731	0.74	10.9							400		
422	6.78	6.74	34.272	26.891	122.8	0.758	0.61	8.9	66.9	2.71	36.9	0.00			422		
500	6.16	6.11	34.317	27.004	111.6	0.849	0.37	5.3							500		
504	6.13	6.08	34.327	27.010	111.1	0.854	0.36	5.2	80.5	2.84	38.8	0.00			504		
584	5.67	5.62	34.356	27.091	104.0	0.940	0.28	4.0	88.0	2.91	39.4	0.00			584		

RV ELLEN B. SCRIPPS				CRUISE 8305				STATION 90 35									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSANGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 13.4 N	118 14.8 W	12/05/83	1047 GMT	1110 M	280	04 KT			1013.9 MB	15.5 C	14.2 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL-A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	17.11	17.11	33.431	24.285	362.8	0.000	5.92	107.4	1.5	0.24	0.1	0.02	0.31	0.00	0		
10	17.12	17.12	33.420	24.275	364.2	0.036	5.94	107.7	2.2	0.26	0.1	0.01	0.25	0.06	10		
20	14.85	14.85	33.464	24.822	312.3	0.069	5.18	89.9							20		
28	12.87	12.87	33.531	25.282	268.7	0.093	4.59	76.5	7.6	0.86	8.5	0.13	0.22	0.06	28		
30	12.66	12.65	33.516	25.313	265.8	0.099	4.60	76.3							30		
37	12.25	12.25	33.483	25.365	261.0	0.117	4.63	76.2	9.9	0.93	10.6	0.01	0.46	0.13	37		
47	12.39	12.38	33.621	25.445	253.6	0.143	3.88	64.1	11.2	1.12	13.9	0.01	0.35	0.21	47		
50	12.30	12.29	33.636	25.476	250.8	0.150	3.78	62.3							50		
61	11.78	11.77	33.673	25.602	239.1	0.177	3.61	58.9	14.2	1.27	16.6	0.01	0.12	0.18	61		
75	11.13	11.12	33.748	25.779	222.5	0.210	3.38	54.4	17.3	1.33	19.1	0.01	0.04	0.14	75		
93	10.75	10.74	33.891	25.959	205.8	0.248	2.96	47.3	22.0	1.61	21.9	0.01	0.02	0.10	93		
100	10.55	10.54	33.920	26.018	200.3	0.262	2.87	45.7							100		
117	10.09	10.08	33.974	26.138	189.7	0.296	2.75	43.3	26.0	1.73	24.2	0.01	0.01	0.08	117		
125	9.95	9.93	33.993	26.180	185.4	0.311	2.71	42.6							125		
136	9.77	9.75	34.025	26.232	180.6	0.331	2.66	41.6	27.7	1.77	25.0	0.00	0.01	0.06	136		
150	9.52	9.50	34.069	26.311	173.4	0.355	2.51	39.0							150		
162	9.26	9.24	34.102	26.376	167.3	0.376	2.41	37.3	32.1	1.83	26.8	0.01	0.00	0.04	162		
190	8.36	8.34	34.069	26.492	156.6	0.421	2.58	39.1	36.1	1.83	28.4	0.00	0.00	0.04	190		
200	8.25	8.23	34.077	26.519	154.7	0.437	2.47	37.3							200		
218	8.15	8.13	34.116	26.561	150.5	0.464	2.16	32.6	40.5	2.11	30.2	0.00			218		
250	7.86	7.84	34.171	26.650	142.4	0.511	1.62	24.2							250		
255	7.82	7.79	34.184	26.663	141.3	0.518	1.54	23.1	47.5	2.30	32.5	0.00			255		
300	7.60	7.57	34.209	26.720	136.6	0.581	1.21	18.1							300		
310	7.55	7.52	34.217	26.729	135.9	0.595	1.17	17.4	52.8	2.46	34.1	0.00			310		
380	6.90	6.86	34.270	26.862	124.0	0.685	0.70	10.3	63.0	2.65	36.8	0.00			380		
400	6.78	6.74	34.272	26.886	122.0	0.710	0.63	9.2							400		
452	6.49	6.45	34.298	26.940	117.3	0.772	0.49	7.1	70.3	2.87	38.3	0.00			452		
500	6.13	6.09	34.317	27.008	111.3	0.827	0.36	5.2							500		
531	5.87	5.82	34.346	27.058	106.7	0.861	0.29	4.1	81.8	2.91	39.8	0.00			531		

RV ELLEN B. SCHRIPPS				CRUISE 8305				STATION 90 37									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 11.0 N	118 22.5 W	12/05/83	1256 GMT	1197 M	300	08 KT	300 01 07	0	1013.9 MB	15.1 C	13.7 C		0/R				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SIO3	P04	N03	N02	CHL A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	DBAR		
0	15.95	15.95	33.309	24.459	346.2	0.000	5.95	105.5	2.6	0.30	0.2	0.01	0.17	0.03	0		
10	15.95	15.95	33.379	24.513	341.4	0.034	5.97	105.9	3.3	0.32	0.1	0.01	0.18	0.02	10		
20 ISL	15.85	15.85	33.360	24.522	341.0	0.069									20		
27	14.60	14.60	33.341	24.781	316.5	0.092	6.32	109.1	2.9	0.42	0.1	0.00	0.32	0.07	27		
30 ISL	14.08	14.08	33.334	24.885	306.5	0.101	6.20	105.9							30		
36	13.18	13.18	33.344	25.076	288.5	0.119	5.89	98.7	5.0	0.67	1.3	0.02	1.27	0.51	36		
50	12.20	12.19	33.302	25.390	259.0	0.157	5.09	83.7	9.3	0.98	7.8	0.12	0.49	0.21	50		
63	11.62	11.61	33.482	25.4*3	250.4	0.190	4.42	71.7							63		
75 ISL	11.43	11.42	33.600	25.611	238.4	0.219	4.01	64.7							75		
86	11.25	11.24	33.728	25.742	226.2	0.245	3.75	60.5	17.7	1.25	17.2	0.01	0.05	0.11	86		
100 ISL	10.54	10.53	33.757	25.893	212.1	0.276	3.49	55.4							100		
104	10.35	10.34	33.775	25.938	207.9	0.284	3.39	53.6	24.8	1.55	21.0	0.01	0.03	0.08	104		
122	10.23	10.22	34.053	26.176	185.7	0.319	2.47	38.2	29.4	1.89	24.8	0.01	0.03	0.11	122		
125 ISL	10.15	10.14	34.063	26.200	183.5	0.325	2.42	38.1							125		
142	9.66	9.64	34.079	26.293	174.9	0.356	2.41	37.6	32.6	1.91	26.0	0.01	0.01	0.05	143		
150 ISL	9.54	9.52	34.091	26.325	172.0	0.369	2.36	36.7							151		
168	9.32	9.30	34.127	26.386	166.5	0.400	2.22	34.4	35.5	1.95	27.3	0.01	0.01	0.05	169		
200 ISL	8.67	8.65	34.145	26.507	155.4	0.451	2.15	32.8							201		
201	8.65	8.63	34.150	26.511	155.1	0.453	2.15	32.8	40.2	1.94	28.2	0.00	0.00	0.03	202		
229	8.23	8.21	34.171	26.592	147.8	0.495	1.96	29.6	44.2	2.13	29.9	0.00			230		
250 ISL	7.93	7.90	34.171	26.641	143.4	0.526	1.73	26.0							252		
276	7.62	7.59	34.247U				1.44		52.4	2.25	33.4	0.01			278		
300 ISL	7.48	7.45	34.208	26.736	135.0	0.596	1.24	18.4							302		
326	7.37	7.34	34.242	26.775	131.7	0.631	1.06	15.7	58.2	2.48	34.3	0.00			328		
400 ISL	6.89	6.86	34.270	26.869	123.7	0.726	0.71	10.4							403		
406	6.85	6.81	34.278	26.876	123.1	0.733	0.69	10.1	66.5		36.8	0.03			409		
488	6.21	6.17	34.330	27.002	111.7	0.829	0.44	6.3	79.4	2.76	39.0	0.01			492		
500 ISL	6.13	6.09	34.332	27.014	110.7	0.842									504		
571	5.65	5.60													576		

RV ELLEN B. SCHRIPPS				CRUISE 8305				STATION 90 42									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 0.6 N	118 43.3 W	12/05/83	1718 1749 GMT	981 M	270	12 KT	290 05 07	1	1015.2 MB	14.8 C	13.7 C				ST		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SIO3	P04	N03	N02	CHL A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	DBAR		
0 ISL	15.22	15.22	33.361	24.661	327.0	0.000	5.96	104.2							0		
1	15.22	15.22	33.361	24.661	327.0	0.003	5.96	104.2	4.3	0.32	0.2	0.02	0.36	0.06	1		
10	15.12	15.12	33.363	24.685	325.1	0.033	5.98	104.3	3.5		0.1	0.02	0.43	0.06	10		
20 ISL	15.00	15.00	33.365	24.713	322.7	0.065									20		
28	14.04	14.04	33.420	24.959	299.5	0.090	5.71	97.5	4.2	0.55	1.8	0.0F	1.95	0.12	28		
30 ISL	13.66	13.65	33.431	25.048	291.1	0.096	5.52	93.6							30		
36	12.56	12.56	33.475	25.299	267.2	0.113	4.95	82.0	7.6	0.80	7.6	0.31	0.55	0.21	36		
50	11.80	11.79	33.560	25.510	247.5	0.149	4.32	70.4	12.1	1.04	12.7	0.07	0.18	0.16	50		
63	11.45	11.44	33.652	25.646	234.8	0.180	3.77	61.0	16.0	1.27	16.1	0.02	0.14	0.18	63		
75 ISL	11.10	11.09	33.710	25.756	224.6	0.208	3.49	56.1							75		
87	10.78	10.77	33.768	25.857	215.2	0.234	3.28	52.4	20.8	1.39	19.4	0.00	0.04	0.15	87		
100 ISL	10.52	10.51	33.847	25.966	205.2	0.261	2.95	46.9							100		
106	10.41	10.40	33.888	26.016	200.6	0.273	2.81	44.5	24.9	1.65	22.8	0.00	0.02	0.11	106		
125	10.00	9.99	33.997	26.171	186.2	0.310	2.49	39.1	29.2	1.86	24.4	0.00	0.02	0.15	125		
141	9.48	9.46	34.056	26.304	173.8	0.339	2.35	36.5	32.3	1.90	25.6	0.02	0.02	0.12	142		
150 ISL	9.24	9.23	34.050	26.340	170.5	0.355	2.39	36.9							151		
169	8.86	8.84	34.032	26.385	166.5	0.387	2.49	38.1	35.2	1.80	26.8	0.00	0.01	0.08	170		
200 ISL	8.52	8.50	34.087	26.485	157.6	0.437	2.24	34.0							201		
203	8.50	8.48	34.098	26.493	156.8	0.442	2.21	33.6	39.3	1.92	28.2	0.00	0.01	0.08	204		
231	8.14	8.12	34.096	26.547	152.0	0.485	2.19	33.0	42.2	2.05	29.2	0.00			232		
250 ISL	7.96	7.93	34.102	26.583	148.9	0.513	2.07	31.1							252		
278	7.73	7.70	34.139	26.641	143.7	0.554	1.80	26.9	48.7	2.19	31.0	0.00			280		
300 ISL	7.56	7.53	34.176	26.699	138.6	0.585	1.51	22.4							302		
329	7.34	7.31	34.237	26.775	131.8	0.625	1.12	16.6	57.2	2.74U	33.9	0.0E			331		
400 ISL	6.64	6.60	34.271	26.903	120.2	0.714	0.64	9.3							403		
405	6.59	6.55	34.278	26.911	119.5	0.720	0.62	9.0	69.7	2.77	36.9	0.02			408		
475	5.99	5.95	34.321	27.023	109.4	0.800	0.44	6.3	80.0	2.80	38.7	0.00			479		
500 ISL	5.81	5.76	34.329	27.057	106.3	0.827	0.39	5.5							504		
539	5.56	5.51	34.357	27.105	102.0	0.868	0.32	4.5	86.4	3.09	39.6	0.02			543		

RV ELLEN B. SCRIPPS				CRUISE 8305				STATION 90 45									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 54.5 N	118 55.3 W	12/05/83	2053 GMT	1757 M	310	15 KT	310 08 07	1	1015.2 MR	15.0 C	13.8 C	3/8		ST			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL.A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	15.22	15.22	33.410	24.699	323.4	0.000	6.02	105.2	6.2	0.53	0.3	0.05	0.53	0.04	0		
10	15.15	15.15	33.385	24.696	324.0	0.032	6.02	105.1	5.3	0.30	0.0	0.02	0.54	0.06	10		
20 ISL	15.05	15.05	33.385	24.718	322.3	0.065									20		
28	14.62	14.62	33.385	24.810	313.7	0.090	6.02	104.0	4.9	0.60	0.4	0.02	1.58	0.12	28		
30 ISL	14.16	14.15	33.402	24.922	303.1	0.096	5.81	99.4							30		
37	12.42	12.42	33.496	25.343	263.2	0.116	5.02	82.9	10.7	0.74	7.6	0.37	0.98	0.27	37		
50 ISL	11.42	11.41	33.535	25.562	242.5	0.149	4.38	70.9							50		
51	11.40	11.39	33.536	25.565	242.2	0.151	4.36	70.5	15.8	0.86	13.8	0.07	0.25	0.12	51		
64	10.95	10.94	33.632	25.721	227.7	0.182	3.98	63.7	18.8	0.94	16.8	0.03	0.10	0.11	64		
75 ISL	10.50	10.49	33.695	25.851	215.5	0.206	3.67	58.2							75		
87	10.06	10.05	33.776	25.988	202.7	0.232	3.37	53.0	25.2	1.16	21.4	0.02	0.03	0.11	87		
100 ISL	9.82	9.80	33.906	26.133	189.2	0.257	3.12	48.7							100		
106	9.73	9.72	33.957	26.185	184.4	0.268	3.03	47.3	28.8	1.37	23.6	0.02	0.02	0.10	106		
123	9.42	9.41	33.943	26.225	180.9	0.299	2.95	45.7	31.0	1.39	24.7	0.02	0.02	0.08	123		
125 ISL	9.37	9.36	33.943	26.235	180.0	0.303	2.93	45.4							125		
141	9.02	9.00	33.981	26.320	172.2	0.331	2.81	43.2	34.4	1.59	25.9	0.01	0.02	0.09	141		
150 ISL	8.87	8.85	33.995	26.357	168.7	0.346	2.79	42.7							150		
169	8.61	8.59	34.032	26.424	162.7	0.378	2.74	41.7	37.2	1.74	26.7	0.00	0.01	0.08	169		
200 ISL	8.26	8.24	34.071	26.512	154.8	0.427	2.50	37.8							200		
201	8.25	8.23	34.076	26.514	154.6	0.429	2.49	37.6	41.4	1.93	28.5	0.01	0.02	0.06	201		
227	8.18	8.16	34.128	26.566	150.2	0.468	2.13	32.1	44.5	2.04	29.6	0.00			227		
250 ISL	8.04	8.02	34.141	26.601	147.3	0.503	1.87	28.2							250		
273	7.87	7.84	34.164	26.641	143.8	0.536	1.66	24.9	50.5	1.92U	31.9	0.01			273		
300 ISL	7.65	7.62	34.221	26.722	136.5	0.574	1.44	21.5							300		
322	7.46	7.43	34.281	26.792	130.0	0.603	1.28	19.0	57.0	2.26	33.5	0.02			322		
399	6.73	6.69	34.369	26.964	114.6	0.697	0.74	10.8	69.7	2.67	36.6	0.00			399		
400 ISL	6.72	6.69	34.363	26.965	114.5	0.698	0.73	10.7							400		
480	6.25	6.21	34.368	27.027	109.4	0.788	0.44	6.4	78.2	2.42U	38.7	0.01			480		
500 ISL	6.11	6.07	34.359	27.044	107.9	0.810	0.43	6.1							500		
563	5.62	5.57	34.360	27.100	102.8	0.876	0.38	5.4							563		

RV ELLEN B. SCRIPPS

CRUISE 8306

STATION 90 28

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 28.0 N	117 47.0 W	14/06/83	0300 GMT	185 M	270	05 KT	270 03 05	4	1012.0 MB	18.2 C	16.7 C	3/8		ST	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	19.32	19.32	33.411	23.727	416.1	0.000	6.06	114.5	2.4	0.29	0.2	0.00	0.33	0.02	0
10	17.71	17.71	33.455	24.161	375.0	0.040	6.10	111.9	0.9	0.29	0.2	0.00	0.28	0.05	10
20 ISL	15.46	15.45	33.458	24.645	325.3	0.075	5.88	103.3							20
30	13.49	13.49	33.446	25.092	286.8	0.106	5.54	93.5	4.3	0.62	2.7	0.01	1.02	0.25	30
39	12.78	12.77	33.372	25.177	279.0	0.131	5.25	87.3	4.8	0.75	5.9	0.03	0.57	0.22	39
50 ISL	12.72	12.71	33.499	25.289	268.6	0.161	4.62	76.8							50
55	12.69	12.68	33.547	25.330	264.8	0.175	4.35	72.3	9.3	1.07	9.8	0.37	0.53	0.42	55
69	12.62	12.61	33.564	25.357	262.6	0.212	4.10	68.0	10.7	1.22	10.9	0.48	0.53	0.38	69
75 ISL	12.46	12.45	33.590	25.411	257.7	0.227	3.90	64.5							75
84	12.16	12.15	33.641	25.506	248.8	0.250	3.61	59.3	13.0	1.35	15.1	0.21	0.21	0.29	84
100 ISL	11.69	11.68	33.697	25.640	236.4	0.289	3.46	56.2							100
104	11.58	11.57	33.714	25.672	233.5	0.299	3.44	55.9	16.0	1.50	17.6	0.00	0.14	0.17	104
125 ISL	11.09	11.08	33.809	25.837	218.1	0.346	3.17	50.9							125
128	11.03	11.01	33.826	25.859	216.1	0.352	3.13	50.2	20.3	1.68	20.5	0.01	0.05	0.12	129
150 ISL	10.64	10.62	33.895	25.986	204.6	0.399	2.96	47.1							151
154	10.58	10.56	33.909	26.004	202.9	0.407	2.94	46.8	22.5	1.75	22.1	0.00	0.02	0.08	155

RV ELLEN B. SCRIPPS

CRUISE #306

STATION 90 30

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 24.9 N	117 53.4 W	14/06/83	0515 GMT	612 M	270	03 KT	270 03 05		1012.0 MB	17.9 C	16.9 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0 ISL	19.27	19.27	33.471	23.786	410.5	0.000	5.71	107.8							0
1	19.27	19.27	33.471	23.786	410.5	0.004	5.71	107.8	0.0	0.28	0.3	0.00	0.23	0.34	1
10	18.01	18.01	33.472	24.101	380.7	0.040	5.91	109.0	0.0	0.30	0.4	0.00	0.21	0.04	10
20 ISL	15.88	15.88	33.455	24.588	334.6	0.075	5.92	104.9							20
29	14.06	14.06	33.480	25.001	295.4	0.104	5.93	101.3	3.2	0.53	0.4	0.00	0.25	0.23	29
30 ISL	13.92	13.92	33.485	25.035	292.3	0.107	5.81	99.0							30
39	12.99	12.98	33.537	25.263	270.8	0.132	4.75	79.4	5.8	0.93	7.9	0.11	0.25	0.15	39
48	12.63	12.62	33.556	25.349	262.8	0.156	4.36	72.3	7.4	1.08	10.9	0.05	0.38	0.34	48
50 ISL	12.54	12.54	33.563	25.372	260.6	0.161	4.29	71.1							50
63	11.96	11.95	33.634	25.538	245.2	0.194	3.94	64.5	12.4	1.33	14.9	0.00	0.15	0.15	63
75 ISL	11.39	11.38	33.691	25.669	231.1	0.223	3.73	60.3							75
77	11.31	11.30	33.704	25.713	228.9	0.228	3.69	59.6	15.3	1.44	17.4	0.00	0.06	0.09	77
96	11.08	11.07	33.841	25.861	215.2	0.270	2.92	46.9	20.5	1.81	21.0	0.00	0.04	0.13	96
100 ISL	11.06	11.05	33.849	25.873	214.2	0.278	2.90	46.5							100
119	10.98	10.97	33.873	25.904	211.6	0.319	2.78	44.6	21.2	1.80	21.7	0.01	0.03	0.12	119
125 ISL	10.91	10.90	33.878	25.923	210.0	0.331	2.82	45.1							125
138	10.75	10.73	33.901	25.968	206.0	0.359	2.90	46.3	21.2	2.09	22.0	0.00	0.02	0.09	137
150 ISL	10.60	10.59	33.920	26.012	202.1	0.383	2.85	45.4							151
167	10.39	10.37	33.955	26.073	196.6	0.417	2.75	43.6	24.6	2.08	23.4	0.01	0.01	0.08	168
197	9.98	9.96	33.980	26.163	188.5	0.475	2.81	44.1	24.6	1.83	24.0	0.00	0.01	0.36	193
200 ISL	9.94	9.92	33.979	26.172	187.7	0.480	2.80	43.9							201
225	9.62	9.59	34.022	26.256	180.2	0.526	2.68	41.7	27.1	2.10	25.3	0.00			226
250 ISL	9.20	9.17	34.073	26.369	169.8	0.570	2.51	38.7							252
264	8.96	8.93	34.108	26.431	164.1	0.593	2.41	37.0	32.8	2.63	28.5	0.00			266
300 ISL	8.44	8.40	34.115	26.523	155.8	0.651	2.21	33.6							302
322	8.16	8.13	34.119	26.563	152.2	0.685	2.09	31.5	40.4	2.31	30.4	0.00			324
395	7.53	7.49	34.171	26.697	140.4	0.792	1.52	22.6	49.5	2.64	33.7	0.00			398
400 ISL	7.50	7.46	34.169	26.706	139.6	0.799	1.47	21.9							403
466	7.10	7.05	34.243	26.815	130.0	0.888	0.90	13.2	58.2	3.03	36.4	0.00			470
500 ISL	6.81	6.76	34.253	26.869	125.1	0.931	0.71	10.4							504
545	6.33	6.28	34.269	26.939	118.6	0.986	0.57	8.2	69.8	3.05	39.2	0.00			549

RV ELLEN B. SCRIPPS				CRUISE 8306						STATION 90 32					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 20.5 N	118 3.2 W	14/06/83	0730 GMT	753 M	290	03 KT			1012.0 MB	17.2 C	16.5 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	18.11	18.11	33.475	24.078	382.6	0.000	5.61	103.7	0.0	0.31	0.3	0.01	0.11	0.03	0
10	16.37	16.37	33.440	24.465	346.1	0.036	5.83	104.3	0.0	0.35	0.3	0.01	0.06	0.02	10
20 ISL	15.16	15.16	33.371	24.684	325.5	0.070	5.93	103.5							20
29	14.38	14.38	33.321	24.812	313.5	0.099	6.02	103.4	0.5	0.41	0.4	0.00	0.13	0.06	29
30 ISL	14.31	14.30	33.319	24.827	312.1	0.102	5.99	102.8							30
39	13.69	13.68	33.331	24.963	299.4	0.130	5.66	95.9	1.5	0.55	2.0	0.20	0.44	0.21	39
49A	13.02	13.01	33.375	25.132	283.5	0.159	5.22	87.2	3.2	0.73	5.4	0.09	0.38	0.22	49
50 ISL	12.93	12.93	33.376	25.152	281.7	0.162	5.18	86.4							50
63A	11.92	11.91	33.464	25.413	257.0	0.197	4.59	75.0	7.7	1.02	10.9	0.01	0.22	0.15	63
75 ISL	11.53	11.53	33.647	25.679	236.8	0.226	3.90	63.3							75
77A	11.50	11.49	33.680	25.659	234.0	0.231	3.80	61.6	12.8	1.24	15.9	0.01	0.07	0.10	77
97A	11.15	11.14	33.795	25.813	219.9	0.276	3.43	55.2	16.4	1.57	18.6	0.01	0.02	0.07	97
100 ISL	11.09	11.08	33.796	25.825	218.6	0.283	3.42	55.0							100
120A	10.77	10.76	33.821	25.901	211.9	0.326	3.32	53.0	18.4	1.56	20.1	0.01	0.02	0.06	120
125 ISL	10.72	10.71	33.844	25.931	209.2	0.337	3.19	50.9							125
139A	10.60	10.58	33.928	26.015	201.5	0.365	2.82	44.9	21.8	1.79	22.2	0.01	0.01	0.08	140
150 ISL	10.50	10.48	33.965	26.065	196.9	0.387	2.70	42.9							151
168	10.29	10.27	34.018	26.139	190.3	0.422	2.61	41.3	24.3	1.89	23.7	0.01	0.00	0.05	169
197	9.81	9.79	34.079	26.269	178.4	0.476	2.37	37.1	28.0	1.88	25.4	0.00	0.00	0.05	198
200	9.77	9.75	34.077	26.278	177.6	0.481	2.36	36.9							201
226	9.47	9.44	34.112	26.351	171.1	0.526	2.28	35.4	30.5	2.08	26.6	0.01			227
250 ISL	9.28	9.25	34.171	26.433	163.8	0.566	1.99	30.8							252
265	9.16	9.13	34.215	26.483	159.4	0.591	1.80	27.8	35.3	2.29	28.8	0.00			267
300 ISL	8.72	8.69	34.216	26.558	152.7	0.646	1.64	25.1							302
322	8.43	8.40	34.210	26.594	149.5	0.679	1.60	24.3	41.7	2.55	30.7	0.00			324
396	7.71	7.67	34.203	26.696	140.6	0.786	1.38	20.6	48.7	2.56	32.8	0.00			399
400 ISL	7.66	7.62	34.196	26.703	140.0	0.792	1.36	20.2							403
467	6.92	6.88	34.216	26.818	129.5	0.882	0.95	13.9	59.9	3.05	35.9	0.00			471
500 ISL	6.65	6.60	34.223	26.867	125.1	0.924	0.79	11.4							504
545	6.38	6.33	34.260	26.926	119.9	0.979	0.60	8.7	69.3	3.00	38.5	0.00			549

A) THE NUTRIENT SAMPLES FROM 49 TO 139 METERS APPEAR TO HAVE BEEN ANALYZED OUT OF ORDER. THEY ARE ASSUMED TO NOW BE IN THE CORRECT ORDER.

RV ELLEN B. SCRIPPS				CRUISE 8306						STATION 90 35					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 15.9 N	118 12.7 W	14/06/83	1010 GMT	295 M	240	09 KT			1012.5 MB	16.5 C	16.2 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	17.54	17.54	33.439	24.189	372.0	0.000	5.68	103.9	0.4	0.33	0.2	0.00	0.13	0.02	0
9	17.45	17.45	33.433	24.206	370.7	0.033	5.70	104.0	0.4	0.38	0.2	0.03	0.10	0.04	9
10 ISL	17.43	17.43	33.433	24.211	370.2	0.037	5.72	104.4							10
20 ISL	17.37	17.37	33.430	24.224	369.4	0.074	5.91	107.7							20
28	14.67	14.67	33.330	24.757	318.7	0.102	5.98	103.3	1.5	0.41	0.2	0.00	0.18	0.10	28
30 ISL	14.35	14.34	33.326	24.823	312.5	0.108	5.94	102.0							30
43	13.35	13.34	33.358	25.053	290.9	0.147	5.45	91.7	3.3	0.65	3.4	0.07	0.01	0.00	43
50 ISL	12.82	12.81	33.393	25.188	278.3	0.167	5.10	84.9							50
53	12.61	12.60	33.415	25.243	273.0	0.176	4.95	82.0	5.9	0.85	7.5	0.01	0.47	0.25	53
67	11.90	11.89	33.536	25.473	251.4	0.212	4.33	70.7	9.9	1.16	12.4	0.00	0.18	0.14	67
75 ISL	11.69	11.68	33.568	25.538	245.4	0.232	4.17	67.9							75
82	11.56	11.55	33.593	25.581	241.5	0.249	4.09	66.3	12.1	1.27	14.6	0.00	0.11	0.12	82
100 ISL	11.08	11.07	33.679	25.737	227.1	0.291	3.83	61.5							100
101	11.06	11.05	33.688	25.746	226.2	0.294	3.81	61.2	15.4	1.42	17.2	0.00	0.05	0.07	101
124	10.85	10.83	33.876	25.930	209.3	0.344	3.06	48.9	20.2	1.69	20.9	0.00	0.02	0.06	124
125	10.82	10.81	33.874	25.936	208.7	0.346	3.06	49.0							125
144	10.29	10.27	33.881	26.032	199.9	0.385	3.12	49.3	22.2	1.77	22.0	0.00	0.02	0.05	145
150 ISL	10.15	10.13	33.890	26.066	196.7	0.397	3.10	48.9							151
178	9.63	9.61	33.965	26.209	183.6	0.450	2.98	46.4	25.7	1.87	24.0	0.00	0.01	0.04	179
200 ISL	9.39	9.37	33.991	26.273	178.0	0.490	2.93	45.4							201
209	9.30	9.28	34.003	26.293	176.2	0.506	2.92	45.2	27.9	2.02	25.2	0.00	0.01	0.04	210
248	8.67	8.64	34.003	26.394	167.2	0.573	2.95	45.0	31.1	2.02	26.3	0.00			250
250 ISL	8.63	8.60	34.003	26.400	166.6	0.576	2.95	44.9							252

RV ELLEN B. SCRIPPS				CRUISE #306								STATION 90 42			
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 0.8 N	118 43.1 W	14/06/83	1558 GMT	964 M	290	04 KT	270 02 04	4	1013.9 MB	16.1 C	15.2 C		9/8		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	17.83	17.83	33.429	24.111	379.4	0.000	5.70	104.8	0.9	0.25	0.0	0.00	0.17	0.01	0
9	17.11	17.11	33.433	24.267	363.0	0.033	5.80	105.2	0.7	0.25	0.0	0.00	0.23	0.02	9
10 ISL	16.99	16.98	33.430	24.314	360.4	0.037	5.81	105.2							10
20 ISL	15.67	15.67	33.400	24.593	334.1	0.072	5.94	104.7							20
28	14.52	14.52	33.382	24.829	311.9	0.098	6.04	104.1	1.9	0.37	0.1	0.01	0.47	0.08	28
30 ISL	14.27	14.27	33.380	24.881	307.0	0.104	5.95	102.0							30
37	13.46	13.45	33.382	25.049	291.1	0.125	5.55	93.6	3.7	0.55	3.0	0.06			37
47	12.48	12.47	33.388	25.247	272.5	0.153	5.02	82.9	6.0	0.78	7.3	0.04	0.34	0.14	47
50 ISL	12.34	12.33	33.410	25.293	268.2	0.161	4.87	80.3							50
62	11.94	11.93	33.526	25.458	252.8	0.192	4.35	71.1	10.3	1.04	12.1	0.00	0.22	0.15	62
75 ISL	11.29	11.28	33.624	25.655	234.2	0.224	3.91	63.1							75
76	11.24	11.23	33.634	25.671	232.8	0.226	3.88	62.5	14.6	1.26	16.3	0.01	0.01	0.27	76
95	10.51	10.50	33.810	25.938	207.8	0.268	3.40	54.0	19.8	1.56	20.3	0.00	0.03	0.07	95
100 ISL	10.34	10.33	33.843	25.995	202.4	0.278	3.28	51.9							100
118	9.83	9.82	33.940	26.155	187.5	0.314	2.97	46.5	24.8	1.76	23.7	0.00	0.00	0.05	118
125 ISL	9.71	9.70	33.957	26.191	184.3	0.327	2.92	45.6							125
138	9.52	9.50	33.983	26.240	179.7	0.350	2.88	44.8	27.4	1.84	24.9	0.00	0.01	0.04	138
150 ISL	9.26	9.24	33.991	26.292	175.1	0.372	2.85	44.0							150
166	8.92	8.90	34.011	26.359	168.9	0.399	2.81	43.1	31.1		26.3	0.00	0.00	0.04	166
196	8.53	8.51	34.090	26.482	157.7	0.448	2.30	35.0	36.8	2.10	28.6	0.00	0.00	0.05	196
200 ISL	8.49	8.47	34.088	26.490	157.0	0.454	2.30	34.9							200
225	8.23	8.21	34.092	26.530	153.6	0.493	2.28	34.4	39.2	2.17	29.6	0.00			225
250 ISL	7.87	7.85	34.098	26.592	148.0	0.531	2.13	31.9							250
263	7.68	7.65	34.111	26.626	144.8	0.550	2.02	30.1	44.9	2.27	31.6	0.00			263
300 ISL	7.26	7.23	34.131	26.707	137.6	0.602	1.60	23.7							300
321	7.07	7.04	34.153	26.746	134.1	0.631	1.36	20.0	54.8	2.60	35.0	0.00			323
394	6.72	6.68	34.214	26.843	125.9	0.726	0.90	13.1	62.6	2.91	37.1	0.00			397
400 ISL	6.68	6.64	34.215	26.854	124.8	0.733	0.84	12.5							403
467	6.17	6.13	34.301	26.984	113.1	0.813	0.49	7.1	74.8	3.13	39.4	0.00			471
500 ISL	5.97	5.92	34.316	27.027	109.2	0.850	0.46	6.6							504
545	5.73	5.68	34.334	27.066	105.9	0.898	0.42	6.0	82.5	3.13	40.6	0.00			546

RV ELLEN B. SCRIPPS				CRUISE #306								STATION 90 48					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 48.1 N	119 7.7 W	14/06/83	2200 GMT	1073 M	280	14 KT	270 04 05	2	1014.0 MB	16.8 C	15.9 C			ST			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	15.90	15.90	33.520	24.633	329.8	0.000	5.97	105.8							0		
1	15.90	15.90	33.520	24.633	329.8	0.003	5.97	105.8	5.3	0.48	1.0	0.00	0.97	0.00	1		
10	15.76	15.76	33.517	24.662	327.2	0.033	5.98	105.7	5.1	0.46	1.0	0.00	0.98	0.00	10		
20 ISL	13.57	13.56	33.522	25.136	282.3	0.062	4.95	93.7							20		
29	11.28	11.28	33.604	25.639	234.7	0.086	3.83	61.8	15.0	1.39	16.6	0.00	0.98	0.16	29		
30 ISL	11.25	11.24	33.610	25.651	233.6	0.089	3.80	61.3							30		
50 ISL	10.56	10.56	33.753	25.884	211.9	0.134	3.27	52.0							50		
58	10.29	10.28	33.813	25.977	203.2	0.150	3.06	48.3	23.3	1.53	22.5	0.00	0.84	0.70	58		
67	9.97	9.96	33.834	26.048	196.6	0.168	3.05	47.8	24.0	1.82	23.2	0.00	0.01	0.38	67		
75 ISL	9.70	9.69	33.890	26.138	188.7	0.183	2.88	44.9							75		
81	9.55	9.54	33.941	26.202	182.2	0.194	2.72	42.3	27.9	1.91	25.7	0.00	0.01	0.10	81		
95	9.49	9.48	34.013	26.268	176.2	0.219	2.49	38.7	29.6	1.95	26.2	0.00	0.01	0.09	95		
100 ISL	9.44	9.43	34.017	26.281	175.1	0.228	2.48	38.4							100		
110	9.31	9.30	34.021	26.304	173.1	0.246	2.45	37.9	31.0	2.03	26.6	0.00	0.01	0.09	110		
125 ISL	9.06	9.05	34.034	26.357	168.3	0.271	2.47	38.1							125		
132	8.94	8.93	34.045	26.382	166.0	0.283	2.48	38.1	33.0	2.06	27.5	0.00	0.01	0.07	132		
150 ISL	8.70	8.69	34.057	26.432	161.6	0.312	2.39	36.4							150		
152	8.68	8.66	34.062	26.437	161.2	0.316	2.37	36.2	35.9			0.00	0.02	0.06	152		
179	8.55	8.53	34.122	26.504	155.3	0.358	2.02	30.7	40.9	2.22	29.4	0.00	0.01	0.07	179		
200 ISL	8.38	8.36	34.129	26.538	152.4	0.391	1.94	29.4							200		
207	8.32	8.30	34.134	26.549	151.5	0.401	1.92	29.1	42.0	2.39	30.3	0.00	0.00	0.06	207		
235	8.03	8.01	34.157	26.611	146.0	0.443	1.72	25.9	45.3	2.40	31.4	0.00			235		
250 ISL	7.82	7.80	34.159	26.647	142.8	0.465	1.60	23.9							250		
281	7.40	7.37	34.175	26.717	136.4	0.508	1.35	20.0	54.9	2.62	34.5	0.00			281		
300 ISL	7.22	7.19	34.182	26.752	133.3	0.534	1.21	17.8							300		
334	6.96	6.93	34.210	26.806	128.6	0.578	0.98	14.4	60.7	2.77	36.5	0.01			334		
400 ISL	6.53	6.50	34.244	26.896	120.7	0.660	0.68	10.0							400		
414	6.46	6.42	34.258	26.912	119.4	0.677	0.64	9.3	65.4	2.92	38.3	0.00			414		
494	6.13	6.09	34.297	26.986	113.2	0.770	0.44	6.3	75.5	3.11	39.9	0.00			494		
500 ISL	6.09	6.05	34.293	26.993	112.6	0.777	0.43	6.2							500		
573	5.64	5.59	34.338	27.080	104.8	0.856	0.32	4.6	84.8	3.16	41.2	0.00			573		
600 ISL	5.50	5.45	34.343	27.108	102.3	0.885	0.32	4.5							600		
700 ISL	5.09	5.03	34.385	27.190	95.3	0.995	0.31	4.3							700		
764	4.93	4.87	34.414	27.226	92.4	1.045	0.30	4.2	100.0	3.26	42.4	0.00			764		

RV ELLEN B. SCRIPPS				CRUISE 9306								STATION 90 53				
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE		
32 37.6 N	119 28.5 W	15/06/83	0230 GMT	1330 M	280	20 KT	270 06 06	2	1013.0 MB	14.8 C	14.0 C		8/8	ST		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SIO2	PO4	NO3	NO2	CHL A	PHAEO	PRESS	
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR	
0 ISL	15.75	15.75	33.427	24.595	333.3	0.000	0.95	16.8							0	
1	15.75	15.75					5.96	105.3	2.4	0.42	0.0	0.00	0.72	0.00	1	
10	15.74	15.74	33.427	24.597	333.4	0.033	5.97	105.4	2.2	0.39	0.0	0.00	0.70	0.05	10	
20 ISL	15.28	15.28	33.456	24.722	321.8	0.066	5.71	100.0							20	
30	13.97	13.97	33.475	25.016	294.1	0.096	5.46	93.1	5.9	0.68	4.3	0.08	1.38	0.41	30	
39	11.74	11.73	33.490	25.466	251.4	0.121	4.52	73.6	12.1	1.15	12.3	0.18	0.30	0.16	39	
50 ISL	11.22	11.22	33.593	25.643	234.8	0.148	4.09	65.8							50	
53	11.08	11.07	33.578	25.656	233.7	0.155	4.03	64.7	14.4	1.090	18.1	0.00	0.13	0.13	53	
69	10.78	10.77	33.727	25.825	217.9	0.191	3.39	54.1	18.6	1.57	19.7	0.00	0.06	0.11	69	
75 ISL	10.68	10.67	33.763	25.872	213.5	0.204	3.26	51.9							75	
82A	10.53	10.52	33.802	25.927	208.4	0.218	3.15	50.0	20.3	1.64	21.6	0.00	0.03	0.10	82	
99A	9.86	9.85	33.886	26.108	191.6	0.252	2.99	46.8	24.5	1.87	23.7	0.00	0.01	0.08	99	
100 ISL	9.82	9.81	33.887	26.116	190.8	0.254	2.99	46.8							100	
114A	9.33	9.32	33.916	26.219	191.3	0.280	3.08	47.6	26.1	1.80	24.5	0.00	0.01	0.07	114	
125 ISL	9.00	8.98	33.924	26.281	175.5	0.300	3.19	49.0							125	
131A	8.85	8.84	33.935	26.310	172.8	0.310	3.21	49.1	28.4	1.87	25.4	0.00	0.00	0.05	132	
150 ISL	8.66	8.65	34.015	26.404	164.2	0.342	2.75	41.9							151	
156A	8.64	8.62	34.046	26.430	161.9	0.352	2.56	39.0	33.7	2.03	27.8	0.00	0.00	0.04	157	
186A	8.37	8.35	34.104	26.518	154.1	0.400	2.21	33.5	37.9	2.19	29.6	0.00	0.00	0.04	187	
200 ISL	8.25	8.23	34.123	26.554	150.9	0.421	2.00	30.3							201	
210A	8.17	8.15	34.142	26.578	148.7	0.436	1.86	28.1	42.6	2.37	31.2	0.00			211	
250 ISL	7.81	7.78	34.181	26.666	140.9	0.494	1.47	22.0							252	
254A	7.77	7.74	34.189	26.675	140.2	0.500	1.44	21.5	48.7	2.50	32.8	0.00			256	
300 ISL	7.26	7.23	34.202	26.762	132.4	0.562	1.13	16.6							302	
301A	7.25	7.22	34.207	26.763	132.3	0.564	1.12	16.5	55.4	2.69	35.1	0.00			303	
375A	6.68	6.65	34.242	26.870	123.0	0.658	0.73	10.6	65.4	2.90	37.9	0.00			378	
400 ISL	6.55	6.51	34.259	26.906	119.8	0.688	0.61	8.9							403	
449A	6.33	6.29	34.309	26.969	114.3	0.746	0.44	6.4	73.4	3.10	38.9	0.00			452	
500 ISL	6.12	6.08	34.321	27.012	110.8	0.804	0.39	5.5							504	
524A	6.03	5.98	34.330	27.025	109.8	0.830	0.36	5.2	79.5	3.18	39.9	0.00			528	

8) CAST 2.

RV ELLEN B. SCRIPPS				CRUISE 8307				STATION 90 28									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 28.3 N	117 47.7 W	16/07/83	0012 GMT	185 M	200	4 KT	240 2 S	1	1010.0 MB	21.9 C	18.5 C	7/8		CU			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	ORP	SI03	P04	N03	N02	CHL A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	21.14	21.14	33.445	23.274	459.3	0.000	5.44	106.2									0
1	21.14	21.14	33.445	23.274	459.3	0.005	5.44	106.2	0.1	0.30	0.2	0.04	0.12	0.02			1
10	19.92	19.92	33.413	23.574	431.0	0.045	5.69	108.7	0.4	0.27	0.0	0.02	0.23	0.01			10
20 ISL	17.49	17.49	33.342	24.128	378.5	0.085	5.92	108.1									20
29	15.49	15.49	33.317	24.569	336.7	0.118	6.04	106.1	0.6	0.35	0.0	0.01	0.24	0.06			29
30 ISL	15.39	15.38	33.313	24.590	334.7	0.121	6.04	105.6									30
38	14.82	14.81	33.297	24.700	324.5	0.147	6.02	104.3	1.4	0.40	0.0	0.03	0.21	0.06			38
50 ISL	14.39	14.39	33.319	24.810	314.3	0.186	5.96	102.5									50
53	14.31	14.30	33.335	24.836	311.9	0.195	5.95	102.1	2.3		0.1	0.02	0.47	0.16			53
67	13.59	13.58	33.412	25.047	292.2	0.237	5.24	88.6	4.5	0.68	3.7	0.08	0.47	0.28			67
75 ISL	13.19	13.18	33.433	25.146	282.9	0.260	4.96	83.2									75
82	12.87	12.86	33.450	25.220	276.0	0.280	4.78	79.6	7.7	0.86	7.5	0.07	0.26	0.16			82
100 ISL	12.27	12.26	33.480	25.363	262.9	0.328	4.50	74.1									100
102	12.22	12.21	33.487	25.375	261.7	0.334	4.48	73.6	9.5	1.17	10.3	0.04	0.13	0.14			102
125 ISL	11.74	11.72	33.545	25.514	249.0	0.392	4.23	68.9									125
126	11.72	11.70	33.553	25.521	248.3	0.395	4.22	68.7	11.8		12.9	0.03	0.07	0.10			126
150 ISL	11.01	11.00	33.740	25.799	222.4	0.451	3.49	56.0									151
151	10.98	10.96	33.755	25.813	221.0	0.454	3.45	55.3	17.6	1.53	18.2	0.03	0.02	0.06			152

RV ELLEN B. SCRIPPS				CRUISE 8307				STATION 90 30									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 24.5 N	117 53.2 W	16/07/83	0304 GMT	602 M	210	2 KT	260 1 S	2	1010.1 MB	19.6 C	17.0 C	7/8		CU			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	ORP	SI03	P04	N03	N02	CHL A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	20.86	20.86	33.441	23.346	452.4	0.000	5.50	106.8	1.2	0.34	0.2	0.02	0.11	0.02			0
10	18.18	18.18	33.361	23.974	392.8	0.042	5.80	107.3	1.4	0.35	0.1	0.02	0.09	0.02			10
20 ISL	16.30	16.30	33.315	24.385	354.0	0.080	5.96	106.5									20
30	15.20	15.20	33.301	24.620	331.8	0.115	6.02	105.1	1.2	0.38	0.1	0.01	0.10	0.02			30
40	14.83	14.82	33.331	24.724	322.2	0.147	5.99	103.8	1.8	0.42	0.1	0.02	0.19	0.05			40
48	14.35	14.34	33.376	24.861	309.4	0.173	5.97	102.5	1.7	0.54	0.1	0.02	0.25	0.07			48
50 ISL	14.23	14.22	33.378	24.890	306.7	0.179	5.91	101.3									50
63	13.47	13.46	33.398	25.060	290.8	0.218	5.39	90.9	3.6	0.63	3.2	0.07	0.59	0.14			63
75 ISL	12.88	12.87	33.442	25.215	276.3	0.252	4.88	81.4									75
78	12.75	12.74	33.459	25.251	273.0	0.260	4.76	79.1	6.3	0.84	7.2	0.04	0.28	0.13			78
98	12.19	12.18	33.559	25.437	255.8	0.313	4.16	68.4	10.2	1.13	12.3	0.02	0.15	0.14			98
100 ISL	12.13	12.12	33.567	25.458	253.9	0.318	4.11	67.4									100
121	11.60	11.58	33.690	25.650	236.0	0.369	3.63	59.0	15.3	1.35	16.0	0.02	0.04	0.09			121
125 ISL	11.56	11.54	33.706	25.673	233.9	0.379	3.55	57.6									125
140	11.44	11.42	33.781	25.750	226.9	0.413	3.26	52.8	17.5		18.0	0.03	0.02	0.08			141
150 ISL	11.32	11.30	33.836	25.818	220.6	0.436	3.06	49.4									151
169	11.09	11.07	33.939	25.937	209.7	0.477	2.75	44.2	21.7		21.1	0.01	0.02	0.05			170
198	10.80	10.78	33.984	26.025	202.0	0.536	2.63	42.0	22.5		22.4	0.01	0.00	0.05			199
200 ISL	10.75	10.73	33.981	26.035	201.1	0.540	2.63	42.0									201
227	10.08	10.05	34.029	26.185	187.2	0.593	2.56	40.3	25.8	1.88	24.1	0.01					228
250 ISL	9.77	9.74	34.080	26.282	178.3	0.635	2.36	36.3									252
267	9.62	9.59	34.129	26.341	173.1	0.665	2.18	34.0	30.4	2.07	26.4	0.02					269
300 ISL	9.36	9.33	34.173	26.423	165.9	0.721	1.93	29.9									302
325	9.18	9.14	34.205	26.473	161.6	0.762	1.77	27.3	37.0		28.5	0.01					327
397	8.37	8.33	34.239	26.627	147.8	0.873	1.40	21.2	44.3	2.44	31.0	0.01					400
400 ISL	8.32	8.28	34.230	26.634	147.2	0.878	1.38	21.0									403
470	7.27	7.22	34.229	26.780	133.5	0.976	1.02	15.1	56.0	2.70	34.6	0.01					474
500 ISL	6.92	6.87	34.230	26.836	128.4	1.015	0.85	12.5									504
547	6.50	6.45	34.267	26.916	121.1	1.074	0.57	8.3	67.6	2.88	37.7	0.01					551

RV ELLEN B. SCRIPPS				CRUISE 8307							STATION 90 32				
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 20.5 N	118 2.8 W	16/07/83	0520 GMT	753 M	270	6 KT		2	1010.0 MB	19.8 C	17.0 C			CU	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	0. BAR
0 ISL	21.52	21.52	33.469	23.189	467.5	0.000	5.50	108.1							0
1	21.52	21.52	33.469	23.189	467.5	0.005	5.50	108.1	0.4	0.25	0.1	0.02	0.22	0.03	1
10	20.10	20.10	34.425	24.299	362.0	0.042	5.69	109.6	0.3	0.29	0.0	0.03	0.18	0.03	10
20 ISL	17.17	17.17	33.743	24.510	342.0	0.078	5.91	107.5							20
29	14.87	14.87	33.313	24.701	324.1	0.107	5.99	103.9	0.9	0.38	0.0	0.02	0.16	0.07	29
30 ISL	14.80	14.80	33.307	24.712	323.0	0.110	5.98	103.6							30
39	14.45	14.44	33.340	24.812	313.8	0.139	5.81	100.0	2.7	0.54	0.3	0.02	0.46	0.19	39
48	13.76	13.75	33.361	24.972	298.5	0.167	5.49	93.1	2.9	0.58	2.3	0.07	0.40	0.17	48
50 ISL	13.61	13.61	33.377	25.016	294.7	0.173	5.36	90.7							50
63	12.86	12.85	33.507	25.266	271.1	0.209	4.52	75.3	7.0	0.96	9.0	0.03	0.26	0.14	63
75 ISL	12.58	12.57	33.563	25.366	261.9	0.241	4.13	68.5							75
76	12.57	12.56	33.569	25.371	261.4	0.244	4.11	68.1	9.4	1.05	11.8	0.02	0.14	0.13	76
97	12.07	12.06	33.607	25.497	250.0	0.298	3.81	62.5	12.7	1.28	14.1	0.02	0.06	0.10	97
100 ISL	11.98	11.97	33.617	25.524	247.5	0.305	3.74	61.2							100
119	11.50	11.48	33.713	25.686	232.5	0.351	3.34	54.1	15.3	1.42	17.2	0.02	0.03	0.08	119
125 ISL	11.42	11.41	33.732	25.718	229.6	0.365	3.28	53.1							125
139	11.29	11.27	33.782	25.778	224.1	0.396	3.19	51.5	17.2	1.60	18.6	0.01	0.01	0.06	140
150 ISL	11.17	11.15	33.812	25.827	219.7	0.421	3.09	49.8							151
168	10.97	10.95	33.872	25.906	212.6	0.460	2.92	46.8	19.8	1.68	20.6	0.01	0.00	0.06	169
197	10.69	10.67	33.975	26.037	200.8	0.520	2.62	41.8	23.1	1.79	22.6	0.02	0.00	0.05	198
200 ISL	10.64	10.62	33.981	26.055	199.2	0.526	2.58	41.2							201
226	10.25	10.22	34.075	26.192	186.6	0.576	2.32	36.7	27.2	1.92	24.5	0.01			227
250 ISL	10.15	10.12	34.101	26.235	183.1	0.621	2.23	35.2							252
266	10.09	10.06	34.120	26.255	181.4	0.649	2.19	34.5	29.0	2.05	25.2	0.01			268
300 ISL	9.49	9.45	34.170	26.402	168.0	0.708	1.92	29.8							302
322	9.01	8.97	34.212	26.505	158.3	0.745	1.72	26.5	37.6	2.26	28.6	0.01			324
395	7.82	7.78	34.213	26.688	141.5	0.854	1.31	19.6	48.5	2.62	32.2	0.02			398
400 ISL	7.74	7.70	34.203	26.698	140.5	0.861	1.29	19.3							403
469	6.80	6.76	34.192	26.815	129.7	0.954	1.04	15.2	59.9	2.91	35.9	0.02			473
500 ISL	6.68	6.63	34.221	26.861	125.7	0.994	0.87	12.7							504
547	6.50	6.45	34.273	26.920	120.7	1.052	0.56	8.1	68.5	3.12	37.8	0.01			551

RV ELLEN B. SCRIPPS				CRUISE 8308							STATION 90 28						
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 28.3 N	117 47.8 W	17/08/83	2029 GMT	185 M	140	08 KT	200 02 05	1	1012.2 MB	25.9 C	23.2 C		3/8	CU			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	24.09	24.09	33.393	22.401	542.9	0.000	5.32	109.3							0		
1	24.09	24.09	33.393	22.401	542.9	0.005	5.32	109.3	1.0	0.20	0.1	0.01	0.25	0.03	1		
10	20.22	20.22	33.355	23.451	442.8	0.050	5.87	112.7	0.6	0.19	0.1	0.02	0.23	0.02	10		
20 ISL	17.69	17.68	33.345	24.084	387.7	0.092	5.97	109.3							20		
30 ISL	16.26	16.26	33.325	24.403	352.6	0.130	6.06	108.1							30		
31	16.18	16.18	33.321	24.417	351.3	0.133	6.07	108.1	2.7	0.27	0.1	0.02	0.26	0.07	31		
39	15.38	15.37	33.332	24.605	333.6	0.161	5.97	104.6	2.5	0.31	0.1	0.02			39		
50 ISL	15.00	14.99	33.341	24.697	325.1	0.197	5.82	101.2							50		
54	14.94	14.93	33.347	24.713	323.7	0.210	5.75	99.9	2.9	0.39	0.2	0.03	0.27	0.31	54		
69	14.28	14.27	33.381	24.880	308.2	0.257	5.40	92.6	4.2	0.49	1.2	0.12	0.23	0.19	69		
75 ISL	14.02	14.00	33.416	24.965	300.3	0.275	5.23	89.1							75		
83	13.69	13.68	33.467	25.069	290.5	0.299	5.00	84.7	5.0	0.59	3.4	0.14	0.21	0.23	83		
100 ISL	13.21	13.20	33.471	25.172	281.2	0.348	4.69	78.7							100		
103	13.14	13.13	33.473	25.186	279.9	0.356	4.64	77.9	7.0	0.77	6.9	0.04	0.14	0.18	103		
125 ISL	12.42	12.41	33.553	25.391	260.8	0.416	4.13	68.3							125		
127	12.36	12.34	33.566	25.411	259.0	0.421	4.09	67.5	10.1	0.99	11.6	0.02	0.07	0.13	127		
150 ISL	11.85	11.83	33.634	25.565	244.8	0.479	3.79	61.3							151		
151	11.83	11.81	33.642	25.570	244.3	0.481	3.78	61.7	12.7	1.22	14.0	0.02	0.04	0.07	152		

RV ELLEN B. SCRIPPS				CRUISE R308							STATION 90 30				
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 24.8 N	117 53.3 W	17/08/83	2255 GMT	633 M	170	13 KT	190 03 05	1	1012.1 MB	24.3 C	22.4 C			SC	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	23.54	23.54	33.489	22.674	520.5	0.000	5.13	104.5	2.0	0.23	0.3	0.02	0.11	0.03	0
10	21.69	21.69	33.459	23.135	473.0	0.050	5.36	106.1	2.3	0.27	0.3	0.02	0.09	0.02	10
20 ISL	19.07	19.06	33.375	23.765	413.2	0.094	5.70	107.2							20
29	17.04	17.04	33.341	24.234	368.7	0.130	5.93	107.3	1.3	0.26	0.2	0.02	0.08	0.02	29
30 ISL	16.95	16.94	33.340	24.257	366.6	0.133	5.93	107.2							30
39	16.32	16.31	33.340	24.400	353.1	0.166	5.98	106.8	1.7	0.27	0.2	0.01	0.10	0.02	39
49	15.42	15.41	33.305	24.576	336.7	0.200	5.95	104.3	0.0	0.27	0.2	0.01	0.14	0.04	49
50 ISL	15.37	15.36	33.302	24.587	335.7	0.204	5.95	104.2							50
64	14.80	14.79	33.318	24.721	323.2	0.250	5.94	102.9	0.8	0.31	0.2	0.00	0.29	0.04	64
75 ISL	14.19	14.18	33.348	24.876	308.8	0.284	5.75	98.4							75
79	13.96	13.95	33.367	24.937	303.1	0.297	5.64	96.1	1.7	0.40	1.0	0.01	0.60	0.32	79
98	12.96	12.95	33.455	25.207	277.7	0.352	4.88	81.5	6.1	0.77	6.6	0.01	0.23	0.22	98
100 ISL	12.88	12.87	33.463	25.231	275.4	0.357	4.81	80.1							100
122	12.24	12.22	33.589	25.451	255.0	0.416	4.09	67.3	10.0	0.99	12.1	0.00	0.12	0.22	122
125 ISL	12.19	12.17	33.600	25.472	253.0	0.423	4.01	65.9							125
140	11.94	11.92	33.671	25.572	243.9	0.461	3.68	60.2	12.6		14.7	0.00	0.04	0.08	141
150 ISL	11.61	11.59	33.682	25.647	237.0	0.485	3.63	58.9							151
170	10.90	10.88	33.743	25.819	220.9	0.530	3.54	56.6	18.3	1.42	17.7	0.02			171
199	10.30	10.28	34.013	26.134	191.5	0.590	2.87	45.4	23.9	1.60	21.8	0.01			200
200 ISL	10.27	10.25	34.009	26.139	191.0	0.592	2.87	45.3							201
228	9.57	9.54	33.979	26.231	182.6	0.644	2.77	43.1	27.0	1.68	24.1	0.00			229
250 ISL	9.11	9.08	33.970	26.304	175.9	0.684	2.87	44.1							252
266	8.84	8.81	33.990	26.357	171.0	0.712	2.90	44.4	30.2	1.75	25.2	0.01			268
300 ISL	8.63	8.60	34.090	26.474	160.5	0.769	2.37	35.4							302
324	8.56	8.53	34.178	26.549	153.9	0.806	1.81	27.5	39.0	2.13	29.1	0.00			326
398	7.89	7.85	34.226	26.688	141.6	0.915	1.22	18.3	48.7	2.64	31.6	0.01			401
400 ISL	7.87	7.82	34.219	26.692	141.2	0.918	1.21	18.1							403
470	6.98	6.93	34.245	26.833	128.2	1.012	0.86	12.6	60.3		34.8	0.01			474
500 ISL	6.64	6.59	34.253	26.892	122.7	1.050	0.69	10.1							504
548	6.13	6.08	34.296	26.986	114.0	1.107	0.41	5.9	75.1	2.21	38.3	0.01			552

RV ELLEN B. SCHIPPS				CRUISE #308							STATION 90 32				
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 20.4 N	118 2.9 W	18/08/83	0118 GMT	753 M	160	10 KT	190 03 04	7	1012.7 MB	22.8 C	21.4 C	9/8		SC	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	23.24	23.24	33.473	22.708	513.3	0.000	5.20	105.3	0.1	0.21	0.0	0.01	0.08	0.02	0
10	21.36	21.36	33.421	23.197	467.1	0.049	5.54	108.6	0.0	0.20	0.0	0.00	0.10	0.01	10
20 ISL	18.49	18.49	33.331	23.876	402.6	0.092	5.84	108.6							20
29	16.36	16.36	33.308	24.366	356.1	0.127	6.01	107.4	0.3	0.24	0.0	0.01	0.15	0.02	29
30 ISL	16.30	16.30	33.307	24.380	354.8	0.131	6.01	107.3							30
39	15.99	15.98	33.302	24.446	348.7	0.162	6.03	106.9	0.6	0.29	0.0	0.01	0.18	0.03	39
49	15.02	15.01	33.301	24.660	328.6	0.196	6.00	104.4	0.7		0.0	0.01	0.23	0.04	49
50 ISL	14.93	14.93	33.301	24.680	326.7	0.200	5.99	104.0							50
63	14.02	14.01	33.342	24.904	305.7	0.241	5.74	97.9	1.4	0.41	0.5	0.00	0.62	0.23	63
75 ISL	13.62	13.61	33.405	25.038	293.3	0.277	5.31	89.8							75
78	13.54	13.53	33.424	25.066	290.6	0.285	5.19	87.7	3.3	0.56	3.7	0.01	0.12	0.66	78
97	12.73	12.72	33.489	25.279	270.4	0.339	4.67	77.6	6.0		6.1	0.00	0.18	0.20	97
100 ISL	12.59	12.56	33.487	25.306	268.3	0.347	4.65	77.0							100
121	11.84	11.82	33.558	25.502	250.0	0.401	4.24	69.2	9.5	1.07	12.2	0.00	0.03	0.05	121
125 ISL	11.82	11.81	33.615	25.552	245.4	0.411	3.97	64.8							125
139	11.76	11.74	33.813	25.716	230.2	0.445	3.05	49.7	16.0	1.44	18.1	0.00	0.01	0.04	140
150 ISL	11.64	11.63	33.866	25.782	224.2	0.470	2.97	48.4							151
169	11.33	11.31	33.892	25.857	217.4	0.512	2.84	45.9	18.1	1.56	19.7	0.02	0.01	0.04	170
198	10.64	10.62	33.946	26.023	202.1	0.572	2.86	45.5	20.2	1.62	21.2	0.02	0.00	0.03	199
200 ISL	10.62	10.60	33.950	26.033	201.2	0.577	2.83	45.1							201
227	10.30	10.27	34.040	26.156	190.0	0.629	2.46	38.9	24.9	1.84	23.7	0.02			228
250 ISL	9.70	9.68	34.055	26.272	179.2	0.672	2.48	38.8							252
267	9.20	9.17	34.061	26.356	171.4	0.702	2.50	38.6	29.2	1.86	25.5	0.01			269
300 ISL	8.45	8.44	34.060	26.490	158.8	0.756	2.36	35.8							302
324	8.04	8.01	34.106	26.571	151.4	0.794	2.17	32.6	39.2	1.98	29.2	0.00			326
396	7.68	7.64	34.228	26.720	138.3	0.898	1.18	17.6	49.3	2.42	32.5	0.00			399
400 ISL	7.63	7.62	34.226	26.728	137.6	0.903	1.15	17.1							403
469	6.80	6.76	34.235	26.849	126.5	0.995	0.77	11.3	61.5	2.79	35.7	0.01			473
530 ISL	6.59	6.57	34.254	26.895	122.4	1.032	0.65	9.4							504
547	6.28	6.23	34.292	26.964	116.3	1.089	0.46	6.6	72.4	2.80	37.8	0.00			551

RV ELLEN B. SCHIPPS				CRUISE 8308								STATION 90 35					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 15.5 N	118 11.9 W	18/08/83	0358 23 GMT	324 M	160	11 KT	190 03 04	2	1013.0 MB	22.4 C	20.4 C	7/8		SC			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	23.17	23.17	33.473	22.729	511.4	0.000	5.17	104.6	0.0	0.23	0.1	0.00	0.13	0.03	0		
10	20.66	20.66	33.464	23.418	446.0	0.048	5.37	104.0	0.8	0.23	0.1	0.00	0.06	0.01	10		
20 ISL	18.84	18.83	33.420	23.858	404.3	0.091	5.60	104.8							20		
29	17.58	17.58	33.366	24.125	379.1	0.126	5.78	105.7	0.7	0.26	0.0	0.00	0.07	0.02	29		
30 ISL	17.44	17.43	33.357	24.153	376.4	0.130	5.80	105.8							30		
44	15.86	15.87	33.298	24.468	346.8	0.181	5.97	105.6	0.0	0.27	0.0	0.00	0.13	0.02	44		
50 ISL	15.56	15.55	33.310	24.550	339.1	0.201	5.96	104.8							50		
53	15.43	15.42	33.322	24.587	335.7	0.211	5.95	104.4	0.3	0.27	0.0	0.00	0.19	0.06	53		
68	14.56	14.55	33.372	24.814	314.4	0.260	5.82	100.4	1.0	0.31	0.2	0.00	0.74	0.30	68		
75 ISL	14.08	14.07	33.338	24.930	303.6	0.282	5.56	95.0							75		
82	13.59	13.58	33.405	25.042	293.1	0.303	5.29	89.4	3.0	0.53	3.4	0.00	0.33	0.28	82		
100 ISL	12.38	12.37	33.388	25.270	271.6	0.354	5.03	83.0							100		
102	12.26	12.25	33.392	25.294	269.4	0.359	5.01	82.4	5.4	0.74	7.6	0.00	0.18	0.18	102		
125 ISL	11.36	11.35	33.558	25.593	241.4	0.418	4.28	69.1							125		
126	11.33	11.31	33.570	25.606	240.2	0.420	4.25	68.6	15.6	1.35	17.8	0.00	0.07	0.06	126		
144	10.63	10.61	33.680	25.816	220.4	0.462	3.90	62.0	21.4	1.62	23.2	0.00	0.02	0.06	145		
150 ISL	10.58	10.56	33.727	25.865	216.0	0.474	3.70	58.8							151		
173	10.38	10.36	33.924	26.031	198.6	0.522	2.95	46.7					0.00	0.03	174		

RV ELLFN B. SCHIPPS				CRUISE 8308					STATION 90 37						
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 10.8 N	118 22.6 W	18/08/83	0620 GMT	1196 M	150	07 KT	190 03 05	1	1013.6 MB	21.9 C	20.2 C	7/8		SC	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	22.56	22.56	33.455	22.889	496.2	0.000	5.27	105.5							0
1	22.56	22.56	33.455	22.889	496.2	0.005	5.27	105.5	0.7	0.21	0.0	0.00	0.16	0.03	1
10	21.37	21.37	33.441	23.209	465.9	0.048	5.40	106.0							10
11	21.24	21.24	33.441	23.245	462.6	0.053	5.42	106.0	0.6	0.21	0.0	0.00	0.13	0.03	11
20	18.99	18.99	33.384	23.792	410.7	0.092	5.75	107.9							20
30	16.43	16.43	33.358	24.389	354.0	0.130	6.05	108.3	0.8	0.29	0.0	0.01	0.31	0.05	30
39	15.04	15.03	33.343	24.688	325.7	0.161	6.03	105.0	0.9	0.34	0.1	0.01	0.55	0.21	39
53	14.35	14.34	33.342	24.836	311.8	0.196	5.87	100.8							50
53	14.23	14.22	33.345	24.863	309.4	0.206	5.80	99.3	1.0	0.35	0.9	0.00	0.91	0.24	53
67	13.03	13.02	33.370	25.127	284.5	0.247	5.27	88.1	7.7	0.88	11.1	0.00	0.37	0.26	67
75	12.50	12.49	33.404	25.259	272.0	0.269	5.02	82.9							75
90	11.76	11.75	33.496	25.469	252.4	0.309	4.60	74.9	7.6	0.94	11.6	0.00	0.12	0.14	90
100	11.45	11.44	33.555	25.574	242.6	0.354	4.35	70.4							100
108	11.27	11.26	33.607	25.645	236.0	0.353	4.16	67.0	12.1	1.20	15.1	0.00	0.08	0.07	108
125	10.92	10.91	33.692	25.777	225.9	0.392	3.74	59.9							125
126	10.90	10.88	33.700	25.784	223.2	0.394	3.72	59.5	14.6	1.33	18.3	0.00	0.02	0.05	126
144	10.39	10.37	33.789	25.943	208.3	0.433	3.47	54.9	18.2	1.50	20.7	0.01	0.02	0.03	145
150	10.27	10.25	33.819	25.990	204.0	0.445	3.35	52.9							151
173	9.89	9.87	33.939	26.146	189.6	0.491	2.93	45.9	23.9	1.71	24.2	0.00	0.00	0.03	174
200	9.40	9.38	34.005	26.282	177.1	0.540	2.73	42.3							201
206	9.28	9.26	34.016	26.307	174.8	0.551	2.72	42.0	27.9	1.76	26.3	0.01	0.00	0.03	207
234	8.60	8.58	34.004	26.405	165.8	0.598	2.86	43.5	28.3	1.76	26.3	0.00			235
250	8.30	8.27	34.013	26.462	160.5	0.625	2.79	42.1							252
281	7.84	7.81	34.059	26.563	151.3	0.673	2.48	37.1	38.4	2.09	30.9	0.00			283
300	7.63	7.60	34.075	26.609	147.1	0.701	2.24	33.4							302
331	7.36	7.33	34.113	26.675	141.3	0.746	1.83	27.1	47.4	2.27	33.8	0.00			333
400	6.79	6.75	34.175	26.808	129.3	0.839	1.09	16.0							403
411	6.71	6.67	34.191	26.826	127.7	0.854	1.00	14.6	59.7	2.57	37.5	0.00			414
490	6.40	6.36	34.243	26.909	120.7	0.952	0.65	9.4	66.7	2.83	40.1	0.00			494
500	6.36	6.31	34.244	26.922	119.7	0.963	0.62	9.0							504
568	6.05	6.00	34.310	27.008	112.2	1.043	0.42	6.0	74.9	2.89	42.0	0.00			571

RV ELLEN B. SCRIPPS				CRUISE 8308								STATION 90 42			
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 0.6 N	118 43.2 W	18/02/83	1025 GMT	944 M	180	04 KT	120 01 05	2	1013.2 MB	21.2 C	20.0 C	8/8		ST	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	22.12	22.12	33.478	23.030	482.6	0.000	5.22	103.7	2.0	0.26	0.1	0.00	0.12	0.02	0
10	20.54	20.54	33.446	23.436	444.2	0.046	5.44	105.1	0.8	0.24	0.0	0.00	0.12	0.02	10
20 ISL	18.84	18.84	33.415	23.853	404.8	0.089	5.64	105.7							20
29	17.40	17.40	33.385	24.182	373.6	0.124	5.81	105.9	1.6	0.27	0.0	0.00	0.06	0.01	29
30 ISL	17.26	17.25	33.376	24.211	371.0	0.128	5.83	106.0							30
39	16.11	16.10	33.320	24.433	350.0	0.160	5.99	106.5	0.1	0.27	0.0	0.00	0.14	0.03	39
50 ISL	15.12	15.11	33.313	24.649	329.7	0.199	5.93	103.4							50
53	14.92	14.91	33.318	24.695	325.4	0.208	5.90	102.5	0.1		0.0	0.00	0.22	0.13	53
68	14.26	14.25	33.304	24.825	313.4	0.255	5.87	100.6	0.3	0.39	0.0	0.00	0.24	0.11	68
75 ISL	13.58	13.57	33.297	24.962	300.4	0.277	5.71	96.5							75
92	11.98	11.97	33.368	25.328	265.8	0.325	5.08	83.0	5.9	0.71	7.9	0.01	0.19	0.13	92
100 ISL	11.66	11.65	33.451	25.454	254.0	0.346	4.69	76.2							100
112	11.44	11.43	33.606	25.614	239.1	0.375	4.04	65.4	11.3	1.32	15.2	0.01	0.05	0.06	112
125 ISL	11.38	11.36	33.775	25.759	225.6	0.406	3.24	52.4							125
131	11.35	11.33	33.847	25.818	220.2	0.419	2.98	48.2	18.0	1.48	20.6	0.00	0.00	0.04	132
150	10.32	10.30	33.814	25.975	205.5	0.459	3.33	52.6	19.8	1.63	22.0	0.05	0.00	0.03	151
180	9.56	9.54	33.928	26.192	185.3	0.518	3.08	47.9	25.2	1.65	24.4	0.01	0.00	0.03	181
200 ISL	9.57	9.55	34.089	26.320	173.6	0.554	2.39	37.2							201
214	9.58	9.56	34.186	26.391	167.2	0.578	1.98	30.8	31.5	1.97	26.2	0.00	0.00	0.03	215
243	8.83	8.80	34.120	26.460	160.8	0.626	2.27	34.8	34.3		29.7	0.01			244
250 ISL	8.66	8.63	34.102	26.477	159.3	0.637	2.29	34.9							252
291	7.78	7.75	34.066	26.577	150.1	0.700	2.40	35.9	40.6	2.48	31.7	0.01			293
300 ISL	7.64	7.61	34.062	26.599	148.1	0.714	2.32	34.5							302
345	7.11	7.08	34.100	26.699	138.9	0.778	1.74	25.6	50.5	2.39	35.2	0.01			347
400 ISL	6.81	6.77	34.155	26.789	131.1	0.853	1.19	17.4							403
427	6.71	6.67	34.192	26.827	127.8	0.888	0.97	14.1	61.2	2.65	38.5	0.00			430
500 ISL	6.27	6.23	34.245	26.933	118.5	0.978	0.59	8.5							504
511	6.21	6.16	34.261	26.948	117.2	0.990	0.55	7.9	71.1	2.90	40.6	0.00			515
594	5.83	5.78	34.319	27.042	108.9	1.084	0.36	5.1	79.4	3.02	43.0	0.01			599

RV ELLEN B. SCRIPPS				CRUISE 8308								STATION 90 45			
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHEP	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
32 54.8 N	118 55.5 W	18/08/83	1313 GMT	1755 M	000	00 KT	220 03 05	5	1012.0 MB	20.6 C	19.9 C	7/8		SC	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRES
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0 ISL	21.87	21.87	33.476	23.098	476.2	0.000	5.21	103.0							0
1	21.87	21.87	33.476	23.098	476.2	0.005	5.21	103.0	1.9	0.22	0.0	0.00	0.12	0.03	1
10 ISL	20.11	20.11	33.457	23.558	432.6	0.046	5.43	104.1							10
11	19.94	19.94	33.457	23.603	428.4	0.050	5.45	104.2	1.2	0.29	0.0	0.00	0.09	0.02	11
20 ISL	18.73	18.73	33.464	23.917	398.7	0.087	5.60	104.6							20
30	17.59	17.58	33.444	24.182	373.7	0.126	5.73	104.9	0.5	0.30	0.2	0.01	0.13	0.04	30
40	16.26	16.25	33.359	24.429	350.5	0.162	5.82	104.9	0.0	0.30	0.0	0.00	0.16	0.06	40
50 ISL	15.36	15.35	33.322	24.604	334.0	0.197	5.99	104.9							50
53	15.11	15.10	33.318	24.654	329.3	0.207	6.02	104.9	0.2	0.32	0.0	0.00	0.33	0.12	53
68	13.49	13.48	33.310	24.988	297.7	0.254	5.51	92.9	1.9	0.53	3.4	0.00	0.45	0.39	68
75 ISL	12.92	12.91	33.330	25.119	285.4	0.274	5.24	87.3							75
93	11.78	11.77	33.412	25.400	259.0	0.323	4.64	75.5	7.2	0.85	11.3	0.00	0.13	0.16	93
100 ISL	11.40	11.39	33.432	25.487	250.8	0.341	4.51	72.9							100
111	10.89	10.88	33.478	25.613	239.1	0.368	4.36	69.6	10.9	1.15	15.2	0.01	0.04	0.07	111
125 ISL	10.39	10.37	33.571	25.775	223.8	0.400	4.15	65.5							125
130	10.25	10.23	33.612	25.829	218.8	0.412	4.07	64.1	14.8	1.19	18.1	0.01	0.02	0.03	131
150	9.91	9.89	33.736	25.983	204.5	0.454	3.78	59.2	18.9	1.44	20.9	0.01	0.02	0.03	151
179	9.03	9.01	33.892	26.249	179.6	0.510	3.21	49.3	25.6	1.67	25.0	0.01	0.00	0.02	180
200 ISL	8.69	8.67	33.958	26.358	169.5	0.546	3.01	45.8							201
213	8.55	8.53	33.991	26.402	165.6	0.568	2.92	44.4	30.8	1.83	27.4	0.01	0.00	0.02	214
242	8.29	8.26	34.026	26.469	159.7	0.615	2.69	40.7	34.5	1.95	29.1	0.01			243
250 ISL	8.23	8.21	34.033	26.488	158.1	0.628	2.61	39.3							252
291	7.88	7.85	34.092	26.583	149.6	0.691	2.15	32.2	40.9	2.12	32.0	0.01			293
300 ISL	7.74	7.71	34.090	26.606	147.4	0.704	2.06	30.7							302
345	7.03	7.00	34.109	26.717	137.2	0.769	1.62	23.8	52.0	2.37	36.0	0.01			347
400 ISL	6.73	6.69	34.179	26.819	128.1	0.842	1.11	16.2							403
430	6.56	6.52	34.208	26.860	124.7	0.880	0.84	12.2	64.4	2.77	39.3	0.01			433

RV ELLEN B. SCRIPPS				CRUISE R308										STATION 90 53				
LATITUDE		LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 38.6 N		119 28.5 W	18/08/83	1845 255	GMT	000	00 KT	300 03 06	5	1014.2 MB	19.1 C	19.3 C	9/8		SC			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS			
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR			
0	20.53	20.53	33.174	23.231	463.4	0.000	5.34	103.0	0.0	0.24	0.1	0.00	0.22	0.02	0			
10	19.42	19.42	33.446	23.729	416.3	0.044	5.50	104.1	0.2	0.25	0.1	0.01	0.12	0.02	10			
20 ISL	18.31	18.31	33.481	24.035	387.4	0.084	5.69	105.7							20			
29	17.16	17.16	33.414	24.261	366.1	0.118	5.87	106.5	0.2	0.27	0.0	0.02	0.14	0.04	29			
30 ISL	16.99	16.99	33.405	24.296	362.8	0.122	5.89	106.6							30			
39	15.52	15.51	33.353	24.591	335.0	0.153	6.03	106.0	0.0	0.30	0.0	0.01	0.12	0.04	39			
50 ISL	14.34	14.33	33.314	24.817	311.6	0.189	5.87	100.7							50			
54	13.97	13.96	33.309	24.889	306.9	0.202	5.81	99.0	1.2	0.43	1.4	0.01	0.88	0.20	54			
68	12.39	12.38	33.343	25.230	274.6	0.242	5.05	83.2	5.2	0.70	7.7	0.01	0.34	0.25	68			
75 ISL	11.90	11.89	33.380	25.354	263.0	0.261	4.80	78.4							75			
92	11.14	11.13	33.490	25.577	242.0	0.304	4.42	71.0	9.8	1.01	13.8	0.01	0.11	0.15	92			
100 ISL	10.88	10.86	33.528	25.657	234.6	0.323	4.33	69.2							100			
112	10.52	10.51	33.596	25.770	224.1	0.351	4.18	66.3	13.5	1.22	16.7	0.01	0.01	0.01	112			
125 ISL	10.04	10.03	33.686	25.924	209.6	0.379	3.77	59.2							125			
131	9.83	9.81	33.733	25.994	203.1	0.391	3.57	55.8	18.4	1.51	21.8	0.01	0.01	0.03	132			
150	9.37	9.35	33.847	26.159	187.7	0.429	3.18	49.2	23.6	1.67	24.4	0.00	0.00	0.01	151			
179	9.00	8.98	33.992	26.332	171.8	0.481	2.71	41.6	29.1	1.84	27.0	0.01	0.00	0.04	180			
200 ISL	8.65	8.63	34.050	26.436	162.2	0.516	2.40	36.7							201			
213	8.43	8.41	34.079	26.489	157.3	0.537	2.24	34.0	35.5	2.10	29.8	0.01	0.00	0.03	214			
242	8.08	8.06	34.114	26.570	150.0	0.581	1.97	29.7	40.6	2.22	31.4	0.01			243			
250 ISL	7.98	7.96	34.115	26.589	148.3	0.593	1.91	28.6							252			
290	7.51	7.48	34.139	26.673	140.8	0.651	1.61	23.9	47.3	2.35	33.8	0.01			292			
300 ISL	7.40	7.37	34.139	26.693	139.0	0.665	1.53	22.7							302			
343	7.00	6.97	34.168	26.768	132.4	0.723	1.22	17.9	55.0	2.54	36.5	0.01			345			
400 ISL	6.75	6.71	34.203	26.835	126.7	0.797	0.89	13.0							403			
425	6.67	6.63	34.229	26.862	124.5	0.829	0.77	11.2	62.9	2.77	39.0	0.02			428			
500 ISL	6.18	6.13	34.280	26.972	114.7	0.918	0.51	7.3							504			
507	6.13	6.08	34.292	26.982	113.7	0.926	0.49	7.1	74.6	2.99	41.2	0.01			511			
589	5.62	5.57	34.326	27.073	105.6	1.016	0.36	5.1	83.1	3.05	43.2	0.01			594			

RV ELLEN R. SCRIPPS				CRUISE R308										STATION 90 55			
LATITUDE		LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE		
32 35.0 N		119 37.1 W	18/08/83	2143 30	GMT	280	05 KT	300 04 05	6	1014.2 MB	18.3 C	18.4 C		8/8	ST		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	ISL 19.39	19.39	32.839	23.273	459.5	0.000	5.45	102.8							0		
1	19.39	19.39	32.839	23.273	459.5	0.005	5.45	102.8	0.5	0.30	0.3	0.01	0.23	0.02	1		
10	ISL 19.17	19.17	33.411	23.765	412.8	0.044	5.47	103.0							10		
11	19.15	19.15	33.464	23.811	408.4	0.048	5.47	103.1	1.1	0.28	0.1	0.01	0.15	0.02	11		
20	ISL 18.23	18.22	33.532	24.095	381.7	0.084	5.61	103.9							20		
30	16.64	16.64	33.388	24.363	356.4	0.121	5.83	104.8	0.0	0.28	0.1	0.01	0.28	0.02	30		
40	14.68	14.67	33.333	24.758	319.0	0.154	6.07	104.9	0.4	0.32	0.1	0.01	0.46	0.11	40		
50	ISL 13.79	13.78	33.321	24.936	302.3	0.186	5.87	99.6							50		
54	13.57	13.56	33.323	24.982	298.0	0.198	5.71	96.5	1.7	0.50	2.4	0.01	0.66	0.33	54		
68	12.44	12.43	33.351	25.227	274.9	0.238	5.05	83.3	5.2	0.68	7.8	0.01	0.45	0.39	68		
75	ISL 11.95	11.94	33.391	25.354	263.0	0.257	4.78	78.1							75		
92	10.98	10.97	33.527	25.634	236.6	0.299	4.22	67.6	12.0	1.06	15.7	0.00	0.09	0.11	92		
100	ISL 10.68	10.67	33.584	25.734	227.2	0.318	3.98	63.3							100		
111	10.34	10.33	33.673	25.861	215.4	0.342	3.67	58.0	16.9	1.50	20.2	0.00	0.04	0.03	111		
125	ISL 9.89	9.87	33.794	26.034	199.1	0.371	3.31	51.8							125		
130	9.74	9.73	33.840	26.092	193.7	0.381	3.19	49.8	22.4	1.53	23.5	0.00	0.00	0.02	131		
150	9.29	9.27	33.962	26.262	177.9	0.418	2.83	43.8	26.7	1.82	26.1	0.01			151		
178	8.99	8.97	33.980	26.324	172.5	0.467	2.75	42.2	28.8	1.88	26.6	0.00	0.00	0.03	179		
200	ISL 8.57	8.55	34.035	26.436	162.1	0.504	2.48	37.8							201		
211	8.36	8.34	34.073	26.495	156.7	0.521	2.31	35.0	35.4	1.99	29.9	0.00	0.00	0.03	212		
240	8.01	7.99	34.125	26.589	148.2	0.566	1.87	28.1	41.1	2.17	32.0	0.01			241		
250	ISL 7.93	7.90	34.130	26.608	146.4	0.580	1.78	26.8							252		
287	7.68	7.65	34.155	26.661	141.9	0.634	1.56	23.3	46.4	2.37	34.0	0.00			289		
300	ISL 7.58	7.55	34.157	26.683	140.1	0.652	1.46	21.8							302		
339	7.27	7.24	34.186	26.745	134.7	0.706	1.19	17.6	53.4	2.54	35.6	0.01			341		
400	ISL 6.90	6.87	34.210	26.820	128.3	0.786	0.90	13.2							403		
419	6.80	6.76	34.226	26.842	126.4	0.810	0.83	12.1	61.1	2.68	38.1	0.00			422		
500	6.32	6.27	34.281	26.949	117.0	0.909	0.49	7.1	71.5	2.85	40.1	0.00			504		
579	5.77	5.72	34.330	27.058	107.2	0.997	0.34	4.9	81.5	2.93	42.0	0.01			584		

RV ELLEN B. SCRIPPS				CRUISE R308				STATION 90 60									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 24.3 N	119 57.4 W	19/08/83	0155 GMT	889 M	310	04 KT	310 04 05	2	1013.8 MB	18.7 C	18.1 C	8/8		SC			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRFSS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	19.62	19.62	33.258	23.533	434.6	0.000	5.42	102.9							0		
1	19.62	19.62	33.258	23.533	434.6	0.004	5.42	102.9	0.4	0.23	0.3	0.00	0.20	0.03	1		
10 ISL	19.67	19.67	33.406	23.633	425.4	0.043	5.42	103.1							10		
11	19.68	19.68	33.426	23.646	424.2	0.047	5.42	103.1	0.7	0.29	0.2	0.02	0.17	0.03	11		
20 ISL	19.19	19.19	33.439	23.783	411.5	0.085	5.48	103.3							20		
30 ISL	18.39	18.38	33.410	23.963	394.6	0.125	5.58	103.7							30		
35	17.88	17.87	33.382	24.065	385.1	0.144	5.65	103.9	0.0	0.24	0.1	0.00	0.15	0.03	35		
44	17.09	17.08	33.388	24.259	366.8	0.178	5.76	104.4	0.0	0.25	0.0	0.01	0.24	0.05	44		
50 ISL	16.32	16.31	33.379	24.433	350.4	0.200	5.81	103.8							50		
58	15.00	14.99	33.373	24.720	323.1	0.227	5.89	102.3	0.0	0.34	0.3	0.01	0.89	0.76	58		
72	11.96	11.95	33.422	25.373	261.0	0.267	4.76	77.8	6.4	0.87	10.2	0.00	0.22	0.22	72		
75 ISL	11.62	11.61	33.447	25.458	253.0	0.275	4.58	74.2							75		
95	10.48	10.47	33.623	25.797	221.1	0.323	3.74	59.3	15.4	1.35	19.2	0.01	0.06	0.07	95		
100 ISL	10.27	10.26	33.645	25.852	216.0	0.334	3.67	57.9							100		
114	9.86	9.85	33.716	25.975	204.5	0.363	3.51	54.9	19.7	1.63	22.1	0.01	0.01	0.03	114		
125 ISL	9.69	9.68	33.808	26.078	195.0	0.385	3.18	49.5							125		
132	9.60	9.59	33.871	26.140	189.2	0.399	2.96	46.1	24.5	1.72	24.7	0.01	0.00	0.03	132		
150 ISL	9.17	9.15	33.956	26.279	176.3	0.432	2.73	42.1							151		
160	8.94	8.92	33.989	26.339	170.7	0.449	2.69	41.3	29.4	1.92	27.4	0.01	0.00	0.03	161		
189	8.68	8.66	34.034	26.415	163.9	0.498	2.66	40.6	31.3	1.97	28.0	0.02	0.00	0.02	190		
200 ISL	8.50	8.48	34.046	26.456	160.3	0.515	2.55	38.7							201		
226	8.07	8.05	34.083	26.547	151.9	0.556	2.24	33.7	38.5	2.08	30.6	0.01	0.00	0.02	227		
250 ISL	7.79	7.77	34.091	26.598	147.3	0.592	2.06	30.8							252		
254	7.75	7.72	34.098	26.606	146.7	0.598	2.03	30.3	42.4	2.21	31.9	0.00			256		
300	7.30	7.27	34.158	26.718	136.6	0.663	1.43	21.1	50.1	2.44	34.9	0.01			302		
363	6.83	6.80	34.202	26.818	127.8	0.746	0.99	14.5	58.8	2.63	37.4	0.01			366		
400 ISL	6.58	6.54	34.226	26.876	122.6	0.793	0.76	11.1							403		
456	6.25	6.21	34.275	26.955	115.9	0.860	0.51	7.4	70.8	2.85	40.1	0.01			459		
500 ISL	6.07	6.03	34.287	26.992	112.8	0.910	0.44	6.3							504		
541	5.94	5.89	34.309	27.020	110.5	0.956	0.41	5.9	77.1	2.98	41.4	0.01			545		
600 ISL	5.74	5.69	34.324	27.063	106.9	1.020	0.33	4.8							605		
613	5.70	5.65	34.337	27.073	106.2	1.034	0.32	4.6	82.2	3.04	42.2	0.02			618		
700 ISL	5.35	5.29	34.360	27.141	100.3	1.123	0.32	4.6							706		
800 ISL	4.86	4.79	34.393	27.225	92.8	1.220	0.33	4.6							807		
803	4.84	4.77	34.403	27.228	92.5	1.223	0.33	4.6	98.3	3.05	44.6	0.01			810		

RV ELLEN B. SCRIPPS				CRUISE F308								STATION 90 65					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETEP	DRY	WET	CLOUD	AMT	TYPE			
32 13.8 N	120 18.7 W	19/08/83	0601 GMT	3730 M	280	05 KT	300 04 05	2	1015.3 MP	18.4 C	17.4 C			SC			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	19.33	19.33	33.441	23.747	414.2	0.000	5.42	102.4							0		
1	19.33	19.33	33.441	23.747	414.2	0.004	5.42	102.4	1.7	0.26	0.0	0.01	0.14	0.03	1		
10 ISL	19.33	19.33	33.448	23.753	413.9	0.041	5.43	102.6							10		
11	19.33	19.33	33.449	23.754	413.9	0.046	5.43	102.6	1.2	0.25	0.0	0.01	0.13	0.03	11		
20 ISL	18.92	18.92	33.462	23.868	403.4	0.082									20		
30 ISL	18.60	18.59	33.485	23.968	394.1	0.122	5.54	103.4							30		
35	18.26	18.25	33.483	24.049	386.5	0.142	5.57	103.2	0.4	0.25	0.0	0.00	0.15	0.03	35		
45	16.62	16.61	33.409	24.385	354.9	0.179	5.83	104.7	0.5	0.30	0.0	0.00	0.30	0.06	45		
50 ISL	15.89	15.88	33.375	24.528	341.3	0.196	5.84	103.5							50		
59	14.58	14.57	33.343	24.787	316.7	0.226	5.87	101.2	0.8	0.40	0.6	0.00	0.62	0.28	59		
73	12.33	12.32	33.384	25.274	270.6	0.267	4.88	80.4	5.7	0.84	8.9	0.00	0.23	0.19	73		
75 ISL	12.15	12.14	33.392	25.316	266.7	0.272	4.79	78.6							75		
97	10.96	10.95	33.537	25.646	235.6	0.328	4.08	65.3	12.5	1.22	16.8	0.01	0.07	0.10	97		
100 ISL	10.79	10.78	33.562	25.698	230.7	0.334	3.97	63.3							100		
116	10.03	10.02	33.723	25.952	206.7	0.370	3.41	53.5	19.4	1.56	22.0	0.01	0.01	0.02	116		
125 ISL	9.84	9.83	33.812	26.055	197.1	0.388	3.11	48.6							125		
134	9.72	9.70	33.893	26.137	189.5	0.405	2.87	44.8	23.6	1.64	24.8	0.01	0.00	0.04	135		
150 ISL	9.37	9.36	33.944	26.237	180.3	0.435	2.88	44.6							151		
163	9.08	9.06	33.963	26.296	174.8	0.458	2.89	44.5	27.9	1.82	26.2	0.00			164		
191	8.51	8.49	34.021	26.431	162.4	0.505	2.69	40.9	34.1	1.92	28.3	0.02	0.00	0.02	192		
200 ISL	8.36	8.34	34.032	26.466	159.2	0.520	2.60	39.4							201		
231	7.95	7.93	34.081	26.563	150.4	0.568	2.23	33.5	44.4	2.22	33.1	0.02	0.00	0.02	232		
250 ISL	7.73	7.71	34.100	26.614	145.8	0.596	1.96	29.3							252		
259	7.64	7.61	34.116	26.636	143.8	0.609	1.83	27.7	45.5	2.37	32.4	0.01			261		
300 ISL	7.28	7.25	34.163	26.729	135.5	0.666	1.32	19.6							302		
306	7.23	7.20	34.175	26.741	134.4	0.674	1.26	18.6	52.9	2.47	35.2	0.02			308		
370	6.75	6.72	34.220	26.843	125.5	0.758	0.81	11.8	61.5	2.62	37.9	0.03			373		
400 ISL	6.56	6.52	34.232	26.883	122.0	0.795	0.68	9.8							403		
465	6.22	6.18	34.274	26.956	115.7	0.872	0.49	7.1	72.2	2.92	38.5	0.02			469		
500 ISL	6.08	6.04	34.285	26.988	113.1	0.912	0.43	6.2							504		
552	5.90	5.85	34.316	27.031	109.6	0.970	0.37	5.3	78.9	2.94	42.0	0.02			556		
600 ISL	5.71	5.66	34.327	27.070	106.3	1.022	0.31	4.5							605		
626	5.60	5.55	34.345	27.091	104.4	1.049	0.29	4.1	84.3	2.90	42.5	0.02			631		
700 ISL	5.28	5.22	34.365	27.154	99.0	1.124	0.30	4.2							706		
800 ISL	4.80	4.74	34.406	27.242	91.1	1.219	0.31	4.3							807		
820	4.70	4.63	34.424	27.260	89.4	1.237	0.31	4.3	100.8	3.00	45.2	0.02			822		

RV ELLEN B. SCRIPPS				CRUISE 8309								STATION 90 28			
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 27.7 N	117 47.4 W	13/09/83	D248 GMT	230 M	130	D6 KT	130 01	0	1010.2 MB	23.2 C	22.6 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	23.44	23.44	33.472	22.650	518.9	0.000	5.10	103.7	0.2	0.22	0.3	0.00	0.15	0.02	0
10	19.97	19.97	33.372	23.530	435.3	0.048	5.70	108.9	0.2	0.27	0.3	0.00	0.28	0.05	10
20 ISL	17.39	17.39	33.329	24.143	377.1	0.089	5.81	105.9							20
29	15.95	15.95	33.319	24.468	346.3	0.122	5.91	104.7	0.2	0.40	0.3	0.00	0.76	0.14	29
30 ISL	15.87	15.87	33.319	24.487	344.6	0.125	5.90	104.5							30
39	15.47	15.46	33.327	24.582	335.8	0.156	5.82	102.2	0.6	0.44	0.5	0.00	0.58	0.19	39
50 ISL	15.20	15.20	33.307	24.626	331.9	0.193	5.71	99.8							50
53	15.11	15.10	33.307	24.646	330.1	0.203	5.67	98.8	1.5	0.650	1.5	0.03	0.54	0.23	53
68	13.86	13.85	33.396	24.979	298.6	0.250	5.23	88.9	2.2	0.64	3.5	0.02	0.28	0.22	68
75 ISL	13.60	13.59	33.409	25.045	292.6	0.271	5.13	86.7							75
81	13.48	13.47	33.417	25.073	290.0	0.288	5.07	85.5	3.3	0.68	4.9	0.02	0.21	0.21	81
100	13.32	13.31	33.429	25.115	286.6	0.343	4.93	82.9	4.9	0.74	6.2	0.02	0.18	0.19	100
124	12.48	12.46	33.511	25.345	265.2	0.409	4.47	73.9	7.1	1.00	10.7	0.03	0.08	0.10	124
125 ISL	12.46	12.44	33.510	25.351	264.6	0.412	4.45	73.6							125
149	12.12	12.10	33.562	25.454	255.4	0.474	4.18	68.6	9.3	1.10	13.3	0.03	0.06	0.08	150
150 ISL	12.11	12.09	33.562	25.456	255.2	0.477									151

RV ELLEN B. SCRIPPS				CRUISE 8309								STATION 90 30			
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 25.5 N	117 54.0 W	13/09/83	D508 GMT	633 M	140	07 KT		0	1011.0 MB	22.2 C	21.8 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0 ISL	23.29	23.29	33.491	22.708	513.5	0.000	5.19	105.2							0
1	23.29	23.29	33.491	22.708	513.5	0.005	5.19	105.2	1.3	0.30	0.0	0.00	0.12	0.01	1
10	21.82	21.82	33.435	23.081	478.2	0.050	5.50	108.7	0.0	0.29	0.0	0.00	0.10	0.01	10
20 ISL	19.67	19.67	33.379	23.613	427.7	0.095	5.85	111.2							20
28	18.08	18.08	33.361	24.000	391.0	0.128	6.05	111.7	0.3	0.31	0.0	0.00	0.13	0.02	28
30 ISL	17.81	17.81	33.356	24.062	385.2	0.136	6.06	111.3							30
37	17.02	17.01	33.343	24.240	368.4	0.162	6.09	110.2	0.2	0.35	0.0	0.00	0.18	0.04	37
47	16.03	16.02	33.321	24.452	348.4	0.198	6.05	107.4	0.0	0.36	0.0	0.00	0.25	0.06	47
50 ISL	15.75	15.75	33.318	24.513	342.7	0.208	6.03	106.4							50
61	14.87	14.86	33.325	24.711	324.1	0.245	5.91	102.5	0.0	0.38	0.0	0.00	0.29	0.14	61
74	14.12	14.11	33.329	24.874	308.9	0.286	5.70	97.4	0.5	0.43	0.2	0.00	0.50	0.45	74
75 ISL	14.08	14.06	33.327	24.884	307.9	0.289	5.68	96.9							75
93	13.28	13.27	33.358	25.068	290.8	0.343	5.28	88.7	1.5	0.63	3.6	0.00	0.22	0.25	93
100 ISL	12.84	12.83	33.357	25.158	282.4	0.363	5.21	86.7							100
115	12.00	11.98	33.396	25.347	264.7	0.404	5.00	81.8	4.5	0.84	8.0	0.00	0.09	0.11	115
125 ISL	11.78	11.76	33.463	25.443	255.8	0.430	4.64	75.6							125
134	11.66	11.64	33.540	25.522	248.4	0.453	4.29	69.7	8.7	1.14	13.4	0.00	0.04	0.05	135
150 ISL	11.31	11.29	33.646	25.672	234.5	0.492	3.82	61.7							151
161	11.10	11.08	33.723	25.767	225.7	0.517	3.54	56.9	15.1	1.60	18.3	0.00	0.02	0.03	162
191	10.89	10.87	33.911	25.952	208.8	0.582	2.81	45.0	19.5	1.76	23.1	0.00	0.01	0.02	192
200 ISL	10.70	10.67	33.947	26.019	202.6	0.601	2.71	43.2							201
218	10.24	10.21	34.017	26.148	190.8	0.636	2.59	40.9	23.3	1.92	24.9	0.00			219
250 ISL	9.52	9.50	34.050	26.300	176.5	0.695	2.48	38.5							252
255	9.42	9.39	34.059	26.319	174.8	0.704	2.46	38.2	28.0	2.11	28.1	0.00			257
300 ISL	8.65	8.62	34.116	26.491	158.9	0.779	2.02	30.7							302
311	8.49	8.46													313
381	7.68	7.64	34.227	26.719	138.2	0.901	1.14	17.0	50.1	2.71	36.0	0.00			384
400 ISL	7.46	7.42	34.224	26.755	135.0	0.927	1.03	15.3							403
450	6.89	6.85	34.236	26.838	127.4	0.992	0.79	11.6	59.9	2.76	39.0	0.00			453
500 ISL	6.37	6.33	34.265	26.936	118.3	1.054	0.55	7.9							504
524	6.14	6.09	34.299	26.987	113.6	1.082	0.43	6.2	74.4	2.97	42.0	0.00			528

RV ELLEN B. SCHIPPS				CRUISE #309				STATION 90 32									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 20.5 N	118 3.5 W	13/09/83	0710 GMT	741 M	140	06 KT		0	1011.2 MB	21.7 C	21.1 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SIO3	PO4	NO3	NO2	CHL.A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	22.69	22.69	33.481	22.872	497.8	0.000	5.20	104.3							0		
1	22.69	22.69	33.481	22.872	497.8	0.005	5.20	104.3							1		
10 ISL	22.49	22.49	33.473	22.923	493.3	0.050	5.26	105.2							10		
11	22.47	22.47	33.473	22.928	492.8	0.055	5.27	105.3	0.0	0.25	0.0	0.00	0.09	0.02	11		
20 ISL	20.94	20.93	33.429	23.319	455.8	0.097	5.69	110.7							20		
29	18.75	18.74	33.388	23.855	404.9	0.135	6.09	113.9	0.0	0.35	0.0	0.00	0.16	0.02	29		
30 ISL	18.49	18.49	33.380	23.914	399.3	0.139	6.09	113.3							30		
38	16.52	16.51	33.345	24.358	357.1	0.170	6.10	109.3	0.0	0.32	0.0	0.00	0.15	0.04	38		
48	14.78	14.77	33.343	24.744	320.5	0.203	5.93	102.7	0.4	0.48	0.0	0.00	0.27	0.13	48		
50 ISL	14.60	14.59	33.348	24.788	316.4	0.210	5.86	101.1							50		
62	13.93	13.92	33.391	24.961	300.3	0.247	5.39	91.8	1.9	0.56	1.8	0.00	0.40	0.52	62		
75 ISL	13.19	13.18	33.410	25.127	284.7	0.285	5.08	85.2							75		
76	13.14	13.13	33.414	25.139	283.6	0.288	5.06	84.8	2.8	0.68	5.3	0.00	0.20	0.22	76		
95	12.14	12.13	33.445	25.358	263.1	0.340	4.75	77.9	5.6	0.86	9.1	0.00	0.09	0.10	95		
100 ISL	12.04	12.02	33.488	25.413	258.0	0.353	4.51	73.9							100		
119	11.83	11.81	33.672	25.593	241.4	0.400	3.64	59.4	12.3	1.26	15.7	0.00	0.03	0.04	119		
125 ISL	11.72	11.71	33.691	25.630	237.9	0.415	3.55	57.7							125		
138	11.48	11.46	33.731	25.704	231.2	0.445	3.43	55.6	14.2	1.37	16.5	0.00	0.02	0.03	138		
150 ISL	11.27	11.25	33.786	25.788	223.5	0.472	3.22	52.0							150		
167	10.94	10.92	33.872	25.912	212.0	0.509	2.95	47.3	18.9	1.58	22.0	0.00	0.01	0.02	167		
197	10.11	10.09	33.947	26.115	193.1	0.570	2.85	44.9	22.6	1.88	23.7	0.00	0.01	0.02	197		
200 ISL	10.01	9.98	33.951	26.139	190.8	0.576	2.83	44.4							200		
226	9.22	9.19	34.036	26.332	172.8	0.623	2.56	39.5	28.6	1.98	25.7	0.00			226		
250 ISL	8.99	8.96	34.112	26.434	163.6	0.664	2.16	33.1							250		
266	8.92	8.89	34.163	26.480	159.5	0.690	1.89	29.0	35.1	2.23	28.1	0.00			266		
300 ISL	8.45	8.42	34.184	26.576	150.8	0.743	1.62	24.7							300		
324	8.08	8.05	34.191	26.632	145.7	0.778	1.51	22.7	44.1	2.46	32.4	0.00			324		
397	7.23	7.19	34.213	26.772	133.0	0.880	1.05	15.5	55.7	2.56	37.7	0.00			397		
400 ISL	7.20	7.16	34.208	26.778	132.5	0.884	1.03	15.2							400		
467	6.62	6.58	34.260	26.893	122.1	0.969	0.61	8.9	65.8	2.78	40.1	0.00			467		
500 ISL	6.39	6.34	34.274	26.941	117.9	1.009	0.48	6.9							500		
542	6.15	6.10	34.308	26.993	113.3	1.058	0.38	5.5	75.9	2.90	40.9	0.00			542		

RV ELLEN B. SCHIPPS				CRUISE #309				STATION 90 35									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 15.3 N	118 12.1 W	13/09/83	0950 GMT	230 M	090	03 KT		2	1011.3 MB	20.1 C	20.0 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SIO3	PO4	NO3	NO2	CHL.A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	22.18	22.18	33.460	22.999	485.5	0.000	5.29	105.2							0		
10	21.74	21.74	33.451	23.115	474.9	0.048	5.34	105.4							10		
20 ISL	19.46	19.46	33.356	23.650	424.2	0.092	5.68	107.6	0.4	0.27	0.3	0.00	0.09	0.02	20		
29	17.20	17.20	33.316	24.177	374.1	0.129	6.00	108.9	0.0	0.41	0.3	0.00	0.17	0.04	29		
30 ISL	17.07	17.06	33.314	24.208	371.2	0.132	6.00	108.7							30		
43	15.80	15.79	33.318	24.501	343.6	0.179	6.05	106.9	0.0	0.45	0.3	0.00	0.56	0.17	43		
50 ISL	15.24	15.23	33.312	24.623	332.2	0.203	5.86	102.4							50		
53	15.03	15.02	33.313	24.667	328.0	0.212	5.77	100.4	0.9	0.54	0.7	0.04	0.71	0.31	53		
67	14.40	14.39	33.337	24.821	313.8	0.257	5.55	95.4	1.1	0.63	1.6	0.11	0.44	0.32	67		
75 ISL	13.95	13.94	33.346	24.925	304.1	0.282	5.44	92.7							75		
81	13.58	13.57	33.365	25.013	295.8	0.300	5.33	90.1	1.7	0.65	3.6	0.01	0.30	0.27	81		
100	12.27	12.26	33.496	25.373	261.9	0.353	4.53	74.5	7.9	0.98	10.2	0.00	0.10	0.14	100		
123	11.42	11.40	33.631	25.637	237.2	0.410	3.91	63.2	12.3	1.06	16.6	0.00	0.05	0.05	123		
125 ISL	11.39	11.37	33.643	25.654	235.6	0.415	3.85	62.2							125		
144	11.12	11.10	33.782	25.809	221.3	0.459	3.32	53.4	16.5	1.57	20.6	0.00	0.01	0.01	144		
150 ISL	10.91	10.89	33.801	25.864	216.1	0.472	3.25	52.0							150		
174	10.04	10.02	33.873	26.069	197.0	0.521	3.11	48.9	20.7	1.74	23.5	0.00	0.00	0.03	174		
200 ISL	9.57	9.55	33.951	26.213	183.8	0.571	2.89	44.9							200		
202	9.55	9.53	33.962	26.220	183.0	0.575	2.87	44.6	24.7	1.95	26.7	0.00	0.00	0.02	202		

RV ELLEN R. SCRIPPS				CRUISE 8309				STATION 90 37									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 11.0 N	118 22.7 W	13/09/83	1206 GMT	1196 M	100	05 KT		2	1011.3 MB	21.5 C	20.3 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	21.38	21.38	33.424	23.193	467.1	0.000	5.34	104.7	0.7	0.28	0.4	0.00	0.14	0.01	0		
10	20.76	20.76	33.425	23.362	451.3	0.046	5.45	105.7	0.7	0.27	0.2	0.00	0.14	0.01	10		
20	18.61	18.60	33.349	23.862	404.0	0.088	5.43	108.7							20		
28	16.74	16.74	33.317	24.285	363.8	0.119	6.10	109.8	0.1	0.35	0.1	0.00	0.17	0.02	28		
30	16.44	16.44	33.313	24.353	357.4	0.127	6.10	109.1							30		
37	15.65	15.64	33.311	24.529	340.8	0.151	6.09	107.3	0.1	0.35	0.1	0.01	0.25	0.06	37		
47	15.26	15.25	33.312	24.616	332.7	0.185	6.01	105.1	0.0	0.35	0.1	0.00	0.28	0.06	47		
50	14.90	14.89	33.317	24.700	324.8	0.194	5.89	102.2							50		
61	13.52	13.51	33.375	25.032	293.4	0.228	5.33	90.0	1.4	0.60	3.2	0.00	0.36	0.22	61		
75	12.87	12.86	33.452	25.223	275.5	0.268	4.80	80.0							75		
76	12.85	12.84	33.460	25.232	274.7	0.271	4.77	79.5	4.6	0.76	8.1	0.00	0.18	0.18	76		
94	12.28	12.27	33.525	25.393	259.8	0.319	4.40	72.4	7.2	1.02	9.5	0.00	0.08	0.08	94		
100	12.20	12.18	33.562	25.441	255.4	0.335	4.23	69.5							100		
118	12.01	11.99	33.684	25.568	243.7	0.380	3.70	60.6	11.1	1.24	15.5	0.00	0.03	0.04	118		
125	11.89	11.88	33.705	25.610	239.9	0.397	3.54	57.9							125		
138	11.64	11.62	33.751	25.690	232.6	0.427	3.29	53.5	14.2	1.40	17.5	0.00	0.08	0.03	138		
150	11.39	11.37	33.812	25.788	223.5	0.455	3.06	49.6							150		
167	11.00	10.98	33.898	25.921	211.1	0.492	2.85	45.7	18.7	1.61	21.6	0.00	0.00	0.02	167		
197	10.29	10.27	33.918	26.062	198.2	0.553	2.95	46.6	21.1		22.9	0.00	0.00	0.01	197		
200	10.15	10.13	33.912	26.085	196.0	0.559	2.98	46.9							200		
226	9.02	9.00	33.937	26.287	177.0	0.607	3.13	48.1	26.1	1.78	25.8	0.00			226		
250	8.64	8.61	34.001	26.401	166.5	0.649	2.87	45.7							250		
264	8.55	8.52	34.050	26.449	162.2	0.672	2.64	40.1	32.2	2.03	28.7	0.00			264		
300	8.27	8.24	34.116	26.548	153.3	0.729	2.19	33.0							300		
324	8.11	8.08	34.156	26.600	148.8	0.765	1.89	28.5	40.2	2.37	33.5	0.00			324		
397	7.34	7.30	34.221	26.763	134.0	0.868	1.04	15.4	53.3	2.52	36.9	0.00			397		
400	7.30	7.26	34.214	26.769	133.5	0.872	1.02	15.1							400		
467	6.58	6.54	34.227	26.872	124.0	0.959	0.75	10.9	64.8	2.74	39.5	0.00			467		
500	6.34	6.30	34.242	26.921	119.7	0.999	0.61	8.9							500		
542	6.16	6.11	34.294	26.991	114.5	1.048	0.44	6.3	72.6	2.84	40.8	0.00			542		

RV ELLEN R. SCRIPPS				CRUISE 8309				STATION 90 42									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 0.8 N	118 43.5 W	13/09/83	1635 GMT	964 M	130	03 KT	260 03 05	1	1012.5 MB	23.7 C	22.3 C				178		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	21.64	21.64	33.442	23.135	472.6	0.000	5.26	103.6	0.9	0.26	0.1	0.00	0.12	0.00	0		
10	20.95	20.95	33.432	23.316	455.7	0.046	5.31	103.3	0.0	0.27	0.0	0.00	0.14	0.01	10		
20	19.03	19.01	33.369	23.770	412.7	0.089	5.65	106.2							20		
28	17.35	17.35	33.327	24.150	376.7	0.121	5.93	108.0	0.0	0.32	0.0	0.00	0.18	0.02	28		
30	17.07	17.06	33.311	24.206	371.4	0.129	5.95	107.8							30		
37	16.20	16.19	33.271	24.375	355.5	0.154	5.99	106.6	0.0	0.30	0.0	0.00	0.16	0.02	37		
47	15.19	15.18	33.279	24.606	333.7	0.189	6.01	104.9	0.0	0.30	0.0	0.00	0.23	0.04	47		
50	14.91	14.90	33.292	24.679	326.8	0.199	5.96	103.5							50		
61	13.98	13.97	33.368	24.933	302.9	0.233	5.62	95.8	0.3	0.48	1.2	0.00	0.76	0.25	61		
74	13.14	13.13	33.447	25.165	281.1	0.271	4.89	81.9	3.7	0.72	5.9	0.00	0.32	0.22	74		
75	13.11	13.10	33.451	25.176	280.0	0.274	4.85	81.1							75		
95	12.67	12.66	33.567	25.351	263.9	0.329	4.18	69.4	7.7	1.01	11.3	0.00	0.11	0.11	95		
100	12.53	12.52	33.580	25.390	260.3	0.342	4.08	67.5							100		
118	12.01	11.99	33.630	25.527	247.7	0.387	3.81	62.4	10.7		14.1	0.00	0.05	0.06	118		
125	11.80	11.79	33.647	25.582	242.5	0.404	3.74	61.0							125		
138	11.45	11.43	33.697	25.693	233.2	0.435	3.61	58.4	13.2	1.34	16.8	0.00	0.02	0.04	138		
150	11.24	11.23	33.744	25.761	226.1	0.463	3.42	55.1							150		
167	10.98	10.96	33.833	25.874	215.6	0.501	3.10	49.7	17.4	1.54	21.9	0.00	0.01	0.02	167		
197	10.26	10.24	34.017	26.144	190.4	0.561	2.54	40.1	24.0		25.4	0.00	0.00	0.02	197		
200	10.18	10.15	34.021	26.168	189.4	0.567	2.52	39.7							200		
226	9.49	9.46	34.076	26.320	174.1	0.614	2.40	37.3	29.1	2.02	28.0	0.00			226		
250	8.99	8.96	34.103	26.426	164.3	0.655	2.27	34.9							250		
265	8.74	8.71	34.123	26.477	159.7	0.679	2.19	33.5	34.1	2.16	28.8	0.00			265		
300	8.38	8.35	34.140	26.551	153.1	0.734	1.99	30.1							300		
324	8.19	8.16	34.158	26.589	149.8	0.771	1.82	27.5	40.5		31.4	0.00			324		
399	7.30	7.26	34.217	26.766	133.7	0.877	1.09	16.1	53.6	2.55	36.8	0.00			399		
400	7.29	7.25	34.211	26.768	133.6	0.878	1.08	16.0							400		
471	6.53	6.49	34.252	26.899	121.6	0.969	0.65	9.6	66.1	2.78	40.8	0.00			471		
500	6.29	6.24	34.264	26.946	117.3	1.004	0.54	7.8							500		
545	5.99	5.94	34.305	27.011	111.4	1.055	0.41	5.9	76.1	2.87	42.3	0.00			545		

RV ELLEN B. SCRIPPS

CRUISE R309

STATION 90 45

LATITUDE	LONGITUDE	DAY/MO/YR	MESSANGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
32 54.9 N	118 55.6 W	13/09/83	1940 GMT	1755 M	170	02 KT	270 03 05	1	1013.2 MB	23.0 C	22.2 C	7/8		SC	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	21.95	21.95	33.422	23.035	482.2	0.000	5.26	104.2	0.0	0.33	0.2	0.00	0.14	0.01	0
10	20.54	20.54	33.418	23.415	446.2	0.046	5.36	103.5	0.0	0.32	0.1	0.00	0.10	0.00	10
20 ISL	19.25	19.25	33.384	23.725	417.0	0.090	5.57	105.2							20
28	18.16	18.16	33.336	23.961	394.7	0.122	5.77	106.7	0.0	0.36	0.1	0.00	0.10	0.00	28
30 ISL	17.82	17.82	33.316	24.029	388.3	0.130	5.82	106.8							30
38	16.50	16.49	33.258	24.296	363.0	0.160	5.97	106.9	0.0	0.30	0.1	0.00	0.11	0.01	38
48	15.21	15.20	33.243	24.574	336.7	0.195	6.05	105.6	0.0	0.36	0.2	0.00	0.18	0.00	48
50 ISL	14.91	14.91	33.227	24.628	331.7	0.202	6.03	104.6							50
62	13.38	13.37	33.200	24.925	303.6	0.240	5.88	98.9	0.2	0.51	0.4	0.00	0.57	0.29	62
75 ISL	12.77	12.76	33.374	25.183	279.4	0.278	5.36	99.1							75
76	12.74	12.73	33.391	25.200	277.7	0.281	5.32	88.4	2.3	0.61	4.4	0.00	0.25	0.17	76
96	11.45	11.44	33.471	25.506	248.9	0.333	4.86	78.6	6.5	0.90	10.6	0.00	0.08	0.09	96
100 ISL	11.24	11.22	33.477	25.552	244.7	0.343	4.77	76.7							100
119	10.60	10.59	33.579	25.742	226.9	0.388	4.14	65.7	12.4	1.34	16.0	0.00	0.02	0.04	119
125 ISL	10.64	10.62	33.668	25.808	220.9	0.401	3.77	59.9							125
139	10.78	10.76	33.882	25.947	207.9	0.431	2.95	47.1	18.7	1.60	21.0	0.00	0.01	0.02	140
150 ISL	10.58	10.56	33.928	26.022	201.1	0.454	2.88	45.8							151
168	10.05	10.03	33.943	26.122	191.9	0.489	2.76	43.4	23.1	1.85	23.3	0.00	0.00	0.01	169
198	9.15	9.13	33.990	26.307	174.6	0.544	2.87	44.2	27.1	2.03	27.0	0.00	0.00	0.01	199
200 ISL	9.10	9.08	33.986	26.315	173.8	0.548	2.87	44.2							201
226	8.62	8.60	34.010	26.406	165.5	0.592	2.87	43.7	30.5	2.10	28.6	0.00			227
250 ISL	8.47	8.44	34.074	26.484	158.5	0.631	2.43	36.9							252
264	8.41	8.38	34.121	26.526	154.8	0.653	2.12	32.2	36.8	2.18	30.4	0.00			266
300 ISL	7.94	7.91	34.146	26.620	146.2	0.707	1.74	26.1							302
323	7.63	7.60	34.157	26.671	141.7	0.740	1.58	23.5	46.3	2.66	33.5	0.00			325
395	7.21	7.17	34.219	26.780	132.3	0.839	1.02	15.1	54.8	2.77	37.3	0.00			398
400 ISL	7.16	7.12	34.215	26.790	131.4	0.845	0.98	14.5							403
465	6.45	6.41	34.259	26.915	119.9	0.927	0.56	8.1	67.9	2.86	40.8	0.01			469
500 ISL	6.19	6.14	34.273	26.966	115.3	0.969	0.48	6.9							504
541	5.98	5.93	34.305	27.012	111.3	1.015	0.39	5.6	77.4	2.96	45.1	0.00			545

RV ELLEN B. SCRIPPS

CRUISE R309

STATION 90 53

LATITUDE	LONGITUDE	DAY/MO/YR	MESSANGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
32 38.7 N	119 28.6 W	14/09/83	0042 GMT	1331 M	300	05 KT	300 02 06	1	1010.7 MB	22.0 C	21.5 C	4/8		CU	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	22.24	22.24	33.472	22.992	486.3	0.000	5.27	104.9	0.3	0.38	0.7	0.00	0.12	0.00	0
10	20.87	20.87	33.456	23.356	451.9	0.047	5.35	104.0	0.3	0.30	1.0	0.00	0.12	0.00	10
20 ISL	19.93	19.93	33.457	23.607	428.3	0.091	5.47	104.5							20
28	18.89	18.89	33.432	23.853	405.1	0.124	5.64	105.7	0.1	0.36	1.1	0.00	0.13	0.00	28
30 ISL	18.41	18.41	33.415	23.960	394.9	0.132	5.73	106.4							30
38	16.39	16.38	33.355	24.396	353.5	0.162	6.03	107.8	1.1	0.36	0.9	0.00	0.24	0.03	38
47	14.51	14.50	33.279	24.752	319.7	0.192	6.05	104.2	0.5	0.39	1.3	0.00	0.60	0.16	47
50 ISL	14.20	14.20	33.265	24.808	314.5	0.202	6.03	103.3							50
62	13.41	13.40	33.271	24.974	298.9	0.239	5.72	96.3	1.1	0.57	3.2	0.00	0.49	0.24	62
75 ISL	12.11	12.10	33.399	25.328	265.4	0.275	4.76	78.0							75
76	12.02	12.01	33.413	25.355	262.9	0.278	4.68	76.6					0.17	0.18	76
95	11.16	11.15	33.526	25.602	239.8	0.326	4.23	68.0	6.7	1.24	12.4	0.00	0.09	0.10	95
100 ISL	10.90	10.89	33.563	25.679	232.5	0.337	4.07	65.1							100
118	10.05	10.04	33.705	25.935	208.4	0.377	3.56	55.9	18.2	1.63	21.4	0.00	0.01	0.03	118
125 ISL	9.84	9.83	33.741	26.001	202.3	0.392	3.46	54.1							125
139	9.52	9.50	33.808	26.104	192.7	0.419	3.32	51.5	21.5	1.67	25.8	0.00	0.01	0.02	140
150 ISL	9.31	9.29	33.846	26.171	186.6	0.440	3.24	50.0							151
168	9.01	8.99	33.914	26.269	177.5	0.473	3.05	46.8	26.6	1.80	28.5	0.00	0.00	0.01	169
197	8.55	8.53	34.041	26.441	161.6	0.522	2.39	36.3	35.0			0.00	0.00	0.02	198
200 ISL	8.52	8.50	34.043	26.449	160.8	0.527	2.36	35.9							201
226	8.32	8.30	34.077	26.505	156.0	0.568	2.22	33.6	36.9			0.00			227
250 ISL	8.00	7.98	34.108	26.581	149.1	0.605	1.97	29.5							252
266	7.77	7.74	34.135	26.632	144.4	0.628	1.78	26.6	44.1			0.00			268
300 ISL	7.33	7.30	34.149	26.710	137.3	0.676	1.46	21.6							302
324	7.07	7.04	34.164	26.755	133.3	0.709	1.26	18.5	54.2			0.00			326
397	6.65	6.61	34.239	26.872	123.1	0.803	0.75	10.9	65.9			0.00			400
400 ISL	6.63	6.60	34.235	26.876	122.7	0.806	0.73	10.7							403
468	6.25	6.21	34.283	26.959	115.5	0.887	0.49	7.1	73.1			0.00			472
500 ISL	6.04	6.00	34.287	26.995	112.3	0.924	0.45	6.5							504
543	5.73	5.68	34.301	27.040	108.3	0.971	0.40	5.7	82.0			0.00			547

RV ELLEN B. SCRIPPS				CRUISE 8309				STATION 90 55									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 34.6 N	119 37.0 W	14/09/83	0330 GMT	1156 M	330	07 KT		1	1011.1 MB	20.2 C	20.0 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	21.21	21.21	33.474	23.277	459.0	0.000	5.28	103.2	2.9	0.33	1.1	0.00	0.12	0.01	0		
10	21.09	21.09	33.488	23.321	455.2	0.046	5.30	103.4	0.0	0.38	0.9	0.01	0.12	0.01	10		
20	20.00	19.99	33.310	23.477	440.7	0.090	5.44	103.9							20		
28	19.12	19.11	33.465	23.820	408.2	0.123	5.64	106.2	0.0	0.34	0.8	0.01	0.16	0.02	28		
30	18.29	18.29	33.428	24.001	391.0	0.131	5.74	106.3							30		
37	15.50	15.49	33.362	24.602	333.8	0.157	5.98	105.1	0.7	0.45	1.0	0.01	0.65	0.30	37		
47	14.19	14.18	33.351	24.875	308.0	0.189	5.69	97.4	1.2	0.62	3.2	0.00	0.52	0.35	47		
50	13.93	13.93	33.346	24.927	303.2	0.198	5.61	95.4							50		
62	13.05	13.04	33.353	25.109	286.1	0.233	5.22	87.3	2.9	0.77	7.2	0.01	0.35	0.33	62		
75	11.45	11.44	33.424	25.396	259.0	0.269	4.63	75.5	7.0	1.01	10.4	0.00	0.15	0.15	75		
97	10.71	10.70	33.577	25.721	228.4	0.323	4.02	64.0	13.4			0.00	0.05	0.06	97		
100	10.61	10.60	33.589	25.750	225.7	0.329	3.98	63.2							100		
118	10.09	10.08	33.676	25.906	211.2	0.369	3.76	59.1	18.3		21.4	0.00	0.02	0.03	118		
125	9.87	9.85	33.720	25.980	204.3	0.383	3.64	57.0							125		
139	9.45	9.43	33.820	26.125	190.7	0.411	3.39	52.6	21.7	1.71	24.5	0.00	0.00	0.02	140		
150	9.20	9.19	33.882	26.216	182.3	0.431	3.18	49.1							151		
166	8.94	8.92	33.962	26.318	172.8	0.460	2.91	44.6	28.7	1.91	29.9	0.00	0.00	0.01	167		
197	8.70	8.68	34.028	26.407	164.8	0.512	2.64	40.3	32.8	2.01	31.5	0.00	0.00	0.02	198		
200	8.68	8.66	34.029	26.415	164.2	0.517	2.62	40.0							201		
225	8.46	8.46	34.069	26.474	159.0	0.558	2.45	37.2	34.0	2.17	32.0	0.00			226		
250	8.20	8.17	34.090	26.538	153.3	0.597	2.17	32.7							252		
264	8.02	7.99	34.108	26.574	150.0	0.618	1.99	29.9	39.7	2.60		0.00			266		
300	7.54	7.51	34.136	26.671	141.1	0.670	1.60	23.8							302		
323	7.25	7.22	34.161	26.728	136.0	0.702	1.38	20.4	50.4	2.66		0.00			325		
396	6.76	6.72	34.218	26.841	126.2	0.798	0.85	12.4	59.8	3.04		0.00			399		
400	6.74	6.70	34.214	26.845	125.8	0.803	0.83	12.1							403		
467	6.40	6.36	34.262	26.924	119.0	0.885	0.58	8.4	67.4	3.04		0.00			471		
500	6.18	6.13	34.275	26.969	114.9	0.923	0.48	7.0							504		
543	5.83	5.78	34.311	27.035	108.9	0.972	0.39	5.6	78.9	3.01		0.00			547		

RV ELLEN B. SCRIPPS				CRUISE 8309				STATION 90 60									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 24.8 N	119 57.7 W	14/09/83	0653 GMT	962 M	300	08 KT		2	1013.0 MB	19.0 C	18.5 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	21.14	21.14	33.478	23.299	456.9	0.000	5.27	102.9	1.1	0.32	0.1	0.00	0.12	0.01	0		
10	20.96	20.96	33.473	23.344	453.0	0.045	5.30	103.2	2.1	0.31	0.1	0.00	0.12	0.03	10		
20	20.07	20.06	33.337	23.479	440.5	0.090	5.45	104.3							20		
27	19.44	19.44	33.451	23.728	417.0	0.119	5.55	105.1							27		
30	18.49	18.48	33.417	23.944	396.5	0.131	5.75	106.9	4.5	0.17	0.1	0.01	0.14	0.03	30		
37	16.11	16.10	33.372	24.473	346.2	0.158	6.11	108.7	2.0	0.33	0.1	0.00	0.26	0.05	37		
46	13.90	13.89	33.351	24.936	302.2	0.187	5.91	100.5	2.0	0.55	1.2	0.01	0.78	0.28	46		
50	13.37	13.36	33.355	25.048	291.5	0.199	5.65	95.1							50		
60	12.55	12.54	33.384	25.231	274.3	0.227	4.93	81.6	5.5	0.94	8.3	0.31	0.39	0.26	60		
73	11.62	11.61	33.467	25.471	251.7	0.261	4.38	71.1	9.6	1.14	14.3	0.00	0.18	0.20	73		
75	11.54	11.53	33.476	25.494	249.6	0.266	4.32	70.0							75		
92	11.04	11.03	33.571	25.658	234.3	0.307	3.93	63.0	12.7	1.33	18.6	0.00	0.08	0.08	92		
100	10.68	10.67	33.631	25.770	223.8	0.326	3.72	59.2							100		
115	10.01	10.00	33.748	25.975	204.6	0.358	3.40	53.4	19.1	1.64	21.5	0.00	0.02	0.02	115		
125	9.68	9.66	33.791	26.067	196.0	0.378	3.33	51.9							125		
134	9.43	9.41	33.828	26.134	189.7	0.395	3.29	51.0	22.6	1.87	22.6	0.00	0.00	0.02	135		
150	9.12	9.10	33.892	26.237	180.2	0.425	3.12	48.0							151		
162	8.94	8.92	33.942	26.302	174.2	0.446	2.98	45.7	26.9	1.82	23.1	0.00	0.00	0.01	163		
190	8.55	8.53	34.026	26.429	162.6	0.494	2.72	41.4	31.5			0.00	0.00	0.01	191		
200	8.43	8.41	34.043	26.464	159.5	0.510	2.59	39.3							201		
219	8.21	8.19	34.077	26.521	154.3	0.539	2.34	35.3	36.8			0.00			220		
250	7.77	7.75	34.104	26.611	146.2	0.586	2.01	30.0							252		
257	7.68	7.65	34.114	26.629	144.5	0.596	1.94	28.9	43.6			0.00			259		
300	7.35	7.32	34.146	26.706	137.8	0.657	1.51	22.3							302		
314	7.27	7.24	34.162	26.726	136.1	0.676	1.38	20.4	51.1			0.00			316		
386	6.72	6.68	34.213	26.842	125.8	0.771	0.89	13.0	61.2			0.00			389		
400	6.67	6.64	34.211	26.852	125.1	0.788	0.85	12.3							403		
457	6.51	6.47	34.235	26.888	122.3	0.859	0.73	10.6	64.5			0.00			460		
500	6.28	6.23	34.250	26.937	118.1	0.910	0.62	9.0							504		
533	6.04	5.99	34.280	26.995	113.8	0.948	0.53	7.6	71.9			0.00			537		

RV ELLEN B. SCRIPPS

CRUISE 8309

STATION 90 65

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
32 14.4 N	120 17.9 W	14/09/83	1040 GMT	3711 M	310	06 KT	310 04 04	2	1012.9 MB	18.8 C	18.3 C	8/8		SC	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	20.72	20.72	33.501	23.430	444.5	0.000	5.31	102.9	0.9	0.32	0.2	0.00	0.10	0.01	0
10	20.72	20.72	33.495	23.426	445.2	0.044	5.31	102.9	3.3	0.36	0.4	0.00	0.10	0.02	10
20 ISL	20.44	20.43	33.497	23.504	438.1	0.089	5.35	103.2							20
28	20.21	20.20	33.502	23.567	432.4	0.123	5.38	103.8	2.2		0.1	0.00	0.11	0.03	28
30 ISL	19.67	19.67	33.485	23.696	420.2	0.132	5.54	105.4							30
38	17.19	17.18	33.440	24.275	365.1	0.163	6.08	110.4	2.2	0.36	0.1	0.00	0.27	0.04	38
50 ISL	13.91	13.91	33.388	24.963	299.7	0.203	5.60	95.4							50
53	13.26	13.25	33.389	25.095	287.2	0.212	5.37	90.2	5.7	0.72	5.1	0.00	0.83	0.36	53
67	11.92	11.91	33.444	25.398	258.6	0.250	4.58	74.8	9.5		13.1	0.00	0.20	0.26	67
75 ISL	11.40	11.39	33.499	25.539	245.3	0.271	4.25	68.7							75
91	10.67	10.66	33.626	25.766	224.0	0.308	3.77	60.0	15.8	1.37	19.6	0.00	0.06	0.08	91
100 ISL	10.37	10.36	33.683	25.865	214.7	0.328	3.56	56.3							100
112	10.05	10.04	33.756	25.975	204.5	0.353	3.33	52.3	21.3	1.72	24.8	0.01	0.01	0.03	112
125 ISL	9.74	9.73	33.822	26.081	194.7	0.379	3.10	48.4							125
130	9.63	9.62	33.847	26.116	191.4	0.389	3.04	47.3	24.2		27.7	0.02	0.01	0.02	131
150	9.21	9.19	33.894	26.221	181.7	0.426	3.00	46.3							151
179	8.82	8.80	33.950	26.328	172.1	0.478	2.87	43.9	29.9	1.93	30.7	0.01	0.00	0.01	180
200 ISL	8.46	8.44	34.009	26.433	162.4	0.513	2.68	40.6							201
213	8.25	8.23	34.050	26.494	156.8	0.534	2.54	38.4	37.0		33.3	0.02	0.00	0.01	214
242	7.97	7.95	34.082	26.561	150.8	0.578	2.25	33.8	40.6		35.1	0.01			243
250 ISL	7.84	7.81	34.078	26.581	148.9	0.590	2.20	32.9							252
291	7.16	7.13	34.085	26.680	139.9	0.649	1.90	28.0	49.8		39.0	0.01			293
300 ISL	7.08	7.05	34.089	26.698	138.3	0.662	1.79	26.3							302
344	6.79	6.76	34.146	26.779	131.1	0.721	1.24	18.1	57.8		42.3	0.01			346
400 ISL	6.51	6.47	34.199	26.864	123.8	0.793	0.85	12.3							403
426	6.39	6.35	34.230	26.899	120.7	0.824	0.73	10.6	67.6	3.04	40.4	0.01			429
500 ISL	5.98	5.94	34.278	26.996	112.2	0.911	0.43	6.2							504
507	5.94	5.90	34.290	27.005	111.4	0.918	0.41	5.9	77.5	3.10		0.01			511
587	5.53	5.48	34.334	27.091	103.9	1.005	0.33	4.7	86.1	3.16		0.02			592

RV DAVID STARR JORDAN				CRUISE 8309				STATION 90 28									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 29.1 N	117 46.1 W	24/09/83	1455 GMT														
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL.A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	20.39	20.39	33.352	23.404	446.9	0.000									0		
10	20.09	20.09	33.340	23.474	440.6	0.044									10		
20	19.05	19.05	33.302	23.713	418.2	0.087									20		
30	17.36	17.35	33.305	24.131	378.6	0.127									30		
40	16.36	16.35	33.306	24.365	356.5	0.164									40		
50	15.91	15.90	33.318	24.477	346.2	0.199									50		
75	14.56	14.55	33.328	24.781	317.9	0.282									75		
100	13.80	13.79	33.401	24.996	297.9	0.359									100		
125	13.30	13.28	33.430	25.121	286.7	0.432									125		
150	12.40	12.38	33.497	25.350	265.3	0.501									151		
175	11.43	11.41	33.642	25.645	237.7	0.564									176		
200	11.03	11.01	33.789	25.832	220.4	0.621									201		
250	9.50	9.47	34.037	26.288	177.6	0.721									252		
300	8.50	8.47	34.134	26.523	155.8	0.804									302		

RV DAVID STARR JORDAN				CRUISE 8309				STATION 90 30									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 25.1 N	117 54.3 W	24/09/83	1620 GMT														
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL.A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	22.41	22.41	33.398	22.888	496.2	0.000									0		
10	22.39	22.39	33.390	22.888	496.6	0.050									10		
20	20.17	20.17	33.351	23.462	442.1	0.097									20		
30	18.18	18.17	33.287	23.919	398.9	0.139									30		
40	17.10	17.09	33.325	24.208	371.5	0.177									40		
50	16.21	16.20	33.303	24.397	353.7	0.213									50		
75	14.31	14.30	33.310	24.819	314.1	0.297									75		
100	13.29	13.28	33.427	25.120	286.1	0.372									100		
125	11.97	11.95	33.506	25.438	256.3	0.440									125		
150	11.40	11.38	33.627	25.638	237.7	0.501									151		
175	10.61	10.59	33.728	25.858	217.2	0.558									176		
200	10.12	10.10	33.924	26.096	195.1	0.610									201		
250	8.84	8.81	34.074	26.423	164.5	0.700									252		
300	8.31	8.28	34.147	26.562	152.0	0.779									302		
350	7.98	7.94	34.187	26.644	145.0	0.853									352		
400	7.31	7.27	34.202	26.752	135.0	0.923									403		
450	6.75	6.71	34.238	26.858	125.3	0.998									453		
500	6.30	6.25	34.277	26.949	117.0	1.049									504		

RV DAVID STARR JORDAN				CRUISE 8309				STATION 90 33									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 17.1 N	118 10.9 W	24/09/83	1830 GMT														
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL.A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	23.00	23.00	33.481	22.733	506.2	0.000									0		
10	22.94	22.94	33.481	22.801	504.9	0.051									10		
20	20.51	20.51	33.410	23.417	446.4	0.098									20		
30	18.80	18.79	33.352	23.815	408.8	0.141									30		
40	16.88	16.87	33.295	24.237	368.8	0.180									40		
50	15.97	15.96	33.272	24.428	350.8	0.216									50		
75	13.92	13.91	33.340	24.924	304.1	0.298									75		
100	12.46	12.45	33.389	25.253	273.3	0.370									100		
125	11.66	11.64	33.532	25.516	248.8	0.435									125		
150	11.04	11.02	33.723	25.778	224.4	0.494									151		
175	10.33	10.31	33.864	25.978	205.8	0.548									176		
200	10.30	10.28	33.953	26.088	195.9	0.598									201		
250	9.17	9.09	34.047	26.357	170.9	0.690									252		
300	8.48	8.45	34.119	26.514	156.6	0.772									302		
350	7.94	7.90	34.177	26.642	145.1	0.847									352		
400	7.38	7.34	34.199	26.740	136.2	0.918									403		
450	6.77	6.73	34.242	26.859	125.3	0.983									453		
500	6.42	6.37	34.279	26.935	118.5	1.044									504		
550	6.14	6.09	34.308	26.994	113.3	1.102									554		
600	5.86	5.81	34.334	27.051	108.3	1.157									605		
700	4.95	4.89	34.399	27.211	93.1	1.258									706		

RV DAVID STARR JORDAN				CRUISE 8309				STATION 90 35									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 15.1 N	118 15.0 W	25/09/83	0205 GMT														
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	22.94	22.94	33.483	22.802	504.4	0.000									0		
10	22.23	22.23	33.455	22.982	487.6	0.050									10		
20	18.79	18.79	33.320	23.792	410.6	0.095									20		
30	16.55	16.55	33.312	24.326	360.0	0.133									30		
40	15.28	15.27	33.303	24.605	333.6	0.168									40		
50	14.54	14.53	33.337	24.791	316.2	0.200									50		
75	13.21	13.20	33.375	25.095	287.8	0.276									75		
100	12.26	12.25	33.514	25.389	260.4	0.344									100		
125	11.67	11.65	33.587	25.557	244.9	0.407									125		
150	10.78	10.76	33.715	25.817	220.5	0.466									151		
175	10.48	10.46	33.872	25.993	204.4	0.519									176		
200	9.87	9.85	33.939	26.149	189.9	0.568									201		
250	8.84	8.81	34.010	26.373	169.3	0.658									252		
300	8.10	8.07	34.026	26.499	157.9	0.740									302		
350	7.58	7.55	34.095	26.629	146.0	0.815									352		
400	7.35	7.31	34.178	26.728	137.4	0.886									403		
450	6.72	6.68	34.219	26.847	126.3	0.952									453		
500	6.36	6.31	34.262	26.929	118.9	1.014									504		

RV DAVID STARR JORDAN				CRUISE 8309				STATION 90 37									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 11.1 N	118 23.2 W	25/09/83	0840 GMT														
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	22.89	22.89	33.484	22.817	502.9	0.000									0		
10	22.78	22.78	33.481	22.847	500.5	0.050									10		
20	20.16	20.16	33.373	23.481	440.3	0.097									20		
30	16.62	16.62	33.354	24.342	358.5	0.137									30		
40	15.90	15.89	33.306	24.469	346.5	0.172									40		
50	14.79	14.78	33.329	24.731	321.8	0.206									50		
75	13.36	13.35	33.389	25.076	289.6	0.282									75		
100	12.55	12.54	33.474	25.302	268.7	0.352									100		
125	11.78	11.76	33.657	25.591	241.7	0.416									125		
150	11.24	11.22	33.825	25.821	220.3	0.474									151		
175	10.74	10.72	33.900	25.969	206.7	0.527									176		
200	10.17	10.15	34.005	26.150	189.9	0.577									201		
250	8.95	8.92	34.050	26.387	168.0	0.666									252		
300	8.42	8.39	34.110	26.517	156.4	0.747									302		
350	7.85	7.81	34.138	26.624	146.7	0.823									352		
400	7.24	7.20	34.180	26.745	133.6	0.893									403		
450	6.88	6.84	34.226	26.831	128.0	0.959									453		
500	6.44	6.39	34.256	26.914	120.4	1.022									504		
550	6.11	6.06	34.288	26.982	114.4	1.080									554		
600	5.85	5.80	34.315	27.037	109.6	1.136									605		
700	5.36	5.30	34.366	27.137	100.7	1.241									706		
800	4.87	4.80	34.408	27.228	92.4	1.338									807		
900	4.30	4.23	34.456	27.329	82.9	1.426									908		
1000	4.12	4.04	34.469	27.359	80.7	1.507									1009		
1100	4.02	3.93	34.480	27.379	79.5	1.587									1111		

RV DAVID STARR JORDAN				CRUISE 8309				STATION 90 45									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 55.1 N	118 56.1 W	26/09/83	0050 GMT														
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	21.13	21.13	33.428	23.250	481.6	0.000									0		
10	21.09	21.09	33.410	23.261	460.9	0.046									10		
20	19.17	19.17	33.314	23.692	420.2	0.090									20		
30	17.80	17.79	33.226	23.965	394.5	0.131									30		
40	16.52	16.51	33.205	24.251	367.4	0.169									40		
50	15.86	15.85	33.192	24.391	354.3	0.205									50		
75	13.54	13.53	33.225	24.913	305.2	0.288									75		
100	12.01	12.00	33.383	25.334	265.5	0.359									100		
125	10.78	10.76	33.594	25.723	228.9	0.421									125		
150	10.22	10.20	33.688	25.894	213.1	0.476									151		
175	9.90	9.88	33.929	26.136	190.6	0.526									176		
200	9.23	9.21	34.053	26.344	171.2	0.572									201		
250	8.34	8.31	34.077	26.502	156.8	0.654									252		
300	8.00	7.97	34.142	26.605	147.8	0.730									302		
350	7.19	7.16	34.136	26.717	137.5	0.801									352		
400	7.00	6.96	34.198	26.792	131.0	0.868									403		
450	6.48	6.44	34.250	26.904	120.7	0.931									453		
500	6.24	6.19	34.277	26.957	116.2	0.990									504		
550	6.04	5.99	34.302	27.002	112.4	1.047									554		
600	5.86	5.81	34.319	27.039	109.4	1.103									605		
700	5.26	5.20	34.373	27.155	98.9	1.207									706		
800	4.71	4.65	34.423	27.258	89.4	1.301									807		
900	4.36	4.29	34.452	27.320	83.9	1.388									908		
1000	4.17	4.09	34.467	27.353	81.4	1.471									1009		
1100	3.96	3.87	34.483	27.388	78.6	1.551									1111		
1200	3.82	3.73	34.495	27.412	76.8	1.628									1212		
1300	3.77	3.67	34.498	27.420	76.8	1.705									1313		
1400	3.73	3.62	34.501	27.427	76.9	1.782									1415		
1500	3.71	3.59	34.504	27.433	77.2	1.859									1516		

RV DAVID STARR JORDAN				CRUISE 8309				STATION 90 53									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 39.1 N	119 28.9 W	26/09/83	1120 GMT														
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	20.59	20.59	33.509	23.470	440.6	0.000											0
10	20.59	20.59	33.509	23.471	440.9	0.044											10
20	20.59	20.59	33.510	23.472	441.2	0.088											20
30	19.88	19.87	33.418	23.589	430.3	0.132											30
40	17.05	17.04	33.425	24.296	363.1	0.171											40
50	15.12	15.11	33.361	24.685	326.3	0.206											50
75	12.38	12.37	33.406	25.281	269.9	0.280											75
100	11.14	11.13	33.546	25.621	238.1	0.344											100
125	10.10	10.09	33.728	25.945	207.7	0.400											125
150	9.30	9.28	33.868	26.187	185.0	0.449											150
175	8.91	8.89	33.937	26.303	174.4	0.494											175
200	8.63	8.61	33.991	26.389	166.6	0.536											200
250	8.17	8.14	34.082	26.531	153.9	0.616											250
300	7.60	7.57	34.131	26.654	142.8	0.691											300
350	7.08	7.05	34.153	26.745	134.7	0.760											350
400	6.76	6.72	34.199	26.825	127.6	0.826											400
450	6.30	6.26	34.198	26.896	122.2	0.888											450
500	6.05	6.01	34.254	26.962	115.4	0.947											500
550	5.88	5.83	34.299	27.020	110.5	1.004											550
600	5.53	5.48	34.331	27.088	104.3	1.058											600
700	5.03	4.97	34.385	27.191	95.1	1.157											700
800	4.51	4.45	34.430	27.285	86.4	1.248											800
900	4.10	4.03	34.458	27.352	80.4	1.331											900
1000	3.93	3.85	34.471	27.380	78.2	1.411											1000
1100	3.86	3.78	34.476	27.392	77.9	1.489											1100
1200	3.80	3.71	34.480	27.402	77.7	1.567											1200

RV DAVID STARR JORDAN				CRUISE 8309				STATION 90 55									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 35.1 N	119 17.1 W	27/09/83	0120 GMT														
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	20.76	20.76	33.516	23.430	444.4	0.000											0
10	20.76	20.76	33.520	23.434	444.4	0.044											10
20	19.95	19.95	33.484	23.621	426.9	0.088											20
30	17.11	17.11	33.374	24.243	367.9	0.128											30
40	15.18	15.17	33.327	24.645	329.7	0.165											40
50	13.60	13.59	33.324	24.976	298.4	0.194											50
75	11.88	11.87	33.429	25.394	259.2	0.264											75
100	10.84	10.83	33.588	25.707	229.9	0.325											100
125	10.15	10.14	33.714	25.925	209.5	0.380											125
150	9.34	9.32	33.846	26.163	187.3	0.429											150
175	8.88	8.86	33.944	26.313	173.4	0.474											175
200	8.49	8.47	34.010	26.426	163.1	0.517											200
250	8.04	8.01	34.064	26.552	151.8	0.595											250
300	7.48	7.45	34.145	26.652	140.1	0.668											300
350	7.13	7.10	34.194	26.771	132.3	0.736											350
400	6.76	6.72	34.212	26.836	126.6	0.801											400
450	6.43	6.39	34.231	26.895	121.5	0.863											450
500	6.14	6.10	34.263	26.958	116.0	0.922											500
550	5.78	5.73	34.282	27.019	110.5	0.979											550
600	5.53	5.48	34.320	27.080	105.1	1.033											600
700	5.13	5.07	34.370	27.167	97.5	1.134											700
800	4.64	4.58	34.416	27.260	89.0	1.228											800
900	4.29	4.22	34.448	27.324	83.4	1.314											900
970	4.13	4.05	34.463	27.353	81.0	1.371											970

RV DAVID STARR JORDAN				CRUISE 8309				STATION 90 60									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 25.1 N	119 57.6 W	27/09/83	0840 GMT														
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	20.59	20.59	33.522	23.480	439.6	0.000											0
10	20.59	20.59	33.526	23.484	439.7	0.044											10
20	20.59	20.59	33.526	23.484	440.0	0.088											20
30	19.12	19.11	33.413	23.781	412.1	0.131											30
40	17.51	17.50	33.306	24.096	382.2	0.170											40
50	16.00	15.99	33.228	24.367	354.7	0.207											50
75	12.70	12.69	33.395	25.211	276.7	0.286											75
100	11.12	11.11	33.525	25.608	239.3	0.351											100
125	10.17	10.16	33.663	25.882	213.6	0.407											125
150	9.55	9.53	33.800	26.093	194.0	0.458											150
175	9.08	9.06	33.920	26.263	178.3	0.505											175
200	8.73	8.71	34.029	26.404	165.3	0.548											200
250	8.00	7.97	34.098	26.569	150.2	0.626											250
300	7.42	7.39	34.147	26.692	139.1	0.699											300
350	6.98	6.95	34.185	26.784	130.9	0.766											350
400	6.70	6.66	34.221	26.851	125.2	0.830											400
450	6.45	6.41	34.244	26.903	120.8	0.892											450
500	5.99	5.95	34.255	26.971	114.6	0.951											500
550	5.70	5.65	34.288	27.033	109.0	1.007											550
600	5.42	5.37	34.318	27.091	103.8	1.060											600
700	5.11	5.05	34.378	27.176	96.6	1.160											700
800	4.52	4.46	34.432	27.266	86.4	1.251											800

RV DAVID STARR JORDAN				CRUISE 8309				STATION 90 65							
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
32 15.1 N	120 18.0 W	27/09/83	1135 GMT												
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SiO3	P04	N03	N02	CHL.A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	20.61	20.61	33.530	23.481	439.5	0.000									0
10	20.62	20.62	33.529	23.478	440.2	0.044									10
20	20.61	20.61	33.528	23.481	440.4	0.088									20
30	19.92	19.91	33.487	23.631	426.3	0.131									30
40	18.16	18.15	33.378	23.994	392.0	0.172									40
50	15.20	15.19	33.389	24.689	325.9	0.208									50
75	11.62	11.61	33.464	25.469	252.0	0.280									75
100	10.86	10.85	33.554	25.677	232.7	0.341									100
125	10.02	10.01	33.744	25.970	205.2	0.396									125
150	9.51	9.49	33.856	26.143	189.2	0.445									151
175	9.02	9.00	33.922	26.274	177.2	0.491									176
200	8.61	8.59	33.986	26.389	166.6	0.534									201
250	7.80	7.77	34.034	26.548	152.1	0.613									252
300	7.42	7.39	34.112	26.665	141.7	0.687									302
350	6.70	6.67	34.103	26.757	133.2	0.756									352
400	6.59	6.55	34.195	26.845	125.6	0.820									403
450	6.26	6.22	34.227	26.914	119.6	0.882									453
500	5.92	5.88	34.246	26.972	114.3	0.940									504
550	5.76	5.71	34.309	27.042	108.2	0.996									554
600	5.47	5.42	34.341	27.104	102.8	1.049									605
700	5.03	4.97	34.380	27.187	95.5	1.148									706
800	4.54	4.48	34.427	27.280	87.0	1.239									807
900	4.19	4.12	34.458	27.343	81.4	1.323									908
1000	3.86	3.78	34.480	27.395	76.7	1.402									1009
1100	3.60	3.52	34.504	27.440	72.7	1.477									1111
1200	3.41	3.32	34.523	27.474	69.9	1.548									1212
1300	3.17	3.08	34.542	27.512	66.3	1.616									1313
1400	2.95	2.85	34.556	27.544	63.3	1.681									1415
1500	2.77	2.66	34.565	27.568	61.1	1.743									1516

RV DAVID STARR JORDAN				CRUISE 8309							STATION 90 70				
LATITUDE		LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE
32 5.1 N		120 38.3 W	27/09/83	1515 GMT											
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	20.59	20.59	33.533	23.489	438.8	0.000									0
10	20.59	20.59	33.532	23.488	439.2	0.044									10
20	20.58	20.58	33.519	23.482	440.3	0.088									20
30	19.23	19.22	33.406	23.747	415.2	0.131									30
40	16.06	16.05	33.422	24.523	341.5	0.168									40
50	14.49	14.48	33.419	24.865	309.1	0.201									50
75	11.07	11.06	33.556	25.641	235.6	0.269									75
100	10.03	10.02	33.665	25.907	210.7	0.325									100
125	9.64	9.63	33.847	26.114	191.5	0.375									125
150	9.07	9.05	33.958	26.294	174.8	0.421									151
175	8.66	8.64	34.039	26.422	163.0	0.463									176
200	8.26	8.24	34.071	26.509	155.2	0.503									201
250	7.64	7.62	34.089	26.615	145.7	0.578									252
300	6.80	6.77	34.075	26.721	135.9	0.649									302
350	6.65	6.62	34.144	26.796	129.5	0.715									352
400	6.01	5.97	34.135	26.872	122.5	0.778									403
450	5.85	5.81	34.203	26.947	116.0	0.838									453
500	5.65	5.61	34.255	27.013	110.2	0.894									504
550	5.37	5.32	34.300	27.082	104.0	0.948									554
600	5.02	4.97	34.310	27.131	99.4	0.999									605
700	4.64	4.58	34.383	27.233	90.5	1.093									706
800	4.36	4.30	34.427	27.299	84.8	1.181									807
900	4.08	4.01	34.454	27.351	80.4	1.264									908
1000	3.74	3.67	34.478	27.405	75.5	1.342									1009
1100	3.51	3.43	34.499	27.445	72.0	1.415									1111
1200	3.28	3.19	34.521	27.485	68.4	1.486									1212
1300	3.12	3.03	34.542	27.517	65.7	1.553									1313
1400	2.92	2.82	34.556	27.547	62.9	1.617									1415
1500	2.75	2.64	34.568	27.572	60.7	1.679									1516

RV ELLEN B. SCRIPPS				CRUISE 8310							STATION 90 28				
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 28.7 N	117 48.0 W	10/10/83	2323 GMT	185 M	300	10 KT	300 02 06	0	1015.5 MB	20.9 C	19.5 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY PCT	SI03	P04	N03	N02	CHL A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L		UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0 ISL	21.57	21.57	33.445	23.157	470.6	0.000	5.54	109.0							0
1	21.57	21.57	33.445	23.157	470.6	0.005	5.54	109.0	1.6	0.19	0.0	0.01	0.14	0.00	1
10	21.15	21.15	33.438	23.267	460.4	0.047	5.57	108.8	1.5	0.19	0.0	0.00	0.12	0.01	10
20 ISL	19.17	19.17	33.337	23.709	418.5	0.090	5.94	111.9							20
30	17.01	17.01	33.274	24.189	373.0	0.130	6.31	114.1	1.5	0.25	0.0	0.01	0.19	0.03	30
41	15.98	15.97	33.271	24.425	350.9	0.170	6.30	111.7	1.9	0.27	0.1	0.02	0.21	0.07	41
50 ISL	15.33	15.32	33.296	24.590	335.3	0.201	6.27	109.7							50
54	15.10	15.09	33.312	24.651	329.6	0.214	6.24	108.7	1.8	0.31	0.0	0.00	0.42	0.19	54
70	14.57	14.56	33.334	24.783	317.5	0.266	5.99	103.3	1.8	0.36	0.1	0.00	0.38	0.27	70
75 ISL	14.28	14.27	33.345	24.856	310.7	0.281	5.84	100.0							75
84	13.78	13.77	33.376	24.981	299.0	0.309	5.57	94.5	3.4	0.51	2.2	0.01	0.17	0.21	84
100 ISL	13.54	13.53	33.411	25.059	292.0	0.356	5.42	91.5							100
103	13.52	13.51	33.420	25.068	291.2	0.365	5.40	91.2	5.6	0.60	4.1	0.01	0.11	0.14	103
125 ISL	12.68	12.66	33.454	25.266	272.7	0.427	4.98	82.7							125
128	12.53	12.51	33.466	25.300	269.5	0.435	4.91	81.2	6.6	0.81	8.4	0.01	0.06	0.10	129
150 ISL	11.43	11.42	33.565	25.587	242.6	0.491	4.32	69.9							151
151	11.38	11.36	33.576	25.602	241.2	0.494	4.29	69.3	13.0	1.13	14.5	0.01	0.02	0.03	152

RV ELLEN B. SCRIPPS				CRUISE 8310						STATION 90 30					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 24.6 N	117 53.5 W	11/10/83	0158 GMT	633 M	050	11 KT	260 03 06	4	1014.9 MB	20.8 C	19.4 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	21.44	21.44	33.476	23.216	464.9	0.000			2.5	0.19	0.0	0.01	0.12	0.01	0
10	21.40	21.40	33.460	23.215	465.3	0.047	5.35	104.9	2.4	0.19	0.0	0.00	0.11	0.01	10
20 ISL	19.99	19.99	33.395	23.542	434.5	0.091	5.87	112.2							20
30	17.91	17.90	33.341	24.026	388.6	0.132	6.11	112.4	2.3	0.20	0.0	0.00	0.18	0.04	30
39	16.05	16.04	33.319	24.446	348.8	0.165	6.09	108.1	2.3	0.20	0.0	0.00	0.33	0.06	39
49	15.31	15.30	33.288	24.587	335.6	0.199	5.97	104.5	2.2	0.27	0.0	0.00	0.32	0.16	49
50 ISL	15.24	15.23	33.287	24.603	334.1	0.203	5.96	104.1							50
63	14.43	14.42	33.328	24.808	314.9	0.245	5.73	98.5	2.2	0.36	0.3	0.01	0.36	0.26	63
75 ISL	13.79	13.78	33.369	24.975	299.3	0.282	5.38	91.3							75
78	13.65	13.64	33.383	25.012	295.8	0.291	5.29	89.5	3.7	0.46	2.6	0.01	0.17	0.21	78
97	12.87	12.86	33.434	25.208	277.5	0.345	4.91	81.8	6.2	0.70	6.3	0.01	0.08	0.13	97
100 ISL	12.73	12.72	33.439	25.242	274.4	0.353	4.84	80.5							100
121	11.91	11.89	33.530	25.468	253.3	0.409	4.31	70.4	10.1	0.89	11.9	0.02	0.03	0.06	121
125 ISL	11.82	11.81	33.550	25.502	250.1	0.419	4.18	68.2							125
139	11.58	11.56	33.641	25.616	239.6	0.453	3.75	60.9	14.4	1.18	15.5	0.02	0.01	0.03	140
150 ISL	11.35	11.33	33.707	25.713	230.6	0.479	3.48	56.1							151
168	10.94	10.92	33.817	25.869	216.1	0.519	3.13	50.1	19.3	1.51	20.0	0.03	0.01	0.02	169
197	10.21	10.19	33.932	26.087	195.9	0.579	2.82	44.5	23.8	1.59	23.2	0.02	0.00	0.02	198
200 ISL	10.13	10.11	33.938	26.109	193.8	0.585	2.79	43.9							201
226	9.52	9.49	34.034	26.282	177.7	0.633	2.52	39.2	29.3	1.83	25.4	0.02			227
250 ISL	9.15	9.12	34.103	26.401	166.8	0.675	2.20	34.0							252
266	8.94	8.91	34.148	26.465	160.9	0.701	1.99	30.5	36.4	2.10	29.1	0.03			269
300 ISL	8.40	8.37	34.178	26.578	150.6	0.754	1.61	24.5							302
323	8.05	8.02	34.194	26.638	145.0	0.788	1.40	21.1	46.1	2.36	32.5	0.03			325
397	7.13	7.09	34.221	26.792	131.0	0.890	0.94	13.8	59.2	2.62	36.2	0.03			400
400 ISL	7.10	7.06	34.216	26.798	130.5	0.894	0.92	13.6							403
471	6.53	6.49	34.266	26.910	120.5	0.983	0.57	8.3	70.2	2.98	38.4	0.02			475
500 ISL	6.36	6.31	34.273	26.944	117.6	1.018	0.48	6.9							504
549	5.15	6.10	34.300	26.987	114.0	1.075	0.38	5.5	77.1	3.07	39.6	0.01			553

RV ELLEN B. SCRIPPS				CRUISE 8310				STATION 90 32									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 20.6 N	118 3.2 W	11/10/83	0425 GMT	731 M	360	06 KT	290 02 06	0	1015.0 MB	21.1 C	18.5 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	21.30	21.30	33.438	23.225	464.0	0.000	5.29	103.6	3.6	0.20	0.0	0.01	0.09	0.01	0		
10 ISL	21.28	21.28	33.434	23.228	464.1	0.047	5.31	103.9							10		
11	21.28	21.28	33.434	23.228	464.1	0.051	5.31	103.9	2.2	0.19	0.0	0.00	0.09	0.01	11		
20 ISL	19.65	19.64	33.372	23.616	427.5	0.090	5.72	108.7							20		
30	17.52	17.51	33.337	24.117	379.9	0.131	6.16	112.5	2.1	0.24	0.0	0.00	0.17	0.03	30		
39	16.56	16.55	33.328	24.336	359.3	0.164	6.15	110.3	2.0	0.20	0.0	0.00	0.19	0.05	39		
48	15.80	15.79	33.314	24.498	344.0	0.196	6.11	108.0	1.9	0.26	0.0	0.00	0.29	0.06	48		
50 ISL	15.70	15.69	33.310	24.521	342.0	0.203	6.10	107.5							50		
64	15.09	15.08	33.315	24.656	329.4	0.250	5.92	103.1	1.7	0.31	0.0	0.00	0.32	0.17	64		
75 ISL	14.47	14.46	33.338	24.810	315.0	0.295	5.65	97.2							75		
78	14.26	14.25	33.345	24.857	310.6	0.295	5.55	95.1	3.7	0.40	0.8	0.01			78		
96	12.39	12.38					4.62	76.2	9.1	0.85	9.3	0.01	0.07	0.09	96		
100 ISL	12.16	12.15	33.347	25.281	270.7	0.358	4.46	73.1							100		
120	11.42	11.40	33.663	25.662	234.8	0.409	3.75	60.7	15.4	1.21	16.2	0.03	0.02	0.03	120		
125 ISL	11.23	11.22	33.713	25.737	227.7	0.421	3.56	57.3							125		
138	10.80	10.78	33.831	25.904	212.0	0.450	3.12	49.8	20.6	1.49	20.4	0.03	0.01	0.02	139		
150 ISL	10.53	10.51	33.883	25.996	203.5	0.475	2.94	46.7							151		
167	10.23	10.21	33.929	26.080	195.8	0.509	2.84	44.8	25.2	1.70	23.4	0.03	0.00	0.02	168		
196	9.77	9.75	33.987	26.204	184.6	0.564	2.69	42.0	27.3	1.72	24.3	0.03	0.00	0.02	197		
200 ISL	9.68	9.66	33.994	26.227	182.4	0.571	2.66	41.4							201		
225	9.16	9.14	34.071	26.369	169.3	0.615	2.42	37.3	32.1	1.90	27.1	0.03			226		
250 ISL	8.85	8.82	34.114	26.457	161.3	0.657	2.18	33.4							252		
263	8.72	8.69	34.138	26.492	158.2	0.677	2.05	31.3	37.7	2.08	28.9	0.03			265		
300 ISL	8.33	8.30	34.176	26.586	149.7	0.734	1.67	25.3							302		
320	8.12	8.09	34.198	26.631	145.7	0.764	1.48	22.3	46.2	2.32	32.1	0.03			322		
393	7.21	7.17	34.223	26.783	131.9	0.865	0.98	14.5	58.5	2.56	35.8	0.03			396		
400 ISL	7.13	7.09	34.221	26.798	130.6	0.875	0.93	13.7							403		
465	6.51	6.47	34.275	26.919	119.5	0.956	0.54	7.8	71.7	2.81	38.2	0.03			469		
500 ISL	6.28	6.23	34.290	26.967	115.3	0.997	0.41	5.9							504		
552	6.07	6.02	34.325	27.017	111.1	1.056	0.31	4.5	80.9	2.84	39.6	0.03			556		

RV ELLEN B. SCRIPPS				CRUISE 8310				STATION 90 35									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 15.4 N	118 12.0 W	11/10/83	0707 GMT	281 M	350	06 KT	290 01 06	0	1015.0 MB	20.4 C	19.6 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	20.90	20.90	33.283	23.216	464.9	0.000	5.38	104.5	1.5	0.17	0.0	0.01	0.16	0.02	0		
10	20.77	20.77	33.282	23.250	462.0	0.046	5.46	105.8	1.4	0.17	0.0	0.00	0.16	0.04	10		
20 ISL	20.00	20.00	33.297	23.465	441.8	0.091	5.61	107.3							20		
30	18.83	18.82	33.312	23.777	412.4	0.134	5.80	108.5	0.9	0.21	0.0	0.00	0.39	0.07	30		
44	16.87	16.86	33.295	24.239	368.7	0.188	6.04	109.0	1.3	0.20	0.0	0.00	0.36	0.08	44		
50 ISL	16.03	16.02	33.300	24.438	349.9	0.210	6.01	106.7							50		
55	15.41	15.40	33.312	24.584	336.1	0.227	5.99	105.0	1.6	0.28	0.0	0.00	0.36	0.14	55		
69	14.51	14.50	33.328	24.791	316.7	0.273	5.79	99.7	2.0	0.32	0.0	0.00	0.30	0.23	69		
75 ISL	14.14	14.13	33.335	24.876	308.8	0.292	5.61	95.9							75		
83	13.69	13.68	33.354	24.982	298.8	0.316	5.35	90.6	4.0	0.650	1.9	0.01	0.19	0.22	83		
100 ISL	12.95	12.93	33.399	25.169	281.4	0.365	4.99	83.2							100		
103	12.82	12.81	33.414	25.203	278.2	0.374	4.92	81.9	5.9	0.71	6.6	0.00	0.08	0.12	103		
125 ISL	11.60	11.58	33.566	25.557	244.9	0.431	4.13	67.0							125		
127	11.50	11.48	33.587	25.588	241.9	0.436	4.05	65.6	12.5	1.09	14.0	0.01	0.02	0.04	128		
145	11.17	11.15	33.733	25.762	225.8	0.478	3.45	55.5	16.7	1.39	17.9	0.01	0.01	0.03	146		
150 ISL	11.07	11.05	33.754	25.800	222.2	0.489	3.36	53.9							151		
178	10.45	10.43	33.871	25.997	204.0	0.549	3.02	47.9	22.2	1.60	21.5	0.01	0.00	0.02	179		
200 ISL	9.90	9.88	33.977	26.177	187.3	0.592	2.69	42.1							201		
208	9.71	9.69	34.015	26.236	181.4	0.607	2.59	40.4	27.5	1.79	24.9	0.01	0.00	0.02	209		
246	8.97	8.94	34.022	26.362	170.3	0.674	2.63	40.4	31.3	1.88	26.4	0.01			248		

RV ELLEN B. SCRIPPS

CRUISE 8310

STATION 90 37

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 11.6 N	118 20.7 W	11/10/83	0907 GMT	1196 M	340	03 KT		0	1015.0 MB	20.5 C	19.6 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	21.25	21.25	33.372	23.189	467.5	0.000	5.28	103.2	0.5	0.19	0.0	0.01	0.15	0.01	0
10	21.06	21.06	33.457	23.305	456.7	0.046	5.28	102.9	0.7	0.24	0.0	0.01	0.12	0.01	10
20 ISL	20.24	20.24	33.429	23.503	438.2	0.091	5.51	105.8							20
30	18.88	18.87	33.348	23.792	411.0	0.133	5.80	108.7	0.7	0.27	0.0	0.01	0.15	0.02	30
40	17.06	17.05	33.275	24.179	374.3	0.172	5.99	108.4	0.7	0.22	0.0	0.00	0.23	0.05	40
50	15.96	15.95	33.280	24.437	350.0	0.208	6.02	106.7	0.7	0.26	0.0	0.00	0.34	0.10	50
63	15.50	15.49	33.292	24.549	339.7	0.253	5.98	105.0	0.7	0.31	0.0	0.00	0.39	0.16	63
75 ISL	14.73	14.71	33.308	24.732	322.5	0.293	5.83	100.8							75
78	14.51	14.50	33.318	24.783	317.7	0.303	5.77	99.4	1.1	0.35	0.1	0.00	0.36	0.30	78
98	13.26	13.25	33.387	25.095	288.5	0.363	5.14	86.3	4.6	0.62	4.3	0.00	0.13	0.19	98
100 ISL	13.12	13.11	33.385	25.124	285.8	0.369	5.12	85.8							100
122	11.78	11.76	33.451	25.431	256.8	0.429	4.84	78.8	6.9	0.81	9.1	0.00	0.05	0.08	122
125 ISL	11.65	11.64	33.476	25.476	252.5	0.436	4.71	76.4							125
140	11.16	11.14	33.633	25.686	232.9	0.473	3.99	64.2	15.4	1.32	16.4	0.01			141
150 ISL	10.96	10.94	33.694	25.773	224.8	0.496	3.68	59.0							151
169	10.64	10.62	33.793	25.903	212.8	0.537	3.27	52.0	19.6	1.52	19.8	0.00	0.01	0.02	170
198	9.92	9.90	33.946	26.146	190.1	0.596	2.79	43.7	25.6	1.69	23.5	0.01			199
200 ISL	9.88	9.85	33.949	26.160	188.9	0.600	2.77	43.3							201
228	9.30	9.27	34.041	26.323	173.7	0.650	2.52	39.0	30.6	1.88	25.0	0.01			229
257 ISL	8.80	8.78	34.074	26.432	163.6	0.687	2.38	36.3							252
267	8.46	8.43	34.100	26.502	157.1	0.715	2.26	34.3	37.5	2.06	28.4	0.01			269
300 ISL	8.10	8.07	34.141	26.593	148.9	0.766	1.91	28.7							302
323	7.93	7.90	34.173	26.640	144.8	0.799	1.64	24.6	46.1	2.31	30.3	0.01			325
396	7.15	7.11	34.211	26.782	132.1	0.900	1.01	14.9	58.0	2.54	34.6	0.01			399
400 ISL	7.12	7.08	34.206	26.788	131.5	0.906	0.99	14.5							403
469	6.57	6.53	34.246	26.889	122.5	0.993	0.67	9.7	67.5	2.83	37.3	0.01			473
500 ISL	6.32	6.27	34.263	26.942	117.7	1.030	0.53	7.7							504
547	5.92	5.87	34.320	27.031	109.4	1.084	0.34	4.9	80.9	2.90	39.2	0.00			551

RV ELLEN B. SCRIPPS

CRUISE 8310

STATION 90 42

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 0.5 N	118 43.6 W	11/10/83	132R GMT	964 M	320	07 KT	290 03 06	0	1015.0 MB	20.2 C	19.7 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	20.60	20.60	33.413	23.395	447.8	0.000	5.31	102.7	0.5	0.23	0.0	0.02	0.13	0.00	0
10	20.58	20.58	33.427	23.411	446.6	0.045	5.32	102.8	0.4	0.23	0.0	0.02	0.11	0.01	10
20 ISL	20.08	20.08	33.380	23.509	437.7	0.089	5.38	103.0							20
30 ISL	19.58	19.57	33.336	23.606	428.7	0.132	5.54	105.1							30
31	19.53	19.52	33.334	23.616	427.8	0.137	5.56	105.4	0.0	0.24	0.0	0.02	0.14	0.02	31
40	17.91	17.90	33.261	23.965	394.7	0.174	5.84	107.4	0.0	0.23	0.0	0.02	0.14	0.02	40
49	17.11	17.10	33.245	24.145	377.9	0.208	5.93	107.4	0.0	0.34	0.0	0.01	0.16	0.03	49
50 ISL	16.96	16.95	33.242	24.179	374.7	0.212	5.93	107.1							50
64	14.97	14.96	33.272	24.649	330.1	0.261	5.92	102.9	0.4	0.31	0.0	0.01	0.30	0.21	64
75 ISL	14.33	14.32	33.304	24.814	314.6	0.297	5.72	98.1							75
78	14.21	14.20	33.318	24.847	311.6	0.306	5.64	96.5	0.6	0.37	0.5	0.02	0.31	0.32	78
97	13.02	13.01	33.421	25.169	281.3	0.363	4.93	82.4	4.4	0.74	5.9	0.01	0.12	0.18	97
100 ISL	12.90	12.89	33.422	25.195	278.9	0.371	4.89	81.6							100
121	12.13	12.11	33.483	25.390	260.7	0.428	4.57	75.0	7.6	0.90	9.9	0.02	0.07	0.09	121
125 ISL	11.90	11.89	33.518	25.463	253.8	0.438	4.38	71.4							125
139	11.13	11.11	33.670	25.720	229.6	0.472	3.68	59.1	14.1	1.32	16.6	0.02	0.02	0.03	140
150 ISL	10.79	10.77	33.727	25.829	219.4	0.497	3.44	55.0							151
169	10.38	10.36	33.811	25.962	207.1	0.537	3.22	51.0	20.6	1.52	21.1	0.02	0.01	0.02	170
198	9.68	9.66	34.002	26.230	182.1	0.594	2.65	41.3	26.7	1.84	24.2	0.03	0.00	0.02	199
200 ISL	9.65	9.63	34.003	26.240	181.2	0.597	2.64	41.1							201
227	9.25	9.22	34.051	26.339	172.2	0.645	2.50	38.6	30.3	1.89	26.5	0.03			228
250 ISL	8.81	8.78	34.095	26.449	162.0	0.683	2.22	34.0							252
265	8.51	8.48	34.129	26.517	155.7	0.707	2.03	30.9	37.6	2.29	29.2	0.02			267
300 ISL	7.95	7.92	34.133	26.610	147.2	0.761	1.78	26.8							302
321	7.67	7.64	34.137	26.649	143.7	0.791	1.66	24.8	46.5	2.30	31.1	0.02			323
394	7.12	7.08	34.211	26.786	131.6	0.892	0.99	14.6	57.1	2.59	35.3	0.01			397
400 ISL	7.06	7.02	34.209	26.799	130.5	0.900	0.95	13.9							403
465	6.40	6.36	34.259	26.921	119.2	0.981	0.56	8.1	69.3	2.82	38.4	0.02			469
500 ISL	6.13	6.08	34.276	26.976	114.2	1.022	0.43	6.2							504
552	5.82	5.77	34.320	27.044	108.2	1.080	0.34	4.9	81.0	2.92	40.8	0.02			556

RV ELLEN B. SCRIPPS				CRUISE 8310							STATION 90 45				
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER		BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE
32 54.8 N	118 56.1 W	11/10/83	1610	GMT	1754 M	310	06 KT	290 05 05	0	1016.0 MB	21.3 C	19.7 C			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SIO3	PO4	NO3	NO2	CHL A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	20.43	20.43	33.396	23.427	444.7	0.000	5.34	102.9	0.5	0.26	0.0	0.00	0.10	0.01	0
10	20.41	20.41	33.395	23.432	444.6	0.044	5.33	102.7	0.5	0.25	0.0	0.00	0.10	0.01	10
20 ISL	19.01	19.00	33.317	23.737	415.9	0.087	5.59	105.0							20
30	17.13	17.13	33.264	24.154	376.4	0.127	5.87	106.4	0.5	0.26	0.0	0.00	0.14	0.04	30
40	15.69	15.68	33.278	24.495	344.1	0.163	5.91	104.2	0.5	0.41	0.0	0.00	0.23	0.12	40
50	14.70	14.69	33.288	24.719	323.0	0.196	5.85	101.1	0.5	0.33	0.0	0.00	0.30	0.22	50
64	13.78	13.77	33.322	24.938	302.4	0.240	5.53	93.8	1.7	0.48	1.8	0.00	0.24	0.26	64
75 ISL	13.43	13.42	33.342	25.026	294.3	0.273	5.40	91.0							75
79	13.33	13.32	33.354	25.055	291.7	0.284	5.35	90.0	3.2	0.86	3.2	0.00	0.18	0.20	79
98	12.47	12.46	33.454	25.302	268.6	0.338	4.81	79.5	6.6	0.76	7.9	0.00	0.10	0.10	98
100 ISL	12.38	12.37	33.462	25.328	266.2	0.343	4.74	78.1							100
122	11.48	11.46	33.603	25.604	240.3	0.399	3.97	64.3	12.2	1.14	14.5	0.00	0.03	0.05	122
125 ISL	11.37	11.35	33.619	25.640	236.9	0.406	3.89	62.8							125
140	10.83	10.81	33.721	25.813	220.7	0.440	3.51	56.1	16.8	1.39	18.6	0.00	0.01	0.03	141
150 ISL	10.46	10.44	33.788	25.934	209.4	0.462	3.27	51.9							151
168	9.90	9.88	33.908	26.120	192.0	0.498	2.91	45.6	24.5	1.69	23.5	0.00	0.01	0.02	169
198	9.56	9.54	34.018	26.262	179.0	0.553	2.53	39.4	28.7	1.88	25.3	0.00	0.00	0.02	199
200 ISL	9.52	9.50	34.018	26.272	178.1	0.557	2.52	39.1							201
226	9.00	8.98	34.068	26.392	167.0	0.602	2.40	36.9	32.7	1.95	26.5	0.00			227
250 ISL	8.51	8.48	34.076	26.480	158.9	0.641	2.37	36.0							252
265	8.25	8.22	34.087	26.524	154.9	0.665	2.33	35.2	38.5	2.04	28.7	0.00			267
300 ISL	8.02	7.98	34.119	26.589	149.3	0.718	1.99	30.0							302
322	7.93	7.90	34.149	26.621	146.6	0.751	1.73	26.0	45.1	2.45	31.5	0.01			324
392	7.16	7.12	34.199	26.771	133.0	0.849	1.07	15.8	57.2	2.54	34.3	0.00			395
400 ISL	7.08	7.04	34.197	26.785	131.7	0.859	1.01	14.9							403
463	6.52	6.48	34.238	26.889	122.4	0.939	0.66	9.6	67.2	2.98	37.5	0.00			467
500 ISL	6.26	6.21	34.259	26.946	117.3	0.984	0.50	7.2							504
539	6.04	5.99	34.303	27.003	112.2	1.028	0.37	5.3	77.4	3.04	37.3	0.00			543

RV ELLEN B. SCRIPPS					CRUISE 8310					STATION 90 53					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER		BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE
32 38.6 N	119 28.8 W	11/10/83	2150	GMT	1200 M	060	06 KT	280 06 07	0	1015.5 MB	20.3 C	19.3 C			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SIO3	PO4	NO3	NO2	CHL A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	20.11	20.11	33.447	23.550	432.9	0.000	5.43	104.1	0.7		0.0	0.00	0.12	0.01	0
10	19.79	19.79	33.443	23.631	425.6	0.043	5.46	104.1	0.7		0.0	0.00	0.12	0.01	10
20 ISL	19.75	19.75	33.440	23.641	425.1	0.086	5.45	103.9							20
30	19.71	19.70	33.440	23.650	424.5	0.128	5.45	103.7	0.7	0.23	0.0	0.00	0.14	0.01	30
40	18.52	18.51	33.353	23.886	402.3	0.169	5.75	107.0	0.5	0.37	0.0	0.00	0.19	0.03	40
49	17.50	17.49	33.357	24.138	378.6	0.204	5.92	108.1	0.7	0.31	0.0	0.00	0.26	0.05	49
50 ISL	17.31	17.30	33.347	24.178	374.7	0.208	5.92	107.7							50
63	14.86	14.85	33.268	24.670	328.1	0.254	5.93	102.8	0.8	0.32	0.0	0.00	0.32	0.16	63
75 ISL	13.89	13.88	33.266	24.876	308.7	0.292	5.73	97.5							75
77	13.79	13.78	33.274	24.900	306.5	0.298	5.69	96.5	0.8	0.37	0.3	0.00	0.33	0.18	77
96	12.78	12.77	33.440	25.231	275.3	0.354	5.26	87.5	3.5	0.57	4.5	0.00	0.14	0.13	96
100 ISL	12.50	12.49	33.449	25.294	269.4	0.365	5.16	85.4							100
119	11.22	11.21	33.504	25.574	243.0	0.413	4.63	74.5	8.9	0.91	11.3	0.00	0.05	0.07	119
125 ISL	10.91	10.90	33.538	25.658	235.1	0.428	4.40	70.3							125
137	10.38	10.36	33.628	25.819	219.9	0.455	3.94	62.3	15.6	1.33	18.0	0.00	0.02	0.03	137
150 ISL	9.88	9.86	33.727	25.984	204.4	0.482	3.54	55.4							151
166	9.37	9.35	33.847	26.159	188.0	0.514	3.16	48.9	24.7	1.69	24.2	0.00	0.00	0.02	167
194	8.76	8.74	33.971	26.354	169.9	0.564	2.76	42.2	30.6	1.87	26.1	0.00	0.00	0.02	195
200 ISL	8.64	8.62	33.982	26.384	167.1	0.574	2.73	41.6							201
223	8.22	8.20	34.024	26.478	158.4	0.612	2.63	39.7	36.5	1.93	27.9	0.00			224
250 ISL	7.83	7.80	34.053	26.563	150.7	0.654	2.31	34.6							252
261	7.70	7.67	34.069	26.591	148.2	0.670	2.16	32.2	42.1	2.11	31.1	0.00			263
300 ISL	7.41	7.38	34.102	26.662	141.0	0.727	1.71	25.3							302
317	7.31	7.28	34.110	26.686	139.9	0.751	1.54	22.8	49.6	2.33	34.2	0.00			319
388	6.61	6.57	34.120	26.783	131.3	0.847	1.25	18.2	59.5	2.53	36.4	0.00			391
400 ISL	6.56	6.52	34.131	26.803	129.6	0.863	1.15	16.7							403
460	6.39	6.35	34.232	26.901	121.0	0.938	0.64	9.3	69.0	2.76	39.0	0.00			463
500 ISL	6.21	6.17	34.264	26.956	116.3	0.985	0.45	6.5							504
537	6.01	5.96	34.293	26.999	112.5	1.028	0.37	5.3	77.4	3.14	40.4	0.00			541

RV ELLEN B. SCRIPPS				CRUISE 8310										STATION 90 55			
LATITUDE		LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE		
32 35.4 N		119 37.5 W	12/10/83	0034 GMT	1075 M	320	15 KT	280 06 07	0	1015.5 MB	20.4 C	19.9 C					
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	20.11	20.11	33.441	23.545	433.4	0.000	5.40	103.5	1.0	0.22	0.0	0.00	0.11	0.01	0		
10	19.91	19.91	33.438	23.596	429.0	0.043	5.41	103.3	0.8	0.23	0.0	0.00	0.11	0.01	10		
20 ISL	19.38	19.38	33.349	23.665	422.7	0.086	5.53	104.5							20		
29	18.91	18.90	33.420	23.839	406.4	0.122	5.72	107.3	0.1	0.25	0.0	0.00	0.18	0.02	29		
30 ISL	18.73	18.72	33.410	23.880	402.6	0.126	5.75	107.6							30		
39	16.93	16.92	33.349	24.266	366.0	0.161	6.02	108.7	0.7	0.25	0.0	0.00	0.22	0.05	39		
50 ISL	15.22	15.21	33.293	24.613	333.2	0.200	5.94	103.8							50		
53	14.83	14.82	33.285	24.689	326.0	0.210	5.92	102.6	0.9	0.34	0.0	0.00	0.27	0.10	53		
68	13.42	13.41	33.288	24.985	298.0	0.256	5.47	92.1	2.8	0.50	2.4	0.00	0.35	0.13	68		
75 ISL	12.87	12.86	33.327	25.127	284.7	0.277	5.31	88.4							75		
92	11.77	11.76	33.455	25.435	255.7	0.323	4.93	80.2					0.07	0.10	92		
100 ISL	11.33	11.31	33.471	25.531	246.6	0.343	4.71	75.9							100		
112	10.80	10.79					4.39	70.0	12.8	1.08	14.2	0.00	0.04	0.06	112		
125 ISL	10.51	10.49	33.594	25.772	224.1	0.402	4.14	65.6							125		
130	10.42	10.40	33.625	25.810	220.7	0.413	4.05	64.1	15.5	1.21	16.9	0.01	0.02	0.03	131		
150	9.82	9.80	33.742	26.003	202.6	0.456	3.58	55.9	23.2	1.45	21.3	0.00	0.01	0.02	151		
179	8.99	8.97	33.926	26.282	176.5	0.511	2.97	45.6	29.4	1.78	24.9	0.00	0.00	0.02	180		
200 ISL	8.75	8.73	33.979	26.366	168.9	0.547	2.77	42.3							201		
213	8.66	8.64	34.001	26.393	166.5	0.569	2.70	41.2	32.2	1.83	26.6	0.00	0.00	0.02	214		
243	8.34	8.31	34.038	26.471	159.5	0.618	2.54	38.4	35.9	2.05	27.7	0.00			244		
250 ISL	8.24	8.21	34.048	26.499	157.0	0.629	2.42	36.5							252		
290	7.61	7.58	34.133	26.654	142.6	0.689	1.67	24.9	48.2	2.38	32.0	0.00			292		
300 ISL	7.46	7.43	34.132	26.679	140.4	0.703	1.58	23.5							302		
343	6.93	6.90	34.140	26.755	133.5	0.762	1.34	19.6	56.1	2.48	34.5	0.00			345		
400 ISL	6.62	6.58	34.182	26.836	126.5	0.836	0.95	13.8							403		
425	6.53	6.49	34.212	26.867	123.9	0.867	0.79	11.5	66.2	2.81	38.1	0.00			428		
500 ISL	5.98	5.94	34.247	26.971	114.6	0.957	0.48	6.8							504		
509	5.92	5.88	34.259	26.983	113.5	0.967	0.45	6.4	77.4	2.92	39.4	0.01			513		
591	5.58	5.53	34.332	27.083	104.7	1.057	0.29	4.1	86.6	2.99	41.2	0.01			596		

RV ELLEN B. SCRIPPS				CRUISE 8310								STATION 90 60			
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
32 25.2 N	117 57.1 W	12/10/83	0503 GMT	960 M	330	18 KT	290 04 07	0	1016.4 MB	19.9 C	19.5 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	19.91	19.91	33.472	23.621	426.1	0.000	5.42	103.5	0.7	0.24	0.0	0.00	0.11	0.02	0
10	19.90	19.90	33.472	23.624	426.2	0.043	5.42	103.5	0.7	0.26	0.0	0.00	0.11	0.02	10
20 ISL	19.84	19.83	33.469	23.640	425.1	0.085	5.44	103.7							20
29	19.78	19.77	33.469	23.654	424.1	0.123	5.45	103.9	0.6	0.26	0.0	0.00	0.13	0.01	29
30 ISL	19.76	19.75	33.466	23.659	423.7	0.128	5.46	104.1							30
39	19.06	19.05	33.431	23.810	409.6	0.165	5.62	105.7	0.4	0.24	0.0	0.00	0.15	0.03	39
50 ISL	16.00	15.99	33.321	24.462	347.6	0.206	5.97	105.8							50
53	15.05	15.04	33.315	24.665	328.3	0.217	5.99	104.3	0.5	0.34	0.0	0.00	0.48	0.16	53
68	12.36	12.35	33.390	25.272	270.6	0.262	4.73	77.9	6.9	0.86	9.0	0.00	0.16	0.19	68
75 ISL	11.65	11.64	33.453	25.457	253.1	0.280	4.34	70.5							75
92	10.62	10.61	33.611	25.763	224.3	0.321	3.77	59.9	15.0	1.25	17.7	0.00	0.03	0.06	92
100 ISL	10.23	10.22	33.675	25.882	213.1	0.339	3.63	57.3							100
110	9.88	9.87	33.743	25.993	202.7	0.359	3.54	55.4	19.9	1.54	20.9	0.00	0.01	0.02	110
125 ISL	9.67	9.65	33.776	26.057	196.9	0.390	3.49	54.4							125
130	9.62	9.61	33.788	26.072	195.6	0.399	3.46	53.8	21.3	1.51	21.3	0.00	0.00	0.02	131
149	9.21	9.19	33.898	26.225	181.4	0.435	2.93	45.2					0.00	0.02	150
150 ISL	9.19	9.18	33.899	26.230	180.9	0.437	2.92	45.1							151
177	8.82	8.80	33.980	26.351	169.9	0.484	2.78	42.5	30.0	1.85	26.5	0.00	0.00	0.02	178
200 ISL	8.51	8.49	34.024	26.437	162.0	0.522	2.58	39.1							201
212	8.36	8.34	34.049	26.477	158.5	0.542	2.45	37.1	35.8	1.98	28.4	0.00	0.00	0.02	213
240	8.09	8.07	34.094	26.553	151.6	0.585	2.13	32.1	40.0	2.22	30.0	0.00			241
250 ISL	7.97	7.95	34.103	26.581	149.1	0.600	2.00	30.0							252
287	7.57	7.54	34.150	26.673	140.7	0.654	1.56	23.2	48.3	2.43	32.4	0.00			289
300 ISL	7.47	7.44	34.154	26.695	138.8	0.672	1.46	21.6							302
340	7.22	7.19	34.182	26.749	134.3	0.727	1.21	17.9	54.4	2.53	34.4	0.00			342
400 ISL	6.88	6.85	34.205	26.818	128.4	0.806	0.93	13.6							403
421	6.76	6.72	34.222	26.844	126.2	0.832	0.84	12.3	62.8	2.69	36.0	0.00			424
500 ISL	6.11	6.07	34.275	26.976	114.2	0.927	0.46	6.7							504
503	6.09	6.05	34.284	26.981	113.7	0.931	0.45	6.5	75.2	2.90	39.4	0.00			507
583	5.61	5.56	34.332	27.079	105.0	1.018	0.28	4.0	85.4	3.03	41.2	0.00			588

RV ELLEN B. SCRIPPS				CRUISE 8310				STATION 90 65									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 14.2 N	120 18.2 W	12/10/83	0934 GMT		310	16 KT			1016.0 MB	19.5 C	18.8 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	20.30	20.30	33.544	23.574	430.8	0.000	5.43	104.5							0		
2	20.30	20.30	33.544	23.574	430.8	0.009	5.43	104.5	1.9	0.31	0.0	0.00	0.10	0.00	2		
10 ISL	20.29	20.29	33.542	23.576	430.9	0.043	5.37	103.4							10		
13	20.29	20.29	33.543	23.577	431.0	0.056	5.36	103.1	1.9	0.32	0.0	0.00	0.10	0.00	13		
20 ISL	20.28	20.28	33.544	23.581	430.8	0.086	5.36	103.1							20		
30 ISL	20.27	20.27	33.547	23.587	430.6	0.129	5.36	103.1							30		
32	20.27	20.26	33.550	23.588	430.6	0.138	5.36	103.1	1.8	0.31	0.0	0.00	0.10	0.01	32		
41	18.76	18.75	33.466	23.912	399.9	0.175	5.75	107.6	1.7	0.31	0.0	0.00	0.20	0.04	41		
50 ISL	16.81	16.80	33.398	24.334	359.9	0.209	6.12	110.4							50		
51	16.57	16.56	33.395	24.386	354.9	0.213	6.14	110.2	1.7	0.35	0.0	0.00	0.34	0.08	51		
64	13.11	13.10	33.397	25.132	284.0	0.254	5.17	86.6	6.1	0.73	5.6	0.02	0.52	0.33	64		
75 ISL	11.62	11.61	33.488	25.489	250.1	0.284	4.41	71.5							75		
78	11.38	11.37	33.516	25.554	244.0	0.291	4.23	68.3	12.1	1.13	13.9	0.00	0.11	0.13	78		
96	10.57	10.56	33.634	25.790	221.8	0.333	3.69	58.6	16.9	1.42	18.4	0.00	0.05	0.07	96		
100 ISL	10.44	10.42	33.653	25.830	218.0	0.342	3.61	57.2							100		
120	9.91	9.90	33.741	25.987	203.5	0.384	3.44	53.9	20.9	1.56	21.1	0.00	0.02	0.03	120		
125 ISL	9.80	9.79	33.749	26.013	201.1	0.395	3.47	54.2							125		
137	9.56	9.54	33.781	26.076	195.3	0.418	3.52	54.7	22.3	1.60	21.8	0.00	0.01	0.02	137		
150 ISL	9.28	9.26	33.854	26.182	185.4	0.443	3.23	49.9							150		
165	8.98	8.96	33.950	26.302	174.3	0.470	2.82	43.3	29.4	1.87	26.1	0.00	0.00	0.02	165		
194	8.64	8.62	34.016	26.407	164.8	0.519	2.61	39.8	33.5	1.92	27.5	0.00	0.00	0.02	194		
200 ISL	8.55	8.53	34.020	26.428	162.9	0.529	2.59	39.4							200		
222	8.22	8.20	34.050	26.499	156.5	0.564	2.49	37.6	37.4	2.04	28.7	0.00			222		
250 ISL	7.91	7.89	34.079	26.571	150.0	0.607	2.19	32.8							250		
259	7.82	7.79	34.094	26.593	148.1	0.621	2.07	31.0	44.5	2.23	31.1	0.00			259		
300 ISL	7.26	7.23	34.113	26.692	139.0	0.679	1.61	23.8							300		
315	7.06	7.03	34.124	26.725	136.0	0.700	1.46	21.5	54.1	2.47	34.7	0.00			315		
385	6.50	6.46	34.158	26.827	126.9	0.792	0.97	14.1	63.7	2.69	37.1	0.00			385		
400 ISL	6.35	6.32	34.154	26.848	125.0	0.811	0.91	13.2							400		
456	5.84	5.80	34.176	26.927	118.0	0.879	0.73	10.4	75.0	2.89	40.2	0.00			456		
500 ISL	5.57	5.53	34.209	26.991	112.2	0.930	0.55	7.8							500		
540	5.42	5.37	34.269	27.052	106.8	0.973	0.37	5.2	86.4	3.01	41.9	0.00			540		

RV ELLEN B. SCRIPPS				CRUISE 8310				STATION 90 70									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 4.7 N	120 38.8 W	12/10/83	1400 GMT		300	16 KT	310 06 07	1	1016.6 MB	19.3 C	18.5 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	20.17	20.17	33.536	23.602	428.1	0.000	5.44	104.4							0		
2	20.17	20.17	33.536	23.602	428.1	0.009	5.44	104.4	1.9	0.26	0.0	0.00	0.08	0.04	2		
10 ISL	20.16	20.16	33.535	23.605	428.1	0.043	5.38	103.4							10		
12	20.16	20.16	33.536	23.605	428.1	0.051	5.37	103.1	1.5	0.25	0.0	0.00	0.11	0.02	12		
20 ISL	19.52	19.52	33.487	23.735	416.0	0.085	5.58	105.8							20		
30 ISL	17.98	17.97	33.400	24.056	385.8	0.124	5.91	108.8							30		
32	17.57	17.56	33.384	24.141	377.7	0.132	5.98	109.4	1.2	0.31	0.0	0.00	0.24	0.04	32		
41	15.37	15.36	33.334	24.609	333.2	0.164	6.13	107.4	1.6	0.35	0.0	0.00	0.37	0.10	41		
50 ISL	13.84	13.83	33.366	24.962	299.8	0.193	5.62	95.5							50		
54	13.28	13.27	33.393	25.094	287.3	0.204	5.30	89.0	5.8	0.60	4.0	0.00	0.88	0.36	54		
68	11.39	11.38	33.471	25.517	247.2	0.242	4.38	70.7	10.8	1.13	13.2	0.00	0.11	0.17	68		
75 ISL	11.15	11.14	33.559	25.630	236.5	0.259	4.12	66.1							75		
92	10.56	10.55	33.631	25.789	221.8	0.298	3.73	59.2	16.8	1.50	18.6	0.00	0.04	0.07	92		
100 ISL	10.37	10.36	33.668	25.853	215.8	0.316	3.59	56.7							100		
110	10.14	10.13	33.721	25.932	208.6	0.337	3.42	53.8	20.7	1.54	20.6	0.00	0.02	0.04	110		
125 ISL	9.70	9.69	33.821	26.087	194.1	0.367	3.10	48.3							125		
127	9.64	9.63	33.837	26.107	192.2	0.371	3.07	47.8	24.6	1.63	22.6	0.00	0.01	0.02	127		
146	9.08	9.06	33.886	26.236	180.2	0.406	3.26	50.1					0.00	0.02	146		
150 ISL	9.02	9.00	33.891	26.252	178.7	0.413	3.23	49.7							150		
182	8.71	8.69	33.956	26.349	170.1	0.449	3.02	46.1	30.8	1.85	26.4	0.00	0.00	0.02	182		
200 ISL	8.53	8.51	33.998	26.413	164.3	0.499	2.76	42.0							200		
216	8.35	8.33	34.039	26.470	159.1	0.525	2.53	38.3	36.6	1.95	28.4	0.00	0.00	0.02	216		
244	7.89	7.87	34.064	26.559	151.0	0.569	2.27	34.0	41.7	2.10	30.5	0.00			244		
250 ISL	7.81	7.79	34.063	26.573	149.8	0.578	2.23	33.4							250		
289	7.35	7.32	34.083	26.652	142.7	0.635	1.97	29.1	48.7	2.31	32.3	0.00			289		
300 ISL	7.18	7.16	34.081	26.677	140.3	0.650	1.86	27.4							300		
342	6.60	6.57	34.101	26.769	131.9	0.707	1.42	20.6	58.6	2.49	36.7	0.00			342		
400 ISL	6.23	6.19	34.141	26.854	124.4	0.782	0.93	13.4							400		
421	6.14	6.10	34.165	26.880	122.2	0.808	0.79	11.4	69.6	2.74	39.7	0.00			421		
500 ISL	5.55	5.51	34.204	26.990	112.3	0.900	0.50	7.1							500		
504	5.52	5.48	34.213	26.995	111.8	0.905	0.49	6.9	82.3	2.91	42.8	0.00			504		
585	5.22	5.17	34.301	27.101	102.4	0.992	0.28	3.9	90.1	2.99	43.2	0.00			585		

RV ELLEN B. SCRIPPS				CRUISE 8311								STATION 90 28					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 27.6 N	117 47.4 W	05/11/83	0022 0046 GMT	296 M	000	00 KT	290 02 06	1	1013.1 MB	21.4 C	19.9 C	1/8		ST			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0A	21.44	21.44	33.413	23.168	469.4	0.000	5.51	108.1	1.0	0.22	0.0	0.00	0.17	0.12	0		
10A	20.54	20.54	33.399	23.400	447.6	0.046	5.55	107.2	1.0	0.21	0.2	0.00	0.16	0.12	10		
20 ISL	18.73	18.72	33.337	23.822	407.7	0.088	5.85	109.3							20		
30	16.83	16.83	33.300	24.252	367.0	0.127	6.04	108.9	1.2	0.33	0.2	0.00	0.43	0.06	30		
40	15.68	15.67	33.294	24.510	342.7	0.163	5.75	101.4	2.5	0.55U	0.4	0.17	0.27	0.15	40		
50 ISL	15.12	15.11	33.317	24.653	329.3	0.197	5.64	98.4							50		
55	14.96	14.95	33.336	24.700	324.9	0.213	5.61	97.5	3.3	0.46	0.9	0.00	0.51	0.29	55		
68	14.53	14.52	33.374	24.822	313.7	0.254	5.38	92.7	3.3	0.50	2.2	0.00	0.28	0.21	68		
75 ISL	14.39	14.38	33.378	24.858	310.5	0.276	5.31	91.3							75		
84	14.17	14.16	33.385	24.907	306.1	0.304	5.24	89.7	3.7	0.50	2.9	0.00	0.16	0.17	84		
100 ISL	13.36	13.34	33.396	25.085	289.4	0.352	5.04	84.7							100		
103	13.19	13.18	33.405	25.123	285.9	0.360	4.99	83.7	6.1	0.70	5.8	0.00	0.08	0.11	103		
125 ISL	12.32	12.30	33.477	25.353	264.4	0.421	4.55	75.0							125		
126	12.28	12.26	33.486	25.364	263.4	0.423	4.53	74.6	9.4	0.84	10.7	0.00	0.03	0.08	126		
149	11.49	11.47	33.637	25.629	238.6	0.481	3.82	61.9	14.3	1.29	16.4	0.02	0.01	0.05	150		
150 ISL	11.46	11.44	33.643	25.639	237.6	0.483									151		

RV ELLEN B. SCRIPPS				CRUISE 8311								STATION 90 30					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 25.3 N	117 53.6 W	05/11/83	0300 GMT	611 M	000	00 KT	290 02 06	1	1014.0 MB	19.9 C	19.3 C			ST			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	20.26	20.26	33.486	23.540	433.9	0.000	5.40	103.8	1.6	0.25	0.0	0.00	0.12	0.12	0		
10	19.99	19.99	33.486	23.612	427.5	0.043	5.44	104.1	2.0	0.24	0.0	0.00	0.12	0.01	10		
20 ISL	19.67	19.67	33.476	23.687	420.6	0.086	5.48	104.2							20		
29	19.39	19.38	33.470	23.755	414.4	0.123	5.51	104.3	1.8	0.25	0.0	0.00	0.14	0.03	29		
30 ISL	19.25	19.24	33.458	23.783	411.8	0.127	5.54	104.5							30		
39	17.74	17.73	33.361	24.083	383.5	0.163	5.80	106.4	2.8	0.33	0.0	0.00	0.18	0.05	39		
49	15.95	15.94	33.295	24.450	348.7	0.200	5.99	106.1	3.0	0.32	0.0	0.00	0.18	0.06	49		
50 ISL	15.85	15.84	33.293	24.474	346.5	0.203	5.99	105.9							50		
63	15.08	15.07	33.352	24.687	326.5	0.247	5.93	103.3	2.7	0.32	0.0	0.00	0.23	0.06	63		
75 ISL	14.85	14.84	33.465	24.826	313.6	0.285	5.86	101.7							75		
78	14.78	14.77	33.490	24.859	310.6	0.295	5.84	101.2	2.7	0.32	0.0	0.00	0.25	0.21	78		
97	13.08	13.07	33.385	25.129	285.1	0.351	5.16	86.3	5.6	0.67	5.2	0.00	0.15	0.19	97		
100 ISL	12.88	12.87	33.395	25.179	280.4	0.360	5.03	83.8							100		
121	11.84	11.82	33.547	25.494	250.8	0.415	4.21	68.7	11.7	1.15	13.3	0.00	0.03	0.04	121		
125 ISL	11.71	11.69	33.560	25.532	247.3	0.426	4.13	67.1							125		
139	11.30	11.28	33.623	25.653	236.0	0.459	3.88	62.6	14.4	1.31	16.1	0.00	0.02	0.04	140		
150 ISL	10.95	10.93	33.702	25.782	224.0	0.484	3.56	57.0							151		
168	10.38	10.36	33.949	25.992	204.3	0.523	3.05	48.3	21.6	1.64	22.5	0.00	0.00	0.03	169		
198	9.59	9.57	33.987	26.233	181.7	0.581	2.65	41.2	27.9	1.83	25.7	0.01	0.00	0.02	199		
200 ISL	9.54	9.51	33.986	26.246	180.6	0.585	2.64	41.1							201		
227	8.88	8.86	34.035	26.385	167.6	0.632	2.54	38.9	34.2	1.95	28.0	0.02			228		
250 ISL	8.57	8.55	34.087	26.478	159.1	0.669	2.27	34.6							252		
266	8.42	8.39	34.130	26.532	154.3	0.694	2.05	31.1	39.6	2.14	30.6	0.01			268		
300 ISL	8.04	8.00	34.164	26.621	146.3	0.746	1.65	24.8							302		
323	7.79	7.76	34.184	26.669	142.0	0.779	1.41	21.1	50.1	2.47	34.3	0.00			325		
396	7.13	7.09	34.224	26.795	130.8	0.878	0.92	13.6	60.3	2.78	37.0	0.01			399		
400 ISL	7.09	7.05	34.219	26.802	130.2	0.884	0.89	13.1							403		
467	6.44	6.40	34.275	26.929	118.6	0.967	0.51	7.4	72.7	2.94	40.0	0.01			471		
500 ISL	6.15	6.11	34.302	26.993	112.7	1.005	0.38	5.5							504		
545	5.79	5.74	34.365	27.083	104.4	1.054	0.28	4.0	86.8	3.09	41.3	0.01			549		

RV ELLEN B. SCRIPPS				CRUISE 8311								STATION 90 32			
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 20.6 N	118 1.3 W	05/11/83	0522 GMT	742 M	000	00 KT	290 02 06	1	1015.0 MB	19.9 C	19.0 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	20.14	20.14	33.510	23.590	429.1	0.000	5.39	103.4	1.5	0.23	0.2	0.00	0.10	0.00	0
10	19.79	19.79	33.508	23.680	420.9	0.042	5.43	103.5	1.4	0.25	0.1	0.00	0.10	0.01	10
20 ISL	19.35	19.35	33.496	23.785	411.2	0.084	5.49	103.8							20
29	18.96	18.95	33.490	23.880	402.5	0.121	5.54	104.0	0.9	0.25	0.1	0.00	0.15	0.03	29
30 ISL	18.73	18.73	33.470	23.923	398.5	0.125	5.58	104.4							30
39	16.79	16.78	33.566	24.312	361.6	0.159	5.94	107.0	1.1	0.28	0.1	0.00	0.11	0.04	39
49	16.22	16.21	33.479	24.531	341.1	0.194	6.00	107.0	1.2	0.25	0.1	0.00	0.12	0.04	49
50 ISL	16.16	16.15	33.474	24.542	340.0	0.197	6.00	106.9							50
63	15.41	15.40	33.401	24.653	329.8	0.241	5.99	105.1	0.3	0.26	0.1	0.00	0.15	0.09	63
75 ISL	14.73	14.72	33.409	24.809	315.2	0.280	5.91	102.3							75
77	14.62	14.61	33.417	24.836	312.6	0.286	5.89	101.7	0.7	0.29	0.1	0.00	0.19	0.20	77
97	13.39	13.38	33.403	25.081	289.7	0.346	5.39	90.8	3.2	0.53	3.1	0.00	0.21	0.22	97
100 ISL	13.13	13.11	33.397	25.132	284.9	0.355	5.30	88.8							100
121	11.57	11.55	33.471	25.485	251.6	0.411	4.54	73.6	10.2	0.96	12.2	0.00	0.07	0.09	121
125 ISL	11.48	11.46	33.511	25.536	246.9	0.421	4.33	70.0							125
139	11.30	11.28	33.679	25.696	231.9	0.455	3.62	58.4	15.0	1.35	17.6	0.00	0.01	0.03	140
150 ISL	10.95	10.93	33.758	25.824	220.0	0.480	3.32	53.1							151
169	10.30	10.28	33.664	26.018	201.8	0.520	3.02	47.7	22.4	1.68	23.1	0.00	0.00	0.03	170
198	9.66	9.64	33.965	26.205	184.5	0.576	2.71	42.2	27.1	1.84	26.0	0.00	0.00	0.03	199
200 ISL	9.62	9.60	33.965	26.215	183.6	0.579	2.70	42.0							201
226	9.17	9.14	34.026	26.333	172.8	0.626	2.55	39.3	31.2	1.95	27.8	0.00			227
250 ISL	8.75	8.72	34.065	26.435	163.4	0.666	2.35	35.9							252
265	8.50	8.47	34.095	26.492	158.1	0.690	2.20	33.4	37.4	2.09	29.7	0.00			267
300 ISL	8.08	8.05	34.140	26.596	148.6	0.744	1.79	26.9							302
322	7.85	7.82	34.172	26.651	143.7	0.776	1.52	22.8	47.9	2.40	33.6	0.00			324
395	6.97	6.93	34.228	26.820	128.2	0.876	0.87	12.8	62.1	2.73	37.7	0.00			398
400 ISL	6.92	6.88	34.226	26.831	127.3	0.882	0.83	12.2							403
467	6.31	6.27	34.291	26.958	115.7	0.963	0.45	6.5	74.9	2.99	40.6	0.00			471
500 ISL	6.05	6.01	34.311	27.013	110.7	1.001	0.33	4.7							504
545	5.74	5.69	34.352	27.079	104.7	1.049	0.23	3.3	88.6	3.11	41.1	0.00			549

RV ELLEN B. SCRIPPS				CRUISE 8311							STATION 90 35					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE		
33 15.5 N	118 12.0 W	05/11/83	0824 GMT	258 M	000	00 KT	290 02 06	1	1015.8 MB	19.8 C	18.4 C			ST		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL A	PHAEO	PRESS	
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR	
0 ISL	20.30	20.30	33.454	23.505	437.3	0.000	5.41	104.1							0	
1	20.30	20.30	33.454	23.505	437.3	0.004	5.41	104.1	1.3	0.26	0.2	0.00	0.12	0.01	1	
10 ISL	20.05	20.05	33.454	23.572	431.3	0.043	5.42	103.8							10	
11	20.02	20.02	33.455	23.580	430.5	0.048	5.42	103.7	1.9	0.25	0.2	0.00	0.12	0.01	11	
20 ISL	19.69	19.69	33.403	23.627	426.4	0.086	5.46	103.9							20	
30 ISL	19.33	19.32	33.467	23.771	413.1	0.128	5.51	104.1							30	
31	19.29	19.28	33.482	23.790	411.2	0.132	5.51	104.1	1.8	0.26	0.2	0.00	0.14	0.02	31	
45	16.46	16.45	33.313	24.348	358.3	0.186	6.03	107.9	1.6	0.32	0.2	0.00	0.29	0.08	45	
50 ISL	15.68	15.67	33.277	24.499	344.1	0.203	6.01	105.9							50	
55	15.05	15.04	33.258	24.621	332.5	0.220	5.99	104.2	1.5	0.33	0.1	0.00	0.32	0.13	55	
71	14.29	14.28	33.274	24.796	316.3	0.272	5.85	100.3	1.5	0.36	0.2	0.00	0.36	0.23	71	
75 ISL	14.01	14.00	33.287	24.866	309.6	0.285	5.77	98.4							75	
85	13.33	13.32	33.345	25.048	297.5	0.315	5.56	93.5	1.6	0.45	1.8	0.00	0.23	0.23	85	
100 ISL	12.80	12.79	33.454	25.241	274.5	0.357	5.32	88.6							100	
105	12.61	12.60	33.493	25.305	268.5	0.371	5.22	86.5	4.2	0.61	5.4	0.00	0.10	0.14	105	
125 ISL	10.80	10.79	33.569	25.702	230.9	0.421	4.40	70.2							125	
128	10.54	10.52	33.586	25.759	225.5	0.428	4.26	67.6	13.9	1.20	16.1	0.00	0.03	0.04	129	
147	10.05	10.03	33.703	25.934	209.7	0.469	3.56	55.9	19.2	1.54	21.3	0.00	0.01	0.03	148	
150 ISL	9.98	9.96	33.714	25.957	207.0	0.475	3.50	54.9							151	
176	9.43	9.41	33.831	26.137	190.3	0.527	3.22	49.9	25.0	1.74	24.3	0.00	0.00	0.02	177	
200	8.94	8.92	33.945	26.305	174.7	0.571	2.94	45.1	29.3	1.89	26.6	0.00	0.00	0.02	201	

RV ELLEN B. SCRIPPS				CRUISE 8311							STATION 90 37				
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 11.2 N	118 22.2 W	05/11/83	1036 GMT	1196 M	180	07 KT		0	1015.8 MB	19.6 C	17.7 C	0/8			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	20.32	20.32	33.415	23.470	440.6	0.000	5.39	103.7	1.2	0.23	0.1	0.00	0.12	0.02	0
10	20.33	20.33	33.410	23.464	441.5	0.044	5.39	103.7	1.2	0.20	0.1	0.00	0.11	0.02	10
20 ISL	19.77	19.76	33.409	23.612	427.8	0.087	5.49	104.5							20
30	19.09	19.08	33.417	23.791	411.0	0.129	5.59	105.2	1.2	0.23	0.1	0.00	0.20	0.04	30
39	18.78	18.77	33.424	23.875	403.4	0.166	5.61	105.0	1.1	0.23	0.1	0.00	0.25	0.06	39
49	17.56	17.55	33.364	24.129	379.4	0.205	5.85	107.0	1.1	0.26	0.1	0.00	0.30	0.10	49
50 ISL	17.42	17.41	33.354	24.158	376.7	0.209	5.86	106.8							50
63	15.46	15.45	33.301	24.564	338.2	0.255	5.94	104.2	1.3	0.31	0.1	0.00	0.49	0.16	63
75 ISL	13.68	13.67	33.340	24.975	299.3	0.294	5.55	94.0							75
78	13.31	13.30	33.361	25.064	290.8	0.303	5.43	91.3	2.9	0.51	3.0	0.00	0.21	0.20	78
97	12.44	12.43	33.415	25.277	270.9	0.356	4.92	81.2	6.8	0.75	7.7	0.01	0.10	0.15	97
100 ISL	12.22	12.20	33.438	25.341	264.9	0.364	4.80	78.9							100
122	10.64	10.63	33.649	25.790	222.4	0.418	3.98	63.3	15.3	1.22	17.3	0.01	0.03	0.05	122
125 ISL	10.31	10.49	33.660	25.824	219.2	0.424	3.90	61.8							125
139	10.02	10.00	33.714	25.948	207.7	0.454	3.60	56.5	19.8	1.49	21.0	0.00	0.01	0.02	140
150 ISL	9.72	9.71	33.758	26.034	199.7	0.477	3.48	54.2							151
169	9.32	9.30	33.844	26.165	187.5	0.513	3.32	51.3	24.6	1.68	24.2	0.00	0.00	0.02	170
198	8.82	8.80	33.963	26.338	171.5	0.565	2.92	44.7	30.6	1.85	27.0	0.01	0.00	0.02	199
200 ISL	8.81	8.79	33.969	26.348	170.6	0.569	2.87	43.9							201
226	8.73	8.71	34.095	26.456	160.9	0.612	2.28	34.8	35.9	2.05	28.9	0.00			227
250 ISL	8.46	8.43	34.129	26.529	154.3	0.650	2.03	30.8							252
265	8.26	8.23	34.143	26.566	150.9	0.673	1.93	29.2	41.4	2.21	31.0	0.00			267
300 ISL	7.91	7.88	34.169	26.645	143.9	0.724	1.59	23.9							302
321	7.71	7.68	34.190	26.685	140.3	0.754	1.40	20.9	49.6	2.44	33.4	0.01			323
394	7.03	6.99	34.221	26.806	129.6	0.853	0.91	13.4	60.0	2.68	36.8	0.00			397
400 ISL	6.97	6.93	34.218	26.817	128.6	0.861	0.87	12.8							403
465	6.40	6.36	34.266	26.927	118.7	0.941	0.56	8.1	70.8	2.90	39.1	0.01			469
500 ISL	6.17	6.13	34.279	26.972	114.7	0.982	0.45	6.5							504
542	5.97	5.92	34.307	27.015	111.0	1.029	0.37	5.3	79.3	3.00	41.6	0.01			546

RV ELLEN B. SCRIPPS				CRUISE 8311							STATION 90 42						
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 0.5 N	118 43.2 W	05/11/83	1458 GMT	964 M	350	05 KT	280 05 07	1	1016.0 MB	19.7 C	18.1 C		6/8	CU			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	19.72	19.72	33.512	23.701	418.6	0.000									0		
1	19.72	19.72	33.512	23.701	418.6	0.004			1.1	0.26	0.1	0.00	0.13	0.01	1		
10 ISL	19.71	19.71	33.517	23.708	418.3	0.042									10		
11	19.71	19.71	33.518	23.709	418.2	0.046	5.45	103.8	0.6	0.26	0.1	0.00	0.12	0.02	11		
20 ISL	19.58	19.58	33.512	23.739	415.7	0.084	5.46	103.8							20		
30	19.44	19.43	33.509	23.772	412.9	0.125	5.48	103.8	0.6	0.25	0.1	0.00	0.17	0.03	30		
40	16.71	16.70	33.405	24.360	357.0	0.163	5.79	104.2	0.6	0.27	0.1	0.00	0.28	0.05	40		
49	15.60	15.59	33.342	24.564	337.7	0.195	5.99	105.4	1.8	0.34	0.0	0.00	0.47	0.23	49		
50 ISL	15.46	15.45	33.337	24.592	335.1	0.198	5.97	104.8							50		
64	13.77	13.76	33.342	24.956	300.8	0.243	5.47	92.8	2.6	0.49	1.5	0.00			64		
75 ISL	13.11	13.10	33.376	25.117	285.7	0.275	5.30	88.7							75		
79	12.95	12.94	33.394	25.161	281.5	0.286	5.25	87.6	4.0	0.58	4.5	0.00	0.19	0.19	79		
98	12.08	12.07	33.463	25.393	260.8	0.338	4.86	79.6	7.1	0.81	9.0	0.00	0.10	0.12	98		
100 ISL	11.94	11.92	33.467	25.416	257.7	0.343	4.80	78.3							100		
122	10.49	10.48	33.594	25.773	224.0	0.396	4.01	63.5	15.3	1.27	17.8	0.01	0.03	0.04	122		
125 ISL	10.39	10.37	33.621	25.815	220.1	0.403	3.90	61.6							125		
140	10.03	10.01	33.770	25.990	203.7	0.434	3.41	53.5	21.2	1.55	22.0	0.01	0.01	0.02	141		
150 ISL	9.88	9.86	33.820	26.057	197.5	0.455	3.23	50.6							151		
169	9.63	9.61	33.887	26.148	189.2	0.491	3.03	47.2	24.7	1.71	24.3	0.01	0.00	0.02	170		
198	9.09	9.07	33.984	26.312	174.1	0.544	2.74	42.2	29.6	1.91	26.6	0.01	0.00	0.02	199		
200 ISL	9.06	9.04	33.987	26.323	173.1	0.548	2.71	41.7							201		
227	8.67	8.65	34.078	26.452	161.2	0.593	2.38	36.3	34.8	2.03	28.7	0.01			228		
250 ISL	8.36	8.34	34.086	26.509	156.1	0.629	2.28	34.6							252		
265	8.18	8.15	34.090	26.537	153.7	0.653	2.23	33.6	40.0	2.11	30.8	0.01			267		
300 ISL	7.83	7.80	34.133	26.627	145.5	0.705	1.78	26.6							302		
321	7.62	7.59	34.174	26.686	140.3	0.738	1.45	21.6	50.2	2.42	34.4	0.01			325		
395	6.92	6.88	34.213	26.815	128.7	0.835	0.97	14.2	60.9	2.61	36.9	0.01			398		
400 ISL	6.88	6.84	34.210	26.823	127.9	0.841	0.94	13.7							403		
467	6.35	6.31	34.264	26.932	118.2	0.924	0.57	8.2	71.3	2.87	39.8	0.01			471		
500 ISL	6.11	6.07	34.280	26.981	113.8	0.962	0.46	6.6							504		
543	5.83	5.78	34.317	27.040	108.5	1.010	0.38	5.4	81.9	3.00	42.0	0.01			547		

RV ELLEN B. SCRIPPS				CRUISE 8311										STATION 90 45			
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 54.6 N	118 55.4 W	05/11/83	1727 GMT	1755 M	290	09 KT	280 06 07	1	1017.9 MB	19.9 C	18.3 C	6/8		CU			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	19.95	19.95	33.490	23.625	425.8	0.000									0		
1	19.95	19.95	33.535U				5.43		2.3	0.26	0.1	0.00	0.14	0.01	1		
10 ISL	19.93	19.93	33.489	23.630	425.7	0.043	5.40	103.2							10		
11	19.93	19.93	33.490	23.630	425.7	0.047	5.40	103.2	0.5	0.25	0.0	0.00	0.14	0.01	11		
20 ISL	19.84	19.83	33.485	23.652	424.0	0.085	5.44	103.8							20		
30 ISL	19.70	19.69	33.480	23.686	421.1	0.127	5.49	104.4							30		
31	19.68	19.67	33.482	23.690	420.8	0.131	5.49	104.4	0.5	0.24	0.0	0.00	0.15	0.02	31		
39	19.57	19.56	33.483	23.720	418.2	0.165	5.48	104.0	0.7	0.26	0.0	0.00	0.17	0.02	39		
48	18.86	18.85	33.477	23.896	401.7	0.202	5.61	105.1	0.9	0.27	0.0	0.00	0.24	0.05	48		
50 ISL	18.29	18.28	33.444	24.014	390.4	0.210	5.68	105.4							50		
62	14.70	14.69	33.331	24.753	320.2	0.252	5.93	102.5	0.9	0.39	0.0	0.00	0.62	0.32	62		
75	13.38	13.37	33.332	25.028	294.2	0.292	5.30	89.2	3.7	0.60	3.1	0.00	0.34	0.26	75		
93	12.12	12.11	33.436	25.354	263.4	0.343	4.74	77.7	7.1	0.88	9.8	0.00	0.09	0.14	93		
100 ISL	11.60	11.59	33.468	25.479	251.6	0.361	4.54	73.6							100		
115	10.64	10.63	33.558	25.719	229.0	0.397	4.10	65.2	13.6	1.24	17.0	0.00	0.04	0.06	115		
125 ISL	10.27	10.26	33.632	25.843	217.4	0.419	3.74	59.0							125		
133	10.05	10.03	33.695	25.927	209.5	0.436	3.49	54.8	18.3	1.54	21.7	0.00	0.02	0.04	134		
150 ISL	9.59	9.57	33.783	26.076	195.6	0.471	3.42	53.1							151		
159	9.38	9.36	33.824	26.139	189.7	0.488	3.38	52.3	23.1	1.66	24.0	0.00	0.00	0.02	160		
186	8.93	8.91	33.910	26.279	176.9	0.538	3.14	48.1	27.0	1.73	25.7	0.00	0.00	0.02	187		
200 ISL	8.74	8.72	33.953	26.347	170.7	0.562	2.91	44.4							201		
213	8.57	8.55	33.997	26.404	165.5	0.584	2.70	41.1	32.8	1.97	28.8	0.01			214		
248	8.08	8.05	34.046	26.517	155.2	0.640	2.55	38.4	37.3	2.03	30.1	0.00			250		
250 ISL	8.05	8.02	34.044	26.523	154.6	0.643	2.52	37.9							252		
300 ISL	7.37	7.34	34.105	26.670	141.2	0.717	1.78	26.3							302		
301	7.36	7.33	34.111	26.673	140.9	0.718	1.76	26.1	48.5	2.33	34.0	0.01			303		
366	6.78	6.75	34.149	26.783	131.1	0.807	1.18	17.2	58.9	2.55	37.2	0.00			369		
400 ISL	6.56	6.52	34.183	26.845	125.6	0.850	0.93	13.5							403		
431	6.39	6.35	34.226	26.896	121.1	0.889	0.74	10.7	67.8	2.83	39.7	0.01			434		
500 ISL	6.08	6.04	34.262	26.970	114.8	0.970	0.49	7.1							504		
501	6.08	6.04	34.269	26.970	114.8	0.971	0.49	7.0	74.4	2.88	40.7	0.01			505		

RV ELLEN B. SCRIPPS				CRUISE 8311								STATION 90 53				
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE		
32 38.8 N	119 29.0 W	05/11/83	2313 GMT	1322 M	260	17 KT	290 07 07	1	1017.5 MB	18.2 C	16.1 C		6/8	SC		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS	
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR	
0	19.82	19.82	33.420	23.605	427.7	0.000	5.46	104.1	0.5	0.23	0.1	0.00	0.13	0.01	0	
10	19.81	19.81	33.417	23.606	428.0	0.043	5.44	103.7	0.0	0.23	0.1	0.00	0.12	0.02	10	
20 ISL	19.13	19.13	33.388	23.759	413.7	0.085	5.58	105.0							20	
29	18.52	18.51	33.369	23.898	400.8	0.122	5.78	107.6	0.7	0.27	0.2	0.00			29	
30 ISL	18.31	18.31	33.360	23.944	396.5	0.125	5.81	107.7							30	
38	16.55	16.54	33.319	24.332	359.7	0.156	5.99	107.4	0.7	0.32	0.2	0.00	0.32	0.09	38	
50 ISL	14.65	14.64	33.317	24.754	319.7	0.197	5.72	98.7							50	
52	14.41	14.40	33.323	24.808	314.6	0.203	5.64	96.9	1.3	0.44	1.5	0.00	0.43	0.30	52	
66	13.32	13.31	33.359	25.060	290.8	0.245	5.26	88.4	3.4	0.61	4.5	0.00	0.26	0.27	66	
75 ISL	12.59	12.58	33.400	25.238	274.1	0.271	4.95	81.9							75	
89	11.55	11.54	33.492	25.504	249.0	0.307	4.45	72.1	9.8	0.98	13.3	0.00	0.08	0.12	89	
100 ISL	10.92	10.91	33.569	25.680	232.4	0.334	4.10	65.6							100	
107	10.60	10.59	33.620	25.774	223.6	0.350	3.91	62.1	15.7	1.32	18.0	0.00	0.04	0.06	107	
125	10.11	10.10	33.704	25.924	209.6	0.389	3.59	56.4	18.6	1.44	20.9	0.00	0.02	0.04	125	
144	9.64	9.62	33.800	26.078	195.3	0.427	3.30	51.4	22.8	1.66	23.7	0.00	0.01	0.02	145	
150 ISL	9.46	9.44	33.829	26.133	190.2	0.439	3.21	49.7							151	
172	8.88	8.86	33.948	26.316	175.0	0.479	2.88	44.1	30.6	1.86	27.2	0.00	0.01	0.02	173	
200 ISL	8.64	8.62	34.048	26.435	162.3	0.526	2.49	38.0							201	
204	8.62	8.60	34.062	26.447	161.3	0.532	2.44	37.2	34.7	2.01	29.1	0.00	0.00	0.01	205	
232	8.09	8.07	34.090	26.550	151.8	0.576	2.17	32.7	40.6	2.14	30.8	0.00			233	
250 ISL	7.87	7.85	34.094	26.589	148.3	0.603	2.04	30.6							252	
278	7.62	7.59	34.111	26.635	144.2	0.644	1.87	27.8	45.6	2.31	33.5	0.00			280	
300 ISL	7.43	7.40	34.123	26.676	140.6	0.676	1.72	25.5							302	
329	7.20	7.17	34.155	26.730	135.9	0.716	1.51	22.3	53.8	2.52	35.2	0.00			331	
400 ISL	6.57	6.53	34.212	26.866	123.6	0.808	0.83	12.1							403	
408	6.50	6.46	34.225	26.881	122.3	0.818	0.76	11.0	67.6	2.71	39.2	0.00			411	
483	5.89	5.85	34.275	26.999	111.6	0.905	0.47	6.7	78.8	2.93	41.9	0.01			497	
500 ISL	5.77	5.72	34.278	27.022	109.5	0.924	0.43	6.1							504	
564	5.35	5.30	34.317	27.098	102.6	0.992	0.34	4.8	90.4	3.05	44.8	0.01			569	

RV ELLEN H. SCRIPPS				CRUISE 8311								STATION 90 55			
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
32 34.7 N	119 38.2 W	06/11/83	0012 GMT	1075 M	260	18 KT	290 07 07	1	1018.0 MB	18.2 C	16.0 C		6/8	SC	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	19.73	19.73	33.479	23.673	421.2	0.000	5.44	103.6	0.8	0.26	0.1	0.01	0.12	0.02	0
10	19.71	19.71	33.479	23.679	421.0	0.042	5.41	103.0	0.7	0.26	0.1	0.00	0.12	0.02	10
20 ISL	19.08	19.08	33.444	23.814	408.5	0.084	5.52	103.8							20
29	18.52	18.51	33.418	23.935	397.3	0.120	5.67	105.6	0.7	0.28	0.1	0.00	0.22	0.06	29
30 ISL	18.11	18.10	33.397	24.022	389.0	0.124	5.69	105.2							30
37	15.22	15.21	33.322	24.633	330.9	0.149	5.79	101.2	1.1	0.38	0.1	0.00	0.49	0.29	37
50 ISL	13.41	13.40	33.354	25.039	292.4	0.190	5.32	89.5							50
51	13.39	13.38	33.359	25.046	291.8	0.193	5.27	88.7	4.9	0.62	4.3	0.00	0.31	0.29	51
64	13.13	13.12	33.378	25.113	285.7	0.230	5.12	85.7	5.3	0.72	5.9	0.01	0.14	0.16	64
75 ISL	12.41	12.40	33.423	25.292	268.9	0.260	4.72	77.9							75
86	11.62	11.61	33.488	25.488	250.4	0.289	4.30	69.8	11.0	1.05	13.4	0.01	0.09	0.13	86
100 ISL	11.15	11.13	33.543	25.619	238.2	0.323	4.07	65.4							100
105	11.00	10.99	33.565	25.661	234.4	0.335	4.00	64.1							105
122	10.20	10.19					3.52	55.4	18.7	1.47	21.1	0.01	0.02	0.04	122
125 ISL	10.06	10.04	33.697	25.930	209.1	0.379	3.48	54.6							125
140	9.42	9.40	33.820	26.129	190.3	0.409	3.30	51.1	24.9	1.67	24.1	0.01	0.01	0.02	141
150 ISL	9.13	9.12	33.875	26.222	181.7	0.428	3.12	48.0							151
167	8.77	8.75	33.963	26.345	170.2	0.458	2.81	42.9	30.1	1.80	26.7	0.01	0.00	0.02	168
198	8.21	8.19	34.036	26.489	157.0	0.509	2.52	38.0	36.2	1.96	29.5	0.01	0.00	0.02	199
200 ISL	8.18	8.16	34.035	26.495	156.3	0.512	2.50	37.7							201
226	7.84	7.82	34.065	26.566	149.9	0.552	2.24	33.5	41.9	2.08	31.5	0.01			227
250 ISL	7.58	7.56	34.083	26.621	145.0	0.587	1.99	29.6							252
273	7.39	7.36	34.107	26.665	141.2	0.620	1.76	26.1	48.9	2.25	33.0	0.00			275
300 ISL	7.24	7.21	34.121	26.701	138.1	0.658	1.55	22.9							302
322	7.13	7.10	34.140	26.728	135.9	0.688	1.40	20.6	53.5	2.41	35.5	0.00			324
400 ISL	6.53	6.50	34.180	26.845	125.5	0.790	0.90	13.0							403
403	6.51	6.47	34.188	26.850	125.1	0.794	0.88	12.8	65.2	2.63	37.6	0.00			406
483	6.00	5.96	34.260	26.973	114.1	0.890	0.49	7.0	76.4	2.95	41.0	0.00			487
500 ISL	5.89	5.85	34.267	26.998	112.0	0.909	0.44	6.2							504
565	5.50	5.45	34.321	27.084	104.2	0.979	0.32	4.5	86.7	2.95	41.8	0.00			570

RV ELLEN H. SCRIPPS				CRUISE 8311							STATION 90 60				
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
32 25.0 N	119 58.0 W	06/11/83	0637 GMT	944 M	060	18 KT	260 09 07	1	1018.5 MB	18.0 C	16.7 C	6/8		SC	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0 ISL	19.39	19.39	33.545	23.811	408.1	0.000	5.44	103.0							0
1	19.39	19.39	33.545	23.811	408.1	0.004	5.44	103.0	1.6	0.32	0.0	0.00	0.12	0.02	1
10 ISL	19.38	19.38	33.548	23.817	407.9	0.041	5.44	103.0							10
11	19.38	19.38	33.549	23.818	407.9	0.045	5.44	103.0	1.8	0.28	0.0	0.00	0.13	0.01	11
20 ISL	19.38	19.38	33.545	23.816	408.2	0.082	5.44	103.0							20
30	19.38	19.37	33.544	23.814	408.9	0.122	5.44	103.0	1.5	0.26	0.0	0.00	0.11	0.03	30
38	19.40	19.39	33.546	23.811	409.4	0.155	5.44	103.0	1.1	0.24	0.0	0.00	0.11	0.02	38
50 ISL	18.06	18.06	33.464	24.086	383.6	0.293	5.76	106.4							50
51	17.87	17.86	33.457	24.125	379.9	0.207	5.79	106.5	1.2	0.27	0.0	0.00			51
63	14.36	14.35	33.345	24.835	312.2	0.248	5.80	99.6	3.1	0.44	0.3	0.00	0.47	0.24	63
75 ISL	12.67	12.66	33.378	25.206	277.2	0.284	5.14	85.2							75
83	12.10	12.09	33.425	25.350	263.6	0.306	4.61	75.6	7.9	0.89	10.5	0.02	0.14	0.15	83
97	11.18	11.17	33.520	25.593	240.6	0.341	4.15	66.7	12.1	1.14	14.9	0.00	0.07	0.10	97
100 ISL	11.01	11.00	33.541	25.642	236.0	0.348	4.05	64.9							100
113	10.43	10.42	33.638	25.818	219.6	0.378	3.68	58.2	17.1	1.37	19.4	0.01	0.03	0.04	113
125 ISL	10.16	10.14	33.690	25.907	211.3	0.404	3.50	55.1							125
132	10.05	10.03	33.719	25.946	207.7	0.418	3.43	53.9	20.2	1.52	21.1	0.00	0.01	0.03	133
150 ISL	9.67	9.65	33.799	26.074	195.9	0.455	3.17	49.3							151
157	9.51	9.49	33.833	26.125	191.1	0.468	3.07	47.7	25.4	1.72	23.9	0.00	0.01	0.02	158
187	8.74	8.72	33.961	26.349	170.3	0.522	2.82	43.1	30.8	1.85	27.3	0.00	0.00	0.02	188
200 ISL	8.54	8.52	33.991	26.407	164.9	0.544	2.72	41.4							201
212	8.39	8.37	34.021	26.450	161.0	0.564	2.62	39.7	35.6	1.93	28.4	0.00			213
250 ISL	7.89	7.87	34.081	26.576	149.5	0.623	2.13	31.9							252
254	7.84	7.81	34.091	26.587	148.5	0.629	2.07	31.0	43.4	2.26	32.8	0.00			256
300 ISL	7.19	7.16	34.132	26.717	136.6	0.694	1.46	21.6							302
301	7.18	7.15	34.138	26.719	136.4	0.696	1.45	21.4	53.4	2.47	35.7	0.01			303
377	6.68	6.64	34.203	26.819	125.9	0.795	0.88	12.8	63.7	2.68	38.2	0.00			380
400 ISL	6.53	6.49	34.216	26.875	122.7	0.824	0.75	10.9							403
450	6.17	6.13	34.255	26.948	116.5	0.884	0.53	7.6	74.3	2.91	40.3	0.00			453
500 ISL	5.76	5.71	34.257	27.007	110.9	0.941	0.41	5.9							504
529	5.50	5.46	34.259	27.034	108.4	0.971	0.39	5.5	84.7	2.95	42.0	0.00			533

RV ELLEN B. SCRIPPS				CRUISE 8311								STATION 90 65				
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE		
32 15.1 N	120 19.1 W	06/11/83	1145 GMT	3844 M	320	15 KT		1	1017.0 MB	17.9 C	16.2 C		2/R	SC		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	S103	P04	N03	N02	CHL A	PHAE0	PRESS	
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR	
0 ISL	19.26	19.26	33.506	23.815	407.8	0.000									0	
1	19.26	19.26	33.506	23.815	407.8	0.004	5.55U		0.8	0.27	0.2	0.01	0.13	0.02	1	
10 ISL	19.26	19.26	33.505	23.815	408.0	0.041									10	
11	19.26	19.26	33.506	23.815	408.1	0.045	5.46	103.1	0.7	0.27	0.2	0.00	0.13	0.02	11	
20 ISL	19.26	19.25	33.506	23.818	408.2	0.082	5.45	103.0							20	
30	19.25	19.24	33.508	23.820	408.3	0.122	5.45	102.9	0.3	0.27	0.1	0.00	0.14	0.02	30	
38	19.28	19.27	33.509	23.814	409.2	0.155	5.45	102.9	0.9	0.29	0.0	0.00	0.15	0.01	38	
50 ISL	18.48	18.47	33.472	23.990	392.7	0.203	5.67	105.6							50	
51	18.41	18.40	33.473	24.005	391.3	0.207	5.69	105.8	2.6	0.31	0.0	0.01	0.27	0.07	51	
64	13.77	13.76	33.342	24.956	300.8	0.252	5.50	93.3	3.5	0.54	1.2	0.04	0.72	0.32	64	
75 ISL	12.14	12.13	33.405	25.328	265.5	0.284	4.92	80.7							75	
86	11.52	11.51	33.493	25.510	248.3	0.313	4.27	69.2	10.5	1.06	13.4	0.01	0.09	0.17	86	
100 ISL	10.63	10.62	33.612	25.765	224.3	0.346	3.78	60.0							100	
103	10.49	10.48	33.639	25.808	220.3	0.352	3.70	58.6	17.3	1.42	19.3	0.01	0.03	0.04	103	
120	10.02	10.01	33.726	25.956	206.4	0.389	3.42	53.7	20.1	1.53	22.1	0.02	0.01	0.03	120	
125 ISL	9.92	9.90	33.743	25.989	203.4	0.399	3.36	52.6							125	
137	9.70	9.68	33.791	26.061	196.8	0.423	3.23	50.3	22.6	1.63	23.1	0.01	0.01	0.02	137	
150 ISL	9.44	9.42	33.846	26.150	188.6	0.448	3.09	47.9							150	
164	9.16	9.14	33.910	26.242	180.0	0.474	2.95	45.5	28.0	1.84	25.7	0.01	0.00	0.02	164	
194	8.68	8.66	34.000	26.389	166.6	0.526	2.70	41.2	32.0	1.94	27.9	0.01	0.00	0.01	194	
200 ISL	8.60	8.58	34.013	26.414	164.2	0.536	2.63	40.1							200	
220	8.34	8.32	34.061	26.489	157.4	0.568	2.42	36.6	36.0	2.05	28.9	0.01			220	
250 ISL	7.85	7.83	34.066	26.569	150.1	0.614	2.32	34.9							250	
264	7.62	7.59	34.066	26.600	147.4	0.635	2.29	34.1	42.4	2.20	30.8	0.01			264	
300 ISL	7.10	7.07	34.071	26.681	139.9	0.687	1.95	28.7							300	
312	6.95	6.92	34.081	26.706	137.7	0.703	1.82	26.7	51.2	2.37	34.8	0.02			312	
387	6.46	6.42	34.147	26.824	127.3	0.803	1.11	16.1	61.6	2.62	36.9	0.01			387	
400 ISL	6.41	6.37	34.157	26.844	125.6	0.819	1.00	14.5							400	
463	6.08	6.04	34.227	26.937	117.4	0.896	0.61	8.8	72.2	2.95	40.3	0.01			463	
500 ISL	5.74	5.70	34.234	26.990	112.5	0.938	0.53	7.6							500	
539	5.28	5.24	34.239	27.044	107.3	0.981	0.45	6.3	85.2	3.00	43.0	0.00			539	

RV ELLEN B. SCRIPPS				CRUISE 8311								STATION 90 70			
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
32 5.2 N	120 39.2 W	06/11/83	1628 GMT	3918 M	310	11 KT	300 11 06	0	1020.0 MB	18.9 C	16.8 C		0/8		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	S103	P04	N03	N02	CHL A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0 ISL	19.27	19.27	33.537	23.836	405.8	0.000	5.49	103.7							0
2	19.27	19.27	33.537	23.836	405.8	0.008	5.49	103.7	1.0	0.25	0.1	0.01	0.13	0.03	2
10 ISL	19.26	19.26	33.537	23.839	405.8	0.041	5.46	103.2							10
12	19.26	19.26	33.538	23.840	405.8	0.049	5.46	103.1	0.4	0.25	0.1	0.00	0.15	0.03	12
20 ISL	19.26	19.25	33.536	23.841	405.9	0.081	5.46	103.0							20
30 ISL	19.25	19.25	33.535	23.842	406.2	0.122	5.45	102.9							30
31	19.25	19.24	33.537	23.842	406.2	0.126	5.45	102.9	0.4	0.25	0.1	0.01	0.15	0.03	31
50 ISL	16.81	16.80	33.390	24.329	360.4	0.198	5.94	107.0							50
54	15.91	15.90	33.367	24.515	342.7	0.212	6.04	107.0	0.5	0.36	0.0	0.03	0.58	0.14	54
61	13.87	13.86	33.369	24.956	300.7	0.234	5.57	94.7	3.0	0.54	2.0	0.01	0.78	0.30	61
73	12.33	12.32	33.437	25.315	266.7	0.269	4.61	75.9	8.5	0.92	10.6	0.00	0.22	0.23	73
75 ISL	12.15	12.14	33.445	25.358	262.6	0.274	4.57	74.2							75
85	11.43	11.42	33.500	25.532	246.2	0.299	4.23	68.4	11.0	1.13	14.5	0.00	0.11	0.17	85
96	10.91	10.90	33.572	25.682	232.1	0.326	3.94	63.0	14.0	1.31	17.5	0.00	0.07	0.10	96
100 ISL	10.76	10.74	33.591	25.726	228.0	0.335	3.86	61.5							100
117	10.16	10.15	33.692	25.906	211.2	0.372	3.54	55.7	19.3	1.51	21.0	0.00	0.02	0.04	117
125 ISL	9.85	9.84	33.752	26.008	201.7	0.389	3.37	52.6							125
132	9.60	9.59	33.810	26.092	193.8	0.403	3.22	50.1	23.3	1.68	24.0	0.00	0.01	0.02	132
150 ISL	9.18	9.16	33.900	26.234	180.5	0.436	2.94	45.3							150
155	9.09	9.07	33.922	26.263	177.9	0.445	2.88	44.3	27.7	1.84	26.7	0.00	0.00	0.02	155
179	8.69	8.67	33.977	26.369	168.2	0.487	2.77	42.2	30.4	1.90	27.1	0.00	0.00	0.02	179
200 ISL	8.43	8.41	34.020	26.446	161.2	0.521	2.61	39.6							200
204	8.39	8.37	34.032	26.458	160.1	0.528	2.58	39.1	34.2	2.02	29.3	0.00			204
248	7.94	7.91	34.061	26.549	152.1	0.596	2.39	35.8	40.1	2.11	30.7	0.00			248
250 ISL	7.91	7.88	34.058	26.555	151.5	0.599	2.36	35.4							250
290	7.25	7.22	34.103	26.681	139.8	0.658	1.78	26.3	49.3	2.35	34.1	0.00			290
300 ISL	7.14	7.11	34.104	26.702	138.0	0.672	1.68	24.7							300
362	6.61	6.58	34.144	26.802	129.1	0.755	1.20	17.5	60.2	2.62	38.2	0.00			362
400 ISL	6.33	6.29	34.175	26.869	123.2	0.802	0.90	13.1							400
435	6.09	6.05	34.217	26.927	117.9	0.845	0.67	9.6	72.5	2.92		0.00			435
500 ISL	5.70	5.66	34.264	27.019	109.7	0.919	0.41	5.9							500
510	5.65	5.61	34.278	27.031	108.6	0.930	0.39	5.5	81.4	2.97	42.0	0.00			510

RV DAVID STARR JORDAN				CRUISE 8311				STATION 90 28									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 29.1 N	117 46.3 W	15/11/83	1415 GMT	47 M	030	01 KT		0	1017.6 MB	17.0 C	15.6 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	19.46	19.46	33.203	23.532	434.6	0.000										0	
10	19.22	19.22	33.404	23.748	414.5	0.042										10	
20	17.88	17.88	33.362	24.049	386.1	0.082										20	
30	16.74	16.74	33.337	24.301	362.3	0.120										30	
40	15.62	15.61	33.309	24.534	340.3	0.155										40	
50	14.93	14.92	33.325	24.698	325.0	0.188										50	
75	14.05	14.04	33.402	24.945	302.2	0.267										75	

RV DAVID STARR JORDAN				CRUISE 8311				STATION 90 30									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 25.0 N	117 54.2 W	15/11/83	1540 GMT	616 M	160	04 KT		0	1018.3 MB	18.8 C	16.4 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	19.54	19.54	33.427	23.683	420.3	0.000										0	
10	19.54	19.54	33.425	23.682	420.8	0.042										10	
20	19.54	19.54	33.425	23.682	421.1	0.084										20	
30	18.29	18.28	33.386	23.968	394.2	0.125										30	
40	16.23	16.22	33.325	24.409	352.3	0.162										40	
50	15.78	15.77	33.358	24.537	340.4	0.197										50	
75	14.38	14.37	33.415	24.886	307.9	0.278										75	
100	13.28	13.27	33.521	25.195	279.0	0.351										100	
125	11.80	11.78	33.481	25.450	255.0	0.418										125	
150	10.77	10.75	33.702	25.809	221.3	0.478										151	
175	10.13	10.11	33.878	26.058	198.1	0.530										176	
200	9.55	9.53	33.961	26.220	183.1	0.578										201	
250	8.54	8.51	34.086	26.479	159.1	0.663										252	
300	7.88	7.85	34.143	25.623	145.9	0.739										302	
350	7.41	7.38	34.192	25.730	136.4	0.810										352	
400	7.03	6.99	34.220	26.805	129.8	0.877										403	
450	6.56	6.52	34.260	26.901	121.1	0.939										453	
500	6.00	5.96	34.310	27.013	110.6	0.997										504	
550	5.70	5.65	34.339	27.074	105.2	1.051										554	

RV DAVID STARR JORDAN				CRUISE 8311				STATION 90 33									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 18.5 N	118 7.2 W	15/11/83	1755 GMT	790 M	330	06 KT		2	1018.6 MB	18.0 C	17.8 C		3/8	CI			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	19.63	19.63	33.435	23.666	421.9	0.000										0	
10	19.58	19.58	33.433	23.677	421.2	0.042										10	
20	19.57	19.57	33.433	23.681	421.3	0.084										20	
30	18.64	18.63	33.395	23.888	401.8	0.125										30	
40	16.84	16.83	33.344	24.283	364.3	0.164										40	
50	15.67	15.66	33.334	24.543	339.8	0.199										50	
75	13.75	13.74	33.395	25.001	296.8	0.279										75	
100	12.32	12.31	33.487	25.356	263.5	0.349										100	
125	11.55	11.53	33.605	25.593	241.4	0.412										125	
150	10.81	10.79	33.736	25.829	219.5	0.469										151	
175	10.06	10.04	33.821	26.025	201.2	0.522										176	
200	9.29	9.27	33.931	26.279	181.2	0.570										201	
250	8.38	8.35	34.034	26.462	160.6	0.655										252	
300	7.96	7.93	34.141	26.610	147.3	0.732										302	
350	7.45	7.42	34.171	26.708	138.5	0.804										352	
400	7.05	7.01	34.200	26.787	131.5	0.871										403	
450	6.62	6.58	34.246	26.882	122.9	0.935										453	
500	6.22	6.18	34.294	26.972	114.7	0.994										504	
532	5.95	5.90	34.312	27.021	110.2	1.030										536	

RV DAVID STARR JORDAN				CRUISE 8311				STATION 90 35									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 15.1 N	118 15.0 W	16/11/83	0040 GMT														
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	19.96	19.96	33.448	23.590	429.1	0.000										0	
10	19.55	19.55	33.444	23.694	419.6	0.042										10	
20	19.52	19.52	33.443	23.701	419.3	0.084										20	
30	19.39	19.38	33.452	23.742	415.8	0.126										30	
40	16.45	16.44	33.338	24.369	356.1	0.165										40	
50	15.57	15.56	33.316	24.551	339.0	0.199										50	
75	13.99	13.98	33.384	24.943	302.3	0.280										75	
100	12.24	12.23	33.506	25.386	260.6	0.350										100	
125	10.96	10.94	33.557	25.662	234.7	0.412										125	
150	10.21	10.19	33.703	25.907	211.9	0.468										151	
156	10.13	10.11	33.764	25.968	206.1	0.480										157	

RV DAVID STARR JORDAN						CRUISE 8311				STATION 90 37							
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 11.1 N	118 23.5 W	16/11/83	0030 GMT	1194 M	360	12 KT	300 01	0	1016.6 MB	19.3 C	17.5 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	19.42	19.42	33.457	23.736	415.2	0.000										0	
10	19.38	19.38	33.455	23.746	414.7	0.041										10	
20	19.38	19.38	33.454	23.745	415.1	0.083										20	
30	18.74	18.73	33.387	23.857	404.8	0.124										30	
40	16.91	16.90	33.375	24.291	363.6	0.162										40	
50	15.00	14.99	33.315	24.675	327.2	0.197										50	
75	13.01	13.00	33.299	25.076	289.6	0.274										75	
100	12.08	12.07	33.435	25.362	262.9	0.343										100	
125	10.77	10.75	33.573	25.708	230.3	0.405										125	
150	10.43	10.41	33.844	25.979	205.1	0.459										151	
175	9.44	9.42	33.878	26.172	187.0	0.508										176	
200	8.70	8.68	33.952	26.348	170.6	0.553										201	
250	8.20	8.17	34.068	26.516	155.3	0.634										252	
300	7.38	7.35	34.099	26.660	142.1	0.709										302	
350	6.93	6.90	34.132	26.749	134.2	0.778										352	
400	6.74	6.70	34.205	26.833	126.9	0.843										403	
450	6.49	6.45	34.260	26.910	120.1	0.905										453	
500	6.19	6.15	34.289	26.972	114.7	0.963										504	
550	5.82	5.77	34.322	27.045	108.0	1.019										554	
600	5.52	5.47	34.353	27.107	102.5	1.072										605	
700	4.99	4.93	34.397	27.205	93.7	1.170										706	
800	4.58	4.52	34.431	27.279	87.2	1.260										807	
900	4.20	4.13	34.464	27.346	81.1	1.345										908	
1000	4.05	3.97	34.475	27.371	79.4	1.425										1009	
1100	3.97	3.89	34.482	27.386	78.8	1.504										1111	

RV DAVID STARR JORDAN						CRUISE 8311				STATION 90 40							
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 5.1 N	118 35.6 W	16/11/83	1500 GMT	1646 M	360	11 KT	290 02 03	1	1018.3 MB	18.9 C	15.2 C		1/8	CI			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	19.31	19.31	33.483	23.784	410.6	0.000										0	
10	19.31	19.31	33.484	23.786	410.8	0.041										10	
20	19.32	19.32	33.483	23.783	411.5	0.082										20	
30	18.64	18.63	33.446	23.927	398.1	0.123										30	
40	17.67	17.66	33.373	24.109	381.0	0.162										40	
50	16.52	16.51	33.319	24.339	359.4	0.199										50	
75	13.49	13.48	33.441	25.090	288.3	0.280										75	
100	11.75	11.74	33.478	25.457	253.8	0.347										100	
125	10.59	10.58	33.593	25.755	225.8	0.407										125	
150	9.60	9.58	33.789	26.076	195.6	0.460										151	
175	9.19	9.17	33.910	26.238	180.7	0.507										176	
200	8.84	8.82	34.029	26.386	166.9	0.550										201	
250	8.15	8.12	34.094	26.544	152.7	0.630										252	
300	7.66	7.63	34.155	26.665	141.9	0.704										302	
350	7.15	7.12	34.195	26.769	132.5	0.773										352	
400	6.77	6.73	34.225	26.845	125.6	0.837										403	
450	6.43	6.39	34.250	26.910	120.1	0.899										453	
500	6.15	6.11	34.281	26.971	114.8	0.957										504	
550	5.80	5.75	34.323	27.049	107.7	1.013										554	
600	5.46	5.41	34.348	27.110	102.1	1.065										605	
700	4.96	4.90	34.384	27.198	94.5	1.164										706	

RV DAVID STARR JORDAN						CRUISE 8311				STATION 90 42							
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 1.8 N	118 43.8 W	16/11/83	1710 GMT	1900 M	350	11 KT	200 02 05	1	1019.3 MB	20.0 C	17.0 C		1/8	CI			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0	19.24	19.24	33.496	23.812	407.9	0.000										0	
10	19.24	19.24	33.496	23.813	408.3	0.041										10	
20	19.20	19.20	33.492	23.820	407.9	0.082										20	
30	19.09	19.08	33.489	23.846	405.8	0.122										30	
40	18.12	18.11	33.435	24.047	386.9	0.162										40	
50	15.43	15.42	33.295	24.566	337.6	0.198										50	
75	12.58	12.57	33.422	25.255	272.5	0.274										75	
100	11.43	11.42	33.534	25.559	244.1	0.339										100	
125	10.68	10.67	33.580	25.729	229.2	0.398										125	
150	9.92	9.90	33.705	25.957	206.9	0.452										151	
200	8.86	8.84	34.002	26.362	169.3	0.546										201	
250	8.11	8.08	34.083	26.541	152.9	0.627										252	
300	7.72	7.69	34.104	26.616	146.5	0.702										302	
350	7.45	7.42	34.190	26.723	137.1	0.773										352	
400	6.86	6.82	34.221	26.829	127.3	0.839										403	
450	6.39	6.35	34.256	26.920	119.1	0.901										453	
500	6.03	5.99	34.279	26.985	113.3	0.959										504	
550	5.84	5.79	34.316	27.038	108.8	1.014										554	
600	5.56	5.51	34.340	27.092	104.0	1.067										605	
700	4.86	4.80	34.381	27.207	93.3	1.166										706	
800	4.53	4.47	34.416	27.272	87.7	1.256										807	
900	4.22	4.15	34.459	27.340	81.7	1.341										908	
1000	3.93	3.85	34.483	27.390	77.3	1.421										1009	

RV DAVID STARR JORDAN				CRUISE R311						STATION 90 45					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
32 55.0 N	118 55.9 W	17/11/83	0010 GMT	1710 M	350	14 KT	300 02 07	1	1017.6 MB	19.0 C	17.0 C	6/8		SC	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	19.19	19.19	33.501	23.829	406.4	0.000									0
10	19.19	19.19	33.501	23.829	406.7	0.041									10
20	19.11	19.11	33.499	23.849	405.3	0.081									20
30	19.09	19.08	33.493	23.849	405.5	0.122									30
40	17.76	17.75	33.458	24.152	376.9	0.161									40
50	14.56	14.55	33.313	24.768	318.3	0.196									50
75	11.70	11.69	33.452	25.445	254.3	0.267									75
100	10.58	10.57	33.610	25.770	223.9	0.327									100
125	9.83	9.82	33.763	26.017	200.7	0.380									125
150	9.21	9.19	33.892	26.220	181.9	0.428									151
175	8.94	8.92	33.933	26.295	175.2	0.473									176
200	8.55	8.53	34.004	26.412	164.4	0.515									201
250	7.94	7.91	34.055	26.544	152.5	0.594									252
300	7.13	7.10	34.107	26.701	138.0	0.667									302
350	6.78	6.75	34.146	26.780	131.1	0.734									352
400	6.34	6.30	34.151	26.843	125.6	0.798									403
450	6.05	6.01	34.184	26.906	120.0	0.860									453
500	5.67	5.63	34.227	26.988	112.6	0.918									504
550	5.55	5.50	34.280	27.045	107.7	0.973									554
600	5.50	5.45	34.343	27.102	103.0	1.026									605
700	5.15	5.09	34.382	27.175	96.8	1.125									706
800	4.66	4.60	34.426	27.266	88.5	1.218									807
900	4.23	4.16	34.461	27.341	81.7	1.303									908
1000	3.93	3.85	34.484	27.391	77.3	1.383									1009
1100	3.81	3.73	34.493	27.411	76.0	1.459									1111
1200	3.75	3.66	34.499	27.422	75.7	1.535									1212
1300	3.71	3.61	34.502	27.429	75.8	1.611									1313
1400	3.68	3.57	34.504	27.435	76.0	1.687									1415
1500	3.67	3.55	34.506	27.438	76.6	1.763									1516

RV DAVID STARR JORDAN				CRUISE 8311						STATION 90 53					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
32 39.1 N	119 28.9 W	17/11/83	1020 GMT	1325 M	300	10 KT		5	1019.0 MB	18.5 C	17.5 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0	18.95	18.95	33.466	23.863	403.1	0.000									0
10	18.95	18.95	33.467	23.864	403.3	0.040									10
20	18.94	18.94	33.458	23.860	404.1	0.081									20
30	18.65	18.64	33.414	23.900	400.7	0.121									30
40	16.36	16.35	33.382	24.424	350.9	0.159									40
50	15.11	15.10	33.315	24.652	329.5	0.193									50
75	12.72	12.71	33.382	25.197	278.0	0.268									75
100	10.60	10.59	33.622	25.775	223.3	0.331									100
125	9.46	9.45	33.835	26.135	189.5	0.383									125
150	9.04	9.02	33.924	26.272	176.8	0.429									151
175	8.69	8.67	33.990	26.379	167.1	0.472									176
200	8.41	8.39	34.044	26.465	159.3	0.512									201
250	7.89	7.86	34.077	26.569	150.1	0.590									252
300	7.39	7.36	34.126	26.680	140.2	0.662									302
350	6.95	6.92	34.152	26.762	132.9	0.731									352
400	6.74	6.70	34.188	26.820	124.2	0.796									403
450	6.12	6.08	34.249	26.949	116.1	0.857									453
500	5.80	5.76	34.280	27.014	110.3	0.913									504
550	5.44	5.39	34.306	27.079	104.4	0.967									554
600	5.25	5.20	34.332	27.122	100.7	1.018									605
700	4.88	4.82	34.376	27.201	93.9	1.116									706
800	4.50	4.44	34.410	27.271	87.8	1.207									807
900	4.17	4.10	34.450	27.338	81.8	1.291									908
1000	3.92	3.84	34.469	27.380	78.3	1.371									1009
1100	3.82	3.74	34.482	27.401	77.0	1.449									1111
1200	3.78	3.69	34.485	27.408	77.1	1.526									1212

RV DAVID STARR JORDAN						CRUISE #311				STATION 90 55									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE					
32 35.0 N	119 37.0 W	17/11/83	1145 GMT	1646 M	310	16 KT			1018.6 MB	18.7 C	17.3 C								
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS				
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR				
0	18.88	18.88	33.449	23.867	402.7	0.000									0				
10	18.89	18.89	33.449	23.865	403.2	0.040									10				
20	18.89	18.89	33.449	23.866	403.6	0.081									20				
30	18.90	18.89	33.448	23.863	404.2	0.121									30				
40	18.90	18.89	33.449	23.864	404.4	0.161									40				
50	16.16	16.15	33.375	24.464	347.4	0.199									50				
75	12.76	12.75	33.400	25.203	277.4	0.277									75				
100	11.27	11.26	33.508	25.568	243.2	0.342									100				
125	10.22	10.21	33.694	25.898	212.1	0.399									125				
150	9.60	9.58	33.781	26.070	196.2	0.450									151				
175	8.96	8.94	33.928	26.288	175.8	0.497									176				
200	8.54	8.52	33.999	26.410	164.6	0.539									201				
250	7.65	7.63	34.090	26.614	145.7	0.617									252				
300	7.21	7.18	34.115	26.697	138.5	0.688									302				
350	6.85	6.82	34.160	26.782	131.0	0.755									352				
400	6.52	6.48	34.176	26.839	126.1	0.820									403				
450	6.23	6.19	34.238	26.926	118.3	0.881									453				
500	5.81	5.77	34.284	27.016	110.1	0.938									504				
550	5.53	5.48	34.319	27.078	104.5	0.991									554				
600	5.33	5.28	34.339	27.119	101.2	1.043									605				
700	4.97	4.91	34.378	27.192	94.9	1.141									706				
800	4.49	4.43	34.426	27.284	86.5	1.232									807				
900	4.12	4.05	34.459	27.351	80.5	1.315									908				
1000	3.85	3.77	34.480	27.396	76.6	1.394									1009				

RV DAVID STARR JORDAN						CRUISE #311				STATION 90 60									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE					
32 24.5 N	119 57.2 W	17/11/83	1620 GMT	988 M	300	10 KT	290 04 04	1	1019.6 MB	18.8 C	17.3 C		7/8	SC					
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS				
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR				
0	18.73	18.73	33.522	23.961	393.8	0.000									0				
10	18.72	18.72	33.522	23.964	393.8	0.039									10				
20	18.72	18.72	33.521	23.964	394.2	0.079									20				
30	18.72	18.71	33.521	23.964	394.6	0.118									30				
40	18.71	18.70	33.518	23.965	394.8	0.158									40				
50	18.69	18.68	33.517	23.969	394.8	0.197									50				
75	13.26	13.25	33.353	25.068	290.3	0.283									75				
100	11.45	11.44	33.501	25.530	246.8	0.350									100				
125	10.34	10.33	33.709	25.889	213.0	0.407									125				
150	9.67	9.65	33.841	26.105	192.9	0.458									151				
175	9.16	9.14	33.913	26.245	180.0	0.505									176				
200	8.69	8.67	33.982	26.373	168.1	0.548									201				
250	8.04	8.01	34.070	26.541	152.9	0.629									252				
300	7.30	7.27	34.094	26.667	141.3	0.702									302				
350	6.63	6.60	34.112	26.774	131.6	0.770									352				
400	6.37	6.33	34.184	26.865	123.5	0.834									403				
450	6.10	6.06	34.223	26.931	117.8	0.894									453				
500	5.80	5.76	34.273	27.009	110.8	0.952									504				
550	5.49	5.44	34.287	27.058	106.4	1.006									554				
600	5.35	5.30	34.326	27.106	102.4	1.058									605				
700	4.84	4.78	34.383	27.211	92.9	1.156									706				
800	4.44	4.38	34.421	27.286	86.2	1.245									807				
900	4.18	4.11	34.447	27.335	82.1	1.329									908				
940	4.01	3.94	34.461	27.364	79.4	1.362									949				

RV DAVID STARR JORDAN				CRUISE 8311				STATION 90 65											
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE					
32 15.7 N	120 17.0 W	17/11/83	1945 GMT	3658 M	360	13 KT	290 04 04	1	1017.3 MB	19.0 C	18.5 C	7/8		CU					
DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SI03 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL.A UG/L	PHAEO UG/L	PRESS D.BAR				
0	18.98	18.98	33.518	23.895	400.0	0.000									0				
10	18.90	18.90	33.534	23.928	397.3	0.040									10				
20	18.84	18.84	33.528	23.939	396.6	0.080									20				
30	18.79	18.78	33.518	23.944	396.5	0.119									30				
40	18.70	18.69	33.506	23.958	395.5	0.159									40				
50	18.67	18.66	33.503	23.964	395.3	0.198									50				
75	13.57	13.56	33.307	24.970	299.7	0.285									75				
100	11.46	11.45	33.440	25.480	251.5	0.354									100				
125	10.31	10.30	33.619	25.824	219.2	0.413									125				
150	9.85	9.83	33.784	26.031	200.0	0.465									151				
175	9.27	9.25	33.905	26.221	182.3	0.513									176				
200	8.77	8.75	33.967	26.349	170.5	0.557									201				
250	8.13	8.10	34.064	26.523	154.4	0.639									252				
300	7.52	7.49	34.114	26.652	142.9	0.713									302				
350	6.88	6.85	34.116	26.743	134.7	0.782									352				
400	6.23	6.19	34.105	26.821	127.5	0.848									403				
450	6.26	6.22	34.209	26.900	120.9	0.910									453				
500	5.84	5.80	34.222	26.963	115.1	0.969									504				
550	5.50	5.45	34.241	27.020	110.0	1.025									554				
600	5.42	5.37	34.309	27.084	104.5	1.079									605				
700	4.99	4.93	34.377	27.189	95.2	1.179									706				
800	4.48	4.42	34.404	27.268	88.0	1.270									807				
900	4.14	4.07	34.445	27.337	81.8	1.355									908				
1000	3.84	3.76	34.475	27.393	76.9	1.435									1009				

RV NEW HORIZON				CRUISE 8312								STATION 90 28					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 28.2 N	117 46.3 W	06/12/83	0155 GMT	258 M	310	06 KT	270 02 06	0	1021.4 MB	17.0 C	15.0 C		0/R				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAED	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	16.31	16.31	33.436	24.475	344.8	0.000	5.79	103.4							0		
1	16.31	16.31	33.436	24.475	344.8	0.003	5.79	103.4	1.3	0.27	0.3	0.00	0.29	0.08	1		
10 ISL	16.20	16.20	33.458	24.518	341.0	0.034	5.79	103.1							10		
20 ISL	15.94	15.94	33.469	24.586	334.8	0.068	5.78	102.6							20		
27	15.67	15.67	33.470	24.647	329.3	0.091	5.78	102.0	1.3	0.41	0.3	0.00	0.95	0.31	27		
30 ISL	15.50	15.50	33.467	24.683	325.9	0.101	5.76	101.2							30		
46	14.58	14.57	33.446	24.866	308.9	0.152	5.58	96.3	2.8	0.46	1.3	0.05	0.52	0.41	46		
50 ISL	14.41	14.40	33.426	24.889	306.8	0.164	5.53	95.1							50		
66	13.85	13.84	33.378	24.967	299.8	0.213	5.30	90.1	4.3	0.55	3.0	0.01	0.36	0.39	66		
75 ISL	13.63	13.62	33.403	25.033	293.7	0.239	5.17	87.5							75		
80	13.46	13.45	33.428	25.086	288.8	0.254	5.09	85.8	6.0	0.64	4.8	0.07	0.20	0.22	80		
93	12.47	12.46	33.480	25.322	266.6	0.290	4.80	79.3	7.5	0.78	8.8	0.01	0.10	0.14	93		
100 ISL	12.16	12.14	33.495	25.396	259.7	0.308	4.68	76.8							100		
107	11.93	11.92	33.514	25.451	254.5	0.326	4.56	74.5	10.0	0.98	11.3	0.00	0.07	0.12	107		
116	11.65	11.64	33.542	25.525	247.7	0.349	4.38	71.1	11.4	1.07	12.9	0.01	0.06	0.10	116		
125 ISL	11.26	11.24	33.598	25.643	236.6	0.371	4.04	65.1							125		
132	10.97	10.95	33.648	25.731	228.3	0.387	3.81	61.0	16.1	1.29	17.1	0.00	0.03	0.07	132		
141	10.75	10.73	33.675	25.792	222.8	0.407	3.76	59.9	17.6	1.37	18.4	0.01	0.02	0.06	141		

RV NEW HORIZON				CRUISE 8312								STATION 90 30					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 24.4 N	117 54.0 W	06/12/83	0425 GMT	605 M	310	14 KT	300 02 06	0	1022.0 MB	15.8 C	11.9 C		0/R				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAED	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	15.95	15.95	33.384	24.517	340.8	0.000	5.84	103.6							0		
1	15.95	15.95	33.384	24.517	340.8	0.003	5.84	103.6	1.7	0.28	0.2	0.01	0.60	0.19	1		
10 ISL	15.83	15.83	33.371	24.534	339.5	0.034	5.87	103.8							10		
11	15.82	15.82	33.370	24.536	339.3	0.037	5.87	103.8	1.7	0.33	0.2	0.01	0.57	0.19	11		
20 ISL	15.73	15.72	33.369	24.557	337.6	0.068	5.84	103.2							20		
21	15.72	15.72	33.370	24.558	337.5	0.071	5.84	103.1	0.9	0.32	0.1	0.00	0.76	0.31	21		
30	15.73	15.73	33.369	24.556	338.0	0.102	5.82	102.7	1.2	0.3	0.07	0.78	0.31	30			
40	15.71	15.70	33.368	24.560	337.9	0.135	5.82	102.7	1.2	0.31	0.3	0.02	0.78	0.31	40		
50	15.62	15.61	33.362	24.576	336.7	0.169	5.77	101.6	1.1	0.35	0.3	0.01	0.72	0.35	50		
59	14.37	14.36	33.359	24.844	311.3	0.198	5.49	94.3	2.6	0.53	1.4	0.02	0.52	0.55	59		
69	13.88	13.87	33.380	24.963	300.3	0.229	5.32	90.5	3.9	0.56	3.0	0.03	0.23	0.24	69		
75 ISL	13.58	13.57	33.386	25.031	293.9	0.247	5.24	88.6							75		
83	13.19	13.18	33.405	25.123	285.4	0.270	5.14	86.2	4.6	0.63	5.2	0.02	0.16	0.20	83		
98	12.50	12.49	33.468	25.307	268.1	0.311	4.86	80.4	6.7	0.78	8.1	0.01	0.09	0.13	98		
100 ISL	12.41	12.39	33.472	25.331	265.9	0.317	4.80	79.2							100		
117	11.60	11.59	33.552	25.542	246.1	0.360	4.26	69.1	11.8	1.09	13.7	0.00	0.04	0.07	117		
125 ISL	11.17	11.15	33.600	25.661	234.9	0.379	4.01	64.6							125		
140	10.43	10.41	33.714	25.878	214.5	0.413	3.58	56.7	19.4	1.45	19.2	0.00	0.01	0.04	141		
150 ISL	10.14	10.12	33.788	25.989	204.1	0.434	3.30	52.0							151		
169	9.72	9.70	33.921	26.180	188.1	0.472	2.87	44.8	27.0	1.76	25.1	0.00			170		
198	9.03	9.01	34.025	26.354	170.1	0.524	2.54	39.0	32.8	2.01	28.0	0.00			199		
200 ISL	8.99	8.96	34.026	26.365	169.1	0.527	2.51	38.6							201		
227	8.48	8.46	34.090	26.491	157.5	0.571	2.18	33.1	38.4	2.12	30.6	0.02			228		
250 ISL	8.23	8.20	34.112	26.550	152.1	0.607	2.00	30.2							252		
264	8.11	8.08	34.129	26.578	149.7	0.628	1.90	28.6	43.9	2.22	31.9	0.02			266		
300 ISL	7.71	7.68	34.160	26.666	141.8	0.680	1.49	22.3							302		
322	7.46	7.43	34.186	26.718	137.1	0.711	1.24	18.4	53.8	2.44	34.3	0.05			324		
393	6.77	6.73	34.238	26.855	124.7	0.804	0.78	11.4	65.7	2.76	39.1	0.03			396		
400 ISL	6.70	6.67	34.238	26.868	123.5	0.813	0.74	10.7							403		
465	6.16	6.12	34.295	26.980	113.4	0.890	0.42	6.0	76.7	2.82	39.0	0.07			469		
500 ISL	5.93	5.88	34.309	27.026	109.3	0.929	0.37	5.3							504		
537	5.73	5.68	34.331	27.063	106.1	0.969	0.32	4.6	86.5	2.95	39.0	0.01			541		

RV NEW HORIZON				CRUISE 8312								STATION 90 32					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 19.5 N	118 2.7 W	06/12/83	0620 GMT	731 M	320	15 KT	300 02 07	0	1022.2 MB	15.8 C	12.1 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	S103	P04	N03	N02	CHL A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	15.73	16.73	33.392	24.344	357.2	0.000	5.71	102.8							0		
1	16.73	16.73	33.392	24.344	357.2	0.004	5.71	102.8	2.0	0.24	0.1	0.00	0.17	0.09	1		
10 ISL	16.74	16.74	33.393	24.344	357.6	0.036	5.79	104.2							10		
11	15.74	16.74	33.394	24.344	357.6	0.039	5.79	104.3	1.8	0.27	0.1	0.00	0.20	0.08	11		
20 ISL	16.74	16.74	33.392	24.343	358.0	0.072	5.76	103.7							20		
25	16.74	16.74	33.392	24.343	358.2	0.089	5.73	103.2	1.6	0.23	0.1	0.00	0.18	0.08	25		
30 ISL	16.66	16.65	33.387	24.360	356.7	0.107	5.73	103.1							30		
40	16.49	16.48	33.383	24.395	353.7	0.143	5.74	102.8	1.6	0.26	0.0	0.00	0.26	0.12	40		
50 ISL	15.02	15.01	33.379	24.722	322.8	0.176	5.66	98.4							50		
54	14.42	14.41	33.390	24.857	309.9	0.189	5.58	96.0	2.9	0.40	0.4	0.00	0.88	0.60	54		
64	13.93	13.92	33.421	24.984	298.1	0.220	5.20	88.6	4.6	0.61	3.3	0.00	0.43	0.33	64		
74	13.36	13.35	33.461	25.131	284.3	0.249	4.86	81.8	6.5	0.73	6.2	0.00	0.19	0.20	74		
75 ISL	13.30	13.29	33.462	25.147	282.8	0.252	4.83	81.2							75		
83	12.50	12.49	33.514	25.342	264.5	0.287	4.48	74.1	9.2	0.95	10.0	0.00	0.06	0.08	83		
100 ISL	11.92	11.91	33.552	25.485	251.1	0.318	4.23	69.2							100		
102	11.84	11.83	33.562	25.505	249.3	0.323	4.20	68.5	12.3	1.09	12.4	0.00	0.03	0.04	102		
117	11.48	11.47	33.603	25.604	240.2	0.360	4.01	64.9	14.2	1.17	15.1	0.00	0.02	0.04	117		
125 ISL	11.17	11.15	33.664	25.711	230.2	0.379	3.76	60.4							125		
140	10.61	10.59	33.788	25.904	212.0	0.412	3.30	52.5	20.3	1.50	20.1	0.00	0.00	0.03	141		
150 ISL	10.42	10.40	33.805	25.954	207.4	0.433	3.22	51.0							151		
159	10.28	10.26	33.821	25.987	204.5	0.451	3.18	50.2	22.8	1.65	20.9	0.00	0.00	0.03	160		
178	9.92	9.90	33.907	26.116	192.6	0.489	2.90	45.5	25.9	1.76	23.7	0.00			179		
198	9.31	9.29	33.990	26.281	177.1	0.526	2.67	41.3	30.4	1.88	25.5	0.00			199		
200 ISL	9.26	9.24	33.992	26.295	175.8	0.530	2.65	40.9							201		
227	8.73	8.71	34.065	26.432	163.1	0.575	2.40	36.7	35.8	2.01	28.0	0.00			228		
250 ISL	8.51	8.48	34.086	26.487	158.2	0.613	2.25	34.2							252		
264	8.41	8.38	34.100	26.510	156.3	0.635	2.16	32.8	39.4	2.13	29.2	0.00			266		
300 ISL	8.02	7.99	34.136	26.601	148.2	0.689	1.78	26.8							302		
322	7.76	7.73	34.167	26.660	142.8	0.721	1.53	22.9	50.0	2.43	32.3	0.00			324		
394	5.80	6.76	34.233	26.847	125.5	0.818	0.85	12.4	65.0	2.67	36.7	0.00			397		
400 ISL	5.74	6.70	34.232	26.859	124.4	0.825	0.81	11.8							403		
466	6.18	6.14	34.294	26.977	113.7	0.904	0.46	6.6	77.3	2.83	37.8	0.00			470		
500 ISL	5.92	5.88	34.311	27.029	109.1	0.942	0.36	5.1							504		
539	5.66	5.61	34.340	27.079	104.5	0.984	0.31	4.4	87.1	3.04	40.2	0.00			543		

RV NEW HORIZON				CRUISE 8312								STATION 90 35			
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
33 17.0 N	118 11.0 W	06/12/83	0844 GMT	351 M	010	10 KT		0	1021.0 MB	15.2 C	10.3 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	S103	P04	N03	N02	CHL A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0 ISL	16.47	16.47	33.376	24.392	352.6	0.000	5.71	102.3							0
1	16.47	16.47	33.376	24.392	352.6	0.004	5.71	102.3	2.4	0.27	2.6	0.00	0.22	0.09	1
10 ISL	16.48	16.48	33.374	24.389	353.3	0.035	5.76	103.1							10
11	16.48	16.48	33.374	24.389	353.3	0.039	5.76	103.2	2.3	0.27	1.1	0.00	0.23	0.08	11
20 ISL	16.47	16.46	33.376	24.395	353.1	0.071	5.75	102.9							20
30	16.45	16.45	33.380	24.401	352.8	0.106	5.72	102.4	2.1	0.28	1.4	0.00	0.21	0.08	30
45	15.95	15.94	33.396	24.528	341.2	0.158	5.75	102.0	2.3	0.29	1.5	0.00	0.43	0.25	45
50 ISL	15.07	15.07	33.403	24.728	322.1	0.174	5.49	95.7							50
54	14.36	14.35	33.418	24.892	304.6	0.187	5.28	90.7	4.2	0.51	6.0	0.00	0.53	0.38	54
69	13.61	13.60	33.442	25.066	290.4	0.232	5.19	87.8	4.7	0.60	5.3	0.00	0.20	0.20	69
75 ISL	13.18	13.17	33.454	25.164	281.2	0.249	4.99	83.6							75
83	12.61	12.60	33.481	25.295	268.8	0.271	4.68	77.6	8.0	0.85	9.3	0.00	0.08	0.10	83
100 ISL	11.84	11.82	33.543	25.494	250.3	0.315	4.29	69.9							100
103	11.73	11.72	33.559	25.523	247.5	0.323	4.23	68.8	12.2	1.07	13.8	0.01	0.03	0.05	103
125 ISL	10.96	10.94	33.657	25.743	227.1	0.375	3.78	60.5							125
127	10.90	10.88	33.671	25.761	225.3	0.379	3.74	59.8	17.6	1.35	18.6	0.00	0.01	0.03	128
145	10.45	10.43	33.785	25.929	209.7	0.419	3.34	52.9	21.6	1.51	21.5	0.00	0.01	0.03	146
150 ISL	10.30	10.29	33.814	25.981	204.9	0.429	3.24	51.1							151
175	9.62	9.60	33.949	26.198	184.6	0.478	2.86	44.5	28.0	1.77	25.6	0.00			176
199	9.19	9.17	33.977	26.290	176.2	0.521	2.81	43.3	31.0	1.80	26.5	0.00			200
200 ISL	9.17	9.15	33.978	26.294	175.8	0.523	2.81	43.3							201

RV NEW HORIZON				CRUISE R312				STATION 90 37									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 10.8 N	118 23.7 W	06/12/83	1113 GMT	1183 M	310	05 KT		0	1020.9 MB	15.5 C	11.0 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	16.75	16.75	33.420	24.361	355.6	0.000	5.66	101.9							0		
1	16.75	16.75	33.420	24.361	355.6	0.004	5.66	101.9	1.3	0.22	0.2	0.00	0.20	0.09	1		
10 ISL	16.75	16.75	33.419	24.361	355.9	0.036	5.78	104.2							10		
11	16.75	16.75	33.420	24.362	355.9	0.039	5.79	104.3	1.3	0.28	0.1	0.00	0.21	0.10	11		
20 ISL	16.74	16.74	33.418	24.363	356.2	0.071	5.74	103.4							20		
25	16.74	16.74	33.418	24.363	356.3	0.089	5.70	102.6	1.1	0.24	0.2	0.00	0.20	0.11	25		
30 ISL	16.29	16.28	33.381	24.440	349.0	0.106	5.71	101.8							30		
40	15.21	15.20	33.333	24.643	329.9	0.140	5.72	99.9	1.3	0.35	0.4	0.00	0.70	0.47	40		
50 ISL	14.51	14.50	33.394	24.843	311.1	0.173	5.74	98.9							50		
55	14.24	14.23	33.429	24.925	303.4	0.188	5.75	98.6	1.3	0.35	0.4	0.00	0.40	0.37	55		
64	13.87	13.86	33.416	24.992	297.3	0.215	5.64	95.9	1.5	0.37	1.3	0.00	0.33	0.35	64		
74	13.11	13.10	33.419	25.149	282.6	0.244	5.45	91.2	3.2	0.52	3.5	0.00	0.20	0.25	74		
75 ISL	13.04	13.03	33.421	25.166	281.0	0.247	5.42	90.6							75		
89	12.19	12.18	33.498	25.389	260.0	0.285	4.97	81.7	6.0	0.76	7.4	0.01	0.10	0.12	89		
100 ISL	11.71	11.69	33.529	25.506	249.1	0.313	4.64	75.5							100		
103	11.60	11.59	33.540	25.532	246.6	0.320	4.55	73.8	9.8	0.95	11.6	0.00	0.05	0.07	103		
118	11.23	11.22	33.603	25.649	235.8	0.356	4.04	65.1	13.2	1.24	15.7	0.00	0.03	0.05	118		
125 ISL	10.97	10.95	33.643	25.731	228.2	0.372	3.83	61.3							125		
141	10.37	10.35	33.758	25.922	210.2	0.408	3.40	53.8	19.7	1.49	21.0	0.01	0.01	0.03	141		
150 ISL	10.16	10.15	33.817	26.006	202.4	0.426	3.20	50.3							151		
161	9.96	9.94	33.883	26.090	194.7	0.448	3.01	47.2	24.0	1.68	24.3	0.00	0.00	0.02	162		
180	9.61	9.59	33.921	26.178	186.6	0.484	2.91	45.3	26.1	1.77	24.3	0.00			181		
200	9.10	9.08	33.992	26.316	173.7	0.520	2.73	42.0	30.4	1.89	27.6	0.01			201		
229	8.63	8.61	34.058	26.442	162.1	0.569	2.45	37.3	35.0	1.94	28.6	0.00			230		
250 ISL	8.37	8.34	34.073	26.498	157.1	0.603	2.32	35.2							252		
267	8.18	8.15	34.087	26.534	153.9	0.629	2.22	33.5	40.3	2.09	30.3	0.00			269		
300 ISL	7.77	7.74	34.109	26.617	146.4	0.679	1.89	28.2							302		
326	7.46	7.43	34.139	26.681	140.7	0.716	1.60	23.7	50.0	2.32	34.6	0.01			328		
398	6.82	6.78	34.208	26.824	127.7	0.813	0.96	14.0	61.6	2.59	36.8	0.00			401		
400 ISL	6.81	6.77	34.203	26.828	127.4	0.815	0.94	13.8							403		
469	6.30	6.26	34.270	26.943	117.1	0.900	0.52	7.5	71.8	2.82	39.8	0.01			473		
500 ISL	6.02	5.97	34.293	27.003	111.6	0.935	0.40	5.8							504		
542	5.58	5.53	34.345	27.093	103.2	0.980	0.32	4.5	86.6	3.00	39.7	0.00			546		

RV NEW HORIZON				CRUISE R312				STATION 90 42									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
33 1.0 N	118 43.5 W	06/12/83	1501 GMT	1128 M	050	05 KT	270 02 06	0	1021.1 MB	15.6 C	11.4 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	16.59	16.59	33.407	24.388	353.1	0.000	5.67	101.8							0		
2	16.59	16.59	33.407	24.388	353.1	0.007	5.67	101.8	1.6	0.25	0.1	0.00	0.22	0.11	2		
10 ISL	16.59	16.59	33.406	24.388	353.4	0.035	5.69	102.1							10		
12	16.59	16.59	33.406	24.388	353.5	0.042	5.69	102.2	1.6	0.24	0.1	0.00	0.22	0.11	12		
20 ISL	16.59	16.59	33.405	24.388	353.7	0.071	5.70	102.4							20		
26	16.59	16.59	33.406	24.389	353.9	0.092	5.71	102.5	1.6	0.23	0.1	0.00	0.24	0.11	26		
30 ISL	16.58	16.57	33.402	24.390	353.9	0.106	5.71	102.4							30		
41	16.55	16.54	33.399	24.393	353.9	0.145	5.68	101.9	1.6	0.24	0.0	0.00	0.24	0.12	41		
50 ISL	14.63	14.62	33.269	24.721	322.8	0.175	5.63	97.3							50		
55	13.52	13.51	33.235	24.924	303.5	0.191	5.61	94.6	2.7	0.43	1.2	0.00	0.48	0.56	55		
65	12.84	12.83	33.329	25.132	283.9	0.220	5.29	88.0	3.9	0.58	4.6	0.00	0.17	0.28	65		
75	12.73	12.72	33.475	25.267	271.3	0.248	5.23	86.9	4.4	0.59	5.2	0.00	0.11	0.18	75		
89	11.98	11.97	33.515	25.442	255.0	0.285	4.56	74.6	9.3	0.92	10.4	0.00	0.05	0.09	89		
100 ISL	11.44	11.43	33.565	25.583	241.7	0.312	4.18	67.5							100		
104	11.27	11.26	33.590	25.632	237.2	0.322	4.06	65.4	13.4	1.17	14.9	0.01	0.02	0.05	104		
118	10.84	10.83	33.669	25.771	224.3	0.354	3.72	59.4	17.0	1.32	18.4	0.00	0.02	0.04	118		
125 ISL	10.61	10.59	33.701	25.839	217.9	0.370	3.56	56.6							125		
142	10.00	9.98	33.786	26.007	202.1	0.405	3.25	51.0	22.3	1.57	21.6	0.00	0.01	0.03	143		
150 ISL	9.67	9.66	33.824	26.095	193.9	0.421	3.17	49.3							151		
161	9.28	9.26	33.880	26.199	184.0	0.442	3.08	47.6	26.7	1.71	23.0	0.00	0.00	0.02	162		
180	8.99	8.97	33.926	26.282	176.5	0.476	2.95	45.3	29.2	1.75	25.7	0.00			181		
200	8.60	8.58	33.996	26.398	165.8	0.511	2.81	42.8	33.1	1.87	26.4	0.00			201		
229	8.11	8.09	34.042	26.509	155.6	0.557	2.48	37.3	38.4	2.02	27.4	0.01			230		
250 ISL	7.91	7.88	34.066	26.561	150.9	0.589	2.25	33.8							252		
266	7.78	7.75	34.089	26.595	148.0	0.613	2.08	31.1	44.4	2.20	29.5	0.01			268		
300 ISL	7.36	7.33	34.111	26.677	140.5	0.662	1.69	25.0							302		
325	7.06	7.03	34.136	26.734	135.3	0.697	1.41	20.7	55.8	2.46	34.4	0.00			327		
396	6.64	6.60	34.231	26.867	123.6	0.789	0.76	11.1	65.7	2.70	37.3	0.01			399		
400 ISL	6.61	6.58	34.228	26.873	123.0	0.794	0.74	10.7							403		
467	6.15	6.11	34.283	26.972	114.2	0.873	0.45	6.5	75.2						471		
500 ISL	5.91	5.87	34.301	27.022	109.7	0.910	0.37	5.3							504		
539	5.62	5.57	34.337	27.082	104.2	0.952	0.33	4.7	86.1	2.87	40.6	0.02			543		

RV NEW HORIZON				CRUISE 8312								STATION 90 53			
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
32 39.4 N	119 28.3 W	06/12/83	2127 GMT	1291 M	350	09 KT	320 04 08	0	1018.9 MB	16.1 C	12.9 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0 ISL	16.37	16.37	33.457	24.478	344.5	0.000	5.67	101.4							0
1	16.37	16.37	33.457	24.478	344.5	0.003	5.67	101.4	2.5	0.25	0.2	0.00	0.43	0.18	1
10 ISL	16.28	16.28	33.455	24.497	343.0	0.034	5.74	102.4							10
11	16.27	16.27	33.455	24.499	342.8	0.038	5.74	102.5	2.4	0.23	0.2	0.00	0.44	0.24	11
20 ISL	16.16	16.16	33.455	24.526	340.6	0.069	5.73	102.1							20
25	16.08	16.08	33.455	24.543	339.1	0.086	5.73	101.9	2.2	0.27	0.2	0.00	0.53	0.24	25
30 ISL	15.96	15.95	33.447	24.566	337.0	0.102	5.71	101.3							30
40	15.73	15.72	33.435	24.607	333.4	0.136	5.68	100.3	2.3	0.31	0.5	0.00	0.66	0.28	40
50 ISL	15.69	15.68	33.430	24.615	332.7	0.169	5.67	100.1							50
54	15.65	15.64	33.431	24.622	332.5	0.183	5.67	100.0	2.3	0.32	0.7	0.00	0.64	0.31	54
64	15.30	15.29	33.419	24.691	326.2	0.216	5.54	97.0	2.8	0.56	1.8	0.00	0.44	0.26	64
75	13.24	13.23	33.392	25.102	287.1	0.249	5.08	85.3	5.8	0.68	5.9	0.00	0.31	0.37	75
88	12.12	12.11	33.441	25.358	262.9	0.285	4.67	76.6	9.1	0.90	10.4	0.00	0.18	0.29	88
100 ISL	11.30	11.28	33.517	25.573	242.7	0.315	4.28	68.9							100
103	11.12	11.11	33.543	25.622	238.0	0.323	4.18	67.1	13.6	1.16	15.5	0.00	0.06	0.12	103
117	10.43	10.42	33.648	25.826	219.9	0.355	3.78	59.8	18.0	1.37	19.3	0.00	0.03	0.07	117
125 ISL	10.22	10.21	33.681	25.890	212.9	0.372	3.64	57.4							125
141	9.91	9.89	33.747	25.992	203.5	0.405	3.41	53.4	22.3	1.58	21.9	0.00	0.02	0.04	142
150 ISL	9.65	9.63	33.797	26.078	195.5	0.423	3.22	50.1							151
160	9.37	9.35	33.859	26.168	187.0	0.442	3.02	46.7	26.6	1.72	25.2	0.00	0.01	0.03	161
179	9.08	9.06	33.924	26.266	178.0	0.477	2.87	44.1	30.1	1.88	26.4	0.00			180
200	8.87	8.85	33.959	26.327	172.6	0.514	2.76	42.3	32.0	1.85	27.2	0.00			201
228	8.40	8.38	34.020	26.448	161.5	0.561	2.60	39.4	36.1	1.95	29.2	0.00			229
250 ISL	8.09	8.07	34.047	26.519	155.0	0.596	2.39	36.0							252
265	7.90	7.87	34.068	26.561	151.2	0.618	2.22	33.3	42.4	2.07	31.2	0.00			267
300 ISL	7.44	7.41	34.102	26.658	142.3	0.670	1.78	26.4							302
323	7.18	7.15	34.131	26.714	137.3	0.702	1.50	22.1	53.6	2.39	34.6	0.00			325
395	6.75	6.69	34.208	26.837	126.5	0.797	0.94	13.7	63.8	2.61	37.5	0.00			398
403 ISL	6.68	6.64	34.206	26.847	125.5	0.803	0.90	13.1							403
466	6.02	5.98	34.260	26.971	114.2	0.893	0.52	7.5	76.8	2.81	41.2	0.00			470
500 ISL	5.81	5.76	34.271	27.012	110.5	0.921	0.50	7.2							504
539	5.66	5.61	34.293	27.042	108.0	0.964	0.48	6.8	83.8	2.90	41.4	0.00			543

RV NEW HORIZON				CRUISE 8312								STATION 90 55					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 32.3 N	119 36.5 W	07/12/83	0023 GMT	911 M	340	07 KT	230 04 09	0	1018.2 MB	16.3 C	13.8 C		0/8				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAEO	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	16.86	16.86	33.508	24.403	351.7	0.000	5.58	100.8							0		
2	16.86	16.86	33.508	24.403	351.7	0.007	5.58	100.8	1.9	0.17	0.2	0.00	0.19	0.08	2		
10 ISL	16.84	16.84	33.506	24.406	351.6	0.035	5.72	103.3							10		
11	16.84	16.84	33.506	24.406	351.6	0.039	5.73	103.4	1.9	0.19	0.3	0.00	0.18	0.08	11		
20 ISL	16.80	16.80	33.507	24.417	350.9	0.070	5.69	102.6							20		
26	16.78	16.78	33.510	24.424	350.5	0.091	5.66	102.1	1.8	0.17	0.1	0.00	0.23	0.10	26		
30 ISL	16.78	16.78	33.508	24.424	350.5	0.105	5.65	101.8							30		
40	16.78	16.77	33.509	24.424	350.9	0.140	5.63	101.5	1.8	0.13	0.1	0.00	0.26	0.10	40		
50 ISL	16.77	16.76	33.506	24.427	351.0	0.176	5.62	101.3							50		
54	16.76	16.75	33.508	24.428	351.0	0.190	5.62	101.3	1.8	0.10	0.1	0.00	0.28	0.11	54		
64	14.03	14.02	33.334	24.896	306.5	0.222	5.46	93.1	4.0		2.0	0.00	0.58	0.42	64		
73	12.80	12.79	33.349	25.156	281.9	0.249	5.20	86.5	5.3	0.70	5.1	0.00	0.28	0.51	73		
75 ISL	12.63	12.62	33.356	25.196	278.1	0.255	5.15	85.4							75		
87	11.97	11.96	33.424	25.373	261.4	0.287	4.88	79.8	7.7	0.82	8.9	0.00	0.10	0.13	87		
100 ISL	11.55	11.53	33.472	25.492	250.4	0.320	4.47	72.4							100		
102	11.48	11.47	33.484	25.511	248.6	0.325	4.41	71.3	11.2	1.07	13.1	0.00	0.07	0.12	102		
116	10.61	10.60	33.592	25.751	226.0	0.358	4.22	67.0	14.9		16.5	0.00	0.03	0.05	116		
125 ISL	10.20	10.18	33.649	25.869	214.9	0.378	4.05	63.8							125		
139	9.70	9.68	33.749	26.028	200.0	0.407	3.69	57.5	21.2	1.72	20.4	0.00	0.01	0.02	140		
150 ISL	9.35	9.34	33.845	26.162	187.3	0.429	3.24	50.1							151		
157	9.18	9.16	33.903	26.233	180.7	0.442	2.98	45.9	28.7	1.97	25.0	0.00	0.00	0.02	158		
176	8.92	8.96	33.945	26.298	174.9	0.475	2.86	43.9	30.6	2.02	26.1	0.00			177		
195	8.76	8.74	33.981	26.361	169.2	0.508	2.76	42.2	32.3	2.07	26.5	0.00			196		
200 ISL	8.68	8.66	33.989	26.384	167.2	0.517	2.72	41.4							201		
225	8.24	8.22	34.049	26.495	156.9	0.557	2.47	37.3							226		
250 ISL	7.87	7.85	34.073	26.572	149.9	0.595	2.23	33.3							252		
262	7.72	7.69	34.086	26.601	147.3	0.613	2.11	31.5	44.6	2.36	32.0	0.00			264		
300 ISL	7.37	7.34	34.104	26.670	141.2	0.668	1.76	26.1							302		
317	7.25	7.22	34.120	26.695	139.0	0.692	1.61	23.8	52.4	2.66		0.00			319		
387	6.75	6.71	34.192	26.821	127.8	0.785	1.00	14.6	62.3	2.74	37.0	0.00			390		
400 ISL	6.67	6.63	34.194	26.839	126.3	0.802	0.92	13.4							403		
458	6.29	6.25	34.234	26.916	119.5	0.873	0.65	9.4	71.7	3.02	38.3	0.00			461		
500 ISL	5.95	5.91	34.258	26.984	113.3	0.922	0.51	7.3							504		
528	5.70	5.65	34.289	27.034	108.7	0.953	0.44	6.3	83.0	3.06	41.1	0.00			532		

RV NEW HORIZON				CRUISE 8312				STATION 90 60									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 24.6 N	119 56.4 W	07/12/83	0401	944 M	340	10 KT	310 04 08	0	1018.1 MB	16.0 C	12.8 C	0/8					
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	17.00	17.00	33.451	24.326	358.9	0.000	5.47	99.0							0		
1	17.00	17.00	33.451	24.326	358.9	0.004	5.47	99.0	2.0	0.31	0.3	0.00	0.20	0.09	1		
10	17.02	17.02	33.452	24.323	359.6	0.036	5.64	102.1	1.4	0.30	0.3	0.00	0.20	0.09	10		
20 ISL	17.02	17.02	33.452	24.324	359.9	0.072	5.67	102.6							20		
24	17.02	17.02	33.453	24.324	359.9	0.086	5.68	102.8	1.4	0.28	0.2	0.00	0.20	0.09	24		
30 ISL	17.02	17.02	33.451	24.324	360.2	0.108	5.67	102.7							30		
39	17.02	17.01	33.452	24.324	360.5	0.140	5.65	102.3	1.4	0.24	0.2	0.00	0.23	0.09	39		
50 ISL	17.01	17.00	33.449	24.326	360.6	0.180	5.64	102.1							50		
53	17.01	17.00	33.451	24.326	360.7	0.191	5.64	102.1	1.4	0.25	0.2	0.00	0.26	0.10	53		
67	15.13	15.12	33.358	24.681	327.2	0.239	5.66	98.7	2.8	0.40	0.6	0.00	0.74	0.45	67		
75 ISL	13.14	13.13	33.354	25.094	287.9	0.263	5.14	86.0							75		
77	12.67	12.66	33.367	25.195	278.2	0.269	4.99	82.8	6.7	0.80	7.3	0.00	0.25	0.28	77		
91	11.51	11.50	33.467	25.492	250.1	0.306	4.51	73.0	10.6	1.07	12.8	0.00	0.08	0.12	91		
100 ISL	11.06	11.05	33.534	25.628	237.4	0.328	4.18	67.0							100		
110	10.68	10.67	33.609	25.752	225.8	0.351	3.86	61.4	16.7	1.41	18.6	0.00	0.05	0.07	110		
125 ISL	10.06	10.04	33.693	25.926	209.4	0.384	3.64	57.2							125		
128	9.94	9.93	33.711	25.958	206.4	0.390	3.63	56.9	20.5	1.51	21.2	0.00	0.02	0.04	128		
147	9.28	9.26	33.804	26.140	189.4	0.428	3.76	58.1	23.6	1.54	22.6	0.00	0.02	0.04	147		
150 ISL	9.22	9.20	33.816	26.162	187.3	0.434	3.70	57.1							150		
166	8.93	8.91	33.893	26.265	177.8	0.463	3.39	52.0	27.6	1.71	25.0	0.00	0.01	0.02	166		
185	8.55	8.53	33.950	26.369	168.2	0.496	3.46	52.6	29.7	1.80	25.6	0.01	0.01	0.03	185		
200 ISL	8.41	8.39	34.002	26.435	162.1	0.520	2.97	45.0							200		
204	8.38	8.36	34.020	26.450	160.8	0.527	2.82	42.7	35.6	1.95	28.2	0.02			204		
238	7.95	7.93	34.033	26.525	154.1	0.580	2.73	40.9	38.8	2.02	29.2	0.00			238		
250 ISL	7.83	7.80	34.043	26.555	151.5	0.599	2.59	38.7							250		
283	7.56	7.53	34.094	26.631	144.7	0.648	2.11	31.4	46.9	2.32	32.5	0.00			283		
300 ISL	7.49	7.46	34.112	26.659	142.3	0.672	1.91	28.3							300		
336	7.34	7.31	34.156	26.711	137.9	0.723	1.54	22.8	53.2	2.56		0.00			336		
400 ISL	6.58	6.54	34.150	26.816	128.3	0.808	1.13	16.4							400		
416	6.36	6.32	34.155	26.844	125.7	0.828	1.05	15.2	66.2	2.65	38.9	0.00			416		
496	5.68	5.64	34.221	26.982	113.1	0.924	0.57	8.1	81.0	2.95	38.3	0.00			496		
500 ISL	5.65	5.61	34.218	26.989	112.5	0.928	0.55	7.9							500		
577	5.20	5.15	34.298	27.101	102.3	1.011	0.34	4.8	91.4	3.02	43.3	0.00			577		

RV NEW HORIZON				CRUISE 8312				STATION 90 65									
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
32 14.9 N	120 17.1 W	07/12/83	0756	3745 M	340	13 KT	330 04 08	4	1019.8 MB	15.9 C	14.0 C	0/8					
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	17.34	17.34	33.563	24.332	358.4	0.000	5.57	101.5							0		
1	17.34	17.34	33.563	24.332	358.4	0.004	5.57	101.5	2.0	0.29	0.2	0.00	0.40	0.13	1		
10 ISL	17.34	17.34	33.562	24.332	358.8	0.036	5.56	101.4							10		
11	17.34	17.34	33.562	24.332	358.8	0.039	5.56	101.4	1.7	0.35	0.2	0.00	0.37	0.15	11		
20 ISL	17.34	17.34	33.561	24.331	359.2	0.072	5.56	101.4							20		
26	17.35	17.35	33.562	24.330	359.5	0.093	5.56	101.4	1.7	0.31	0.2	0.00	0.37	0.15	26		
30 ISL	17.36	17.35	33.561	24.329	359.8	0.108	5.55	101.2							30		
40	17.37	17.36	33.564	24.327	360.2	0.144	5.54	101.0	1.7	0.29	0.2	0.00	0.36	0.15	40		
50 ISL	17.34	17.33	33.561	24.333	359.9	0.180	5.57	101.5							50		
55	17.33	17.32	33.563	24.336	359.8	0.199	5.58	101.7	1.7	0.38	0.2	0.02	0.37	0.14	55		
69	15.77	15.76	33.494	24.644	330.8	0.246	5.38	95.1	3.4	0.43	1.9	0.00	0.52	0.17	69		
75 ISL	13.85	13.84	33.466	25.037	293.4	0.264	4.89	83.2							75		
79	12.58	12.57	33.481	25.301	268.2	0.276	4.54	75.2	9.2	0.92	10.1	0.00	0.38	0.46	79		
93	11.10	11.09	33.571	25.647	235.4	0.311	3.90	62.6	14.3	1.39	17.0	0.01	0.10	0.12	93		
100 ISL	10.77	10.76	33.602	25.733	227.4	0.328	3.77	60.1							100		
112	10.45	10.44	33.656	25.828	218.5	0.354	3.65	57.8	17.6	1.50	19.2		0.05	0.07	112		
125 ISL	10.01	10.00	33.732	25.965	205.7	0.382	3.41	53.5							125		
131	9.83	9.81	33.773	26.025	200.1	0.394	3.30	51.6	22.4	1.79	21.5	0.01	0.02	0.03	131		
150	9.40	9.38	33.865	26.168	186.8	0.431	3.04	47.1	25.7	1.78	24.6	0.00	0.01	0.02	150		
169	9.16	9.14	33.928	26.256	178.8	0.466	2.88	44.4	29.1	1.82	25.6	0.00	0.00	0.02	169		
189	8.76	8.74	33.980	26.360	169.1	0.500	2.82	43.1	31.2	1.91	25.0	0.01			189		
200 ISL	8.58	8.56	34.007	26.412	164.4	0.519	2.68	40.8							200		
208	8.47	8.45	34.031	26.446	161.3	0.532	2.57	39.0	35.2	1.93	28.7	0.00			208		
241	8.05	8.03	34.072	26.541	152.7	0.584	2.29	34.4	40.1	2.08	30.4	0.00			241		
250 ISL	7.92	7.89	34.076	26.568	150.3	0.597	2.19	32.9							250		
289	7.36	7.33	34.110	26.672	140.8	0.654	1.76	26.1	49.4	2.38	34.1	0.00			289		
300 ISL	7.24	7.22	34.113	26.694	138.8	0.670	1.65	24.3							300		
342	6.87	6.84	34.143	26.766	132.4	0.726	1.26	18.4	58.1	2.55	36.0	0.00			342		
400 ISL	6.38	6.34	34.168	26.856	124.4	0.801	0.90	13.0							400		
423	6.20	6.16	34.186	26.889	121.4	0.829	0.79	11.4	69.2	2.76	39.1	0.00			423		
500 ISL	5.67	5.62	34.218	26.987	112.7	0.919	0.49	7.0							500		
504	5.64	5.60	34.227	26.992	112.2	0.924	0.48	6.8	79.7	2.94	40.8	0.01			504		
586	5.18	5.13	34.290	27.097	102.8	1.012	0.33	4.6	90.8	2.96	43.1	0.00			586		

RV NEW HORIZON				CRUISE 8312								STATION 90 70			
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
32 3.0 N	120 38.0 W	07/12/83	1157 GMT	3811 M	340	13 KT	320 04 06	0	1018.7 MB	15.5 C	13.9 C		0/8		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0 ISL	17.22	17.22	33.539	24.342	357.5	0.000	5.53	100.6							0
2	17.22	17.22	33.539	24.342	357.5	0.007	5.53	100.6	2.5	0.29	0.2	0.00	0.24	0.10	2
10 ISL	17.22	17.22	33.537	24.341	357.9	0.036	5.58	101.4							10
11	17.22	17.22	33.537	24.341	357.9	0.039	5.58	101.5	2.5	0.29	0.2	0.01	0.24	0.10	11
20 ISL	17.21	17.20	33.536	24.344	357.9	0.072	5.57	101.2							20
26	17.20	17.20	33.537	24.346	357.9	0.093	5.56	101.1	2.4	0.26	0.2	0.00	0.24	0.10	26
30 ISL	17.21	17.20	33.535	24.344	358.2	0.107	5.55	101.0							30
40	17.23	17.22	33.537	24.340	359.0	0.143	5.54	100.8	2.2	0.35	0.2	0.00	0.25	0.10	40
50 ISL	17.22	17.21	33.536	24.344	358.9	0.179	5.54	100.7							50
55	17.21	17.20	33.539	24.346	358.9	0.197	5.54	100.7	2.1	0.26	0.1	0.01	0.24	0.10	55
70	13.55	13.54	33.450	25.084	288.7	0.246	4.90	82.8	7.6	0.69	5.9	0.16	0.54	0.51	70
75 ISL	12.67	12.66	33.462	25.272	270.9	0.260	4.58	76.0							75
78	12.22	12.21	33.479	25.369	261.7	0.268	4.39	72.2	10.8	1.14	11.8	0.01	0.21	0.29	78
93	10.98	10.97	33.568	25.667	233.5	0.305	3.88	62.1	15.4	1.40	17.1	0.01	0.09	0.14	93
100 ISL	10.71	10.70	33.594	25.736	227.0	0.321	3.77	60.0							100
112	10.47	10.41	33.646	25.826	218.8	0.348	3.63	57.4	18.4	1.55	19.6	0.01	0.05	0.08	112
125 ISL	9.95	9.93	33.728	25.972	205.0	0.375	3.38	52.9							125
130	9.78	9.77	33.765	26.027	199.9	0.385	3.28	51.2	23.2	1.63	22.3	0.00	0.01	0.03	131
149	9.40	9.38	33.859	26.163	187.3	0.422	3.04	47.1	26.7	1.79	25.0	0.01	0.01	0.02	150
150 ISL	9.38	9.36	33.860	26.171	186.6	0.424	3.02	46.8							151
168	9.01	8.99	33.942	26.291	175.4	0.457	2.79	42.9	30.7	1.94	26.3	0.01	0.00	0.02	169
188	8.70	8.68	33.986	26.375	167.8	0.491	2.72	41.5	32.8	1.97	28.0	0.00			189
200 ISL	8.56	8.54	34.006	26.415	164.1	0.511	2.62	39.8							201
207	8.48	8.46	34.023	26.438	162.1	0.522	2.55	38.7	36.0	2.03	29.1	0.00			208
239	7.99	7.97	34.064	26.544	152.4	0.573	2.27	34.1	41.4	2.14	30.7	0.01			240
250 ISL	7.85	7.82	34.066	26.570	150.0	0.589	2.18	32.6							252
287	7.44	7.41	34.090	26.645	143.4	0.644	1.86	27.6	48.7	2.39	33.7	0.00			289
300 ISL	7.32	7.29	34.098	26.672	141.0	0.662	1.72	25.4							302
339	6.99	6.96	34.143	26.750	134.0	0.716	1.30	19.1	58.3	2.59	36.4	0.01			341
400 ISL	6.44	6.40	34.176	26.854	124.6	0.795	0.84	12.2							403
419	6.27	6.23	34.190	26.883	122.0	0.818	0.74	10.7	69.9	2.76	39.3	0.00			422
499	5.66	5.62	34.212	26.978	113.6	0.912	0.50	7.1	81.0	3.08	42.2	0.01			503
500 ISL	5.65	5.61	34.206	26.979	113.5	0.914	0.50	7.1							504
579	5.24	5.19	34.265	27.070	105.3	1.000	0.30	4.2	90.0	3.04	42.3	0.00			584

RV NEW HORIZON				CRUISE 8312								STATION 90 75			
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
31 54.0 N	120 56.3 W	07/12/83	1432 GMT	4114 M	330	09 KT	350 04 06	1	1019.8 MB	15.6 C	13.8 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL.A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0 ISL	16.94	16.94	33.441	24.333	358.4	0.000	5.63	101.8							0
2	16.94	16.94	33.441	24.333	358.4	0.007	5.63	101.8	1.0	0.27	0.2	0.00	0.19	0.07	2
10 ISL	16.94	16.94	33.438	24.331	358.8	0.036	5.64	102.0							10
12	16.94	16.94	33.438	24.331	358.9	0.043	5.64	102.0	1.0	0.28	0.2	0.01	0.20	0.08	12
20 ISL	16.93	16.93	33.437	24.333	358.9	0.072	5.63	101.8							20
22	16.93	16.93	33.438	24.334	359.0	0.079	5.63	101.8	0.9	0.28	0.2	0.01	0.19	0.08	22
30 ISL	16.96	16.95	33.439	24.330	359.6	0.108	5.58	100.8							30
31	16.96	16.95	33.441	24.329	359.7	0.111	5.57	100.7	0.9	0.27	0.2	0.00	0.19	0.09	31
41	16.92	16.91	33.441	24.339	359.1	0.147	5.61	101.4	0.8		0.4	0.01	0.19	0.07	41
50 ISL	16.95	16.94	33.449	24.341	359.1	0.180	5.61	101.4							50
55	16.96	16.95	33.457	24.343	359.2	0.197	5.61	101.5	0.8		0.2	0.01	0.22	0.08	55
64	16.59	16.58	33.450	24.424	351.8	0.229	5.62	100.9	0.7	0.30	0.2	0.00	0.30	0.12	64
75	13.34	13.33	33.313	25.021	294.8	0.265	5.41	91.0	2.8	0.59	3.0	0.00	0.36	0.32	75
88	11.88	11.87	33.452	25.412	257.8	0.301	4.43	72.3	9.1	1.03	12.0	0.02	0.18	0.20	88
100 ISL	11.28	11.26	33.508	25.569	243.0	0.331	4.22	68.0							100
108	11.05	11.04	33.535	25.629	237.5	0.350	4.08	65.4	12.5	1.21	15.7	0.00	0.06	0.12	108
125 ISL	10.39	10.37	33.634	25.825	219.1	0.389	3.80	60.1							125
127	10.31	10.29	33.651	25.849	216.9	0.394	3.76	59.4	17.0	1.50	20.3	0.01	0.02	0.05	128
149	9.54	9.52	33.845	26.130	190.5	0.438	3.08	47.8	24.1	1.73	25.1	0.00	0.00	0.03	150
150 ISL	9.52	9.50	33.846	26.137	189.8	0.440	3.07	47.6							151
178	9.02	9.00	33.938	26.287	176.1	0.492	2.87	44.1	28.2	1.90	27.2	0.01			179
200 ISL	8.59	8.57	34.014	26.417	164.0	0.529	2.57	39.1							201
207	8.46	8.44	34.040	26.454	160.6	0.540	2.48	37.6	34.8	1.98	29.0	0.00			208
240	7.97	7.95	34.067	26.549	151.9	0.592	2.31	34.7	39.5	2.12	30.5	0.00			241
250 ISL	7.84	7.82	34.066	26.571	149.9	0.607	2.26	33.8							252
288	7.41	7.38	34.082	26.643	143.6	0.663	2.00	29.6	46.3	2.30	34.4	0.00			290
300 ISL	7.28	7.25	34.082	26.665	141.5	0.680	1.88	27.7							302
341	6.88	6.85	34.113	26.741	134.8	0.737	1.43	20.9	54.8	2.49	36.0	0.00			343
400 ISL	5.50	5.47	34.173	26.844	125.6	0.813	0.90	13.0							403
424	6.38	6.34	34.207	26.882	122.3	0.843	0.73	10.6	67.0	2.74	40.2	0.01			427
500 ISL	5.90	5.86	34.249	26.982	113.4	0.933	0.47	6.7							504
504	5.88	5.84	34.258	26.987	113.0	0.937	0.46	6.6	76.6	2.94	40.3	0.00			508
587	5.52	5.47	34.325	27.085	104.4	1.028	0.31	4.4	85.8	3.00	42.9	0.00			592

RV NEW HORIZON				CRUISE 8312								STATION 90 80			
LATITUDE	LONGITUDE	DAY/MO/YR	MESSANGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
31 44.7 N	121 18.3 W	07/12/83	2024 GMT	3478 M	360	08 KT	350 04 06	1	1017.3 MB	16.2 C	14.0 C		6/8	ST	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0 ISL	16.92	16.92	33.398	24.305	361.0	0.000	5.56	100.5							0
2	16.92	16.92	33.398	24.305	361.0	0.007	5.56	100.5	2.6	0.26	0.3	0.01	0.22	0.08	2
10 ISL	16.92	16.92	33.399	24.306	361.2	0.036	5.65	102.2							10
12	16.92	16.92	33.400	24.307	361.2	0.043	5.67	102.4	2.6	0.25	0.3	0.01	0.14	0.06	12
20 ISL	16.88	16.88	33.402	24.319	360.3	0.072	5.68	102.5							20
26	16.84	16.84	33.405	24.330	359.5	0.094	5.68	102.5	2.6	0.24	0.3	0.00	0.17	0.07	26
30 ISL	16.82	16.82	33.403	24.333	359.2	0.108	5.67	102.2							30
40	16.78	16.77	33.402	24.342	358.7	0.144	5.64	101.6	2.6	0.27	0.3	0.00	0.22	0.08	40
50 ISL	16.72	16.71	33.397	24.353	358.0	0.180	5.65	101.6							50
54	16.70	16.69	33.398	24.358	357.7	0.194	5.65	101.6	2.6	0.24	0.3	0.01	0.27	0.10	54
68	14.32	14.31	33.296	24.806	315.2	0.241	5.65	96.9	3.2	0.41	0.5	0.01	0.70	0.53	68
75 ISL	13.30	13.29	33.299	25.020	294.9	0.263	5.35	89.9							75
77	13.05	13.04	33.308	25.075	289.7	0.269	5.26	87.9	4.9	0.55	3.8	0.00	0.32	0.38	77
91	12.24	12.23	33.375	25.284	270.0	0.308	4.94	81.2	7.1	0.86	8.2	0.00	0.12	0.18	91
100 ISL	11.76	11.75	33.415	25.408	258.4	0.332	4.66	75.8							100
110	11.28	11.27	33.474	25.540	246.0	0.357	4.32	69.6	12.1	1.06	13.6	0.00	0.07	0.13	110
125 ISL	10.68	10.66	33.592	25.742	227.1	0.392	3.82	60.7							125
128	10.58	10.56	33.619	25.777	225.8	0.399	3.73	59.2	18.1	1.33	19.0	0.00	0.03	0.07	129
147	10.18	10.16	33.705	25.913	211.2	0.440	3.45	54.3	27.4				0.02	0.04	147
150 ISL	10.06	10.04	33.725	25.952	207.5	0.447	3.38	53.1							151
165	9.47	9.45	33.847	26.143	189.6	0.476	3.06	47.5	30.0	1.76	25.9	0.00	0.00	0.03	166
183	9.14	9.12	33.917	26.251	179.5	0.510	2.89	44.5	32.5	1.83	27.4	0.00			184
200 ISL	8.87	8.85	33.955	26.328	172.5	0.540	2.83	43.3							201
202	8.84	8.82	33.964	26.336	171.8	0.543	2.82	43.2	32.1	1.83	28.1	0.01			203
235	8.41	8.39	34.040	26.462	160.3	0.598	2.46	37.3	37.8	1.99	29.9	0.00			236
250 ISL	8.21	8.19	34.055	26.508	156.1	0.622	2.32	35.0							252
281	7.81	7.78	34.086	26.588	148.8	0.669	2.05	30.7	45.4	2.21	32.9	0.01			283
300 ISL	7.58	7.55	34.094	26.633	144.8	0.697	1.86	27.7							302
334	7.19	7.16	34.121	26.705	138.3	0.745	1.53	22.6	53.9	2.39	35.8	0.00			336
400 ISL	6.60	6.57	34.164	26.824	127.6	0.833	0.94	13.6							403
412	6.51	6.47	34.179	26.843	125.9	0.848	0.85	12.3	67.2	2.66	40.4	0.01			415
492	5.90	5.86	34.219	26.954	116.0	0.945	0.57	8.2	78.2	2.80	41.4	0.00			498
500 ISL	5.84	5.79	34.216	26.965	115.0	0.954	0.55	7.8							504
570	5.30	5.25	34.260	27.059	106.3	1.032	0.38	5.4	90.5	2.96	44.9	0.00			575

RV NEW HORIZON				CRUISE 8312						STATION 90 85					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSANGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
31 34.0 N	121 38.8 W	08/12/83	0243 GMT	4149 M	350	11 KT	340 03 06	T	1012.2 MB	16.0 C	14.2 C	7/8		ST	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0 ISL	17.13	17.13	33.452	24.297	361.8	0.000	5.62	102.0							0
2	17.13	17.13	33.452	24.297	361.8	0.007	5.62	102.0	1.9	0.24	0.2	0.00	0.11	0.15	2
10 ISL	17.13	17.13	33.447	24.294	362.3	0.036	5.61	101.8							10
11	17.13	17.13	33.448	24.294	362.4	0.040	5.61	101.8	1.7	0.24	0.2	0.00	0.16	0.07	11
20 ISL	17.12	17.12	33.446	24.295	362.6	0.072	5.60	101.7							20
25	17.12	17.12	33.447	24.296	362.6	0.091	5.60	101.6	1.7	0.23	0.2	0.02	0.16	0.06	25
30 ISL	17.13	17.12	33.447	24.295	362.9	0.109	5.59	101.4							30
38	17.14	17.13	33.450	24.294	363.3	0.138	5.57	101.1	1.6	0.25	0.2	0.03	0.20	0.08	38
50 ISL	17.10	17.09	33.447	24.304	362.7	0.181	5.57	101.0							50
52	17.09	17.08	33.449	24.306	362.7	0.189	5.57	101.0	1.6	0.23	0.2	0.02	0.22	0.08	52
65	15.51	15.50	33.342	24.585	336.2	0.234	5.65	99.3	2.5	0.34	0.2	0.01	0.66	0.44	65
74	13.38	13.37	33.326	25.023	294.6	0.262	5.28	88.9	4.3	0.56	3.2	0.01	0.41	0.39	74
75 ISL	13.25	13.24	33.326	25.050	292.0	0.265	5.25	88.1							75
88	12.34	12.33	33.383	25.271	271.2	0.302	4.86	80.0	7.0	0.79	8.1	0.00	0.15	0.20	88
100 ISL	11.75	11.74	33.453	25.439	255.5	0.334	4.41	71.7							100
106	11.49	11.48	33.499	25.521	247.8	0.349	4.18	67.6	12.4	1.11	14.6	0.01	0.09	0.15	106
124	10.44	10.43	33.652	25.827	218.9	0.391	3.61	57.2	18.0	1.39	20.1	0.00	0.03	0.06	124
125 ISL	10.41	10.39	33.654	25.837	218.0	0.393	3.60	56.9							125
141	10.02	10.00	33.732	25.961	206.4	0.427	3.42	53.7	21.1	1.54	22.8	0.01	0.02	0.03	142
150 ISL	9.78	9.76	33.776	26.039	199.2	0.445	3.24	50.6							151
159	9.57	9.55	33.824	26.108	192.7	0.463	3.08	47.9	25.0	1.67	25.3	0.00	0.01	0.03	160
178	9.35	9.33	33.888	26.195	184.9	0.499	3.02	46.7	27.3	1.73	24.0	0.01			179
197	9.05	9.03	33.963	26.302	175.0	0.533	2.78	42.7	30.2	1.82	26.9	0.02			198
200 ISL	8.99	8.97	33.967	26.318	173.5	0.538	2.76	42.4							201
228	8.46	8.44	34.034	26.450	161.3	0.585	2.57	39.0	35.7	1.95	29.7	0.01			229
250 ISL	8.16	8.14	34.070	26.527	154.3	0.620	2.28	34.4							252
272	7.90	7.87	34.103	26.588	148.7	0.653	1.99	29.8	43.8	2.30	32.4	0.01			274
300 ISL	7.50	7.47	34.106	26.653	142.8	0.694	1.79	26.5							302
322	7.20	7.17	34.114	26.698	138.8	0.725	1.65	24.3	52.2	2.35	35.5	0.02			324
399	6.58	6.54	34.186	26.839	126.1	0.827	0.90	13.1	65.0	2.60	39.5	0.02			402
400 ISL	6.57	6.54	34.181	26.841	126.0	0.828	0.89	13.0							403
476	6.10	6.06	34.239	26.944	116.9	0.921	0.58	8.3	73.8	2.81	41.0	0.00			480
500 ISL	5.96	5.92	34.249	26.975	114.1	0.948	0.50	7.2							504
555	5.66	5.61	34.295	27.044	108.1	1.009	0.37	5.3	83.6	2.96	42.0	0.00			559

RV NEW HORIZON				CRUISE R312						STATION 90 90							
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE			
31 23.7 N	121 59.5 W	08/12/83	0626 GNT	3928 M	350	09 KT		1	1019.8 MB	16.0 C	14.4 C	7/8		ST			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAE0	PRESS		
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR		
0 ISL	16.95	16.95	33.427	24.320	359.6	0.000	5.64	102.0							0		
2	16.95	16.95	33.427	24.320	359.6	0.007	5.64	102.0	1.4	0.25	0.2	0.00	0.15	0.06	2		
10 ISL	16.96	16.96	33.425	24.318	360.1	0.036	5.61	101.4							10		
12	16.96	16.96	33.426	24.317	360.2	0.043	5.60	101.3	1.4	0.27	0.3	0.00	0.16	0.07	12		
20 ISL	16.95	16.95	33.426	24.320	360.2	0.072	5.60	101.2							20		
26	16.94	16.94	33.427	24.323	360.1	0.094	5.60	101.2	0.9	0.26	0.2	0.00	0.15	0.06	26		
30 ISL	16.92	16.91	33.427	24.330	359.6	0.108	5.61	101.3							30		
40	16.84	16.83	33.429	24.349	358.1	0.144	5.62	101.4	0.9	0.34	0.2	0.01	0.17	0.06	40		
50 ISL	16.75	16.75	33.416	24.361	357.3	0.180	5.61	101.1							50		
54	16.72	16.71	33.414	24.365	357.0	0.194	5.61	101.0	0.9	0.25	0.2	0.00	0.22	0.08	54		
68	13.07	13.06	33.340	25.095	287.5	0.239	5.13	85.8	5.5	0.67	4.8	0.02	0.24	0.22	68		
75 ISL	12.41	12.40	33.382	25.260	272.0	0.259	4.84	79.8							75		
77	12.30	12.29	33.398	25.291	269.1	0.264	4.76	78.3	7.5	0.82	9.2	0.00	0.12	0.17	77		
91	11.63	11.62	33.443	25.451	254.0	0.301	4.59	74.5	9.4	0.94	11.7	0.01	0.09	0.12	91		
100 ISL	11.22	11.20	33.490	25.566	243.3	0.323	4.36	70.1							100		
110	10.78	10.77	33.564	25.699	230.8	0.347	4.03	64.2	16.2	1.27	17.5	0.01	0.04	0.06	110		
125 ISL	10.18	10.16	33.693	25.907	211.3	0.380	3.49	54.9							125		
128	10.07	10.06	33.722	25.945	207.7	0.386	3.39	53.3	20.8	1.70	22.4	0.01	0.02	0.03	129		
146	9.63	9.61	33.815	26.091	194.1	0.422	3.17	49.3	24.5	1.65	24.3	0.01	0.01	0.02	147		
150 ISL	9.55	9.53	33.838	26.125	191.0	0.430	3.09	48.0							151		
165	9.29	9.27	33.929	26.236	180.6	0.458	2.83	43.7	28.4	1.79	26.4	0.01	0.00	0.02	166		
183	9.00	8.98	33.969	26.314	173.5	0.490	2.77	42.5	30.5	1.86	27.6	0.02			184		
200 ISL	8.66	8.64	34.003	26.397	165.9	0.519	2.65	40.3							201		
202	8.62	8.60	34.011	26.407	165.0	0.522	2.63	40.1	34.2	1.94	29.6	0.02			203		
235	8.23	8.21	34.048	26.496	157.0	0.575	2.50	37.7	37.6	2.01	30.8	0.01			236		
250 ISL	8.06	8.03	34.060	26.535	153.5	0.598	2.36	35.5							252		
281	7.70	7.67	34.096	26.612	146.5	0.645	2.00	29.8	46.4	2.23	35.0	0.01			283		
300 ISL	7.48	7.45	34.105	26.655	142.6	0.672	1.79	26.5							302		
333	7.12	7.09	34.135	26.725	136.3	0.719	1.43	21.0	53.9	2.43	34.9	0.00			335		
400 ISL	6.52	6.48	34.191	26.856	124.5	0.806	0.82	11.9							403		
413	6.42	6.38	34.209	26.878	122.5	0.822	0.73	10.6	67.7	2.73	38.3	0.00			416		
493	5.98	5.94	34.266	26.981	113.6	0.916	0.47	6.7	76.4	2.85	40.5	0.01			497		
500 ISL	5.94	5.90	34.263	26.989	112.8	0.924	0.45	6.5							504		
574	5.49	5.44	34.312	27.078	104.9	1.005	0.29	4.1	86.8	2.98	43.8	0.00			579		

RV NEW HORIZON				CRUISE R312						STATION 90 100					
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE	
31 5.8 N	122 37.8 W	08/12/83	1153 GMT	4052 M	350	08 KT		1	1019.1 MB	15.9 C	13.4 C	7/8			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL A	PHAE0	PRESS
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
0 ISL	16.84	16.84	33.320	24.263	365.0	0.000	5.64	101.7							0
2	16.84	16.84	33.320	24.263	365.0	0.007	5.64	101.7	1.5	0.22	0.4	0.00	0.12	0.06	2
10 ISL	16.85	16.85	33.319	24.261	365.5	0.037	5.63	101.6							10
12	16.85	16.85	33.319	24.261	365.5	0.044	5.63	101.5	1.5	0.24	0.3	0.00	0.12	0.05	12
20 ISL	16.85	16.85	33.320	24.263	365.6	0.073	5.61	101.2							20
26	16.85	16.85	33.323	24.264	365.7	0.095	5.60	101.0	1.3	0.23	0.3	0.00	0.12	0.06	26
30 ISL	16.84	16.84	33.326	24.269	365.3	0.110	5.60	101.0							30
41	16.83	16.82	33.341	24.283	364.4	0.150	5.60	101.0	1.2	0.27	0.3	0.02	0.18	0.08	41
50 ISL	16.68	16.67	33.346	24.326	360.6	0.182	5.63	101.1							50
55	16.59	16.58	33.391	24.378	355.8	0.200	5.64	101.2	1.2	0.23	0.2	0.00	0.16	0.07	55
70	14.15	14.14	33.187	24.758	319.8	0.251	5.91	101.0	1.2	0.30	0.2	0.00	0.45	0.31	70
75 ISL	13.65	13.64	33.168	24.847	311.4	0.267	5.86	99.0							75
79	13.33	13.32	33.173	24.915	305.0	0.279	5.77	96.9	2.1	0.41	1.0	0.00	0.23	0.21	79
94	12.46	12.45	33.362	25.232	275.1	0.322	5.17	85.4	5.0	0.66	6.2	0.00	0.09	0.13	94
100 ISL	12.17	12.16	33.414	25.331	265.9	0.339	4.99	81.9							100
113	11.60	11.59	33.516	25.514	248.6	0.372	4.71	76.4	8.7	0.87	11.3	0.00	0.05	0.08	113
125 ISL	11.12	11.10	33.602	25.672	233.8	0.401	4.65	74.7							125
131	10.87	10.85	33.645	25.747	226.8	0.415	4.60	73.5	11.9	0.98	13.6	0.00	0.03	0.04	132
150	9.93	9.91	33.729	25.974	205.3	0.456	3.88	60.8	18.9	1.36	20.5	0.00	0.01	0.01	151
170	9.29	9.27	33.792	26.129	190.9	0.496	3.66	56.5	23.0	1.54	22.7	0.00	0.01	0.01	171
189	8.86	8.84	33.886	26.271	177.6	0.531	3.57	54.6	26.3	1.70	24.9	0.00			190
200 ISL	8.65	8.63	33.914	26.328	172.4	0.550	3.49	53.1							201
208	8.52	8.50	33.936	26.363	169.1	0.564			28.1	1.56	24.2	0.00			209
241	8.04	8.02	34.015	26.498	156.8	0.617	3.00	45.1	35.9	1.83	28.8	0.00			242
250 ISL	7.95	7.93	34.026	26.523	154.6	0.632	2.83	42.4							252
289	7.59	7.56	34.077	26.613	146.5	0.690	2.08	30.9	45.6	2.15	33.2	0.00			291
300 ISL	7.43	7.40	34.079	26.642	143.8	0.706	1.94	28.7							302
342	6.79	6.76	34.102	26.744	134.4	0.765	1.52	22.2	56.4	2.41	36.7	0.00			344
400 ISL	6.26	6.22	34.116	26.830	126.7	0.841	1.11	16.0							403
422	6.12	6.08	34.131	26.855	124.5	0.868	0.99	14.2	68.2	2.66	40.3	0.00			425
500 ISL	5.71	5.67	34.192	26.960	115.3	0.962	0.56	8.0							504
503	5.70	5.66	34.201	26.964	114.9	0.965	0.55	7.8	79.1	2.86	43.6	0.00			507
584	5.26	5.21	34.270	27.072	105.2	1.054	0.35	4.9	89.2	3.05	46.7	0.01			589

RV NEW HORIZON				CRUISE #312						STATION 90 110						
LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD	AMT	TYPE		
30 44.0 N	123 18.5 W	08/12/83	1735 GMT	3975 M	230	04 KT	340 01 03	1	1018.3 MB	16.5 C	13.4 C		4/8	SC		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SWA	DYN HT	OXYGEN	ORP	SIO3	PO4	NO3	NO2	CHL A	PHAEO	PRESS	
M	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR	
0 ISL	17.48	17.48	33.353	24.138	376.9	0.000	5.57	101.7								0
1	17.48	17.48	33.353	24.138	376.9	0.004	5.57	101.7	3.3	0.23	0.2	0.00	0.11	0.05		1
10 ISL	17.44	17.44	33.351	24.145	376.5	0.038	5.60	102.1								10
11	17.44	17.44	33.351	24.146	376.5	0.041	5.60	102.2	3.3	0.24	0.2	0.00	0.13	0.06		11
20 ISL	17.42	17.42	33.350	24.150	376.5	0.075	5.62	102.5								20
25	17.42	17.42	33.351	24.151	376.5	0.094	5.63	102.7	1.3	0.23	0.2	0.03	0.13	0.06		25
30 ISL	17.43	17.42	33.349	24.150	376.8	0.113	5.62	102.5								30
40	17.44	17.43	33.351	24.147	377.3	0.151	5.60	102.1	1.1	0.24	0.3	0.00	0.13	0.06		40
50 ISL	17.43	17.42	33.350	24.152	377.2	0.188	5.61	102.4								50
55	17.42	17.41	33.353	24.154	377.2	0.207	5.63	102.7	1.1	0.23	0.1	0.00	0.13	0.06		55
69	17.08	17.07	33.331	24.218	371.5	0.260	5.69	103.1	1.3	0.26	0.3	0.00	0.27	0.14		69
75 ISL	15.76	15.75	33.265	24.473	347.3	0.281	5.85	103.3								75
79	14.87	14.86	33.247	24.652	330.3	0.295	5.95	103.2	1.3	0.31	0.3	0.02	0.38	0.31		79
93	14.38	14.37	33.376	24.856	311.2	0.340	5.76	99.0	2.3	0.36	0.6	0.00	0.17	0.17		93
100 ISL	13.95	13.93	33.366	24.941	303.2	0.361	5.60	95.4								100
113	13.11	13.09	33.367	25.110	287.4	0.400	5.31	88.9	3.8	0.53	4.3	0.00	0.09	0.12		113
125 ISL	12.60	12.58	33.511	25.325	267.2	0.433	5.16	85.5								125
131	12.34	12.32	33.588	25.432	257.1	0.449	5.08	83.8	6.2	0.66	7.8	0.00	0.05	0.07		131
150 ISL	11.11	11.09	33.584	25.661	235.5	0.495	4.61	74.0								151
151	11.04	11.02	33.587	25.672	234.5	0.498	4.58	73.4	11.3	1.00	13.4	0.00	0.03	0.04		152
171	9.94	9.92	33.717	25.964	206.8	0.542	3.77	59.0	20.5	1.46	21.9	0.00	0.01	0.02		172
190	9.30	9.28	33.864	26.184	186.1	0.579	3.53	54.5	24.6	1.61	24.5	0.00				191
200 ISL	9.04	9.02	33.898	26.256	179.4	0.597	3.67	56.4								201
209	8.84	8.82	33.925	26.305	174.6	0.613	3.81	58.3	26.8	1.57	24.8	0.00				210
242	8.25	8.22	33.998	26.453	161.1	0.669	3.27	49.4	33.7	1.78	28.3	0.00				243
250 ISL	8.14	8.11	34.003	26.478	158.8	0.682	3.18	47.9								252
291	7.62	7.59	34.037	26.577	149.9	0.745	2.75	40.9	42.3	2.01	31.2	0.00				293
300 ISL	7.51	7.48	34.036	26.597	148.1	0.758	2.63	39.1								302
344	6.99	6.96	34.066	26.689	139.8	0.822	2.05	30.1	51.3	2.26	35.0	0.00				346
400 ISL	6.44	6.40	34.107	26.801	129.6	0.897	1.33	19.2								403
426	6.22	6.18	34.138	26.848	125.3	0.931	1.04	15.0	67.4	2.69	40.6	0.02				429
500 ISL	5.77	5.73	34.199	26.959	115.4	1.020	0.57	8.1								504
508	5.73	5.69	34.213	26.970	114.5	1.029	0.54	7.7	78.6		44.4	0.01				512
589	5.31	5.26	34.289	27.081	104.5	1.118	0.34	4.8	88.8	3.01	44.7	0.00				594

CRUISE 8301-TC MACROZOOPLANKTON BIOMASS

Net Mesh Size: 0.505 mm

Line	Sta.	Position		Date Mo/Day	Time (GMT)		Water Volume Strained (m ³)		Volume (cm ³) per 1000 m ³ Strained			
		°N	°W		Start	End	Port	Stbd	Total	Port Small	Starboard Total	Small
90	30	33	25.0	117	54.3	1/27	0935	0956	383	394	36	23
"	"	"	"	"	"	1/27	1015	1037	405	417	32	24
"	"	"	"	"	"	1/27	1050	1111	382	397	31	28
90	37	33	11.3	118	22.8	1/27	0410	0431	402	412	40	31
90	50	32	43.5	119	17.0	1/26	0930	0951	405	414	25	22
"	"	"	"	"	"	1/26	1000	1021	392	405	18	17
"	"	"	"	"	"	1/26	1030	1051	382	389	26	18
"	"	"	"	"	"	1/26	2045	2106	390	403	23	12
"	"	"	"	"	"	1/26	2120	2141	397	408	15	7
"	"	"	"	"	"	1/26	2150	2211	399	414	7	10
90	60	32	25.4	119	59.3	1/26	0145	0206	422	428	21	14
90	70	32	05.0	120	31.8	1/25	1015	1036	431	393	65	61
"	"	"	"	"	"	1/25	1050	1111	418	440	65	52
"	"	"	"	"	"	1/25	1120	1141	409	433	95	67
"	"	"	"	"	"	1/25	1930	1951	433	454	30	37
"	"	"	"	"	"	1/25	2005	2026	412	435	39	25
"	"	"	"	"	"	1/25	2040	2101	422	444	14	13
90	80	31	45.0	121	20.7	1/25	0200	0221	402	397	27	35
90	90	31	24.8	121	58.9	1/24	0630	0651	417	443	38	32
"	"	"	"	"	"	1/24	0705	0726	405	432	25	37
"	"	"	"	"	"	1/24	0750	0811	407	435	32	25
"	"	"	"	"	"	1/24	1925	1946	397	415	15	17
"	"	"	"	"	"	1/24	2000	2021	404	421	12	14
"	"	"	"	"	"	1/24	2035	2056	414	432	12	12
90	122	30	26.6	124	13.8	1/23	0700	0721	393	426	25	19
"	"	"	"	"	"	1/23	0735	0756	413	447	24	18
"	"	"	"	"	"	1/23	0810	0831	411	445	24	27

CRUISE 8302-3 TC MACROZOOPLANKTON BIOMASS

90	28	33	29.1	117	46.1	3/4	2049	2057		154		104	104
90	30	33	25.1	117	54.3	3/4	2330	2352		431		16	16
90	37	33	11.1	118	23.2	3/5	0620	0642		454		33	33
90	45	32	55.1	118	56.1	3/5	1932	1954		415		36	36
90	50	32	45.1	119	16.6	3/6	0022	0044		422		47	47
90	55	32	35.1	119	37.0	3/6	0632	0654		420		29	29
90	60	32	25.1	119	57.6	3/6	1202	1224		432		215	215

CRUISE 8303-EB MACROZOOPLANKTON BIOMASS

90	28	33	28.3	117	47.0	3/18	0041	0101	624	664	61	46	50	45
90	32	33	19.6	118	02.6	3/18	0600	0621	558	576	77	68	66	66
90	37	33	08.4	118	23.3	3/18	1325	1346	533	535	36	30	43	32
90	45	32	56.0	118	55.7	3/18	2021	2042	453	448	24	24	31	31
90	53	32	37.6	119	29.0	3/19	0308	0328	537	448	65	61	87	80
90	62	32	19.9	120	07.5	3/19	1040	1102	636	648	77	77	62	62

CRUISE 8303-EK MACROZOOPLANKTON BIOMASS

90	30	33	24.9	117	54.1	3/23	2250	2312		388		41	41
90	37	33	11.0	118	23.0	3/23	1840	1902		397		30	30
90	45	32	55.3	118	55.9	3/23	1500	1522		385		62	62

Net Mesh Size: 0.505 mm

Line	Sta.	Position		Date Mo/Day	Time (GMT) Start End	Water Volume Strained (m ³)		Volume (cm ³) per 1000 m ³ Strained			
		°N	°W			Port	Stbd	Port Total	Small	Starboard Total	Small
90	53	32 38.9	119 28.8	3/23	1035 1057		432			30	30
90	60	32 25.7	119 56.9	3/23	0705 0727		404			40	40
90	70	32 05.3	120 38.0	3/23	0242 0304		377			32	32
90	80	31 45.1	121 18.9	3/22	2140 2202		391			15	15
90	90	31 25.6	122 00.0	3/22	1650 1712		406			15	15
90	100	31 05.0	122 40.0	3/22	1205 1227		410			37	37
90	110	30 45.0	123 20.0	3/22	0715 0737		408			69	69

CRUISE 8305-EB MACROZOOPLANKTON BIOMASS

90	28	33 28.0	117 46.5	5/12	0100 0118	361	352	61	61	65	54
90	32	33 20.5	118 03.0	5/12	0813 0836	604	604	126	123	139	119
90	37	33 11.0	118 22.5	5/12	1325 1347	407	408	74	74	86	71
90	45	32 54.5	118 55.3	5/12	2124 2146	444	445	86	86	88	88
90	53	32 39.0	119 28.5	5/13	1643 1705	500	500	98	98	80	80
90	55	32 35.0	119 37.0	5/13	1837 1900	479	483	127	127	151	143

CRUISE 8306-EB MACROZOOPLANKTON BIOMASS

90	28	33 28.0	117 45.4	6/14	0335 0356	516	436	350	344	414	406
90	32	33 20.7	118 03.6	6/14	0831 0854	483	495	100	68	97	67
90	48	32 47.7	119 07.5	6/14	2308 2329	464	476	99	99	88	76
90	53	32 37.4	119 28.7	6/15	0355 0417	473	495	182	182	200	184
90	60	32 24.5	119 58.2	6/15	1339 1404	568	585	25	25	70	70
90	65	32 14.5	120 19.0	6/15	1707 1731	575	580	57	57	43	43

CRUISE 8307-EB MACROZOOPLANKTON BIOMASS

90	28	33 28.3	117 47.5	7/16	0055 0116	409		34	34		
90	32	33 20.2	118 02.7	7/16	0605 0626	605		213	86		

CRUISE 8308-EB MACROZOOPLANKTON BIOMASS

90	28	33 28.5	117 48.0	8/17	2050 2111	392	409	1829	13	1631	17
90	32	33 20.3	118 02.9	8/18	0150 0211	393	400	36	23	25	25
90	37	33 17.2	118 21.1	8/18	0655 0716	426	419	171	47	112	50
90	42	32 54.8	118 55.6	8/18	1403 1425	419	429	29	29	16	16
90	53	32 38.0	119 28.9	8/18	1923 1944	422	433	19	9	51	12
90	55	32 34.6	119 38.0	8/18	2232 2253	423	433	19	7	9	9
90	60	32 23.9	119 57.4	8/19	0236 0257	416	421	46	46	52	52
90	65	32 13.4	120 19.8	8/19	0640 0701	374	393	123	123	117	117

CRUISE 8309-EB MACROZOOPLANKTON BIOMASS

90	28	33 27.7	117 47.8	9/13	0315 0336	406	425	291	25	360	24
90	32	33 20.7	118 03.6	9/13	0745 0805	380	400	71	53	58	58
90	37	33 11.1	118 22.8	9/13	1255 1316	400	420	90	20	198	14
90	45	32 55.5	118 55.8	9/13	2022 2043	396	414	5	5	77	10
90	53	32 38.1	119 28.4	9/14	0141 0202	390	404	62	15	17	17
90	55	32 34.2	119 37.0	9/14	0400 0421	414	435	80	48	90	48
90	60	32 24.2	119 58.3	9/14	0732 0753	421	437	74	64	66	66
90	65	32 14.0	120 18.3	9/14	1125 1156	401	420	67	67	64	64

Net Mesh Size: 0.505 mm

Line	Sta.	Position		Date Mo/Day	Time (GMT)		Water Volume Strained (m ³)		Volume (cm ³) per 1000 m ³ Strained				
		°N	°W		Start	End	Port	Stbd	Port Total	Small	Starboard Total	Small	
CRUISE 8310-EB MACROZOOPLANKTON BIOMASS													
90	28	33 28.5	117 48.3	10/10	2345	0006	386	377	41	10	16	8	
90	32	33 20.6	118 03.5	10/11	0505	0526	407	396	93	76	104	63	
90	37	33 12.7	118 22.4	10/11	1000	1021	413	401	128	44	167	37	
90	45	32 55.2	118 56.3	10/11	1640	1701	485	466	19	6	30	11	
90	53	32 38.4	119 29.2	10/11	2230	2251	429	385	19	19	18	18	
90	55	32 35.4	119 38.2	10/12	0135	0156		423			83	83	
90	60	32 25.6	119 57.0	10/12	0540	0601		371			65	65	
90	65	32 14.5	120 20.0	10/12	1043	1105		451			64	64	
90	70	32 04.9	120 39.2	10/12	1434	1456		418			48	26	
CRUISE 8311-EB MACROZOOPLANKTON BIOMASS													
90	28	33 27.4	117 47.3	11/5	0100	0122	421	425	147	29	122	26	
90	32	33 21.3	118 02.7	11/5	0555	0616	472	482	61	49	98	56	
90	37	33 10.8	118 20.3	11/5	1120	1140	371	376	81	30	66	66	
90	45	32 54.1	118 55.7	11/5	1756	1817	447	448	20	13	16	16	
90	53	32 39.2	119 29.2	11/5	2345	0006	447	446	16	16	9	9	
90	55	32 34.8	119 38.7	11/6	0240	0301	395	392	33	33	36	36	
90	60	32 25.2	119 58.6	11/6	0710	0731	515	522	58	58	79	73	
90	65	32 15.4	120 19.8	11/6	1223	1244	485	493	45	45	59	59	
90	70	32 05.6	120 39.9	11/6	1658	1719	533	556	21	21	20	20	
CRUISE 8312-NH MACROZOOPLANKTON BIOMASS													
90	28	33 28.0	117 47.4	12/6	0220	0241	392	351	69	46	71	40	
90	32	33 20.1	118 03.0	12/6	0650	0711	380	336	32	32	39	39	
90	37	33 10.5	118 24.6	12/6	1150	1211	401	357	47	35	56	56	
90	53	32 39.9	119 29.0	12/6	2200	-	392	347	46	46	1429	1429	
90	55	32 31.9	119 36.2	12/7	0055	0119	471	422	38	38	47	47	
90	60	32 24.4	119 56.7	12/7	0429	0450	424	373	61	61	67	67	
90	65	32 14.8	120 17.8	12/7	0837	0856	373	331	43	43	154	154	
90	70	32 04.4	120 37.6	12/7	1235	1256	364	322	162	118	109	109	
90	75	31 53.9	120 56.3	12/7	1608	1630	386	337	18	18	21	21	
90	80	31 44.8	121 18.7	12/7	2100	2120	361	331	51	28	24	24	
90	85	31 32.7	121 38.7	12/8	0325	0346	396	357	53	53	59	59	
90	90	31 23.6	121 59.5	12/8	0657	0718	359	328	50	50	58	58	
90	100	31 05.0	122 38.0	12/8	1230	1251	358	326	67	67	55	46	
90	110	30 43.6	123 17.5	12/8	1803	1824	370	326	81	51	31	31	

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