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Hydrographic Data from Oregon Waters 1969

by

Bruce Wyatt, William Gilbert,
Louis Gordon and Dennis Barstow.

Office of Naval Research
Contract N00014-67-A-0369-0007
Project NR 083-102

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Data Report No. 42 Reference 70-12

June 1970

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Corvallis, Oregon 97331

HYDROGRAPHIC DATA FROM OREGON WATERS, 1969.

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John V. Byrne
Chairman

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INTRODUCTION

Hydrographic Data from Oregon Waters, 1969, is the tenth report during a study to determine the currents and water masses along the Oregon coast. Reports for time periods beginning in 1958 are listed in References.

DATA COLLECTING AND PROCESSING

Data were collected by Oregon State University personnel aboard the R/V YAQUINA and the R/V CAYUSE. Most of the cruises were concerned with surveying hydrographic conditions along a latitudinal track at 44°39.1'N and studying the Columbia River plume.

Most stations are identified by a letter-number code. Numerals that have a BH, CH, CM, DB, NH, TH or SH prefix are the distance from shore in nautical miles. Thus NH-85 is a hydrographic station 85 miles off the coast from Newport, Oregon. All stations that have other letter prefixes were numbered sequentially with the letter prefix designating either a particular leg of that cruise or designating what work was done on that particular station. Cruise tracks are included to facilitate location of stations.

Sampling methods and analysis techniques used on the Yaquina Long Cruise - 1969 are given starting on page 7.

Explanation

Letter	
DB	Off Brookings, Oregon along 42°00.0'N
CH	Off Coos Bay, Oregon along 43°20.6'N
CM	Off Cape Mears, Oregon along 45°29,0'N
DB	On a line between 44°48.7', 124°05.5' (DB-1) and 45°48.0', 127°44.0' N
TH	Off Tillamook, Oregon along 45°56.3'N

Depth

Depth determinations were made by the "depth-difference" method described in the U.S. Hydrographic Office Publication 607(1955). At least once each year three to six calibration casts were made to monitor the pressure coefficients (Q) for unprotected thermometers. Depth estimates have an approximate accuracy of 1.5 percent at 750 m depth. Depths of the second cast are followed by an asterisk if two or more casts were used as a single station.

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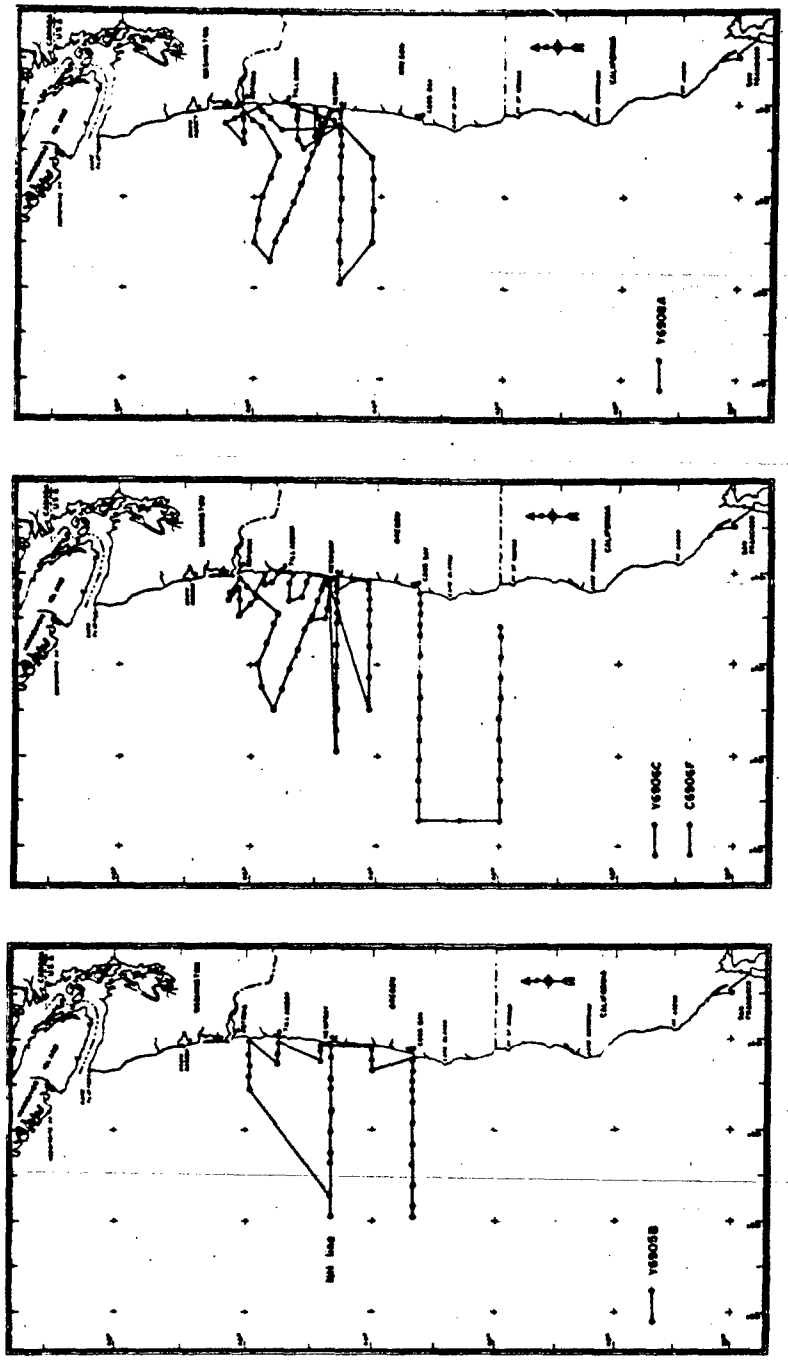

Figure 1. Positions of hydrographic stations in 1969.

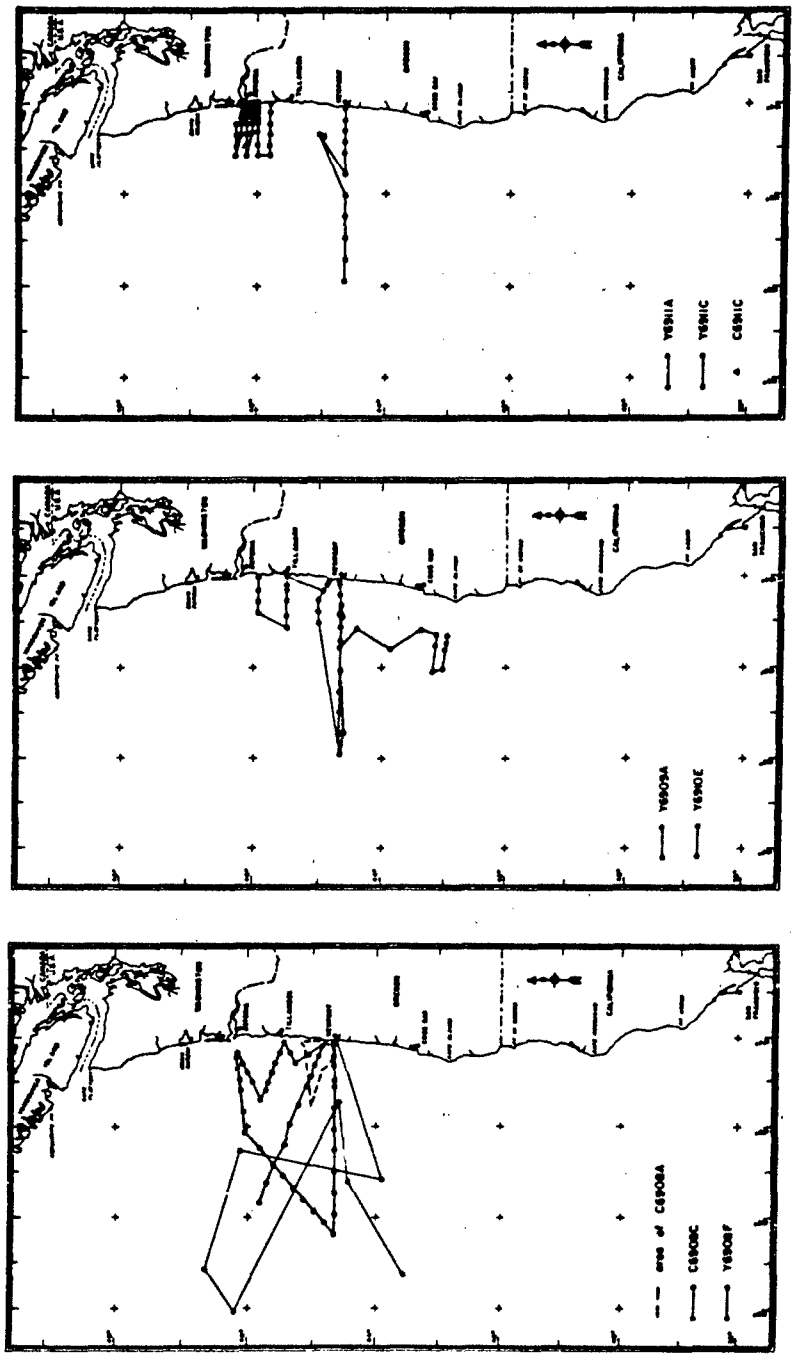

Figure 2. Positions of hydrographic stations in 1969.

Temperature

Thermometer calibrations were done at Oregon State University using the Oceanography Department's improved calibration tank. The standard was a platinum resistance thermometer calibrated by the U.S. Bureau of Standards.

The accuracy of reduced temperature readings is believed to be ± 0.02°C for the reversing thermometers. All sampling bottles were equipped with two reversing thermometers. Those below 200m also have an unprotected thermometer for determination of thermometric depth.

Salinity

Salinity determinations were made with an inductive salinometer, Model II, manufactured in Australia by Industria Manufacturing Engineers Pty. Ltd. and a Hytech salinometer, model 6220. The method used for the determinations was described by Brown and Hamon (1961). Substandard water was prepared from seawater that had been collected 100 miles off Oregon and stored for three months prior to use.

Precision of Chemical Data

All precisions are given as two standard deviations.

Oxygen

The modified Winkler method of oxygen analysis as described by Strickland and Parsons (1968) was employed. Precision was estimated to be ± 0.2 ml/L of dissolved oxygen.

Manual Phosphate Analysis

Phosphate was determined on a Beckman DU spectrophotometer and a Hitachi 111 spectrophotometer using a method described in the previous report (Barstow *et al.*, 1969b). This method was used to normalize phosphate values obtained using the Autoanalyzer®. Table 1 gives the average slopes and intercepts obtained by plotting manual versus Autoanalyzer® results for 20% of the samples taken on the 1969 cruises beginning with C6904-C. C reported = C auto x (slope) - (intercept).

Table 1. Slopes and intercepts for normalization of automated phosphate analyses

Cruise	Average Slope	Average Intercept
C6901A	-	-
C6902C	-	-
C6903E	-	-
C6904C	0.790	0.10
Y6905B	0.778	0.04
Y6906C	0.968	0.02
C6906F	0.838	0.10
Y6908A	0.953	0.28
C6908A	0.885	0.15
C6908C	0.888	0.14
Y6909A	0.897	0.24
Y6910E	0.891	0.32

Automated Nutrient Analysis

The nitrate+nitrite analysis used on the Autoanalyzer[R] is a modification pf Armstrong et al. (1967). Two sample tubes, 3.40 ml/minute, were used as described by Hager et al. (1968). Precision was estimated as $\pm$ 8 μM.

Phosphates were determined using the Grasshoff modification described previously (Barstow et al., 1969b). It is a modified ascorbic acid method of Armstrong et al (1967). Precision was estimated as $\pm$ 0.6 μ M.

Rejection of questionable nutrient data and adjustment of observed zero nutrient values

The precision and accuracy of nutrient data were quite variable from day to day. Obvious wild points have been rejected by visual inspection. In addition, a crude statistical technique was applied to the deep data (500-1000m) from stations NH65, 85, 105, 125, 145, and 165. We assumed that seasonal changes in nutrient concentrations below 500m are insignificant. Mean concentrations and average deviations from the mean were calculated for each cruise for each of the depths, 500, 600, 800 and 1000m. We rejected all nutrient values lying more than four average deviations from the mean. At some stations all four of the nutrients treated gave values more than two average deviations from their

means; all the values for that nutrient have been omitted from that station. This method gave excellent agreement with subjective, visual evaluations. A few points were eliminated on the basis of subjective evaluation, by examining relative coherence between all the nutrient values and the AOU at a given station and depth.

Because of the mechanics of our computer data processing, we add a one in the last significant figure to all observed zero values of the nutrients. Thus a zero value phosphate becomes 0.01 and a zero nitrate becomes 0.1.

pH

An Orion model 801 digital pH meter was used on all cruises for pH determinations except for Y6909A when a beckman pH meter, model 7600, with expanded scale was used. Precisely weighed Beckman pH 7.41 buffers were employed. The method used is that of Park (1966), with values corrected to *in situ* temperature but not *in situ* pressure. Precision was ± 0.02 pH units except for Y6909A when it was ± 0.03 pH units.

Alkalinity

Alkalinity was determined on fresh samples using the method of Anderson and Robinson (1946). Precisely weighed Beckman pH 4.00 buffers were employed. Precision is about ± 0.04 milliequivalent/liter.

Computations

All hydrographic data were processed with the aid of the CDC 3300 computer. Auxiliary temperature corrections and index corrections obtained from laboratory thermometer calibrations were applied with a computer program. Property values at standard depths are determined by three-point parabolic interpolation. (Two observed property points above the standard depth and one point below were interpolated parabolically: the result was averaged with similar interpolation by using one observed point above the standard depth and two points below). The specific volume anomally, dynamic height, and sigma-t were computed by using interpolated properties. The same computer program has been used in all Oregon State University hydrographic data reports.

Weather codes and cloud cover clouds were adopted from the National Oceanographic Data Center Manual "Processing Physical and Chemical Data from Oceanographic Stations," Publication M-2 (Rev. Aug. 1964).

YALOC 69 CHEMICAL DATA COLLECTING AND PROCESSING

Water Sampling

All water samples (except those from the bottom tripping water bottles) were collected in plastic (polypropylene) water bottles made by the National Institute of Oceanography (NIO), Wormley, Surrey, England. The order of sampling was oxygen, pH, salinity, and nutrients.

Salinity

Salinity determinations were made with a Hytech inductive salinometer, model 6220. The salinometer was standardized with substandard seawater (salinity about 35.00‰), and frequently checked against Copenhagen water. The average accuracy of the salinity determinations was about ± 0.003‰; the precision of salinity determinations at any one station was about ± 0.002‰.

Oxygen

The Winkler method described by Strickland and Parsons (1965) was used for samples drawn from the NIO water bottles. The precision of this method was ± 0.03 ml O_2/l.

Samples from the bottom tripping water bottles were analyzed by a modification of Carpenter's (1965) oxygen method. Calibrated 30 ml Erlenmeyer flasks were used instead of the 125 ml flasks recommended by Carpenter (1965). The concentrations of the oxygen reagents were changed so that the addition of 0.5 ml of each reagent would result in the final concentrations recommended by Carpenter (1965). Solid sodium sulfate was added to the manganous chloride reagent to decrease the solubility of oxygen in this reagent. Oxygens determined by this method agreed to within ± 0.04 ml O_2/l with oxygen measured by the method of Strickland and Parsons (1965).

Reactive Phosphate

Reactive phosphate was measured by the method described by Strickland and Parsons (1965). Precision was ± 0.1μM. Analyses were started within 2 hours after the nutrient samples had been drawn.

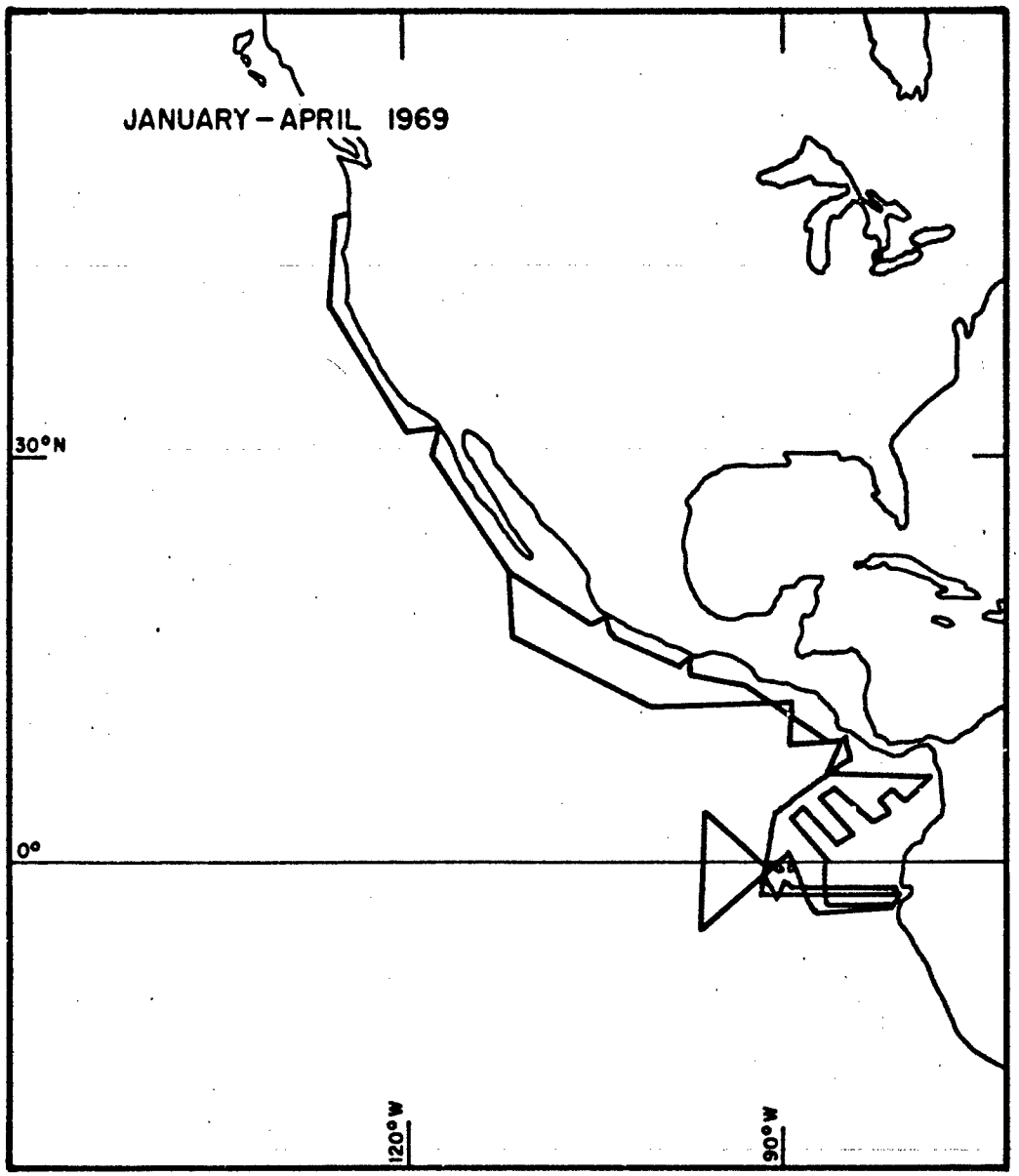

Figure 3. Cruise track for YALOC-69.

Reactive Silicate

Reactive silicate was measured by the method described by Strickland and Parsons (1965). Precision was ± 2 μ M.

Nitrate

Nitrates were measured on frozen samples using a Technicon Autoanalyser[R] and the nitrate method of Hager, Gordon, and Park (1968). This method measures nitrate plus nitrite. The samples were analyzed ashore, 2 weeks after the cruise returned. Precision was ± 1 μ M.

pH

An Orion model 801 digital pH meter, with a precision of ± 0.1 mv, was used for pH measurements. The pH samples were drawn into 5 ml plastic syringes, fitted with stainless steel needles. The syringes were placed in a water bath at 25°C for 10 to 15 minutes, and the pH sample was then injected into a Beckman #46850. The precision of the PH measurements was ± 0.005 pH units. All measurements were made at 25.0 ± 0.1°C.

The electrode was standardized with a buffer containing 0.008695 m KH_2PO_4 plus 0.03043 m Na_2HPO_4. This buffer has pH = 7.413 on the NBS pH scale at 25°C. (Bates, 1964). The slope of the glass electrode response was determined from potential measurements in the 7.413 buffer and in a 0.05 m potassium hydrogen phthalate buffer which has pH = 4.008 at 25°C (Bates, 1964). The measured slope was 58.63 mv/pH at 25°C. The potential of each sample was read from the Orion pH meter and the pH calculated from the equation (Bates, 1964),

$$pH = 7.413 + \frac{E_{sw} - E_{7.413}}{58.63}$$

where E_{sw} and $E_{7.413}$ are the potentials measured in seawater and in the 7.413 buffer.

Alkalinity

Alkalinities were determined by a modification of the method of Anderson and Robinson (1946). To remove most of the liberated carbon dioxide, 5.998 ml of 0.009994N was added to 20.0k ml of seawater, and water saturated air bubbled through the mixture for 5 minutes. All measurements were made at 25.0 ± 0.1°C with an Orion model 801 digital

pH meter. The value $f_H = 0.741$ was used for the empirical coefficient in Anderson and Robinson's (1946) equation for alkalinity. This value is based on unpublished experiments made in this laboratory.

A glass electrode, saturated calomel electrode pair (Beckman #40498 amd 39170), was used to measure pH standardized with a 0.05 m potassium hydrogen phthalate buffer that had pH = 4.007 (25°C) when compared with the NBS 0.05 m potassium hydrogen phthalate buffer (185-d). The slope of the glass electrode response (58.91 mv/pHO was determined from potential measurements in the two standard buffers (4.007 and 7.413). Potential measurements were converted to pH values by equation:

$$pH = 4.007 - \frac{E_{sw} - E_{4.007}}{58.91}$$

where E_{sw} and $E_{4.007}$ are the measure potentials in seawaer and in the 4.007 buffer.

ACKNOWLEDGEMENTS

This work was supported by Office of Naval Research contract N00014-67-A-0369-0007, National Science Foundation grants GA1281, GA12113 and GA1435, and Bureau of Commercial Fisheries contract 14-17-0002-333 Professor Mishikawa was supported by the Universidad Antonoma de Baja California, Mexico, during his participation in Cruise Y6908A. Work at sea was under the supervision of the hydrographic group; Bruce Wyatt, Peter Kalk, James Washburn, Lyndal Brixius, and Dennis Barstow. Ronald Jones and Douglas Coughenower analyzed most of the salinity and oxygen samples.

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Table I. Cruise dates, stations, observations, and personnel for hydrographic cruises for 1969.

CRUISE	DATES	STATIONS	OBSERVATIONS	PERSONNEL
[a]C6901B	17-20 Jan.	[b]NH-3 to NH-165	Temperatures, Salinities, [c]O_2, PO_4, NO_3, drift bottles, BT, MWT, VMN	[d]Bruce Wyatt, Dennis Barstow, Gary Muehlberg Carl Fisher, Douglas Coughenower, From Clatsop Community College: Dennis Crew, David Gosser.
C6902C	11-15 Feb.	NH-3 to NH-165	Temperatures, Salinity O_2, PO_4 NO_3, drift bottles, BT MWT, VMN, Secchi disc.	Dennis Barstow, Peter Kalk, Douglas Coughenower, Phil Larson, William Smoker From Clatsop Community College: Mike Wiseman. Joseph Knutson.
C6903E	14-16 Mar. 19021 Mar.	NH-3 to NH-45 NH-65 to NH-85	Temperatures, Salinity, O_2, PO_4 NO_3, BT, Secchi disc, MWT, VMN, Phyto net tows.	Dennis Barstow, Peter Kalk, Douglas Coughenower, Rodney Eagle, John Butler John Hawley, Leonard Pietrafesa
C6904C	11-12 Apr.	NH-3 to NH25	Temperatures, Salinities, O_2, PO_4, NO_3, BT, Secchi disc, MWT, VMN, Phyto net tows, CPA, CNA	Peter Kalk, Douglas Coughenower, Rodney Eagle, Kenneth Bowman, John Detweiler, Percy Donaghey, Richard Stewart, Allan Vogel.
Y6905B	12-21 May	NH-3 to NH-165 TH-45 to TH-3 CH-25 to CH-5 DB-18 to DB-3 SH-1 to SH-25 CH-3 to CH-165	Temperatures, Salinities, O_2, PO_4, NO_3, BT, drift bottles, MWT, VMN, CPA, CNA	Bruce Wyatt, Douglas Coughenower, Robert Mul-ler, Lilly Muller, Lyndal Brixius, David Cutchin, William Smoker, David Evans, Harold O'Connors, John Hawley, Paul Longueville, Richard Tomlinson, Ruth Sullivan, From Clatsop Community College: Michael Maurice, Mel Hatfield, Dennis Crew, David Gosser.
Y6906A	1-8 June	NH-65 NH-65 N	Temperatures, Salinities, O_2, PO_4, NO_3, BT, MWT, SMG, CPA, CNA, Secchi disk.	Peter Kalk, Michael Kyte, Jack Groelle, Hilary Findley, William Smoker, B. Hillesland, From Academic Year Institute: W. Holtzmeyer, J. Kile, D. Henning, D. Keech, J. Lodman, B. Deden From Dept. of Biochemistry, Oregon State Univ.: H. Wilson, W. D. Loomis.
Y6906C	18June-3July	DB-5 to DB-135	Temperatures, Salinities, O_2 PO_4, NO_3, pH, alk., ST, Secchi disk, photometer, CPA, CNA, drogue, MWT, VMN	James Washburn, William Forster, Lawrence Small, Louis Gordon, Ronald Jones, Lyndal Brixius, William Plank, Saul Alvarez, Douglas Coughenower, David Ball, Eric Howland, Richard Gates, Jerry Wagner, John Naidu, Peter Kalk, David Stein, Percy Donaghey, James Ward.
C6906F	27June-3July	CH-3 to CH-205 BH-3 to BH-205	Temperatures, Salinities, O_2, PO_4, NO_3, BT, Drift bottles, Secchi disk, CPA, CNA, MWT, VMN Radiation thermometer readings	Dennis Barstow, Larry Carr, Robert Wesmer, Larry Helm, Edward Siefert, Hilary Findley, Allan Vogel.
Y6908A	31July-12Aug.	NH-3 to NH-165 DB-1 to DB-165 A-6 to C-249	Temperatures, Salinities, O_2, PO_4, NO_3, NO_2, pH, alk, PCO_2, MWT, VMN, Secchi disk, photometer, CPA, CNA, Concentrations of radionuclides and trace elements.	James Washburn, Lyndal Brixius, Louis Gordon, William Plank, Eric Howland, David Ball, Douglas Coughenower, Richard Gates, Ronald Jones, Peter Kalk, David Stein, Edward Siefert Allan Vogel, John Naidu, Norman Farrow, Nancy Brown, Susan VanDyke, Saul Alvarez. From School of Marine Sciences, Ensenada, Mexico, Luis Alvarez-Sanchey, Katsuo Nishikawa
C6908A	1-9 Aug.	NH-15 Suf-2 to Suf-13C WH-3A to WH-18 CIA-1 to CIA-5 Drog. 2,3 DB-1 to DB-65	Temperatures, Salinities, O_2, PO_4, CPA, CNA, MWT	Peter Becker, Larry Helm, John Pequegnat, Hilary Findley, Phil Larson, Ronald Kay From Dept. of Microbiology, Oregon State Univ. Larry Jones.

[a]Prefix letter is ship designation: Y is R/V YAQUINA, C is R/V CAYUSE. First two numbers are year. Second two numbers are month. Suffix letter is sequence of cruise within the month for each ship with A being the first cruise.

[b]Station identifiers explained in text.

[c]Observation identifers:

[d]Party Chief

ALK	alkalini-	O_2	oxygen
BT	bathyth- -graph	OT	otter trawls
CNA	carbon ogen analysis	PCO_2	partial CO_2
CPA	chlorophyll pigment analysis	PO_4	phosphate
GEK	Geomagnetic electro-kinetograph	SMG	Smith McIntyre grab
MWT	Midwater trawl (Isaacs-Kidd 6 foot)	SiO_4	silicate
NO_2	nitrite	VD	Van Dorn cast
NO_3	nitrate	VMN	vertical meter net

CRUISE	DATES	STATIONS	OBSERVATIONS	PERSONNEL
C6908C	18-28 Aug.	NH-3 to NH-185 A1- to A-8 B-9 to B-13 C-14 to C-19 D-20 to D-25 E 26, 27 F-28, 29 G-30 to G-39	Temperatures, Salinities, O_2, PO_4, NO_3, BT, drift bottles, photometer, CPA, CNA	Dennis Barstow, Larry Carr, Edward Siefert, Taylor Poynter, David Menzies, Hilary Findley From Clatsop Community College: Dennis Craw, Harold Symmonds
Y6908F	17-31 Aug	1 to 7	Temperatures, Salinities, O_2 PO_4, NO_3, pH, alk, Geological cores, current meter stations.	Robert Buehrig, Mark Jones, Charles Culberson LaVern Kulm, William Bales, Gordon Ness, John Harlett, Gerald Gibney, Kenneth Scheidegger, From Univ of California at Santa Cruz: Gary Griggs From Geology Dept., Univ. of Oregon: William Orr From Dept. of Information, Oregon State U.. J.Robbins From Geology Dept., Princeton University: Gary Peniston
Y6909A	9-18 Sept.	NH-3 to NH-165 A-1 to A-3 BO-1 to BO-7	Temperatures, Salinities, O_2, PO_4, NO_3, pH drift bottles, MWT, VMM, CPA, CNA, BT	Lyndal Brixius, Bruce Wyatt, George Beardsley, Hasong Pak, Thomas Sholes, Ronald Zaneveld, William Plank, Wen Yuh Lee, Peter Kalk, David Stein, Ronald Jones, Hewitt Jeter, Edward Siefert, Taylor Poynter, Patrick Rasmussen, William Stout, J. Somsion From Clatsop Community College: Dennis Craw.
Y6909C	20-27 Sept.	NH-65	Temperatures, Salinities, O_2 PO_4, BT MWT, Secchi disk, CT, geological cores.	Peter Kalk, Roderick Mesecar, David Stein, William Pearcy, Henry Vanderploeg. From Eastern Oregon College: M. Osterlow, M. Harvey. From Humboldt State College: T. Sharp, C. DeVees, M. C. Dewees, J. Young, C. Kalu.
Y6910E	22-31 Oct.	NH-3 to NH165 DB24 to DB45 DB3 to CH50 TH3 to TH35	Temperatures, Salinities, O_2, PO_4, NO_3, pH, CPA, CNA, BT Drogue, Trace metal samples, fluorometer pump casts.	James Washburn, Lyndal Brixius, Peter Kalk, Louis Gordon, David Ball, Richard Gates, Ronald Jones, Alex Adams, Saul Alvarez, Nancy Brown, Mark Jones, John Pequegnat, Sandra Sumich, From University of Washington: Greg Buchor, William Peterson. From Clatsop Community College: David Gosser, Rick Dornes, Kerry Wymetalek

LEGS	DATES	STATIONS	OBSERVATIONS	PERSONNEL
Newport, Ore. to San Diego, Calif.	2-6 Jan.	YNS1 to YNS3	Temperatures, Salinities, O_2 BT, GEK, Light scattering	James Washburn, Lyndal Brixius, George Beardsley, Kendall Carder, Charles Culberson, Tom Curtin, Deryl McKeel, Hasong Pak, William Plank, Thomas Sholes, Ronald Zaneveld. From University of Copenhagen, Denmark: Bo Lundgren
San Diego, Calif. to Puntarenas, Costa Rica	7-22 Jan.	YSP4 to YSP21	Temperatures, Salinities, O_2 BT, GEK, Light Scattering	Same as leg 1 + Wayne Burt, Steve Tucker
Puntarena, Costa Rica to Galapagos Islands	25 Jan. - 1 Feb.	YPT22 to YPT45	Temperatures, Salinities, O_2 pH, BT, GEK, Light Scattering	Same as leg 2
Galapagos Islands to Talara, Peru	1-11 Feb.	YPT46 to YPT69	Temperatures, Salinities, O_2, pH, BT, GEK, Light Scattering	Same as leg 3
Talara, Peru to Talara, Peru	14 Feb. - 6 Mar.	YTT70 to YTT104	Temperatures, Salinities, O_2 pH, alk., BT, PO_4, SiO_4, Magnetics, Seismic profiler, gravity measurements.	James Washburn, Donald Heinricks, Ross Heath, Robert Beer, George Beardsley, Robert Hodgson, Michael Gemperle, Lyndal Brixius, Chas Culberson, Deryl McKeel, William Plank, Thomas Sholes, Ronald Zaneveld. From University of Copenhagen, Denmark: Bo Lundgren From Ecuadorian Navy: Lt. Marcelo Andrade
Talara, Peru to Puntarenas, Costa Rica	7-29 Mar.	YTP105 to YTP 114	Temperatures, Salinities, O_2, pH, alk., BT, PO_4, SiO_4, Magnetics, Seismic profiler, gravity measurements	James Washburn, Lyndal Brixius, Donald Heinrichs, Ross Heath, Robert Beer, Robert Hodgson, Michael Gemperle, Chas Culberson, Deryl McKeel, Robey Banks, From University of Copenhagen: Bo Lundgren
Puntarenas, Costa Rica to San Diego, Calif.	1-19 April	YPS115 to YPS121	Temperatures, Salinities O_2, pH, alk., SiO_4, NO_3	James Washburn, Lyndal Brixius, Robey Banks, Donald Heinrichs, Chas Culberson, Deryl McKeel
San Diego, Calif. to Newport, Oregon	21-26 April	YSN122 to YSN127	Temperatures, Salinities, O_2 pH, alk., SiO_4, NO_3	James Washburn, Lyndal Brixius, Deryl McKeel, Chas Culberson

Table II. Hydrographic data from the Newport line for 1969.

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
NH- 3 44 39.1 N 124 07.8 W DATE 18 JAN 69 0044 GCT WIRE DRY 42.9 WET 39.0 CRUISE C6901B													
WIND DIRECTION 06 VEL 04 KTS BAR 21 SWELL DIRECTION 30 H 06 T 10 CLOUD 7 AMT 8 WEATHER													
0	8.44	28.125	6.88	1.39			8.7	0	8.44	28.13	21.86	597.1	0
5	9.07	29.848	6.61	0.83			6.8	10	9.50	31.27	24.15	378.3	.049
15*	9.60	31.586	6.43	0.81			6.2	20	9.25	29.99	23.14	470.2	.091
20*	9.25	29.982	6.62	1.03			6.5	30	9.59	31.68	24.45	349.8	.132
30*	9.59	31.673	6.44				5.7						
NH- 5 44 39.1 N 124 10.7 W DATE 18 JAN 69 0250 GCT WIRE 05 DRY 42.0 WET 39.3 CRUISE C6901B													
WIND DIRECTION 08 VEL 05 KTS BAR 21 SWELL DIRECTION 30 H 06 T 09 CLOUD 7 AMT 8 WEATHER													
0	8.35	28.208	6.88	.74			5.5	0	8.35	28.21	21.94	589.8	0
7	9.20	30.838	6.52	.85			4.9	10	9.40	31.47	24.32	341.9	.048
17	9.65	32.234	6.41	.87			4.5	20	9.69	32.24	24.89	308.2	.091
27	9.72	32.313	6.39	.81			4.4	30	9.72	32.31	24.93	304.6	.112
38	9.72	32.318	6.40	.79			4.4						
48	9.72	32.322	6.40	.74			4.3						
NH- 15 44 39.2 N 124 24.9 W DATE 18 JAN 69 0451 GCT WIRE 07 DRY 43.3 WET 39.5 CRUISE C6901B													
WIND DIRECTION 06 VEL 07 KTS BAR 20 SWELL DIRECTION 33 H 06 T 08 CLOUD 7 AMT 7 WEATHER													
0	9.61	32.302	6.46	.73			4.7	0	9.61	32.31	24.94	303.1	0
10	9.62	32.300	6.44					10	9.63	32.30	24.94	303.5	.030
20		32.301	6.48	.79			4.2	20	9.68	32.31	24.93	304.4	.061
30	9.85	32.356	6.37	.77			4.5	30	9.85	32.36	24.94	303.2	.091
41	10.24	32.595	6.17	.77			5.4	50	10.18	32.59	25.07	291.8	.151
51	10.17	32.591	6.17	.83			5.6	75	10.39	32.75	25.16	283.9	.223
61	10.19	32.630	6.09	.86			5.7						
77	10.43	32.771	6.40	.91			6.8						
NH- 25 44 39.1 N 124 38.6 W DATE 18 JAN 69 0705 GCT WIRE 07 DRY 42.7 WET 38.0 CRUISE C6901B													
WIND DIRECTION 08 VEL 05 KTS BAR 18 SWELL DIRECTION 32 H 06 T 08 CLOUD 8 AMT 2 WEATHER 02													
0	9.76	32.495	6.36	.90			4.3	0	9.76	32.50	25.07	291.1	0
10	9.80	32.491	6.34	.83			4.8	10	9.80	32.50	25.06	292.1	.029
20		32.491	6.36	.82			4.7	20	9.83	32.50	25.05	292.7	.059
30	9.84	32.490	6.36	.68			3.2	30	9.84	32.50	25.05	293.2	.088
51*	9.81	32.497	6.35	.81			3.2	50	9.81	32.50	25.06	292.9	.146
77*	9.88	32.525	6.25	.88			3.8	75	9.87	32.51	25.06	293.2	.220
103*	9.83	33.211	4.92	1.56			13.5	100	9.85	33.12	25.54	248.2	.287
129*	9.21	33.665	3.56	2.20			22.2	150	8.76	33.74	26.20	185.9	.396
154*	8.68	33.747	3.53				21.5						
181*	8.36	33.875	2.92	2.48			26.5						
NH- 35 44 39.1 N 124 52.8 W DATE 18 JAN 69 1016 GCT WIRE 00 DRY 43.5 WET 40.2 CRUISE C6901B													
WIND DIRECTION 04 VEL 10 KTS BAR 17 SWELL DIRECTION 32 H 05 T 10 CLOUD 8 AMT 6 WEATHER													
0	9.52	32.470	6.43	.72			4.6	0	9.52	32.47	25.09	289.2	0
10	9.52	32.471	6.43	.72			3.5	10	9.52	32.48	25.09	289.3	.029
20	9.55	32.470	6.44	.78			3.1	20	9.55	32.47	25.08	290.0	.059
30	9.58	32.470	6.45	.83			2.9	30	9.58	32.47	25.08	290.6	.087
51	9.55	32.475	6.46				3.0	50	9.55	32.47	25.08	290.4	.145
77	9.58	32.479	6.44				3.2	75	9.58	32.48	25.08	290.9	.213
103	9.37	33.019	5.46	1.70			11.9	100	9.40	32.94	25.47	254.3	.285
129	9.19	33.593	3.83	1.94			21.4	150	8.50	33.68	26.19	187.0	.396
154	8.37	33.679	3.82	2.07			24.2						
181	8.35	33.912	2.73	2.40			27.3						
NH- 45 44 39.3 N 125 06.1 W DATE 18 JAN 69 1550 GCT WIRE 08 DRY 43.3 WET 39.5 CRUISE C6901B													
WIND DIRECTION 09 VEL 08 KTS BAR 12 SWELL DIRECTION 32 H 05 T 08 CLOUD 7 AMT 6 WEATHER													
0	9.69	32.398	6.37	.71			3.4	0	9.69	32.40	25.00	297.2	0
10	9.69	32.400	6.39				5.5	10	9.69	32.40	25.00	297.2	.033
20	9.71	32.397	6.41	.77			5.4	20	9.71	32.40	25.00	298.2	.059
30	9.74	32.394	6.40	.67			4.7	30	9.74	32.40	24.99	298.7	.089
51	9.81	32.430	6.34	.63				50	9.80	32.43	25.00	298.0	.143
78	10.46	32.812	6.07	.98			7.2	75	10.40	32.76	25.16	283.5	.222
103	9.98	33.288	4.63	1.53			16.5	100	10.08	33.23	25.58	243.7	.288
129	9.03	33.716	3.46	1.95			22.6	150	8.71	33.85	26.29	177.5	.393
154	8.67	33.859	2.82	2.18			26.4	200	8.36	33.95	26.42	165.4	.472
207	8.30	33.951	2.45	2.35			27.7	250	7.87	33.99	26.53	156.4	.554
259	7.77	33.993	2.47					300	7.37	34.01	26.61	148.8	.635
311	7.26	34.009	2.34	2.44			29.4	400	6.10	34.00	26.78	133.9	.777
413	5.95	33.999	2.10					500	5.53	34.09	26.92	120.4	.906
516	5.48	34.114	1.09	2.45			30.7	600	4.94	34.19	27.07	107.6	1.018
620	4.79	34.207	.79	3.38			36.3						

OBSERVED								INTERPOLATED				DERIVED	
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
NH- 65 44 39.1 N 125 34.0 W DATE 18 JAN 69 2014 GCT WIRE 05 DRY 44.3 WET 40.5 CRUISE C6901R													
WIND DIRECTION 07 VEL 08 KTS BAR 10 SWELL DIRECTION 33 H 06 T 08 CLOUD 6 AMT 7 WEATHER													
0	9.73	32.521	6.39	.99			4.5	0	9.73	32.53	25.09	288.7	0
10	9.74	32.523	6.39	.84			5.4	10	9.74	32.53	25.09	288.9	.029
30*	9.70	32.524	6.42	.83			5.5	20	9.72	32.52	25.09	288.9	.058
50*	10.36	32.932	5.71	1.10			9.5	30	9.70	32.53	25.10	288.8	.087
76*		33.413	5.04	1.46			14.8	50	10.36	32.94	25.31	283.1	.142
103*	9.33	33.613	3.69	2.16			22.0	75	10.14	33.40	25.70	231.9	.205
127*	8.78	33.798	3.24				24.8	100	9.45	33.60	25.98	206.4	.260
154*	8.36	33.909	2.84	2.29			26.9	150	8.42	33.90	26.37	169.5	.354
205*	7.39	33.941	2.93	2.35			27.6	200	7.48	33.94	26.54	153.9	.435
309*	6.76	34.072	1.71	2.94			31.7	250	7.03	34.00	26.65	143.9	.509
409*	5.86	34.100	1.13	3.15			34.2	300	6.78	34.06	26.74	134.8	.579
615*	4.76	34.198	.41	3.51			36.6	400	5.94	34.10	26.88	124.5	.710
821*	4.16	34.306	.36	3.61			37.3	500	5.28	34.14	26.99	113.8	.829
1025*	3.58	34.417	.76	3.58			38.1	600	4.81	34.19	27.08	104.0	.939
1230*	3.08	34.475	.56	3.58			38.3	700	4.48	34.24	27.16	92.9	1.041
1433*	2.68	34.522	.80	3.54			38.3	800	4.21	34.29	27.23	82.5	1.137
1640*	2.34	34.558	1.06	3.47			38.2	1000	3.65	34.40	27.38	79.5	1.309
								1200	3.15	34.47	27.47	70.1	1.458
								1500	2.56	34.53	27.58	60.3	1.653
NH- 85 44 39.0 N 126 02.0 W DATE 19 JAN 69 0025 GCT WIRE 05 DRY 44.0 WET 40.0 CRUISE C6901R													
WIND DIRECTION 10 VEL 03 KTS BAR 05 SWELL DIRECTION 34 H 05 T 11 CLOUD 8 AMT 7 WEATHER													
0	8.58	32.323	6.63	0.77			3.3	0	8.58	32.33	25.12	286.2	0
10	8.60	32.324	6.56	0.79			3.1	10	8.60	32.33	25.12	286.5	.029
30	8.61	32.327	6.56					20	8.60	32.33	25.11	286.9	.057
50	8.66	32.333	6.54	0.77			3.3	30	8.61	32.33	25.12	286.7	.086
78	8.05	32.891	5.51	1.49			13.0	50	8.66	32.34	25.11	287.3	.143
104	8.15	33.443	4.33	1.84			21.2	75	8.12	32.81	25.57	244.3	.210
128	8.01	33.697	3.72	1.99			23.3	100	8.12	33.37	26.00	203.8	.266
154	7.70	33.831	3.40	2.13			26.1	150	7.75	33.82	26.41	165.9	.358
206	7.08	33.943	2.67	2.32			30.3	200	7.15	33.94	26.59	149.4	.437
310	6.15	34.015	1.73	2.44				250	6.65	33.99	26.70	139.6	.509
411	5.49	34.063	1.14	2.94			32.3	300	6.22	34.01	26.77	133.0	.577
618	4.67	34.211	.72	2.96			32.8	400	5.55	34.06	26.89	122.7	.705
825	4.07	34.336	.26				40.4	500	5.08	34.12	27.00	112.5	.823
1030	3.47	34.420	.61	3.61			40.9	600	4.72	34.20	27.10	104.4	.931
1236	3.04	34.474	.58	3.45			41.1	700	4.42	34.26	27.18	96.5	1.031
								800	4.14	34.32	27.26	89.5	1.124
								1000	3.55	34.41	27.39	78.0	1.292
								1200	3.10	34.47	27.48	69.7	1.439
NH-105 44 39.0 N 126 30.0 W DATE 19 JAN 69 0456 GCT WIRE 03 DRY 42.5 WET 39.0 CRUISE C6901R													
WIND DIRECTION 33 VEL 05 KTS BAR 02 SWELL DIRECTION 33 H 04 T 09 CLOUD 7 AMT 2 WEATHER													
0	8.33	32.296	6.62	.68			2.4	0	8.33	32.30	25.14	284.6	0
10	8.32	32.296	6.62	.71			2.3	10	8.32	32.30	25.14	284.6	.028
30	8.34	32.291	6.63	.77			3.0	20	8.33	32.29	25.13	285.4	.057
31*	8.32	32.291	6.63				3.0	30	8.34	32.30	25.13	285.5	.085
51*	8.33	32.289	6.63					50	8.32	32.29	25.13	286.0	.143
77*	8.34	33.074	5.09	1.12			9.6	75	8.34	33.00	25.68	233.5	.208
104*	8.24	33.575	4.14	2.06			22.0	100	8.26	33.52	26.10	194.3	.261
129*	8.08	33.769	3.44	2.27			24.7	150	7.86	33.84	26.41	165.7	.351
154*	7.82	33.848	3.19				24.3	200	7.39	33.95	26.56	151.7	.430
207*	7.33	33.961	2.44	2.56			30.5	250	6.93	34.00	26.67	142.7	.504
311*	6.38	34.014	2.23	2.89			34.5	300	6.48	34.01	26.74	136.2	.574
413*	5.62	34.070	1.16					400	5.71	34.06	26.88	124.3	.704
620*	4.72	34.208	.40	3.53			39.9	500	5.17	34.13	26.99	113.4	.823
827*	4.06	34.314	.26	3.51			40.3	600	4.78	34.19	27.09	105.3	.932
1032*	3.50	34.398	.35	3.49			37.3	700	4.45	34.25	27.17	97.7	1.033
1239*	3.04	34.460	.46	3.08			31.8	800	4.14	34.30	27.24	91.1	1.128
1446*	2.64	34.519	.85	3.15			34.7	1000	3.58	34.39	27.37	80.1	1.294
1652*	2.26	34.556	1.47	3.46			40.3	1200	3.12	34.45	27.46	71.2	1.450
								1500	2.54	34.53	27.58	60.3	1.647
NH-125 44 39.2 N 126 57.6 W DATE 19 JAN 69 0918 GCT WIRE 12 DRY 43.0 WET 40.0 CRUISE C6901R													
WIND DIRECTION 34 VEL 15 KTS BAR 01 SWELL DIRECTION 33 H 05 T 04 CLOUD 8 AMT 7 WEATHER													
0	8.42	32.455	6.48	.79			4.6	0	8.42	32.46	25.25	274.1	0
10	8.45	32.451	6.51	.82			3.9	10	8.45	32.46	25.24	274.9	.027
30	8.43	32.455	6.48				3.5	20	8.44	32.45	25.24	275.2	.055
51	8.49	32.454	6.52	.86			3.6	30	8.43	32.46	25.24	274.6	.082
78	8.28	33.664	3.65					50	8.49	32.45	25.23	274.1	.137
103	7.98	33.815	3.07	2.04			23.1	75	8.31	33.52	26.09	194.6	.196
128	7.73	33.878	2.63					100	8.02	33.80	26.35	170.3	.242
154	7.54	33.917	2.36	2.75			31.1	150	7.57	33.91	26.51	156.2	.324
206	7.17	33.966	2.14				31.2	200	7.21	33.96	26.60	148.5	.400
309	6.68	34.013	1.83	3.08			32.6	250	6.93	33.99	26.66	143.3	.473
411	6.30	34.047	1.58	3.14			33.9	300	6.71	34.01	26.70	139.6	.543
617	5.11	34.156	1.05	3.44			37.8	400	6.34	34.04	26.78	133.8	.680
823	4.24	34.282	.30	3.64			39.5	500	5.80	34.09	26.89	124.0	.809
1028	3.53	34.407	.32	3.65			39.9	600	5.21	34.15	27.00	114.2	.928
1234	3.06	34.464	.50	3.74			40.2	700	4.73	34.21	27.10	104.5	1.037
								800	4.33	34.27	27.20	95.9	1.137
								1000	3.62	34.39	27.37	80.1	1.313
								1200	3.12	34.46	27.47	70.4	1.464

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (10^{-5})	ΔD (dyn.m)

NH-145 44 39.1 N 127 25.9 W DATE 19 JAN 69 1611 GCT WIRE 15 DRY 41.2 WET 37.0 CRUISE C69019
WIND DIRECTION 33 VEL 17 KTS BAR 02 SWELL DIRECTION 33 H 09 T 09 CLOUD 6 AMT 7 WEATHER

0	8.44	32.407	6.52	.69	2.0	0	8.44	32.41	25.21	277.9	0
10	8.44	32.407	6.52	.69	2.0	10	8.44	32.41	25.21	274.1	.028
30	8.47	32.408	6.55			20	8.45	32.41	25.20	278.6	.056
51	8.53	32.444	6.48	.96	3.2	30	8.47	32.41	25.20	278.7	.083
78	8.58	33.002	5.42		11.8	50	8.53	32.44	25.21	277.8	.139
104	8.00	33.536	4.15	1.75	15.6	75	8.57	32.93	25.59	242.7	.204
128	7.86	33.772	3.58	2.16	19.2	100	8.09	33.46	26.08	196.2	.259
154	7.75	33.882	3.16	2.18	21.6	150	7.77	33.87	26.45	142.0	.349
204	7.33	33.961	2.52	2.76		200	7.39	33.96	26.57	151.1	.427
309	6.39	34.032	1.76	3.14	28.4	250	6.92	34.00	26.67	142.3	.500
411	5.73	34.072	1.26		30.0	300	6.47	34.03	26.75	135.0	.569
646*	4.65	34.093	.77	3.21	34.0	400	5.79	34.07	26.87	124.0	.699
807*	4.20	34.229	.57			500	5.26	34.07	26.94	118.5	.821
1007*	3.41	34.391	.31	3.38	35.7	600	4.82	34.08	27.00	113.0	.937
1203*	3.10	34.448	.44	3.56	36.5	700	4.48	34.14	27.07	106.8	1.047
						800	4.21	34.23	27.18	97.4	1.149
						1000	3.62	34.39	27.37	80.3	1.327
						1200	3.11	34.45	27.46	71.1	1.478

NH-165 44 39.1 N 127 54.9 W DATE 19 JAN 69 2103 GCT WIRE 08 DRY 41.0 WET 31.5 CRUISE C69019
WIND DIRECTION 33 VEL 08 KTS BAR 02 SWELL DIRECTION 32 H T 09 CLOUD 6 AMT 8 WEATHER

0	8.57	32.411	6.52	1.01	3.6	0	8.57	32.42	25.19	279.5	0
10	8.56	32.408	6.55	1.03	3.7	10	8.56	32.41	25.19	279.7	.028
30	8.55	32.412	6.53		3.8	20	8.55	32.41	25.19	279.9	.056
51	8.58	32.408	6.53	1.23	3.9	30	8.55	32.42	25.19	279.5	.084
78	8.43	32.999	6.18	1.63	10.7	50	8.58	32.41	25.18	280.8	.140
104	8.10	33.555	4.09	2.39	21.8	75	8.46	32.92	25.60	241.6	.205
129	7.92	33.749	3.79	2.45	23.6	100	8.15	33.48	26.09	194.7	.260
155	7.72	33.894	3.28	2.67	26.1	150	7.76	33.87	26.45	161.9	.349
207	7.16	33.964	2.67	3.04	29.4	200	7.24	33.95	26.59	149.3	.427
311	6.41	34.000	1.60	3.50	34.1	250	6.86	33.99	26.67	142.6	.500
413	4.96	34.056	1.52	3.76	35.9	300	6.50	34.00	26.73	137.5	.570
620	4.49	34.201	.51	3.72	40.0	400	5.14	34.05	26.83	118.5	.698
827	4.00	34.323	.31		40.8	500	4.56	34.12	27.05	107.0	.811
1033	3.41	34.419	.31		41.5	600	4.54	34.19	27.11	103.0	.916
1240	2.97	34.469	.50	3.75	41.7	700	4.31	34.25	27.19	96.1	1.015
						800	4.07	34.31	27.26	89.8	1.108
						1000	3.50	34.41	27.39	77.7	1.275
						1200	3.04	34.46	27.48	69.5	1.422

NH- 3 44 39.3 N 124 07.5 W DATE 12 FEB 69 0154 GCT WIRE 00 DRY 48.0 WET 44.5 CRUISE C69020
WIND DIRECTION 30 VEL 03 KTS BAR 11 SWELL DIRECTION 23 H 07 T 09 CLOUD 6 AMT 7 WEATHER

0	8.79	27.834	7.08	1.11	11.1	0	8.79	27.84	21.59	623.6	0
10	8.60	30.896	6.77	1.08	8.5	10	8.60	30.90	24.00	392.8	.051
20	8.69	31.469	6.71	.97	7.2	20	8.69	31.47	24.44	351.5	.088
30	8.64	31.838	6.69	1.20	7.1	30	8.64	31.84	24.57	338.6	.123

NH- 5 44 39.0 N 124 10.8 W DATE 12 FEB 69 0341 GCT WIRE 08 DRY 55.5 WET 48.0 CRUISE C69020
WIND DIRECTION 29 VEL 05 KTS BAR 11 SWELL DIRECTION 23 H 07 T 09 CLOUD 6 AMT 7 WEATHER

0	8.65	26.930	7.04	.97	15.9	0	8.65	26.94	20.90	689.3	0
10	8.72	32.013	6.62		6.8	10	8.72	32.02	24.84	311.4	.050
20	8.80	32.226	6.57	.89	5.8	20	8.80	32.23	25.01	294.8	.080
30	8.93	32.376	6.52	.97	5.7	30	8.93	32.38	25.11	287.7	.110
40	9.05	32.477	6.46			50	9.05	32.48	25.17	282.3	.167
50	9.05	32.477	6.46	1.33	6.2						

NH- 15 44 39.0 N 124 24.0 W DATE 12 FEB 69 0551 GCT WIRE 04 DRY 48.0 WET 44.5 CRUISE C69020
WIND DIRECTION 22 VEL 08 KTS BAR 10 SWELL DIRECTION 23 H 06 T 09 CLOUD 6 AMT 8 WEATHER

0	9.49	32.728	6.43	1.09	7.8	0	9.49	32.73	25.29	269.6	0
10	9.48	32.726	6.45	1.02	7.3	10	9.48	32.73	25.29	269.8	.027
20	9.49	32.727	6.44	1.15	7.3	20	9.49	32.73	25.29	270.0	.054
30	9.48	32.740	6.40			30	9.48	32.75	25.30	269.0	.081
40	9.47	32.753	6.32	1.24	7.5	50	9.48	32.77	25.32	267.7	.135
50	9.48	32.763	6.29	1.25	7.7						
60	9.49		6.29								
74	9.49	32.764	6.29		8.0						

NH- 25 44 39.0 N 124 38.7 W DATE 12 FEB 69 0920 GCT WIRE 00 DRY 48.5 WET 42.0 CRUISE C69020
WIND DIRECTION 29 VEL 03 KTS BAR 10 SWELL DIRECTION 27 H 06 T 09 CLOUD 08 AMT 01 WEATHER

0	9.27	32.634	6.49	1.15	6.0	0	9.27	32.64	25.25	273.2	0
10	9.25	32.631	6.46	.85	6.6	10	9.25	32.64	25.26	273.3	.027
20	9.28	32.633	6.44	.96	6.9	20	9.28	32.64	25.25	273.8	.055
30	9.29	32.642	6.45		7.1	30	9.29	32.65	25.26	273.6	.082
40	9.28	32.647	6.49	1.02	6.9	50	9.29	32.68	25.28	271.3	.136
50	9.29	32.674	6.41	1.09	7.0	75	9.51	32.78	25.33	267.6	.204
60	9.42	32.732	6.37		7.5	100	9.54	32.90	25.42	259.6	.270
75	9.51	32.776	6.34	1.18	8.4	150	9.79	33.40	25.76	227.6	.391
100	9.54					200	9.09	33.66	[illegible]	147.2	.499
125	9.76	33.103	5.24	1.35	12.4						
150	9.79	33.195	4.47	1.86	16.9						
175	9.30	33.466	1.72	1.85	22.5						
201	9.36	33.663	1.57	1.85	23.1						

NH- 35 44 39.0 N 124 52.8 W DATE 12 FEB 69 1141 GCT WIRE 00 DRY 46.0 WET 42.0 CRUISE C6902C
WIND DIRECTION 23 VEL 04 KTS BAR 10 SWELL DIRECTION 25 H 06 T 09 CLOUD 08 AMT 03 WEATHER

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
0	9.38	32.696	6.44	.81			6.2	0	9.38	32.70	25.29	270.3	0
10	9.35	32.687	6.44	.84			6.4	10	9.35	32.69	25.28	270.7	.027
20	9.40	32.689	6.45				6.6	20	9.40	32.69	25.28	271.4	.054
30	9.43	32.685	6.45	.87			6.7	30	9.43	32.69	25.27	272.4	.081
50	9.44	32.725	6.33	.89			6.9	50	9.44	32.73	25.30	269.9	.136
75	9.68	32.978	5.96	1.37			9.1	75	9.68	32.98	25.46	255.3	.201
100	9.82	33.111	5.50				11.4	100	9.82	33.12	25.54	248.1	.264
126	9.87	33.294	4.83	1.39			13.9	150	9.81	33.50	25.84	220.3	.381
151	9.80		4.14					200	8.35	33.90	26.38	169.2	.476
176	9.14	33.726	3.36	1.40				250	7.40	33.99	26.59	149.7	.556
202	8.29	33.911	2.69					300	6.92	34.02	26.68	141.9	.631
227	7.67	33.960	2.60										
252	7.38	33.991	2.38										
303	6.89	34.016	2.09										
353		34.017	2.04										

NH- 45 44 39.2 N 125 06.3 W DATE 12 FEB 69 1533 GCT WIRE 04 DRY 43.0 WET 42.0 CRUISE C6902C
WIND DIRECTION 33 VEL 12 KTS BAR 11 SWELL DIRECTION 28 H 07 T 09 CLOUD 06 AMT 08 WEATHER

0	8.71	32.646	6.45	.86			5.2	0	8.71	32.65	25.35	264.0	0
10	8.70	32.644	6.48	.88			6.1	10	8.70	32.65	25.35	264.2	.026
30	8.75	32.648	4.48	.90			6.2	20	8.73	32.65	25.35	264.8	.053
50	9.55	32.928	6.13	1.00			8.7	30	8.75	32.65	25.35	264.9	.079
75	9.95	33.360	5.05	1.46			15.3	50	9.55	32.93	25.44	256.5	.131
100	9.69	33.626	3.75	1.84			21.1	75	9.95	33.37	25.71	231.3	.192
126	9.20	33.734	3.30	2.14			23.7	100	9.69	33.63	25.96	207.9	.247
151	8.83	33.834	2.90	2.28			26.0	150	8.84	33.83	26.25	180.8	.344
202	8.24	33.918	2.89					200	8.26	33.92	26.41	164.6	.431
252	7.59	33.973	2.65	2.53			28.8	250	7.62	33.97	26.55	154.1	.511
303	6.94	33.988	2.19				31.9	300	6.97	33.99	26.65	144.8	.586
353	6.60	34.062	1.72					400	5.86	34.02	26.82	129.5	.723
404	5.80	34.014	1.73	2.91			36.6	500	5.30	34.10	26.96	116.8	.846
505	5.27	34.113	.89	3.33			39.9						

NH- 65 44 39.0 N 125 34.2 W DATE 12 FEB 69 2005 GCT WIRE 20 DRY 47.5 WET 43.2 CRUISE C6902C
WIND DIRECTION 30 VEL 15 KTS BAR 14 SWELL DIRECTION 28 H 09 T 10 CLOUD 8 AMT 5 WEATHER

0	8.34	32.581	6.55	.90			5.2	0	8.34	32.59	25.36	263.6	0
10	8.31	32.579	6.58	1.22			5.1	10	8.31	32.58	25.36	263.4	.026
29	8.36	32.576	6.56				6.0	20	8.33	32.58	25.35	264.3	.053
48	8.34	32.576	6.54					30	8.35	32.58	25.35	264.8	.079
73	9.40	33.340	4.63	1.77			15.4	50	8.42	32.63	25.38	262.0	.132
98	9.32	33.530	4.09	1.86			20.8	75	9.39	33.37	25.80	222.4	.192
124	8.08	33.723	3.65				23.9	100	9.22	33.55	25.97	206.9	.246
148	8.04	33.871	3.08	2.15			26.3	150	8.04	33.88	26.41	185.3	.339
197	7.79	33.975	2.49	2.25			29.1	200	7.74	33.98	26.53	154.7	.419
297	6.22	34.000	1.96	2.49			32.4	250	6.97	34.00	26.66	143.1	.493
395	5.95	34.109	1.10	2.80			34.0	300	6.20	34.00	26.77	133.5	.563
593	4.65	34.200	.46					400	5.92	34.11	26.89	123.2	.691
790	4.18	34.322	.27					500	5.27	34.17	27.01	111.7	.808
988	3.59	34.406	.35	3.04			37.2	600	4.63	34.20	27.11	102.7	.915
1186	3.18	34.457	.48	3.61			43.2	700	4.35	34.27	27.19	95.5	1.014
								800	4.15	34.33	27.26	89.4	1.107
								1000	3.56	34.41	27.39	78.1	1.274
								1200	3.15	34.46	27.47	70.7	1.423

NH- 85 44 39.1 N 125 02.1 W DATE 13 FEB 69 0810 GCT WIRE 10 DRY 44.0 WET 41.0 CRUISE C6902C
WIND DIRECTION 25 VEL 10 KTS BAR 16 SWELL DIRECTION 29 H 09 T 10 CLOUD 8 AMT 4 WEATHER

0	8.30	32.637	6.54	.81			6.1	0	8.30	32.64	25.41	258.8	0
10	8.29	32.632	6.56	.62			5.1	10	8.29	32.64	25.40	259.2	.026
29	8.14	32.622	6.58	.72			5.5	20	8.20	32.63	25.41	258.8	.052
48	8.32	32.622	6.56	.88			7.0	30	8.15	32.62	25.41	258.5	.078
73	8.37	33.029	5.31	1.00			9.4	50	8.35	32.64	25.40	259.9	.129
97	8.13	33.621	3.88					75	8.36	33.08	25.74	227.8	.190
122	7.79	33.745	3.68	1.50			17.3	100	8.09	33.65	26.23	182.3	.242
147	7.49	33.866	3.31	1.53			19.2	150	7.45	33.87	26.49	157.6	.327
196	6.91		2.92				30.1	200	6.85	33.95	26.66	144.1	.402
294	5.81	33.966	2.17	1.99				250	6.23	33.94	26.71	138.1	.473
393	5.83	34.115	.99	2.44				300	5.81	33.98	26.79	130.6	.540
589	4.79	34.210	.47	3.09			39.5	400	5.80	34.12	26.91	121.1	.666
786	4.19	34.319	.31					500	5.32	34.18	27.02	111.1	.782
982	3.64	34.404	.35					600	4.75	34.22	27.11	103.3	.889
1178		34.462	.48	3.26			42.5	700	4.42	34.27	27.19	95.9	.988
								800	4.15	34.33	27.26	89.4	1.081
								1000	3.59	34.41	27.39	78.4	1.249
								1200	3.15	34.47	27.47	70.1	1.397

NH-105 44 39.0 N 126 30.0 W DATE 13 FEB 69 1313 GCT WIRE 00 DRY 48.0 WET 44.0 CRUISE C69020
WIND DIRECTION 23 VEL 06 KTS BAR 10 SWELL DIRECTION 29 H 06 T 10 CLOUD 8 AMT 4 WEATHER

OBSERVED						INTERPOLATED				DERIVED	
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
0	7.69	32.407	6.79	.76			4.7	0	7.69	32.41	25.31	267.6	0
10	7.73	32.427	6.77	.75			4.7	10	7.73	32.43	25.32	266.7	.027
30	8.10	32.545	6.69	.80			5.3	20	7.91	32.49	25.34	265.3	.053
50	8.09	32.555	6.65	.80			5.7	30	8.10	32.55	25.36	263.3	.080
75	8.08	32.770	6.04	1.06			9.3	50	8.09	32.56	25.37	262.6	.132
99	7.85	33.492	4.10	1.60			18.7	75	8.08	32.77	25.54	246.8	.196
125	7.43	33.662	4.23	1.64			19.3	100	7.83	33.51	26.15	189.4	.250
150	7.17	33.758	4.21	1.80			23.1	150	7.18	33.76	26.45	161.9	.334
201	6.66		3.41	2.08			28.2	200	6.67	33.88	26.61	147.3	.416
302	6.00	33.984	1.92	2.59			34.7	250	6.32	33.95	26.71	137.9	.487
402	5.24	34.016	1.41	2.84			37.5	300	6.01	33.98	26.78	132.5	.554
604	4.70	34.204	.64	3.19			41.9	400	5.25	34.02	26.89	122.2	.682
806	3.98	34.317	.24					500	4.91	34.10	27.00	112.1	.799
1008	3.45	34.410	.35	3.20			41.3	600	4.71	34.20	27.10	104.0	.907
1209	2.99	34.479	.52				40.0	700	4.36	34.26	27.19	95.8	1.007
								800	4.00	34.31	27.27	88.6	1.099
								1000	3.47	34.41	27.39	77.3	1.265
								1200	3.01	34.48	27.49	67.9	1.410

NH-125 44 38.9 N 126 58.0 W DATE 13 FEB 69 1827 GCT WIRE 05 DRY 45.0 WET 41.5 CRUISE C69020
WIND DIRECTION 16 VEL 08 KTS BAR 13 SWELL DIRECTION 29 H 08 T 10 CLOUD 0 AMT 4 WEATHER

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
0	7.41	32.359	6.81	.79			3.8	0	7.42	32.36	25.32	267.4	0
10	7.41	32.360	6.80	.75			4.3	10	7.42	32.36	25.32	267.5	.027
30	7.49	32.383	6.76	.78			4.5	20	7.45	32.37	25.32	267.5	.053
50	8.15	32.589	6.54	.84			5.7	30	7.49	32.39	25.32	267.0	.080
75	8.25	33.419	4.66	1.99			21.8	50	8.15	32.59	25.39	261.0	.133
100	8.10	33.719	3.49	2.16			25.6	75	8.25	33.42	26.03	201.0	.141
125	7.84	33.855	2.99				27.7	100	8.10	33.72	26.28	177.0	.224
150	7.64	33.901	2.70	2.30			30.3	150	7.65	33.91	26.49	157.7	.322
201	7.27	33.962	.07	2.46			33.0	200	7.28	33.96	26.59	149.3	.394
302	6.53	34.011	.02	2.81			35.5	250	6.91	33.99	26.66	142.7	.471
402	5.90	34.049	.36	2.89			36.0	300	6.54	34.01	26.73	137.3	.541
604	4.94	34.166	.72				40.1	400	5.91	34.05	26.84	127.9	.674
906	4.16	34.309	.31	3.24			40.9	500	5.40	34.10	26.94	119.1	.797
1007	3.52	34.408	.39					600	4.96	34.16	27.04	109.7	.911
1208	3.03	34.471	.48	3.44			42.3	700	4.55	34.24	27.15	100.2	1.016
								800	4.18	34.30	27.24	91.4	1.111
								1000	3.54	34.41	27.39	75.2	1.261
								1200	3.05	34.47	27.48	68.9	1.428

NH-145 44 39.1 N 127 25.5 W DATE 13 FEB 69 2156 GCT WIRE 00 DRY 45.0 WET 42.5 CRUISE C69020
WIND DIRECTION 16 VEL 11 KTS BAR 10 SWELL DIRECTION 16 H 02 T 02 CLOUD 8 AMT 6 WEATHER

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
0	7.78	32.514	6.69	.73			3.1	0	7.79	32.52	25.39	260.8	0
10	7.76	32.514	6.72	.53			3.0	10	7.77	32.52	25.39	260.7	.026
30	7.78	32.513	6.71	.82			5.6	20	7.77	32.51	25.38	261.2	.052
50	8.09	32.865	5.77	1.18			11.5	30	7.79	32.52	25.38	261.2	.078
75	8.24	33.649	3.71	2.03			24.8	50	8.09	32.87	25.62	233.6	.134
100	7.96	33.822	3.10	2.35			26.8	75	8.24	33.65	26.21	183.8	.181
126	7.78	33.863	2.80					100	7.96	33.83	26.38	167.3	.225
151	7.53	33.932	2.42	2.51			31.2	150	7.54	33.93	26.53	154.5	.306
202	7.18	33.971	2.24	2.55			31.8	200	7.19	33.97	26.61	147.4	.381
303	6.70	34.019	1.86					250	6.94	34.00	26.66	142.8	.454
404	6.20	34.049	1.45	2.61			31.5	300	6.71	34.02	26.71	139.0	.524
606	5.02	34.169	.64					400	6.22	34.05	26.80	131.9	.659
808	4.32	34.279	.32				41.4	500	5.62	34.10	26.92	120.9	.786
1010	3.59	34.406	.33	3.64			43.1	600	5.05	34.16	27.03	110.8	.902
1212	3.15	34.463	.48	3.64			41.9	700	4.67	34.22	27.12	102.7	1.008
								800	4.34	34.27	27.20	95.5	1.107
								1000	3.62	34.40	27.37	79.5	1.282
								1200	3.17	34.46	27.47	70.8	1.433

NH-165 44 39.2 N 127 54.0 W DATE 14 FEB 69 0226 GCT WIRE 22 DRY 48.0 WET 46.0 CRUISE C69020
WIND DIRECTION 14 VEL 18 KTS BAR 06 SWELL DIRECTION 14 H 05 T 05 CLOUD 6 AMT 8 WEATHER

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
0	7.79	32.458	6.80	.75			4.3	0	7.80	32.46	25.34	265.1	0
9	7.77	32.460	6.81	.81			4.4	10	7.77	32.46	25.34	265.1	.027
28	7.87	32.487	6.77					20	7.82	32.48	25.35	264.8	.053
48	7.87	32.486	6.75	.86			4.6	30	7.87	32.49	25.35	264.7	.079
95	8.07	33.670	3.81	1.91			24.0	50	7.90	32.53	25.38	262.3	.132
71	8.30	33.180	4.95					75	7.98	33.12	25.83	219.8	.192
120	7.89	33.849	3.30	2.07			25.9	100	8.03	33.70	26.27	178.0	.242
144	7.77	33.923	3.02	2.21			27.9	150	7.67	33.93	26.51	154.4	.326
192	6.88	33.938	2.78	2.57			31.6	200	6.79	33.94	26.64	144.0	.401
289	6.10	34.017	1.81	2.70			34.1	250	6.32	33.98	26.74	135.7	.471
384	5.54	34.057	1.27	3.01			38.0	300	6.03	34.02	26.80	129.8	.537
579	4.82	34.186	.69	3.27			40.8	400	5.48	34.07	26.91	121.2	.662
772	4.24	34.302	.28					500	5.07	34.13	27.00	112.0	.779
964	3.68	34.390	.31	3.31			40.8	600	4.75	34.20	27.10	104.6	.887
1158	3.18	34.457	.42	3.27			42.8	700	4.45	34.26	27.19	97.0	.988
								800	4.16	34.32	27.25	90.2	1.082
								1000	3.58	34.40	27.38	78.8	1.250

	OBSERVED							INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
NH- 3 44 39.1 N 124 07.8 W DATE 14 MAR 2330 GCT WIRE 02 DRY 50.5 WET 46.5 CRUISE C6903F													
WIND DIRECTION 15 VEL 05 KTS BAR 28 SWELL DIRECTION H T CLOUD 6 AMT 4 WEATHER 01													
0	9.10	31.993	8.00	.69			.9	0	9.10	32.00	24.78	318.3	0
5	8.97	31.99[illegible]	8.00	.66			.8	10	8.94	32.03	24.85	312.1	.032
10	8.84	32.02[illegible]	7.56	.87			1.4	20	9.21	32.62	25.25	273.7	.141
15	9.05	32.548	6.45	1.10			6.1	30	9.28	32.80	25.38	261.8	.248
20	9.21	32.619	6.38	1.20			7.1						
25	9.25	32.726	6.21	1.34			8.2						
30	9.28	32.797	6.10										
NH- 5 44 39.1 N 124 10.8 W DATE 15 MAR 69 0037 GCT WIRE 00 DRY 49.5 WET 45.5 CRUISE C6903F													
WIND DIRECTION 18 VEL 08 KTS BAR 27 SWELL DIRECTION 18 H 01 T 01 CLOUD 6 AMT 4 WEATHER 01													
0	9.15	31.984	8.39	.56			.1	0	9.15	31.99	24.77	319.7	0
5	9.12	31.983	8.37	.80			.1	10	8.97	32.13	24.90	307.1	.031
10	8.97	32.120	7.37	.78			1.1	20	8.96	32.48	25.18	280.8	.061
15	8.89	32.332	6.70	.97			4.4	30	9.11	32.67	25.30	269.3	.088
20	8.96	32.473	6.49	.95			5.3						
25	9.05	32.567	6.36	1.32			7.2						
30	9.11	32.661	6.25										
35	9.15	32.766	6.08	1.34			8.1						
40	9.30	32.896	5.72	1.40			10.1						
45	9.39	33.081	5.24	1.58			12.7						
NH- 15 44 39.1 N 124 25.4 W DATE 15 MAR 69 0255 GCT WIRE 05 DRY 49.0 WET 45.0 CRUISE C6903F													
WIND DIRECTION 22 VEL 08 KTS BAR 27 SWELL DIRECTION 02 H 02 T 02 CLOUD 6 AMT 4 WEATHER 01													
0	8.92	32.130	7.62	.83			.5	0	8.92	32.13	24.92	305.5	0
5	8.88	32.140	7.63				.9	10	8.88	32.23	25.00	298.3	.030
10	8.88	32.224	7.44					20	8.92	32.60	25.28	271.3	.139
15	8.92	32.499	7.36	.97			1.6	30	8.92	32.67	25.34	265.9	.185
20	8.92	32.594	7.02				2.3	50	9.04	32.75	25.37	262.7	.138
25	8.88	32.633	7.02	1.12			3.9	75	7.98	33.15	25.85	217.3	.198
30	8.92	32.668	6.79	1.00			4.5						
35	9.01	32.728	6.63	.99			5.6						
40	9.05	32.746	6.56	.85									
45	9.04	32.741	6.55	1.00									
50	9.04	32.740	6.54	1.05			6.7						
55	8.91	32.742	6.55	1.09			6.8						
60		32.757	6.46	1.34			6.8						
65		32.817	6.40	1.32			8.1						
75		33.149	5.17	1.57			12.9						
NH- 25 44 39.0 N 124 28.5 W DATE 15 MAR 69 0730 GCT WIRE 10 DRY 47.9 WET 44.9 CRUISE C6903F													
WIND DIRECTION 20 VEL 14 KTS BAR 26 SWELL DIRECTION 20 H 04 T 02 CLOUD 4 AMT 4 WEATHER 01													
0	8.80	31.865	7.62	.43			.1	0	8.80	31.87	24.73	329.4	0
10	8.79	31.942	7.75	.58			.3	10	8.79	31.95	24.79	317.7	.032
20	8.82	32.272	7.25	.79			1.2	20	8.82	32.28	25.04	293.7	.063
30	8.90	32.559	6.77	.96			2.7	30	8.90	32.56	25.25	273.7	.131
40	8.98	32.648	6.59	1.00			4.9	50	8.93	32.67	25.34	264.2	.165
50	8.93	32.670	6.52	.93			4.3	75	8.76	32.71	25.39	261.7	.211
60	8.87	32.688	6.46	.88				100	9.69	33.12	25.56	245.9	.274
70	8.76	32.703	6.61	.73			3.6	150	8.27	33.78	26.30	175.8	.340
80	8.84	32.723	6.54	.82			6.3	200	7.27	33.94	26.57	150.6	.461
90	9.20	32.847	6.15	1.04			8.5						
100	9.69	33.112	5.37	1.17			9.7						
125	8.92	33.603	3.87	1.80			19.8						
150		33.777	3.31										
175	7.72	33.918	2.86	2.12			25.5						
200	7.27	33.942	2.74	2.10			25.5						
NH- 35 44 39.2 N 124 52.6 W DATE 15 MAR 69 0955 GCT WIRE 10 DRY 44.0 WET 46.0 CRUISE C6903F													
WIND DIRECTION 19 VEL 14 KTS BAR 25 SWELL DIRECTION 19 H 04 T 03 CLOUD 6 AMT 3 WEATHER 02													
0	8.65	32.637	6.89	.66			2.6	0	8.65	32.64	25.35	263.8	0
10	8.57	32.635	6.92	.70			2.8	10	8.57	32.64	25.36	263.0	.026
20	8.59	32.633	6.92	.64			2.7	20	8.59	32.64	25.36	263.5	.053
30	8.60	32.629	6.86	.52			2.6	30	8.60	32.63	25.36	264.1	.079
50	8.73	32.661	6.71	.89			5.4	50	8.73	32.67	25.36	261.9	.132
75	8.66	32.711	6.51	1.02			6.2	75	8.66	32.72	25.41	259.6	.197
98*	8.56	33.346	4.55	1.60			15.0	100	8.56	33.39	25.95	208.3	.256
124*	8.60	33.776	3.30					150	8.44	33.82	26.31	175.7	.362
149*	8.45	33.813	3.22	1.98			24.0	200	7.57	33.97	26.55	153.1	.434
173*	8.03	33.914	2.89	2.19			27.2	250	6.88	33.97	26.65	143.7	.508
198*	7.59	33.964	2.64	2.19			29.3	300	6.44	34.00	26.73	137.0	.578
223*	7.33	33.970	2.61										
247*	6.91	33.974	2.47										
297*	6.47	33.994	2.18	2.48			34.6						
346*	5.94	34.048	1.52	2.58			35.3						

OBSERVED | INTERPOLATED | DERIVED

NH- 45 44 39.0 N 125 06.2 W DATE 15 MAR 69 1447 GCT WIRE 05 DRY 49.0 WET 47.0 CRUISE C6903F
WIND DIRECTION 20 VEL 11 KTS BAR 25 SWELL DIRECTION 26 H 08 T 09 CLOUD 6 AMT 7 WEATHER

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
0	9.07	32.660	6.85	.69			3.9	0	9.07	32.67	25.31	268.3	0
10	9.03	32.660	6.84	.68			4.2	10	9.03	32.67	25.31	267.9	.027
30	8.91	32.691	6.85	.78			4.8	20	8.97	32.68	25.33	266.3	.054
49	8.82	32.685	6.71	.77			5.3	30	8.91	32.70	25.36	264.1	.080
74	8.83	32.679	6.70	.75			5.8	50	8.82	32.68	25.36	264.0	.133
99	9.28	32.897	6.04	.97			9.0	75	8.85	32.68	25.35	264.8	.199
125	9.31	33.602	3.94	1.70			21.4	100	9.29	32.92	25.47	253.9	.264
149	8.68	33.78	3.30					150	8.46	33.78	26.25	181.5	.373
200	8.08	33.904	3.01	1.87			23.0	200	8.08	33.91	26.43	164.6	.454
250	7.52	33.969	2.64	2.06			25.1	250	7.53	33.97	26.56	152.4	.538
301	6.75	33.984	2.30	2.12			27.8	300	6.76	33.98	26.48	142.3	.612
350	6.24	34.031	1.77	2.68				400	5.55	34.07	24.90	121.8	.744
400	5.54	34.063	1.28	2.71			36.7	500	5.16	34.13	26.99	113.4	.842
500	5.15	34.120	.89					600	4.70	34.21	27.11	103.5	.970
600	4.70	34.205	.69										

NH- 65 44 39.0 N 125 34.1 W DATE 20 MAR 69 1000 GCT WIRE 08 DRY 49.0 WET 47.0 CRUISE C6903F
WIND DIRECTION 01 VEL 14 KTS BAR 18 SWELL DIRECTION 01 H 04 T 03 CLOUD 3 AMT 3 WEATHER

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
0	9.38	32.800	6.54	.91			5.6	0	9.38	32.80	25.37	262.6	0
10	9.35	32.794	6.57	.77			4.6	10	9.35	32.80	25.37	262.7	.026
30	9.34	32.799	6.55	.99			7.0	20	9.34	32.80	25.37	263.0	.053
50	9.37	32.799	6.55	1.01			7.3	30	9.34	32.80	25.37	262.5	.079
75	9.41	32.800	6.54	1.01			7.5	50	9.38	32.80	25.37	253.3	.131
100	9.92	33.316	4.79	1.48			15.6	75	9.41	32.80	25.36	264.2	.197
126	9.78	33.561	4.38	1.60			16.0	100	9.92	33.32	25.68	234.5	.260
151	9.46	33.684	3.49	1.63			19.7	150	9.48	33.68	26.03	201.7	.369
202	8.65	33.896	2.86	2.09			26.0	200	8.68	33.89	26.32	175.0	.463
402*	5.84	34.022	1.64	2.74			36.0	250	7.87	33.98	26.52	157.3	[illegible]
603*	4.83	34.183	.60					300	7.12	33.96	26.61	149.1	[illegible]
804*	4.16	34.317	.77	3.30			43.1	400	5.86	34.02	26.82	129.3	.742
1004*	3.63	34.395	.40					500	5.21	34.10	26.96	115.9	.884
1206*	3.12	34.467	.55					600	4.84	34.18	27.07	107.0	.996
								700	4.48	34.25	27.17	98.0	1.098
								800	4.17	34.31	27.25	90.5	1.192
								1000	3.64	34.39	27.37	80.2	1.363
								1200	3.13	34.46	27.47	70.2	1.513

NH- 85 44 39.1 N 126 02.3 W DATE 20 MAR 69 1600 GCT WIRE 10 DRY 49.9 WET 47.8 CRUISE C6903F
WIND DIRECTION 03 VEL 20 KTS BAR SWELL DIRECTION 03 H 06 T 05 CLOUD 0 AMT 3 WEATHER

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
0	8.66	32.596	6.96	.70			2.6	0	8.66	32.60	25.32	267.0	0
10	8.60	32.596	6.98	.70			2.8	10	8.60	32.60	25.33	266.3	.027
30	8.57	32.599	6.95	.70			2.7	20	8.58	32.60	25.33	266.3	.053
50	8.56	32.599	6.86	.74			3.2	30	8.57	32.60	25.34	265.9	.080
75	8.64	32.681	6.60	.78			4.1	50	8.56	32.60	25.34	264.1	.133
100	9.37	33.192	5.21	1.14			10.7	75	8.64	32.69	25.39	261.5	.199
125	9.28	33.627	3.90	1.81			20.6	100	9.38	33.20	25.67	235.0	.261
150	8.61	33.857	2.91	2.10			26.1	150	8.61	33.86	26.31	175.0	.344
201	7.41	33.998	2.43	2.31			29.8	200	7.43	34.00	26.60	148.7	.444
402	5.58	34.076	1.22					250	6.71	34.05	26.74	135.9	.516
603	4.61	34.209	.52	2.83			35.2	300	6.17	34.04	26.80	130.5	.582
804	4.16	34.339	.49				40.5	400	5.58	34.08	26.90	121.8	.708
1004	3.62	34.414	.44	3.16			40.4	500	5.02	34.14	27.02	110.8	.825
1206	3.11	34.471	.58	3.30			42.7	600	4.62	34.21	27.12	102.4	.931
								700	4.37	34.28	27.20	95.0	1.030
								800	4.17	34.34	27.27	88.9	1.122
								1000	3.63	34.41	27.38	78.7	1.289
								1200	3.12	34.47	27.48	69.7	1.437

NH- 3 44 39.1 N 124 07.8 W DATE 12 APR 69 0241 GCT WIRE 08 DRY 53.5 WET 51.1 CRUISE C6904C
WIND DIRECTION 35 VEL 10 KTS BAR 14 SWELL DIRECTION 28 H 08 T 09 CLOUD 6 AMT 8 WEATHER

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
0	11.09	31.728	7.13	.36			.1	0	11.09	31.73	24.25	369.3	0
10	10.15	32.277	7.06	.32			.1	10	10.15	32.28	24.83	313.5	.034
5	10.68	32.110	7.27	.31			.1	20	9.98	32.35	24.92	305.8	.065
15	9.98	32.315	6.77	.35			.1	30	8.57	32.50	25.26	273.6	.094
20	9.98	32.347	6.53	.44			.2						
25	9.90	32.386	6.59	.59			.2						
30		32.496	6.61	.55			1.4						

NH- 5 44 39.1 N 124 10.6 W DATE 12 APR 69 0355 GCT WIRE 00 DRY 52.4 WET 51.0 CRUISE C6904C
WIND DIRECTION 26 VEL 05 KTS BAR 14 SWELL DIRECTION 28 H 08 T 09 CLOUD 6 AMT 2 WEATHER

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
0	11.09	32.160	7.05	.33			.1	0	11.09	32.17	24.58	337.4	0
5	10.43	32.413	7.17	.37			.1	10	9.82	32.45	25.02	295.9	.032
10	9.82	32.444	7.03	.42			.1	20	9.65	32.45	25.05	293.2	.061
15	9.68	32.450	6.74	.53			.4	30	9.46	32.46	25.08	290.1	.090
20	9.65	32.447	6.64	.50			.7						
25	9.51	32.442	6.56	.55			1.2						
30	9.46	32.452	6.55	.62			1.4						
35	9.41	32.486	6.57	.61			1.8						
40	9.39	32.493	6.59	.60			1.9						
45	9.35	32.516	6.54	.63			2.3						

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
NH- 15 44 39.0 N 124 24.2 W DATE 12 APR 69 0555 GCT WIRE 00 DRY 51.1 WET 50.3 CRUISE C6904C													
WIND DIRECTION 25 VEL 12 KTS BAR 14 SWELL DIRECTION 28 H 08 T 09 CLOUD 6 AMT 5 WEATHER													
0	10.17	32.549	6.79	.65			1.6	0	10.17	32.55	25.04	293.5	0
5	10.24	32.549	6.79	.66			1.6	10	9.77	32.58	25.13	285.7	.029
10	9.77	32.572	6.82	.71			1.7	20	9.60	32.60	25.17	281.6	.057
15	9.69	32.589	6.81	.67			1.7	30	9.47	32.60	25.19	279.5	.085
20	9.60	32.594	6.78	.63			1.8	50	9.24	32.63	25.25	274.1	.141
25	9.50	32.594	6.79	.67			1.8	75	8.64	33.04	25.67	235.3	.204
30	9.47	32.597	6.78										
35	9.47	32.617	6.79	.69			1.9						
40	9.34	32.613	6.78										
45	9.22	32.608	6.69										
50	9.24	32.627	6.64	.72			2.0						
55	9.93	32.637	6.62	.71			2.0						
60		32.643	6.61	.74			2.3						
66		32.698	6.27	.83			3.8						
76		33.096	4.79	1.33			13.2						
NH- 25 44 39.1 N 124 38.9 W DATE 12 APR 69 1520 GCT WIRE 20 DRY 51.0 WET 49.0 CRUISE C6904C													
WIND DIRECTION 17 VEL 25 KTS BAR 10 SWELL DIRECTION 2[illegible] H 06 T 14 CLOUD 7 AMT 8 WEATHER													
0	10.06	32.579	6.83	.57			.8	0	10.06	32.58	25.08	289.6	0
10	10.12	32.579	6.86	.57			.8	10	10.13	32.58	25.07	290.7	.029
20	9.77	32.613	6.98	.53			.6	20	9.77	32.62	25.16	282.8	.056
30	9.50	32.624	6.87	.57			1.1	30	9.50	32.63	25.21	277.9	.085
40	9.52	32.630	6.68	.62			1.5	50	9.34	32.63	25.24	275.7	.141
50	9.34	32.625	6.56	.64			1.8	75	9.30	32.98	25.51	249.8	.207
60	9.29	32.623	6.53					100	9.16	33.46	25.92	212.1	.264
70	9.34	32.771	6.13	.76			3.8	150	8.23	33.82	26.34	172.3	.341
80	9.25	33.167	4.85	1.32			13.1	200	7.75	33.96	26.52	156.1	.443
90	9.24	33.210	4.92	1.64			12.3						
100	9.16	33.458	4.15				18.4						
124	8.70	33.734	3.34	1.74			23.9						
149		33.819	3.22	1.86			26.0						
174	7.91	33.903	3.09	1.90			27.2						
199	7.76	33.957	2.77	2.03			30.2						
NH- 35 44 38.1 N 124 52.9 W DATE 13 APR 69 0320 GCT WIRE 00 DRY 48.2 WET 45.8 CRUISE C6904C													
WIND DIRECTION 33 VEL 15 KTS BAR 24 SWELL DIRECTION 25 H 06 T 08 CLOUD 0 AMT 8 WEATHER													
0	9.53	32.582	6.68	.56			.9	0	9.53	32.59	25.17	281.1	0
10	9.63	32.580	6.71	.51			.8	10	9.63	32.58	25.15	282.9	.028
20	9.50	32.578	6.68	.54			1.0	20	9.50	32.58	25.17	281.2	.055
30	9.51	32.587	6.68	.53			.9	30	9.51	32.59	25.18	280.8	.084
50	9.54	32.600	6.60	.55			1.0	50	9.54	32.60	25.19	280.7	.141
75	9.35	32.939	5.88	.83			5.8	75	9.35	32.84	25.40	260.4	.208
100	9.07	33.474	3.94	1.41			20.0	100	9.07	33.48	25.94	209.5	.267
126	8.78	33.704	3.58	1.60			22.4	150	8.33	33.88	26.37	169.4	.362
151	8.31	33.887	2.91	1.77			27.8	200	7.78	33.98	26.53	154.8	.443
176	7.97	33.956	2.71	1.85			29.5	250	7.27	34.02	26.63	145.8	.518
202	7.76	33.981	2.49					300	6.76	34.03	26.72	138.6	.589
227	7.37	33.963	2.41										
252	7.26	34.023	2.24	2.11			32.8						
303	6.72	34.033	1.90	2.28			36.0						
353	6.07	34.054	1.50	2.32			36.7						
NH- 45 44 38.1 N 125 06.7 W DATE 15 APR 69 0640 GCT WIRE 00 DRY 47.9 WET 43.3 CRUISE C6904C													
WIND DIRECTION 30 VEL 08 KTS BAR 25 SWELL DIRECTION 25 H 05 T 08 CLOUD 8 AMT 7 WEATHER													
0	9.60	32.603	6.66	.60			.6	0	9.60	32.61	25.18	280.6	0
10	9.73	32.603	6.68	.56			.6	10	9.73	32.61	25.16	282.8	.028
30	9.60	32.605	6.69	.55			.6	20	9.69	32.60	25.16	282.6	.056
50	9.60	32.616	6.63	.59			.9	30	9.60	32.61	25.18	280.9	.085
74	9.18	32.936	5.59	.94			8.0	50	9.60	32.62	25.19	280.6	.141
99	9.18	33.434	4.19	1.33			17.6	75	9.18	32.96	25.52	249.4	.207
125	8.77	33.710	3.32	1.66			23.9	100	9.17	33.45	25.90	213.2	.265
150	8.35	33.845	3.34	1.74			27.4	150	8.35	33.85	26.34	172.1	.341
201	7.69	33.957	2.64	1.85			31.1	200	7.70	33.96	26.52	155.6	.443
250	7.16	34.004	2.40	1.88				250	7.17	34.01	26.64	145.0	.518
301	6.53	33.012	2.06	2.16			37.0	300	6.54	33.03	25.95	210.6	.607
351	6.10	34.043	1.60	2.34			39.1	400	5.71	34.09	26.89	122.5	.773
402	5.70	34.089	1.57	2.54			42.8	500	5.15	34.15	27.01	111.8	.890
503	5.14	34.147	.77	2.72			45.4	600	4.71	34.20	27.10	103.8	.998
604	4.69	34.205	.52	2.84			47.1						

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NH- 65 44 39.4 N 125 34.2 W DATE 15 APR 69 1316 GCT WIRE 00 DRY 47.5 WET 42.5 CRUISE C6904C
WIND DIRECTION 30 VEL 03 KTS BAR 29 SWELL DIRECTION 27 H 03 T 09 CLOUD 6 AMT 6 WEATHER

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	9.50	32.619	6.69	.70			1.4
10	9.58	32.618	6.69	.74			1.6
30	9.41	32.623	6.63				1.8
50	9.44	32.624	6.65	.90			2.0
75	9.35	32.654	6.60				2.8
100	9.36	33.129	5.09	1.42			12.6
126	9.08	33.473	4.11	1.68			19.0
151	8.93	33.699	3.56	2.03			23.4
202	8.13	33.883	2.94	2.07			27.6
303	6.69	33.999	2.23	2.31			34.1
404	5.79	34.061	1.41	2.83			39.4
606	4.61	34.215	.51	3.19			
808	4.02	34.345	.54	3.33			44.0
1010	3.50	34.419	.42	3.45			47.0
1212	3.02	34.482	.60	3.37			47.0

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dynm)
0	9.50	32.62	25.21	277.0	0
10	9.58	32.62	25.19	279.3	.028
20	9.51	32.62	25.20	278.5	.056
30	9.41	32.63	25.22	276.4	.083
50	9.44	32.63	25.22	277.3	.138
75	9.35	32.66	25.26	274.1	.208
100	9.36	33.13	25.63	239.5	.272
150	8.94	33.69	26.13	192.4	.380
200	8.17	33.88	26.40	167.9	.470
250	7.40	33.96	26.57	151.7	.550
300	6.73	34.00	26.69	140.7	.623
400	5.82	34.06	26.86	125.9	.756
500	5.14	34.13	27.00	112.6	.875
600	4.63	34.21	27.12	102.4	.983
700	4.29	34.28	27.21	93.8	1.081
800	4.04	34.34	27.29	87.0	1.171
1000	3.52	34.42	27.40	77.2	1.335
1200	3.05	34.48	27.49	68.2	1.481

NH- 85 44 39.1 N 126 02.2 W DATE 15 APR 69 1651 GCT WIRE 03 DRY 50.0 WET 45.5 CRUISE C6904C
WIND DIRECTION 30 VEL 03 KTS BAR 29 SWELL DIRECTION 27 H 06 T 08 CLOUD 8 AMT 7 WEATHER

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	9.66	32.635	6.75	.77			2.5
10	9.57	32.637	6.77	.76			2.7
30	9.49	32.638	6.75	.72			2.8
50	9.39	32.639	6.66	.76			3.0
74	9.28	32.786	6.16	.89			6.1
99	9.39	33.293	4.60	1.53			16.4
125	8.95	33.620	3.68	1.87			22.6
150	8.39	33.723	3.73	1.89			24.6
200	8.13	33.957	2.60	2.21			29.3
301	6.57	34.002	2.10	2.53			29.1
402	5.78	34.061	1.30	2.90			39.8
602	4.74	34.192	.52	3.07			41.7
803	4.17	34.324	.79	3.42			46.4
1004	3.60	34.405	.39	3.48			47.2
1204	3.12	34.470	.54	3.53			46.9

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dynm)
0	9.66	32.64	25.19	279.1	0
10	9.57	32.64	25.21	277.8	.028
20	9.52	32.64	25.21	277.4	.056
30	9.49	32.64	25.22	276.8	.083
50	9.39	32.64	25.24	275.5	.139
75	9.29	32.80	25.38	262.3	.206
100	9.38	33.31	25.76	226.7	.247
150	8.39	33.73	26.24	181.7	.369
200	8.13	33.96	26.47	161.4	.455
250	7.40	33.98	26.59	150.4	.533
300	6.59	34.00	26.71	139.5	.605
400	5.79	34.06	26.86	125.5	.737
500	5.20	34.12	26.99	113.9	.856
600	4.75	34.19	27.09	105.2	.946
700	4.43	34.26	27.18	97.0	1.047
800	4.18	34.32	27.26	90.0	1.160
1000	3.61	34.40	27.38	79.1	1.330
1200	3.13	34.47	27.48	69.8	1.478

NH-105 44 39.1 N 126 30.3 W DATE 15 APR 69 2106 GCT WIRE 00 DRY 50.8 WET 47.7 CRUISE C6904C
WIND DIRECTION 18 VEL 08 KTS BAR 30 SWELL DIRECTION 27 H 06 T 08 CLOUD 0 AMT 2 WEATHER

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	8.94	32.453	6.81	.79			2.4
10	8.72	32.455	6.86	.83			2.4
30	8.53	32.458	6.84	1.06			2.4
50	8.44	32.474	6.79				2.7
75	7.87	32.995	5.29	1.38			13.3
100	7.90	33.452	4.23	1.76			20.8
126	7.74	33.746	3.62				25.1
151	7.46	33.838	3.66				26.2
202	6.77	33.923	2.92				30.6
303	5.84	33.993	1.83				36.9
404	5.24	34.054	1.26	3.08			42.6
606	4.59	34.208	.52	3.74			
808	4.09	34.349	.53	3.41			44.7
1010	3.56	34.421	.43	3.46			45.4
1212	3.08	34.472	.53	3.53			44.9

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dynm)
0	8.94	32.46	25.17	281.8	0
10	8.72	32.46	25.20	278.5	.028
20	8.60	32.46	25.22	277.1	.056
30	8.53	32.46	25.23	275.8	.083
50	8.44	32.48	25.26	273.4	.138
75	7.88	33.00	25.75	227.2	.201
100	7.91	33.46	26.10	194.0	.254
150	7.47	33.84	26.46	160.5	.342
200	6.80	33.92	26.62	145.8	.419
250	6.27	33.96	26.73	136.4	.489
300	5.86	33.99	26.80	130.0	.556
400	5.26	34.05	26.92	119.5	.691
500	4.88	34.13	27.02	110.0	.795
600	4.60	34.20	27.12	102.5	.902
700	4.35	34.28	27.20	94.6	1.000
800	4.11	34.34	27.28	87.4	1.091
1000	3.59	34.42	27.39	77.8	1.256
1200	3.11	34.47	27.48	69.5	1.404

NH-125 44 39.1 N 126 59.0 W DATE 16 APR 69 0118 GCT WIRE 00 DRY 50.5 WET 47.9 CRUISE C6904C
WIND DIRECTION 18 VEL 10 KTS BAR 28 SWELL DIRECTION 27 H 06 T 07 CLOUD 0 AMT 7 WEATHER

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	8.68	32.435	6.89				2.0
10	8.68	32.429	6.89	.77			2.2
30	8.32	32.432	6.89				13.5
50	8.23	32.441	6.86	.78			22.5
75	7.95	33.024	5.19	1.62			25.3
100	7.74	33.601	3.95	1.81			27.6
126	7.79	33.790	3.41	1.96			30.3
151	7.49	33.842	3.25	2.08			36.2
202	6.79	33.931	2.69	2.39			42.2
303	5.14	33.888	2.61	2.81			46.0
404	4.59	33.955	2.02	2.81			47.8
606	4.47	34.201	.49	3.20			48.4
808	4.02	34.340	.68	3.40			47.7
1010	3.44	34.420	.63				
1212	2.94	34.477	.57	3.47			

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dynm)
0	8.68	32.44	25.19	279.3	0
10	8.68	32.43	25.19	279.9	.028
20	8.51	32.43	25.21	277.8	.056
30	8.32	32.44	25.24	274.8	.083
50	8.23	32.45	25.26	273.1	.138
75	7.95	33.03	25.76	226.1	.201
100	7.74	33.61	26.24	180.7	.251
150	7.51	33.89	26.50	157.0	.336
200	6.82	33.93	26.63	145.5	.411
250	5.96	33.91	26.73	136.3	.482
300	5.18	33.89	26.80	129.8	.548
400	4.60	33.95	26.92	119.6	.677
500	4.47	34.07	27.02	109.5	.787
600	4.47	34.19	27.12	101.7	.893
700	4.29	34.29	27.21	94.1	.990
800	4.04	34.36	27.28	87.4	1.081
1000	3.47	34.42	27.40	76.5	1.265
1200	2.97	34.47	27.50	67.6	1.389

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
NH-145 44 39.8 N 127 25.9 W DATE 16 APR 0958 GCT WIRE 00 DRY 48.0 WET 47.0 CRUISE C69042													
WIND DIRECTION 18 VEL 10 KTS BAR 27 SWELL DIRECTION 27 H 06 T 09 CLOUD 7 AMT 8 WEATHER													
0	8.40	32.404	6.90				3.0	0	8.40	32.41	25.21	277.8	0
10	8.50	32.410	6.95				2.9	10	8.50	32.42	25.20	278.7	.028
30	8.20	32.408	6.95				3.0	20	8.39	32.41	25.21	277.6	.156
50	7.90	32.415	6.93				3.3	30	8.20	32.41	25.24	274.9	.283
75	7.20	32.887	5.71				13.5	50	7.91	32.42	25.29	270.4	.138
100	7.39	33.458	4.64	1.68			20.8	75	7.20	32.89	25.75	224.2	.300
126	7.72	33.773	3.57	1.96			26.2	100	7.40	33.46	26.15	184.5	.351
151	7.47	33.871	3.48	2.08			28.0	150	7.49	33.87	26.69	158.2	.338
202	6.99	33.905	3.09	2.24			30.4	200	7.01	33.90	26.58	149.9	.415
302	5.98	33.991	1.98	2.68			37.6	250	6.50	33.95	26.65	140.4	.487
403	5.15	34.015	1.54	2.97				300	6.00	33.99	26.75	131.5	.555
605	4.28	34.154	.66	.97			44.7	400	5.17	34.01	26.90	121.3	.682
807	3.95	34.329	.67	3.53			46.9	500	4.63	34.07	27.01	111.1	.794
1008	3.45	34.425	.41	3.60			47.2	600	4.29	34.15	27.11	102.9	.905
1210	3.01	34.474	.53	3.65			46.9	700	4.10	34.24	27.20	94.8	1.004
								800	3.96	34.32	27.24	87.4	1.095
								1000	3.47	34.42	27.41	78.1	1.258
								1200	3.03	34.47	27.49	68.4	1.403
NH-165 44 39.1 N 127 54.0 W DATE 16 APR 69 0958 GCT WIRE 20 DRY 48.2 WET 47.7 CRUISE C69042													
WIND DIRECTION 20 VEL 15 KTS BAR 24 SWELL DIRECTION 27 H 05 T 08 CLOUD 7 AMT 4 WEATHER													
0	8.98	32.443	6.79	.74			1.4	0	8.98	32.45	25.15	283.1	0
9	9.07	32.444	6.81	.62			1.4	10	9.04	32.44	25.14	284.5	.028
28	8.38	32.399	6.92	.63			1.5	20	8.71	32.42	25.17	281.5	.157
48	8.25	32.397	6.91	.67			1.9	30	8.36	32.40	25.21	278.1	.285
71	7.72	32.950	5.49	1.25			13.2	50	8.20	32.44	25.26	273.4	.140
95	7.69	33.416	4.54	1.64			20.2	75	7.71	33.04	25.80	222.[illegible]	.202
120	8.02	33.627	3.83	1.85			23.7	100	7.76	33.47	26.13	191.0	.253
145	7.83	33.820	3.36	2.01			26.9	150	7.78	33.84	26.42	164.5	.342
193	7.31	33.927	2.83	2.24			29.8	200	7.24	33.94	26.57	150.7	.421
289	6.47	34.001	2.02	2.59			35.1	250	6.78	33.98	26.68	141.7	.494
386	5.92	34.057	1.36	2.89			38.1	300	6.40	34.01	26.74	135.7	.563
570	4.81	34.170	.66	3.21			41.9	400	5.83	34.07	26.86	125.4	.494
773	4.20	34.301	.57	3.44			44.5	500	5.21	34.13	26.99	113.9	.114
967	3.63	34.381	.36	3.53			44.7	600	4.70	34.19	27.09	104.4	.123
1160	3.23	34.462	.62	3.52			44.7	700	4.38	34.26	27.18	96.4	1.023
								800	4.12	34.31	27.25	90.0	1.117
								1000	3.55	34.39	27.38	79.1	1.285
NH 3 44 39.1 N 124 28.3 W DATE 13 MAY 69 0045 GCT WIRE 01 DRY 56.5 WET 54.0 CRUISE Y69052													
WIND DIRECTION 32 VEL 10 KTS BAR 14 SWELL DIRECTION 28 H 02 T 05 CLOUD 6 AMT 1 WEATHER													
0	8.62	33.756	3.66	2.17			23.3	0	8.63	33.76	26.23	180.3	0
5	8.74	33.750	3.73	2.30			24.3	10	8.56	33.75	26.24	180.7	.018
10	8.56	33.747	3.80	2.32			25.4	20	8.36	33.77	26.25	176.[illegible]	.036
15	8.53	33.713	3.63	2.23			25.2	30	7.72	33.89	26.47	158.0	.053
20	8.36	33.767	3.47	2.30			26.0						
25	8.01	33.847	2.85	2.40			27.6						
30	7.72		2.78	2.28			27.6						
35	7.69	33.906	2.78	2.32			28.6						
NH 5 44 39.1 N 124 10.7 W DATE 13 MAY 69 0301 GCT WIRE 02 DRY 51.5 WET 50.0 CRUISE Y69052													
WIND DIRECTION 32 VEL 10 KTS BAR 14 SWELL DIRECTION 32 H 03 T 06 CLOUD 6 AMT 2 WEATHER 03													
0	8.86	33.653	3.89	2.24			28.7	0	8.86	33.66	26.12	191.5	0
5	8.84	33.659	3.86	2.29			28.2	10	8.91	33.67	26.12	191.4	.019
10	8.91	33.664	3.91	2.23			27.9	20	8.57	33.67	26.17	186.5	.038
15	8.73	33.667	3.62	2.26			27.3	30	8.25	33.74	26.28	176.7	.056
20	8.57	33.662	3.52	2.21			26.8	50	7.61	33.91	26.50	155.6	.089
25	8.40	33.685	3.21	2.21			26.4						
30	8.25	33.738	2.86										
35	8.11	33.795	2.70	2.36			27.3						
40	7.96	33.839	2.62	2.34			26.9						
50	7.61	33.900	2.70	2.08			21.6						
NH 15 44 39.0 N 124 24.6 W DATE 13 MAY 69 0445 GCT WIRE 05 DRY 57.3 WET 52.1 CRUISE Y69052													
WIND DIRECTION 32 VEL 05 KTS BAR 15 SWELL DIRECTION H T CLOUD 6 AMT 2 WEATHER 02													
0	9.58	32.267	6.84	.66			1.9	0	9.58	32.27	24.92	305.2	0
5	9.58	32.267	6.87	.63			1.9	10	9.57	32.27	24.92	305.0	.031
10	9.57	32.270	6.84	.61			1.9	20	9.28	32.31	25.00	298.1	.061
15	9.58	32.272	6.85	.64			1.9	30	9.05	32.38	25.09	289.2	.090
20	9.28	32.305	6.84	.63			2.0	50	8.17	32.55	25.36	264.2	.145
25	9.30	32.315	6.84	.62			2.0	75	8.47	32.93	25.61	240.7	.208
30	9.05	32.380	6.87	.63			2.1						
35	8.71	32.445	6.84	.70			2.8						
40	8.31	32.460	6.77	.74			3.5						
50	8.17	32.549	6.51	.80			5.8						
75	8.47	32.928	5.30	1.33			12.8						

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NH 25 44 40.1 N 124 35.5 W DATE 13 MAY 69 0715 GCT WIRE 05 DRY 52.5 WET 50.8 CRUISE Y6905A
WIND DIRECTION 32 VEL 05 KTS BAR 15 SWELL DIRECTION H T CLOUD 6 AMT 7 WEATHER 03

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	10.84	31.066	6.86				
10	10.38	31.389	6.94				
20	9.46	32.171	7.02				
30	8.69	32.461	6.80				
50	8.14	32.421	6.82				
75	8.21	32.767	5.82				
100	7.87	33.289	4.61				
125	8.14	33.720	3.30				
150	7.97	33.832	3.03				
175	7.14	33.971	2.13				
200	6.51	34.026	1.70				

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	10.84	31.07	23.78	414.2	0
10	10.38	31.39	24.10	383.0	.140
20	9.46	32.18	24.86	310.8	.275
30	8.69	32.47	25.21	277.9	.404
50	8.14	32.43	25.26	273.3	.659
75	8.21	32.77	25.52	248.9	.924
100	7.88	33.29	25.98	205.7	.181
150	7.97	33.84	26.39	167.5	.476
200	6.51	34.03	26.74	134.3	.650

NH 35 44 39.1 N 124 53.0 W DATE 13 MAY 69 1140 GCT WIRE 07 DRY 54.0 WET 51.8 CRUISE Y6905A
WIND DIRECTION 00 VEL 04 KTS BAR 15 SWELL DIRECTION 32 H 02 T 08 CLOUD 6 AMT 8 WEATHER 03

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	11.05	31.089	6.77	.38			.1
10	11.07	31.094	6.77	.37			.1
20	10.41	32.213	6.95	.39			.1
30	9.99	32.302	6.95	.46			.5
50	8.56	32.459	6.87	.60			2.3
74	7.90	32.490	6.64	.71			3.9
99	8.21	33.157	4.92				
124	8.39	33.695	3.53	1.52			19.0
149	8.40	33.858	2.94	1.90			26.8
173	7.84	33.888	3.06	2.51			27.7
198	7.49	33.938	2.80	2.60			29.5
248	6.71	34.006	2.14	2.62			26.8
297	6.21	34.050	1.80	2.51			22.0
396	5.46	34.134	.93	2.90			40.2

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	11.05	31.09	23.76	415.9	0
10	11.07	31.10	23.76	416.1	.142
20	10.41	32.22	24.74	322.4	.279
30	9.99	32.31	24.88	309.5	.413
50	8.56	32.46	25.23	276.5	.149
75	7.90	32.50	25.36	264.4	.236
100	8.22	33.18	25.84	218.8	.287
150	8.38	33.86	26.35	171.7	.194
200	7.46	33.94	26.55	153.3	.476
250	6.69	34.01	26.71	138.6	.343
300	6.18	34.05	26.81	129.5	.415
400	5.43	34.14	26.97	115.3	.738

NH 45 44 39.0 N 125 06.4 W DATE 13 MAY 69 1430 GCT WIRE 00 DRY 52.2 WET 50.0 CRUISE Y6905A
WIND DIRECTION 09 VEL 04 KTS BAR 14 SWELL DIRECTION 32 H 02 T 06 CLOUD 6 AMT 8 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	11.12	32.121	6.74	.46			.1
10	10.97	32.260	6.84	.49			.2
20	10.49	32.480	6.74	.53			1.0
30	10.27	32.579	6.67	.56			1.5
50	9.98	32.570	6.71	.59			1.6
75	9.24	32.571	6.54	.68			3.1
100	9.13	33.304	4.50	1.44			17.2
124	8.93	33.721	3.34	1.84			24.5
149	8.41	33.840	3.17	1.96			26.6
199	7.69	33.941	2.88	2.09			29.2
299	6.70	34.007	2.04	2.45			34.1
398	5.90	34.069	1.36	2.73			37.8
498	5.03	34.170	.75	3.07			42.3
697	4.29	34.323	.26	3.22			33.4

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	11.13	32.13	24.55	340.8	0
10	10.97	32.26	24.68	328.2	.033
20	10.49	32.48	24.93	304.2	.165
30	10.27	32.58	25.05	293.4	.295
50	9.98	32.57	25.09	289.8	.153
75	9.24	32.58	25.21	278.6	.224
100	9.13	33.31	25.80	223.0	.287
150	8.39	33.84	26.33	173.1	.386
200	7.68	33.94	26.52	156.3	.444
250	7.14	33.99	26.63	146.3	.544
300	6.69	34.01	26.71	139.5	.415
400	5.88	34.07	26.86	125.8	.748
500	5.02	34.17	27.04	108.2	.445
600	4.49	34.26	27.17	97.2	.348
700	4.28	34.33	27.25	90.3	1.061

NH 65 44 39.1 N 125 37.5 W DATE 14 MAY 69 0047 GCT WIRE 04 DRY 51.3 WET 51.0 CRUISE Y6905A
WIND DIRECTION VEL 00 KTS BAR 16 SWELL DIRECTION 35 H 02 T 05 CLOUD 6 AMT 8 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	11.08	32.571	6.71	.60			1.0
10	10.76	32.627	6.74	.56			.9
20	10.72	32.630	6.71	.57			.9
30	10.56	32.623	6.76	.56			1.0
40	10.49	32.623	6.74	.61			1.1
50	10.19	32.630	6.69	.62			1.6
59	9.67	32.598	6.64	.68			2.2
69	9.52	32.670	6.35	.87			4.6
79	9.17	32.791	5.89				7.8
99	7.97	33.041	5.33	1.16			13.0
124	8.77	33.656	3.55	1.75			22.2
149	8.34	33.827	3.21				
173	8.12	33.925	2.86	1.97			27.0
198	7.85	33.978	2.65	2.08			29.1

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	11.08	32.58	24.90	308.9	0
10	10.76	32.63	25.00	297.6	.030
20	10.72	32.63	25.01	296.9	.040
30	10.56	32.63	25.03	294.9	.090
50	10.19	32.63	25.10	288.7	.148
75	9.33	32.74	25.32	267.8	.217
100	7.99	33.07	25.79	224.2	.279
150	8.33	33.83	26.33	173.0	.378
200	7.83	33.98	26.53	155.5	.460

NH 65 44 38.2 N 125 37.3 W DATE 14 MAY 69 0518 GCT WIRE DRY 57.9 WET 54.3 CRUISE Y6905A
WIND DIRECTION 31 VEL 07 KTS BAR 17 SWELL DIRECTION 31 H T CLOUD 6 AMT 8 WEATHER 03

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	10.99		6.74	.48			1.3
10	10.64		6.76				1.0
20	10.61		6.71	.36			.8
30	10.67		6.69	.45			1.1
40	10.54		6.69	.47			1.1
50	10.23		6.67	.51			1.4
60	10.01		6.58	.53			1.7
70	9.51		4.88	.58			2.7
80	8.72		6.39	.68			4.3
100	9.12		4.35	1.43			18.0
125	8.71		3.27	1.76			24.6
150	8.36		3.03	1.92			26.3
175	8.04		3.01				
200	7.66		2.68	1.96			26.9

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
NH 65 44 38.0 N 125 37.0 W DATE 14 MAY 69 0732 GCT WIRE 07 DRY 52.8 WET 51.0 CRUISE Y69044													
WIND DIRECTION VEL 00 KTS BAR 18 SWELL DIRECTION N 00 T CLOUD 6 AMT R WEATHER 02													
0	10.92	32.548	6.74	.60			.2	0	10.92	32.55	24.91	305.[illegible]	0
10	10.58	32.5[illegible]1	6.74	.55			.1	10	10.58	32.57	24.[illegible]	299.[illegible]	.033
20	10.56	32.5[illegible]6	6.71	.54			.1	20	10.56	32.59	25.0[illegible]	297.[illegible]	.060
30	10.26	32.566	6.69	.51			.1	30	10.26	32.57	25.0[illegible]	294.[illegible]	.090
40	9.79	32.5[illegible]	6.58	.61			1.0	50	9.64	32.60	25.17	282.[illegible]	.147
50	9.64	32.595	6.57	.64			1.6	75	8.88	32.75	25.40	240.[illegible]	.215
60	8.79	32.544	6.48	.70			2.4	100	9.04	33.54	25.[illegible]	204.[illegible]	.273
70	8.64	32.607	6.28	.81			4.2	150	8.35	33.86	26.35	171.[illegible]	.347
80	9.16	32.915	5.50	1.04			9.5	200	7.76	33.96	26.52	155.[illegible]	.449
100	9.04	33.530	3.86	1.47			16.5						
125	8.72	33.758	3.37	1.87			24.5						
150	8.35	33.858	3.03	1.96			25.5						
175	7.96	33.941	2.85	2.01			26.1						
200	7.76	33.965	2.71	2.16			28.7						
NH 65 44 36.8 N 125 35.3 W DATE 14 MAY 69 1030 GCT WIRE 03 DRY 52.3 WET 50.0 CRUISE Y69059													
WIND DIRECTION 35 VEL 04 KTS BAR 18 SWELL DIRECTION 35 H 02 T 07 CLOUD 6 AMT R WEATHER 02													
0	11.00	32.526	6.71	.57			.2	0	11.00	32.53	24.88	308.[illegible]	0
10	10.70	32.559	6.71	.54			.2	10	10.70	32.56	24.96	301.[illegible]	.031
20	10.60	32.559	6.77				.1	20	10.60	32.56	24.98	300.[illegible]	.061
30	10.35	32.564	6.71	.51			.1	30	10.35	32.57	25.02	295.[illegible]	.090
40	9.84	32.558	6.72	.61			.3	50	9.33	32.55	25.18	281.[illegible]	.148
50	9.33	32.550	6.58	.68			.6	75	9.20	33.08	25.61	240.[illegible]	.213
60	8.95	32.573	6.48	.78			1.9	100	9.04	33.53	25.99	205.[illegible]	.249
70	9.20	32.953	5.48	1.12				150	8.43	33.85	26.33	173.[illegible]	.364
80	9.16	33.188	4.78	1.17			8.6	200	7.93	33.95	26.49	159.[illegible]	.447
100	9.04	33.523	3.84	1.35			13.4						
125	8.66	33.780	3.30	1.84			26.0						
150	8.43	33.845	3.11										
175	8.21	33.910	2.91	1.92			26.7						
200	7.93	33.951	2.73	1.94			27.1						
NH 65 44 38.6 N 125 35.3 W DATE 14 MAY 69 1708 GCT WIRE 02 DRY 52.5 WET 48.5 CRUISE Y69358													
WIND DIRECTION 35 VEL 10 KTS BAR 21 SWELL DIRECTION 32 H 04 T 07 CLOUD 6 AMT R WEATHER													
0	10.82	32.617	6.72					0	10.82	32.62	24.98	299.1	0
10	10.81	32.620	6.30					10	10.81	32.63	24.99	298.[illegible]	.030
30	10.54	32.630	6.67					20	10.71	32.63	25.01	297.[illegible]	.060
50	10.01	32.628	6.58					30	10.54	32.63	25.04	294.1	.089
65	9.59	32.648	6.46					50	10.01	32.63	25.13	286.[illegible]	.147
80	9.15	32.804	5.86					75	9.31	32.73	25.32	267.[illegible]	.216
100	8.27	33.277	4.71					100	8.27	33.28	25.91	212.2	.276
125	8.72	33.760						150	8.25	33.89	26.39	167.4	.371
150	8.25	33.886	2.99					200	7.70	33.98	26.55	153.4	.452
200	7.70	33.979	2.67					250	7.25	34.03	26.64	144.[illegible]	.526
300	6.81	34.048	2.08					300	6.82	34.05	26.72	137.[illegible]	.597
400	5.73	34.074	1.50					400	5.73	34.08	26.89	127.4	.727
500	5.13	34.148	0.74					500	5.14	34.15	27.02	111.[illegible]	.845
600	4.75	34.222	0.39					600	4.76	34.23	27.12	102.6	.951
800	4.13	34.357	0.30					700	4.42	34.29	27.21	94.2	1.050
1000	3.61	34.424	0.29					800	4.14	34.36	27.29	86.4	1.140
1199	3.19	34.474	0.52					1000	3.61	34.43	27.40	77.[illegible]	1.304
								1200	3.19	34.47	27.48	70.1	1.451
NH 85 44 39.1 N 126 03.1 W DATE 14 MAY 69 2211 GCT WIRE 02 DRY 53.0 WET 48.0 CRUISE Y69358													
WIND DIRECTION 35 VEL 06 KTS BAR 22 SWELL DIRECTION 32 H 04 T 10 CLOUD 6 AMT 7 WEATHER 01													
0	11.15	32.567	6.63	.53			.3	0	11.15	32.57	24.89	308.4	0
10	11.06	32.602	6.63	.47			.2	10	11.06	32.61	24.93	304.6	.031
20	10.93	32.659	6.64	.53			.4	20	10.93	32.66	25.00	298.2	.061
30	10.84	32.651	6.63	.54			.4	30	10.84	32.66	25.01	297.5	.091
50	9.97	32.603	6.63	.62			1.3	50	9.97	32.61	25.12	287.2	.149
75	9.17	32.869	5.57	1.04			8.6	75	9.17	32.87	25.45	255.4	.217
100	8.25	33.202	4.92	1.32			14.3	100	8.25	33.21	25.86	217.5	.276
125	7.99	33.498	4.42					150	7.74	33.73	26.34	172.4	.373
150	7.74	33.723	4.13	1.52			17.2	200	7.66	33.90	26.57	151.1	.454
199	7.07	33.895	3.93	1.76			24.1	250	6.47	33.93	26.67	141.7	.527
249	6.49	33.929	3.25	2.04			29.0	300	5.68	33.92	26.77	132.8	.596
299	5.69	33.924	2.76	2.25			32.9	400	5.28	34.04	26.91	12[illegible].7	.723
399	5.28	34.039	1.41	2.69			39.1	500	4.59	34.12	27.02	11[illegible].6	.838
598	4.56	34.185	.48	3.05			43.2	600	4.56	34.19	27.11	10[illegible].2	.945
798	4.12	34.338	.27					700	4.32	34.27	27.20	9[illegible].2	1.044
997	3.58	34.429	.31	3.22			45.3	800	4.11	34.34	27.28	8[illegible].1	1.136
1196	3.11	34.474	.42	3.15			42.0	1000	3.57	34.43	27.40	7[illegible].7	1.300
								1200	3.10	34.47	27.48	6[illegible].1	1.446

NH 105 44 39.0 N 126 31.0 W DATE 15 MAY 69 0132 GCT WIRE 07 DRY 53.5 WET 47.0 CRUISE Y6905R
WIND DIRECTION 35 VEL 08 KTS BAR 22 SWELL DIRECTION 35 H 06 T 08 CLOUD 8 AMT 5 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	DERIVED σ_t	δ (x10⁸)	ΔD (dyn.m)
0	11.17	32.555	6.67	.50			.1	0	11.17	32.56	24.87	309.4	0
10	10.82	32.556	6.69	.57			.2	10	10.82	32.56	24.94	303.8	.031
20	10.74	32.559	6.72	.49			.2	20	10.74	32.56	24.95	302.5	.061
30	10.69	32.558	6.71	.50			.2	30	10.69	32.56	24.96	301.9	.091
50	9.91	32.601	6.33	.61			1.4	50	9.91	32.61	25.13	296.6	.150
74	9.43	32.677	6.30	.82			5.2	75	9.37	32.69	25.28	272.0	.220
99	7.96	33.104	5.24	1.16			12.0	100	7.93	33.12	25.84	219.6	.281
124	7.64	33.454	4.58	1.51			19.5	150	7.56	33.64	26.30	176.2	.380
149	7.56	33.634	4.27	1.64			22.2	200	7.25	33.87	26.52	155.6	.463
198	7.27	33.866	3.61	1.77			25.5	250	6.78	33.97	26.67	142.3	.537
297	6.29	34.011	4.46	2.21			26.2	300	6.26	34.01	26.77	133.6	.606
396	5.44	34.064	1.28					400	5.42	34.07	26.91	120.6	.733
495	5.03	34.147	1.06	2.38			22.4	500	5.01	34.15	27.03	109.6	.844
594	4.58	34.217	.40	2.60			24.6	600	4.56	34.22	27.13	100.7	.953
793	3.98	34.329	.43					700	4.23	34.28	27.22	93.0	1.050
991	3.50	34.421	.29	2.89			31.9	800	3.96	34.33	27.29	86.8	1.140
1189	3.07	34.479	.43	2.76				1000	3.48	34.42	27.41	76.1	1.303
								1200	3.05	34.48	27.49	67.9	1.447

NH 125 44 39.6 N 126 44.0 W DATE 15 MAY 69 0544 GCT WIRE 04 DRY 49.1 WET 45.0 CRUISE Y6905R
WIND DIRECTION 06 VEL 08 KTS BAR 22 SWELL DIRECTION 35 H 06 T 05 CLOUD 6 AMT 6 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	10.04	32.451	6.86	.57			1.4	0	10.04	32.46	24.99	299.7	0
10	9.79	32.453	6.87	.58			1.5	10	9.79	32.46	25.03	294.8	.030
20	9.56	32.449	6.85	.58			1.4	20	9.56	32.45	25.06	291.7	.059
30	9.57	32.447	6.86	.57			1.4	30	9.57	32.45	25.06	292.1	.088
50	8.70	32.434	6.95	.57			1.5	50	8.70	32.44	25.19	280.3	.145
75	8.19	32.488	6.58	.69			3.2	75	8.19	32.49	25.51	269.4	.214
100	7.61	32.878	5.60	1.12			12.3	100	7.61	32.88	25.70	232.6	.277
125	7.50	33.559	4.39	1.56			21.8	150	7.35	33.77	26.42	164.1	.376
150	7.35	33.761	3.38	1.79			25.1	200	6.80	33.93	26.63	145.0	.453
200	6.79	33.927	2.92	2.01			26.9	250	6.24	33.98	26.75	134.7	.523
299	5.76	33.995	1.96	2.54			36.2	300	5.75	34.00	26.82	128.4	.589
399	5.11	34.054	1.22	2.84			40.6	400	5.10	34.05	26.94	117.5	.712
499	4.65	34.148	.65	2.98			42.1	500	4.65	34.15	27.07	105.5	.823
599	4.39	34.238	.36					600	4.39	34.24	27.17	97.4	.925
798	3.89	34.352	.29	3.31			44.1	700	4.14	34.30	27.24	90.3	1.018
998	3.37	34.440	.34	3.46			43.8	800	3.88	34.35	27.31	84.4	1.106
1197	2.98	34.478	.46	3.29			42.1	1000	3.37	34.44	27.43	73.6	1.264
								1200	2.97	34.48	27.50	67.3	1.404

NH 165 44 39.0 N 127 55.0 W DATE 15 MAY 69 1312 GCT WIRE 05 DRY 49.0 WET 45.0 CRUISE Y6905R
WIND DIRECTION 04 VEL 08 KTS BAR 20 SWELL DIRECTION 00 H 03 T 10 CLOUD 6 AMT 4 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	10.24	32.491	6.72					0	10.24	32.50	24.98	299.0	0
10	10.25	32.491	6.71					10	10.25	32.50	24.98	299.3	.030
20	10.24	32.489	6.71					20	10.24	32.49	24.98	299.4	.060
30	10.21	32.489	6.67					30	10.21	32.49	24.99	299.1	.090
50	9.02	32.434	6.85					50	9.02	32.44	25.14	285.1	.148
75	8.21	32.484	6.62					75	8.21	32.49	25.30	269.9	.218
100	7.68	32.938	5.72					100	7.69	32.94	25.73	229.1	.280
125	7.64	33.519	4.74					150	7.53	33.73	26.37	169.2	.379
150	7.52	33.724	4.44					200	7.14	33.88	26.54	153.8	.460
199	7.15	33.874	3.88					250	6.47	33.89	26.64	144.4	.535
299	5.76	33.908	3.02					300	5.75	33.91	26.75	134.8	.605
399	4.81	33.970	1.83					400	4.81	33.97	26.91	120.3	.732
499	4.82	34.129	.72					500	4.82	34.13	27.03	108.9	.847
598	4.52	34.217	.39					600	4.51	34.22	27.14	100.4	.951
798	3.94	34.319	.25					700	4.21	34.28	27.21	93.2	1.048
997	3.53	34.422	.29					800	3.94	34.32	27.28	87.4	1.138
1197	3.06	34.473	.43					1000	3.52	34.42	27.40	76.7	1.302
								1200	3.05	34.47	27.49	68.6	1.447

NH 145 44 40.0 N 127 27.6 W DATE 15 MAY 69 1535 GCT WIRE DRY 50.5 WET 46.0 CRUISE Y6905R
WIND DIRECTION 10 VEL 04 KTS BAR 20 SWELL DIRECTION 01 H 04 T 05 CLOUD 6 AMT 7 WEATHER 03

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	10.27	32.468	6.74					0	10.27	32.47	24.96	301.1	0
10	10.23	32.466	6.73					10	10.23	32.47	24.97	300.8	.030
20	10.13	32.470	6.72					20	10.13	32.47	24.99	299.1	.060
30	9.86	32.463	6.77					30	9.86	32.47	25.03	295.5	.090
50	8.73	32.450	6.77					50	8.73	32.46	25.20	279.4	.147
75	7.82	32.530	6.49					75	7.82	32.53	25.39	261.1	.215
100	7.66	32.925	5.53					100	7.67	32.93	25.72	229.8	.276
124	7.73	33.314	4.85					150	7.43	33.61	26.29	176.5	.378
149	7.45	33.606	4.67					200	6.51	33.88	26.63	145.2	.458
199	6.52	33.877	4.01					250	5.97	33.90	26.71	137.6	.529
299	5.68	33.920	3.05					300	5.68	33.92	26.77	133.0	.596
398	5.35	34.056	1.31					400	5.34	34.06	26.92	120.1	.723
498	4.73	34.134	1.74					500	4.72	34.14	27.05	107.6	.837
597	4.44	34.219	.43					600	4.43	34.22	27.15	99.2	.940
796	3.98	34.354	.26					700	4.20	34.30	27.23	91.6	1.035
995	3.41	34.435	.29					800	3.97	34.36	27.30	85.1	1.123
1194	3.00	34.492	.46					1000	3.40	34.44	27.43	74.2	1.281
								1200	2.99	34.49	27.51	66.4	1.423

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁵)	ΔD (dyn.m)
TH 45 45 55.1 N 125 07.0 W DATE 16 MAY 69 1010 GCT WIRE 04 DRY 51.2 WET 48.0 CRUISE Y69058													
WIND DIRECTION VEL 00 KTS BAR 19 SWELL DIRECTION 01 H 04 T 10 CLOUD 6 AMT 4 WEATHER 02													
0	12.90	26.548	7.14	.35			.1	0	12.90	26.55	19.92	783.4	0
10	10.45	31.627	6.76	.40			.1	10	10.95	31.63	24.19	374.[illegible]	.058
20	8.69	32.468	7.04	.56			1.5	20	8.69	32.47	25.22	277.1	.090
30	8.19	32.433	6.88	.60			2.0	30	8.19	32.44	25.26	272.3	.118
49	7.96	32.447	6.76	.63			2.8	50	7.92	32.45	25.31	268.4	.172
74	7.11	32.516	6.63	.73			4.4	75	7.13	32.54	25.49	251.[illegible]	.237
99	7.73	33.078	5.20	1.26			15.1	100	7.73	33.09	25.46	218.5	.296
123	7.53	33.416	4.51	1.51			19.7	150	7.57	33.77	26.10	166.3	.392
148	7.58	33.752	3.76	1.55			18.4	200	7.01	33.95	26.62	144.2	.470
197	7.04	33.949	3.03	1.95			26.3	250	6.46	33.96	26.70	139.1	.542
296	5.95	33.975	2.25	2.33			29.3	300	5.65	33.98	26.78	132.1	.610
394	5.22	34.022	1.56	2.43			29.3	400	5.19	34.03	26.91	120.[illegible]	.736
493	4.69	34.088	.98	2.66			31.8	500	4.68	34.10	27.02	109.3	.851
591	4.64	34.195	.46	2.52			25.5	600	4.62	34.20	27.11	102.7	.957
788	4.10	34.342	.25	3.13			36.8	700	4.38	34.29	27.21	94.4	1.056
985	3.57	34.426	.33	3.24			42.2	800	4.07	34.35	27.29	86.3	1.146
1182	3.14	34.479	.59	3.09			34.1	1000	3.53	34.43	27.41	76.2	1.309
								1200	3.10	34.46	27.49	68.[illegible]	1.454
TH 35 45 56.3 N 124 49.8 W DATE 16 MAY 69 1254 GCT WIRE 03 DRY 53.0 WET 48.8 CRUISE Y69058													
WIND DIRECTION 03 VEL 04 KTS BAR 18 SWELL DIRECTION 33 H 01 T 06 CLOUD 8 AMT 3 WEATHER 01													
0	12.20	30.286	6.71	.36			.1	0	12.20	30.29	22.93	494.3	0
10	10.64	31.486	6.96	.42			.1	10	10.64	31.49	24.14	380.1	.044
20	9.23	32.401	6.91	.66			.8	20	9.23	32.41	25.18	290.2	.077
30	9.03	32.473	6.97	.66			1.1	30	9.03	32.44	25.17	282.3	.106
40	8.70	32.465	6.88				1.4	50	8.84	32.52	25.33	274.[illegible]	.162
50	8.84	32.519	6.56	.63			1.8	75	8.66	32.66	25.37	263.[illegible]	.229
60	8.55	32.533	6.49	.75				100	8.45	33.18	25.81	222.[illegible]	.290
70	8.69	32.639	6.19	.84			4.6	150	7.82	33.82	26.40	166.[illegible]	.387
80	8.60	32.692	5.97				5.5	200	6.99	33.93	26.40	148.2	.465
100	8.45	33.179	4.64	1.41			17.4						
125	7.58	33.578	4.11	1.66			23.7						
150	7.82	33.819	3.40	1.96			25.6						
175	7.58	33.949	2.71				28.1						
200	6.99	33.926	2.88	2.04			30.4						
TH 25 45 55.3 N 124 35.1 W DATE 16 MAY 69 1446 GCT WIRE DRY 53.0 WET 49.5 CRUISE Y69058													
WIND DIRECTION VEL 00 KTS BAR 19 SWELL DIRECTION 33 H 01 T 08 CLOUD 6 AMT 8 WEATHER 03													
0	11.32	29.926	8.52	.74			4.9	0	11.32	29.93	22.81	506.8	0
10	10.18	31.385	7.48	.93			5.8	10	10.18	31.39	24.13	380.[illegible]	.044
20	9.19	31.899	6.76	.72			3.2	20	9.19	31.90	24.69	324.3	.080
30	8.90	32.426	6.60	.95			3.7	30	8.93	32.43	25.15	283.6	.110
40	8.70		6.56					50	8.58	32.53	25.28	271.3	.166
50	8.58	32.524	6.55	.81			3.0	75	8.61	32.91	25.87	244.[illegible]	.230
60	8.49	32.560	6.31	.94			6.4	100	8.09	33.50	26.11	193.4	.285
70	8.57	32.747		1.12			9.1						
80	8.63	33.076	4.85	1.21			11.0						
100	8.09	33.491	3.62	1.78			20.7						
120	7.59	33.848	2.46	2.21			28.8						
140	7.14	33.937	2.17	1.96			19.1						
TH 15 45 56.3 N 124 20.9 W DATE 16 MAY 69 1635 GCT WIRE 03 DRY 56.5 WET 54.5 CRUISE Y69058													
WIND DIRECTION VEL 00 KTS BAR 20 SWELL DIRECTION 32 H 02 T 04 CLOUD 6 AMT 8 WEATHER 02													
0	12.18	23.952	8.08	.49			.2	0	12.18	23.96	18.35	963.4	0
5	11.15	30.032	8.18	.33			.1	10	10.74	31.43	24.37	384.3	.067
10	10.74	31.423	7.95	.33			.1	20	9.29	32.22	24.94	303.[illegible]	.102
20	9.20	32.218	5.98	1.23			[illegible].3	30	8.72	32.52	25.25	274.1	.131
30	8.72	32.515	5.57	1.30			12.3	50	8.39	32.97	25.45	236.3	.182
40	8.54	32.674	5.58					75	7.45	33.95	26.35	151.[illegible]	.230
50	8.39	32.966	4.76	1.49			15.6	100	6.95	33.97	26.44	143.[illegible]	.267
60	7.92	33.583	3.08	2.07			24.2						
70	7.63	33.904	2.62	2.28			28.3						
80	7.29	33.949	2.49	2.29			29.6						
90	7.14	33.961	2.36	2.30			29.7						
100	6.95	33.963	2.18	2.43			30.8						
120	6.84	33.991	2.12	2.44			31.1						
TH 3 45 56.1 N 124 03.5 W DATE 16 MAY 69 1815 GCT WIRE 00 DRY 57.1 WET 54.5 CRUISE Y69058													
WIND DIRECTION VEL 00 KTS BAR 20 SWELL DIRECTION H 00 T CLOUD 6 AMT 8 WEATHER 02													
0	11.74	28.937	8.41	.44			.1	0	11.74	28.94	21.37	586.7	0
5	11.04	30.460	7.60	.49			.5	10	9.70	31.57	24.36	358.[illegible]	.047
15	8.49	32.291	5.73					20	8.53	32.52	25.28	271.5	.079
25	8.56	32.575	4.24	.99			7.3	30	8.53	32.89	25.64	244.4	.105
35	8.51		3.85	1.71			19.0	50	7.99	33.87	26.42	163.7	.145
45	7.96	33.751	2.74	2.12			26.0						
50	7.99	33.867	2.85	2.11			27.7						
55	7.90	33.913	2.70	2.11			27.4						

OBSERVED | INTERPOLATED | DERIVED

CM 25 45 29.8 N 124 33.4 W DATE 16 MAY 69 2229 GCT WIRE 09 DRY 58.0 WET 53.5 CRUISE Y6905B
WIND DIRECTION VEL 00 KTS BAR 21 SWELL DIRECTION 31 H 03 T 10 CLOUD 6 AMT 8 WEATHER 01

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	13.48	24.838		.34			.1	0	13.48	24.84	18.50	920.4	0
5	11.96	29.047		.37			.1	10	11.64	29.91	22.74	513.4	.072
10	11.64	29.907		.39			.1	20	9.07	32.40	25.10	288.1	.112
20	9.07	32.398		.62			2.1	30	8.91	32.42	25.14	284.3	.140
29	8.92	32.415		.66			2.2	50	8.59	32.48	25.24	275.3	.196
39	8.79	32.486		.71			2.7	75	8.48	32.79	25.50	251.1	.242
49	8.60	32.478		.71			3.0	100	8.16	33.19	25.86	217.5	.321
73	8.50	32.764		1.06			9.2	150	7.15	33.79	26.47	159.8	.415
98	8.18	33.153		1.45			15.7	200	6.68	33.92	26.64	144.4	.491
122	7.85	33.541		1.76			20.9	250	6.13	33.96	26.74	135.2	.541
147	7.19	33.774		1.88			.4	300	5.74	34.01	26.83	127.1	.428
171	6.97	33.842		1.98			24.8						
196	6.73	33.913		2.23			27.8						
245	6.18	33.953		2.47			31.2						
293	5.80	34.004		2.78			33.8						

CM 15 45 29.2 N 124 20.0 W DATE 17 MAY 69 0129 GCT WIRE 00 DRY 57.0 WET 51.0 CRUISE Y6905B
WIND DIRECTION 00 VEL 04 KTS BAR 20 SWELL DIRECTION 32 H 03 T 10 CLOUD 6 AMT 6 WEATHER 01

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	13.30	24.658		.37			.1	0	13.30	24.66	18.39	930.5	0
5	11.53	29.537						10	10.88	31.17	23.85	407.4	.047
10	10.87	31.166		.34				20	9.13	32.45	25.13	285.6	.102
20	9.12	32.441		.55			.7	30	8.81	32.46	25.19	280.0	.130
30	8.81	32.457		.52			1.4	50	8.42	32.48	25.26	273.1	.185
40	8.67	32.448		.56			1.6	75	8.60	32.88	25.55	246.3	.250
50	8.42	32.477		.77			4.1	100	8.58	33.55	26.07	197.0	.305
60	8.49	32.541											
75	8.60	32.878		.88			5.9						
100	8.58	33.544		1.98			22.0						
125	7.58	33.878		2.34			28.7						

CM 5 45 28.8 N 124 05.7 W DATE 17 MAY 69 0310 GCT WIRE 06 DRY 55.0 WET 51.0 CRUISE Y6905B
WIND DIRECTION 01 VEL 10 KTS BAR 21 SWELL DIRECTION 35 H 01 T 02 CLOUD 6 AMT 4 WEATHER 01

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	11.73	28.814		.12			.2	0	11.73	28.82	21.88	595.6	0
5	10.23	31.042		.21			.1	10	9.52	31.52	24.34	360.3	.068
10	9.52	31.514		.39			9.8	20	8.56	32.05	24.90	304.9	.081
20	8.56	32.044		.43			11.7	30	8.68	32.60	25.31	268.0	.110
30	8.68	32.592						50	8.45	33.54	26.08	195.3	.156
40	8.65	33.187											
50	8.45			.64			18.7						
60	8.01	33.638		.84			26.0						

DB 18 44 48.6 N 124 30.4 W DATE 17 MAY 69 0840 GCT WIRE 01 DRY 54.1 WET 50.0 CRUISE Y6905B
WIND DIRECTION 02 VEL 06 KTS BAR 20 SWELL DIRECTION H 00 T CLOUD 6 AMT 5 WEATHER 03

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	12.59	28.422	6.79	.10			.2	0	12.59	28.43	21.42	639.5	0
5	11.39	30.777	6.81	.6			.1	10	10.93	31.29	23.93	399.5	.052
10	10.93	31.286	6.99				.1	20	10.18	31.73	24.40	354.7	.090
20	10.18	31.729	6.95	.10			.1	30	9.01	32.32	25.05	293.6	.122
30	9.01	32.313	6.89					50	8.25	32.43	25.25	274.8	.179
40	8.54	32.392	6.88	.20			2.6	75	8.22	32.60	25.39	261.9	.246
50	8.25	32.422	6.74	.23			3.3	100	7.98	33.30	25.97	206.7	.305
60	8.31	32.467	6.67	.28			4.6						
75	8.22	32.595	6.28										
100	7.98	33.296	4.62	.69			19.3						
125	8.15	33.688	3.74	.83			25.1						

DB 8 44 48.5 N 124 16.3 W DATE 17 MAY 69 1127 GCT WIRE 00 DRY 53.0 WET 52.0 CRUISE Y6905B
WIND DIRECTION 35 VEL 06 KTS BAR 20 SWELL DIRECTION H 00 T CLOUD 6 AMT 4 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	11.36	30.581	7.35	.4			.1	0	11.36	30.59	23.31	458.7	0
5	9.83	31.621	7.28				.8	10	9.17	32.41	25.09	289.0	.037
10	9.17	32.404	7.06	.10			.8	20	8.88	32.50	25.21	279.0	.066
20	8.88	32.496	6.78	.18			2.1	30	8.59	32.49	25.25	274.5	.093
30	8.59	32.487	6.73	.18			2.8	50	8.53	32.60	25.34	265.6	.147
40	8.55	32.516	6.63	.22			3.6	75	8.22	33.26	25.90	212.8	.207
50	8.53	32.599	6.32	.29			4.1						
60	8.63	32.717	5.76	.41			8.5						
70	8.52	33.047	4.77	.43			8.9						
80		33.528	3.44	.70			17.7						

DB 3 44 48.5 N 124 09.5 W DATE 17 MAY 69 1215 GCT WIRE 00 DRY 52.5 WET 51.5 CRUISE Y6905B
WIND DIRECTION VEL 00 KTS BAR 19 SWELL DIRECTION 25 H 01 T 10 CLOUD 4 AMT 1 WEATHER 01

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	10.04	32.936	6.11	.46			10.8	0	10.04	32.94	25.35	262.8	0
5	9.57	33.120	5.47	.56			13.2	10	9.23	33.19	25.69	231.6	.025
10	9.23	33.189	5.11	.72			18.9	20	8.69	33.46	25.93	203.6	.046
20	8.69	33.460	4.12	.86			24.0	30	8.31	33.69	26.23	181.6	.066
30	8.31	33.646	3.06	.89									
40	8.12	33.740	3.07										

	OBSERVED							INTERPOLATED			DERIVED		
	D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
SH 1 44 00.2 N 124 10.8 W DATE 17 MAY 69 2022 GCT WIRE 02 DRY 60.5 WET 56.6 CRUISE Y69059														
WIND DIRECTION 34 VEL 12 KTS BAR 13 SWELL DIRECTION 31 H 03 T 10 CLOUD 3 AMT 2 WEATHER 02														
	0	11.54	32.55	7.99	.18			2.0	0	11.54	32.66	24.88	307.6	0
	5	11.15	32.652	7.92	.14			1.9	10	9.83	32.78	25.27	271.8	.029
	10	9.83	32.772	7.12	.37			4.4	20	8.76	32.94	25.57	243.4	.055
	15	9.37	32.800	5.93	.63			11.2						
	20	8.76	32.938	5.27	.64			13.0						
	25	8.64	33.173	4.67	.73			14.1						
SH 5 44 00.1 N 124 15.0 W DATE 17 MAY 69 2147 GCT WIRE 00 DRY 54.9 WET 54.0 CRUISE Y69059														
WIND DIRECTION 34 VEL 16 KTS BAR 12 SWELL DIRECTION 31 H 03 T 10 CLOUD 3 AMT 2 WEATHER 01														
	0	11.91	32.566	7.59					0	11.91	32.57	24.75	321.6	0
	5	12.42	32.502	7.74	.42			.2	10	9.55	32.83	25.35	263.1	.029
	10	9.55	32.830	6.77	1.18			6.3	20	8.64	32.98	25.62	239.1	.054
	15	9.41	32.992	5.62	1.56			12.2	30	8.57	33.36	25.93	209.5	.077
	20	8.64	32.972	5.33	1.60			13.5	50	8.26	33.74	26.27	177.4	.115
	25	8.25	33.045	5.18										
	30	8.57	33.358	4.09				14.8						
	40	8.35	33.618	3.31	1.61									
	50	8.26	33.734	2.76	2.58			20.1						
	60	7.86	33.862	2.23	2.97			30.1						
SH 15 44 00.0 N 124 29.8 W DATE 17 MAY 69 2340 GCT WIRE 14 DRY 58.5 WET 55.2 CRUISE Y69059														
WIND DIRECTION 35 VEL 18 KTS BAR 10 SWELL DIRECTION 35 H 01 T CLOUD 8 AMT 1 WEATHER 01														
	0	12.14	32.819	8.37	1.21			.1	0	12.14	32.82	24.90	307.1	0
	5	12.25	32.819	8.34	.57			.1	10	11.08	32.82	25.09	289.3	.030
	10	11.08	32.811	8.47					20	9.51	33.13	25.60	241.0	.056
	20	9.51	33.122	5.18	.48			.1	30	8.63	33.45	25.95	203.9	.079
	30	8.63	33.446	3.89	1.83			14.5	50	8.01	33.71	26.28	176.1	.117
	40	8.26	33.626	3.42	1.85			16.3	75	7.59	33.95	26.54	152.5	.158
	50	8.01	33.704	2.86	2.01			22.7	100	7.27	33.99	26.61	145.9	.195
	60	7.62	33.833	2.46	1.93			22.3						
	75	7.59	33.947	2.50										
	100	7.26	33.980	2.43	2.11			24.3						
SH 25 44 00.2 N 124 42.8 W DATE 18 MAY 69 0130 GCT WIRE 00 DRY 59.0 WET 56.5 CRUISE Y69059														
WIND DIRECTION 01 VEL 20 KTS BAR 09 SWELL DIRECTION 00 H 04 T 06 CLOUD 8 AMT 2 WEATHER 01														
	0	11.55	32.765	8.25					0	11.55	32.77	24.97	300.6	0
	5	11.44	32.755	8.23	.26				10	10.76	32.72	25.07	291.1	.030
	10	10.76	32.715	7.66					20	9.04	32.69	25.33	266.0	.057
	20	9.04	32.689	6.15	.79			7.4	30	8.89	32.71	25.37	263.0	.084
	30	8.89	32.701	6.05	.80				50	8.42	33.51	26.07	194.7	.130
	40	8.24	33.126	5.06	1.20			10.1	75	8.46	33.66	26.13	186.6	.178
	50	8.42	33.505	3.68	2.09			24.1	100	8.26	33.73	26.25	179.1	.223
	60	8.44	33.593	3.44										
	75	8.46	33.654	3.27				22.1						
	100	8.26	33.721	2.90	2.20			26.7						
CH 3 43 20.8 N 124 27.1 W DATE 17 MAY 69 0620 GCT WIRE 07 DRY 54.1 WET 53.0 CRUISE Y69059														
WIND DIRECTION VEL 18 KTS BAR 09 SWELL DIRECTION H T CLOUD 4 AMT 4 WEATHER 03														
	0	11.30	32.531	7.93	.44			.1	0	11.30	32.54	24.83	313.6	0
	5	11.18	32.542	7.95	.21			.1	10	10.29	32.58	25.04	293.5	.030
	10	10.29	32.576	8.04	.30			.1	20	8.70	32.66	25.35	263.4	.058
	20	8.70	32.651	4.29	.71			6.0	30	8.69	33.23	25.81	221.3	.082
	30	8.69	33.223	4.52	1.59			17.5	50	8.15	33.76	26.33	174.4	.122
	40	8.40	33.557	3.35	1.88			23.5						
	50	8.15	33.754	2.61	2.15			26.5						
	60	7.75	33.839	2.31										
	70	7.66	33.867	2.17										
CH 5 43 20.7 N 124 29.9 W DATE 18 MAY 69 0830 GCT WIRE 07 DRY 57.0 WET 54.0 CRUISE Y69059														
WIND DIRECTION 20 VEL 30 KTS BAR 20 SWELL DIRECTION 35 H 03 T 06 CLOUD 3 AMT 8 WEATHER 03														
	0	11.00	32.573	7.71	.66			.1	0	11.00	32.58	24.92	305.4	0
	5	11.04	32.579	7.69	.45			.1	10	10.93	32.59	24.94	303.4	.030
	10	10.93	32.581	7.73	.48			.1	20	9.58	32.66	25.22	276.4	.059
	20	9.58	32.659	7.03	.62			2.4	30	9.22	32.83	25.41	259.1	.086
	30	9.22	32.820	5.97	1.23			8.3						
	40	8.58	33.200	4.93	1.84			18.5						

CH 15 43 20.0 N 124 43.8 W DATE 18 MAY 69 1136 GCT WIRE 04 DRY 55.0 WET 52.5 CRUISE Y6905R
WIND DIRECTION 20 VEL 20 KTS BAR 11 SWELL DIRECTION 35 H 04 T 07 CLOUD 6 AMT 8 WEATHER 01

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	DERIVED ΔD (dyn.m)
0	10.45	32.261	7.05	.39			.2	0	10.45	32.27	24.77	319.4	0
10	10.35	32.261	7.02	.40			.3	10	10.35	32.27	24.79	317.9	.032
20	9.69	32.336	6.97	.37			1.2	20	9.69	32.34	24.96	302.1	.063
30	9.37	32.437	6.72	.57			2.9	30	9.38	32.44	25.09	289.8	.092
40	8.85	32.474	6.62				3.3	50	8.72	32.50	25.23	274.0	.149
50	8.72	32.498	6.58	.69			4.3	75	8.64	33.08	25.70	232.3	.213
75	8.64	33.074	5.07	1.49			15.1	100	8.46	33.49	26.04	199.8	.267
100	8.46	33.482	3.93	1.87			21.9	150	7.72	33.95	26.51	155.8	.355
125	7.92	33.863	2.63	2.21			28.1	200	6.94	34.04	26.70	139.1	.429
150	7.72	33.942	2.49					250	6.70	34.05	26.74	135.8	.498
175	7.52	33.990	2.32	2.30			31.1						
200	6.93	34.031	2.02	2.43			33.5						
250	6.70	34.049	1.82	2.55			34.9						

CH 25 43 20.6 N 124 56.5 W DATE 18 MAY 69 1505 GCT WIRE 04 DRY 53.2 WET 52.3 CRUISE Y6905R
WIND DIRECTION VEL 10 KTS BAR 12 SWELL DIRECTION 18 H 04 T 06 CLOUD 8 AMT 6 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	DERIVED ΔD (dyn.m)
0	11.20	32.290	7.08	.37			.1	0	11.20	32.29	24.66	329.7	0
10	11.17	32.284	7.08	.39			.1	10	11.17	32.29	24.66	329.8	.033
20	10.08	32.436	7.26	.39			.1	20	10.08	32.44	24.97	300.8	.064
30	9.72	32.534	6.86	.55			2.0	30	9.72	32.54	25.10	288.0	.094
40	9.67	32.575	6.66	.61			3.0	50	9.47	32.61	25.20	279.1	.151
50	9.47	32.607	6.40	.70			5.3	75	9.18	32.88	25.46	255.0	.217
75	9.18	32.877	5.60	.98			9.9	100	9.13	33.47	25.93	210.4	.276
100	9.12	33.469	3.93	1.60			19.7	150	8.33	33.84	26.34	172.6	.371
125	8.74	33.737	3.17	2.01			26.2	200	7.58	33.96	26.54	154.0	.453
149	8.34	33.833	2.94	2.06			27.5	250	6.91	34.01	26.68	141.3	.527
174	7.98	33.909	2.73	2.18			29.2	300	6.51	34.03	26.75	135.3	.596
199	7.60	33.954	2.50	2.26			30.4	400	5.85	34.10	26.89	123.4	.725
249	6.92	34.012	2.05	2.47			33.4	500	5.41	34.13	26.96	116.1	.845
299	6.52	34.032	1.77	2.67			35.2	600	4.98	34.19	27.06	108.0	.957
398	5.86	34.097	1.21	2.97			38.5						
498	5.42	34.129	1.11	2.96									
598	4.99	34.189	.56	3.32			41.6						

CH 35 43 20.7 N 125 09.2 W DATE 18 MAY 69 1645 GCT WIRE DRY 54.4 WET 54.2 CRUISE Y6905R
WIND DIRECTION 19 VEL 14 KTS BAR 14 SWELL DIRECTION 16 H 03 T 03 CLOUD 6 AMT 9 WEATHER 01

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	DERIVED ΔD (dyn.m)
0	11.85	32.454	6.68	.45			.1	0	11.85	32.46	24.67	328.8	0
10	11.86	32.451	6.67	.46			.1	10	11.86	32.46	24.67	329.4	.033
20	11.82	32.452	6.69	.42			.1	20	11.82	32.46	24.68	328.8	.066
30	11.06	32.498	6.81	.43			.1	30	11.06	32.50	24.85	312.5	.098
50	9.86	32.509	6.60	.58			.8	50	9.86	32.51	25.06	292.4	.158
75	8.79	32.733	5.96	.70			5.4	75	8.79	32.74	25.41	259.8	.227
100	9.18	33.296	4.29	1.61			17.9	100	9.18	33.30	25.79	224.4	.288
125	8.64	33.616	3.02	2.02			24.1	150	8.27	33.76	26.28	177.7	.388
150	8.27	33.753	3.62					200	7.51	33.93	26.53	155.1	.472
200	7.50	33.921	3.15	2.03			24.4	250	6.89	34.01	26.68	141.3	.546
299	6.40	34.050	1.59	2.79			36.2	300	6.39	34.05	26.78	132.4	.614
399	5.68	34.096	1.19	3.05			37.5	400	5.67	34.10	26.91	121.3	.741
499	5.18	34.164	.66	3.25			38.8	500	5.18	34.16	27.02	110.7	.857
599	4.84	34.232	.38	3.25			37.9	600	4.84	34.23	27.11	103.1	.964
798	4.27	34.340	.33	3.27			34.8	700	4.53	34.29	27.19	95.6	1.063
998	3.92	34.390	.29	3.24			33.6	800	4.27	34.34	27.26	89.7	1.156
1198	3.22	34.474	.52	3.49			37.6	1000	3.91	34.39	27.34	81.7	1.329
								1200	3.21	34.47	27.47	70.6	1.483

CH 45 43 20.0 N 125 23.6 W DATE 18 MAY 69 1932 GCT WIRE 02 DRY 56.5 WET 55.0 CRUISE Y6905R
WIND DIRECTION 18 VEL 14 KTS BAR 14 SWELL DIRECTION 16 H 03 T 08 CLOUD 6 AMT 8 WEATHER 01

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	DERIVED ΔD (dyn.m)
0	12.23	32.402	6.49	.45			.1	0	12.23	32.41	24.56	339.4	0
10	12.04	32.444	6.54	.46			.1	10	12.04	32.45	24.63	333.1	.034
20	11.29	32.626	6.77	.46			.1	20	11.29	32.63	24.91	306.8	.066
30	11.04	32.634	6.69	.48			.3	30	11.04	32.64	24.96	302.1	.096
50	10.65	32.631	6.50	.60			1.3	50	10.65	32.64	25.02	296.1	.158
75	9.43	32.860	5.64	1.16			9.5	75	9.43	32.87	25.41	260.1	.225
100	8.94	33.354	4.24	1.58			14.4	100	8.94	33.36	25.87	218.4	.285
125	8.76	33.672	3.29	2.11			24.5	150	8.44	33.79	26.28	178.0	.384
150	8.44	33.783	2.94				25.6	200	7.72	33.95	26.52	154.2	.447
200	7.72	33.948	2.62	2.32			30.2	250	7.12	34.02	26.65	143.9	.542
300	6.60	34.037	2.10	2.67			35.0	300	6.60	34.04	26.74	135.8	.612
400	5.76	34.083	1.18	3.01			38.6	400	5.77	34.09	26.89	123.1	.741
500	5.29	34.145	.76	3.31			40.7	500	5.30	34.15	26.99	113.2	.859
600	4.88	34.217	.42	3.48			42.1	600	4.89	34.22	27.10	104.5	.968
800	4.28	34.339	.25				43.4	700	4.56	34.28	27.18	96.7	1.069
1000	3.69	34.410	.34				43.6	800	4.29	34.34	27.26	89.7	1.162
1200	3.22	34.470	.88				44.0	1000	3.70	34.42	27.38	79.3	1.331
								1200	3.22	34.47	27.47	70.8	1.481

OBSERVED								INTERPOLATED				DERIVED	
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)

CH 65 43 20.2 N 125 52.2 W DATE 18 MAY 69 2345 GCT WIRE 09 DRY 54.5 WET 52.7 CRUISE Y69059
WIND DIRECTION 24 VEL 12 KTS BAR 16 SWELL DIRECTION 25 H 03 T 06 CLOUD 5 AMT 9 WEATHER 02

0	11.68	32.561	6.56	.40	.4	0	11.68	32.57	24.79	317.9	0
10	11.67	32.568	6.58	.57	.3	10	11.67	32.57	24.79	317.4	.032
20	11.51	32.595	6.61	.39	.3	20	11.51	32.60	24.84	312.8	.063
30	10.66	32.538	6.74	.42	.3	30	10.66	32.54	24.95	302.8	.094
50	9.45	32.497	6.65	.45	.9	50	9.45	32.50	25.12	284.9	.153
75	8.64	32.528	6.49	.72	3.2	75	8.64	32.53	25.27	272.8	.223
100	7.94	32.837	5.78	1.10	10.4	100	7.94	32.84	25.62	240.2	.287
124	7.91	33.526	4.21	1.75	21.3	150	7.81	33.78	26.37	169.3	.389
149	7.82	33.776	3.91	1.99	23.8	200	7.19	33.90	26.56	152.4	.470
199	7.21	33.904	3.60	2.31	22.1	250	6.46	33.94	26.68	140.7	.543
299	5.84	33.953	2.54	2.30		300	5.83	33.95	26.77	132.4	.611
398	5.49	34.093	1.15			400	5.48	34.09	26.93	119.1	.737
498	4.97	34.152	.70			500	4.98	34.15	27.04	108.9	.851
597	4.68	34.229	.49			600	4.67	34.23	27.13	101.3	.946
797	4.03	34.324	.25			700	4.36	34.28	27.21	94.1	1.054
996	3.56	34.416	.26	3.40	34.2	800	4.02	34.33	27.27	88.0	1.145
1195	3.13	34.475	.42			1000	3.55	34.42	27.40	77.4	1.310
						1200	3.12	34.48	27.48	69.2	1.456

CH 85 43 20.0 N 126 20.0 W DATE 19 MAY 69 1556 GCT WIRE DRY 52.0 WET 52.0 CRUISE Y69059
WIND DIRECTION 27 VEL 05 KTS BAR 18 SWELL DIRECTION 27 H 04 T 03 CLOUD 7 AMT 8 WEATHER 10

0	11.04	32.439	6.68	.57	1.5	0	11.04	32.44	24.81	316.0	0
10	11.04	32.438	6.70	.74	2.0	10	11.04	32.44	24.81	316.2	.032
20	10.96	32.443	6.71	.76	1.9	20	10.96	32.45	24.82	314.7	.063
30	9.82	32.444	6.85	.76	2.4	30	9.82	32.45	25.02	294.3	.094
50	8.98	32.438	6.82	.76	2.8	50	8.98	32.44	25.15	284.2	.152
75	8.42	32.528	6.45	.90	5.2	75	8.42	32.53	25.30	269.7	.22
100	7.95	33.011	5.26		12.5	100	7.95	33.02	25.75	227.5	.28
125	7.83	33.450	4.28			150	7.84	33.72	26.32	174.1	.383
150	7.84	33.719	3.69		24.7	200	7.21	33.92	26.56	151.7	.465
200	7.21	33.913	2.94		29.0	250	6.63	33.98	26.69	139.9	.539
300	6.10	33.991	1.91		34.8	300	6.10	34.00	26.77	132.7	.606
400	5.11	34.003	1.50		7.0	400	5.11	34.01	26.90	121.1	.733
500	4.76	34.101	.85		40.3	500	4.77	34.11	27.02	110.1	.848
599	4.50	34.200	.40		41.1	600	4.50	34.20	27.13	101.5	.946
799	3.94	34.306	.25		42.4	700	4.21	34.26	27.20	94.2	1.052
999	3.50	34.406	.28		42.3	800	3.94	34.31	27.27	88.4	1.143
1199	3.09	34.468	.45		42.1	1000	3.50	34.41	27.39	77.6	1.309
						1200	3.09	34.47	27.48	69.4	1.456

CH 105 43 21.5 N 126 47.0 W DATE 19 MAY 69 1934 GCT WIRE 05 DRY 55.0 WET 53.1 CRUISE Y69059
WIND DIRECTION 27 VEL 08 KTS BAR 20 SWELL DIRECTION 25 H 04 T 03 CLOUD 7 AMT 8 WEATHER 02

0	11.12	32.418			1.6	0	11.13	32.42	24.78	318.9	0
10	10.89	32.420			1.6	10	10.89	32.42	24.82	315.0	.032
20	10.27	32.431			1.6	20	10.27	32.44	24.93	304.2	.063
30	9.52	32.433			1.7	30	9.52	32.44	25.06	292.4	.092
50	9.00	32.447			1.7	50	9.00	32.45	25.15	283.8	.150
75	8.16	32.542			5.5	75	8.16	32.55	25.35	264.9	.219
100	7.63	33.331			18.8	100	7.64	33.34	26.05	199.2	.277
125	7.75	33.634			22.0	150	7.60	33.83	26.44	162.7	.367
150	7.60	33.826			24.2	200	7.12	33.95	26.60	148.0	.445
200		33.945			28.0	250	6.62	34.00	26.71	138.4	.514
300	6.10	34.024			28.2	300	6.10	34.03	26.80	130.3	.584
400	5.47	34.076				400	5.47	34.08	26.92	120.0	.709
500	4.98	34.148			39.8	500	4.98	34.15	27.03	109.2	.823
599	4.58	34.217				600	4.58	34.22	27.13	101.1	.928
799	3.98	34.317			42.3	700	4.26	34.27	27.21	94.1	1.025
999	3.40	34.418			38.6	800	3.99	34.32	27.27	88.1	1.117
1199	2.96	34.476			41.8	1000	3.40	34.42	27.41	75.6	1.280
						1200	2.96	34.48	27.50	67.3	1.423

CH 125 43 20.1 N 127 13.9 W DATE 19 MAY 69 2254 GCT WIRE DRY 53.1 WET 52.0 CRUISE Y69059
WIND DIRECTION 28 VEL 04 KTS BAR 21 SWELL DIRECTION 25 H 03 T 10 CLOUD 3 AMT 7 WEATHER 03

0	11.50	32.462	6.61	.59	1.1	0	11.50	32.47	24.74	322.1	0
10	10.94	32.456	6.62	.56	1.6	10	10.94	32.46	24.84	313.2	.032
20	10.35	32.457	6.78	.57	1.5	20	10.35	32.46	24.94	303.6	.063
30	9.92	32.457	6.80	.58	2.1	30	9.92	32.46	25.01	296.9	.093
50	9.14	32.469	6.77	.65	3.2	50	9.14	32.47	25.15	284.3	.151
75	8.52	32.480	6.59	.76	5.1	75	8.52	32.48	25.25	274.7	.221
100	7.41	32.947	5.37	1.17	15.1	100	7.82	32.99	25.75	227.3	.283
125	7.69	33.543	4.09	1.50	23.6	150	7.59	33.74	26.37	169.7	.383
150	7.59	33.730	3.60	1.74	32.8	200	7.13	33.92	26.58	150.3	.463
199		33.919	3.01	1.83	36.9	250	6.62	34.00	26.71	138.3	.535
299	6.06	34.027	1.72	2.01	37.0	300	6.05	34.03	26.80	129.7	.602
399	5.40	34.073	.97	2.56	44.0	400	5.39	34.09	26.94	118.1	.725
499	4.95	34.151	.57	2.77	45.7	500	4.95	34.15	27.04	108.9	.839
599	4.56	34.213	.36	2.88	46.2	600	4.56	34.21	27.13	101.2	.944
798	4.02	34.317	.25	2.99	46.8	700	4.27	34.27	27.20	94.5	1.042
998	3.38	34.415	.24	3.04	47.6	800	4.01	34.32	27.27	88.4	1.133
1197	3.02	34.479	0.56			1000	3.38	34.42	27.41	75.5	1.297
						1200	3.01	34.48	27.50	67.7	1.440

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
CH 145 43 20.1 N 127 41.1 W DATE 20 MAY 69 0221 GCT WIRE 00 DRY 51.9 WET 50.0 CRUISE Y6905A													
WIND DIRECTION 29 VEL 08 KTS BAR 21 SWELL DIRECTION 27 H 03 T 10 CLOUD 6 AMT 3 WEATHER 03													
0	11.34	32.459	6.59	.68			.5	0	11.34	32.46	24.77	318.6	0
10	11.01	32.462	6.62	.69			.2	10	11.01	32.47	24.83	313.9	.332
20	10.34	32.457	6.74	.65			.1	20	10.34	32.46	24.94	303.6	.363
30	9.81	32.467	6.76	.73			.1	30	9.81	32.47	25.04	294.4	.392
50	8.86	32.465	6.67	.72			.1	50	8.86	32.47	25.19	277.6	.453
75	8.18	32.533	6.39	.88			1.7	75	8.18	32.54	25.34	264.9	.518
100	7.73	33.041	5.44	1.25			9.2	100	7.73	33.05	25.81	229.2	.679
125	7.83	33.663	4.06	1.63			18.2	150	7.72	33.83	26.43	194.1	.876
149	7.73	33.831	3.43	1.93			27.4	200	7.03	33.89	26.57	151.0	.954
199	7.04	33.992	3.68					250	6.60	33.96	26.68	141.1	.997
299	6.25	34.011	1.86	2.61				300	6.24	34.01	26.77	133.3	.996
398	5.30	34.019	1.49	2.83				400	5.29	34.02	26.89	122.2	.924
498	4.97	34.128	.74					500	4.96	34.13	27.02	110.7	.940
598	4.64	34.202	.52					600	4.63	34.20	27.11	102.9	.967
797	4.07	34.320	.38	3.22				700	4.34	34.27	27.19	95.5	1.044
996	3.47	34.427	.38	3.33				800	4.06	34.32	27.27	88.7	1.138
1195	2.99	34.480	.75	3.31				1000	3.46	34.43	27.41	75.6	1.332
								1200	2.98	34.48	27.50	67.2	1.445
CH 165 43 20.1 N 127 55.0 W DATE 20 MAY 69 0545 GCT WIRE DRY 51.1 WET 50.2 CRUISE Y6905A													
WIND DIRECTION VEL KTS BAR SWELL DIRECTION H T CLOUD AMT WEATHER													
0	11.27	32.458	6.61	.66			.7	0	11.27	32.46	24.78	318.5	0
10	11.26	32.456	6.62					10	11.26	32.46	24.78	318.6	.332
20	10.85	32.476	6.70	.66			.6	20	10.85	32.48	24.87	310.4	.363
30	10.46	32.495	6.72	.65			.5	30	10.46	32.50	24.95	302.7	.394
50	9.80	32.496	6.70	.70			1.1	50	9.80	32.50	25.06	292.4	.453
75	9.27	32.615	6.30	.83			3.9	75	9.27	32.62	25.24	275.8	.524
100	8.50	33.201	4.91	1.33			15.0	100	8.50	33.21	25.82	221.2	.757
125	8.11	33.652	3.95	1.70			22.2	150	7.76	33.85	26.43	163.7	.983
150	7.75	33.841	3.37	1.91			25.7	200	7.28	33.95	26.58	150.4	1.041
200	7.27	33.941	2.77	2.12			29.0	250	6.77	33.98	26.67	141.9	1.074
299	6.31		1.88	2.52			34.9	300	6.30	34.00	26.75	134.7	1.103
399	5.56	34.010	1.13	2.76			39.2	400	5.55	34.01	26.85	124.2	1.134
499	5.09	34.076	.72	2.94			41.3	500	5.09	34.08	26.96	114.1	1.165
599	4.71	34.137	.34	2.98			42.1	600	4.71	34.14	27.05	108.6	1.167
798	4.15	34.206	0.76					700	4.41	34.17	27.11	103.1	1.173
998	3.59	34.328	0.34					800	4.14	34.21	27.17	98.2	1.174
1197	3.09	34.431	0.78					1000	3.58	34.33	27.32	84.4	1.356
								1200	3.08	34.43	27.45	72.0	1.412
NH 65 45 39.0 N 125 35.2 W DATE 02 JUN 69 0214 GCT WIRE 10 DRY 57.0 WET 56.5 CRUISE Y6906A													
WIND DIRECTION 00 VEL 18 KTS BAR 18 SWELL DIRECTION 00 H 03 T 05 CLOUD AMT 0 WEATHER 01													
0	12.69	32.240						0	12.69	32.25	24.35	359.7	0
10	12.66	32.258	6.13					10	12.66	32.26	24.37	355.0	.336
20	12.19	32.531						20	12.19	32.54	24.67	329.6	.370
30	10.38	32.544						30	10.38	32.55	25.00	297.8	.402
49	9.47	32.567						50	9.46	32.57	25.17	281.8	.460
74	9.31	32.730	5.99					75	9.29	32.75	25.34	264.8	.523
100	8.80		4.16					100	8.80	33.12	25.71	231.8	.650
149	8.23	33.824	3.34					150	8.21	33.83	26.35	171.2	.891
200	7.25	33.915	3.41					200	7.26	33.92	26.56	152.1	.972
249	7.01	33.007	2.81					250	7.00	33.02	25.89	216.2	.944
300	6.59	34.034	1.79					300	6.59	34.04	26.74	135.9	.982
400	5.53	34.070	1.50					400	5.54	34.08	26.91	121.2	.990
500	5.13	34.142	0.90					500	5.14	34.15	27.01	111.6	.997
600	4.69	34.218	0.64					600	4.69	34.22	27.12	102.1	1.024
799	4.10	34.331	0.42					700	4.36	34.28	27.20	94.6	1.132
999	3.67	34.405	0.55					800	4.10	34.33	27.27	88.4	1.133
1199	3.10	34.468	0.72					1000	3.67	34.41	27.37	79.7	1.381
								1200	3.10	34.47	27.48	69.5	1.513
NH 65 44 49.3 N 125 36.5 W DATE 06 JUN 69 1710 GCT WIRE 00 DRY 57.0 WET 56.5 CRUISE Y6906A													
WIND DIRECTION 16 VEL 10 KTS BAR 14 SWELL DIRECTION 27 H 03 T 07 CLOUD 6 AMT 8 WEATHER 02													
0	13.34	31.874						0	13.34	31.88	23.94	398.7	0
10	13.00	31.854						10	13.00	31.86	23.99	394.0	.340
20	12.78	31.923						20	12.78	31.93	24.09	385.1	.379
30	9.62	32.491	6.98					30	9.63	32.50	25.06	289.7	.412
49	9.46	32.571	6.65					50	9.43	32.57	25.18	281.3	.459
74	8.92	32.634	6.23					75	8.93	32.66	25.32	267.7	.528
99	9.21	33.314	4.31					100	9.21	33.33	25.81	222.4	.753
149	8.60	33.817	2.51					150	8.58	33.82	26.29	177.6	.944
199	7.56	33.889	3.36					200	7.54	33.89	26.50	158.3	1.043
248	6.92	33.934	2.85					250	6.90	33.94	26.62	144.8	1.099
298	6.55	33.999	2.17					300	6.53	34.00	26.72	133.0	1.131
398	5.76	34.048	1.40					400	5.75	34.05	26.86	125.7	1.162
497	5.13	34.127	0.91					500	5.12	34.13	27.00	112.6	1.221
597	4.79	34.182	0.75					600	4.78	34.18	27.08	104.1	1.291
795	4.21	34.304	0.41					700	4.48	34.25	27.17	98.3	1.333
994	3.69	34.400	0.42					800	4.20	34.31	27.25	91.1	1.188
1193	3.12	34.462	1.01					1000	3.67	34.40	27.37	80.0	1.358
								1200	3.10	34.46	27.48	69.8	1.458

OBSERVED INTERPOLATED DERIVED

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dynm)

DB 5 44 49.8 N 124 10.0 W DATE 19 JUN 69 0420 GCT WIRE DRY 57.5 WET 56.0 CRUISE Y690AC
WIND DIRECTION 17 VEL 14 KTS BAR 14 SWELL DIRECTION 32 H 04 T 07 CLOUD 7 AMT R WEATHER

0	31.344	6.49	.47			.1	
10	32.214	6.55				5.3	
20	32.546	5.57	1.09			9.9	
30	33.052	4.26	1.58			17.8	
50	33.710	2.97	2.05			26.4	

DB 10 44 51.6 N 124 17.2 W DATE 19 JUL 69 1811 GCT WIRE 05 DRY 59.5 WET 58.0 CRUISE Y690AC
WIND DIRECTION 22 VEL 10 KTS BAR 14 SWELL DIRECTION 31 H 03 T 07 CLOUD 6 AMT R WEATHER 02

0	29.076	5.98	.14	8.26	2.15	1	
3	31.276	6.65	.17	8.25	2.25	.1	
6	31.493	6.69	.18	8.24	2.26	.1	
10	32.044	5.82	.28	8.23	2.28	.3	
15	32.281	6.66	[illegible]	8.21	2.28	.5	
20	32.438	6.89	.26	8.23	2.28	1.2	
30	32.512	6.56	.33	8.19	2.28	3.8	
50	32.909	4.96	.56	8.04	2.30	16.3	
75	33.499	4.08	.69	7.97	2.31	23.1	
100	33.704	3.66	.75	7.93	2.31	26.4	

DB 15 44 53.7 N 124 22.8 W DATE 19 JUN 69 2020 GCT WIRE 00 DRY WET CRUISE Y690AC
WIND DIRECTION 21 VEL 10 KTS BAR 14 SWELL DIRECTION 31 H 03 T 08 CLOUD 6 AMT R WEATHER 02

0	28.415	5.88	.31	8.25	2.15	.1	
3	28.796	5.38	.26	8.26	2.23	.1	
6	31.345	6.28	.31	8.24	2.33	.1	
10	31.921	6.65	.30	8.23	2.34	.1	
15	32.172	6.93	.31	8.24	2.34	.1	
20	32.430	7.23	.37	8.24	2.36	.1	
30	32.460	6.73	.52	8.20	2.34	2.1	
50	32.483	6.49	.64	8.18	2.34	5.4	
75	32.921	5.32	.96	8.10	2.37	13.4	
100	33.576	3.77	1.39	7.95	2.39	23.7	
125	33.848	2.45	1.76	7.82	2.42	30.9	
150	33.890	2.30	1.80	7.75	2.42	32.1	

DB 25 44 57.2 N 124 36.7 W DATE 19 JUN 69 2312 GCT WIRE 02 DRY 59.5 WET 57.5 CRUISE Y690AC
WIND DIRECTION 28 VEL 08 KTS BAR 13 SWELL DIRECTION 31 H 03 T 10 CLOUD 6 AMT R WEATHER 02

0	27.398	5.96				.1	
3	27.597	6.00				.1	
6	29.218	6.08				.4	
10	31.446	6.66				.1	
15	32.139	7.11				.2	
20	32.395	7.32				.2	
30	32.459	6.99				1.2	
50	32.475	6.53				3.1	
75	32.948	5.28				10.4	
100	33.505	3.96					
125	33.804	3.18				18.7	
150	33.892	2.94				27.2	
200	33.940	2.87					

DB 40 45 02.6 N 124 56.4 W DATE 20 JUN 69 0140 GCT WIRE 00 DRY 58.0 WET 56.5 CRUISE Y690AC
WIND DIRECTION 31 VEL 08 KTS BAR 12 SWELL DIRECTION 29 H 04 T 10 CLOUD 6 AMT R WEATHER 02

0	26.981	5.98	.18	8.25	2.03	.1	
3	27.070	6.00	.20	8.25	2.05	.1	
6	27.671	6.04	.21	8.25	2.07	.1	
10	30.987	6.43	.25	8.26	2.21	.1	
15	31.917	6.93	.30	8.24	2.25	.1	
20	32.186	7.05	.37	8.25	2.26	.2	
30	32.405	7.19	.38	8.28	2.26	.3	
50	32.500	6.65	.66	8.20	2.26	4.1	
75	32.599	6.19	.76	8.13	2.26	8.2	
100	33.198	4.57	1.13	8.02	2.28	18.2	
125	33.625	3.67	1.36	7.96	2.31	25.3	
150	33.875	2.94	1.54	7.89	2.17	28.9	
200	33.942	2.61	1.67	7.86	2.33	32.4	

DB 55 45 09.2 N 125 15.0 W DATE 20 JUN 69 1340 GCT WIRE 00 DRY 56.0 WET 54.0 CRUISE Y690AC
WIND DIRECTION 32 VEL 10 KTS BAR 14 SWELL DIRECTION 30 H 04 T 06 CLOUD 6 AMT R WEATHER 02

0	28.902	5.97	.18	8.23	2.09	.1	
3	29.360	6.02	.22	8.24	2.11	.1	
6	30.276	6.15	.24	8.24	2.14	.1	
10	31.281	6.19	.27	8.25	2.19	.1	
15	32.420	6.77	.30	8.26	2.23	.2	
20	32.447	6.93	.34	8.28	2.23	.2	
30	32.479	7.19	.41	8.26	2.21	.3	
50	32.467	6.93	.56	8.23	2.23	1.4	
75	32.667	6.18	.76	8.17	2.23	6.2	
100	33.187	4.82	1.09	8.04	2.23	13.8	
125	33.539	3.99	1.38	7.98	2.26	20.3	
150	33.808	3.33	1.56	7.92	2.30	24.3	
200	33.927	2.97	1.70	7.90	2.30	27.6	

	OBSERVED							INTERPOLATED			DERIVED		
	D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)

DR 75 45 16.3 N 125 41.6 W DATE 20 JUN 1855 GCT WIRE 00 DRY 58.0 WET 55.0 CRUISE Y6906C
WIND DIRECTION 30 VEL 10 KTS BAR 16 SWELL DIRECTION 31 H 04 T 06 CLOUD 6 AMT # WEATHER 02

0		31.376	6.10	.41	8.23	2.30	.1						
3		31.486	6.05	.40	8.23	2.28	.1						
6		31.650	6.05	.40	8.23	2.28	.1						
10		32.110	6.27	.41	8.25	2.30	.1						
15		32.347		.47	8.24	2.31	.1						
20		32.6[illegible]		.48	8.27	2.31	.1						
30		32.649	7.30	.57	8.27	2.31	.1						
50		33.668	6.61	.96	8.26	2.31	5.3						
75		3[illegible].874	6.14	1.11			9.8						
100		33.461	4.13	1.66	8.13	2.33	18.5						
125		33.604	3.56	1.96			23.0						
150		33.719	3.38	[illegible].02	7.92	2.37	3.9						
200		33.925	3.00	2.22	7.86	2.37	27.8						

DB 95 45 23.8 N 126 07.2 W DATE 20 JUN 69 2145 GCT WIRE 05 DRY 57.0 WET 54.0 CRUISE Y6906C
WIND DIRECTION 30 VEL 12 KTS BAR 17 SWELL DIRECTION 32 H 04 T 06 CLOUD 6 AMT # WEATHER 02

0		31.984	6.20	.31	8.24	2.30	.1						
3		31.985	6.15	.33	8.24	2.30	.1						
6		31.984	6.17	.33	8.24	2.30	.1						
10		31.988	6.18	.33	8.25	2.28	.1						
15		32.046	6.26	.37	8.24	2.28	.1						
20		32.397	6.73	.39	8.25	2.30	.1						
30		32.671	7.38	.44	8.26	2.14	.1						
50		32.678	6.57	.77	8.21	2.30	4.9						
75		32.730	6.38	.87	8.19	2.30	6.1						
100		32.895	5.84	1.11	8.13	2.30	10.5						
125		33.411	4.16	1.70	8.00	2.33	19.5						
150		33.696	3.43	1.97	7.92	2.34	24.5						
200		33.891	2.92	2.14	7.89	2.36	27.4						

DB 115 45 30.9 N 126 33.8 W DATE 21 JUN 69 0027 GCT WIRE 05 DRY 55.0 WET 54.0 CRUISE Y6906C
WIND DIRECTION 32 VEL 12 KTS BAR 17 SWELL DIRECTION 32 H 06 T 08 CLOUD 6 AMT # WEATHER 02

0		31.992	6.17	.47	8.24	2.19	.2						
3		31.993		.45	8.24	2.19	.1						
6		31.993	6.17	.49	8.25	2.19	.1						
10		31.994	6.20	.50	8.25	2.19	.1						
15		32.221	6.61	.53	8.26	2.17	.1						
20		32.486	7.06	.52	8.26	2.21	.1						
30		32.638	7.23	.60	8.28	2.23	.1						
50		32.679	6.60	.73	8.22	2.23	5.6						
75		32.721	6.38	.93	8.19	2.23	6.5						
100	9.39	33.112	5.08	1.47	8.06	2.25	14.3						
125		33.490	3.93	1.83	7.98	2.26	20.2						
150		33.680	3.40	2.03	7.93	2.29	23.4						
200		32.953			8.13	2.25							

DB 135 45 38.5 N 127 00.1 W DATE 21 JUN 69 0335 GCT WIRE 01 DRY 55.8 WET 53.0 CRUISE Y6906C
WIND DIRECTION 33 VEL 13 KTS BAR 18 SWELL DIRECTION 34 H 04 T 06 CLOUD 6 AMT # WEATHER 02

0		32.114	6.17	.46	8.23	2.30	.1						
3		32.113	6.18	.52	8.23	2.28	.1						
6		32.118	6.18	.47	8.24	2.29	.1						
10		32.219	6.28	.47	8.24	2.28	.1						
15		32.412	6.73	.51	8.23	2.30	.1						
20		32.391	4.94	.49	8.25	2.28	.1						
30		32.423	7.13	.53	8.25	2.28	.1						
50		32.454	6.94	.74	8.23	2.30	2.7						
75		32.512	5.59	.87	8.21	2.30	5.0						
100		32.942	5.51	1.37	8.10	2.31	13.3						
125		33.502	4.34	1.87	7.99	2.34	20.9						
150		33.759	3.83	2.07	7.95	2.35	24.1						
200		33.955	2.97	2.42	7.87	2.39	28.5						

A 35 45 50.0 N 126 29.5 W DATE 21 JUN 69 1323 GCT WIRE 02 DRY 54.0 WET 54.5 CRUISE Y6906C
WIND DIRECTION 30 VEL 10 KTS BAR 19 SWELL DIRECTION 32 H 04 T 08 CLOUD 6 AMT # WEATHER 02

0	14.22	31.936	6.14	.45	8.23	2.26	.2						
3		31.936	6.13	.44	8.24	2.26	.1						
6		31.938	6.13	.40	8.24	2.26	.1						
10		31.938	6.14	.44	8.25	2.26	.1						
15		31.947	6.17	.40	8.25	2.26	.1						
20		31.986	6.20	.36	8.2[illegible]	2.25	.1						
30		32.486	7.22	.42	8.28	2.37	.1						
50		32.663	6.84	.68	8.24	2.34	2.9						
75		32.717	6.44	.83	8.20	2.34	5.9						
100	9.33	32.945	5.61	1.18	8.12	2.34	11.5						
125		33.466	4.04	1.73	7.98	2.36	20.1						
150		33.710	3.30	1.98	7.93	2.35	23.8						
200		33.917	2.87	2.17	7.89	2.39	28.2						

	OBSERVED							INTERPOLATED			DERIVED		
	D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)

C 37 45 52.8 N 126 00.2 W DATE 21 JUN 69 1730 GCT WIRE 02 DRY 58.8 WET 56.1 CRUISE Y690AC
WIND DIRECTION 27 VEL 07 KTS BAR 20 SWELL DIRECTION 32 H 03 T 07 CLOUD 6 AMT 8 WEATHER 02

0		31.673	6.04	.85	8.25	2.23	.1					
3		31.716	5.97	.71	8.25	2.23	.1					
6		31.759	6.11	.38	8.26	2.23	.1					
10		32.302	6.27	.41	8.26	2.25	.1					
15		32.325	6.24	.43	8.26	2.25	.1					
20		32.366	6.50	.43	8.26	2.26	.2					
30		32.469	7.27	.49	8.30	2.26	.2					
50		32.603	6.84	.72	8.25	2.26	2.9					
75		32.604	6.54	.86	8.23	2.26	5.3					
100		33.073	5.21	1.35	8.11	2.28	13.8					
125		32.576	3.50	1.86	7.97	2.31	21.8					
150		33.695	3.56	1.91	7.97	2.31	23.7					
200		33.933	2.91	2.18	7.91	2.34	27.6					

C 41 45 45.1 N 125 32.8 W DATE 21 JUN 69 2045 GCT WIRE 00 DRY 59.0 WET 57.5 CRUISE Y690AC
WIND DIRECTION 27 VEL 10 KTS BAR 21 SWELL DIRECTION 32 H 04 T 07 CLOUD 6 AMT 8 WEATHER 02

0		30.956	6.07	.37	8.26	2.19	.1					
3		31.078	6.07	.38	8.25	2.19	.1					
6		32.260	6.20	.42	8.25	2.25	.1					
10		32.228	6.30	.45	8.26	2.25	.1					
15		32.354	6.34	.47	8.26	2.25	.1					
20		32.514	6.65	.49	8.27	2.25	.1					
30		32.541	6.80	.54	8.24	2.25	.1					
50		32.543	6.90	.64	8.18	2.25	1.5					
75		32.724	6.02	.89	8.02	2.25	7.8					
100		33.351	4.34	1.63	7.95	2.28	18.1					
125		33.656	3.66	1.96	7.94	2.30	22.9					
150		33.797	3.47		7.89	2.31	24.2					
200		33.936	2.92	2.23	8.26	2.33	26.4					

C 45 45 38.5 N 125 06.8 W DATE 21 JUN 69 2337 GCT WIRE 05 DRY 60.0 WET 58.6 CRUISE Y690AC
WIND DIRECTION 28 VEL 10 KTS BAR 21 SWELL DIRECTION 30 H 03 T 08 CLOUD 4 AMT 7 WEATHER 01

0	16.78	23.938	6.14	.36	8.26	1.94	.1					
3		30.749	6.12	.39	8.25	2.25	.1					
6		31.328	6.20	.42	8.25	2.26	.1					
10		31.440	6.20	.42	8.26	2.23	.1					
15		32.251	6.53	.48	8.25	2.28	.1					
20		32.373	6.90	.49	8.27	2.28	.1					
30		32.494	6.90	.49	8.28	2.28	.1					
50		32.558	6.88	.68	8.25	2.30	2.4					
75		32.778	5.94	1.02	8.17	2.31	8.9					
100	9.06	33.363	4.33	1.53	8.03	2.33	18.2					
125		33.573	4.06	1.70	7.99	2.34	21.4					
150		33.705	4.13	1.76	7.99	2.34	22.2					
200		33.885	3.32	2.04	7.93	2.37	27.2					

A 47 45 35.0 N 124 53.9 W DATE 22 JUN 69 0205 GCT WIRE 07 DRY 60.2 WET 58.9 CRUISE Y690AC
WIND DIRECTION 30 VEL 12 KTS BAR 20 SWELL DIRECTION 30 H 03 T 06 CLOUD 6 AMT 8 WEATHER 02

0	16.84	21.439	6.30	.35	8.29	1.81	.1					
3		21.638	6.27	.37	8.31	1.83	.1					
6		31.943	6.59	.45	8.25	2.26	.1					
10		32.213	6.84	.45	8.28	2.28	.1					
15		32.348	6.93	.46	8.27	2.28	.1					
20		32.391	6.94	.53	8.29	2.28	.1					
30		32.477	7.07	.62	8.27	2.30	1.2					
50		32.435	6.76	.83	8.21	2.28	3.8					
75		32.515		.92	8.20	2.28	6.7					
100	7.42	32.988	5.36	1.36	8.09	2.30	14.6					
125		33.478	4.37	1.73	8.01	2.34	21.0					
150		33.759	4.56	1.92	7.95	2.55	24.5					
200		33.949	1.96	2.17	7.87	2.37	27.7					

A 54 45 54.0 N 124 30.3 W DATE 22 JUN 69 1334 GCT WIRE 06 DRY 57.9 WET 57.9 CRUISE Y690AC
WIND DIRECTION 23 VEL 12 KTS BAR 17 SWELL DIRECTION 26 H 02 T 06 CLOUD 6 AMT 8 WEATHER 02

0	16.21	22.747	6.36	.28	8.27	1.91	.1					
3		25.328	6.12	.25	8.30	2.01	.1					
6		29.506	6.23	.27	8.26	2.17	.1					
10		32.190	6.49	.31	8.23	2.28	.1					
15		32.368	6.76	.64	8.21	2.28	.1					
20		32.397	6.92	.54	8.25	2.28	.1					
30		32.476	6.84	.97	8.22	2.28	3.7					
50		32.576	6.24	1.17	8.19	2.30	6.3					
75		33.195	4.62		8.14	2.31	16.3					
100	7.98	33.697	3.19		8.01	2.34	25.7					
125		33.876	2.67		7.90	2.36	27.0					

C 56 46 00.6 N 124 41.0 W DATE 22 JUN 69 1650 GCT WIRE 01 DRY 59.0 WET 57.5 CRUISE Y6906C
WIND DIRECTION 27 VEL 10 KTS BAR 18 SWELL DIRECTION 29 H 02 T 05 CLOUD 6 AMT 8 WEATHER 02

D (m)	T (°C)	S (‰)
0		28.712
3		28.740
6		28.932
10		30.929
15		32.240
20		32.403
30		32.447
50		32.506
75		33.073
100		33.528
125		33.826
150		33.921
200		33.963

C 59 46 10.8 N 124 57.0 W DATE 22 JUN 69 1943 GCT WIRE 00 DRY 58.7 WET 58.0 CRUISE Y6906C
WIND DIRECTION 24 VEL 10 KTS BAR 18 SWELL DIRECTION 29 H 02 T 06 CLOUD 6 AMT 8 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	15.43	29.753					
3	15.38	29.885					
6	14.86	30.317					
10	13.04	31.737					
15	12.50	32.177					
20	11.92	32.323	6.71	.17	8.26	2.31	
30	10.15	32.427	7.00	.24	8.26	2.31	.1
50	8.57	32.508	6.54	.54	8.21	2.31	3.6
75	8.26	32.609	6.16	.70	8.18	2.31	6.8
100	8.23	33.256	4.48	1.28	8.00	2.39	10.3
125	8.23	33.556	3.75	1.57	7.96	2.40	10.5
150	7.94	33.822	3.18	1.80	7.91	2.40	10.5
200	6.78	33.921	3.11				

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	15.43	29.76	21.88	595.7	0
10	13.04	31.74	23.89	403.4	.050
20	11.92	32.33	24.56	340.1	.087
30	10.15	32.43	24.95	302.7	.119
50	8.57	32.51	25.27	273.0	.177
75	8.26	32.61	25.39	261.4	.244
100	8.23	33.26	25.90	213.2	.303
150	7.94	33.83	26.39	167.8	.398
200	6.78	33.92	26.63	145.6	.476

C 62 46 10.6 N 124 35.7 W DATE 22 JUN 69 2200 GCT WIRE 05 DRY 59.0 WET 58.7 CRUISE Y6906C
WIND DIRECTION 23 VEL 12 KTS BAR 18 SWELL DIRECTION 29 H 02 T 07 CLOUD 6 AMT 8 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	16.19	26.812	6.12	.30	8.29	2.09	.4
3	16.03	26.722	6.12		8.29	2.07	.4
6	14.82	30.603	6.26		8.26	2.25	.3
10	12.99	31.777	6.59	1.24	8.28	2.30	.1
15	11.62	32.287	6.77	1.28	8.27	2.31	.1
20	11.01	32.374	6.85		8.27	2.31	.1
30	8.67	32.487	6.97	1.37	8.24	2.33	2.3
50	7.88	32.461	6.71		8.21	2.31	5.3
75	8.25	33.274	4.00	1.61	7.99	2.36	16.6
100	8.03	33.654	3.41	1.90	7.93	2.37	20.2
125	7.75	33.805	2.95	2.07	7.88	2.39	22.5
150	7.12	33.916	2.76	2.22	7.87	2.39	24.1
200	7.02	33.932	2.13	2.72	7.80	2.39	

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	16.19	26.82	19.46	827.2	0
10	12.99	31.78	23.93	399.5	.061
20	11.01	32.38	24.76	320.6	.097
30	8.67	32.49	25.23	275.7	.127
50	7.89	32.47	25.33	264.7	.181
75	8.25	33.28	25.91	211.8	.241
100	8.03	33.66	26.24	180.8	.290
150	7.13	33.92	26.58	149.5	.373
200	7.02	33.93	26.60	148.0	.447

C 64 46 10.8 N 124 19.8 W DATE 23 JUN 69 0028 GCT WIRE DRY 58.8 WET 58.8 CRUISE Y6906C
WIND DIRECTION 24 VEL 12 KTS BAR 18 SWELL DIRECTION 29 H 03 T 07 CLOUD 6 AMT 8 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	16.50	11.948	6.61	.78	8.19	1.35	1.0
3	16.38	13.622	6.45	.84	8.19	1.46	1.0
6	15.40	23.661	5.96	.65	8.21	1.91	.9
10	13.39	29.680	6.04	.55	8.21	2.17	.9
15	10.88	31.013	6.43	.45	8.23	2.25	.1
20	9.57	32.272	6.73	.68	8.18	2.26	2.1
30	8.83	32.669	6.46	1.66	8.04	2.28	11.7
50	8.20	33.415	2.64	2.40	7.85	2.31	22.8
75	7.73	33.830	2.87	2.46	7.87	2.33	27.7
100	7.08	33.934	1.74	3.05	7.76	2.36	33.3

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	16.50	11.95	8.07	1935.9	0
10	13.39	29.69	22.24	561.3	.125
20	9.57	32.28	24.92	305.0	.168
30	8.83	32.67	25.35	264.5	.197
50	8.20	33.42	26.03	200.3	.243
75	7.73	33.83	26.42	163.1	.289
100	7.08	33.94	26.60	146.9	.327

A 67 46 20.7 N 124 36.1 W DATE 23 JUN 69 0320 GCT WIRE 01 DRY 58.0 WET 57.5 CRUISE Y6906C
WIND DIRECTION 24 VEL 10 KTS BAR 17 SWELL DIRECTION 27 H 02 T 06 CLOUD 6 AMT 8 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	15.49	30.734	6.07	.12	8.26	2.19	.1
3	15.53	30.736	6.13	.9	8.27	2.19	.1
6	15.53	30.738	6.06	.7	8.26	2.19	.1
10	15.04	30.917	6.27	.13	8.28	2.21	.1
15	11.79	31.921	7.05	.22	8.27	2.25	.1
20	10.75	32.107	6.93	.35	8.24	2.25	.1
30	8.77	32.480	6.76	.65	8.21	2.26	1.6
50	8.34	32.576	6.19	.79	8.15	2.26	3.1
75	8.16	33.345	4.17	1.65	7.99	2.30	17.3
100	7.76	33.744	3.36	1.90	7.91	2.33	21.1
125	7.20	33.910	2.05	2.33	7.79	2.34	24.1
150	7.04	33.928	2.15	2.33	7.78	2.34	
200	6.95	33.938	2.14	2.67	7.80	2.34	33.1

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	15.49	30.74	22.62	525.0	0
10	15.04	30.92	22.85	502.4	.051
20	10.75	32.11	24.60	334.0	.093
30	8.77	32.48	25.21	277.7	.124
50	8.34	32.58	25.35	264.4	.178
75	8.16	33.35	25.98	205.3	.237
100	7.77	33.75	26.35	170.3	.284
150	7.05	33.93	26.60	147.5	.363
200	6.95	33.94	26.62	146.6	.437

	OBSERVED								INTERPOLATED				DERIVED	
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)		Z (m)	T (°C)	S (‰)	σ_t	B ($\times 10^6$)	ΔD (dyn.m)
A 76	46 19.4 N	124 24.7 W	DATE 23 JUN 69	1325 GCT	WIRE 04	DRY 58.3	WET 58.1	CRUISE Y6906C						
WIND DIRECTION 23 VEL 10 KTS			BAR 12 SWELL DIRECTION 27 H 04 T 08 CLOUD 7 AMT					R WEATHER 02						
0	15.48	29.083	4.02	.27	8.27	2.15	.1		0	15.48	29.07	21.25	659.6	0
3	15.46	29.346	4.00	.25	8.27	2.17	.2		10	15.50	30.02	22.06	578.4	.062
6	15.49	29.877	4.03	.24	8.27	2.19	.1		20	10.46	32.00	24.56	334.4	.108
10	15.50	30.011	4.14	.24	8.28	2.19	.1		30	8.72	32.38	25.14	284.9	.139
15	11.68	31.741	4.37	.45	8.27	2.26	.1		50	8.38	32.69	25.43	254.9	.193
20	10.46	31.947	4.16	.42	8.20	2.28	1.7		75	8.01	33.70	26.28	177.0	.247
30	8.72	32.373	4.47	1.34	8.11	2.30	10.1		100	7.28	33.92	26.46	150.8	.288
50	8.38	32.687	5.22	1.51	8.06	2.30	12.4							
75	8.01	33.496	2.58	2.57	7.83	2.36	27.4							
100	7.25	33.917	1.40	3.01	7.76	2.37	31.9							
C 81	46 09.8 N	124 08.1 W	DATE 23 JUN 69	2270 GCT	WIRE 00	DRY 59.9	WET 59.0	CRUISE Y6906C						
WIND DIRECTION 26 VEL 18 KTS			BAR 13 SWELL DIRECTION 27 H 05 T 07 CLOUD 7 AMT					7 WEATHER 02						
0	16.38	17.428	4.30	.71	8.24	1.72	2.0		0	14.36	17.43	12.66	1484.8	0
3	12.23	31.014	4.51		8.14	2.26			10	9.40	32.39	25.04	293.7	.089
6	10.49	32.254	4.10	.74	8.17	2.28	2.5		20	8.48	32.81	25.51	248.4	.116
10	9.40	32.347	4.00	.84	8.16	2.28	5.2		30	8.20	33.39	26.00	207.4	.139
15	8.91	32.510	4.71	1.05	8.13	2.30	8.4							
20	8.48	32.808	4.76	1.40	8.03	2.31	15.8							
30	8.20	33.382	3.16	1.89	7.91	2.31	24.0							
40	8.10	33.541	3.26	1.90	7.91		24.2							
C 83	46 03.0 N	124 18.1 W	DATE 24 JUN 69	0017 GCT	WIRE 03	DRY 58.9	WET 56.4	CRUISE Y6906C						
WIND DIRECTION 30 VEL 18 KTS			BAR 13 SWELL DIRECTION 28 H 05 T 06 CLOUD 3 AMT					7 WEATHER 02						
0	15.90	20.230	4.56	.45	8.27		1.1		0	15.90	20.23	14.50	1304.4	0
3	15.59	21.094	4.13	.45	8.21	1.88	2.0		10	14.18	29.52	21.96	584.3	.095
6	14.19	27.546	5.82	.49	8.20	2.11	3.0		20	9.96	32.30	24.88	309.0	.140
10	14.18	29.517	6.23	.36	8.24	2.17	.6		30	8.34	32.51	25.10	269.8	.169
15	12.14	31.824	4.88	.26	8.29	2.26	.1		50	8.23	33.12	25.79	222.9	.218
20	9.96	32.299	7.04	.35	8.26	2.30	.1		75	7.95	33.71	26.30	176.6	.248
30	8.34	32.503	4.26	.76	8.14	2.31	6.3							
50	8.23	33.116	4.52	1.23	8.03	2.33	18.1							
75	7.95	33.707	3.00	1.77	7.88	2.37	26.3							
A 85	45 55.7 N	124 28.9 W	DATE 24 JUN 69	0243 GCT	WIRE	DRY 58.0	WET 56.6	CRUISE Y6906C						
WIND DIRECTION 30 VEL 22 KTS			BAR 14 SWELL DIRECTION 28 H 06 T 06 CLOUD 8 AMT					R WEATHER 02						
0	15.96	25.277	6.43	.25	8.25		.1		0	15.96	25.28	18.34	918.6	[illegible]
3	15.70	26.597	6.39	.27			.3		10	11.23	32.27	24.66	332.6	.083
6	13.89	30.080	6.33	.25	8.32	2.01	.2		20	8.63	32.68	25.23	275.8	.104
10	11.23	32.263	6.81	.38	8.27	2.30	.3		30	8.33	32.50	25.29	270.3	.121
15	9.31	32.471	6.73	.62	8.23	2.31	2.6		50	8.09	32.83	25.54	242.2	.172
20	8.63	32.479	6.76	.68	8.22	2.30	3.5		75	8.21	33.17	25.83	219.6	.230
30	8.33	32.498	6.56	.70	8.19	2.30	5.2		100	8.06	33.56	26.16	188.7	.281
50	8.09	32.830	5.33	1.37	8.11	2.31	13.5							
75	8.21	33.161	4.49	1.61	8.02	2.34	18.1							
100	8.06	33.554	3.48	1.87	7.94	2.34	23.6							
125	7.56	33.852	2.71	2.12	7.85	2.36	24.8							
A 93	45 46.2 N	124 02.1 W	DATE 24 JUN 69	1314 GCT	WIRE	DRY 52.8	WET 51.8	CRUISE Y6906C						
WIND DIRECTION 32 VEL 09 KTS			BAR 16 SWELL DIRECTION 27 H 04 T 06 CLOUD 8 AMT					R WEATHER 02						
0	12.63	30.761	4.43	.71	8.24	2.23	.1		0	12.63	30.77	23.22	467.6	0
3	12.54	31.167	4.53	.68	8.25	2.25	3.5		10	10.88	32.25	24.89	327.6	.140
6	11.34	32.002	6.69	.73	8.24	2.28	3.5		20	8.60	32.64	25.35	284.9	.169
10	10.87	32.248	4.56	.79	8.23	2.26	4.0		30	8.31	33.14	25.80	222.2	.194
15	9.57	32.423	5.66	1.18	8.12	2.28	9.8							
20	8.60	32.635	5.02	1.46	8.04	2.30	15.2							
30	8.31	33.137	4.00	1.82	7.94	2.31	21.1							
40	8.17	33.423	3.57	2.01	7.91	2.33	23.7							
C 95	45 46.9 N	124 01.7 W	DATE 24 JUN 69	1610 GCT	WIRE 02	DRY 54.0	WET 52.4	CRUISE Y6906C						
WIND DIRECTION 30 VEL 08 KTS			BAR 16 SWELL DIRECTION 28 H 04 T 06 CLOUD 6 AMT					7 WEATHER 02						
0	13.30	28.966	8.48	.33	8.26	2.14	.1		0	13.30	28.97	21.71	412.1	0
3	12.91	29.151	6.58	.35	8.25	2.21	.1		10	9.55	32.43	25.05	241.2	.145
6	11.07	32.213	6.43	.42	8.21	2.26	.5		20	8.43	32.80	25.51	248.9	.172
10	9.55	32.425	6.26	.34	8.16	2.28	3.8		30	8.21	33.34	25.97	204.1	.195
15	8.57	32.563	5.87		8.12	2.28	9.8		50	8.05	33.73	26.29	174.2	.133
20	8.43	32.799	4.59		8.00	2.28	15.9							
30	8.21	33.334	3.77	.34	7.95	2.31	21.6							
50	8.05	33.724	2.38	.33	7.82	2.33	26.8							
C 97	45 47.1 N	124 16.3 W	DATE 24 JUN 69	1822 GCT	WIRE 03	DRY 57.8	WET 55.0	CRUISE Y6906C						
WIND DIRECTION 23 VEL 06 KTS			BAR 13 SWELL DIRECTION 28 H 04 T 06 CLOUD 6 AMT					R WEATHER 02						
0	15.03	20.300	6.35		8.26		1.7		0	15.03	20.30	14.73	1285.1	0
3	14.61	27.124	5.77		8.18	2.07	2.9		10	11.74	32.28	24.55	340.3	.081
7	13.14	31.002	6.73		8.26	2.28	.6		20	9.70	32.46	25.04	293.6	.113
10	11.74	32.274	6.30		8.34	2.28	.6		30	8.63	32.51	25.25	273.9	.141
15	10.54	32.349	6.88		8.26	2.30	1.1		50	8.11	32.80	25.54	244.8	.193
20	9.70	32.452	6.82		8.26	2.30	1.7		75	8.12	33.43	26.05	198.7	.249
30	8.62	32.502	6.65		8.22	2.30	3.8		100	7.71	33.79	26.39	166.8	.294
50	8.11	32.799	5.51		8.11	2.31	8.7							
75	8.12	33.425	4.02		7.88	2.34	9.7							
100	7.71	33.732	2.66		7.84	2.37								

C 100 45 40.8 N 124 12.6 W DATE 24 JUN 69 2102 GCT WIRE 05 DRY 56.7 WET 54.1 CRUISE Y6906C
WIND DIRECTION 25 VEL 17 KTS BAR 15 SWELL DIRECTION 28 H 04 T 06 CLOUD 6 AMT 8 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁵)	ΔD (dyn.m)
0	14.95	22.310	6.52	.52	8.28	1.86	1.1	0	14.95	22.31	16.28	1134.6	0
3	13.72	29.286	6.30	.50	8.26	2.11	1.2	10	11.85	32.18	24.45	349.6	.174
6	13.81	31.450	6.47	.34	8.27	2.25	.1	20	9.31	32.46	25.11	287.2	.106
10	11.85	32.174	6.73	.44	8.28	2.28	.1	30	8.24	32.49	25.30	249.4	.134
15	10.51	32.366		.53	8.28	2.30	.1	50	8.00	32.73	25.52	248.4	.196
20	9.31	32.458	6.73	.77	8.24	2.30	2.4	75	8.12	33.42	26.04	199.8	.242
30	8.24	32.486	6.72	.90	8.23	2.30	4.1	100	7.76	33.84	26.43	163.3	.287
50	8.00	32.730	5.87	1.20	8.15	2.31	10.7						
75	8.12	33.411	3.67	1.87	7.97	2.34	25.4						
100	7.75	33.837	2.33	2.38	7.82	2.37	28.7						
125	7.50	33.872	2.29	2.52	7.82	2.37	29.2						

C 102 45 34.2 N 123 59.5 W DATE 24 JUN 69 2314 GCT WIRE 00 DRY 55.2 WET 53.8 CRUISE Y6906C
WIND DIRECTION 23 VEL 08 KTS BAR 14 SWELL DIRECTION 28 H 05 T 06 CLOUD 6 AMT 8 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁵)	ΔD (dyn.m)
0	13.43	28.367	6.33	.80	8.23	2.11	2.0	0	13.43	28.37	21.22	658.7	0
3	12.87	29.301	6.36	.69	8.24	2.15	1.8	10	9.99	32.31	24.88	308.7	.248
6	12.29	31.360	6.51	.65	8.26	2.25	.3	20	8.96	32.72	25.36	263.2	.277
10	9.99	32.308	5.37	1.23	8.12	2.30	9.8						
15	9.30	32.557	5.05	1.40	8.08	2.30	12.9						
20	8.96	32.711	4.84	1.46	8.05	2.30	14.6						

C 105 45 20.3 N 124 01.8 W DATE 25 JUN 69 0153 GCT WIRE 05 DRY 53.9 WET 52.5 CRUISE Y6906C
WIND DIRECTION 28 VEL 10 KTS BAR 15 SWELL DIRECTION 28 H 06 T 06 CLOUD 6 AMT 8 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁵)	ΔD (dyn.m)
0	13.47	27.647	6.65	.66	8.23	2.07		0	13.47	27.65	20.66	712.5	0
3	13.15	27.998	6.64	.77	8.24	2.09		10	9.86	32.73	25.23	276.0	.149
6	11.39	31.653	6.28	.92	8.16	2.23		20	8.39	33.27	25.88	213.7	.174
10	9.86	32.722	5.12	1.32	8.05	2.28		30	8.16	33.59	26.17	186.7	.194
15	8.91	32.958	4.46	1.61	8.00	2.30							
20	8.39	33.265	3.69	1.89	7.94	2.30							
30	8.16	33.586	2.92	2.17	7.87	2.33							

A 107 45 24.0 N 124 14.7 W DATE 25 JUN 69 0410 GCT WIRE 05 DRY 54.7 WET 53.1 CRUISE Y6906C
WIND DIRECTION 24 VEL 04 KTS BAR 12 SWELL DIRECTION 28 H 06 T 06 CLOUD 6 AMT 8 WEATHER

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁵)	ΔD (dyn.m)
0	14.94	25.592	6.53	.44	8.30	1.98	.1	0	14.94	25.60	18.79	891.9	0
3	14.70		6.57		8.29	2.01	.1	10	11.49	32.06	24.43	351.9	.162
6	13.12	31.435	6.64	.54	8.27	2.23	.1	20	9.06	32.50	25.18	281.0	.194
10	11.49	32.058	6.80	.63	8.28	2.25	.1	30	8.39	32.54	25.31	268.2	.121
15	10.11	32.383	7.05	.69	8.26	2.26	.1	50	8.18	32.88	25.61	239.7	.172
20	9.06		5.90	1.06	8.15	2.26	.1	75	8.17	33.57	26.15	188.8	.226
30	8.39	32.533	5.95	1.09	8.14	2.26	6.2	100	7.68	33.80	26.41	165.1	.170
50	8.17	32.879	5.08	1.27	8.06	2.28	7.7						
75	8.17	33.568	2.87	2.26	7.88	2.31	23.0						
100	7.67	33.798	3.41	2.29	7.92	2.33	26.1						

A 117 45 25.0 N 124 38.1 W DATE 25 JUN 69 1517 GCT WIRE DRY 55.9 WET 52.5 CRUISE Y6906C
WIND DIRECTION 32 VEL 20 KTS BAR 10 SWELL DIRECTION 27 H 06 T 10 CLOUD 8 AMT 6 WEATHER 01

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁵)	ΔD (dyn.m)
0	15.46	27.025	6.07	.34	8.28	2.05	.3	0	15.46	27.03	19.78	796.6	0
3	15.49	27.048	6.10	.32	8.26	2.07	.1	10	13.36	31.87	23.93	399.7	.060
6	15.43	27.321	6.12	.32	8.26	2.07	.4	20	11.89	32.55	24.74	322.4	.096
10	13.36	31.868	6.53	.35	8.25	2.26	.4	30	9.66	32.48	25.07	291.8	.127
15	12.57	32.237		.37	8.25	2.28	.2	50	8.42	32.48	25.26	273.0	.183
20	11.89	32.550	6.75	.38	8.26	2.30	.2	75	8.08	32.43	25.27	272.4	.251
30	9.66	32.471	6.75	.42	8.26	2.28	.2	100	8.07	33.29	25.95	208.9	.311
50	8.42	32.478	6.64	.42	8.20	2.28	4.2	150	7.58	33.77	26.40	166.8	.405
75	8.08	32.426	5.59	.70	8.12	2.31	8.2	200	6.95	33.91	26.59	148.8	.484
100	8.07	33.283	4.43	.89	8.01	2.33	14.9						
125	7.86	33.680	3.58	1.00	7.94	2.47	17.9						
150	7.58	33.767	3.56	1.02	7.93	2.36	23.9						
200	6.95	33.908	3.05	1.13	7.86	2.37	24.8						

C 119 45 12.3 N 124 32.4 W DATE 25 JUN 69 1732 GCT WIRE 05 DRY 57.4 WET 54.5 CRUISE Y6906C
WIND DIRECTION 33 VEL 15 KTS BAR 12 SWELL DIRECTION 28 H 06 T 06 CLOUD 8 AMT 6 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁵)	ΔD (dyn.m)
0	15.24	27.587	6.06	.30	8.27	2.05		0	15.24	27.59	20.26	750.9	0
3	15.26	27.719	6.06		8.27	2.05		10	13.22	31.01	23.29	460.7	.141
6	15.11	28.166	6.12	.28	8.26	2.07		20	10.38	32.41	24.90	307.7	.099
10	13.22	31.003	6.51	.34	8.26	2.23		30	9.36	32.54	25.16	282.3	.128
15	12.34	32.206	6.61	.38	8.25	2.25		50	8.45	32.51	25.28	271.1	.184
20	10.37	32.406	6.97	.40	8.25	2.25		75	8.12	32.81	25.57	244.7	.248
30	9.36	32.536	6.88	.44	8.23	2.25		100	8.18	33.43	26.04	199.8	.304
50	8.45	32.510	6.63	.53	8.20	2.25		150	7.56	33.88	26.49	158.3	.393
75	8.12	32.807	5.65	.70	8.12	2.26		200	7.21	33.98	26.61	147.2	.470
100	8.18	33.427	4.02	.96	7.98	2.30							
125	7.80	33.706	2.61	1.03	7.94	2.31							
150	7.55	33.877	2.95	1.12	7.90	2.33							
200	7.21	33.977	2.49	1.19	7.84	2.33							

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁵)	ΔD (dyn.m)
C 122 45 07.4 N 124 12.2 W DATE 25 JUN 69 2019 GCT WIRE 00 DRY 56.3 WET 54.3 CRUISE Y6906C													
WIND DIRECTION 29 VEL 12 KTS BAR 13 SWELL DIRECTION 28 H 05 T 07 CLOUD 8 AMT 6 WEATHER 02													
0	15.38	24.419	6.43	.48	8.31	1.94	.1	0	15.38	24.42	17.81	997.0	0
3	15.28	24.523	6.43	.47	8.30	1.94	.1	10	12.05	31.89	24.19	374.5	.048
6	12.60	30.763	6.59	.53	8.25	2.21	.1	20	10.05	32.44	24.99	299.1	.102
10	12.05	31.885	6.73	.60	8.24	2.25	.1	30	8.41	32.51	25.29	270.7	.130
15	10.77	32.293	6.49	.71	8.21	2.26	.7	50	7.83	32.63	25.47	253.8	.183
20	10.05	32.452	6.96		8.24	2.26	.4	75	7.92	33.54	26.17	187.7	.238
30	8.41	32.504	6.58	.99	8.18	2.26	5.0	100	7.77	33.78	26.37	164.2	.282
50	7.83	32.625	6.14	1.28	8.14	2.26	9.5						
75	7.91	33.534	4.00	2.06	7.97	2.31	23.2						
100	7.76	33.772	3.39	2.55	7.91	2.37	26.2						
125	7.50	33.885	2.66	2.61	7.84	2.37	29.7						
C 124 45 04.7 N 124 02.0 W DATE 25 JUN 69 2157 GCT WIRE 00 DRY 55.3 WET 54.0 CRUISE Y6906C													
WIND DIRECTION 30 VEL 10 KTS BAR 14 SWELL DIRECTION 28 H 05 T 07 CLOUD 8 AMT 6 WEATHER 16													
0	13.77	27.978						0	13.77	27.98	20.85	693.7	0
3	13.06	28.105						10	9.76	32.64	25.17	281.1	.049
6	10.89	32.158											
10	9.76	32.632											
15	8.77	32.924											
C 127 44 48.6 N 124 06.4 W DATE 26 JUN 69 0121 GCT WIRE 00 DRY 59.6 WET 54.7 CRUISE Y6906C													
WIND DIRECTION 29 VEL 12 KTS BAR 15 SWELL DIRECTION 29 H 06 T 10 CLOUD 8 AMT 4 WEATHER 01													
0	13.36	29.567	6.68	.81	8.19	2.19	3.6	0	13.36	29.57	22.16	568.9	0
3	11.98	30.980	6.53	1.26	8.15	2.33	8.7	10	10.17	32.64	25.11	287.5	.043
6	11.16	32.085	6.30		8.16	2.30		20	8.65	33.04	25.66	234.6	.069
10	10.17	32.633	6.34	1.28	8.09	2.31	8.4	30	8.25	33.50	26.08	195.0	.090
15	9.37	32.865	5.02	1.56	8.04	2.33	14.2						
20	8.65	33.035	4.44	1.84	8.00	2.33	17.9						
30	8.25	33.491	3.18	2.11	7.91	2.34	22.9						
C 128 44 49.3 N 124 08.2 W DATE 26 JUN 69 0209 GCT WIRE DRY 57.9 WET 53.4 CRUISE Y6906C													
WIND DIRECTION 32 VEL 10 KTS BAR 15 SWELL DIRECTION 29 H 06 T 10 CLOUD 8 AMT 3 WEATHER 01													
0	14.07	28.522	6.72	.71	8.26	2.14	.6	0	14.07	28.53	21.21	659.2	0
3	12.89	30.253	6.44	.79	8.20	2.21	1.6	10	10.82	32.18	24.64	332.1	.050
6	11.59	31.549	6.23	.96	8.18	2.28	3.6	20	8.96	32.81	25.44	254.3	.079
10	10.82	32.173	6.14	1.10	8.16	2.30	5.6	30	8.38	33.18	25.82	220.2	.103
15	9.76	32.589	6.24	1.60	8.08	2.31	12.1	50	8.06	33.71	26.28	176.7	.142
20	8.96	32.804	4.82	1.72	8.03	2.31	15.2						
30	8.38	33.178	4.02	2.07	7.96	2.33	20.3						
50	8.06	33.705	2.56	2.52	7.83	2.37	28.2						
A 129 44 49.8 N 124 10.6 W DATE 26 JUN 69 0335 GCT WIRE 00 DRY 57.5 WET 54.1 CRUISE Y6906C													
WIND DIRECTION 32 VEL 08 KTS BAR 15 SWELL DIRECTION 28 H 05 T 06 CLOUD 8 AMT 7 WEATHER 02													
0	12.92	31.265	6.63	.61	8.24	2.28	.1	0	12.92	31.27	23.55	435.7	0
3	12.05	31.128	6.65	.62	8.25	2.28	.1	10	10.92	32.29	24.71	325.7	.038
6	11.49	32.089	6.53	.71	8.22	2.30	.1	20	8.72	32.49	25.23	274.4	.068
10	10.92	32.282	6.69	.73	8.22		.3	30	8.42	33.02	25.68	233.1	.094
15	9.57	32.423	6.32	1.35	8.10	2.30	8.7	50	7.97	33.61	26.21	183.0	.135
20	8.72	32.486	5.65										
30	8.42	33.011	4.36	1.92	7.99	2.33	18.4						
50	7.97	33.603	3.77	2.27	7.93	2.34	23.8						
A 137 45 04.0 N 125 03.0 W DATE 26 JUN 69 1432 GCT WIRE 05 DRY 55.9 WET 53.3 CRUISE Y6906C													
WIND DIRECTION 26 VEL 12 KTS BAR 14 SWELL DIRECTION 28 H 06 T 08 CLOUD 8 AMT 7 WEATHER 02													
0	15.62	27.563	6.08	.37	8.25	2.09	.2	0	15.63	27.57	20.16	760.3	0
3	15.02	29.290	6.36	.37	8.24	2.19	.2	10	11.91	32.35	24.58	337.7	.055
6	13.11	31.974	6.56	.47	8.23	2.26	.8	20	10.66	32.42	24.85	311.7	.087
10	11.91	32.350	6.93	.51	8.25	2.28	.8	30	9.57	32.51	25.11	287.6	.117
15	10.89	32.401	7.12	.51	8.26	2.28	.2	50	8.71	32.50	25.23	276.2	.174
20	10.66	32.416	7.10	.52	8.25	2.28	.1	75	8.13	32.67	25.45	255.7	.240
30	9.57	32.508	7.05	.59	8.24	2.28	.7	100	8.18	33.28	25.92	211.2	.299
50	8.71	32.492	6.81	.74	8.21	2.28	1.0	150	7.99	33.86	26.41	166.2	.393
75	8.13	32.660	6.10	.97	8.18	2.28	8.3	200	7.31	33.94	26.57	151.0	.472
100	8.18	33.274	4.51	1.53	8.01	2.31	17.7						
125	8.22	33.683	3.51	1.78	7.94	2.34	23.5						
150	7.99	33.856	3.12	1.99	7.90	2.34	26.2						
200	7.31	33.944	2.84	2.14	7.86	2.36	29.6						

OBSERVED

C 140 44 50.4 N 125 00.2 W DATE 26 JUN 69 1725 GCT WIRE 01 DRY 58.0 WET 54.5 CRUISE Y6906C
WIND DIRECTION 28 VEL 10 KTS BAR 15 SWELL DIRECTION 28 H 06 T 08 CLOUD 8 AMT WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	16.09	25.315	6.04	.27	8.27	1.96	.1
3	16.12	25.846	6.04	.27	8.26	1.98	.1
6	15.55	30.248	6.15	.32	8.24	2.17	.1
10	14.68	31.331	6.23	.34	8.25	2.21	.1
15	11.91	32.058		.43	8.27	2.25	.1
20	10.24	32.239	7.18	.46	8.29	2.25	.1
30	9.03	32.465	6.89	.68	8.24	2.25	2.2
50	8.32	32.500	6.23	.83	8.19	2.25	6.4
75	8.41	32.995	5.24	1.26	8.09	2.26	14.6
100	8.73	33.475	5.65	1.61	7.99	2.30	21.0
125	8.56	33.769	3.19	1.83	7.92	2.31	25.8
150	8.17	33.878	2.85	1.94	7.90	2.33	27.6
200	7.47	33.960	2.66	2.05	7.86	2.34	30.0

C 143 44 48.3 N 124 48.3 W DATE 26 JUN 69 1955 GCT WIRE 00 DRY 57.8 WET 54.1 CRUISE Y6906C
WIND DIRECTION 28 VEL 10 KTS BAR 16 SWELL DIRECTION 28 H 06 T 08 CLOUD 8 AMT 7 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	16.07	26.508	6.04	.40	8.25	2.05	.1
3	16.09	27.243	6.07	.53	8.25	2.09	.1
6	15.62	29.895	6.23		8.24	2.19	.1
10	11.63	31.959	7.05	.68	8.26	2.28	.1
15	10.18	32.372	7.29	.81	8.28	2.30	.1
20	9.78	32.470	7.31		8.28	2.30	.1
30	9.22	32.487	7.22	.86	8.27	2.30	.3
50	8.42	32.473	6.58	1.00	8.20	2.28	5.1
75	8.18	32.820	5.67	1.53	8.12	2.31	12.4
100	8.26	33.465	3.85	2.16	7.95	2.34	22.4
125	7.95	33.669	3.49	2.34	7.93	2.36	24.8
150	7.63	33.898	2.87	2.59	7.87	2.37	28.4
200	7.15	33.971	2.38	3.18	7.81	2.37	37.4

C 146 44 45.6 N 124 18.2 W DATE 26 JUN 69 2230 GCT WIRE 00 DRY 56.9 WET 54.5 CRUISE Y6906C
WIND DIRECTION 28 VEL 10 KTS BAR 16 SWELL DIRECTION 28 H 06 T 07 CLOUD 8 AMT 7 WEATHER 02

D (m)	T (°C)	S (‰)
0	14.80	27.158
3	13.12	29.802
6	11.69	31.908
10	10.76	32.351
15	9.52	32.434
20	8.77	32.496
30	8.42	32.526
50	8.25	32.877
75	7.92	33.634

C 147 44 45.0 N 124 11.3 W DATE 27 JUN 69 0005 GCT WIRE 00 DRY 54.9 WET 53.9 CRUISE Y6906C
WIND DIRECTION 28 VEL 10 KTS BAR 16 SWELL DIRECTION 28 H 06 T 08 CLOUD 8 AMT 7 WEATHER 02

D (m)	T (°C)	S (‰)
0	13.61	28.062
3	12.31	30.547
6	11.08	32.074
10	10.49	32.361
15	9.39	32.576
20	8.84	32.763
30	8.35	33.170
50	8.16	33.638

NH 3 44 39.0 N 124 07.7 W DATE 27 JUN 69 1451 GCT WIRE 00 DRY 55.0 WET 53.4 CRUISE Y6906C
WIND DIRECTION VEL 00 KTS BAR 17 SWELL DIRECTION 28 H 05 T 08 CLOUD 8 AMT 7 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	13.87	30.543	6.54	.63	8.25	2.23	.8
3	13.72	30.708	6.44	.63	8.24	2.23	1.0
6	12.95	31.657	6.67	.70	8.22	2.28	2.1
10	12.72	32.135	6.60	.73	8.22	2.31	
15	10.10	32.823	5.38	1.51	8.05	2.33	14.3
20	8.83	33.151	3.93	1.74	7.95	2.33	21.0

NH 5 44 38.9 N 124 10.5 W DATE 27 JUN 69 1600 GCT WIRE 01 DRY 55.9 WET 53.8 CRUISE Y6906C
WIND DIRECTION 18 VEL 05 KTS BAR 17 SWELL DIRECTION 28 H 04 T 08 CLOUD 6 AMT 8 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	13.85	28.202		.41	8.30	2.11	.7
3	13.19	28.942	6.97	.53	8.29	2.17	.5
6	11.27	31.175	7.30	.59	8.29	2.23	.3
10	9.86	32.615	7.54	1.16	8.13	2.31	9.5
15	9.06	32.916	4.92	1.50	8.04	2.33	16.4
20	8.46	33.031	4.46	1.60	8.01	2.33	18.1
30	8.42	33.418	3.44	1.91	7.93	2.36	23.5

INTERPOLATED / DERIVED

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
0	16.09	25.32	18.34	935.2	0
10	14.68	31.34	23.25	464.9	.075
20	10.24	32.26	24.80	316.5	.105
30	9.03	32.47	25.16	292.6	.135
50	8.32	32.50	25.30	270.0	.196
75	8.41	33.00	25.67	234.8	.257
100	8.73	33.48	26.00	204.3	.312
150	8.17	33.88	26.40	167.0	.405
200	7.47	33.96	26.56	152.1	.485

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
0	16.07	26.51	19.26	847.1	0
10	11.63	31.96	24.33	361.7	.060
20	9.78	32.47	25.04	293.5	.093
30	9.22	32.49	25.15	283.8	.122
50	8.42	32.48	25.26	273.4	.179
75	8.18	32.83	25.57	244.5	.242
100	8.26	33.47	26.06	198.1	.305
150	7.64	33.90	26.49	157.8	.387
200	7.15	33.97	26.61	146.8	.463

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
0	14.80	27.16	20.02	773.8	0
10	10.76	32.36	24.79	318.0	.055
20	8.77	32.50	25.23	276.3	.086
30	8.42	32.53	25.30	269.2	.112
50	8.25	32.88	25.60	241.0	.143
75	7.93	33.64	26.24	180.4	.215

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
0	13.61	28.07	20.95	684.5	0
10	10.49	32.37	24.84	312.8	.050
20	8.84	32.77	25.42	257.5	.075
30	8.35	33.17	25.82	220.3	.102
50	8.16	33.64	26.21	183.1	.143

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
0	13.88	30.55	22.81	504.7	0
10	12.72	32.14	24.26	368.2	.044
20	8.83	33.16	25.73	228.6	.074

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
0	13.85	28.21	21.01	678.6	0
10	9.86	32.62	25.14	283.9	.048
20	8.46	33.04	25.49	232.1	.074
30	8.42	33.42	26.00	202.9	.094

NH 10 44 39.2 N 124 17.8 W DATE 27 JUN 69 1730 GCT WIRE 02 DRY 57.2 WET 54.8 CRUISE Y690A
WIND DIRECTION 22 VEL 08 KTS BAR 18 SWELL DIRECTION 29 H 05 T 08 CLOUD 6 AMT 8 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED δ (x10⁸)	ΔD (dyn.m)
0	13.28	29.234						0	13.28	29.24	21.92	592.0	0
3	11.73							10	10.46	32.26	24.7[illegible]	320.4	.046
6	11.23	32.217						20	8.56	32.51	25.2[illegible]	272.4	.175
10	10.46	32.252						30	8.32	32.75	25.4[illegible]	251.4	.101
15	9.14	.457						50	8.23	33.41	26.02	201.6	.147
20	8.56	32.506											
30	8.32	32.746											
50	8.23	33.403											

NH 15 44 39.2 N 124 24.9 W DATE 27 JUN 69 1916 GCT WIRE 00 DRY 56.6 WET 54.9 CRUISE Y690A
WIND DIRECTION 20 VEL 12 KTS BAR 18 SWELL DIRECTION 29 H 05 T 08 CLOUD 8 AMT 7 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	15.31	26.170			8.30	2.01		0	15.31	26.17	19.14	856.6	0
3	15.00	27.359	6.46	.18	8.29	2.05	.1	10	11.63	32.01	24.3[illegible]	358.2	.061
6	13.58	31.022	6.61	.21	8.26	2.21	.1	20	9.58	32.42	25.0[illegible]	294.2	.093
10	11.63	32.006	6.88	.30	8.26	2.25	.1	30	8.63	32.51	25.2[illegible]	273.9	.122
15	10.73	32.346	6.80	.40	8.25	2.26	.3	50	8.26	32.69	25.45	255.1	.175
20	9.58	32.419	6.32	.67	8.20	2.26	4.4						
25	8.85	32.485	6.45	.75	8.20	2.26	5.8						
30	8.62	32.502	6.63	.72	8.20	2.28	5.7						
35	8.52	32.503	6.56	.80	8.20	2.28	6.8						
40		32.518											
45	8.39	32.550	6.31	.87	8.18	2.26	7.1						
50	8.26	32.688	5.77	1.05	8.14	2.28	10.8						
55		32.857	5.08	1.29	8.09	2.28	14.6						
60		32.993	4.66	1.43	8.03	2.28	17.4						
65		33.244	4.15	1.67	7.99	2.31	21.1						
70	8.16	33.443	4.07	1.69	7.99	2.31	22.5						

NH 25 44 39.0 N 124 38.8 W DATE 28 JUN 69 0027 GCT WIRE DRY 57.3 WET 54.6 CRUISE Y690A
WIND DIRECTION 32 VEL 12 KTS BAR 20 SWELL DIRECTION 26 H 04 T 10 CLOUD 8 AMT 6 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	16.17	27.305	6.06	.32	8.26	2.09	.1	0	16.17	27.31	19.45	790.4	0
3		29.151	6.31	.44		2.17	.1	10	12.13	32.07	24.32	362.5	.058
6	13.49	31.567	6.64	.45	8.26	2.39	.1	20	9.60	32.47	25.37	290.5	.090
10	12.12	32.065	6.88	.46	8.27	2.30	.1	30	8.82	32.48	25.21	278.4	.119
15		32.386	7.28	.56	8.24	2.30	.1	50	8.36	32.49	25.29	271.[illegible]	.174
20	9.60	32.470	7.35	.55	8.28	2.30	.1	75	8.19	32.96	25.67	234.[illegible]	.237
30	8.82	32.480	6.88	.71	8.24	2.30	2.5	100	8.06	33.51	26.12	192.[illegible]	.290
40	8.37	32.468	6.64	.83	8.21	2.30	4.7	150	7.64	33.93	26.52	155.4	.377
45	8.35	32.475	6.58	.86	8.20	2.31	4.8	200	7.15	33.99	26.63	145.4	.453
50	8.36	32.483	6.54	.90	8.21	2.30	5.1						
60	8.24	32.589	6.2[illegible]		8.18	2.31	7.4						
65		32.673	5.96			2.31	9.3						
70		32.806	5.64	.99	8.07	2.31	12.0						
75	8.19	32.952	5.25	1.11	8.09	2.33	15.1						
80	8.20	33.037	4.85	1.27	8.06	2.33	17.1						
87	8.21	33.254	4.51	1.37	8.02	2.34	21.1						
100	8.06	33.508	3.69	1.60	7.95	2.34	25.9						
125	7.75	33.866	2.26	2.12	7.80	2.39							
150	7.64	33.929			7.83	2.39							
200		33.988											

NH 35 44 39.2 N 124 52.8 W DATE 28 JUN 69 0312 GCT WIRE DRY 59.0 WET 55.5 CRUISE Y690A
WIND DIRECTION 30 VEL 14 KTS BAR 20 SWELL DIRECTION 28 H 06 T 08 CLOUD 8 AMT 5 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	15.93	27.503	6.06	.45	8.25	2.09	.1	0	15.93	27.51	20.05	771.[illegible]	0
3		28.238	6.16	.39		2.11	.1	10	12.38	32.05	24.26	368.[illegible]	.057
6	13.58	31.435	6.57	.53	8.24	2.28	.1	20	9.76	32.46	25.04	294.3	.090
10	12.37	32.042	6.80	.54	8.25	2.30	.1	30	8.88	32.49	25.20	279.[illegible]	.119
15		32.370	7.21	.60		2.30	.1	50	8.30	32.54	25.32	267.3	.173
20	9.76	32.457	7.42	.66	8.26	2.31	.1	75	8.40	33.09	25.75	227.[illegible]	.235
30	8.87	32.481	6.88	.99	8.23	2.31	2.2	100	8.20	33.42	26.03	201.[illegible]	.289
35	8.69	32.472	6.76	.90	8.21	2.30	2.8	150	7.94	33.92	26.46	160.3	.379
40	8.52	32.469	6.65	.95	8.21	2.30	3.6	200	7.37	33.97	26.59	149.4	.457
45		32.489	6.43	1.08		2.30	5.8						
50	8.30	32.533	6.40	1.15	8.18	2.30	6.0						
55	8.29	32.610	6.16	1.35	8.16	2.31	8.4						
60	8.27	32.645	6.02	1.33	8.16	2.31	9.1						
65	8.36	32.794	5.65	1.58	8.13	2.31	11.4						
70	8.40	32.957	5.24	1.94	8.09	2.33	13.9						
75	8.40	33.040	4.88	1.88	8.05	2.33	15.3						
100		33.412	4.18	2.26	8.00	2.34	20.6						
125	7.96	33.755	2.90	2.64	7.87	2.37	23.3						
150	7.93	33.913	2.79	2.75	7.88	2.37	24.8						
200	7.37	33.974	2.62	3.07	7.84	2.39	29.4						

NH 45 44 39.0 N 125 07.0 W DATE 28 JUN 69 0803 GCT WIRE 05 DRY 57.5 WET 54.8 CRUISE Y6906C
WIND DIRECTION 27 VEL 16 KTS BAR 22 SWELL DIRECTION 29 H 04 T 08 CLOUD 8 AMT 7 WEATHER 02

OBSERVED								INTERPOLATED				DERIVED	
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
0	16.21	25.449	5.95	.33	8.25	1.94	.1	0	16.21	25.45	18.42	927.8	0
10	15.18	30.874	6.10	.27	8.24	2.17	.1	10	15.18	30.88	22.79	508.6	.072
20	11.89	32.158	6.96	.37	8.26	2.23	.1	20	11.89	32.16	24.43	351.7	.115
30	9.04	32.472	7.17	.66	8.25	2.25	1.2	30	9.04	32.48	25.16	282.3	.147
40	8.76	32.469	6.88	.68	8.22	2.23	2.8	50	8.32	32.47	25.27	272.9	.202
45		32.458	6.72	.74	8.21	2.23	3.6	75	8.15	32.83	25.57	243.8	.267
50	8.32	32.461	6.63		8.20	2.25	4.8	100	8.31	33.30	25.92	211.3	.323
60	8.21	32.522	6.41		8.19	2.25	7.1	150	7.94	33.81	26.37	169.3	.419
65	8.20	32.600	6.15		8.16	2.25	8.5	200	7.11	33.96	26.61	147.2	.498
75	8.15	32.824	5.64	1.09	8.11	2.25	12.4	250	6.54	34.02	26.74	135.7	.568
85		33.018	5.04		8.08	2.25	15.2	300	6.11	34.04	26.81	129.3	.635
100	8.31	33.297	4.43	1.40	8.02	2.28	19.6	400	5.39	34.10	26.94	117.5	.758
124	8.17	33.628	3.54	1.74	7.95	2.30	24.5	500	5.06	34.16	27.03	109.8	.872
149	7.96	33.802	3.00	1.92	7.90	2.34	28.5	600	4.52	34.26	27.17	97.1	.975
199	7.12	33.957	2.18	2.24	7.81	2.33	32.4						
299	6.12	34.043	1.57	2.53	7.75	2.33	36.5						
398	5.40	34.100	1.03	2.76	7.68	2.36	38.9						
498	5.07	34.156	.75	2.90	7.62	2.36	41.1						
597	4.54	34.260	.39	3.14	7.65	2.39	42.4						

NH 45 44 39.0 N 125 07.0 W DATE 28 JUN 69 1412 GCT WIRE 00 DRY 57.5 WET 54.8 CRUISE Y6906C
WIND DIRECTION 27 VEL 16 KTS BAR 22 SWELL DIRECTION 29 H 04 T 08 CLOUD 8 AMT 7 WEATHER 02

0	16.18	26.034						0	16.18	26.04	18.87	884.2	0
3	16.18	27.034	5.98	.36	8.24	1.96	.1	10	15.21	30.82	22.74	513.1	.070
6	16.04	28.739	5.98	.35	8.23	2.09	.1						
10	15.21	30.820	6.07	.35	8.22	2.17	.1						
15	14.01	31.586	6.29	.37	8.24	2.21	.1						

NH 65 44 39.2 N 125 35.2 W DATE 29 JUN 69 0638 GCT WIRE 05 DRY 59.0 WET 55.0 CRUISE Y6906C
WIND DIRECTION 28 VEL 18 KTS BAR 23 SWELL DIRECTION 29 H 04 T 07 CLOUD 8 AMT 8 WEATHER 02

0	15.96	28.153	5.98	.41	8.24	2.09	.1	0	15.96	28.16	20.54	724.0	0
10	14.43	31.533	6.39	.42	8.25	2.25	.1	10	14.43	31.54	23.45	445.1	.058
20	11.33	32.414	6.98	.48	8.24	2.28	.1	20	11.33	32.42	24.74	323.1	.097
30	10.44	32.485	7.12	.55	8.26	2.28	.1	30	10.44	32.49	24.95	303.1	.128
40	9.90	32.515	7.14	.56	8.25	2.30	.1	50	9.41	32.57	25.18	281.1	.187
50	9.41	32.567	6.72	.71	8.21	2.28	3.5	75	8.56	32.71	25.42	258.9	.256
55		32.555	6.47		8.19	2.26	4.8	100	8.63	33.21	25.80	222.5	.314
60	8.94	32.575	6.46	.90	8.20	2.28	4.2	150	8.00	33.58	26.18	187.1	.417
65		32.574	6.33	.92	8.18	2.28	6.2	200	7.68	33.94	26.51	154.7	.503
75	8.56	32.700						250	7.01	33.95	26.62	147.3	.579
87		32.753	5.84	1.08	8.13	2.30	10.8	300	6.30	33.97	26.72	137.5	.650
100	8.32	33.207	4.72	1.44	8.03	2.33	17.2	400	5.54	34.06	26.89	122.6	.780
150	8.00	33.574	3.36	1.93	7.92	2.34	26.1	500	5.02	34.13	27.01	111.3	.897
199	7.69	33.934	2.79	2.09	7.86	2.36	29.2	600	4.64	34.20	27.11	103.4	1.004
299	6.31	33.965	2.30	2.40	7.80	2.37	34.1	700	4.31	34.27	27.20	94.9	1.103
399	5.55	34.057	1.36	2.89	7.69	2.39	38.5	800	4.02	34.33	27.28	87.4	1.194
598	4.65	34.196	.52	3.17	7.64	2.41	42.2	1000	3.46	34.42	27.41	76.0	1.357
798	4.03	34.332	.36		7.64	2.44	43.3	1200	3.08	34.48	27.49	68.5	1.502
997	3.47	34.422	.52	3.24	7.66	2.47	43.5						
1197	3.09	34.479	.64	3.24	7.69	2.48	43.3						

NH 65 44 39.3 N 125 43.0 W DATE 30 JUN 69 1323 GCT WIRE 00 DRY 54.8 WET 53.6 CRUISE Y6906C
WIND DIRECTION 32 VEL 10 KTS BAR 24 SWELL DIRECTION 29 H 04 T 06 CLOUD 8 AMT 7 WEATHER 02

0	15.55	28.970						0	15.55	28.98	21.25	655.6	0
3	15.55	28.970	6.00	.23	8.23	2.15	.1	10	13.64	32.25	24.17	377.2	.052
6	14.46	31.860	6.22		8.24	2.26	.1	20	12.00	32.52	24.69	327.1	.087
10	13.64	32.247	6.23		8.25	2.28		30	10.92	32.56	24.91	306.2	.119
15	12.39	32.500	6.72		8.26	2.30	.1	50	9.39	32.57	25.18	281.0	.177
25	11.75	32.543	6.68	.40	8.26	2.30	.1	75	8.88	32.78	25.43	258.0	.245
30	10.42	32.551	6.94	.41	8.26		.1	100	8.84	33.25	25.80	223.0	.305
35		32.561	7.05		8.25	2.28	.1	150	8.33	33.76	26.28	178.4	.405
40	10.13	32.555	7.08	.70	8.26	2.30	.2	200	7.54	33.94	26.53	154.6	.488
45		32.562	7.01	.78	8.25	2.28	1.2						
50	9.39	32.564	6.80		8.23	2.28	2.7						
55		32.534	4.07	.82	8.22	2.26	4.0						
60	8.78	32.510	6.61		8.21	2.28	4.6						
65		32.568	6.28	.83	8.14	2.28	6.1						
70	8.69	32.621	6.00	.93	8.17	2.28	7.2						
75	8.87	32.774	5.76	1.07	8.15	2.30	9.7						
80	8.95	32.891	5.47	1.20	8.12	2.30	11.8						
100		33.248	4.47	1.76	8.03	2.31	17.8						
125	8.75	33.617	3.51	1.91	7.95	2.33	23.6						
150	8.33	33.756	3.14	2.03	7.92	2.34	25.7						
200	7.54	33.939	2.75	2.28	7.86	2.34	29.8						

NH 65 44 34.3 N 125 38.4 W DATE 29 JUN 69 2008 GCT WIRE 06 DRY 59.1 WET 56.2 CRUISE Y69[illegible]
WIND DIRECTION 32 VEL 04 KTS BAR 24 SWELL DIRECTION 29 H 03 T 06 CLOUD 8 AMT 5 WEATHER 02

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁻⁵)	ΔD (dyn.m)
0	15.52	30.828						0	15.52	30.83	22.[illegible]	51[illegible]	0
3	15.52	30.828	5.97	.25	8.24	2.21	.1	10	14.53	31.84	23.46	42[illegible]	.047
6	14.80	31.554	6.12	.31	8.25	2.23	.1	20	11.61	32.37	24.64	331.[illegible]	.085
10	14.53	31.833	6.1[illegible]	.33	8.25	2.[illegible]	.1	30	10.45	32.47	24.93	304.[illegible]	.117
15	12.55	32.307	6.62		8.25	2.26	.1	50	8.90	32.51	25.23	274.[illegible]	.175
25	11.11	32.425	6.97	.36	8.28	2.26	.1	75	8.15	32.64	25.44	256.[illegible]	.241
30	10.45	32.470	7.13	.46	8.27	2.26	.1	100	8.34	33.23	25.89	213.[illegible]	.300
35		32.484	7.14		8.28	2.28	.1	150	7.94	33.79	26.36	170.[illegible]	.396
40	9.30	32.474	7.06	.54	8.28	2.26	.6	200	7.30	33.90	26.54	153.[illegible]	.477
45		32.473	6.92		8.25	2.27	2.0						
50	8.80	32.507	6.58	.68	8.22	2.26	4.0						
55		32.543	6.42	.77	8.21	2.27	4.8						
60	8.78	32.586	6.28	.83	8.19	2.28	5.9						
65	8.43	32.621	6.14	.92	8.17	2.28	7.8						
70	8.18	32.634	6.12	1.11	8.18	2.28	8.6						
75	8.15	32.655	6.05	1.12	8.17	2.28	8.9						
80	8.41	32.816	5.68	1.13	8.14	2.28	11.1						
100		33.276	4.54	1.47	8.04	2.30	18.0						
125	8.35	33.683	3.58	1.82	7.95	2.33	23.8						
150	7.93	33.790	3.24	1.98	7.92	2.34	26.7						
200	7.30	33.905	3.12	2.10	7.91	2.34	29.1						

NH 65 44 32.6 N 125 40.8 W DATE 29 JUN 69 0213 GCT WIRE 00 DRY 57.8 WET 53.9 CRUISE Y69[illegible]
WIND DIRECTION 32 VEL 06 KTS BAR 23 SWELL DIRECTION 29 H 03 T 07 CLOUD 8 AMT 1 WEATHER 02

0	16.19	28.169	5.94					0	16.19	28.17	20.50	727.4	0
3	16.19	28.169	5.96	.42	8.21	2.17	.1	10	13.77	32.22	24.11	382.4	.055
6	14.94	31.098	6.13	.46	8.25	2.26	.1	20	11.45	32.43	24.73	323.[illegible]	.091
10	13.77	32.211	6.24	.47	8.25	2.31	.1	30	10.20	32.49	24.99	299.[illegible]	.122
15		32.432			8.25	2.31		50	8.82	32.54	25.25	274.4	.174
25	10.67	32.437	6.99	.55	8.26	2.31	.1	75	7.98	32.74	25.53	248.3	.245
30	10.20	32.489	7.09	.58	8.28	2.31	.1	100	8.39	33.31	25.92	211.8	.302
35		32.511	7.14	.70	8.25	2.31	.2	150	8.32	33.51	26.32	174.4	.39[illegible]
40	9.12	32.502	6.91	.70	8.24	2.31	1.8	200	7.53	33.92	26.52	155.3	.481
45		32.485	6.81	.68	8.22	2.31	2.9						
50	8.82	32.535	6.55	.88	8.21	2.33	4.4						
55		32.547	6.47	.68	8.20	2.31	4.9						
60	8.40	32.525	6.45	.90	8.19	2.37	5.7						
65	8.33	32.580	6.30	.91	8.17	2.31	6.8						
70	8.26	32.652	6.06	1.26	8.17	2.31	8.9						
75	7.98	32.732	5.88	1.23	8.14	2.33	10.6						
80	8.36	32.916	5.40	1.28	8.10	2.33	13.1						
100		33.306	4.40	1.52	8.02	2.34	18.2						
125	8.43	33.663	2.59	1.82	7.94	2.36	23.9						
150	8.32	33.802	3.16	1.96	7.90	2.37	26.2						
200	7.53	33.921	2.92	2.10	7.86	2.39	29.4						

NH 85 44 39.0 N 126 03.5 W DATE 30 JUN 69 1251 GCT WIRE 02 DRY 54.9 WET 53.8 CRUISE Y69[illegible]
WIND DIRECTION 34 VEL 12 KTS BAR 22 SWELL DIRECTION 29 H 03 T 08 CLOUD 8 AMT 8 WEATHER 02

0	15.29	31.629	5.87	.14	8.23	2.25	.1	0	15.29	31.63	23.35	455.3	0
3		31.626	5.88		8.22	2.23	.1	10	14.11	32.36	23.92	40[illegible]	.063
6	15.16	31.656	5.88	.14	8.22	2.26	.1	20	11.23	32.46	24.78	31[illegible]	.079
10	14.11	32.051	6.23	.14	8.21	2.26	.1	30	10.07	32.53	25.04	294.4	.109
15	12.34	32.376	6.65	.15	8.23	2.28	.1	50	9.07	32.55	25.22	27[illegible]	.147
20	11.23	32.454	5.87	.19	8.25	2.28	.1	75	8.49	32.58	25.38	26[illegible]	.234
30	10.07	32.523	7.13	.26	8.26	2.28	.1	100	8.81	33.32	25.86	21[illegible]	.294
40		32.588	6.84		8.23	2.28	1.7	150	8.21	33.75	26.29	17[illegible]	.393
50	9.07	32.543	6.72	.31	8.21	2.28	3.1	200	7.46	33.48	26.50	15[illegible]	.477
75	8.69	32.674	6.02		8.16	2.28	7.5	250	6.97	33.77	26.64	14[illegible]	.552
100	8.81	33.315	4.44		8.01	2.33	18.2	300	6.59	34.02	26.73	13[illegible]	.623
125	8.32	33.588	3.83		7.96	2.33	22.6	400	5.77	34.07	26.88	12[illegible]	.754
150	8.21	33.745	3.65		7.94	2.33	25.1	500	5.22	34.14	27.00	11[illegible]	.872
199	7.47	33.882	3.36		7.91	2.34	31.6	600	4.81	34.22	27.10	104.0	.981
299	6.60	34.017	1.98		7.78	2.36	35.1	700	4.41	34.27	27.19	9[illegible]	1.08[illegible]
399	5.78	34.072	1.28		7.71	2.37	39.4	800	4.09	34.32	27.27	8[illegible]	1.172
598	4.82	34.216	.44		7.65	2.40	43.7	1000	3.65	34.41	27.38	7[illegible]	1.36[illegible]
798	4.09	34.323	.29		7.65	2.43	45.4	1200	3.14	34.45	27.46	7[illegible]	1.491
997	3.66	34.409	.40		7.65	2.44	45.6						
1197	3.15	34.451	.50		7.70	2.47	45.3						

NH 105 44 39.3 N 126 30.3 W DATE 30 JUN 69 1626 GCT WIRE 01 DRY 55.0 WET 55.0 CRUISE Y6906C
WIND DIRECTION 00 VEL 12 KTS BAR 21 SWELL DIRECTION 12 H 03 T 07 CLOUD 6 AMT 0 WEATHER 02

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dynm)
0	14.81	32.162	5.97	.36	8.20	2.25	.2	0	14.81	32.37	24.01	391.7	0
5		32.355	6.88	.35	8.21	2.21	.1	10	14.82	32.37	24.01	392.1	.139
10	14.82	32.363	5.89		8.21	2.23		20	14.47	32.39	24.10	383.5	.278
20	14.47	32.387	6.04	[illegible]	8.20	2.23	.1	30	13.42	32.50	24.40	355.1	.415
30	13.42	32.497	6.32	.36	8.22	2.23	.1	50	9.66	32.53	25.11	348.0	.679
40		32.518	5.97	.69	8.24	2.21	.1	75	8.63	32.67	25.36	262.8	.944
50	9.66	32.526	6.87	.64	8.23	2.23	.6	100	8.26	33.27	25.91	212.8	1.107
55	9.28	32.534	6.68	.63	8.21	2.25	1.8	150	7.37	33.80	26.38	168.6	1.403
60	9.08	32.539	6.52	.67	8.19	2.23	3.1	200	7.49	33.94	26.54	154.0	1.483
65	8.98	32.554	6.38	.70			3.9	250	6.97	33.99	26.65	144.0	1.558
75	8.62	32.660	6.04	.86	8.15	2.23	6.8	300	6.45	34.00	26.73	136.9	1.629
100	8.26	33.268	4.64	1.47	8.01	2.26	17.1	400	5.78	34.07	26.87	124.9	1.759
149	7.88	33.798	3.43	1.90	7.95	2.30	25.7	500	5.14	34.12	26.99	113.7	1.878
199	7.50	33.936	2.86	2.41	7.86	2.31	29.5	600	4.62	34.17	27.09	104.9	1.987
299	6.46	34.000	2.10	2.52	7.77	2.33	34.9	700	4.34	34.26	27.19	96.2	2.088
398	5.79	34.064	1.31	2.78	7.70	2.34	39.3	800	4.15	34.33	27.27	88.8	2.180
597	4.63	34.171	.54	3.10	7.64	2.37	44.5	1000	3.86	34.42	27.39	78.6	2.344
796	4.16	34.332	.27		7.65	2.40		1200	3.17	34.47	27.48	70.0	2.496
995	3.67	34.417	.34	3.16	7.68	2.41	45.8						
1194	3.18	34.471	.44	3.29	7.66	2.43	46.1						

NH 125 44 39.0 N 126 59.0 W DATE 30 JUN 69 2006 GCT WIRE 03 DRY 56.9 WET 56.2 CRUISE Y6906C
WIND DIRECTION 34 VEL 10 KTS BAR 21 SWELL DIRECTION 29 H 02 T 12 CLOUD 6 AMT 7 WEATHER 02

0	14.64	32.506	5.94	.41	8.22	2.31	.3	0	14.64	32.51	24.16	377.9	0
5		32.506	5.98		8.23	2.30	.1	10	14.47	32.51	24.19	374.9	.138
10	14.47	32.507	5.99	.41	8.23	2.30	.2	20	13.38	32.48	24.40	355.3	.274
20	13.37	32.473	6.22	.41	8.24	2.30	.8	30	10.93	32.46	24.84	313.6	.405
30	10.93	32.453	6.80	.40	8.26	2.30	.8	50	8.89	32.46	25.17	291.6	.667
40		32.436	7.03		8.26	2.30	.1	75	7.91	32.53	25.38	262.3	.935
50	8.89	32.455	6.84	.44	8.27	2.30	1.2	100	7.65	33.01	25.79	223.4	.996
55	8.79	32.455	6.74	.48	8.25	2.30	1.7	150	7.99	33.82	26.37	169.1	1.194
60	8.55	32.464	6.62	.58	8.23	2.30	3.1	200	7.12	33.94	26.60	148.5	1.273
65	8.40	32.474	6.48	.61	8.22	2.30	3.9	250	6.55	33.99	26.71	138.0	1.345
75	7.90	32.529	6.35	.82	8.19	2.30	6.3	300	6.17	34.01	26.78	132.4	1.412
100	7.65	33.010	5.36	1.49	8.11	2.31	14.3	400	5.61	34.09	26.91	120.9	1.539
149	8.00	33.812	3.19	1.94	7.92	2.36	26.5	500	5.14	34.17	27.03	110.1	1.664
199	7.13	33.942	2.96	2.21	7.87	2.37	30.0	600	4.73	34.24	27.13	101.5	1.780
299	6.18	34.012	1.93	2.59	7.78	2.39	35.8	700	4.35	34.30	27.22	93.1	1.887
399	5.62	34.091	1.16	2.89	7.70	2.40	39.2	800	4.01	34.35	27.30	85.9	1.987
598	4.74	34.236	.44	3.26	7.65	2.44	41.1	1000	3.42	34.43	27.42	75.1	2.188
797	4.02	34.350	.42	3.34	7.65	2.46	44.0	1200	3.02	34.47	27.49	68.3	2.351
996	3.43	34.427	.42	3.35	7.67	2.48	44.3						
1196	3.03												

NH 145 44 39.0 N 127 27.3 W DATE 30 JUN 69 2339 GCT WIRE 05 DRY 60.0 WET 56.9 CRUISE Y6906C
WIND DIRECTION 34 VEL 06 KTS BAR 21 SWELL DIRECTION 10 H 01 T 06 CLOUD 4 AMT 1 WEATHER 01

0	14.71	32.420	6.00	.42	8.21	2.25	.1	0	14.71	32.42	24.08	385.5	0
5		32.419	6.08	.48	8.21	2.25	.1	10	14.08	32.42	24.21	373.4	.139
10	14.08	32.416	6.06	.51	8.22	2.25	.1	20	11.95	32.42	24.62	334.0	.273
20	11.95	32.413	6.60	.51	8.24	2.25	.1	30	10.89	32.43	24.82	315.2	.406
30	10.89	32.423	6.80	.51	8.25	2.25	.1	50	9.04	32.48	25.17	282.0	.645
40		32.451	6.97	.51	8.25	2.25	.1	75	8.42	32.50	25.27	273.2	.935
50	9.04	32.480	6.88	.52	8.27	2.25	.1	100	7.67	32.57	25.45	256.3	1.201
55	8.93	32.492	6.80	.53	8.25	2.25	1.1	150	7.60	33.48	26.17	198.6	1.412
59	8.87	32.496	6.72	.55	8.24	2.26	1.4	200	7.25	33.87	26.52	155.9	1.594
64	8.82	32.506	6.62	.59	8.24	2.26	1.7	250	6.47	33.89	26.64	144.9	1.573
74	8.52	32.494	6.50	.90	8.21	2.25	3.8	300	5.63	33.91	26.76	133.4	1.643
99	7.68	32.559	6.35	.99	8.16	2.26	6.4	400	4.73	33.96	26.91	120.5	1.770
149	7.60	33.472	4.37	1.69	8.00	2.31	21.2	500	4.44	34.07	27.03	109.3	1.885
198	7.28	33.862	3.76	1.86	7.97	2.33	26.2	600	4.48	34.20	27.13	101.0	1.990
297	5.67	33.907	3.02	2.49	7.85	2.34	32.6	700	4.26	34.28	27.22	93.1	2.087
397	4.74	33.952	1.98	2.70	7.75	2.36	37.2	800	4.01	34.34	27.29	86.4	2.177
595	4.49	34.200	.42	3.26	7.64	2.40	42.0	1000	3.52	34.41	27.39	77.4	2.341
793	4.03	34.339	.25	3.31	7.64	2.43	43.0	1200	3.06	34.46	27.48	69.7	2.488
992	3.54	34.411	.39	3.30	7.66	2.44	43.2						
1190	3.08	34.457	.40	3.32	7.68	2.46	43.3						

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
NH 165 44 39.3 N 127 54.8 W DATE 01 JUL 69 0255 GCT WIRE 00 DRY 56.5 WET 55.3 CRUISE Y6906C													
WIND DIRECTION 00 VEL 04 KTS BAR 20 SWELL DIRECTION 29 H 01 T 06 CLOUD 4 AMT 2 WEATHER 02													
0	14.79	32.424	6.02	.33	8.21	2.25	.1	0	14.79	32.43	24.06	384.8	0
5		32.419	6.08		8.21	2.25	.1	10	13.98	32.42	24.23	371.6	.038
10	13.98	32.417	6.04	.47	8.22	2.25	.1	20	12.17	32.43	24.59	336.8	.073
20	12.17	32.429	6.52	.46	8.24	2.25	.1	30	10.89	32.46	24.84	313.2	.106
30	10.89	32.450	6.80	.46	8.24	2.25	.1	50	9.27	32.47	25.13	286.2	.166
40		32.456	6.92		8.24	2.25	.1	75	8.25	32.53	25.32	267.8	.235
50	9.27	32.470	6.90	.48	8.24	2.25	.1	100	7.80	32.67	25.50	251.2	.300
55	8.85	32.475	6.64	.60	8.23	2.25	1.7	150	7.65	32.56	25.63	239.1	.427
60	8.72	32.486	6.62	.59	8.22	2.25	2.3	200	7.07	33.85	26.53	154.9	.530
65	8.56	32.491	6.48	.64	8.21	2.25	3.3	250	6.35	33.87	26.64	144.4	.605
75	8.25	32.521	6.38	.79	8.19	2.25	4.6	300	5.68	33.90	26.75	134.4	.675
99	7.81	32.675	6.02	.98	8.16	2.26	8.5	400	5.08	34.10	26.98	113.8	.799
149	7.66	32.533	4.74	1.73	8.04	2.30	19.1	500	4.61	34.17	27.09	103.5	.907
199	7.09	33.840	4.23	1.76	7.99	2.33	23.9	600	4.26	34.20	27.15	96.1	1.009
298	5.70	33.999	2.92	2.39	7.85	2.48	32.7	700	4.08	34.27	27.23	92.0	1.104
397	5.10	34.099	1.41	2.85	7.70	2.36	39.2	800	3.94	34.34	27.30	85.7	1.193
596	4.27	34.193	.66	3.13	7.63	2.39	43.5	1000	3.45	34.43	27.41	75.6	1.354
795	3.95	34.341	.25	3.27	7.64	2.42	44.5	1200	3.03	34.47	27.48	68.9	1.499
993	3.47	34.425	.34	3.31	7.65	2.44	44.8						
1192	3.05	34.465	.47	3.18	7.72	2.46	44.2						
C 200 44 08.3 N 126 59.3 W DATE 01 JUL 69 1500 GCT WIRE DRY 58.0 WET 54.8 CRUISE Y6906C													
WIND DIRECTION 35 VEL 06 KTS BAR 19 SWELL DIRECTION 29 H 02 T 06 CLOUD 6 AMT 7 WEATHER 02													
0	15.05	32.141	5.93	.64	8.24	2.30	.2	0	15.05	32.15	23.79	412.8	0
3	14.89	32.269	5.90	.57	8.23	2.31	.1	10	14.60	32.49	24.15	378.4	.040
6	14.65	32.476	5.98	.58	8.23	2.31	.1	20	14.50	32.49	24.17	377.0	.077
10	14.60	32.489	5.99	.58	8.23	2.30	.1	30	12.06	32.52	24.68	328.5	.113
15	14.56	32.485	6.00	.57	8.23	2.31	.1	50	9.50	32.54	25.14	284.9	.174
20	14.50	32.484	6.00	.57	8.23	2.31	.1	75	8.77	32.73	25.40	260.4	.242
30	12.06	32.516	6.41	.56	8.25	2.31	.1	100	8.84	33.30	25.84	219.4	.302
50	9.50	32.535	6.73	.84	8.23	2.30	1.9	150	8.16	33.80	26.33	172.9	.400
75	8.77	32.722	5.98	1.02	8.16	2.31	8.0	200	7.61	33.97	26.55	153.1	.482
100	8.84	33.291	4.42	1.72	8.02	2.34	17.8						
125	8.25	33.631	3.79	2.28	7.96	2.36	23.4						
150	8.16	33.796	3.34	2.27	7.93	2.39	25.8						
200	7.61	33.972	2.61	2.46	7.86	2.39	30.2						
C 206 44 08.4 N 126 18.0 W DATE 01 JUL 69 1856 GCT WIRE 00 DRY 58.3 WET 53.3 CRUISE Y6906C													
WIND DIRECTION 33 VEL 08 KTS BAR 19 SWELL DIRECTION 29 H 02 T 06 CLOUD 6 AMT 8 WEATHER 02													
0	15.90	30.818	5.84	.44	8.23	2.21	.3	0	15.90	30.82	22.59	527.4	0
3	15.90	30.824	5.85	.43	8.23	2.21	.4	10	15.74	31.03	22.79	509.4	.052
6	15.81	30.965	5.84	.42	8.23	2.23	.4	20	12.59	32.16	24.10	384.2	.096
10	15.74	31.021	5.84	.43	8.23	2.23	.4	30	10.38	32.44	24.92	308.8	.124
15	14.73	31.612	6.11	.41	8.23	2.25	.5	50	9.05	32.55	25.22	277.5	.187
20	12.59	32.159	6.66	.40	8.25	2.26	.5	75	7.92	32.44	25.31	269.2	.256
30	10.38	32.436	7.27	.45	8.26	2.28		100	8.65	33.01	25.64	234.0	.319
35	9.96	32.490	7.38	.66	8.25	2.28		150	8.05	33.79	26.34	172.5	.422
40	9.30	32.521	8.08	.64	8.25	2.28	.5	200	7.46	33.93	26.54	154.1	.503
45	9.21	32.545	6.85	.63	8.23	2.28	2.5						
50	9.05	32.542	6.74	.62	8.22	2.26	3.5						
75	7.91	32.437	6.67	.62	8.21	2.26	4.9						
100	8.65	33.005	5.14	.96	8.10	2.30	13.7						
150		33.780	3.28	1.63	7.93	2.33	25.5						
200	7.46	33.931	2.90	1.89	7.88	2.34	29.1						
C 212 44 08.2 N 125 37.0 W DATE 01 JUL 69 2243 GCT WIRE 00 DRY 61.1 WET 57.1 CRUISE Y6906C													
WIND DIRECTION 32 VEL 10 KTS BAR 18 SWELL DIRECTION 29 H 02 T 07 CLOUD 6 AMT 7 WEATHER 02													
0	16.76	28.106	5.86	.12	8.23	2.07	.1	0	16.76	28.11	20.33	744.3	0
3	16.76	28.115	5.86	.16	8.23	2.07	.1	10	13.91	31.72	23.70	421.5	.058
6	16.43	28.240	5.86	.18	8.22	2.07	.1	20	11.66	32.38	24.65	331.6	.096
10	13.91	31.716	6.37	.29	8.25	2.23	.1	30	10.13	32.46	24.98	300.0	.128
15	12.67	32.190	6.60	.34	8.25	2.25	.1	50	8.54	32.48	25.25	274.8	.185
20	11.66	32.376	6.85	.34	8.26	2.25	.1	75	8.01	32.56	25.38	262.1	.252
30	10.13	32.460	7.19	.43	8.28	2.25	.1	100	8.03	33.08	25.79	223.7	.313
35	9.74	32.477	7.24	.46	8.26	2.26	.1	150	8.04	33.76	26.32	173.9	.412
40	9.18	32.480	7.16	.71	8.25	2.25	.9	200	7.48	33.92	26.52	155.5	.494
45	8.80	32.481	6.95	.71	8.23	2.31	2.7						
50	8.54	32.478	6.82	.71	8.22	2.25	3.7						
75	8.01	32.552	6.30	.90	8.18	2.23	7.8						
100	8.03	33.077	4.97	1.43	8.06	2.30	16.5						
150	8.04	33.759	3.36	2.04	7.93	2.33	25.7						
200	7.48	33.916	2.95	2.27	7.87	2.34	28.6						

C 216 44 08.0 N 125 09.3 W DATE 02 JUL 69 0142 GCT WIRE 05 DRY 60.0 WET 55.9 CRUISE Y6906C
WIND DIRECTION 33 VEL 06 KTS BAR 18 SWELL DIRECTION 34 H 02 T 06 CLOUD 6 AMT 8 WEATHER 02

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	16.12	26.211	6.00	.7	8.29	2.05	.1	0	16.13	26.22	19.02	869.9	0
3	16.13	26.280	5.95	.6	8.29	2.05	.1	10	14.54	31.35	23.28	461.5	.067
6	15.80	29.724	5.97	.6	8.23	2.23	.1	20	10.11	32.42	24.95	332.7	.105
10	14.56	31.345	6.21	.15	8.24	2.26	.1	30	8.98	32.48	25.18	280.9	.134
15	11.64	32.205	6.94	.24	8.26	2.30	.1	50	8.39	32.50	25.28	271.0	.189
20	10.11	32.417	7.26	.30	8.25	2.31	.1	75	8.07	32.81	25.58	243.7	.253
30	8.98	32.479	7.15	.44	8.25	2.31	1.1	100	8.61	33.54	26.06	198.4	.309
35	8.72	32.478	6.83	.75	8.22	2.31	3.4	150	8.07	33.84	26.38	168.5	.400
40	8.56	32.468	6.77	.82	8.21	2.30	3.6	200	7.25	33.94	26.58	150.3	.480
45	8.53	32.503	6.24	.96	8.17	2.31	7.4						
50	8.39	32.499	6.42	.96	8.18	2.31							
75	8.07	32.810	5.61	1.09	8.12	2.28	11.6						
100	8.61	33.530	3.78	1.74	7.96	2.36	22.4						
149	8.08	33.837	3.05	2.09	7.90	2.37	27.1						
199	7.27	33.943	2.90	2.27	7.86	2.40	30.0						

A 219 44 08.1 N 124 49.1 W DATE 02 JUL 69 0408 GCT WIRE 00 DRY 59.4 WET 56.9 CRUISE Y6906C
WIND DIRECTION 26 VEL 02 KTS BAR 18 SWELL DIRECTION 33 H 02 T 05 CLOUD 6 AMT 8 WEATHER 02

0	14.14	31.040	6.48	.28	8.28	2.26	.1	0	14.14	31.04	23.13	475.4	0
3	13.50				8.27	2.28		10	12.32	31.54	23.87	405.1	.044
6	13.00	31.262	6.57	.34	8.27	2.28	.1	20	10.06	32.33	24.88	308.8	.080
10	12.32	31.535	6.61	.39	8.26	2.30	.7	30	8.92	32.92	25.53	247.2	.108
15	11.05	31.983	6.47	.58	8.22	2.31	2.3	50	8.25	33.50	26.08	195.3	.152
20	10.06	32.323	6.10	.82	8.19	2.31	5.3	75	8.04	33.88	26.41	164.2	.197
30	8.92	32.920	4.73	1.45	8.03	2.34	15.1						
35	8.54	33.150	4.06	1.75	7.97	2.34	19.3						
40	8.29	33.336	3.70	1.92	7.95	2.36	22.0						
45	8.34	33.358	3.65	1.93	7.94	2.36	22.3						
50	8.25	33.491	3.33	2.07	7.91	2.36	24.5						
75	8.04	33.874	2.47	2.40	7.84	2.39	29.9						

C 228 44 08.3 N 124 35.1 W DATE 02 JUL 69 1359 GCT WIRE 00 DRY 60.7 WET 56.6 CRUISE Y6906C
WIND DIRECTION 22 VEL 04 KTS BAR 20 SWELL DIRECTION 33 H 01 T 05 CLOUD 6 AMT 8 WEATHER 02

0	14.96	30.776	6.22	.31	8.28	2.21	.1	0	14.96	30.78	22.76	511.1	0
3	14.48	31.746	6.46	.31	8.26	2.25	.1	10	13.55	31.75	23.80	417.0	.046
6	14.38	31.732	6.45	.30	8.26	2.23	.1	20	9.07	32.92	25.51	249.3	.079
10	13.55	31.750	6.60	.39	8.25	2.25	.2	30	8.35	33.30	25.91	211.3	.102
15	11.72	32.301	6.31	.48	8.19	2.26	2.9	50	8.08	33.68	26.25	179.5	.141
20	9.07	32.920	4.81	.89	8.04	2.30	13.4	75	7.73	33.88	26.46	160.1	.184
30	8.35	33.292	3.62	.98	7.94	2.30	23.0	100	7.55	33.95	26.54	152.5	.223
35	8.34	33.374	3.54	1.02	7.92	2.31	24.5						
40	8.27	33.507	3.11	1.09	7.88	2.31	27.5						
45	8.11	33.609	2.83	1.14	7.83	2.33	29.8						
50	8.08	33.672	2.64	1.18	7.94	2.33	31.4						
75	7.73	33.871	1.85	1.33	7.76	2.33	36.3						
100	7.54	33.943	1.90	1.34	7.77	2.34	36.5						

C 230 44 08.5 N 124 21.4 W DATE 02 JUL 69 1540 GCT WIRE 01 DRY 60.0 WET 55.5 CRUISE Y6906C
WIND DIRECTION 24 VEL 06 KTS BAR 20 SWELL DIRECTION 33 H 02 T 05 CLOUD 6 AMT 8 WEATHER 02

0	14.36	31.898	6.58	.51	8.28	2.25	.1	0	14.36	31.90	23.75	414.7	0
3	14.17	32.936	6.63	.48	8.26	2.25	.2	10	8.93	32.95	25.55	245.5	.033
6	12.23	32.244	6.32	.54	8.26	2.26	1.4	20	8.39	33.17	25.81	221.2	.056
10	8.93	32.941	4.91	1.29	8.25	2.28	13.6	30	8.41	33.41	25.99	203.4	.078
15	8.50	32.991	4.55	1.45	8.19	2.28	15.9	50	8.04	33.74	26.31	174.0	.115
20	8.39	33.164	4.08	1.59	8.04	2.30	18.7	75	7.79	33.91	26.48	158.1	.157
30	8.41	33.409	3.35		7.94	2.30	24.2						
35	8.31	33.561	.29	2.01	7.92	2.31	26.6						
40	8.17	33.665	2.88	2.03	7.88	2.31	27.9						
45	8.16	33.715	2.90	2.02	7.83	2.31	28.7						
50	8.04	33.738	2.74	2.03	7.84	2.33	33.8						
75	7.78	33.907	1.60	2.49	7.76	2.33	35.3						

C 231 44 08.7 N 124 14.5 W DATE 02 JUL 69 1725 GCT WIRE 00 DRY 57.9 WET 56.0 CRUISE Y6906C
WIND DIRECTION 25 VEL 06 KTS BAR 21 SWELL DIRECTION 32 H 02 T 05 CLOUD 6 AMT 8 WEATHER 02

0	13.32	32.016	7.34	.27	8.35	2.25	.1	0	13.32	32.02	24.05	387.9	0
3	13.01	32.079	7.53		8.33	2.25		10	8.95	32.79	25.42	257.3	.032
6	11.46	32.268	6.94	.49	8.26	2.26	.1	20	8.42	33.13	25.77	224.4	.056
10	8.95	32.786	5.30	1.18	8.09	2.26	9.5	30	8.27	33.51	26.09	194.2	.077
15	8.48	32.903	4.66	1.44	8.05	2.28	14.2						
20	8.42	33.127	4.08	1.65	7.98	2.28	18.3						
30	8.27	33.506	3.27	1.95	7.93	2.30	24.4						
35	8.19	33.612	2.85	2.05	7.87	2.30	27.2						
40	8.10	33.683	2.75	2.10	7.86	2.31	28.3						
45	8.16	33.755	3.03	2.11	7.87	2.31	27.3						

OBSERVED								INTERPOLATED				DERIVED	
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)

C 232 44 08.3 N 124 10.3 W DATE 02 JUL 69 1842 GCT WIRE 00 DRY 58.5 WET 58.0 CRUISE Y6906C
WIND DIRECTION 23 VEL 06 KTS BAR 21 SWELL DIRECTION 32 H 02 T 05 CLOUD 06 AMT 08 WEATHER

D	T	S	O_2	PO_4	pH	Alk.	NO_3	Z	T	S	σ_t	δ	ΔD
0	11.46	32.445	7.99	.70	8.12	2.31	.1	0	11.46	32.45	24.74	322.7	0
3	11.01	32.529	7.85	.64	8.11	2.33	.1	10	8.64	33.01	25.64	236.4	.024
6	9.30	32.769	5.38	1.19	8.09	2.31	8.4	20	8.45	33.32	25.91	211.1	.050
10	8.64	33.006	4.52	1.34	8.03	2.33	14.4	30	8.24	33.60	26.16	187.3	.073
15	8.51	33.213	3.93	1.61	7.97	2.33	19.4						
20	8.45	33.312	3.71	1.66	7.95	2.34	21.5						
30	8.24	33.593	2.87	2.02	7.87	2.36	26.4						

C 235 44 23.2 N 124 09.9 W DATE 02 JUL 69 2056 GCT WIRE 00 DRY 61.7 WET 58.2 CRUISE Y6906C
WIND DIRECTION 13 VEL 10 KTS BAR 22 SWELL DIRECTION 32 H 02 T 10 CLOUD 6 AMT 6 WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO_3	Z	T	S	σ_t	δ	ΔD
0	13.60	31.858	7.28	.53			.1	0	13.60	31.86	23.87	464.8	0
3	12.34	32.152	7.23	.56			.1	10	8.63	32.77	25.43	244.3	.033
4	10.10	32.650	7.27	1.07			8.9	20	8.47	33.12	25.75	224.1	.157
10	8.63	32.764	5.41	1.13			9.2	30	8.28	33.57	26.14	199.0	.274
15	8.73	32.916	4.88	1.28			12.6						
20	8.47	33.113	4.29	1.53			17.2						
30	8.28	33.565	2.95	1.96			25.6						

NH 15 44 39.0 N 124 24.5 W DATE 02 JUL 69 0002 GCT WIRE 00 DRY 60.6 WET 57.8 CRUISE Y6906C
WIND DIRECTION 34 VEL 08 KTS BAR 23 SWELL DIRECTION 32 H 02 T 06 CLOUD 8 AMT 8 WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO_3	Z	T	S	σ_t	δ	ΔD
0	15.46	29.738	6.21	.39	8.30	2.15	.1	0	15.46	29.74	21.86	597.4	0
3	13.97	30.439	6.54	.34	8.30	2.17	.1	10	10.38	32.39	24.88	308.9	.045
6	12.24	31.958	6.78	.34	8.27	2.25	.1	20	8.93	32.48	25.19	230.0	.075
10	10.38	32.389	6.99	.40	8.26	2.26	.1	30	8.46	32.50	25.27	272.3	.102
15	9.43	32.453	7.15	.48	8.24	2.26	.1	50	8.13	32.67	25.45	255.2	.155
20	8.93	32.479	7.08	.79	8.25	2.26	.8	75	8.10	33.44	26.06	198.0	.212
30	8.46	32.492	6.54	.86	8.19	2.26	4.8						
35	8.27	32.485	6.53	.88	8.20	2.26	5.3						
40	8.33	32.513	6.40	.88	8.18	2.26	5.8						
45	8.28	32.546	5.98	.98	8.16	2.26	8.1						
50	8.13	32.663	5.78	1.07	8.13	2.26	9.4						
75	8.10	33.431	3.78	1.76	7.96	2.30	22.5						

NH 5 44 39.0 N 124 10.5 W DATE 02 JUL 69 0148 GCT WIRE 00 DRY 58.2 WET 57.5 CRUISE Y6906C
WIND DIRECTION 26 VEL 06 KTS BAR 23 SWELL DIRECTION 28 H 01 T 06 CLOUD 2 AMT 8 WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO_3	Z	T	S	σ_t	δ	ΔD
0	13.45	30.688	7.09	.38			.4	0	13.45	30.69	23.00	488.0	0
3	10.68	31.003	6.40	.83			.8	10	9.31	32.63	25.24	274.8	.038
6	9.58	32.446	5.39	1.29			1.2	20	8.40	33.12	25.76	225.1	.063
10	9.31	32.623	5.01	1.33			5.0	30	8.21	33.60	26.17	186.8	.084
15	8.60	32.922	4.38	1.60			13.1						
20	8.40	33.114	3.90	1.75			16.5						
30	8.21	33.594	2.58	2.22			26.7						
40	7.94	33.741	2.42	2.30			29.5						

CH 5 43 19.7 N 124 26.5 W DATE 27 JUN 69 1945 GCT WIRE 00 DRY 58.3 WET 55.5 CRUISE C6906F
WIND DIRECTION 19 VEL 08 KTS BAR 20 SWELL DIRECTION 26 H 06 T 08 CLOUD 6 AMT 8 WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO_3	Z	T	S	σ_t	δ	ΔD
0	13.64		6.43	.57			.5	0	13.64	30.69	22.96	491.6	0
5	13.60	31.893	6.42	.72			.7	10	11.94	32.50	24.68	327.7	.041
10	11.94	32.493	6.26	1.29			2.5	20	9.91	33.40	25.74	227.1	.069
15	10.62	33.016	5.20	1.66			3.7	30	8.28	33.61	26.07	195.9	.090
20	9.91	33.395	4.49	2.18			5.3						
25	8.98	33.588	3.78	2.17			5.2						
30	8.88	33.603	4.85	2.22			5.3						
35	8.64	33.654	3.25	2.25			26.4						
40	8.52	33.666	3.02										
45	8.48	33.700	3.02	2.34			27.6						

CH 15 43 19.5 N 124 40.0 W DATE 27 JUN 69 2225 GCT WIRE DRY 59.5 WET 56.5 CRUISE C6906F
WIND DIRECTION 19 VEL 10 KTS BAR 21 SWELL DIRECTION 26 H 07 T 08 CLOUD 8 AMT 6 WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO_3	Z	T	S	σ_t	δ	ΔD
0	14.70	30.956	6.07	.59			.1	0	14.70	30.96	22.95	492.6	0
5	12.89	31.576	5.24	.56			.1	10	12.67	32.52	24.56	339.6	.042
10	12.67	32.511	3.90	.64			.1	20	10.93	32.54	24.90	307.2	.074
20	10.93	32.538	3.95	.66			.1	30	9.26	32.49	25.14	284.7	.104
30	9.26	32.483	4.41	.69			1.5	50	8.71	32.68	25.37	262.6	.158
40	8.89	32.509	4.41	.85			3.5	75	8.48	33.39	25.97	206.6	.217
50	8.71	32.675	3.39	1.08			7.3	100	8.56	33.77	26.25	180.0	.265
60	8.67	33.049	3.47	1.38			14.2						
71	8.50	33.288	2.95	1.74			18.5						
80	8.48	33.523	2.15	1.94			20.9						
90	8.53	33.734	1.76										
100	8.56	33.769	2.50	2.22			25.9						
125	7.72	33.896	2.24	2.22			25.5						

CH 2B 43 19.5 N 124 53.5 W DATE 28 JUN 69 0241 PCT WIRE 11 DRY 60.9 WET 56.5 CRUISE C690AF
WIND DIRECTION 32 VEL 13 KTS BAR 22 SWELL DIRECTION 28 H 05 T 08 CLOUD 8 AMT 4 WEATHER 02

OBSERVED							INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
0	15.47	31.154	5.90	.50			.1	0	15.67	31.16	22.90	497.7	0
5	15.57	31.162	6.20	.44			.1	10	15.03	31.50	23.30	459.8	.048
10	15.03	31.498	6.41	.49			.1	20	13.01	32.46	24.45	350.4	.088
20	13.01	32.452	5.48	.52			.1	30	10.99	32.54	24.89	308.3	.121
30	10.99	32.538	5.12	.69			.1	50	9.54	32.58	25.17	282.4	.180
40	9.90	32.525	6.72	.70			.2	75	8.42	32.81	25.52	249.3	.247
50	9.54	32.577	6.62	.82			2.[illegible]	100	8.66	33.38	25.93	210.6	.304
60	9.16	32.867	6.08	1.02			6.[illegible]	150	8.31	33.86	26.36	170.9	.400
75	8.42	32.802	5.59	1.20			9.6	200	7.25	33.96	26.59	148.8	.480
100	8.66	33.376	4.18	1.71			18.1						
125	8.60	33.673	3.38	2.02			22.4						
150		33.853	3.66	2.24			25.1						
175	7.40	33.932	2.88	2.25			26.5						
200		33.964	2.67	2.52			27.8						

CH 3B 43 19.6 N 125 08.1 W DATE 28 JUN 69 0525 PCT WIRE 03 DRY 59.1 WET 54.1 CRUISE C690AF
WIND DIRECTION 29 VEL 08 KTS BAR 22 SWELL DIRECTION 30 H 06 T 08 CLOUD 8 AMT WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
0	15.60	31.261	5.93	.39			.3	0	15.60	31.27	23.00	488.7	0
5	15.63	31.261	5.85	.41			.2	10	15.13	31.70	23.43	447.2	.047
10	15.12	31.695	6.04	.38			.2	20	13.19	32.41	24.38	357.3	.087
20	13.19	32.405	6.41	.43				30	11.98	32.50	24.68	328.7	.121
30	11.98	32.495	6.53	.49			.2	50	9.19	32.47	25.14	285.0	.183
40	9.95	32.456	6.59					75	8.52	32.52	25.28	271.8	.252
50	9.19	32.449	6.83	.11				100	8.18	32.97	25.68	234.1	.315
60	8.68	32.461	6.74	.12				150	7.84	33.71	26.31	174.8	.418
75	8.52	32.518	6.26	.17				200	7.25	33.92	26.56	151.9	.499
100	8.18	32.966	5.25	.32									
125	7.93	33.498	4.24	.49									
150	7.84	33.709	3.98	.54									
175	7.58	33.845	3.66	.58									
200		33.922	3.17	2.01			28.5						

CH 4B 43 19.4 N 125 22.0 W DATE 28 JUN 69 1245 PCT WIRE DRY 57.2 WET 55.0 CRUISE C6906F
WIND DIRECTION 31 VEL 11 KTS BAR 24 SWELL DIRECTION 30 H 05 T 08 CLOUD 8 AMT 2 WEATHER 01

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
0	15.18	31.560	5.85					0	15.18	31.56	23.32	488.1	0
5	15.18	31.560	5.85	.42			.4	10	15.21	31.57	23.31	458.7	.046
10	15.21	31.563	5.97	.41			.3	20	15.07	31.47	23.57	433.9	.090
20	15.07	31.465	5.92	.41			.2	30	13.38	32.49	24.40	355.6	.130
30	13.38	32.483	6.28	.51			.1	50	10.32	32.58	25.04	294.7	.195
40	11.46	32.556	6.73	.56			.1	75	8.34	32.47	25.27	273.0	.263
50	10.32	32.577	6.81	.53			.2	100	7.88	32.88	25.66	236.1	.330
60	9.01	32.666	6.75	.66			2.2	150	7.76	33.81	26.41	166.1	.430
75	8.34	32.647	6.51	.81			5.0	200	7.25	33.93	26.57	151.3	.509
100	7.87	32.879	5.59	1.20			11.7						
125	8.06	33.674	3.45	1.60			22.5						
150	7.79	33.808	3.98	1.89			24.9						
175	7.51	33.868	3.11	1.96			26.6						
200		33.930	2.62	2.12			28.3						

CH 6B 43 19.6 N 125 44.6 W DATE 28 JUN 69 1720 PCT WIRE 05 DRY 56.8 WET 54.2 CRUISE C6906F
WIND DIRECTION 29 VEL 10 KTS BAR 24 SWELL DIRECTION 29 H 06 T 08 CLOUD 6 AMT 7 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
0	14.92	30.994		.47			.2	0	14.92	31.00	22.94	494.3	0
5	14.89	30.998		.43			.1	10	14.83	31.09	23.03	486.1	.049
10	14.83	31.084		.46				20	13.18	32.45	24.41	353.9	.091
20	13.18	32.446		.53			.1	30	9.80	32.45	25.02	295.7	.123
30	9.80	32.447		.58			.1	50	8.38	32.45	25.25	274.7	.181
40	8.40	32.452		.83			2.2	75	7.89	32.79	25.59	242.6	.245
50	8.38	32.448		.75			3.3	100	7.94	33.27	25.95	209.2	.302
75	7.88	32.789		1.18			10.1	150	7.72	33.79	26.39	167.1	.395
100	7.93	33.267		1.45			17.2	200	7.05	33.92	26.59	149.0	.474
125	7.87	33.534		1.65			20.7						
150	7.72	33.790		1.88			24.6						
175	7.36	33.886		1.97			24.8						
200	7.05	33.924		2.12			28.1						

CH 8B 43 19.5 N 124 16.1 W DATE 28 JUN 69 2124 PCT WIRE 05 DRY 59.8 WET 57.0 CRUISE C690AF
WIND DIRECTION 29 VEL 13 KTS BAR 25 SWELL DIRECTION 30 H 06 T 10 CLOUD 8 AMT 6 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
0	15.45	31.218	5.15	.44			.1	0	15.45	31.22	23.00	488.7	0
5	15.43	31.220	5.92	.35			.2	10	15.45	31.23	23.00	488.7	.049
10	15.45	31.221	5.10	.37			.2	20	13.94	32.45	24.26	368.8	.092
20	13.94	32.444	6.20	.45			.1	30	11.55	32.43	24.70	326.2	.126
30	11.55	32.426	6.15	.46			.1	50	9.04	32.45	25.14	284.6	.188
40	9.80	32.436	7.06	.50			.1	75	8.21	32.45	25.27	272.9	.257
50	9.04	32.444	6.43	.55			.4	100	7.71	32.89	25.68	233.8	.321
75	8.21	32.444	6.13	.80			4.7	150	7.44	33.80	26.44	162.6	.420
100	7.71	32.881	4.93	1.23			12.4	200	6.99	33.92	26.60	148.1	.497
125	7.59	33.537	3.41	1.70			20.9						
150	7.43		3.39										
175	7.21	33.866	3.69	1.89			24.1						
200	6.99	33.928	3.11	2.03			25.3						

OBSERVED								INTERPOLATED				DERIVED	
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
CH 105 43 19.5 N 126 43.3 W DATE 29 JUN 69 0142 GCT WIRE 04 DRY 57.0 WET 54.4 CRUISE C6904F													
WIND DIRECTION 30 VEL 15 KTS BAR 25 SWELL DIRECTION 32 H 06 T 10 CLOUD 6 AMT R WEATHER 02													
0	15.26	31.542	6.19	.41			.2	0	15.26	31.57	23.32	459.6	0
5	15.26	31.575	5.28	.40			.1	10	14.31	32.42	24.15	378.6	.142
10	14.31	32.410	5.83	.45			.1	20	13.15	32.48	24.44	351.1	.178
20	13.15	32.478	5.11	.46			.1	30	11.72	32.51	24.7[illegible]	323.3	.112
30	11.72	32.[illegible]	6.79	.45			.1	50	9.28	32.48	25.13	285.6	.173
40	10.08	32.450	7.11	.51			.1	75	8.30	32.53	25.32	268.5	.242
50	9.28	32.480	6.92	.60			.9	100	7.83	32.97	25.74	228.9	.304
75	8.30	3.521	6.46	.77			4.6	150	7.61	33.78	26.40	166.7	.403
100	7.83	32.969	5.37	1.09			10.9	200	6.85	33.89	26.59	148.6	.482
125	7.93	33.538	4.15	1.58			18.8						
150	7.61	33.774	3.83	1.65			20.0						
175	7.33	33.858	3.50	1.96			24.5						
200	6.85	33.893	3.33										
CH 125 43 19.5 N 127 10.1 W DATE 29 JUN 69 0540 GCT WIRE 00 DRY 56.4 WET 53.0 CRUISE C6904F													
WIND DIRECTION 30 VEL 10 KTS BAR 26 SWELL DIRECTION 29 H 06 T 07 CLOUD 6 AMT R WEATHER 02													
0	14.24	32.490	6.15	.49			.1	0	14.24	32.50	24.23	370.6	0
5	14.25	32.491	6.07	.47			.1	10	14.27	32.50	24.22	371.7	.037
10	14.27	32.490	5.98				.1	20	14.25	32.49	24.23	371.7	.174
20	14.25	32.488	6.06	.48			.1	30	12.66	32.49	24.5[illegible]	341.5	.110
30	12.66	32.488	6.67	.48			.1	50	8.72	32.49	25.22	277.0	.172
40	9.82	32.492	6.99	.62			1.3	75	8.19	32.56	25.35	264.1	.239
50	8.72	32.483	6.75	.67			2.4	100	7.73	33.16	25.[illegible]	213.4	.299
75	8.19	32.559	6.27	.87			5.8	150	7.52	33.86	26.47	159.4	.392
100	7.73	33.153	4.98	1.47			16.0	200	6.85	33.94	26.63	145.4	.469
125	7.60	33.635	4.23	1.77			21.7						
150	7.51	33.852	3.51	2.06			25.5						
175	7.26	33.928	3.06	2.10			29.3						
200		33.936	3.18	2.20			29.7						
CH 145 43 19.4 N 127 39.0 W DATE 29 JUN 69 1010 GCT WIRE DRY 54.8 WET 52.8 CRUISE C6904F													
WIND DIRECTION 33 VEL 10 KTS BAR 25 SWELL DIRECTION 30 H 06 T 08 CLOUD 6 AMT R WEATHER 02													
0	14.40	32.442	2.50	.49			.1	0	14.40	32.45	24.16	377.4	0
5	14.42	32.442	2.72	.45			.1	10	14.40	32.44	24.16	378.[illegible]	.038
10	14.40	32.437	5.25	.51			.1	20	14.24	32.46	24.19	374.[illegible]	.075
20	14.26	32.450	6.06	.49			.1	30	11.58	32.45	24.72	326.[illegible]	.110
30	11.58	32.449	6.94	.47			.1	50	8.78	32.44	25.13	281.[illegible]	.171
40	9.52	32.446	7.23	.53			.1	75	8.27	32.50	25.30	269.[illegible]	.240
50	8.78	32.440	7.00	.64			1.8	100	7.78	33.00	25.75	226.[illegible]	.302
75	8.27	32.498	6.50	.87			5.8	150	8.09	33.84	26.37	169.[illegible]	.401
100	7.77	32.991	5.27	1.42			12.9	200	7.18	33.94	26.58	149.[illegible]	.480
125	8.17	33.520	2.98	1.67			20.3						
150	8.09	33.832	2.23	1.97			24.4						
175	7.80	33.923	1.41	2.01			24.7						
200	7.18	33.938	1.60	2.06			26.1						
CH 165 43 20.0 N 128 05.0 W DATE 29 JUN 69 1600 GCT WIRE 01 DRY 56.0 WET 53.3 CRUISE C6904F													
WIND DIRECTION 35 VEL 08 KTS BAR 25 SWELL DIRECTION 29 H 04 T 07 CLOUD 6 AMT R WEATHER 02													
0	14.14	32.478	6.29	.49			.2	0	14.14	32.48	24.24	369.[illegible]	0
5	14.16	32.473	6.10	.53			.1	10	14.14	32.46	24.24	370.[illegible]	.037
10	14.14	32.474	6.18	.52			.1	20	12.97	32.46	24.46	349.[illegible]	.073
20	12.97	32.452	6.24	.58			.1	30	10.81	32.50	24.39	308.[illegible]	.106
30	10.81	32.499	6.99	.57			.3	50	9.15	32.45	25.13	246.[illegible]	.145
40	9.44	32.442	7.06	.58			.3	75	8.17	32.62	25.41	259.[illegible]	.234
50	9.15	32.446	6.94	.59			.4	100	7.89	33.02	25.76	226.[illegible]	.294
75	8.17	32.614	6.18	.97			6.9	150	7.52	33.79	26.42	164.[illegible]	.392
100	7.88	33.013	5.32	1.30			12.9	200	6.99	33.90	26.59	149.[illegible]	.471
125	7.76	33.603	4.54	1.64			19.9						
150	7.51	33.782	4.14										
175	7.26	33.852	3.74	2.00			25.6						
200	6.99	33.902	3.46										
CH 185 43 20.0 N 128 32.0 W DATE 29 JUN 69 1910 GCT WIRE 01 DRY 58.3 WET 53.3 CRUISE C6904F													
WIND DIRECTION 32 VEL 05 KTS BAR 26 SWELL DIRECTION 31 H 05 T 08 CLOUD 6 AMT R WEATHER 02													
0	13.99	32.461	6.27	.60			.7	0	13.99	32.47	24.26	368.[illegible]	0
5	13.99	32.461	6.15	.51			.6	10	13.98	32.44	24.26	368.[illegible]	.037
10	13.98	32.455	6.16	.50			.5	20	13.58	32.46	24.34	360.[illegible]	.173
20	13.58	32.457	6.16	.49			.5	30	11.59	32.50	24.75	321.[illegible]	.107
30	11.59	32.494	6.91	.47			.4	50	9.00	32.44	25.16	283.	.168
40	10.18	32.531	6.98	.61			.3	75	8.36	32.59	25.36	264.[illegible]	.236
50	9.00	32.457	6.81	.61			.8	100	8.00	33.05	25.77	225.[illegible]	.297
75	8.34	32.588	6.23	1.03			6.2	150	7.67	33.72	26.35	171.[illegible]	.397
100	8.00	33.047	5.24	1.24			12.4	200	7.03	33.89	26.57	150.[illegible]	.477
125	8.11	33.435	4.62	1.53			17.3						
150	7.66	33.720	3.81	1.84			21.9						
175	7.46	33.838	3.69	1.87			23.2						
200	7.03	33.894	3.59	2.01			24.8						

OBSERVED							INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)

CH 205 43 20.0 N 128 58.5 W DATE 29 JUN 69 2255 GCT WIRE 03 DRY 64.0 WET 63.1 CRUISE C6906F
WIND DIRECTION 32 VEL 06 KTS BAR 26 SWELL DIRECTION 11 H 04 T 08 CLOUD 6 AMT 8 WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO_3	Z	T	S	σ_t	δ	ΔD
0	14.24	32.464	6.00	.53			.2	0	14.24	32.47	24.21	372.8	0
5	14.07	32.464	5.37	.53			.2	10	13.98	32.47	24.26	367.8	.037
10	13.98	32.466	5.02	.52			.1	20	13.97	32.48	24.28	366.8	.074
20	13.97	32.479		.57			.1	30	11.35	32.47	24.77	319.6	.108
30	11.35	32.467	6.04	.57			.1	50	9.18	32.54	25.19	280.1	.168
40	10.22	32.50	6.86	.53			.1	75	8.57	32.56	25.30	270.0	.237
50	9.18	32.533	7.07	.56			.1	100	7.69	32.59	25.45	255.4	.302
75	8.57	32.552	6.31	.76			3.6	150	7.85	33.02	26.24	182.1	.412
100	7.68	33.582	6.46	.91			5.1	200	7.42	33.88	26.51	157.2	.497
125	7.77	33.182	5.37	1.30			13.6						
150	7.85	33.613		1.49			17.7						
175	7.64	33.830		1.45			20.7						
200	7.42	33.881	4.47	1.75			22.1						

CH 225 43 19.5 N 129 26.0 W DATE 30 JUN 69 0210 GCT WIRE 10 DRY 59.8 WET 55.1 CRUISE C6906F
WIND DIRECTION 30 VEL 07 KTS BAR 25 SWELL DIRECTION 31 H 03 T 08 CLOUD 8 AMT 8 WEATHER 03

D	T	S	O_2	PO_4	pH	Alk.	NO_3	Z	T	S	σ_t	δ	ΔD
0	14.52	32.501	6.07	.54			.2	0	14.52	32.51	24.18	375.7	0
5	14.45	32.496	6.06	.55			.1	10	14.24	32.50	24.24	370.6	.037
10	14.24	32.498	6.11	.53			.1	20	14.21	32.50	24.24	370.2	.074
20	14.21	32.498	6.13	.52			.1	30	11.38	32.47	24.77	320.3	.109
30	11.37	32.464	6.76	.55			.1	50	9.51	32.50	25.11	287.9	.170
40	10.86	32.488	6.85	.58			.1	75	8.47	32.56	25.32	268.4	.239
50	9.51	32.496	7.15	.57			.1	100	7.64	32.58	25.45	255.5	.305
75	8.47	32.555	6.70	.75			3.9	150	7.55	33.31	26.04	200.3	.419
100	7.63	32.574	6.46	.87			5.5	200	7.42	33.82	26.46	162.0	.509
125	7.29	32.888	5.85	1.15			10.8						
150	7.54	33.309	4.96	1.52			17.1						
175	7.55	33.623	4.25	1.67			20.6						
200	7.42	33.817	4.20	1.77			22.3						

CBH235 42 39.5 N 129 26.0 W DATE 30 JUN 69 0913 GCT WIRE 00 DRY 57.2 WET 54.5 CRUISE C6906F
WIND DIRECTION 30 VEL 05 KTS BAR 24 SWELL DIRECTION 31 H 04 T 08 CLOUD 6 AMT 7 WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO_3	Z	T	S	σ_t	δ	ΔD
0	14.37	32.505	5.95	.35			.1	0	14.38	32.51	24.21	372.4	0
5	14.36	32.499	5.89	.45			.1	10	14.17	32.50	24.25	369.4	.037
10	14.17	32.492	5.98	.48			.1	20	14.13	32.50	24.26	368.8	.074
20	14.12	32.492	5.96	.50			.1	30	11.54	32.50	24.76	321.1	.109
30	11.54	32.493	6.54	.53			.1	50	10.02	32.60	25.10	289.6	.169
40	10.88	32.592	6.75	.53			.1	75	8.69	32.56	25.29	271.4	.239
50	10.02	32.594	6.79	.56			.1	100	7.91	32.56	25.40	260.7	.306
75	8.69	32.558	6.50	.79			3.4	150	8.52	33.45	26.01	204.2	.422
100	7.90	32.555	6.47	.85			5.5	200	7.54	33.81	26.43	164.0	.514
125	7.55	32.660	6.20	1.02			9.1						
150	8.52	33.445	5.21	1.18			14.0						
175	7.92	33.628	4.59	1.57			21.0						
200	7.54	33.812	3.90	1.84			25.5						

BH 245 42 00.0 N 129 27.0 W DATE 30 JUN 69 1520 GCT WIRE 01 DRY 57.5 WET 55.0 CRUISE C6906F
WIND DIRECTION 31 VEL 05 KTS BAR 23 SWELL DIRECTION 30 H 03 T 09 CLOUD 8 AMT 8 WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO_3	Z	T	S	σ_t	δ	ΔD
0	14.45	32.656	6.02	.49			.1	0	14.45	32.66	24.31	362.9	0
5	14.45	32.655	5.94	.47			.1	10	14.44	32.66	24.32	363.0	.036
10	14.44	32.654	5.97	.45			.1	20	14.46	32.66	24.31	363.7	.073
20	14.46	32.654	5.98	.45			.1	30	14.42	32.66	24.32	363.3	.109
30	14.42	32.652	6.01	.45			.1	50	10.17	32.54	25.03	295.6	.175
40	11.39	32.501	6.63	.50			.1	75	8.73	32.56	25.28	272.2	.246
50	10.17	32.532	6.90	.48			.1	100	7.79	32.58	25.44	257.4	.312
75	8.73	32.554	6.53	.65			2.3	150	8.26	33.68	26.23	183.1	.422
100	7.78	32.577	6.41	.84			5.7	200	7.87	33.93	26.48	159.8	.508
125	7.64	33.097	5.41	1.28			14.2						
150	8.26	33.479	4.99	1.30			16.2						
175	8.15	33.889	4.80	1.42			18.9						
200	7.87	33.932	4.65				19.0						

BH 224 41 59.3 N 128 59.7 W DATE 30 JUN 69 1952 GCT WIRE 03 DRY 61.2 WET 58.0 CRUISE C6906F
WIND DIRECTION 00 VEL 06 KTS BAR 22 SWELL DIRECTION 31 H 04 T 08 CLOUD 6 AMT 8 WEATHER

D	T	S	O_2	PO_4	pH	Alk.	NO_3	Z	T	S	σ_t	δ	ΔD
0	14.63	32.688	5.79	.50			.1	0	14.63	32.69	24.30	364.2	0
5	14.55	32.683	4.87	.45			.1	10	14.50	32.69	24.32	362.3	.036
10	14.50	32.681	4.62	.45			.1	20	14.45	32.68	24.33	361.9	.073
20	14.45	32.676	5.13	.43			.1	30	13.32	32.65	24.54	342.3	.108
30	13.32	32.645	4.87	.43			.1	50	9.90	32.60	25.12	288.7	.171
40	11.05	32.605	4.84	.56			.1	75	9.46	32.74	25.30	269.7	.240
50	9.90	32.594	5.17	.61			1.1	100	8.85	33.28	25.82	220.9	.301
75	9.46	32.717	4.75	.87			5.5	150	8.14	33.74	26.29	177.4	.401
100	8.85	33.276	3.63	1.47			16.0	200	7.33	33.93	26.56	152.3	.482
125	8.39	33.547	3.01	1.78			21.1						
150	8.14	33.712	3.09	2.00			24.4						
175	7.69	33.862	2.77	2.10			26.0						
200	7.33	33.931	2.00	2.26			28.1						

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10³)	ΔD (dyn.m)
BH 202 42 00.0 N 128 31.5 W DATE 30 JUL 69 2227 GCT WIRE 04 DRY 61.5 WET 59.8 CRUISE C6904F													
WIND DIRECTION 35 VEL 05 KTS BAR 22 SWELL DIRECTION 31 H 04 T 08 CLOUD 6 AMT 6 WEATHER 01													
0	14.91	32.718	5.98	.31		.1		0	14.91	32.72	24.26	367.7	0
5	14.82	32.718	5.96	.28		.1		10	14.66	32.72	24.31	363.1	.037
10	14.66	32.715	6.00	.30		.1		20	14.66	32.72	24.31	363.3	.073
20	14.66	32.715	6.01	.35		.1		30	14.68	32.72	24.31	364.[illegible]	.109
30	14.68	32.[illegible]15	6.01	.47		.1		50	12.11	32.76	24.56	312.[illegible]	.177
40	14.38	32.736	6.03	.34		.1		75	9.86	33.15	25.56	248.4	.247
50	12.11	32.758	6.52	.45		.1		100	8.78	33.59	26.28	194.4	.302
75	9.86	33.144	4.81	1.19		12.8		150	7.97	33.93	26.47	160.3	.391
100	8.78	33.590	3.58	1.75		22.9		200	7.09	34.02	26.67	142.[illegible]	.447
125	8.45	33.768	3.09	1.92		25.0							
150	7.97	33.930	2.60	2.15		28.5							
175	7.56	33.989	2.3[illegible]	2.24		30.4							
200	7.09	34.025	2.19	2.48		32.4							
BH 181 42 00.0 N 128 05.0 W DATE 01 JUL 69 0206 GCT WIRE 06 DRY 59.9 WET 57.4 CRUISE C6904F													
WIND DIRECTION 34 VEL 08 KTS BAR 21 SWELL DIRECTION 29 H 04 T 08 CLOUD 8 AMT 6 WEATHER													
0	14.67	32.625	5.93	.51		.1		0	14.67	32.63	24.24	369.4	0
5	14.69	32.624	5.93	.53		.1		10	14.61	32.62	24.25	369.[illegible]	.037
10	14.61	32.619	5.96	.51		.1		20	14.49	32.62	24.28	366.3	.074
20	14.49	32.619	5.13	.52		.1		30	14.49	32.63	24.28	366.[illegible]	.110
30	14.49	32.625	5.93	.54		.1		50	12.64	32.6[illegible]	24.48	329.3	.180
40	13.97	32.663	6.10	.54		.1		75	10.25	32.85	25.25	273.[illegible]	.255
50	12.66	32.659	6.30	.56		.1		100	8.85	33.09	25.47	234.3	.319
75	10.25	32.850	5.74	.96		6.7		150	8.17	33.82	26.35	171.4	.421
100	8.85	33.086	5.15	1.29		12.4		200	7.44	33.95	26.56	152.[illegible]	.502
125	8.60	33.613	3.70	1.83		21.8							
150	8.17	33.813	3.26	2.01		24.7							
175	7.73	33.901	3.11	2.17		26.9							
200	7.44	33.954	2.82	2.27		20.8							
BH 160 42 00.8 N 127 37.9 W DATE 01 JUL 69 0550 GCT WIRE 07 DRY 57.2 WET 55.0 CRUISE C6904F													
WIND DIRECTION 01 VEL 10 KTS BAR 20 SWELL DIRECTION 32 H 04 T 07 CLOUD 6 AMT 8 WEATHER 02													
0	14.46	32.657	6.24	.44		.2		0	14.46	32.66	24.31	363.1	0
5	14.47	32.655	6.50	.46		.2		10	14.47	32.66	24.31	363.4	.036
10	14.47	32.655	6.12	.45		.1		20	14.49	32.66	24.31	364.[illegible]	.073
20	14.49	32.657	6.18			.1		30	14.49	32.65	24.31	364.[illegible]	.109
30	14.49	32.657	6.19	.46		.1		50	12.85	32.67	24.64	332.4	.179
40	13.88	32.684	6.25	.48		.1		75	10.04	33.13	25.55	244.3	.251
50	12.85	32.662	6.53	.52		.1		100	8.74	33.59	26.08	196.3	.306
75	10.04	33.178	5.00	1.27		14.5		150	7.58	33.92	26.51	156.2	.394
100	8.74	33.589	3.99	1.60		20.6		200	7.28	33.99	26.61	147.[illegible]	.470
125	7.88	33.790	3.76	1.80		23.9							
150	7.58	33.910	3.23	1.79		23.9							
175	7.38	33.954	2.90	1.83		24.2							
200	7.28	33.987	2.56	2.11		28.3							
BH 139 42 00.7 N 127 11.2 W DATE 01 JUL 69 1115 GCT WIRE 05 DRY 57.5 WET 55.2 CRUISE C6904F													
WIND DIRECTION 33 VEL 10 KTS BAR 19 SWELL DIRECTION 31 H 04 T 08 CLOUD 6 AMT 8 WEATHER 02													
0	14.32	32.676	6.10	.44		.1		0	14.32	32.69	24.36	358.3	0
5	14.34	32.677	6.12	.44		.1		10	14.33	32.65	24.33	361.4	.036
10	14.33	32.644	6.20	.45		.1		20	14.33	32.65	24.34	361.2	.072
20	14.33	32.653	6.08	.40		.1		30	14.11	32.67	24.39	356.6	.108
30	14.11	32.662	6.08	.43		.1		50	11.75	32.58	25.02	294.7	.173
40	12.65	32.720	6.61	.48		.1		75	9.68	33.14	25.60	242.0	.241
50	11.75	32.879	6.40	.67		2.1		100	8.86	33.55	26.03	201.3	.296
75	9.68	33.157	5.05	1.36		14.7		150	8.21	33.87	26.38	165.8	.389
100	8.86	33.542	4.04	1.74		20.5		200	7.53	33.98	26.57	151.3	.469
125	8.39	33.785	3.42	1.99		24.9							
150	8.21	33.862	3.18	2.15		26.7							
175	7.86	33.939	2.91	2.23		28.4							
200	7.53	33.981	2.68	2.36		29.5							
BH 118 42 00.0 N 126 44.0 W DATE 01 JUL 69 1500 GCT WIRE 00 DRY 57.8 WET 54.2 CRUISE C6904F													
WIND DIRECTION 34 VEL 10 KTS BAR 19 SWELL DIRECTION 33 H 04 T 06 CLOUD 8 AMT 8 WEATHER 02													
0	14.58	32.665		.12		.1		0	14.58	32.67	24.29	364.9	0
5	14.60	32.662	6.07	.12		.1		10	14.60	32.67	24.29	365.6	.037
10	14.60	32.664	6.10	.12		.1		20	14.61	32.67	24.28	364.2	.073
20	14.61	32.662	6.13	.15		.1		30	14.63	32.67	24.28	366.7	.110
30	14.62	32.661	6.04	.14		.1		50	11.06	32.66	24.97	301.0	.176
40	12.86	32.666	6.46	.15		.1		75	9.89	32.88	25.36	266.0	.247
50	11.06	32.659	6.68	.16		.1		100	9.60	33.20	25.64	235.4	.310
75	9.89	32.878	5.69	.17		3.8		150	9.36	33.75	25.10	195.2	.419
100	9.60	33.195	4.87	1.29		13.7		200	8.52	33.98	25.35	172.9	.511
125	9.50	33.514	4.07	1.60		18.7							
150	9.36	33.740	3.26	1.79		22.7							
175	8.77	33.820	3.13	1.96		25.1							
200	8.52	33.886	3.05	2.05		26.5							

BH 9A 42 00.0 N 124 17.5 W DATE 01 JUL 69 1835 GCT WIRE 07 DRY 61.0 WET 57.5 CRUISE C6904F
WIND DIRECTION 00 VEL 08 KTS BAR 19 SWELL DIRECTION 32 H 04 T 06 CLOUD 6 AMT 7 WEATHER 2

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	15.16	32.280	6.86	.48			.1	0	15.16	32.28	23.87	404.9	0
5	15.17		6.96					10	15.11	32.30	23.89	403.1	.040
10	15.11	32.294	6.02					20	14.67	32.64	24.25	366.2	.079
20	14.67	32.638	6.07	.46			.1	30	14.33	32.65	24.33	361.7	.119
30	14.33	32.650	6.15	.44			.1	50	11.21	32.69	24.96	301.8	.242
40	12.39	32.640	6.57	.46			.1	75	10.01	32.83	25.28	272.1	.354
50	11.21	32.682	6.57	.56			.1	100	9.35	33.19	25.67	235.4	.317
75	10.01	32.821	5.86	.90			5.9	150	8.61	33.75	26.23	183.2	.422
100	9.35	33.182	4.97	1.33			12.9	200	8.00	33.94	26.47	161.3	.508
125	8.77	33.591	4.09	1.77			20.3						
150	8.61	33.747	3.77	1.97			24.1						
175	8.29	33.866	3.34	2.12			25.9						
200	8.00	33.937	2.88	2.26			28.1						

BH 77 42 00.0 N 125 51.0 W DATE 01 JUL 69 2223 GCT WIRE 10 DRY 62.5 WET 58.5 CRUISE C6904F
WIND DIRECTION 32 VEL 05 KTS BAR 20 SWELL DIRECTION 32 H 04 T 06 CLOUD 6 AMT 8 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	14.49	31.622		.49			.1	0	14.49	31.63	23.51	439.6	0
5	14.21	31.613		.52			.1	10	14.06	31.62	23.59	431.9	.044
10	14.06	31.614		.45			.1	20	12.94	32.35	24.38	357.2	.083
20	12.94	32.342		.41			.1	30	11.54	32.55	24.80	317.5	.117
30	11.54	32.541		.46			.1	50	9.18	32.55	25.20	279.2	.176
40	9.64	32.532		.52			.1	75	8.95	32.89	25.50	250.9	.243
50	9.18	32.545		.68			2.1	100	8.78	33.46	25.98	206.3	.300
75	8.95	32.885		1.17			10.2	150	7.99	33.88	26.42	164.4	.392
100	8.78	33.458		1.58			17.3	200	7.25	33.99	26.61	146.9	.470
125	8.30	33.758		2.12			26.0						
150	7.99	33.879		2.27			27.4						
175	7.73	33.942		2.29			28.3						
200	7.25	33.988		2.46			30.4						

BH 5A 42 00.0 N 125 24.0 W DATE 02 JUL 69 0142 GCT WIRE 03 DRY 60.2 WET 57.0 CRUISE C6904F
WIND DIRECTION 32 VEL 06 KTS BAR 20 SWELL DIRECTION 35 H 03 T 06 CLOUD 8 AMT 8 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	14.52	32.228	6.45	.48			.1	0	14.52	32.23	23.97	395.7	0
5	14.22	32.294	6.46	.49			.1	10	13.45	32.45	24.35	359.2	.038
10	13.45	32.443	6.63	.53			.1	20	10.08	32.83	25.27	272.0	.069
20	10.08	32.825	5.83	1.16			8.7	30	9.58	33.01	25.50	250.7	.095
30	9.58	33.008	5.18	1.38			13.0	50	8.80	33.46	25.97	205.7	.141
40	9.41	33.302	4.72	1.75			18.3	75	8.32	33.72	26.25	180.0	.184
50	8.80	33.459	3.98	1.92			22.0	100	7.82	33.87	26.44	162.4	.232
75	8.32	33.715	3.25	2.27			26.0	150	7.32	33.96	26.58	149.3	.310
100	7.81	33.860	3.08	2.34			27.9	200	6.85	33.99	26.67	141.6	.383
125	7.43	33.927	2.87	2.37			28.7						
150	7.31	33.953	2.72	2.41			29.6						
175	7.06	33.977	2.55	2.56			31.0						
200	6.85	33.987	2.38	2.59			32.1						

BH 45 42 00.4 N 125 10.6 W DATE 02 JUL 69 0332 GCT WIRE 00 DRY 60.1 WET 55.2 CRUISE C6904F
WIND DIRECTION 32 VEL 08 KTS BAR 20 SWELL DIRECTION 34 H 03 T 06 CLOUD 6 AMT 8 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	13.91	32.139	6.47	.46			.3	0	13.91	32.14	24.03	390.2	0
5	13.82	32.223	6.52	.45			.2	10	13.86	32.24	24.11	382.5	.039
10	13.86	32.233	6.68	.45			.2	20	9.98	32.58	25.09	289.0	.072
20	9.98	32.574	6.48	.74			4.0	30	8.96	32.72	25.36	263.2	.100
30	8.96	32.712	5.77	1.03			9.2	50	8.73	33.31	25.86	214.6	.148
40	8.79	33.002	6.72	1.32			14.5	75	8.56	33.68	26.18	186.6	.198
50	8.73	33.302	4.29	1.58			19.3	100	7.94	33.84	26.40	165.8	.242
75	8.56	33.675	3.56	1.95			25.0	150	7.46	33.93	26.54	153.3	.322
100	7.94	33.839	3.22	2.05			26.8	200	6.97	33.99	26.65	143.3	.396
125	7.72	33.875	3.24	2.06			26.8						
150	7.46	33.927	3.06	2.16			28.3						
175	7.26	33.952	2.89	2.23			29.2						
200	6.97	33.986	2.55	2.38			30.8						

BH 35 42 00.0 N 124 57.6 W DATE 02 JUL 69 0547 GCT WIRE 02 DRY 60.0 WET 55.3 CRUISE C6904F
WIND DIRECTION 32 VEL 06 KTS BAR 20 SWELL DIRECTION 34 H 04 T 06 CLOUD 6 AMT 8 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	14.52	31.821	6.16	.47			.1	0	14.52	31.83	23.66	425.6	0
5	14.55	31.816	6.16	.43			.1	10	14.49	31.85	23.68	423.6	.042
10	14.49	31.845	6.18	.47			.1	20	14.47	31.97	23.78	414.4	.084
20	14.47	31.966	6.15	.58			.1	30	10.55	32.53	24.94	301.6	.120
30	10.55	32.530	6.95	.55			.1	50	8.88	32.94	25.56	245.4	.175
40	9.64	32.721	6.10	1.02			7.2	75	8.63	33.32	25.89	214.3	.232
50	8.87	32.939	5.42	1.22			11.3	100	8.20	33.64	26.20	184.8	.282
75	8.62	33.313	4.53	1.55			17.5	150	7.77	33.90	26.47	160.0	.368
100	8.20	33.633	3.95	1.83			22.2	200	7.03	33.98	26.64	144.5	.444
125	8.01	33.745	3.58	1.87			24.6						
150	7.76	33.893	3.24	2.03			27.1						
175	7.24	33.951	2.89	2.22			29.3						
200	7.03	33.981	2.55	2.35			30.8						

	OBSERVED								INTERPOLATED				DERIVED	
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)		Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
BM 25 42 00.0 N 124 45.1 W DATE 02 JUL 69 0945 PCT WIRE 00 DRY 58.9 WET 55.2 CRUISE C690AF														
WIND DIRECTION 31 VEL 05 KTS BAR 19 SWELL DIRECTION 14 H 03 T 06 CLOUD 6 AMT 8 WEATHER 02														
0	13.92	32.096	6.23	.49			.1		0	13.92	32.10	23.99	393.5	0
5	13.91	32.096	6.19	.47			.1		10	13.64	32.17	24.11	383.0	.039
10	13.64	32.169	6.27	.48			.1		20	10.61	32.35	24.81	315.7	.074
20	10.61	32.350	6.49	.52			.1		30	9.55	32.54	25.13	285.3	.104
30	9.55	32.535		.59			1.7		50	8.63	32.75	25.44	254.4	.158
40	8.89	32.593		.76			3.4		75	8.60	33.30	25.87	215.6	.217
50	8.63	32.743		1.08			10.2		100	8.32	33.64	26.19	186.0	.267
75	8.60	33.292		1.47			16.1		150	7.90	33.90	26.45	161.8	.354
100	8.32	33.640		1.81			21.9		200	7.03	33.98	26.64	146.2	.431
125	8.01	33.806		1.96			24.4							
150	7.89	33.894		2.10			26.7							
175	7.58	33.954		2.23			28.4							
200		33.985		2.26			28.4							
DB 5 44 50.0 N 124 12.5 W DATE 31 JUL 69 1450 PCT WIRE 00 DRY 51.9 WET 50.9 CRUISE Y690AA														
WIND DIRECTION 03 VEL 10 KTS BAR 13 SWELL DIRECTION 32 H 04 T 07 CLOUD 4 AMT 8 WEATHER 02														
0	9.03	33.004	5.02		7.93	2.19	38.7		0	9.03	33.01	25.58	242.2	0
3	8.89	33.035	4.67	2.37	7.89	2.21	20.7		10	7.67	32.99	25.77	224.1	.023
6	8.41	33.016	4.83	2.25	7.93	2.21	19.3		20	7.74	33.29	25.99	203.5	.045
10	7.66	32.987	4.83	2.04	7.97	2.19	17.2		30	7.82	33.40	26.07	194.2	.065
15	7.67	33.210	4.50	2.19	7.90	2.26	19.6		50	7.80	33.75	26.35	170.0	.101
20	7.74	33.260	4.33	2.25	7.90	2.25	23.4		75	7.22	33.92	26.57	149.7	.141
30	7.82	33.394	3.88	2.38	7.85	2.25	22.9							
40	7.80	33.592	3.10	2.63	7.85	2.25	25.5							
50	7.79	33.744	3.00	2.75	7.79	2.25	27.2							
62	7.47	33.863	2.28	2.92	7.71	2.26	30.3							
75	7.22	33.917	2.35	2.91	7.72	2.26	31.9							
DB 15 44 54.2 N 124 23.7 W DATE 31 JUL 69 1918 PCT WIRE 00 DRY 58.0 WET 55.9 CRUISE Y690AA														
WIND DIRECTION 02 VEL 04 KTS BAR 23 SWELL DIRECTION 32 H 04 T 07 CLOUD 6 AMT 8 WEATHER 02														
0	12.07	32.326	8.29	.90	8.28	2.25	1.0		0	12.07	32.33	24.53	342.1	0
10	11.38	32.448	7.04	1.16	8.17	2.25	4.9		10	11.38	32.45	24.75	321.3	.033
20	11.08	32.485	6.65	1.89	8.15	2.23	9.0		20	11.08	32.49	24.83	313.6	.065
30	8.45	32.462	6.65	1.19	8.18	2.19	4.7		30	8.45	32.47	25.25	274.4	.094
40	7.60	32.565	6.15		8.13	2.21	11.2		50	7.82	33.01	25.76	225.4	.144
50	7.81	33.003	5.02	1.85	8.02	2.23	16.7		75	7.85	33.74	26.33	172.2	.154
62	7.95	33.518	3.80	2.35	7.93	2.25	22.2		100	7.60	33.86	26.46	160.1	.235
75	7.85	33.731	3.34	2.71	7.87	2.25	25.2		150	6.93	33.97	26.65	143.1	.311
100	7.60	33.852	2.92	2.62			27.1							
150	6.93	33.972	1.97		7.72	2.33								
DB 30 44 59.8 N 124 43.0 W DATE 31 JUL 69 2207 PCT WIRE 00 DRY 58.3 WET 56.3 CRUISE Y690AA														
WIND DIRECTION VEL 00 KTS BAR 24 SWELL DIRECTION 32 H 04 T 07 CLOUD 6 AMT 7 WEATHER 02														
0	14.13	31.350	4.90	.53	8.28	2.17	.1		0	14.13	31.35	23.37	452.4	0
10	12.30	32.114	6.65	.63	8.22	2.19	.1		10	12.30	32.12	24.32	362.1	.041
20	10.12	32.428	6.83	.79	8.20	2.19	1.7		20	10.13	32.43	24.96	302.0	.074
30	8.76	32.505	6.74	.94	8.18	2.19	4.0		30	8.76	32.51	25.23	275.7	.103
40	8.38	32.506	6.51	1.00	8.15	2.19	6.7		50	7.81	32.54	25.40	260.3	.155
50	7.80	32.533	6.30	1.04	8.15	2.19	8.8		75	8.09	33.12	25.81	221.3	.217
62	8.03	32.696	5.85	1.17	8.10	2.19	11.4		100	8.30	33.58	26.14	190.2	.263
75	8.08	33.114	4.84	1.59	8.02	2.28	18.7		150	7.44	33.88	26.50	157.0	.353
100	8.30	33.580	3.82	1.94	7.93	2.28	25.3		200	6.82	33.94	26.64	144.4	.433
150	7.43	33.871	3.47	2.14	7.88	2.31			250	6.37	34.01	26.75	134.4	.500
200	6.81	33.939	2.84	2.40	7.82	2.30	34.7		300	6.07	34.07	26.84	126.6	.545
300	6.06	34.047	1.53	2.87	7.71	2.33	39.4		400	5.67	34.10	26.91	120.8	.689
400	5.67	34.103	1.23	3.08	7.64	2.33	41.7							
C 14 45 06.0 N 125 02.9 W DATE 01 AUG 69 0050 PCT WIRE 07 DRY 61.9 WET 59.1 CRUISE Y690AA														
WIND DIRECTION 34 VEL 10 KTS BAR 24 SWELL DIRECTION 32 H 04 T 07 CLOUD 6 AMT 8 WEATHER 02														
0	15.98	31.134	6.15	.68	8.30	2.17	.2		0	15.98	31.14	22.81	506.0	0
3	15.97	31.134	6.15		8.31	2.17	.1		10	15.38	31.12	22.93	494.7	.050
6	15.93	31.152	6.17	.62	8.30	2.17	.1		20	14.64	31.31	23.23	464.6	.098
10	15.38	31.119	6.33	.61	8.33	2.17			30	11.38	32.36	24.67	329.6	.138
20	14.64	31.303	6.49	.61	8.31	2.17	.1		50	8.66	32.49	25.24	275.7	.193
30	11.37	32.337	6.98	.90	8.22	2.19	.1		75	7.96	32.75	25.54	247.4	.244
40	9.66	32.474	7.12	1.08	8.23	2.19	.8		100	8.58	33.42	25.97	206.5	.320
50	8.66	32.489	6.82	1.18	8.20	2.19	1.8		150	7.83	33.85	26.42	164.6	.413
62	8.25	32.496	6.57	1.30	8.17	2.19	3.6		200	7.32	33.95	26.57	150.7	.492
75	7.96	32.740	5.83	1.55	8.12	2.21	9.6							
100	8.58	33.415	4.24	2.06	7.96	2.25	19.0							
125	7.96	33.656	3.41	2.25	7.92	2.25	21.9							
150	7.83	33.844	2.74		7.90	2.26	29.7							
200	7.32	33.900	1.32	2.06	7.81	2.26	33.4							

OBSERVED

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
A 17 45 10.3 N 125 22.5 W DATE 01 AUG 69 0400 GCT WIRE 00 DRY 60.3 WET 58.4 CRUISE Y690RA							
WIND DIRECTION 35 VEL 16 KTS BAR 24 SWELL DIRECTION 32 H 04 T 07 CLOUD 6 AMT 7 WEATHER 02							
0	15.81	30.949	6.07	.38	8.27	2.15	.1
3	15.77	30.950	6.08	.43	8.27	2.14	.1
6	15.74	30.964	6.08	.42	8.28	2.14	.1
10	15.61	30.999	6.09	.42	8.28	2.14	.1
20	15.03	32.262	6.22	.58	8.21	2.17	.1
30	11.51	32.446	7.00	.66	8.22	2.17	.1
40	9.96	32.454	7.16	.69	8.23	2.19	.1
50	9.29	32.527	7.22	.83	8.22	2.19	2.2
62	8.86	32.502	6.95	.88	8.20	2.19	2.3
75	8.12	32.475	6.71	.98	8.18	2.17	4.8
100	7.92	32.772	5.68	1.34	8.09	2.19	12.2
125	7.65	33.340	4.67		8.00	2.23	
150	7.76	33.715	4.15	1.86	7.96	2.25	28.4
200	7.29	33.905	3.41	2.20	7.88	2.26	26.8
C 24 45 16.0 N 125 43.0 W DATE 01 AUG 69 1423 GCT WIRE 00 DRY 61.3 WET 56.8 CRUISE Y690RA							
WIND DIRECTION 00 VEL 13 KTS BAR 24 SWELL DIRECTION 32 H 04 T 07 CLOUD 6 AMT 7 WEATHER 02							
0	16.68	31.272	5.78	.47	8.23	2.11	.2
3	16.69	31.280	5.78	.48	8.24	2.14	.1
6	16.60	31.724	5.83	.52	8.23	2.15	.1
10	16.45	31.965	5.84	.53	8.22	2.17	.1
20	15.69	32.296	5.99	.59	8.20	2.17	.1
30	11.76	32.491	6.93	.69	8.22	2.17	.1
40	9.94	32.472	7.16	.71	8.24	2.17	.1
50	8.95	32.464	7.14	.70	8.24	2.17	.1
62	8.50	32.472	6.80	.84	8.21	2.17	1.8
75	8.07	32.496	7.14	.96	8.18	2.17	4.6
100	7.94	32.672	6.01	1.20	8.14	2.19	8.7
125	8.13	33.359	4.54	1.73	8.00	2.21	20.0
150	7.67	33.545	4.48	1.77	8.00	2.23	21.3
200	7.40	33.885	3.66	2.14	7.91	2.28	26.3
C 27 45 23.8 N 126 08.1 W DATE 01 AUG 69 1838 GCT WIRE 00 DRY 61.9 WET 57.5 CRUISE Y690RA							
WIND DIRECTION 32 VEL 08 KTS BAR 24 SWELL DIRECTION 32 H 04 T 07 CLOUD 6 AMT 6 WEATHER 01							
0	16.62	32.178	5.78	.60	8.19	2.21	.1
3	16.56	32.179	5.78	.60	8.19	2.21	.1
6	16.50	32.180	5.79	.59	8.19	2.21	.1
10	16.49	32.181	5.79	.56	9.19	2.19	.1
20	16.35	32.176	5.78	.56	8.19	2.21	.1
30	11.78	32.543	7.22	.64	8.23	2.21	.1
40	10.71	32.631	7.46	.72	8.23	2.21	.1
50	10.14	32.649	7.47		8.24	2.21	.1
62	9.74	32.672	6.62	.90	8.19	2.21	3.1
75	9.58	32.696	4.41	1.01	8.15	2.21	5.8
100	9.30	32.913	5.59	1.30	8.06	2.23	11.1
150	9.15	33.630	3.47	1.99	7.90	2.25	24.0
200	8.39	33.874	2.87	2.20	7.84	2.26	28.5
C 31 45 31.0 N 126 33.2 W DATE 01 AUG 69 2202 GCT WIRE 00 DRY 62.0 WET 56.2 CRUISE Y690RA							
WIND DIRECTION 32 VEL 08 KTS BAR 24 SWELL DIRECTION 32 H 04 T 07 CLOUD 6 AMT 2 WEATHER 01							
0	16.85	32.020	5.80	.48	8.22	2.19	.1
3	16.74	32.019	5.80	.51	8.22	2.19	.1
6	16.65	32.003	5.81	.54	8.22	2.17	.1
10	16.59	31.992	5.82	.53	8.22	2.17	.1
20	15.77	32.153	6.01	.58	8.21	2.21	.1
30	11.59	32.528	7.21	.75	8.24	2.21	.1
40	10.35	32.649	7.47	.73	8.25	2.21	.1
50	10.01	32.660	7.38	.76	8.25	2.21	1.9
62	9.74	32.685	6.51	.96	8.19	2.21	5.9
75	9.54	32.697	4.23	1.05	8.13	2.21	10.6
100	9.25	32.862	5.66	1.31	8.10	2.23	23.8
150	8.97	33.673	3.34	2.12	7.90	2.26	26.1
200	8.27	33.881	2.91	2.40	7.84	2.26	28.4
C 35 45 40.0 N 124 59.5 W DATE 02 AUG 69 0138 GCT WIRE 07 DRY 61.1 WET 57.0 CRUISE Y690RA							
WIND DIRECTION 33 VEL 11 KTS BAR 23 SWELL DIRECTION 33 H 04 T 07 CLOUD 6 AMT 4 WEATHER 01							
0	17.02	31.553	5.77	.47	8.23	2.15	.1
3	17.02	31.545	5.76	.50	8.23	2.15	.1
6	16.87	31.601	5.84	.51	8.23	2.15	.1
10	16.85	31.802	5.79	.50	8.23	2.15	.1
20	16.44	32.335	5.82	.59	8.19	2.17	.1
30	15.37	32.389	6.09	.62	8.21	2.17	.1
40	12.89	32.455	6.73	.68	8.23	2.17	.1
50	10.72	32.477	7.06	.73	8.25	2.17	
62	10.08	32.516	7.07	.73	8.24	2.17	.2
75	8.99	32.512	6.89	.79	8.22	2.17	.4
100	8.70	32.812	5.68	1.25	8.12	2.23	10.4
150	8.17	33.532	3.81	1.87	7.95	2.33	24.1
200	7.23	33.961	3.43	2.38	7.82	2.26	33.4

INTERPOLATED DERIVED

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
A 17					
0	15.81	30.95	22.71	515.9	0
10	15.61	31.00	22.79	514.3	.051
20	15.03	32.27	23.89	434.0	.097
30	11.61	32.45	24.73	324.0	.133
50	9.29	32.53	25.17	282.2	.194
75	8.12	32.48	25.31	269.3	.243
100	7.93	32.78	25.57	244.8	.327
150	7.77	33.72	26.33	173.2	.491
200	7.29	33.90	26.54	153.7	.513
C 24					
0	16.69	31.28	22.76	510.9	0
10	16.46	31.97	23.35	455.5	.148
20	15.69	32.30	23.77	415.3	.292
30	11.76	32.50	24.72	325.1	.429
50	8.95	32.47	25.17	241.8	.593
75	8.07	32.50	25.33	247.1	.255
100	7.94	32.68	25.49	252.5	.323
150	7.68	33.55	26.21	184.6	.432
200	7.40	33.88	26.51	156.7	.518
C 27					
0	16.63	32.18	23.47	443.4	0
10	16.50	32.19	23.30	440.4	.044
20	16.35	32.18	23.53	438.2	.088
30	11.78	32.55	24.75	321.4	.124
50	10.14	32.65	25.12	284.5	.187
75	9.58	32.70	25.25	274.4	.257
100	9.30	32.92	25.47	254.6	.323
150	9.15	33.63	26.05	200.1	.437
200	8.39	33.87	26.36	171.7	.530
C 31					
0	16.85	32.02	23.70	450.0	0
10	16.59	32.00	23.33	456.6	.046
20	15.77	32.16	23.64	427.4	.090
30	11.59	32.53	24.78	319.4	.127
50	10.01	32.67	25.15	283.6	.188
75	9.54	32.70	25.26	273.4	.257
100	9.25	32.87	25.44	257.6	.324
150	8.97	33.68	26.11	196.1	.437
200	8.27	33.88	26.38	169.4	.527
C 35					
0	17.02	31.56	22.90	497.9	0
10	16.85	31.81	23.13	476.2	.049
20	16.44	32.36	23.63	428.5	.094
30	15.38	32.39	23.91	402.0	.135
50	10.72	32.68	24.89	309.7	.207
75	8.99	32.52	25.20	279.2	.280
100	8.70	32.82	25.48	253.0	.347
150	8.17	33.54	26.13	192.7	.458
200	7.23	33.96	26.60	158.7	.543

C 39 45 45.3 N 127 25.9 W DATE 02 AUG 69 0450 GCT WIRE 00 DRY 61.5 WET 56.0 CRUISE Y690RA
WIND DIRECTION 32 VEL 08 KTS BAR 22 SWELL DIRECTION 32 H 03 T 07 CLOUD 8 AMT 4 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	16.48	32.209	5.80	.57	8.20	2.17	.2	0	16.48	32.21	23.52	438.1	0
3	16.47	32.208	5.79	.55	8.20	2.17	.1	10	16.29	32.23	23.58	433.3	.044
6	16.37	32.214	5.82	.55	8.20	2.19	.1	20	16.21	32.26	23.62	429.4	.087
10	16.29	32.222	5.84	.56	8.21	2.17	.1	30	15.68	32.48	23.91	402.0	.128
20	16.21	32.235	5.83	.56	8.21	2.17	.1	50	10.76	32.46	24.95	302.4	.199
30	15.68	32.478	6.00	.66	8.20	2.19	.1	75	8.31	32.48	25.28	272.2	.271
40	11.77	32.457	7.13	.72	8.25	2.17		100	7.57	32.79	25.63	239.2	.334
50	10.76	32.457	7.30	.70	8.25	2.17	.3	150	7.58	33.31	26.03	201.5	.445
62	8.93	32.460	7.21	.77	8.24	2.17	.5	200	7.12	33.88	26.54	153.6	.533
75	8.31	32.473	6.65	.83	8.19	2.19	3.6						
100	7.57	32.783	5.68	1.33	8.10	2.21	12.0						
150	7.58	33.301	4.71	1.70	8.03	2.23	19.2						
200	7.12	33.875	3.31	2.23	7.88	2.26	29.2						

A 46 46 00.0 N 127 00.0 W DATE 02 AUG 69 1339 GCT WIRE 00 DRY 60.1 WET 54.9 CRUISE Y690RA
WIND DIRECTION 32 VEL 04 KTS BAR 22 SWELL DIRECTION 30 H 02 T 07 CLOUD 3 AMT 8 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	16.32	32.282	5.70	.46	8.20	2.21	.1	0	16.32	32.29	23.62	429.3	0
3	16.32	32.282	5.78	.45	8.20	2.21	.1	10	16.35	32.28	23.61	430.4	.043
6	16.33	32.280	5.79	.50	8.19	2.21	.1	20	16.32	32.29	23.62	429.9	.086
10	16.35	32.280	5.77	.46	8.20	2.21	.1	30	16.00	32.38	23.76	416.2	.129
20	16.32	32.281	5.79	.46	8.20	2.21	.1	50	10.77	32.46	24.87	311.1	.201
30	16.00	32.378	5.88	.48	8.19	2.21	.1	75	8.54	32.50	25.26	273.9	.274
40	13.41	32.457	6.52	.53	8.21	2.21	.1	100	7.71	32.57	25.43	257.5	.341
50	10.77	32.455	6.97	.54	8.24	2.21	.1	150	7.55	33.60	26.27	178.9	.450
62	9.12	32.487	7.11	.59	8.24	2.21	.1	200	7.11	33.86	26.53	154.6	.533
75	8.54	32.494	6.69	.70	8.20	2.21	1.2						
100	7.71	32.562	6.33	.95	8.16	2.21	5.1						
150	7.54	33.597	4.14	1.81	7.96	2.26	23.6						
200	7.11	33.860	3.43	2.12	7.89	2.28	27.1						

C 50 45 56.4 N 124 30.4 W DATE 02 AUG 69 1838 GCT WIRE 00 DRY 60.1 WET 56.0 CRUISE Y690RA
WIND DIRECTION 31 VEL 10 KTS BAR 22 SWELL DIRECTION 32 H 02 T 06 CLOUD 6 AMT 8 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	16.32	32.184	5.78	.49	8.20	2.19	.1	0	16.32	32.19	23.54	436.5	0
3	16.32	32.183	5.83	.51	8.20	2.21	.1	10	16.32	32.19	23.54	436.9	.044
6	16.31	32.181	5.86	.52	8.19	2.19		20	16.23	32.19	23.56	434.9	.087
10	16.32	32.181	5.79	.54	8.19	2.19	.1	30	12.70	32.43	24.49	347.0	.126
20	16.23	32.185	5.85	.56	8.20	2.19	.1	50	10.24	32.60	25.07	291.8	.190
30	12.70	32.423	6.81	.53	8.23	2.19	.1	75	8.68	32.55	25.28	272.1	.251
40	11.03	32.541	7.23	.53	8.24	2.21	.1	100	8.39	32.81	25.52	249.1	.326
50	10.24	32.599	7.39	.50	8.24	2.21	.1	150	8.44	33.74	26.24	181.7	.434
62	9.04	32.519	6.99	.60	8.22	2.21	.7	200	7.71	33.82	26.50	158.3	.519
75	8.68	32.546	6.52	.71	8.18	2.21	4.4						
100	8.39	32.801	5.78	1.15	8.11	2.23	10.8						
150	8.44	33.733	3.35		2.26	7.90							
200	7.71	33.922	2.86										

C 54 45 52.8 N 124 00.0 W DATE 02 AUG 69 2143 GCT WIRE 00 DRY 60.5 WET 55.8 CRUISE Y690RA
WIND DIRECTION 33 VEL 08 KTS BAR 23 SWELL DIRECTION 32 H 02 T 06 CLOUD 6 AMT 8 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	16.04	31.903	5.93	.39	8.24	2.19	.1	0	16.04	31.91	23.39	451.0	0
3	16.01	31.902	5.92	.44	8.24	2.19	.1	10	15.98	31.92	23.41	449.4	.045
6	15.96	31.904	5.93	.41	8.24	2.19	.1	20	15.38	32.32	23.63	428.9	.089
10	15.98	31.910	5.94	.50	8.24	2.19	.1	30	12.50	32.46	24.55	340.9	.127
20	16.38	32.312	5.80	.47	8.20	2.24	.1	50	8.88	32.47	25.19	280.2	.190
30	12.50	32.456	6.76	.51	8.22	2.24	.1	75	7.82	32.53	25.39	260.9	.257
40	10.52	32.490	7.25	.53	8.24	2.24	.1	100	7.48	33.00	25.81	222.1	.318
50	8.87	32.469	7.27	.58	8.24	2.24	.1	150	7.59	33.96	26.54	153.0	.411
62	8.28	32.491	6.70	.73	8.19	2.24	3.3	200	7.22	33.94	26.58	150.4	.487
75	7.81	32.530	6.37	.90	8.15	2.24	6.9						
100	7.48	32.996	5.36	1.32	8.06	2.26	14.7						
150	7.59	33.956	3.90	1.81	7.94	2.28	24.4						
200	7.22	33.936	2.76	2.32	7.81	2.30	30.9						

C 58 45 45.0 N 125 33.9 W DATE 03 AUG 69 0052 GCT WIRE 00 DRY 60.5 WET 56.6 CRUISE Y690RA
WIND DIRECTION 32 VEL 08 KTS BAR 22 SWELL DIRECTION 32 H 02 T 06 CLOUD 6 AMT 3 WEATHER 01

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	17.42	30.564	5.77	.29	8.25	2.17	.1	0	17.42	30.57	22.05	579.0	0
3	17.02	31.123	5.81	.35	8.25	2.19	.1	10	16.06	31.92	23.39	451.1	.052
6	16.64	31.529	5.86	.37	8.24	2.19	.1	20	15.72	31.96	23.50	440.9	.096
10	16.06	31.910	5.99	.41	8.25	2.21	.1	30	11.35	32.29	24.63	333.4	.135
20	15.72	31.955	6.03	.40	8.26	2.21	.1	50	8.23	32.51	25.31	268.5	.195
30	11.35	32.281	7.02	.54	8.24	2.23	.1	75	7.98	32.80	25.58	243.4	.259
40	9.10	32.489	7.00	.68	8.21	2.23	1.4	100	7.98	33.34	26.00	203.8	.315
50	8.23	32.503	6.51	.91	8.18	2.23	5.3	150	7.81	33.84	26.42	165.0	.407
62	7.95	32.555	6.27	.99	8.14	2.21	8.3	200	7.04	33.94	26.60	147.9	.485
75	7.98	32.798	5.60	1.27	8.08	2.23	12.4						
100	7.98	33.335	4.31	1.70	7.96	2.25	20.6						
150	7.80	33.813	3.24	2.07	7.87	2.28	27.6						
200	7.04	33.917	2.85	2.31	7.83	2.30	31.1						

OBSERVED								INTERPOLATED				DERIVED	
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
A 62 46 37.8 N 125 06.4 W DATE 03 AUG 69 0415 GCT WIRE 00 DRY 61.0 WET 56.5 CRUISE Y69GRA													
WIND DIRECTION 00 VEL 10 KTS BAR 1 SWELL DIRECTION 32 H 02 T 05 CLOUD 8 AMT 2 WEATHER 02													
0	16.99	30.337	5.92	.26	8.28	2.14	.1	0	17.00	30.34	21.98	546.0	0
3	17.03	30.313	5.85	.25	8.28	2.14	.1	10	16.41	30.49	22.13	571.6	.058
6	16.99	30.343	5.84	.25	8.28	2.14	.1	20	15.79	30.86	22.44	522.7	.113
10	16.81	30.484	5.46	.25	8.27	2.14	.1	30	12.47	32.37	24.49	344.8	.156
20	15.79	30.857	4.02	.28	8.28	2.15	.1	50	9.11	33.51	25.18	280.8	.219
30	12.47	32.368	4.75	.51	8.22	2.19	.1	75	7.77	33.54	25.41	259.7	.246
40	10.40		7.17	.57	8.23	2.21	.1	100	8.60	33.19	25.79	223.7	.347
50	9.11	32.510	6.91	.72	8.21	2.21	1.7	150	7.97	33.81	26.37	169.5	.445
62	8.21	32.481	6.67	.85	8.18	2.21	4.0	200	7.38	33.95	26.56	151.7	.525
75	7.75	32.538	6.27	1.03	8.15	2.21	8.3						
100	8.60	33.188	4.72	1.51	8.01	2.25	17.7						
150	7.97	33.806	3.25	2.01	7.88	2.28	27.2						
200	7.38	33.948	2.89	2.24	7.84	2.28	29.9						
A 68 45 53.7 N 124 28.8 W DATE 03 AUG 69 1302 GCT WIRE 03 DRY 57.1 WET 55.5 CRUISE Y69GRA													
WIND DIRECTION 34 VEL 02 KTS BAR 20 SWELL DIRECTION 32 H 02 T 05 CLOUD 6 AMT 2 WEATHER 02													
0	13.27	29.127	8.62	.52	8.32	2.17	.1	0	13.27	29.13	21.84	599.7	0
3	11.60	31.751	8.17	.41	8.40	2.23	.1	10	10.56	32.60	25.01	296.6	.145
6	11.41	32.321	8.56	.41	8.36	2.23	.1	20	9.64	32.66	25.21	277.7	.174
10	10.56	32.596	6.54	.89	8.19	2.25	6.8	30	7.49	32.62	25.50	250.0	.100
20	9.64	32.654	5.14	1.51	8.05	2.25	14.9	50	7.39	33.23	26.00	203.0	.145
30	7.49	32.612	5.70		8.08	2.21		75	7.52	33.82	26.44	161.3	.191
40	7.25	32.911	5.24	1.62	8.01	2.23	16.7	100	7.14	33.93	26.59	148.2	.229
50	7.38	33.226	4.24	1.93	7.94	2.25	21.9						
57	7.44	33.439	3.40	2.09	7.86	2.26	25.1						
75	7.51	33.814	2.85	2.20	7.82	2.28	28.3						
100	7.13	33.936	2.34	2.40	7.78	2.30	31.5						
125	6.80	33.972	1.86	2.60	7.72	2.30	33.1						
C 70 46 02.2 N 124 15.9 W DATE 03 AUG 69 1615 GCT WIRE 00 DRY 59.3 WET 55.0 CRUISE Y69GRA													
WIND DIRECTION 02 VEL 02 KTS BAR 21 SWELL DIRECTION 30 H 02 T 06 CLOUD 6 AMT 8 WEATHER 02													
0	13.28	28.973	8.73	.52	8.35	2.14	.1	0	13.28	28.98	21.71	611.2	0
3	12.38	32.244	8.17	.54	8.30	2.23	.2	10	10.89	32.51	24.88	309.0	.146
6	11.72	32.418	7.99	.54	8.30	2.23	.6	20	8.20	32.67	25.44	255.7	.174
10	10.89	32.502	7.32	.74	8.25	2.25	3.6	30	8.02	32.69	25.64	237.0	.199
20	8.20	32.664	4.16	1.97	7.92	2.23	21.2	50	7.40	33.37	26.11	192.6	.142
30	8.02	32.883	3.58	2.00	7.86	2.23		75	7.26	33.93	26.57	149.7	.195
40	7.55	33.027	4.54		7.96	2.25		100	6.80	33.98	26.67	140.0	.221
50	7.39	33.367	3.96		7.91	2.37	23.6						
62	7.48	33.787	2.35	2.35	7.76	2.36	31.2						
75	7.25	33.922	2.02	2.44	7.73	2.34	32.9						
100	6.79	33.975	1.71	2.60	7.70	2.34							
A 74 46 15.2 N 124 00.2 W DATE 03 AUG 69 1942 GCT WIRE 00 DRY 60.0 WET 57.3 CRUISE Y69GRA													
WIND DIRECTION 27 VEL 04 KTS BAR 21 SWELL DIRECTION H T CLOUD 6 AMT 6 WEATHER 02													
0	18.57	4.509	5.67	.79	7.84	1.27	2.8	0	18.57	4.51	2.00	2537.0	0
3	19.45	4.702	5.64	.75	7.86		2.7	10	13.34	19.96	14.77	1280.7	.191
6	17.72	6.746	5.45	.78	7.83	1.27	4.0						
10	13.34	19.956	4.34	1.31	7.81	1.81	13.4						
15	11.68	26.363	4.09	1.73	7.84	2.01	18.8						
C 76 46 10.5 N 124 10.7 W DATE 03 AUG 69 2134 GCT WIRE 00 DRY 61.1 WET 56.4 CRUISE Y69GRA													
WIND DIRECTION 27 VEL 08 KTS BAR 21 SWELL DIRECTION 30 H 03 T 10 CLOUD 6 AMT 6 WEATHER 02													
0	13.71	27.041	5.91	1.40	8.05	2.03	11.5	0	13.71	27.05	20.15	761.7	0
3	12.21	29.724	6.74	1.36	8.18	2.21	8.1	10	10.88	32.48	24.86	310.9	.054
6	11.75	32.003	8.20	.92	8.32	2.21	2.4	20	8.10	33.53	25.13	189.9	.079
10	10.88	32.473	6.83	1.21	8.16	2.14	7.0	30	7.56	33.86	24.47	158.3	.196
20	8.10	33.529	2.34	2.19	7.74	2.25	15.8	50	7.29	33.92	24.56	151.0	.127
30	7.55	33.854	2.02	2.10	7.75	2.26	16.1						
40	7.33	33.907	1.66	2.86	7.69	2.26	35.9						
50	7.28	33.919	1.46	2.88	7.67	2.26	26.5						
C 77 46 10.6 N 124 19.2 W DATE 03 AUG 69 2321 GCT WIRE 00 DRY 61.6 WET 57.3 CRUISE Y69GRA													
WIND DIRECTION 27 VEL 04 KTS BAR 21 SWELL DIRECTION 30 H 02 T 10 CLOUD 6 AMT 3 WEATHER 01													
0	12.52	26.984	6.98	1.34	8.16	2.05	10.0	0	12.52	26.99	20.32	744.6	0
3	12.24	31.770	8.72	.63	8.39	2.19	1.2	10	11.85	32.60	24.78	318.4	.053
6	12.02	32.162	8.70	.58	8.38	2.21	.4	20	10.26	32.75	25.18	281.0	.083
10	11.85	32.597	8.54	.53	8.37	2.23	.8	30	8.79	32.95	25.57	243.3	.109
20	10.26	32.743	6.82	1.20	8.22	2.23		50	7.57	33.51	26.20	196.4	.152
30	8.79	32.947	4.63	1.89	8.00	2.23	15.6	75	7.05	33.92	26.59	147.1	.194
40	8.26	33.103	3.70	2.16	7.90	2.23	19.6	100	6.70	33.97	26.68	139.3	.229
50	7.56	33.508	2.81	2.51	7.79	2.23	24.3						
62	7.43	33.809	1.63	2.88	7.68	2.26	29.1						
75	7.04	33.920	1.98	2.85	7.74	2.26	29.2						
100	6.70	33.969	1.96	2.85	7.72	2.28	29.1						

	OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)		Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
C 79 44 10.5 N 124 35.4 W DATE 04 AUG 69 0[illegible] GCT WIRE 00 DRY 56.6 WET 57.3 CRUISE Y690RA														
WIND DIRECTION 27 VEL 04 KTS BAR 20 SWELL DIRECTION 28 H 02 T 06 CLOUD 4 AMT 5 WEATHER 02														
0	14.85	32.265	7.50	.41	8.29	2.23	.1		0	13.85	32.27	24.93	399.7	0
3	13.84	32.260	7.80	.34	8.32	2.21	.1		10	9.97	32.42	24.97	300.7	.035
6	13.[illegible]	32.279	7.76	.38	8.30	2.23	.1		20	8.02	32.48	25.32	264.9	.063
10	8.[illegible]	[illegible]	4.73	.75	8.19	2.21	1.1		30	7.85	32.49	25.36	264.0	.090
20	8.02	32.480	4.33	.96	8.14	2.19	5.5		50	7.73	32.[illegible]	25.69	232.8	.140
30	7.[illegible]	32.489	4.31	1.03	8.13	2.21	8.5		75	7.[illegible]	33.09	26.16	187.8	.192
40	7.46	32.555	4.09	1.17	8.11	2.21	9.8		100	7.60	33.74	26.37	168.6	.237
50	7.62	32.872		1.38	8.05	2.21	14.0							
62	7.78	33.297	4.41	1.63	7.98	2.23	20.2							
75	7.56	33.485	4.12	1.76	7.94	2.25	22.5							
100	7.40	33.747	3.58		7.90	2.26	26.6							
125	7.36	33.893	2.65		7.82	2.29	29.8							
A 81 46 10.6 N 124 50.0 W DATE 04 AUG 69 0345 GCT WIRE 00 DRY 60.9 WET 58.0 CRUISE Y690RA														
WIND DIRECTION 31 VEL 10 KTS BAR 19 SWELL DIRECTION 30 H 02 T 06 CLOUD 8 AMT 5 WEATHER 02														
0	15.13	32.214	4.37	.41	8.27	2.19	.1		0	15.13	32.22	23.83	409.1	0
3	15.16	32.214	5.57	.38	8.27	2.17	.1		10	13.50	32.27	[illegible].21	373.1	.030
6	14.59	32.220	4.46	.39	8.28	2.19	.1		20	9.04	32.49	25.17	281.2	.072
10	13.50	32.267	4.70	.42	8.26	2.19	.1		30	8.10	32.49	25.32	267.8	.099
20	9.04	32.484	4.50	.66	8.22	2.19	1.3		50	7.49	32.54	25.45	255.7	.152
30	8.10	32.484	4.76	.87	8.19	2.19	4.6		75	7.52	32.99	25.79	222.8	.211
40	7.86	32.484	4.64	.91	8.18	2.19	5.5		100	7.95	33.53	26.15	189.3	.263
50	7.49	32.538	4.36	1.02	8.15	2.19	8.5		150	7.52	33.92	26.52	155.0	.349
62	7.39	32.772	4.79	1.23	8.10	2.19	12.8		200	6.81	33.95	26.65	143.5	.424
75	7.51	32.997	5.24	1.44	8.04	2.21	15.9							
100	7.95	33.524	3.90	1.77	7.94	2.25	23.2							
150	7.51	33.914	3.10	2.21	7.86	2.26	31.5							
200	6.81	33.954	2.76		7.83	2.28								
A 87 46 27.5 N 124 24.0 W DATE 04 AUG 69 1331 GCT WIRE 00 DRY 58.9 WET 58.0 CRUISE Y690RA														
WIND DIRECTION 30 VEL 04 KTS BAR 18 SWELL DIRECTION 30 H 02 T 07 CLOUD 6 AMT 8 WEATHER 02														
0	12.06	32.288	9.24	.1	.39	2.25	.1		0	12.06	32.29	24.50	344.8	0
3	11.27	32.309	9.09	.38	8.38	2.25	.1		10	10.15	32.42	24.94	302.9	.032
6	10.30	32.333	6.72	.78	8.15	2.25	[illegible]		20	8.06	32.58	25.39	260.4	.061
10	10.15	32.420	6.25	1.14	8.12	2.23	9.9		30	7.07	32.70	25.63	238.2	.085
20	8.06	32.574	4.97	1.54	8.00	2.23	15.7		50	7.57	33.49	26.18	184.4	.128
30	7.07	32.696	5.53	1.47	8.06	2.23	14.5		75	7.29	33.89	26.54	152.6	.170
40	7.66	33.222	3.44	2.07	7.85	2.25	26.9							
50	7.56	33.481	3.58	2.05	7.88	2.25	25.2							
62	7.51	33.809	1.02	2.81	7.62	2.28	34.9							
75	7.28	33.880	.86	2.95	7.60	2.28	34.5							
C 89 46 19.0 N 124 17.7 W DATE 04 AUG 69 1634 GCT WIRE 00 DRY 59.0 WET 56.0 CRUISE Y690RA														
WIND DIRECTION 19 VEL 08 KTS BAR 18 SWELL DIRECTION 29 H 02 T 05 CLOUD 8 AMT 7 WEATHER 02														
0	13.16	27.460	7.21	.66	8.27	2.07	4.7		0	13.16	27.67	20.73	705.9	0
3	12.57	32.302	8.59		8.38	2.23	.1		10	9.99	33.07	25.47	252.6	.048
6	11.44	32.755	8.14	.39	8.32	2.23	.3		20	8.44	33.37	25.95	207.1	.071
10	9.99	33.065	5.61	1.02	8.05	2.26	9.8		30	7.65	33.61	26.26	178.0	.090
20	8.44	33.364	2.90	2.41			25.2		50	7.17	33.93	26.58	147.9	.123
30	7.64	33.605	1.93	2.56	7.72	2.26	31.5							
40	7.41	33.868	1.33	2.67	7.65	2.28	33.5							
50	7.16	33.926	1.49	2.82	7.48	2.30	33.3							
62	7.14	33.937	1.39	2.87	7.67	2.28	33.3							
C 91 46 10.8 N 124 11.2 W DATE 04 AUG 69 1835 GCT WIRE 00 DRY 59.0 WET 56.6 CRUISE Y690RA														
WIND DIRECTION 20 VEL 10 KTS BAR 19 SWELL DIRECTION 29 H 02 T 05 CLOUD 8 AMT 4 WEATHER 02														
0	12.46	26.258	5.76	1.25	8.08	2.03	11.8		0	12.46	26.26	19.78	797.3	0
3	11.46	30.318	5.86	1.22	8.10	2.21	11.8		10	9.25	33.02	25.55	245.0	.052
6	9.79	32.652	4.57	1.62	7.99	2.25	17.6		20	7.94	33.53	26.15	188.2	.074
10	9.25	33.012	3.71	1.91	7.90	2.25	21.7		30	7.57	33.85	26.46	159.2	.091
20	7.94	33.522	2.00	2.45	7.74	2.26	26.5							
30	7.57	33.845	2.03	2.50	7.74	2.28	33.0							
40	7.37	33.767	1.62											
C 94 45 56.3 N 124 02.4 W DATE 04 AUG 69 2115 GCT WIRE 00 DRY 58.7 WET 56.4 CRUISE Y690RA														
WIND DIRECTION 17 VEL 10 KTS BAR 20 SWELL DIRECTION 30 H 02 T 07 CLOUD 8 AMT 3 WEATHER 02														
0	11.27	31.969	7.11	1.08	8.19	2.19	4.2		0	11.27	31.97	24.40	354.6	0
3	10.86	32.626	4.10	1.55	8.08	2.21	10.9		10	8.90	33.28	25.81	220.5	.029
6	10.21	33.025	4.97	2.08	7.96	2.21	17.0		20	8.38	33.55	26.10	192.9	.049
10	8.90	33.272	3.54	2.42	7.85	2.21	22.1		30	7.93	33.68	26.28	176.3	.068
20	8.38	33.543	3.00	2.63	7.80	2.23	25.0							
30	7.92	33.680	2.53	2.79	7.77	2.25	27.1							
40	7.56	33.840	2.14	2.87	7.74	2.26	27.9							

OBSERVED | INTERPOLATED | DERIVED

C 96 45 52.4 N 124 37.4 W DATE 04 AUG 69 2256 GCT WIRE 00 DRY 54.2 WET 47.2 CRUISE Y69084
WIND DIRECTION 19 VEL 14 KTS RAR 20 SWELL DIRECTION 29 H 02 T 07 CLOUD 3 AMT 7 WEATHER 03

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	14.14	24.336	9.67	.50	8.49	2.09	.1
3	12.20	30.742	9.94	.54	8.51	2.17	.1
6	10.09	32.623	5.76	1.39	8.06	2.23	11.0
10	9.18	32.836	4.38	1.94	7.95	2.23	17.5
20	7.90	33.274	2.74	2.59	7.80	2.23	26.3
30	7.77	33.470	2.43	2.57	7.76	2.26	28.4
40	7.55	33.810	2.19	3.02	7.75	2.26	29.3
50	7.36	33.842	2.31		7.76	2.26	
60	7.20	33.923	1.89		7.72	2.28	32.1
73	7.07	33.940	1.45	3.09	7.70	2.28	32.5

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	14.14	28.34	21.06	674.4	0
10	9.18	32.84	25.43	247.2	.047
20	7.91	33.28	25.96	204.1	.070
30	7.78	33.47	26.29	175.0	.089
50	7.36	33.90	26.53	151.1	.122

C 97 45 44.7 N 124 17.6 W DATE 04 AUG 69 0127 GCT WIRE 01 DRY 60.9 WET 57.0 CRUISE Y69084
WIND DIRECTION 19 VEL 14 KTS RAR 20 SWELL DIRECTION 27 H 02 T 07 CLOUD 6 AMT 7 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	14.87	28.871	9.99	.43	8.52	2.05	.1
3	13.32	30.445	9.59	.40	8.48	2.17	.1
6	10.24	31.935	5.38	1.19	8.05	2.21	11.8
10	9.26	32.765	4.15	1.97	7.89	2.23	20.3
20	8.31	33.065	3.90	2.23	7.80	2.23	27.1
30	7.94	33.450	2.05	2.48	7.76	2.25	29.6
40	7.74	33.708	1.54	2.71	7.68	2.26	32.5
50	7.53	33.846	1.51	2.47	7.[illegible]	2.28	32.3
57	7.43	33.881	1.24		7.65	2.30	34.6
75	7.04	33.940	1.67	2.80	7.70	2.30	34.0
100	6.46	33.987	1.92	2.80	7.74	2.31	35.0
125	6.33	33.998	1.95	2.84	7.72	2.31	35.2

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	14.88	26.88	19.79	796.3	0
10	9.26	32.77	25.36	263.5	.053
20	8.31	33.07	25.74	227.6	.078
30	7.94	33.46	26.10	193.7	.099
50	7.54	33.85	26.47	158.8	.134
75	7.05	33.95	26.61	145.6	.172
100	6.46	33.99	26.72	134.9	.207

A 100 45 35.2 N 124 32.6 W DATE 05 AUG 69 0435 GCT WIRE 00 DRY 60.0 WET 56.3 CRUISE Y69084
WIND DIRECTION 25 VEL 14 KTS RAR 23 SWELL DIRECTION 29 H 02 T 05 CLOUD 8 AMT 6 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	14.66	32.218	4.99	.39	8.12	2.19	.1
3	14.67	32.240	7.04	.43	8.22	2.21	.1
6	14.62	32.252	7.07	.43	8.22	2.19	.1
10	12.82	32.312	7.42	.47	8.30	2.19	.1
20	8.85	32.438	7.84	.78	8.22	2.19	1.0
30	7.94	32.443	6.48	1.10	8.16	2.19	6.0
40	7.73	32.513	6.33	1.18	8.15	2.21	7.8
50	7.75	32.571	6.1[illegible]	1.24	8.13	2.21	9.0
6[illegible]	7.62	32.938	5.26	1.62	8.05	2.21	15.7
75	7.73	33.308	4.33	1.87	7.97	2.23	21.3
100	7.76	33.618	3.58	2.18	7.91	2.25	26.5
150	7.23	33.883	2.61	2.50	7.82	2.28	32.1
200	6.44	33.948	2.20	2.67	7.77	2.34	34.1

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	14.66	32.22	23.93	399.3	0
10	12.82	32.32	24.38	357.0	.038
20	8.85	32.44	25.17	281.8	.070
30	7.94	32.45	25.31	268.6	.097
50	7.76	32.58	25.43	256.8	.150
75	7.73	33.31	26.02	202.0	.207
100	7.77	33.62	26.25	179.7	.255
150	7.23	33.89	26.54	153.6	.338
200	6.44	33.95	26.67	141.8	.412

A 106 44 57.0 N 124 31.5 W DATE 05 AUG 69 1303 GCT WIRE 02 DRY 59.9 WET 57.8 CRUISE Y69084
WIND DIRECTION 30 VEL 04 KTS RAR 23 SWELL DIRECTION 30 H 05 T 07 CLOUD 6 AMT 3 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	14.69	31.400	6.79	.27	8.36	2.01	.1
3	14.63	31.424	6.83	.26	8.35	2.17	.1
6	14.20	31.610	6.93	.27	8.35	2.17	.1
10	12.84	32.102	7.01	.30	8.35	2.17	.1
20	9.61	32.462	7.01	.64	8.26	2.17	.5
30	8.21	32.512	6.38	.91	8.18	2.17	7.0
40	7.77	32.528	6.33	1.07	8.16	2.17	8.6
50	7.33	32.610	6.12	1.14	8.13	2.17	10.7
62	7.42	32.944	5.32	1.44	8.05	2.19	16.2
75	7.92	33.261	4.42	1.66	7.99	2.21	21.5
100	7.87	33.687	3.45	1.96	7.90	1.83	27.8
150	7.24	33.915	2.96	2.17	7.86	2.11	31.8
200	6.68	33.976	2.46	2.42	7.79	2.01	34.5

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	14.69	31.40	23.30	459.8	0
10	12.84	32.11	24.21	372.8	.042
20	9.61	32.47	25.07	291.5	.075
30	8.21	32.52	25.32	267.3	.103
50	7.33	32.61	25.52	248.2	.154
75	7.93	33.27	25.95	208.1	.211
100	7.88	33.69	26.29	176.1	.249
150	7.24	33.92	26.56	151.2	.341
200	6.68	33.98	26.68	140.2	.414

C 108 44 52.5 N 124 17.7 W DATE 05 AUG 69 1618 GCT WIRE 00 DRY 58.5 WET 56.0 CRUISE Y69084
WIND DIRECTION 24 VEL 04 KTS RAR 23 SWELL DIRECTION 28 H 04 T 07 CLOUD 8 AMT 7 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	14.25	30.017	7.15				
3	14.22	30.019	7.16	.33	8.36	2.15	.1
6	11.83	32.178	7.47	.46	8.28	1.91	.3
10	9.73	32.468	6.88	.72	8.23	1.94	2.3
20	7.84	32.493	4.26	1.10	8.18	2.17	8.1
30	7.26	32.601	4.10	1.29	8.13	2.11	11.8
40	7.27	32.773	5.50	1.42	8.09	2.19	14.4
50	7.60	33.243	4.23	1.86	7.97	2.11	22.1
62	7.91	33.531	3.74	1.94	7.93	2.23	24.5
75	7.90	33.706	3.39	2.07	7.90	2.05	26.9
100	7.59	34.092	2.98	2.24	7.85	2.28	29.9

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	14.25	30.02	22.33	557.7	0
10	9.73	32.47	25.05	292.8	.062
20	7.84	32.50	25.36	263.4	.070
30	7.27	32.61	25.53	247.7	.099
50	7.60	33.25	25.98	204.7	.141
75	7.91	33.71	26.30	174.7	.188
100	7.59	34.10	26.65	142.1	.228

C 109 44 50.2 N 124 13.0 W DATE 05 AUG 69 1738 GCT WIRE 00 DRY 57.3 WET 56.1 CRUISE Y69084
WIND DIRECTION 17 VEL 06 KTS RAR 23 SWELL DIRECTION 28 H 04 T 07 CLOUD 8 AMT 3 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	13.56	31.461	6.80	.29	8.35	2.15	.1
3	13.47	31.678	7.40	.23	8.38	2.14	.1
6	11.60	32.245	7.83	.47	8.28	2.17	.3
10	9.65	32.673	5.89	1.02	8.10	2.21	8.3
20	7.88	32.853	4.21	1.76	7.94	2.19	20.8
30	7.65	33.176	3.49	2.07	7.86	2.23	26.2
40	7.82	33.502	2.77	2.26	7.80	2.23	28.3
50	7.72	33.697	2.59	2.37	7.79	2.25	30.3
62	7.61	33.818	7.45	2.38	7.81	2.26	30.4

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	13.56	31.47	23.98	433.3	0
10	9.65	32.48	25.22	276.3	.035
20	7.89	32.86	25.64	237.2	.061
30	7.66	33.13	25.92	210.1	.084
50	7.72	33.70	26.38	172.5	.127

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	B ($\times 10^8$)	ΔD (dyn.m)
C 110 44 49.4 N 124 07.8 W DATE 05 AUG 69 1854 GCT WIRE 00 DRY 59.1 WET 56.4 CRUISE Y69084													
WIND DIRECTION 17 VEL 04 KTS BAR 23 SWELL DIRECTION 28 H 04 T 07 CLOUD 8 AMT 2 WEATHER 02													
C	13.68	31.642	6.96	.37	8.31	2.17	.8	0	13.68	31.65	23.69	422.2	0
3	11.88	32.300	6.51	.78	8.21	2.19	4.7	10	9.49	33.07	25.56	244.4	.033
6	10.58	32.716	5.73	1.26	8.09	2.21	13.3	20	8.51	33.57	26.10	192.8	.055
10	9.49	33.067	4.75	1.86	7.94	2.21	20.0	30	7.96	33.64	26.24	179.9	.074
20	8.51	33.569	3.48	2.18	7.84	2.25	27.4	50	7.19	33.91	26.56	150.0	.107
30	7.96	33.740	2.99	2.27	7.82	2.23	[illegible].2						
40	7.48	33.[illegible]03	2.53	2.39	7.78	2.25	[illegible].3						
50	7.18	33.902	2.28	2.52	7.76	2.26	32.2						
NH 3 44 39.0 N 124 09.0 W DATE 05 AUG 69 2346 GCT WIRE 00 DRY 58.9 WET 56.8 CRUISE Y69084													
WIND DIRECTION 32 VEL 12 KTS BAR 22 SWELL DIRECTION 29 H 03 T 10 CLOUD 8 AMT 2 WEATHER 02													
0	12.04	33.075	5.20	1.53	8.05	2.11	18.2	0	12.04	33.08	25.12	286.4	0
3	10.34	33.220	5.02	1.73	8.01	2.17	18.9	10	8.97	33.65	26.09	193.6	.024
6	9.65	33.414	4.63	1.93	7.95	2.25	22.1	20	7.72	33.79	26.39	165.7	.042
10	8.97	33.648	4.09	2.18	7.85	2.26	28.1	30	7.33	33.88	26.52	153.4	.058
20	7.72	33.784	2.79										
30	7.33	33.879	2.27	2.50	7.81	2.15	33.5						
NH 5 44 39.0 N 124 10.8 W DATE 06 AUG 69 0055 GCT WIRE 07 DRY 59.9 WET 57.2 CRUISE Y69084													
WIND DIRECTION 34 VEL 12 KTS BAR 21 SWELL DIRECTION 29 H 04 T 10 CLOUD 8 AMT 2 WEATHER 02													
0	11.91	32.651	6.18	1.18	8.15	2.19	12.1	0	11.91	32.66	24.81	315.3	0
3	10.99	32.715	5.53	1.22	8.08	2.21	11.8	10	9.30	33.38	25.83	218.8	.027
6	9.59	33.302	4.63	1.90	7.94	2.23	24.0	20	8.10	33.62	26.20	183.5	.047
10	9.30	33.376	4.35	2.02	7.91	2.23	23.8	30	7.44	33.82	26.46	159.6	.064
20	8.10	33.515	3.14	2.25	7.83	2.25	29.0	50	7.19	33.91	26.56	149.9	.095
30	7.44	33.816	2.45	2.44	7.78	2.17	32.5						
40	7.27	33.891	2.26	2.52	7.78	2.19	33.3						
50	7.19	33.905	2.24	2.50	7.78	2.05	33.3						
NH 15 44 39.1 N 124 24.6 W DATE 06 AUG 69 0336 GCT WIRE 00 DRY 59.5 WET 57.2 CRUISE Y69084													
WIND DIRECTION 35 VEL 14 KTS BAR 20 SWELL DIRECTION 32 H 04 T 07 CLOUD 8 AMT 1 WEATHER 02													
0	12.97	32.204	7.54	.48	8.31	2.17	.4	0	12.97	32.21	24.27	367.5	0
3	12.92	32.207	6.76	.51	8.31	2.17	.5	10	10.23	32.43	24.94	303.7	.034
6	12.60	32.196	7.59	.50	8.31	2.17	.5	20	8.40	32.45	25.24	274.4	.062
10	10.23	32.427	7.00	.65	8.24	2.19	2.0	30	7.53	32.55	25.44	255.6	.089
20	8.40	32.448	6.36	.97	8.17		5.1	50	7.38	32.74	25.62	239.4	.138
30	7.52	32.542	5.79	1.31	8.11	2.15	11.5						
40	7.41	32.628	5.61	1.36	8.09	2.17	13.5						
50	7.37	32.736	5.37	1.43	8.05	2.19	15.7						
62	7.42	32.874	5.05	1.51	8.03	2.21	18.2						
A 122 45 14.3 N 124 56.8 W DATE 06 AUG 69 1424 GCT WIRE 00 DRY 59.9 WET 56.5 CRUISE Y69084													
WIND DIRECTION 01 VEL 14 KTS BAR 20 SWELL DIRECTION 34 H 05 T 07 CLOUD 8 AMT 3 WEATHER 02													
0	16.29	31.196	5.92	.30	8.31	2.03	.1	0	16.29	31.20	22.77	508.0	0
3	16.31	31.197	5.95	.31	8.33	2.15	.1	10	15.77	31.56	23.18	470.9	.049
6		31.268	5.96	.34	8.31	2.17	.1	20	13.23	32.23	24.23	370.9	.091
10	15.77	31.555	4.11	.35	8.31	2.17	.1	30	9.64	32.44	25.04	294.3	.124
20	13.23	32.230	4.72	.44	8.33	2.19	.1	50	8.15	32.47	25.29	270.2	.181
30	9.64	32.432	7.15	.67	8.29	2.21	.1	75	7.54	32.77	25.62	239.3	.244
40	8.74	32.466	4.48	.73	8.25	2.14	2.3	100	8.19	33.41	26.03	201.4	.299
50	8.15	32.465	4.53	.95	8.22	2.19	6.1	150	7.52	33.77	26.41	165.7	.391
62	7.76	32.576	4.10	1.07	8.18	2.19	9.8	200	7.05	33.93	26.60	148.3	.470
75	7.53	32.770	5.08	1.19	8.14	2.23	13.5						
100	8.19	33.408	4.18	1.54	8.01	2.25	23.0						
150	7.51	33.770	3.45		7.94	2.26							
200	7.05	33.933	2.65	2.37	7.86	2.28	34.2						
C 125 45 20.4 N 124 45.0 W DATE 06 AUG 69 1739 GCT WIRE 00 DRY 58.1 WET 55.3 CRUISE Y69084													
WIND DIRECTION 00 VEL 14 KTS BAR 20 SWELL DIRECTION 31 H 04 T 06 CLOUD 8 AMT 5 WEATHER 02													
0	15.18	32.135	6.33	.37	8.33	2.25	.1	0	15.18	32.14	23.76	416.0	0
3	15.08	32.182	6.54	.34	8.34	2.23	.1	10	14.55	32.18	23.92	400.3	.041
6	14.72	32.189	6.56	.34	8.33	2.25	.1	20	10.86	32.39	24.80	317.1	.077
10	14.55	32.177	6.46	.37	8.33	2.25	.1	30	9.38	32.47	25.11	287.9	.107
20	10.86	32.388	7.11	.48	8.31	2.25	.1	50	7.89	32.47	25.33	266.6	.162
30	9.38	32.445	7.04	.56	8.28	2.23	1.1	75	7.81	32.97	25.73	228.6	.224
40	8.43	32.475	6.52	.71	8.24	2.25	4.3	100	8.17	33.56	26.14	190.4	.277
50	7.88	32.663	3.28	.80	8.23	2.25	6.6	150	7.61	33.81	26.42	164.5	.345
62	7.55	32.816	5.85	.90	8.18	2.26	10.8	200	6.96	33.94	26.61	146.9	.443
75	7.40	32.963	5.55	1.12	8.10	2.19	16.7						
100	8.17	33.552	3.91	1.47	7.98	2.41	25.9						
150	7.61	33.804	3.03	1.56	7.95	2.33	28.9						
200	6.96	33.936	2.79	1.84	7.87	2.34	33.6						

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	S ($\times 10^8$)	ΔD (dyn.m)
C 127 45 20.0 N 124 32.5 W DATE 06 AUG 69 1915 GCT WIRE 00 DRY 54.7 WET 55.1 CRUISE Y690RA													
WIND DIRECTION 00 VEL 14 KTS BAR 20 SWELL DIRECTION 31 H 03 T 10 CLOUD 8 AMT 5 WEATHER 02													
0	14.92	32.275	6.67		8.33	2.17	.1	0	14.92	32.28	23.92	400.4	0
3	14.94	32.274	6.67	.27	8.32	2.17	.1	10	12.49	32.28	24.42	353.3	.038
6	14.98	32.281	6.67	.26	8.32	2.17	.1	20	8.91	32.47	25.18	281.0	.069
10	12.49	32.290	6.93	.40	8.30	2.15	.1	30	8.19	32.47	25.29	270.4	.097
20	8.91	32.461	6.61	.70	8.22	2.23	2.9	50	7.52	32.53	25.43	257.1	.150
30	8.19	32.464	6.63	.84	8.20	2.19	5.6	75	7.91	33.17	25.88	214.7	.209
40	7.79	32.463	6.51	.93	8.19	2.19	7.3	100	8.05	33.62	26.21	183.9	.258
50	7.51	32.523	6.28	1.00	8.17	2.19	9.6	150	7.35	33.89	26.52	155.1	.343
62	7.46	32.864	5.28	1.30	8.09	2.21	16.3	200	6.72	33.95	26.65	143.0	.418
75	7.90	33.158	4.67	1.54	8.03	2.21	20.4						
100	8.05	33.617	3.69	1.91	7.94	2.25	28.3						
150	7.35	33.883	3.00	2.19	7.87	2.26	33.0						
200	6.72	33.946	2.68	2.38	7.83	2.26	35.5						
C 129 45 20.7 N 124 19.0 W DATE 06 AUG 69 2145 GCT WIRE 00 DRY 59.1 WET 56.0 CRUISE Y690RA													
WIND DIRECTION 33 VEL 18 KTS BAR 20 SWELL DIRECTION 31 H 04 T 10 CLOUD 8 AMT 2 WEATHER 02													
0	13.66	31.045	7.89	.36	8.39	2.15	.1	0	13.66	31.05	23.24	465.8	0
3	13.25	31.227	7.89	.38	8.38	2.14	.1	10	8.68	32.45	25.20	278.5	.037
6	10.83	32.149	7.32	.50	8.28	2.14	.1	20	8.11	32.45	25.29	270.4	.065
10	8.68	32.447	7.01	.72	8.22	2.14	1.6	30	7.72	32.55	25.42	258.0	.091
20	8.11	32.449	6.68	.91	8.19	2.14	4.1	50	7.56	32.98	25.78	223.7	.139
30	7.72	32.546	6.20	1.05	7.96	2.15	8.9	75	7.79	33.55	26.20	184.8	.190
40	7.47	32.733	7.24		8.10	2.17		100	7.36	33.89	26.52	154.5	.233
50	7.55	32.979	5.04	1.53	8.03	2.17	18.6	150	7.35	33.95	26.57	150.5	.309
62	7.79	33.282	4.28	1.85	7.98	2.21	23.3						
75	7.78	33.349	3.37	2.24	7.88	2.23	28.7						
100	7.36	33.883	2.50	2.49	7.80	2.25	34.7						
150	7.35	33.948	2.52	2.52	7.81	2.23	35.8						
C 130 45 20.4 N 124 12.5 W DATE 06 AUG 69 2310 GCT WIRE 04 DRY 57.9 WET 55.3 CRUISE Y690RA													
WIND DIRECTION 33 VEL 18 KTS BAR 19 SWELL DIRECTION 31 H 03 T 10 CLOUD 8 AMT 2 WEATHER 02													
0	12.85	30.914	8.25		8.39	2.14	.1	0	12.85	30.92	23.29	460.3	0
3	12.43	31.735	7.93	.31	8.33	2.09	.1	10	8.16	32.46	25.29	270.3	.037
6	10.86	32.527	7.34	.44	8.25	2.06	1.1	20	7.41	32.58	25.49	251.5	.063
10	8.16	32.459	6.24	1.11	8.12	2.07	6.0	30	7.29	32.70	25.60	241.0	.087
20	7.40	32.574	4.00	1.30	8.11	2.15	8.8	50	7.53	33.19	25.95	208.2	.132
30	7.28	32.695	5.44	1.62	8.04	2.09	12.5	75	7.67	33.76	26.38	167.5	.179
40	7.56	33.123	4.78	1.90	7.99	2.19	17.2	100	7.29	33.91	26.54	152.0	.219
50	7.52	33.181	4.72	1.98	7.96	2.19	18.1						
62	7.72	33.448	3.80	2.23	7.91	2.21	21.9						
75	7.66	33.758	2.57			—							
100	7.28	33.901	3.02		7.78	2.09	28.4						
125	6.94	33.950	2.54		7.81	1.98							
C 131 45 20.4 N 124 05.6 W DATE 07 AUG 69 0050 GCT WIRE 04 DRY 58.4 WET 55.9 CRUISE Y690RA													
WIND DIRECTION 33 VEL 16 KTS BAR 18 SWELL DIRECTION 31 H 04 T 10 CLOUD 8 AMT 1 WEATHER 02													
0	13.39	31.580	8.31	.52	8.30	2.23	.8	0	13.39	31.58	23.70	421.3	0
3	13.43	31.647	8.43	.51	8.27	2.23	.8	10	10.72	32.61	24.99	298.2	.036
6	12.67	31.828	8.31	.62	8.25	2.23	1.4	20	8.40	32.82	25.53	247.0	.063
10	10.72	32.410	5.67	1.33	8.08	2.28	8.2	30	7.81	33.05	25.80	222.1	.087
20	8.40	32.819	3.30	2.11	7.80	2.28	21.0	50	7.67	33.67	26.31	174.0	.126
30	7.80	33.042	3.77	2.46	7.86	2.28	20.4	75	7.01	33.96	26.61	145.5	.166
40	7.58	33.410	3.18		7.82	2.28							
50	7.66	33.666	2.81		7.79	2.28							
62	7.46	33.868	3.01										
75	7.00	33.934	1.87		7.71	2.31							
C 132 45 20.3 N 124 02.0 W DATE 07 AUG 69 0218 GCT WIRE 00 DRY 57.4 WET 56.0 CRUISE Y690RA													
WIND DIRECTION 01 VEL 12 KTS BAR 18 SWELL DIRECTION 34 H 05 T 07 CLOUD 8 AMT 1 WEATHER 02													
0	11.31	32.471	6.34	1.52	8.12	2.25	9.9	0	11.31	32.58	24.86	310.8	0
3	11.08	32.547	6.33		8.13	2.25		10	7.88	33.18	25.89	212.8	.026
6	10.02	32.675	5.69	1.[illegible]	8.05	2.25	12.9	20	7.56	33.73	26.37	167.6	.045
10	7.87	33.177	3.21	2.35	7.81	2.25	24.7	30	7.43	33.84	26.47	157.8	.061
20	7.55	33.727	2.36	2.65	7.75	2.28	29.3						
30	7.42	33.836	2.17	2.56	7.76	2.26	27.6						
A 133 45 25.3 N 124 01.1 W DATE 07 AUG 69 0335 GCT WIRE 00 DRY 54.3 WET 54.8 CRUISE Y690RA													
WIND DIRECTION 34 VEL 14 KTS BAR 17 SWELL DIRECTION 32 H 03 T 06 CLOUD 8 AMT 1 WEATHER 02													
0	11.56	32.395	6.75	1.29	8.19	2.21	8.2	0	11.56	32.40	24.68	323.1	0
3	10.97	32.464	6.33	1.44	8.16	2.21	9.4	10	9.24	32.89	25.65	254.5	.029
6	9.48	32.797	4.62	2.16	7.95	2.21	14.8	20	7.89	33.22	25.92	210.4	.052
10	9.24	32.803	4.40	2.18	7.93	2.21	18.6	30	8.73	33.47	25.99	203.7	.073
20	7.88	33.213	3.01	2.47	7.83	2.23	25.5						
30	8.73	33.469	2.85		7.80	2.23							

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
A 140 44 52.3 N 124 17.4 W DATE 07 AUG 69 1237 GCT WIRE 04 DRY 57.3 WET 55.3 CRUISE Y69ORA													
WIND DIRECTION 35 VEL 05 KTS BAR 19 SWELL DIRECTION 33 H 02 T 05 CLOUD H AMT 3 WEATHER 03													
0	12.64	31.974	7.06	.50	8.31	2.19	1.0	0	12.64	31.98	24.15	378.3	0
3	12.63	31.980	7.02	.60	8.31	2.19	1.1	10	12.32	32.10	24.31	363.8	.237
6	12.59	32.012	7.07		8.31	2.19	1.1	20	7.66	32.49	25.38	261.3	.364
10	12.32	32.095	7.10		8.31	2.19	1.0	30	7.23	32.67	25.68	242.2	.364
20	7.65	32.497	5.99	1.18	8.14	2.19	8.0	50	7.56	33.16	25.92	210.3	.339
30	7.23	32.670	5.47	1.27	8.09	2.21	13.9	75	7.79	33.75	26.35	170.3	.184
40	7.27	32.909	5.04	1.38	8.05	2.21	17.0	100	7.35	33.89	26.53	153.0	.227
50	7.55	33.159	4.26		7.97	2.23							
62	7.79	33.561	2.90	1.98	7.85	2.25	28.1						
75	7.78	33.743			7.80	2.26							
100	7.35	33.889	2.69	2.07	7.83	2.28	30.7						
C 141 44 50.9 N 124 11.8 W DATE 07 AUG 69 1535 GCT WIRE 00 DRY 57.6 WET 55.2 CRUISE Y69ORA													
WIND DIRECTION 30 VEL 03 KTS BAR 19 SWELL DIRECTION 32 H 02 T 05 CLOUD 6 AMT 4 WEATHER 03													
0	11.54	32.280	6.37	.74	8.21	2.21	4.4	0	11.54	32.28	24.59	336.2	0
3	11.50	32.395	5.89	.70	8.14	2.23	5.7	10	8.79	32.61	25.31	268.3	.333
6	10.34	32.548	5.16	1.05	8.01	2.21	12.2	20	7.59	32.71	25.56	244.6	.365
10	8.79	32.607	4.66		7.98	2.19	16.5	30	7.26	32.89	25.75	226.1	.379
20	7.59	32.700	4.78	1.48	8.00	2.19	18.0	50	7.76	33.67	26.29	175.4	.323
30	7.25	32.889	4.43	1.64	8.00	2.21	17.5	75	7.19	33.93	26.57	148.8	.182
40	7.45	33.199	4.04	1.86	7.94	2.25	18.8						
50	7.75	33.644	2.54	2.19	7.80	2.28	29.4						
62	7.51	33.845	2.71	2.12	7.82	2.30	29.7						
75	7.18	33.922	2.25	2.43	7.77	2.30	30.8						
DB 1 44 48.7 N 124 05.5 W DATE 07 AUG 69 1704 GCT WIRE 00 DRY 52.0 WET 51.4 CRUISE Y69ORA													
WIND DIRECTION 32 VEL 04 KTS BAR 20 SWELL DIRECTION 32 H 02 T 05 CLOUD 6 AMT 7 WEATHER 02													
0	9.58	33.407	4.48	2.17	7.91	2.28		0	9.58	33.41	25.81	220.7	0
3	9.51	33.423	4.33	1.81	7.91	2.28		10	7.97	33.72	26.30	173.9	.322
6	8.45	33.621	3.45	2.00	7.84	2.31		20	7.43	33.84	26.47	157.9	.039
10	7.97	33.719	2.81	1.88	7.82	2.30							
20	7.42	33.833	2.32	1.77	7.78	2.30							
DB 3 44 49.8 N 124 07.9 W DATE 08 AUG 69 1804 GCT WIRE 00 DRY 58.0 WET 56.1 CRUISE Y69ORA													
WIND DIRECTION 28 VEL 04 KTS BAR 20 SWELL DIRECTION 32 H 02 T 05 CLOUD 6 AMT 7 WEATHER 02													
0	11.70	32.531	6.13	.88	8.10	2.19	11.3	0	11.70	32.54	24.76	320.5	0
3	11.27	32.500	6.06	.76	8.12	2.19	10.2	10	7.92	32.90	25.66	234.6	.022
6	9.41	32.770	4.99	.68			16.1	20	7.72	33.34	26.04	199.2	.049
10	7.91	32.891	4.36	1.55	7.93	2.19	19.7	30	7.77	33.64	26.27	177.3	.048
20	7.72	33.333	3.34	1.81	7.84	2.23	26.8						
30	7.76	33.637	2.89	2.08	7.80	2.23	29.8						
40	7.55	33.814	3.03	1.90	7.81	2.23	30.5						
C 144 44 53.7 N 124 23.4 W DATE 07 AUG 69 2010 GCT WIRE 00 DRY 58.5 WET 56.2 CRUISE Y69ORA													
WIND DIRECTION 28 VEL 02 KTS BAR 20 SWELL DIRECTION 32 H 03 T 10 CLOUD 6 AMT 2 WEATHER 02													
0	13.54	32.031	7.06		8.33	2.19	.1	0	13.54	32.04	24.02	391.0	0
3	13.35	32.015	7.04	.37	8.35	2.17	.1	10	10.23	32.38	24.90	307.4	.135
6	12.64	32.155	7.05	.37	8.32	2.17	.1	20	8.09	32.45	25.29	270.5	.040
10	10.23	32.377	7.14	.41	8.26	2.17	.1	30	7.77	32.47	25.35	264.6	.191
20	8.09	32.444	6.41	.75	8.19	2.09	4.1	50	7.52	32.86	25.49	232.4	.143
30	7.76	32.464	6.37	.94	8.17	2.15	6.4	75	7.93	33.49	24.12	191.7	.193
40	7.34	32.546	5.95	1.16	8.12	2.15	11.1	100	7.76	33.78	26.38	147.7	.238
50	7.51	32.854	4.28	1.58	8.06	2.17	15.3	150	6.74	33.98	26.68	139.8	.315
62	7.62	33.182	4.38	1.71	7.98	2.17	21.2						
75	7.92	33.482	3.89	1.86	7.94	2.28	25.3						
100	7.75	33.777	3.14	2.12	7.87	2.23	27.6						
150	6.74	33.982	2.01	2.59	7.77	2.26	34.1						
C 146 44 57.4 N 124 36.4 W DATE 07 AUG 69 2245 GCT WIRE 00 DRY 59.5 WET 56.8 CRUISE Y69ORA													
WIND DIRECTION 30 VEL 10 KTS BAR 20 SWELL DIRECTION 32 H 03 T 10 CLOUD 6 AMT 4 WEATHER 02													
0	14.73	32.237	6.57	.26	8.31	2.17	.1	0	14.73	32.24	23.93	399.3	0
3	14.27	32.229	6.65	.25	8.32	2.17	.1	10	13.33	32.23	24.21	372.9	.339
6	14.13	32.232	6.66	.30	8.32	2.17	.1	20	9.30	32.45	25.10	287.4	.472
10	13.33	32.226	6.80	.29	8.29	2.15	.1	30	8.65	32.48	25.23	276.4	.103
20	9.30	32.446	7.14	.49	8.25	2.17	.3	50	7.89	32.58	25.62	258.5	.191
30	8.65	32.474	6.72	.71	8.21	2.17	3.1	75	7.89	33.26	25.95	204.0	.212
40	8.33	32.4[illegible]	6.44	.78	8.18	2.17	5.9	100	7.92	33.65	26.25	179.6	.243
50	7.88	32.571	6.07	.96	8.14	2.17	9.7	150	7.35	33.88	26.51	155.7	.344
62	7.83	32.853	5.36	1.13	8.09	2.17	13.9	200	6.59	33.95	26.67	141.1	.419
75	7.88	33.255	4.53	1.45	8.02	2.21	19.9						
100	7.91	33.647	3.72	1.78	7.93	2.23	26.0						
150	7.35	33.875	3.36	1.93	7.90	2.25	27.4						
200	6.59	33.948	2.56	2.19	7.82	2.26	32.7						

	OBSERVED								INTERPOLATED				DERIVED	
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)		Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn m)

C 148 45 01.5 N 124 49.4 W DATE 08 AUG 69 0115 PCT WIRE 00 DRY 60.5 WET 58.4 CRUISE Y69084
WIND DIRECTION 30 VEL 08 KTS BAR 20 SWELL DIRECTION 32 H 03 T 06 CLOUD 8 AMT 4 WEATHER 02

0	15.71	31.823	4.34	.42	8.24	2.15	.1	0	15.71	31.83	23.40	449.8	0
3	15.72	31.820	4.28	.44	8.24	2.15	.1	10	15.34	31.84	23.51	[illegible]	[illegible]
4	15.52	31.825	4.15	.43	8.24	2.15	.1	20	13.25	32.13	24.15	379.0	.245
10	15.34	31.860	4.21	.42	8.24	2.15	.1	30	9.56	32.63	25.04	293.9	.114
20	13.25	32.125	4.48		8.26	2.15	.1	50	7.90	32.96	25.32	247.4	.175
30	9.58	32.424	7.15	.61	8.20	2.17	.1	75	8.01	33.00	25.73	222.3	.137
40	8.38	32.454	4.78	.83	8.17	2.17	3.6	100	8.00	33.38	26.03	201.0	.291
50	7.89	32.451	4.61	.54	8.18	2.17	5.9	150	7.57	33.83	26.44	162.7	.182
62	7.97	32.498	4.87	1.41	8.09	2.17	11.3	200	7.11	33.95	26.80	147.8	.449
75	8.01	32.998	5.12	1.43	8.02	2.19	15.7						
100	8.00	33.177	4.31	1.71	7.95	2.19	21.7						
150	7.57	33.821	3.41	2.00	7.86	2.23	28.5						
200	7.11	33.951	2.81	2.31	7.80	2.25	31.9						

A 149 45 05.0 N 124 40.6 W DATE 08 AUG 69 0317 PCT WIRE 00 DRY 60.6 WET 57.9 CRUISE Y69084
WIND DIRECTION 00 VEL 08 KTS BAR 20 SWELL DIRECTION 32 H 03 T 06 CLOUD 8 AMT 7 WEATHER 02

0	14.44	32.212	4.41		8.27	2.19	.1	0	14.94	32.22	23.87	405.4	0
3	14.28	32.134	4.41	.37	8.26	2.17	.1	10	12.78	32.27	24.35	359.7	.338
4	14.14	32.214	4.47	.45	8.27	2.17	.1	20	9.33	32.46	25.11	287.4	.071
10	12.78	32.265	4.43	.52	8.26	2.17	.1	30	9.04	32.47	25.16	282.8	.099
20	9.33	32.457	7.31	.68	8.24	2.17	.1	50	8.21	32.53	25.33	266.7	.156
30	9.04	32.468	7.16	.78	8.23	2.17	.0	75	7.78	32.87	25.66	239.8	.217
40	8.68	32.446	4.47	.93	8.17	2.17	5.1	100	8.06	33.52	26.13	191.3	.270
50	8.21	32.523	4.14	1.11	8.18	2.17	7.0	150	7.54	33.06	26.44	161.1	.398
62	8.02	32.604	4.96					200	6.60	33.96	26.67	141.5	.434
75	7.77	32.861	5.43	1.53	8.08	2.19	14.2						
100	8.04	33.514	3.75	2.00	7.94	2.23	24.7						
150	7.53	33.835	3.35	2.16	7.90	2.25	27.7						
200	6.60	33.944	2.54	2.53	7.81	2.26	33.1						

A 150 45 03.5 N 124 04.0 W DATE 08 AUG 69 1235 PCT WIRE 00 DRY 53.6 WET 51.9 CRUISE Y69084
WIND DIRECTION 00 VEL 08 KTS BAR 19 SWELL DIRECTION 32 H 02 T 05 CLOUD 8 AMT 2 WEATHER 02

0	10.60	32.585	4.03	1.05	8.14	2.21	9.7	0	10.60	32.59	25.00	297.9	0
3	9.77	32.639	4.55	1.47	7.98	2.21	14.8	10	8.46	32.97	25.44	234.6	.127
4	9.43	32.820	4.27	1.55	7.96	2.21	17.7	20	7.78	33.39	26.07	194.7	.048
10	9.44	32.968	3.51	1.89	7.86	2.19	24.0	30	7.41	33.76	26.36	168.3	.047
20	7.77	33.389	2.86	2.02	7.83	2.23	28.5						
30	7.41	33.730	2.38	2.25	7.78	2.25	31.2						
40	7.47	33.866	2.55	2.23	7.80	2.25	31.7						

C 157 45 02.8 N 124 10.7 W DATE 08 AUG 69 1506 PCT WIRE 00 DRY 55.5 WET 53.8 CRUISE Y69084
WIND DIRECTION 00 VEL 08 KTS BAR 19 SWELL DIRECTION 32 H 02 T 05 CLOUD 8 AMT 4 WEATHER 02

0	13.02	31.447	4.30	.38	8.40	2.23	.1	0	13.02	31.44	23.83	403.4	0
3	13.02	31.449	4.26	.34	8.40	2.21	.1	10	9.72	32.44	25.04	294.2	.135
4	12.94	31.671	4.18		8.38	2.21		20	8.25	32.84	25.61	258.4	.243
10	9.72	32.444	4.13		8.04	2.19	.1	30	7.48	32.73	25.94	241.4	.188
20	8.25	32.831	4.11	1.24	7.94	2.19	21.0	50	7.47	33.31	26.05	197.9	.132
30	7.48	32.723	4.07		8.03	2.19		75	7.47	33.88	26.50	154.4	.176
40	7.38	33.027	4.53	1.27	7.97	2.21	21.2	100	7.08	33.94	26.60	144.8	.214
50	7.47	33.310	4.14	1.43	7.94	2.23	23.9						
62	7.75	33.699	2.64		7.82	2.26	30.4						
75	7.47	33.873	2.51	2.13	7.81	2.24	32.4						
100	7.08	33.935	2.32	2.40	7.80	2.28	33.9						

C 158 44 59.9 N 124 18.0 W DATE 08 AUG 69 1825 PCT WIRE 00 DRY 57.5 WET 55.4 CRUISE Y69084
WIND DIRECTION 02 VEL 12 KTS BAR 18 SWELL DIRECTION 31 H 02 T 05 CLOUD 6 AMT 2 WEATHER 02

0	13.25	31.509	7.36	.47	8.31	2.17	.1	0	13.25	31.51	23.67	423.0	0
3	13.35	31.497	7.28	.48	8.31	2.15	.1	10	10.50	32.40	24.87	310.1	.337
4	13.25	31.739	7.41	.75	8.29	2.19	.1	20	8.22	32.46	25.28	271.2	.046
10	10.50	32.400	7.29	.44	8.22	2.17	.2	30	7.82	32.51	25.37	262.4	.192
20	8.22	32.459	4.72	1.17	8.18	2.17	3.1	50	7.72	33.20	25.93	209.8	.140
30	7.81	32.501	4.31		8.15	2.15	6.4	75	7.88	33.73	26.32	173.1	.188
40	7.53	32.819	4.49	1.47	8.05	2.17	13.1	100	7.49	33.87	26.49	157.1	.229
50	7.72	33.196	4.54	1.53	7.98	2.19	16.6	150	6.74	33.98	26.68	140.2	.303
62	7.76	33.419	3.73	2.08	7.91	2.21	21.4						
75	7.87	33.722	3.11	2.51	7.85	2.23	26.5						
100	7.45	33.864	3.02	2.50	7.85	2.25	28.1						
150	6.74	33.977	1.94	2.83	7.74	2.26	33.8						

C 159 44 58.2 N 124 24.9 W DATE 08 AUG 69 1716 PCT WIRE 00 DRY 57.1 WET 55.8 CRUISE Y69084
WIND DIRECTION 34 VEL 14 KTS BAR 18 SWELL DIRECTION 31 H 02 T 05 CLOUD 8 AMT 1 WEATHER 02

0	13.95	31.549	7.29	.30	8.31	2.17	.1	0	13.95	31.55	23.56	434.3	0
3	13.17	31.513	7.23	.72	8.23	2.19	.1	10	9.41	32.46	25.10	288.6	.336
4	10.20	32.405	7.30	.59	8.25	2.17	.1	20	8.58	32.47	25.23	275.7	.044
10	9.41	32.458	7.37	.37	8.35	2.17	.1	30	8.04	32.47	25.31	268.6	.192
20	8.58	32.467	7.10	.85	8.22	2.25	2.0	50	7.47	32.75	25.61	240.0	.142
30	8.04	32.462	4.72	1.03	8.19	2.17	5.5	75	7.82	33.45	26.11	192.8	.197
40	7.49	32.498	4.45	1.15	8.15	2.17	7.9	100	7.54	33.80	26.41	185.3	.241
50	7.47	32.745	5.03	1.37	8.10	2.19	13.1	150	6.95	33.93	26.61	144.2	.319
62	7.71	33.159	4.72	1.68	7.99	2.21	20.3	200	6.34	34.01	26.76	132.9	.189
75	7.82	33.448	4.06	1.91	7.96	2.23	23.3						
100	7.68	33.796	3.22	2.16	7.87	2.25	29.2						
150	6.95	33.929	2.95	2.37	7.84	2.26	32.3						
200	6.34	34.015	2.02	2.69	7.75	2.26	37.4						

C 160 44 56.7 N 124 31.6 W DATE 08 AUG 69 1937 PCT WIRE 00 DRY 58.1 WET 45.5 CRUISE Y690A4
WIND DIRECTION 36 VEL 14 KTS BAR 18 SWELL DIRECTION 31 M 02 T 05 CLOUD 6 AMT 1 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	14.40	31.734	6.89	.30	8.32	2.15	.1
3	14.39	31.736	6.81	.3	8.33	2.15	.1
6	14.23	31.762	6.80	.32	8.34	2.15	.1
10	13.99	32.093	6.81	.35	8.32	2.15	.1
20	9.50	32.429	7.30	.47	8.25	2.15	.1
30	8.27	32.449	6.33	.80	8.19	2.15	3.7
40	7.83	32.454	6.36	.92	8.17	2.15	6.6
50	7.54	32.519	6.16	.71	8.18	2.15	9.7
62	7.46	32.762	5.56	.97	8.09	2.15	13.9
75	7.81	33.186	4.60	1.31	8.01	2.19	19.5
100	7.98	33.666	3.63	1.66	7.91	2.23	26.4
150	7.12	33.902	3.08	1.88	7.87	2.25	31.5
200	6.46	33.963	2.71	2.26	7.79	2.26	35.6

INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED Φ ($\times 10^5$)	ΔD (dyn.m)
0	14.40	31.74	23.62	429.2	0
10	13.99	32.10	23.98	395.3	.361
20	9.50	32.43	25.04	293.5	.376
30	8.27	32.45	25.28	271.1	.104
50	7.55	32.52	25.42	247.8	.147
75	7.82	33.19	25.91	212.1	.218
100	7.96	33.67	26.26	178.4	.265
150	7.13	33.91	26.57	150.5	.167
200	6.46	33.96	26.70	138.3	.619

C 162 44 52.2 N 124 17.6 W DATE 08 AUG 69 2120 PCT WIRE DRY 57.9 WET 56.1 CRUISE Y690A4
WIND DIRECTION 35 VEL 14 KTS BAR 18 SWELL DIRECTION 31 M 02 T 10 CLOUD 6 AMT 1 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	11.49	31.946	7.04	.56	8.29	2.19	2.1
3	10.72	32.478	6.76	.85	8.22	2.19	3.6
6	9.58	32.452	6.80	.82	8.22	2.19	3.6
10	8.17	32.446	4.32	1.06	8.15	2.17	5.8
20	7.56	32.483	5.99	1.31	8.13	2.17	9.5
30	7.36	32.743	5.35		8.05	2.17	13.8
40	7.56	33.138	4.53	1.90	7.99	2.21	20.5
50	7.68	33.403	3.72	2.14	7.93	2.21	25.0
62	7.72	33.455	3.70	2.47	7.82	2.22	30.7
75	7.64	33.502	3.15		7.87	2.25	
100	7.36	33.491	3.40	2.54	7.82	2.25	32.6

INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED Φ ($\times 10^5$)	ΔD (dyn.m)
0	11.49	32.00	24.32	362.7	0
10	9.17	32.45	25.27	271.5	.232
20	7.57	32.50	25.40	259.4	.058
30	7.34	32.75	25.63	239.2	.083
50	7.69	33.41	26.10	193.0	.124
75	7.49	33.81	26.42	164.0	.171
100	7.15	33.90	26.63	153.0	.231

C 163 44 50.0 N 124 17.5 W DATE 08 AUG 69 2268 PCT WIRE 01 DRY 58.2 WET 56.0 CRUISE Y690A4
WIND DIRECTION 35 VEL 16 KTS BAR 17 SWELL DIRECTION 31 M 02 T 10 CLOUD 6 AMT 1 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	11.07	32.414	6.67	.60	8.18	2.21	4.6
3	10.02	32.701	5.00	.89	8.03	2.19	13.7
6	9.37	32.880	4.43	1.22	7.98	2.21	17.2
10	8.23	32.815	3.97	1.67			23.0
20	7.34	32.923	4.52		7.97	2.19	
30	7.64	33.182	3.64	1.69	7.95	2.21	25.4
40	7.73	33.496	3.51	2.18	7.80	2.23	31.9
50	7.55	33.419	3.67	2.17	7.81	2.25	32.1
62	7.69	33.449	3.44		7.81	2.25	
75	7.25	33.406	3.51	2.17	7.79	2.26	33.6

INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED Φ ($\times 10^5$)	ΔD (dyn.m)
0	11.07	32.42	24.78	318.3	0
10	8.23	32.82	25.56	244.7	.028
20	7.34	32.93	25.77	226.7	.042
30	7.69	33.39	26.08	195.5	.073
50	7.56	33.82	26.44	161.1	.108
75	7.26	33.91	26.55	150.9	.167

C 164 44 45.5 N 124 21.0 W DATE 09 AUG 69 0025 PCT WIRE 06 DRY 57.7 WET 56.0 CRUISE Y690A4
WIND DIRECTION 35 VEL 18 KTS BAR 15 SWELL DIRECTION 32 M 05 T 06 CLOUD AMT 0 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	13.29	31.967	7.44	.33	8.31	2.19	.1
3	13.13	31.925	6.37	.39	8.31	2.17	.1
6	13.29	31.924		.39	8.32	2.17	.1
10	10.91	32.403	7.68	.47	8.25	2.19	.1
20	7.49	32.487	5.93	1.04	8.10	2.17	10.5
30	7.54	32.564	6.39	1.05	8.12	2.17	10.1
40	7.15	32.738	5.37	1.29	8.05	2.17	15.6
50	7.52	33.157	4.30	1.52	7.96	2.21	22.4
62	7.90	33.658	3.65	1.78	7.90	2.23	27.1
75	7.40	33.722	3.33	1.89	7.87	2.25	28.3
100	7.49	33.464	3.74	2.06	7.82	2.25	31.5

INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED Φ ($\times 10^5$)	ΔD (dyn.m)
0	13.29	31.95	24.00	392.8	0
10	10.91	32.41	24.80	316.6	.035
20	7.90	32.42	25.35	264.4	.065
30	7.55	32.57	25.46	254.2	.090
50	7.53	33.16	25.93	210.0	.137
75	7.81	33.76	26.34	170.0	.196
100	7.44	33.87	26.49	157.4	.225

NH 24 44 39.1 N 124 34.6 W DATE 09 AUG 69 0304 PCT WIRE 00 DRY 59.0 WET 56.0 CRUISE Y690A4
WIND DIRECTION 34 VEL 18 KTS BAR 14 SWELL DIRECTION 32 M 04 T 06 CLOUD AMT 0 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	13.79	32.156	4.75	.37	8.33	2.19	.1
3	13.98	32.149	6.80	.36	8.32	2.17	.1
6	13.91	32.149	4.83	.35	8.31	2.17	.1
10	13.02	32.218	4.92	.41	8.30	2.17	.1
20	8.89	32.456	4.81	.73	8.21	2.17	2.6
30	8.33	32.490	4.33	.96	8.17	2.17	6.7
40	7.83	32.549	4.08	1.04	8.14	2.17	
50	7.45	32.598	3.95	1.14	8.12	2.17	11.4
62	7.62	32.898	3.12	1.40	8.04	2.19	17.5
75	4.03	33.294	4.26	1.60	7.97	2.21	21.9
100	7.88	33.672	3.44	1.84	7.91	2.23	27.9
150	7.10	33.937	2.14	2.37	7.79	2.25	35.4
200	6.73	34.000	2.11	2.45	7.78	2.26	36.4

INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED Φ ($\times 10^5$)	ΔD (dyn.m)
0	13.79	32.16	24.06	384.6	0
10	13.02	32.22	24.97	367.4	.038
20	8.89	32.46	25.18	280.9	.070
30	8.33	32.50	25.29	270.8	.098
50	7.45	32.60	25.50	250.7	.150
75	8.03	33.30	25.98	207.0	.207
100	7.49	33.88	26.28	177.4	.255
150	7.10	33.94	26.60	147.7	.336
200	6.73	34.00	26.69	139.1	.408

NH 10 44 39.1 N 124 17.7 W DATE 09 AUG 69 1439 PCT WIRE 03 DRY 56.0 WET 54.9 CRUISE Y690A4
WIND DIRECTION 35 VEL 0 KTS BAR 18 SWELL DIRECTION 32 M 03 T 05 CLOUD 8 AMT 8 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	11.40	32.414	7.15	.60	8.26	2.23	1.8
3	11.21	32.425	7.00	.58	8.26	2.23	2.4
6	8.91	32.952	4.93	1.19	8.03	2.19	17.3
10	9.14	32.772	4.11	1.51	7.93	2.21	21.1
20	7.26	32.989	4.57	1.68	7.98	2.21	20.5
30	7.43	33.240	4.04	1.54	7.94	2.23	24.8
40	7.78	33.554	2.97	1.96	7.82	2.26	30.4
50	7.70	33.714	2.54	1.98	7.80	2.25	32.1
62	7.62	33.435	2.69	2.07	7.81	2.28	32.3

INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED Φ ($\times 10^5$)	ΔD (dyn.m)
0	11.40	32.42	24.72	323.9	0
10	9.14	32.78	25.38	261.2	.029
20	7.27	32.99	25.83	214.7	.053
30	7.44	33.25	26.00	202.4	.074
50	7.70	33.72	26.34	171.0	.112

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁻²)	ΔD (dyn.m)
NH 3 44 39.1 N 124 07.8 W DATE 09 AUG 69 1720 GCT WIRE 00 DRY 55.5 WET 54.0 CRUISE Y69094													
WIND DIRECTION 34 VEL 04 KTS BAR 19 SWELL DIRECTION 30 H 02 T 05 CLOUD 4 AMT 4 WEATHER 02													
0	8.64	33.631	3.54	1.19	7.81	2.31	29.0	0	8.64	33.64	26.13	189.4	0
3	8.18	33.654	3.24	1.16	7.84	2.26	29.4	10	7.60	33.83	26.44	160.9	.018
6	7.79	33.759	2.64	1.31	7.80	2.25	31.1	20	7.21	33.91	26.55	150.0	.033
10	7.60	33.824	2.47	1.23	7.79	2.28	31.1	30	7.18	33.91	26.56	149.3	.048
20	7.21	33.901	2.11	1.49	7.78	2.28	33.8						
30	7.17	33.905	2.09	1.42	7.78	2.28	33.3						
NH 5 44 39.3 N 124 10.7 W DATE 09 AUG 69 1817 GCT WIRE 00 DRY 54.4 WET 53.6 CRUISE Y69094													
WIND DIRECTION 33 VEL 08 KTS BAR 19 SWELL DIRECTION 30 H 02 T 05 CLOUD 6 AMT 4 WEATHER 02													
0	9.92	33.263	4.83	1.99	7.93	2.26	21.7	0	9.92	33.27	25.64	236.*	0
3	9.89	33.248	4.83	1.98	7.95	2.26	21.8	10	7.74	33.60	26.24	179.4	.021
6	8.45	33.374	3.37	2.34	7.84	2.25	26.0	20	7.55	33.80	26.42	162.4	.038
10	7.75	33.600	2.77	2.41	7.80	2.26	29.3	30	7.17	33.92	26.57	148.3	.053
20	7.54	33.795	2.44	2.49	7.78	2.28	31.4						
30	7.16	33.917	2.22	2.59	7.75	8.28	33.5						
40	7.23	33.922	2.21	2.63	7.76	2.28	33.5						
NH 15 44 38.9 N 124 24.8 W DATE 09 AUG 69 2018 GCT WIRE 00 DRY 60.5 WET 58.0 CRUISE Y69094													
WIND DIRECTION 34 VEL 04 KTS BAR 20 SWELL DIRECTION 30 H 02 T 10 CLOUD 6 AMT 4 WEATHER 02													
0	13.09	32.003	7.46	.43	8.30	2.21	.1	0	13.09	32.01	24.09	384.5	0
3	12.90	31.996	7.61	.44	8.30	2.21	.1	10	9.73	32.42	25.01	237.1	.034
6	12.59	32.027	7.43	.52	8.30	2.19	.1	20	7.97	32.49	25.33	265.1	.062
10	9.73	32.410	7.31	.70	8.24	2.19	.1	30	7.45	32.61	25.50	249.9	.088
20	7.97	32.481	5.94	1.29	8.11	2.17	.1	50	7.46	33.03	25.83	219.9	.135
30	7.45	32.605	5.75	1.44	8.08	2.17	8.4	75	7.83	33.70	26.31	174.6	.184
40	7.47	32.897	5.27	1.58	8.04	2.19	10.8						
50	7.46	33.027	4.74	1.77	8.00	2.19	14.7						
62	7.64	33.273	4.02		7.94	2.23							
75	7.83	33.697	3.29	2.16	7.88	2.25	17.5						
NH 35 44 39.1 N 124 52.8 W DATE 09 AUG 69 2341 GCT WIRE 00 DRY 62.1 WET 58.0 CRUISE Y69094													
WIND DIRECTION 33 VEL 04 KTS BAR 21 SWELL DIRECTION 32 H 02 T 05 CLOUD 8 AMT 4 WEATHER 02													
0	15.28	31.798	6.24	.37	8.28	2.19	.1	0	15.29	31.80	23.48	442.7	0
3	15.18	31.821	6.25	.40	8.28	2.21	.1	10	13.29	32.02	24.06	387.1	.041
6	14.73	31.844	6.56	.61	8.27	2.21	.1	20	10.30	32.34	24.85	311.9	.076
10	13.28	32.020	6.99	.57	8.27	2.19	.1	30	9.07	32.45	25.14	284.5	.106
20	10.30	32.333	6.63	.78	8.22	2.19	.1	50	7.83	32.56	25.41	259.9	.141
30	9.07	32.448	6.64	.87	8.19	2.19	1.7	75	7.99	33.16	25.86	217.1	.220
40	8.70	32.476	6.72		8.20	2.19		100	7.82	33.57	26.21	184.3	.270
50	7.83	32.555	6.08	1.21	8.15	2.19		150	7.45	33.91	26.53	154.5	.355
62	7.90	32.792	5.43	1.62	8.08	2.19	12.7	200	7.05	33.97	26.63	145.3	.430
75	7.99	33.153	4.49	1.73	8.00	2.21		250	6.63	34.01	26.72	137.5	.501
100	7.81	33.565	2.88	1.99	7.94	2.23	22.1	300	6.27	34.05	26.79	130.9	.568
150	7.45	33.909	1.85	2.30	7.85	2.26	28.7	400	5.79	34.09	26.89	123.3	.695
200	7.04	33.968	2.60	2.64	7.84	2.20	31.3						
300	6.26	34.043	1.78	3.01	7.75	2.30	36.5						
400	5.79	34.089	1.35	3.23	7.71	2.14	39.5						
NH 45 44 39.1 N 125 07.0 W DATE 10 AUG 69 0145 GCT WIRE 05 DRY 61.7 WET 59.0 CRUISE Y69094													
WIND DIRECTION 35 VEL 04 KTS BAR 20 SWELL DIRECTION 32 H 02 T 05 CLOUD 8 AMT 4 WEATHER 02													
0	15.77	31.656	6.16	.58	8.28	2.17	.1	0	15.77	31.66	23.26	461.3	0
3	15.71	31.656	6.24		8.28	2.17		10	15.21	31.69	23.41	449.6	.046
6	15.36	31.678	6.24		8.30	2.17		20	12.95	32.03	24.13	389.9	.087
10	15.21	31.687	6.29	.47	8.30	2.17		30	8.97	32.47	25.17	281.7	.120
20	12.95	32.022	6.66		8.25	2.17		50	8.14	32.53	25.34	265.4	.175
30	8.97	32.466	6.69	1.48	8.20	2.17	2.4	75	8.19	33.13	25.81	221.5	.236
40	8.51	32.470	6.41		8.18	2.17		100	7.98	33.58	26.19	184.1	.297
50	8.14	32.527	6.18	1.08	8.16	2.17	7.0	150	7.69	33.89	26.47	159.7	.373
62	8.02	32.718	5.77	1.27	8.12	2.19	10.7	200	7.14	33.96	26.61	147.5	.450
75	8.18	33.130	4.81	1.63	7.02	2.21	16.5	250	6.70	34.00	26.70	139.4	.522
100	7.98	33.573	3.89	2.00	7.95	2.23	22.6	300	6.35	34.03	26.77	133.3	.590
150	7.69	33.884	3.17	2.27	7.87	2.26	27.3	400	5.78	34.10	26.89	123.6	.718
200	7.13	33.955	2.60	2.48	7.83	2.26	30.4	500	5.24	34.15	27.00	115.2	.835
300	6.35	34.027	1.86	2.68	7.75	2.28	32.4	600	4.79	34.22	27.11	108.3	.943
400	5.77	34.092	1.21	2.87	7.69	2.30	34.6	700	4.39	34.28	27.20	94.9	1.042
600	4.78	34.217	.54	3.29	7.64	2.31	38.9	800	4.08	34.35	27.29	87.0	1.133
800	4.08	34.348	.36		7.65	2.36	43.2						

OBSERVED								INTERPOLATED				DERIVED	
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($r10^5$)	ΔD (dyn.m)

NM 65 44 39.3 N 125 35.3 W DATE 10 AUG 69 0454 GCT WIRE 00 DRY 62.3 WET 60.0 CRUISE Y690RA
WIND DIRECTION 32 VEL 08 KTS BAR 20 SWELL DIRECTION 30 H 02 T 05 CLOUD 6 AMT 7 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	17.18	31.015	5.79	.40	8.27	2.15	.1
3	17.18	31.011	5.84	.40	8.27	2.15	.1
6	16.40	31.270	5.94	.41	8.28	2.15	.1
10	16.34	31.370	5.94	.40	8.27	2.17	.1
20	13.66	32.393	6.59	.60	8.25	2.19	.1
30	11.23	32.431	7.07	.64	8.25	2.19	.1
40	9.35	32.423	7.21	.66	8.26	2.19	.1
50	8.75	32.445	6.94	.77	8.24	2.19	.5
62	8.20	32.489	6.48	.92	8.21	2.19	4.2
75	7.42	32.543	6.07	1.07	8.18	2.19	6.0
100	7.75	33.102	5.09	1.56	8.06	2.23	14.7
150	7.68	33.837	3.33	2.17	7.91	2.26	25.6
200	7.30	33.959	2.31	2.55	7.81	2.28	29.7
300	6.53	34.073	1.85	2.78	7.76	2.30	33.2
400	5.54	34.041	1.39	3.03	7.70	2.31	36.7
600	4.75	34.209	.54	3.36	7.64	2.34	41.4
800	4.15	34.343	.34	3.39	7.65	2.36	41.4
1000	3.59	34.414	.39	3.51	7.66	2.39	43.2
1200	3.20	34.465	.49		7.68	2.40	

Z (m)	T (°C)	S (‰)	σ_t	δ ($r10^5$)	ΔD (dyn.m)
0	17.19	31.02	22.45	540.7	0
10	16.34	31.38	22.91	494.6	.152
20	13.66	32.40	24.27	347.1	.195
30	11.23	32.44	24.77	320.3	.129
50	8.75	32.45	25.19	240.3	.184
75	7.93	32.57	25.40	250.0	.247
100	7.76	33.11	25.85	217.0	.317
150	7.69	33.84	26.44	153.0	.417
200	7.31	33.96	26.59	149.5	.435
250	6.91	34.01	26.69	141.7	.463
300	6.54	34.03	26.76	135.9	.532
400	5.84	34.07	26.86	125.7	.743
500	5.24	34.13	26.98	114.0	.883
600	4.76	34.21	27.11	103.5	.991
700	4.42	34.28	27.20	95.2	1.091
800	4.16	34.35	27.24	87.3	1.157
1000	3.60	34.42	27.34	77.8	1.365
1200	3.20	34.47	27.47	70.9	1.496

NM 85 44 38.8 N 126 03.1 W DATE 10 AUG 69 1419 GCT WIRE 04 DRY 63.5 WET 58.9 CRUISE Y690RA
WIND DIRECTION 35 VEL 07 KTS BAR 20 SWELL DIRECTION 32 H 04 T 07 CLOUD 6 AMT 8 WEATHER 03

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	17.11	31.464	5.72	.36	8.26	2.15	.1
3	17.11	31.511	5.71	.42	8.25	2.17	.3
6	16.86	31.799	5.76	.44	8.24	2.17	.3
10	16.85	31.897	5.77	.44	8.25	2.17	.3
20	16.71	32.097	5.79	.51	8.23	2.19	.3
30	14.05	32.310	6.16		8.24	2.19	.3
40	11.24	32.432	7.13	.57	8.27	2.19	.2
50	9.53	32.443	7.22		8.28	2.19	1.7
62	8.87	32.484	6.87	.81	8.22	2.19	5.5
75	8.53	32.544	6.27	.94	8.18	2.19	23.0
100	8.49	32.963	5.21	1.45	8.09	2.21	25.9
150	7.99	33.684	3.73	2.01	7.95	2.26	26.4
200	7.73	33.931	2.04	2.15	7.87	2.28	40.5
300	6.28	33.973	2.29		7.80	2.31	
400	5.55	34.061	1.27	3.09	7.71	2.33	44.2
600	4.72	34.196	.63	3.32	7.64	2.36	44.7
799	4.23	34.315	.34	3.47	7.65	2.37	44.8
999	3.62	34.406	.38	3.45	7.65	2.40	44.2
1199	3.11	34.476	.50	3.35	7.68	2.41	

Z (m)	T (°C)	S (‰)	σ_t	δ ($r10^5$)	ΔD (dyn.m)
0	17.11	31.47	22.81	504.6	0
10	16.85	31.90	23.20	469.3	.144
20	16.71	32.10	23.39	451.4	.195
30	14.05	32.31	24.13	381.0	.135
50	9.53	32.45	25.06	292.1	.204
75	8.53	32.55	25.30	270.1	.274
100	8.49	32.97	25.6	238.4	.335
150	7.99	33.64	26.27	179.8	.442
200	7.73	33.94	26.50	157.6	.424
250	7.04	33.95	26.62	147.3	.402
300	6.29	33.98	26.74	136.0	.473
400	5.56	34.07	26.90	122.1	.402
500	5.06	34.13	27.01	111.7	.419
600	4.72	34.20	27.10	104.1	1.027
700	4.46	34.26	27.17	97.4	1.127
800	4.23	34.32	27.25	91.1	1.222
1000	3.62	34.41	27.39	79.0	1.392
1200	3.11	34.48	27.48	69.0	1.540

NM 105 44 39.1 N 124 31.2 W DATE 10 AUG 69 1741 GCT WIRE 00 DRY 61.9 WET 59.0 CRUISE Y690RA
WIND DIRECTION 35 VEL 10 KTS BAR 21 SWELL DIRECTION 31 H 04 T 07 CLOUD 6 AMT 7 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	17.15	31.784	5.76	.36	8.23	2.19	.1
3	17.17	31.786	5.81	.35	8.22	2.23	.1
6	17.16	31.783	5.87	.34	8.22	2.25	.1
10	17.18	31.833	5.79	.52	8.22	2.25	.1
20	14.63	32.040	5.84	.52	8.21	2.25	.1
30	14.15	32.400	6.44		8.20	2.25	.1
40	11.15	32.462	7.10	.58	8.24	2.25	.1
50	9.76	32.469	7.18	.54	8.24	2.23	.1
62	8.77	32.472	6.89	.67	8.20	2.28	.4
75	8.16	32.486	6.48	.87	8.17	2.26	2.9
100	7.94	32.942	5.35	2.18	8.06	2.26	15.9
150	8.31	33.790	3.34		7.88	2.31	
200	7.66	33.913	3.16	2.15	7.85	2.31	27.1
300	6.61	33.994	2.39	2.39	7.77	2.31	31.4
400	5.60	34.024	1.71	2.73	7.69	2.40	36.2
600	4.77	34.243	.39		7.60	2.41	
800	4.17	34.343	.19		7.61	2.41	
1000	3.59	34.421	.32		7.62	2.43	

Z (m)	T (°C)	S (‰)	σ_t	δ ($r10^5$)	ΔD (dyn.m)
0	17.15	31.79	23.05	483.9	0
10	17.19	31.84	23.09	480.9	.048
20	16.63	32.04	23.35	454.2	.095
30	14.15	32.40	24.18	374.4	.137
50	9.76	32.47	25.05	293.8	.204
75	8.16	32.49	25.31	259.1	.274
100	7.94	32.95	25.70	232.4	.337
150	8.31	33.79	26.31	175.4	.439
200	7.67	33.92	26.50	157.9	.522
250	7.11	33.97	26.62	147.1	.598
300	6.61	34.00	26.71	139.0	.470
400	5.60	34.03	26.86	125.5	.402
500	5.07	34.13	27.00	112.2	.421
600	4.78	34.25	27.13	101.2	1.027
700	4.45	34.30	27.21	94.1	1.125
800	4.18	34.35	27.28	88.1	1.216
1000	3.59	34.42	27.39	77.6	1.381

NM 125 44 39.8 N 124 58.9 W DATE 10 AUG 69 2143 GCT WIRE 04 DRY 63.2 WET 60.2 CRUISE Y690RA
WIND DIRECTION 32 VEL 10 KTS BAR 21 SWELL DIRECTION 32 H 03 T 10 CLOUD 6 AMT 8 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	17.38	31.340	5.82	.49	8.23	2.15	.7
2	17.36	31.358	5.84	.46			.8
6	17.33	31.335	5.83	.53	8.23	2.15	.4
10	16.78	31.937	5.94	.49	8.20	2.17	.1
20	15.32	32.201	6.24	.59	8.21	2.19	.9
29	12.63	32.417	6.75	.65	8.22	2.19	.7
39	10.47	32.470	7.10	.64	8.24	2.19	.3
49	9.74	32.509	7.14	.71	8.24	2.19	
61	9.33	32.523	6.86	.86	8.21	2.19	1.9
73	8.59	32.545	6.16	.92	8.16	2.19	4.2
98	8.87	33.131	5.00	1.59	8.03	2.23	12.5
147	8.45	33.733	3.47	2.25	7.91	2.26	20.1
196	7.73	33.886	3.26	2.38	7.87	2.26	22.9
293	6.73	34.012	2.14	2.71	7.77	2.30	22.4
391	5.72	34.037	1.68	3.04			33.5
587	4.81	34.197	.63	3.22	7.62	2.34	
782	4.16	34.310	.32		7.59	2.36	41.2
978	3.66	34.405	.35	3.35	7.61	2.37	
1173	3.19	34.468	.50		7.62	2.40	39.8

Z (m)	T (°C)	S (‰)	σ_t	δ ($r10^5$)	ΔD (dyn.m)
0	17.38	31.34	22.65	521.5	0
10	16.78	31.94	23.25	464.8	.069
20	15.32	32.21	23.78	414.5	.093
30	12.36	32.43	24.55	340.8	.131
50	9.70	32.51	25.08	290.2	.194
75	8.61	32.62	25.34	265.8	.264
100	8.87	33.17	25.73	229.6	.326
150	8.41	33.75	26.24	180.3	.428
200	7.68	33.89	26.48	159.9	.513
250	7.14	33.98	26.62	147.0	.590
300	6.65	34.01	26.72	138.4	.661
400	5.66	34.04	26.87	125.1	.793
500	5.11	34.12	26.99	113.2	.912
600	4.76	34.21	27.10	104.2	1.020
700	4.41	34.27	27.19	96.2	1.121
800	4.13	34.32	27.26	89.6	1.213
1000	3.61	34.41	27.39	78.3	1.381
1200	3.12	34.48	27.48	69.2	1.529

OBSERVED

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
NH 14R 44 39.1 N 127 27.0 W DATE 11 AUG 69 0123 GCT WIRE 00 DRY 64.3 WET 60.9 CRUISE Y690R4							
WIND DIRECTION 32 VEL 13 KTS BAR 21 SWELL DIRECTION 32 H 04 T 06 CLOUD 6 AMT 9 WEATHER 02							
0	17.94	30.447	5.84	.43	8.22	2.11	.1
3	17.95	30.447	5.75	.44	8.22	2.14	.1
6	17.95	30.448	5.78	.40	8.22	2.14	.1
10	17.86	30.455	5.74	.36	8.22	2.14	.1
20	17.24	31.190	5.88		8.22	2.14	.1
30	16.25	32.224	6.08	.49	8.20	2.17	.1
40	15.08	32.436	6.16	.58	8.20	2.19	.1
50	11.27	32.461	7.06	.53	8.23	2.19	.1
62	9.04	32.479	7.26	.58	8.24	2.19	.1
75	8.42	32.489	6.44	.99	8.18	2.19	4.8
100	7.35	32.581	6.44	1.18	8.15	2.19	9.7
150	8.15	33.593	3.96	1.91	7.94	2.25	24.7
200	7.71	33.914	3.04		7.85	2.26	29.5
300	6.34	33.997	2.10	2.42	7.75	2.28	37.4
400	5.50	34.031	1.56	2.98	7.68	2.30	41.4
600	4.68	34.227	.60	3.30	7.62	2.33	46.2
800	4.07	34.333	.31	3.31	7.60	2.36	47.9
1000	3.57	34.423	.47	3.32	7.62	2.37	47.5
1200	3.12	34.472	.50	3.21	7.64	2.41	47.8
NH 16R 44 39.2 N 127 55.0 W DATE 11 AUG 69 0449 GCT WIRE 00 DRY 62.0 WET 59.2 CRUISE Y690R4							
WIND DIRECTION 33 VEL 10 KTS BAR 20 SWELL DIRECTION 31 H 04 T 07 CLOUD 8 AMT 6 WEATHER 02							
0	17.38	32.007		.21	2.25	.1	
3	17.25	32.032	5.68	8.21	2.25	.1	
6	16.74	32.317	5.74	8.20	2.25	.1	
10	16.57	32.281	5.76	8.21	2.25	.1	
20	16.02	32.398	5.84	8.21	2.25	.1	
30	13.88	32.428	6.39	8.23	2.25	1.9	
40	11.32	32.442	6.97	8.26	2.25	1.9	
50	9.47	32.475	7.32	8.26	2.25	1.9	
62	8.61	32.477	6.99	8.24	2.25	1.5	
75	7.98	32.517	6.50	8.20	2.25	7.8	
100	7.51	32.713	5.83	8.15	2.25	9.1	
150	7.27	33.528	4.59	8.01	2.30	19.3	
200	7.22	33.896	3.18	7.88	2.33		
300	5.90	33.997	2.27	7.78	2.33	34.3	
400	4.82	33.978	1.71	7.71	2.36	37.0	
600	4.34	34.162	.61	7.63	2.39		
800	4.03	34.336	.39	7.61	2.41	40.5	
1000	3.51	34.416	.45	7.66	2.43	41.5	
1200	3.11	34.470	.51	7.69	2.43	34.4	
A 21R 44 08.3 N 127 00.0 W DATE 11 AUG 69 1520 GCT WIRE 01 DRY 62.6 WET 57.6 CRUISE Y690R4							
WIND DIRECTION 34 VEL 12 KTS BAR 21 SWELL DIRECTION 31 H 03 T 07 CLOUD 6 AMT 9 WEATHER 02							
0	17.45	31.151		.40	8.23	2.17	.1
3	17.45	31.146		.40	8.23	2.17	.1
6	17.46	31.147		.39	8.23	2.17	.1
10	17.28	31.338		.39	8.23	2.19	.1
20	16.54	31.446			8.22	2.17	
30	13.13	32.402		.50	8.23	2.21	.1
40	10.28	32.500		.59	8.24	2.23	.1
50	9.84	32.534			8.23	2.25	
62	9.44	32.547		.65	8.20	2.23	1.0
75	8.53	32.487		.76	8.18	2.23	3.1
100	8.53	32.862			8.09	2.26	
150	8.32	33.730		2.00	7.92	2.31	25.4
200	7.27	33.882		2.14	7.88	2.30	26.7
C 22R 44 07.5 N 126 18.6 W DATE 11 AUG 69 2012 GCT WIRE 00 DRY 61.1 WET 56.6 CRUISE Y690R4							
WIND DIRECTION 33 VEL 12 KTS BAR 22 SWELL DIRECTION 32 H 03 T 10 CLOUD 6 AMT 7 WEATHER 02							
0	16.92	31.546	5.95	.36	8.24	2.21	.1
3	16.97	31.542	5.86	.36	8.23	2.21	.1
6	16.88	31.541	5.91	.34	8.24	2.21	.1
10	15.04	31.612	6.31	.40			.1
20	11.08	32.388	6.97	.58	8.22	2.23	.1
30	9.07	32.467	6.86	.71	8.20	2.25	1.4
40	8.45	32.475	6.51	.83	8.16	2.23	4.4
50	8.12	32.526	6.24	.94	8.14	2.25	6.3
62	7.99	32.649	5.73	1.03	8.10	2.25	8.7
75	8.10	33.114	4.88	1.41	8.01	2.26	15.4
100	8.26	33.555	3.81	1.79	7.92	2.30	21.0
150	7.75	33.887	2.90	2.07	7.83	2.33	25.4
200	7.21	33.962	2.58	2.04	7.79	2.33	25.4

INTERPOLATED / DERIVED

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	17.94	30.85	22.14	570.1	0
10	17.86	30.86	22.17	568.0	.087
20	17.25	31.19	22.46	530.5	.112
30	16.25	32.23	23.59	432.8	.160
50	11.27	32.47	24.78	319.1	.235
75	8.42	32.49	25.27	272.6	.304
100	7.35	32.59	25.60	251.2	.375
150	8.15	33.60	26.18	197.8	.484
200	7.71	33.92	26.49	154.5	.571
250	7.03	33.96	26.62	147.2	.647
300	6.34	34.00	26.75	135.6	.718
400	5.51	34.04	26.88	123.7	.847
500	5.01	34.12	27.01	111.6	.965
600	4.69	34.23	27.13	101.3	1.071
700	4.35	34.29	27.21	94.0	1.169
800	4.07	34.34	27.28	87.7	1.260
1000	3.58	34.43	27.40	76.9	1.424
1200	3.12	34.47	27.48	69.5	1.571
0	17.38	32.01	23.16	472.8	0
10	16.57	32.29	23.56	435.1	.065
20	16.02	32.40	23.77	414.9	.088
30	13.88	32.43	24.26	368.9	.127
50	9.47	32.48	25.10	288.8	.193
75	7.98	32.52	25.36	264.3	.242
100	7.52	32.72	25.58	243.6	.325
150	7.28	33.53	26.25	180.4	.431
200	7.22	33.90	26.55	153.1	.515
250	6.65	33.93	26.65	144.2	.589
300	5.91	33.96	26.77	132.7	.658
400	4.82	33.98	26.92	119.8	.786
500	4.43	34.07	27.03	109.0	.899
600	4.34	34.19	27.13	100.7	1.003
700	4.19	34.27	27.21	93.4	1.100
800	4.04	34.34	27.29	87.0	1.191
1000	3.52	34.42	27.40	76.8	1.354
1200	3.11	34.47	27.48	69.5	1.500
0	17.46	31.16	22.49	536.8	0
10	17.28	31.34	22.67	519.4	.053
20	16.54	31.45	22.93	495.7	.104
30	13.13	32.41	24.39	356.6	.146
50	9.84	32.54	25.08	290.2	.211
75	8.53	32.49	25.25	274.3	.281
100	8.53	32.87	25.55	246.8	.347
150	8.32	33.74	26.26	190.2	.453
200	7.27	33.88	26.53	155.1	.537
0	16.92	31.55	22.92	494.2	0
10	15.04	31.62	23.19	451.4	.047
20	11.08	32.39	24.76	320.8	.086
30	9.07	32.47	25.16	289.1	.116
50	8.12	32.53	25.35	265.2	.171
75	8.10	33.12	25.81	221.4	.232
100	8.26	33.56	26.13	191.5	.283
150	7.76	33.89	26.47	160.3	.371
200	7.21	33.96	26.60	148.3	.449

A 229 44 08.1 N 125 36.7 W DATE 12 AUG 69 0031 GCT WIRE 00 DRY 61.8 WET 55.0 CRUISE Y69RA
WIND DIRECTION 33 VEL 10 KTS BAR 22 SWELL DIRECTION 32 H 04 T 06 CLOUD 9 AMT 5 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED δ (x10⁶)	ΔD (dyn.m)
0	15.27	32.281	6.29	.50	8.22	2.21	.1	0	15.27	32.29	23.85	407.1	0
3	15.08	32.2[illegible]	6.37	.44	8.22	2.19	.1	10	13.13	32.38	24.37	354.0	.138
6	13.48	32.344	6.91	.44	8.23	2.21	.1	20	10.50	32.48	24.93	304.5	.171
10	13.13	32.377	7.00	.50	8.25	2.21	.1	30	9.35	32.53	25.16	282.7	.101
20	10.50	[illegible].477	7.20	.67	8.22	2.21	1.2	50	8.50	32.66	25.39	260.8	.155
30	9.35	32.524	6.58	.85	8.16	2.21	4.9	75	8.46	33.11	25.75	227.6	.216
40	8.51	32.523	6.18	.92	8.14	2.21	7.4	100	8.35	33.63	26.17	187.4	.268
50	8.50	32.654	5.83	1.14	8.10	2.21	10.6	150	7.84	33.88	26.44	162.4	.355
62	8.33	32.853	5.48		8.08	2.23	13.5	200	7.24	33.96	26.59	149.8	.433
75	8.46	33.102	4.92	1.46	8.02	2.23	16.9						
100	8.35	33.627	3.63	1.88	7.92	2.26	25.5						
150	7.84	33.876	2.96	2.13	7.85	2.28	30.1						
200	7.24	33.961	2.56	2.35	7.81	2.30	33.5						

C 232 44 08.9 N 125 09.2 W DATE 12 AUG 69 0449 GCT WIRE 00 DRY 60.0 WET 57.1 CRUISE Y69RA
WIND DIRECTION 00 VEL 07 KTS BAR 20 SWELL DIRECTION 33 H 03 T 07 CLOUD 8 AMT 2 WEATHER 01

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED δ (x10⁶)	ΔD (dyn.m)
0	15.28	31.806	6.51		8.30	2.23		0	15.28	31.81	23.48	442.1	0
3	14.73	32.011	6.89		8.27	2.25	.1	10	12.23	32.28	24.46	348.9	.040
6	13.12	32.196	7.18	.33	8.27	2.25	.1	20	9.25	32.46	25.12	284.6	.071
10	12.23	32.275	7.36	.39	8.26	2.25	5.4	30	8.29	32.47	25.28	271.5	.099
20	9.25	32.454	6.48	.55	8.16	2.23	8.5	50	7.63	32.56	25.44	254.0	.152
30	8.29	32.470	6.33	1.13	8.17	2.23	10.0	75	8.02	33.24	25.92	211.3	.210
40	7.96	32.495	6.30	1.19	8.14	2.25	12.2	100	8.10	33.67	26.24	180.9	.259
50	7.62	32.557	6.06	1.15	8.12	2.23	20.6	150	7.64	33.91	26.50	157.4	.344
62	7.77	32.996	4.88	1.41	8.02	2.26	25.6	200	6.88	34.00	26.68	140.8	.418
75	8.02	33.237	4.28	1.54	7.95	2.28	25.6						
100	8.10	33.666	3.10	1.74	7.86	2.30	29.2						
150	7.63	33.903	2.84		7.83	2.31							
200	6.88	34.004	2.08	2.02	7.77	2.33							

NH 15 44 39.1 N 124 24.5 W DATE 12 AUG 69 1312 GCT WIRE 00 DRY 58.5 WET 56.2 CRUISE Y69RA
WIND DIRECTION 18 VEL 06 KTS BAR 21 SWELL DIRECTION 30 H 04 T 06 CLOUD 6 AMT 4 WEATHER 03

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED δ (x10⁶)	ΔD (dyn.m)
0	14.01	31.700	7.42	.26	8.32	2.21	.1	0	14.01	31.71	23.67	424.4	0
3	14.26	31.664	7.42		8.32	2.21	.1	10	9.55	32.48	25.09	289.2	.036
6	10.58	32.411	7.52	.44	8.25	2.21	.4	20	7.68	32.56	25.43	254.7	.063
10	9.55	32.479	7.23	.66	8.21	2.21	2.9	30	7.60	32.45	25.36	263.6	.089
20	7.67	32.552	5.30	1.44	8.05	2.21	15.2	50	7.60	33.24	25.98	205.2	.136
30	7.60	32.449	5.36	1.68	7.98	2.21	20.4						
40	7.56	32.957	5.01		8.02	2.23							
50	7.60	33.236	4.17	1.82	7.96	2.25	23.3						

DB 20 44 56.4 N 124 31.2 W DATE 12 AUG 69 1632 GCT WIRE 00 DRY 59.2 WET 57.0 CRUISE Y69RA
WIND DIRECTION 17 VEL 12 KTS BAR 20 SWELL DIRECTION 30 H 03 T 07 CLOUD 6 AMT 7 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED δ (x10⁶)	ΔD (dyn.m)
0	15.37	32.152	6.46	.18	8.32	2.23	.1	0	15.38	32.16	23.73	418.6	0
3	15.34	32.154	6.46	.20	8.32	2.23	.1	10	13.08	32.30	24.31	363.0	.039
6	14.80	32.306	6.98	.35	8.26	2.23	.1	20	8.64	32.44	25.20	278.6	.071
10	13.08	32.296	6.98	.34	8.28	2.23	.1	30	7.94	32.47	25.32	267.0	.098
20	8.64	32.440	7.12	.71	8.22	2.23	1.8	50	7.57	32.81	25.64	234.9	.149
30	7.94	32.465	6.59	.97	8.18	2.23	4.7	75	8.05	33.41	25.05	199.0	.203
40	7.55	32.575	6.11	1.02	8.13	2.23	10.5	100	7.93	33.74	26.32	173.5	.250
50	7.56	32.803	5.56		8.08	2.25	14.7	150	7.31	33.91	26.55	152.5	.331
62	7.89	33.147	4.73		8.01	2.26	19.5	200	6.64	33.97	26.69	140.4	.405
75	8.05	33.408	4.06	1.62	7.96	2.28	23.5						
100	7.92	33.732	3.33	1.94	7.88	2.30	28.5						
150	7.30	33.908	2.92	2.05	7.84	2.31	32.3						
200	6.64	33.966	2.51	2.37	7.79	2.31	35.5						

DB 15 44 53.9 N 124 23.5 W DATE 12 AUG 69 1809 GCT WIRE 00 DRY 61.0 WET 56.2 CRUISE Y69RA
WIND DIRECTION 17 VEL 12 KTS BAR 20 SWELL DIRECTION 30 H 03 T 07 CLOUD 6 AMT 8 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED δ (x10⁶)	ΔD (dyn.m)
0	15.42	31.446	6.81	.16	8.36	2.21		0	15.42	31.45	23.18	471.4	0
3	15.39	31.445	6.73	.17	8.36	2.19		10	12.22	32.22	24.42	353.0	.041
6	14.43	31.837	7.19	.14	8.34	2.21		20	8.30	32.46	25.26	272.8	.073
10	12.22	32.217	7.53	.33	8.30	2.19		30	7.44	32.50	25.39	260.8	.099
20	8.30	32.453	6.59	.82	8.17	2.19	4.3	50	7.55	33.02	25.81	221.0	.147
30	7.63	32.492	6.29	1.02	8.14	2.19	8.6	75	7.85	33.50	26.14	189.9	.199
40	7.58	32.758	5.59	1.23	8.08	2.21	13.7	100	7.76	33.79	26.39	166.8	.243
50	7.54	33.013	5.04	1.48	8.03	2.23	19.0	150	7.29	33.96	26.59	148.4	.322
62	7.71	33.222	4.64	1.52	7.99	2.25	22.5						
75	7.85	33.402	3.92		7.94	2.26	26.[illegible]						
100	7.75	33.730	2.94	2.12	7.84	2.28	33.3						
150	7.29	33.965	1.70	2.60	7.72	2.31	36.7						

	OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)		Z (m)	T (°C)	S (‰)	σ_t	S ($\times 10^8$)	ΔD (dyn.m)

C 244 44 52.5 N 124 17.7 W DATE 12 AUG 69 1933 GCT WIRE 00 DRY 63.1 WET 57.2 CRUISE Y690RA
WIND DIRECTION 19 VEL 04 KTS BAR 20 SWELL DIRECTION 30 H 03 T 10 CLOUD 6 AMT 6 WEATHER 02

0	15.10	31.577	6.93	.21	8.16	2.23	.1	0	15.10	31.58	23.35	455.2	0
3	13.55	31.956	7.66	.28	8.32	2.25	.2	10	8.78	32.42	25.16	283.7	.037
6	11.49	32.092	7.63	.41	8.28	2.23	7.8	20	7.77	32.44	25.35	243.6	.044
10	8.78	32.410	5.95	1.02	8.10	2.23	8.2	30	7.56	32.79	25.63	237.6	.089
20	7.76	32.476	4.06	1.08	8.11	2.21	9.3	50	7.47	33.25	26.01	202.6	.133
30	7.55	32.788	5.00	1.57	8.01	2.23	18.5	75	7.72	33.72	26.33	171.9	.180
40	7.47	33.115	4.64	1.64	7.99	2.25	21.1	100	7.35	33.89	26.52	154.0	.221
50	7.47	33.250	4.35		7.66	2.26	23.9						
62	7.40	33.521	3.61		7.68	2.31	27.7						
75	7.72	33.711	2.82		7.81	2.30	30.8						
100	7.35	33.887	1.00	2.18	7.84	2.31	32.9						

C 246 44 50.9 N 124 11.4 W DATE 12 AUG 69 2115 GCT WIRE 01 DRY 64.0 WET 58.4 CRUISE Y690RA
WIND DIRECTION 23 VEL 06 KTS BAR 20 SWELL DIRECTION 30 H 03 T 10 CLOUD 6 AMT 5 WEATHER 02

0	13.49	31.744	7.23		8.32	2.23	.1	0	13.49	31.79	23.84	408.2	0
3	12.00	32.168	7.67	.36	8.27	2.23	1.1	10	8.35	32.57	25.34	264.0	.034
6	10.99	32.328	7.79	.40	8.28	2.25	1.1	20	8.10	33.06	25.76	225.4	.058
10	8.35	32.566	6.51		7.95	2.23		30	7.61	33.21	25.95	207.4	.080
20	8.10	33.052	3.14		7.83	2.25		50	7.61	33.74	26.36	164.5	.117
30	7.61	33.204	3.42	1.34	7.87	2.25	23.2	75	7.15	33.93	26.58	144.3	.157
40	7.64	33.493	2.80	1.49	7.82	2.26	27.3						
50	7.61	33.731	2.51	1.51	7.80	2.28	27.2						
62	7.19	33.879	2.06	1.65	7.75	2.28	30.0						
75	7.14	33.922	2.03	1.68	7.75	2.30	30.1						

C 247 44 48.5 N 124 05.7 W DATE 12 AUG 69 2248 GCT WIRE 00 DRY WET CRUISE Y690RA
WIND DIRECTION 28 VEL 04 KTS BAR 20 SWELL DIRECTION 30 H 03 T 10 CLOUD 6 AMT 6 WEATHER 02

0	10.80	32.669	7.27		8.27	2.26		0	10.80	32.67	25.03	294.9	0
3	9.88	33.181	5.03	1.24	8.02	2.26	19.0	10	9.71	33.39	25.77	224.4	.026
6	9.75	33.258	4.70		8.00	2.26		20	8.18	33.83	26.35	169.1	.046
10	9.71	33.387	4.96	1.69	7.94	2.28	22.8	30	7.47	33.89	26.50	154.9	.062
20	9.18	33.825	3.23	1.89	7.83	2.30	29.1						
30	7.47	33.885		1.86	7.76	2.30	29.2						

NH 3 44 39.2 N 124 07.4 W DATE 13 AUG 69 0031 GCT WIRE 01 DRY WET CRUISE Y690RA
WIND DIRECTION 35 VEL 10 KTS BAR 18 SWELL DIRECTION 30 H 04 T 10 CLOUD 6 AMT 2 WEATHER 02

0	11.00	33.719	5.22					0	11.00	33.72	25.81	220.8	0
3	10.06	33.733	5.11					10	8.28	33.76	26.28	175.6	.020
6	9.50	33.745	4.51					20	7.43	33.88	26.50	155.0	.036
10	8.28	33.755	3.28										
20	7.42	33.872	2.36										

NH 15 44 39.1 N 124 24.7 W DATE 02 AUG 69 1515 GCT WIRE 00 DRY 50.7 WET 50.7 CRUISE C690RA
WIND DIRECTION VEL KTS BAR 22 SWELL DIRECTION 33 H 03 T 07 CLOUD 7 AMT 4 WEATHER 04

0	10.12	32.408	4.27	1.23		9.5		0	10.13	32.41	24.94	303.2	0
9	8.44	32.469	4.15	1.14		9.5		10	8.77	32.45	25.13	279.6	.029
19	7.44	32.527	5.44	1.14		11.7		20	7.45	32.55	25.45	254.7	.056
44	6.96	33.116	4.47	1.77		23.4		30	7.41	32.75	25.58	244.3	.081
70	7.69	33.763	2.76	2.14		31.4		50	8.92	33.26	25.79	222.7	.127

SUR 2 44 42.0 N 124 20.5 W DATE 02 AUG 69 1635 GCT WIRE 00 DRY 55.2 WET 53.3 CRUISE C690RA
WIND DIRECTION 00 VEL 08 KTS BAR 22 SWELL DIRECTION 31 H 04 T 06 CLOUD 6 AMT 2 WEATHER 01

0	9.57	32.585	5.49	1.33		12.1		0	9.57	32.59	25.17	281.5	0
15	7.73	32.693	5.40	1.21		11.0		10	7.62	32.35	25.27	271.5	.028
25	7.16	32.774	5.13	1.25		14.5		20	7.37	32.52	25.52	249.4	.054
50	7.43	33.493	3.00	2.06		28.6		30	7.43	32.96	25.78	223.7	.077
76	7.58	33.835	2.41	2.37		32.4		50	7.43	33.60	26.22	181.8	.118
								75	7.60	33.83	26.44	162.0	.161

SUR 3 44 43.4 N 124 24.5 W DATE 02 AUG 69 1715 GCT WIRE 00 DRY 56.5 WET 54.3 CRUISE C690RA
WIND DIRECTION 01 VEL 08 KTS BAR 22 SWELL DIRECTION 31 H 04 T 06 CLOUD 6 AMT 3 WEATHER 01

0	10.36	32.332	4.52	1.00		7.4		0	10.36	32.34	24.84	312.7	0
15	8.96	32.385	4.22			7.6		10	9.48	32.35	25.00	298.1	.031
25	7.91	32.457	5.99	1.25		11.2		20	8.40	32.41	25.21	277.6	.059
50	7.82	33.087	4.77	1.52		17.7		30	7.89	32.56	25.40	259.6	.086
76	7.97	33.690	3.27	2.01		28.1		50	7.82	33.09	25.83	219.3	.134
								75	7.96	33.67	26.26	178.7	.184

SUR 4 44 45.2 N 124 38.8 W DATE 02 AUG 69 1845 GCT WIRE 00 DRY 60.6 WET 57.1 CRUISE C690RA
WIND DIRECTION VEL 00 KTS BAR 23 SWELL DIRECTION 31 H 04 T 06 CLOUD 6 AMT 4 WEATHER 02

0	12.52	31.832	4.92	.67		.9		0	12.52	31.84	24.06	386.6	0
15	11.26	32.186	6.85	.82		2.4		10	12.81	32.06	24.18	375.8	.038
25	8.17	32.446	4.61	.92		5.3		20	9.72	32.32	24.93	304.2	.072
50	7.71	32.859	5.25	1.27		14.5		30	8.08	32.54	25.36	263.5	.100
75	7.84	33.279	4.20	1.73		22.5		50	7.71	32.86	25.67	234.8	.150
125	7.04	33.939	2.18	2.53		34.5		75	7.84	33.28	25.98	205.4	.208
								100	7.62	33.64	26.29	176.4	.253

	OBSERVED							INTERPOLATED			DERIVED		
	D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	8 ($\times 10^6$)	ΔD (dyn.m)

SUF 5 44 46.6 N 124 25.0 W DATE 02 AUG 69 1945 GCT WIRE 05 DRY 62.8 WET 58.3 CRUISE C690R4
WIND DIRECTION 32 VEL 05 KTS BAR 23 SWELL DIRECTION 31 H 04 T 10 CLOUD 6 AMT 6 WEATHER 02

0	11.80	32.129	7.00	1.02	5.1							
15	10.89	32.225	6.83	1.00	5.1							
25	8.05	32.445	5.70									

SUF 6 44 48.0 N 124 20.5 W DATE 02 AUG 69 2045 GCT WIRE 00 DRY 63.2 WET 58.7 CRUISE C690R4
WIND DIRECTION 30 VEL 05 KTS BAR 22 SWELL DIRECTION 32 H 04 T 10 CLOUD 6 AMT 6 WEATHER 02

0	11.35	32.269	5.91	1.21	10.5	0	11.35	32.27	24.62	333.8	0
15	10.50	32.529	5.99	1.44	13.0	10	11.76	32.54	24.76	320.9	.033
25	7.99	32.498	5.64			20	9.28	32.52	25.16	282.5	.063
60	7.58	33.014	4.96	1.52	17.4	30	7.93	32.53	25.37	262.5	.090
85	7.92	33.659	3.58	1.92	22.6	50	7.70	32.79	25.61	239.7	.140
110	7.10	33.935	1.94	2.69	31.9	75	7.82	33.41	26.08	196.0	.195
						100	7.57	33.87	26.48	158.7	.239

SUF 7 44 51.1 N 124 11.8 W DATE 02 AUG 69 2220 GCT WIRE 00 DRY 62.8 WET 58.6 CRUISE C690R4
WIND DIRECTION 29 VEL 10 KTS BAR 22 SWELL DIRECTION 32 H 04 T 05 CLOUD 6 AMT 2 WEATHER 01

0	11.76	32.281	7.16	.74	4.6	0	11.76	32.29	24.55	340.0	0
15	8.17	32.491	5.13	1.55	13.0	10	8.17	32.30	25.16	292.5	.031
25	8.17	32.843	3.45	.62	19.9	20	8.17	32.65	25.43	254.6	.058
50	7.71	33.738	2.75	.99	26.1	30	8.13	33.02	25.73	228.4	.082
75				2.35	28.4	50	7.71	33.74	26.36	169.4	.122

SUF 8 44 54.2 N 124 20.2 W DATE 03 AUG 69 0025 GCT WIRE 00 DRY 62.8 WET 58.8 CRUISE C690R4
WIND DIRECTION 34 VEL 08 KTS BAR 22 SWELL DIRECTION 31 H 04 T 07 CLOUD 0 AMT 2 WEATHER 01

0	13.45	31.868	7.20	.37	1.9	0	13.45	31.87	23.91	401.2	0
25	7.53	32.496	6.15	1.22	9.6	10	7.38	32.05	25.07	290.5	.035
50	7.78	33.239	4.43	1.73	19.7	20	7.48	32.35	25.29	269.7	.063
75	7.87	33.699	3.42	1.91	25.9	30	7.58	32.65	25.52	248.5	.088
100	7.59	33.856	2.80	2.12	29.7	50	7.79	33.24	25.95	207.4	.134
125	7.24	33.922	2.33	2.32	32.5	75	7.88	33.70	26.30	174.8	.182
						100	7.59	33.86	26.47	159.6	.224

SUF 9 44 57.0 N 124 28.9 W DATE 03 AUG 69 0140 GCT WIRE 00 DRY 62.8 WET 58.1 CRUISE C690R4
WIND DIRECTION 00 VEL 10 KTS BAR 22 SWELL DIRECTION 31 H 03 T 06 CLOUD 0 AMT 2 WEATHER

0	14.00	31.691	6.85	.26	.2	0	14.00	31.70	23.66	424.8	0
15	12.78	31.900	6.92	.35	.2	10	13.54	31.80	23.84	408.4	.042
50	7.45	32.596	5.84	1.11	11.3	20	11.98	31.99	24.28	366.0	.080
100	7.93	33.627	3.27	1.73	22.9	30	10.42	32.18	24.71	326.9	.115
150	7.22	33.914	2.26	2.31	32.5	50	7.45	32.60	25.50	250.8	.173
200	6.24	34.026	1.73	2.55	36.3	75	7.69	33.16	25.90	213.1	.231
						100	7.94	33.63	26.24	181.4	.280
						150	7.22	33.92	26.56	151.0	.363
						200	6.24	34.03	26.78	130.8	.433

SUF10 45 00.0 N 124 20.5 W DATE 03 AUG 69 0315 GCT WIRE DRY 59.9 WET 56.2 CRUISE C690R4
WIND DIRECTION 33 VEL 10 KTS BAR 22 SWELL DIRECTION 31 H 03 T 07 CLOUD 0 AMT 2 WEATHER 01

0	13.24	32.082	7.39	.25	1.7	0	13.24	32.09	24.12	381.5	0
25	7.71	32.473	5.84	1.16	9.5	10	7.83	32.26	25.18	240.7	.033
50	7.51	32.842	5.33	1.35	13.1	20	7.75	32.41	25.30	269.0	.061
75	7.95	33.440	3.97	1.60	19.6	30	7.67	32.54	25.42	257.8	.087
100	7.76	33.748	3.35	1.93	26.7	50	7.52	32.85	25.68	233.3	.136
150	7.87	33.969	1.98	2.47	33.9	75	7.95	33.45	26.09	195.2	.190
						100	7.77	33.75	26.36	170.0	.235
						150	7.87	33.97	26.51	156.2	.317

SUF11 45 02.8 N 124 12.5 W DATE 02 AUG 69 0440 GCT WIRE 00 DRY 58.1 WET 55.0 CRUISE C690R4
WIND DIRECTION 00 VEL 07 KTS BAR 20 SWELL DIRECTION 31 H 04 T 06 CLOUD 6 AMT 2 WEATHER 02

0	11.46	32.474	6.77	.91	6.3	0	11.46	32.48	24.76	320.5	0
10	10.07	32.554	6.22	1.04	7.3	10	10.07	32.56	25.06	291.7	.031
25	7.43	32.634	5.60	1.35	13.4	20	8.23	32.59	25.38	261.8	.058
50	7.77	33.556	3.03	2.15	28.4	30	7.50	32.81	25.65	235.9	.083
75	7.65	33.841	3.11		29.0	50	7.78	33.56	26.20	183.7	.125
120	6.86	33.960	2.33	2.60	33.8	75	7.64	33.85	26.44	161.2	.168
						100	7.30	33.91	26.54	152.2	.207

SUF 14 44 39.1 N 124 24.8 W DATE 03 AUG 69 1355 GCT WIRE 00 DRY 56.2 WET 54.1 CRUISE C690R4
WIND DIRECTION 00 VEL 06 KTS BAR 21 SWELL DIRECTION 31 H 03 T 07 CLOUD 7 AMT 3 WEATHER 02

0	11.76	32.162	6.69	.88	3.2	0	11.76	32.17	24.46	348.8	0
10	9.36	32.404	6.34	1.01	6.4	10	9.36	32.41	25.06	291.8	.032
25	7.45	32.529	5.99	1.04	10.6	20	7.90	32.50	25.35	264.0	.060
50	7.40	32.871	5.06	1.48	16.3	30	7.44	32.57	25.68	253.6	.086
76	7.61	33.735	2.80	2.23	28.3	50	7.41	32.88	25.72	229.7	.134
						75	7.60	33.69	26.33	171.0	.186

OBSERVED								INTERPOLATED			DERIVED	
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
SUF 2A 44 41.9 N 124 20.5 W DATE 03 AUG 69 1510 GCT WIRE 00 DRY 59.8 WET 54.0 CRUISE CA9084													
WIND DIRECTION 00 VEL 04 KTS HAR 22 SWELL DIRECTION 31 H 02 T 07 CLOUD 7 AMT 2 WEATHER 02													
0	12.00	32.148	7.24	.44			1.5	0	12.00	32.19	24.44	351.1	0
10	8.99	32.161	5.91	.99			8.1	10	8.99	32.35	25.07	291.0	.132
25	7.36	32.594	5.29	1.42			13.4	20	7.83	32.50	25.39	260.4	.240
50	7.47	33.421	3.81	1.81			22.8	30	7.44	32.74	25.62	238.9	.185
74	7.49	33.607	2.80	2.01			25.1	50	7.88	33.43	26.08	195.2	.128
								75	7.71	33.80	24.40	165.3	.173
SUF 3A 44 43.4 N 124 24.5 W DATE 03 AUG 69 1550 GCT WIRE 00 DRY 58.8 WET 55.9 CRUISE CA9084													
WIND DIRECTION 00 VEL 07 KTS HAR 21 SWELL DIRECTION 31 H 03 T 06 CLOUD 8 AMT 2 WEATHER 02													
0	12.45	32.074	7.08	.38			1.2	0	12.45	32.08	24.27	367.4	0
10	10.73	32.105	6.89	.56			1.4	10	10.73	32.11	24.60	335.7	.035
25	7.31	32.541	5.91	1.19			10.9	20	8.35	32.37	25.19	279.9	.146
50	7.71	33.154	4.56	1.58			18.8	30	7.39	32.68	25.56	244.1	.202
75	7.41	33.615	3.27	1.98			24.6	50	7.71	33.16	25.90	212.5	.138
90	7.42	33.733	3.15	2.05			26.9	75	7.92	33.69	26.23	181.6	.187
SUF 4A 44 46.9 N 124 24.1 W DATE 03 AUG 69 1645 GCT WIRE 00 DRY 60.6 WET 57.6 CRUISE CA9084													
WIND DIRECTION 02 VEL 08 KTS HAR 22 SWELL DIRECTION 31 H 03 T 06 CLOUD 8 AMT 6 WEATHER 02													
0	12.74	31.832	7.08	.47			1.9	0	12.74	31.90	24.06	384.6	0
10	10.81	32.277	6.38	1.01			6.9	10	10.81	32.28	24.72	324.3	.036
25	7.85	32.458	5.91	1.03			8.9	20	8.72	32.42	25.17	281.8	.065
50	7.84	32.987	4.90	1.32			16.7	30	7.88	32.56	25.41	258.7	.093
75	7.46	33.169	4.51	1.43			19.5	50	7.46	32.99	25.75	227.0	.141
100	7.43	33.702	3.19	1.74			24.6	75	7.86	33.17	25.89	214.1	.197
130	7.07	33.932	2.10	2.29			32.7	100	7.83	33.71	26.31	174.6	.265
SUF 5A 44 46.5 N 124 33.4 W DATE 03 AUG 69 1750 GCT WIRE 00 DRY 60.3 WET 57.0 CRUISE CA9084													
WIND DIRECTION 03 VEL 08 KTS HAR 22 SWELL DIRECTION 31 H 03 T 06 CLOUD 8 AMT 2 WEATHER 02													
0	12.43	31.794	7.09	.42			1.8	0	12.43	31.80	23.96	396.8	0
10	11.56	32.106	6.85	.70			3.4	10	11.56	32.11	24.65	364.6	.037
25	8.66	32.466	6.61	.69			3.6	20	9.58	32.36	24.99	318.6	.170
50	8.05	32.653	5.80	1.00			10.9	30	8.31	32.51	25.30	289.3	.198
75	7.46	33.278	4.28	1.50			20.6	50	8.05	32.86	25.66	256.8	.161
100	7.41	33.702	3.35	1.71			23.9	75	7.96	33.26	25.96	207.6	.205
190	6.73	33.980	2.02	2.28			31.0	100	7.42	33.71	26.30	175.6	.158
								150	7.45	33.86	26.48	158.7	.160
SUF 6A 44 48.0 N 124 24.3 W DATE 03 AUG 69 1850 GCT WIRE 00 DRY 61.7 WET 61.2 CRUISE CA9084													
WIND DIRECTION 01 VEL 06 KTS HAR 22 SWELL DIRECTION 31 H 03 T 06 CLOUD 8 AMT 8 WEATHER 02													
0	13.49	31.833	7.00	.26			.3	0	13.49	31.84	23.88	404.6	0
10	10.76	32.056	6.85	.54			1.2	10	10.76	32.06	24.56	334.6	.137
25	8.00	32.444	5.86	1.13			9.3	20	8.71	32.32	25.09	288.8	.148
50	7.84	32.816	5.45	1.17			13.4	30	7.47	32.53	25.37	263.9	.198
75	7.33	33.342	3.84	1.54			22.5	50	7.84	32.82	25.61	239.8	.146
100	7.67	33.620	3.35	1.76			26.5	75	7.44	33.35	26.01	203.2	.202
150	6.98	33.963	2.02	2.20			33.4	100	7.88	33.63	26.26	181.1	.250
								150	6.98	33.96	26.62	148.0	.331
SUF 7A 44 49.5 N 124 24.7 W DATE 03 AUG 69 1950 GCT WIRE 00 DRY 61.9 WET 57.5 CRUISE CA9084													
WIND DIRECTION 02 VEL 05 KTS HAR 22 SWELL DIRECTION 31 H 02 T 10 CLOUD 8 AMT 6 WEATHER 02													
0	13.36		7.16	.39			.8	0	13.36	31.84	23.90	402.1	0
10	11.40	32.272	7.31	.22				10	11.40	32.28	24.61	334.6	.137
25	8.09	32.445	5.91	.90			7.0	20	9.10	32.36	25.07	291.2	.148
50	7.41	32.847	5.45				14.4	30	7.66	32.50	25.34	260.5	.206
74	7.49	33.542	3.89				24.4	50	7.42	32.85	25.70	231.6	.165
SUF 8A 44 50.8 N 124 29.0 W DATE 03 AUG 69 2050 GCT WIRE 00 DRY 63.8 WET 58.2 CRUISE CA9084													
WIND DIRECTION 02 VEL 05 KTS HAR 22 SWELL DIRECTION 31 H 02 T 10 CLOUD 8 AMT 5 WEATHER 02													
0	14.07	31.853	7.00	.16			.2	0	14.07	31.86	23.77	414.3	0
10	12.95	31.908	7.16	.15			.2	10	12.95	31.91	24.06	380.3	.140
25	8.07	32.444	6.38	.79			6.6	20	9.72	32.25	24.88	304.6	.175
50	7.42	32.828	5.86	1.03			12.4	30	7.52	32.49	25.40	250.5	.196
75	7.99	33.401	3.97	1.58			22.0	50	7.43	32.83	25.53	244.1	.164
100	7.78	33.722	3.07	1.93			27.5	75	7.99	33.41	26.05	199.7	.210
165	6.75	33.982	2.02	2.43			33.5	100	7.79	33.73	26.33	172.2	.256
								150	7.05	33.92	26.59	148.6	.337
SUF 9A 44 52.6 N 124 33.3 W DATE 03 AUG 69 2155 GCT WIRE 00 DRY 65.7 WET 59.1 CRUISE CA9084													
WIND DIRECTION 02 VEL 05 KTS HAR 22 SWELL DIRECTION 31 H 04 T 10 CLOUD 8 AMT 5 WEATHER 02													
0	14.90	31.566	6.22	.28			.3	0	14.90	31.57	23.38	451.9	0
10	12.68	32.016	6.54	.35			.3	10	12.68	32.02	24.18	376.2	.141
25	8.61	32.443	6.69	.73			3.0	20	9.84	32.33	24.92	305.7	.175
50	8.06	32.793	5.45	1.14			11.0	30	8.17	32.52	25.33	266.1	.104
88	7.45	33.550	3.77	1.75			21.9	50	8.06	32.80	25.56	244.5	.155
100	7.86		3.81	2.84			32.7	75	7.99	33.30	25.97	205.8	.211
201	6.55		2.57					100	7.84	33.73	26.32	173.1	.259
								150	7.32	33.92	26.55	152.1	.340
								200	6.57	34.03	28.74	138.0	.412

NOT REPRODUCIBLE

	OBSERVED								INTERPOLATED				DERIVED	
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)		Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
SUF10A 44 55.6 N 124 24.7 W DATE 03 AUG 69 2210 GCT WIRE 00 DRY 63.8 WET 58.0 CRUISE C6908A														
WIND DIRECTION 34 VEL 07 KTS BAR 21 SWELL DIRECTION 31 H 03 T 08 CLOUD 7 AMT 3 WEATHER 02														
0	13.74	31.957	7.08	.19			.6		0	13.74	31.96	23.92	400.3	0
10	12.79	32.003	7.16	.16			.2		10	12.79	32.01	24.14	374.2	.039
25	8.16	32.446	4.54	.76			4.5		20	9.74	32.29	24.91	304.8	.073
50	7.43	32.642	3.68	1.18			12.3		30	7.81	32.49	25.39	251.1	.102
75	7.97	33.438	3.89	1.77			22.6		50	7.44	32.65	25.94	247.2	.152
100	7.72	33.761	3.00	2.37			28.6		75	7.97	33.44	26.08	195.4	.208
175	6.58	33.997	1.94	2.90			36.0		100	7.72	33.77	26.37	148.5	.253
									150	7.02	33.92	26.54	148.3	.333
SUF11A 44 57.1 N 124 20.5 W DATE 04 AUG 69 0010 GCT WIRE 00 DRY 62.0 WET 57.7 CRUISE C6908A														
WIND DIRECTION 34 VEL 04 KTS BAR 21 SWELL DIRECTION 31 H 02 T 06 CLOUD 7 AMT 3 WEATHER 02														
0	14.09	31.941	7.16	.28			.7		0	14.09	31.99	23.87	405.3	0
10	12.10	32.143	7.47	.44			.5		10	12.10	32.15	24.38	366.3	.038
25	7.92	32.458	4.22	1.14			7.8		20	9.23	32.35	25.04	294.4	.071
50	7.57	32.948	4.90	1.71			18.1		30	7.85	32.56	25.41	259.1	.098
75	7.95	33.655	3.42	2.23			26.6		50	7.57	32.99	25.79	221.3	.147
100	7.57	33.831	2.80						75	7.95	33.66	26.26	170.2	.197
150	6.87	33.958	1.83						100	7.57	33.84	26.45	141.2	.239
									150	6.87	33.96	26.64	143.3	.315
SUF12A 45 00.2 N 124 12.0 W DATE 04 AUG 69 0135 GCT WIRE 00 DRY 59.9 WET 56.8 CRUISE C6908A														
WIND DIRECTION 32 VEL 07 KTS BAR 20 SWELL DIRECTION 31 H 02 T 06 CLOUD 6 AMT 03 WEATHER 02														
0	12.36	32.023	7.94	.60			1.9		0	12.36	32.03	24.24	363.7	0
10	11.46	32.284	7.47	.63			2.0		10	11.46	32.29	24.61	334.7	.035
25	7.57	32.651	5.04	1.89			15.8		20	8.47	32.52	25.23	274.2	.066
50	7.77	33.414	2.57	2.51			29.8		30	7.61	32.85	25.67	233.8	.091
75	7.57	33.860	2.65	2.92			30.8		50	7.78	33.62	26.25	179.4	.133
100	7.05	33.921	2.33						75	7.57	33.87	26.47	154.7	.175
									100	7.06	33.93	26.59	147.5	.213
SUF13A 45 01.7 N 124 07.5 W DATE 04 AUG 69 0245 GCT WIRE 00 DRY 60.0 WET 56.5 CRUISE C6908A														
WIND DIRECTION 32 VEL 04 KTS BAR 20 SWELL DIRECTION 31 H 02 T 06 CLOUD 6 AMT 3 WEATHER 02														
0	12.22	31.482	7.50	.65			3.9		0	12.22	31.49	23.85	407.0	0
10	8.30	32.753	4.59	1.92			17.9		10	8.48	32.63	25.37	262.2	.133
25	7.93	32.994	3.89	2.20			23.6		20	7.99	32.90	25.65	235.5	.158
50	7.62	33.800	2.72	2.37			30.9		30	7.84	33.17	25.89	213.4	.181
74	7.10	33.906	2.02	2.84			40.8		50	7.63	33.80	26.42	163.5	.218
									75	7.12	33.90	26.54	144.8	.258
SUF14A 45 03.1 N 124 11.9 W DATE 04 AUG 69 0325 GCT WIRE 00 DRY 60.9 WET 57.2 CRUISE C6908A														
WIND DIRECTION 35 VEL 07 KTS BAR 20 SWELL DIRECTION 31 H 03 T 07 CLOUD 4 AMT 7 WEATHER 02														
0	13.17		8.01	.42			1.2		0	13.17	31.49	23.67	424.4	0
10	10.72	32.507	7.39	.63			1.2		10	10.72	32.51	24.91	305.8	.037
25	7.53	32.652	5.21	1.81			14.6		20	8.42	32.47	25.25	273.9	.065
50	7.79	33.585	2.41	2.67			29.7		30	7.54	32.82	25.65	235.7	.091
100	7.14	33.910	2.10	2.90			33.3		50	7.40	33.59	26.22	181.8	.133
									75	7.67	33.75	26.37	168.7	.176
									100	7.17	33.92	26.57	149.8	.216
SUF15A 45 04.8 N 124 07.4 W DATE 04 AUG 69 0430 GCT WIRE 00 DRY 57.6 WET 55.3 CRUISE C6908A														
WIND DIRECTION VEL 00 KTS BAR 20 SWELL DIRECTION 31 H 03 T 07 CLOUD 4 AMT 8 WEATHER 02														
0	12.26	32.198	7.39	.86			6.3		0	12.26	32.20	24.40	355.0	0
15	7.66	32.861	4.28	2.02			19.0		10	7.50	32.59	25.48	251.8	.030
25	7.98	33.403	3.11	2.49			28.1		20	7.67	33.14	25.89	213.2	.054
50	7.47	33.851	2.65	2.68			29.2		30	7.95	33.56	26.18	186.0	.074
74	7.02	33.932	2.33	2.68			32.3		50	7.47	33.86	26.48	157.7	.108
									75	7.04	33.93	26.60	146.7	.146
SUF 18 44 39.1 N 124 24.8 W DATE 04 AUG 69 1310 GCT WIRE 00 DRY 56.5 WET 55.1 CRUISE C6908A														
WIND DIRECTION VEL 00 KTS BAR 19 SWELL DIRECTION 31 H 02 T 06 CLOUD 9 AMT 8 WEATHER 02														
0	12.66	32.103	7.13	.35			1.0		0	12.66	32.11	24.25	369.2	0
10	10.19	32.313	6.38	.76			3.4		10	10.19	32.32	24.85	311.5	.034
25	7.75	32.465	4.07	1.14			8.1		20	8.39	32.42	25.22	276.4	.063
50	7.30	32.734	5.45	1.27			10.7		30	7.44	32.51	25.42	257.6	.090
74	7.82	33.354	4.04	1.74			23.2		50	7.31	32.74	25.63	238.6	.140
									75	7.78	33.32	26.02	201.7	.195
SUF 28 44 40.7 N 124 19.3 W DATE 04 AUG 69 1425 GCT WIRE 00 DRY 55.2 WET 54.3 CRUISE C6908A														
WIND DIRECTION 22 VEL 05 KTS BAR 20 SWELL DIRECTION 31 H 02 T 06 CLOUD 6 AMT 8 WEATHER 02														
0	11.47	32.506	6.92	1.16			7.0		0	11.47	32.51	24.78	318.3	0
10	11.14	32.576	6.38	1.22			9.6		10	11.14	32.58	24.89	307.7	.031
25	9.14	32.604	5.45	1.51			13.0		20	9.86	32.59	25.12	286.7	.061
50	7.65	33.285	4.05	1.88			21.1		30	8.69	32.72	25.41	259.4	.088
76	7.64	33.814	2.72	2.43			31.1		50	7.66	33.29	26.01	202.2	.134
									75	7.64	33.80	26.41	164.7	.180

NOT REPRODUCIBLE

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁶)	ΔD (dynm)
SUF 3R 44 42.1 N 124 13.7 W DATE 04 AUG 69 1530 GCT WIRE 00 DRY 54.8 WET 53.1 CRUISE C690RA													
WIND DIRECTION 24 VEL 05 KTS BAR 20 SWELL DIRECTION 30 H 04 T 07 CLOUD 6 AMT 8 WEATHER 02													
0	10.50	32.610	6.57	1.27			0.7	0	10.50	32.61	25.03	296.4	0
10	10.01	32.667	5.76	1.37			1.6	10	10.01	32.67	25.16	289.4	.029
25	7.66	33.050	3.81	1.98			26.2	20	8.45	32.90	25.59	242.0	.065
50	7.63	33.784	2.72	2.26			32.2	30	7.65	33.19	25.93	209.6	.078
								50	7.64	33.79	26.40	154.8	.115
SUF 4R 44 43.9 N 124 18.9 W DATE 06 AUG 69 1627 GCT WIRE 00 DRY 57.8 WET 55.3 CRUISE C690RA													
WIND DIRECTION 30 VEL 07 KTS BAR 20 SWELL DIRECTION 30 H 04 T 07 CLOUD 6 AMT 8 WEATHER 02													
0	12.35	32.260	7.55	.41			.9	0	12.35	32.26	24.43	352.0	0
10	9.94	32.441	6.85	.70			2.7	10	9.94	32.45	25.00	298.1	.112
25	7.37	33.291	5.45	1.26			10.9	20	8.34	33.02	25.74	227.2	.159
50	7.63	32.638	4.01	1.68			17.8	30	7.42	33.19	25.96	204.2	.180
75	7.71	33.790	2.86	2.14			27.3	50	7.64	33.84	25.50	2[illegible].1	.126
								75	7.71	33.79	26.40	185.8	.178
SUF 5R 44 47.5 N 124 29.6 W DATE 04 AUG 69 1753 GCT WIRE 00 DRY 59.1 WET 55.8 CRUISE C690RA													
WIND DIRECTION 34 VEL 04 KTS BAR 21 SWELL DIRECTION 30 H 03 T 06 CLOUD 6 AMT 6 WEATHER 02													
0	13.96	31.891	6.89	0.26			.1	0	13.96	31.90	23.83	409.4	0
10	13.43	31.995	7.00	0.44			.7	10	13.43	32.00	24.01	391.7	.040
50	7.42	32.561	5.84	1.04			6.9	20	11.55	32.11	24.39	344.4	.077
100	7.90	33.624	3.58	2.01			28.0	30	10.46	32.25	24.75	321.3	.111
150		33.956	1.99					50	7.43	32.57	25.47	253.1	.169
								75	7.66	33.11	25.87	215.8	.227
								100	7.91	33.63	26.24	181.2	.277
								150	6.87	33.96	26.64	143.5	.358
SUF 6R 44 44.4 N 124 35.0 W DATE 04 AUG 69 1900 GCT WIRE 00 DRY 60.0 WET 57.0 CRUISE C690RA													
WIND DIRECTION 13 VEL 08 KTS BAR 22 SWELL DIRECTION 30 H 03 T 06 CLOUD 6 AMT 6 WEATHER 02													
0	15.11	31.353	6.30	.27			.5	0	15.11	31.36	23.17	471.8	0
10	12.87	31.729	6.54	.40			.2	10	12.88	31.73	23.92	400.8	.044
50	8.04	32.750	5.52	1.21			13.6	20	11.16	32.03	24.47	348.6	.081
100	7.91	33.660	3.58	2.05			28.0	30	9.78	32.30	24.91	306.3	.114
200	6.63	33.975	2.30	2.58			36.4	50	8.04	32.75	25.53	247.4	.169
								75	7.98	33.26	25.94	209.1	.226
								100	7.92	33.67	26.26	178.7	.275
								150	7.44	33.82	26.45	161.5	.340
								200	6.63	33.97	26.69	139.6	.435
SUF 7R 44 54.0 N 124 18.1 W DATE 04 AUG 69 2105 GCT WIRE 00 DRY 61.4 WET 58.1 CRUISE C690RA													
WIND DIRECTION 18 VEL 08 KTS BAR 22 SWELL DIRECTION 30 H 04 T 06 CLOUD 8 AMT 4 WEATHER 02													
0	14.04	31.489	7.31					0	14.04	31.49	23.50	440.5	0
10	11.35	32.231	7.47	.46			.1	10	11.35	32.24	24.59	336.8	.039
25	7.72	32.477	6.15	1.11			8.8	20	8.76	32.45	25.19	279.8	.073
50	7.47	32.936	4.90	1.55			17.8	30	7.67	32.57	25.44	255.9	.096
125	8.22	33.958	2.10	2.44			33.3	50	7.47	32.94	25.76	225.8	.145
								75	7.72	33.34	26.04	200.1	.198
								100	7.72	33.68	26.30	175.1	.245
SUF 8R 44 55.6 N 124 12.6 W DATE 04 AUG 69 2150 GCT WIRE 00 DRY 60.0 WET 57.0 CRUISE C690RA													
WIND DIRECTION 18 VEL 12 KTS BAR 22 SWELL DIRECTION 30 H 02 T 06 CLOUD 6 AMT 5 WEATHER 02													
0	14.07	31.008	7.55	.45			.7	0	14.07	31.01	23.12	476.4	0
10	12.01	31.024	7.82	.62			.7	10	12.01	31.03	23.54	437.3	.046
25	8.27	32.757	4.82	1.73			16.7	20	9.42	32.12	24.83	314.2	.083
50	7.80	33.494	2.88	2.15			28.0	30	8.18	33.03	25.73	228.9	.110
100		33.946	2.23					50	7.61	33.50	26.15	188.6	.152
								75	7.72	33.89	26.47	159.7	.196
								100	7.72	33.95	26.52	154.7	.235
SUF 9R 44 57.1 N 124 07.1 W DATE 04 AUG 69 2250 GCT WIRE 00 DRY 59.0 WET 55.8 CRUISE C690RA													
WIND DIRECTION 18 VEL 14 KTS BAR 22 SWELL DIRECTION 30 H 03 T 08 CLOUD 6 AMT 6 WEATHER 02													
0	13.65	31.472	7.47	.38			1.0	0	13.65	31.48	23.57	434.2	0
10	10.53	32.793	5.84	1.32			12.0	10	10.53	32.80	25.17	281.5	.036
25	8.37	33.520	3.35					20	8.84	33.39	25.91	211.6	.060
40	7.65	33.810	2.80	2.38			30.8	30	7.37	33.67	26.26	178.4	.080
SUF10R 44 59.0 N 124 12.4 W DATE 04 AUG 69 2354 GCT WIRE 00 DRY 61.7 WET 58.7 CRUISE C690RA													
WIND DIRECTION 19 VEL 10 KTS BAR 22 SWELL DIRECTION 30 H 03 T 06 CLOUD 6 AMT 5 WEATHER 02													
0	14.60	30.838	7.39	.24			1.0	0	14.60	30.84	22.88	499.3	0
15	9.13	32.519	6.21	1.31			8.1	10	9.99	32.64	24.99	299.0	.040
25	7.40	32.688	5.29	1.67			15.6	20	8.10	32.84	25.43	256.5	.068
50	7.57	33.199	3.84					30	7.43	32.77	25.83	237.7	.092
100	7.20	33.899	2.18	2.41			30.1	50	7.57	33.20	25.95	207.6	.137
								75	7.50	33.61	26.28	178.7	.185
								100	7.20	33.90	26.55	151.1	.224

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)

SUF11R 45 00.8 N 124 17.8 W DATE 05 AUG 69 0050 GCT WIRE 00 DRY 62.8 WET 60.1 CRUISE C69OR4
WIND DIRECTION 20 VEL 11 KTS BAR 23 SWELL DIRECTION 31 H 04 T 07 CLOUD 6 AMT 3 WEATHER 02

0	14.73	30.818	7.39	.24	.3	0	14.73	31.82	22.84	503.3	0
10	12.53	31.673	7.62	.32	.1	10	12.53	31.68	23.94	398.7	.045
50	7.41	32.971	4.98	1.64	20.0	20	10.76	32.18	24.65	330.8	.082
100	7.54	33.829	3.17	1.99	30.0	30	9.31	32.57	25.19	279.5	.112
150	6.84	33.961	1.94	2.49	35.6	50	7.42	32.98	25.80	222.4	.162
						75	7.48	33.50	26.20	184.6	.213
						100	7.55	33.83	26.45	161.0	.256
						150	6.84	33.97	26.66	142.1	.332

SUF12R 45 02.4 N 124 12.2 W DATE 05 AUG 69 0151 GCT WIRE 00 DRY 60.5 WET 57.1 CRUISE C69OR4
WIND DIRECTION 19 VEL 12 KTS BAR 22 SWELL DIRECTION 31 H 04 T 06 CLOUD 6 AMT 3 WEATHER 02

0	14.25	31.055	7.55	.19	1.0	0	14.25	31.06	23.12	476.4	0
10	9.99	32.643	6.46	2.07	4.9	10	9.99	32.65	25.14	283.9	.038
50	7.78	33.494	3.11	2.09	29.4	20	8.23	33.28	25.92	210.5	.063
75	7.42	33.877	2.49	2.27	32.2	30	8.89	33.07	25.65	234.0	.085
115	6.99	33.946	2.10	2.46	34.3	50	7.79	33.50	26.15	188.5	.127
						75	7.43	33.88	26.51	155.4	.170
						100	7.13	33.92	26.58	148.9	.208

SUF13R 45 03.[illegible] N 124 06.7 W DATE 05 AUG 69 0250 GCT WIRE 00 DRY 58.3 WET 56.1 CRUISE C69OR4
WIND DIRECTION 19 VEL 11 KTS BAR 22 SWELL DIRECTION 31 H 03 T 06 CLOUD 6 AMT 3 WEATHER 02

0	13.24	31.636	7.44	.27	1.1	0	13.24	31.64	23.77	414.3	0
10	9.43	32.670	5.60	1.17	10.6	10	9.43	32.67	25.26	273.2	.034
25	7.64	33.180	3.42	2.10	27.5	20	7.90	33.09	25.81	220.4	.059
50	7.63	33.786	2.80	2.22	30.9	30	7.64	33.33	26.04	198.7	.090
76	6.93	33.945	1.94	2.52	34.9	50	7.64	33.79	26.40	164.7	.116
						75	6.97	33.94	26.61	145.1	.155

SUF14R 45 05.7 N 124 12.1 W DATE 05 AUG 69 0353 GCT WIRE 00 DRY 58.8 WET 57.0 CRUISE C69OR4
WIND DIRECTION 17 VEL 10 KTS BAR 22 SWELL DIRECTION 30 H 04 T 06 CLOUD 9 AMT 4 WEATHER 02

0	14.84		7.31	.18	.8	0	14.64	31.64	23.45	445.4	0
10	11.14	32.283	7.61	.36	.7	10	11.14	32.29	24.67	329.3	.039
25	7.39	32.585	5.76	1.34	12.8	20	8.36	32.45	25.25	274.2	.069
50	7.61	33.266	3.73	1.89	24.4	30	7.43	32.72	25.59	241.4	.095
125	6.85	33.957	2.07	2.27	29.6	50	7.61	33.27	26.00	203.1	.139
						75	7.59	33.72	26.36	169.6	.186
						100	7.34	33.95	26.57	149.4	.226

SUF 1C 44 39.1 N 124 24.7 W DATE 05 AUG 69 1330 GCT WIRE 00 DRY 56.0 WET 55.0 CRUISE C69OR4
WIND DIRECTION 18 VEL 06 KTS BAR 23 SWELL DIRECTION 29 H 06 T 08 CLOUD 6 AMT 8 WEATHER 02

0	12.18		7.31	.39	.8	0	12.18	31.64	23.98	395.0	0
10	10.21	32.448	7.00	.64	1.9	10	10.21	32.45	24.96	301.8	.035
25	7.88	32.498	5.76	1.21	9.9	20	8.53	32.40	25.19	280.1	.044
50	7.35	32.975	4.98	1.53	17.9	30	7.57	32.58	25.46	254.0	.091
75	7.74	33.394	3.97	1.81	24.9	50	7.35	32.98	25.81	221.3	.138
						75	7.74	33.40	26.08	195.7	.190

SUF 2C 44 40.6 N 124 19.3 W DATE 05 AUG 69 1430 GCT WIRE 00 DRY 55.5 WET 54.2 CRUISE C69OR4
WIND DIRECTION 19 VEL 04 KTS BAR 24 SWELL DIRECTION 29 H 06 T 07 CLOUD 6 AMT 8 WEATHER 02

0	12.82	31.852	7.31	.38	.4	0	12.82	31.86	24.02	390.4	0
10	11.97	32.351	7.38	.39	.3	10	11.97	32.36	24.57	339.7	.036
25	11.18	32.845	7.08	.54	1.2	20	11.47	32.70	24.92	305.0	.069
50	7.41	33.723	4.75	1.36	14.1	30	10.36	33.02	25.37	262.9	.097
70	7.82		3.27	2.00	25.6	50	7.42	33.73	26.39	166.4	.140

SUF 3C 44 42.1 N 124 13.7 W DATE 05 AUG 69 1539 GCT WIRE 00 DRY 55.5 WET 54.2 CRUISE C69OR4
WIND DIRECTION 16 VEL 07 KTS BAR 24 SWELL DIRECTION 28 H 06 T 07 CLOUD 8 AMT 6 WEATHER 02

0	13.51	31.317	7.31			0	13.51	31.84	23.89	403.6	0
10	9.91		5.45			10	9.91	32.36	24.93	304.2	.035
25	8.16	33.130	3.58			20	8.44	32.70	25.43	257.0	.063
50	7.68	33.750	2.65			30	7.82	33.02	25.77	224.7	.088
						50	7.69	33.73	26.35	170.1	.127

SUF 4C 44 43.9 N 124 19.9 W DATE 05 AUG 69 1630 GCT WIRE 00 DRY 56.9 WET 55.3 CRUISE C69OR4
WIND DIRECTION 18 VEL 06 KTS BAR 24 SWELL DIRECTION 27 H 06 T 07 CLOUD 6 AMT 6 WEATHER 02

0	13.75	31.500	7.29			0	13.75	31.50	23.57	434.0	0
10	10.75	32.459	6.77			10	10.75	32.46	24.87	303.8	.037
25	7.43	32.649	5.20			20	8.32	32.60	25.37	242.5	.066
50	7.58	33.253	4.05			30	7.46	32.78	25.63	237.5	.091
75	7.79	33.743	3.25			50	7.58	33.26	25.99	203.7	.135
						75	7.60	33.75	26.35	170.5	.182

SUF 5C 44 47.5 N 124 29.5 W DATE 04 AUG 69 1755 GCT WIRE 00 DRY 60.6 WET 57.6 CRUISE C69ORA
WIND DIRECTION 21 VEL 04 KTS BAR 24 SWELL DIRECTION 29 H 06 T 07 CLOUD 8 AMT 4 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED δ (x10⁸)	ΔD (dynm)
0	14.10	31.831	7.16					0	14.10	31.84	23.75	416.5	0
10	10.45	32.368	7.00					10	10.45	32.37	24.85	311.6	.136
25	7.79	32.445	6.30					20	8.39	32.42	25.22	274.8	.146
50	7.46	32.73	5.45					30	7.52	32.49	25.40	259.6	.193
150	6.95	33.941	2.41					50	7.46	32.74	25.60	240.7	.143
								75	7.21	33.03	25.87	216.1	.230
								100	7.04	33.33	26.12	191.9	.241
								150	6.95	33.94	26.62	145.7	.235

SUF 6C 44 49.4 N 124 35.0 DATE 05 AUG 6 · 1900 GCT WIRE 00 DRY 61.9 WET 58.0 CRUISE C69ORA
WIND DIRECTION VEL 00 KTS BAR 24 SWELL DIRECTION 29 H 06 T 08 CLOUD 6 AMT 2 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED δ (x10⁸)	ΔD (dynm)
0	14.63	31.585	6.85					0.	14.63	31.59	23.45	445.1	0
10	12.97	31.940	7.08					10	12.97	31.94	24.06	387.2	.242
25	8.65	32.449	6.85					20	10.13	32.29	24.84	313.1	.277
100	7.94	33.630	3.66					30	8.07	32.58	25.39	257.8	.235
201	6.50	33.978	2.14					50	8.41	33.01	25.68	233.5	.155
								75	8.18	33.41	24.02	201.2	.209
								100	7.94	33.63	24.24	181.3	.257
								150	7.30	33.80	26.46	147.6	.242
								200	6.52	33.97	26.70	138.2	.217

SUF 7C 44 54.0 N 124 18.1 W DATE 05 AUG 69 2100 GCT WIRE 00 DRY 65.0 WET 59.5 CRUISE C69ORA
WIND DIRECTION 33 VEL 05 KTS BAR 23 SWELL DIRECTION 29 H 06 T 07 CLOUD 8 AMT 1 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED δ (x10⁸)	ΔD (dynm)
0	15.38	31.086	6.92					0	15.38	31.09	22.91	496.9	0
10	11.04	32.280	7.55					10	11.04	32.28	24.68	327.9	.241
25	7.47	32.532	5.91					20	8.37	32.45	25.24	276.5	.171
76	7.86	33.586	3.35					30	7.51	32.64	25.52	248.1	.237
125	7.06	33.941	1.94					50	7.66	33.07	25.84	218.5	.144
								75	7.77	33.57	26.21	183.5	.194
								100	7.61	33.84	26.45	161.4	.237

SUF 8C 44 55.6 N 124 12.5 W DATE 05 AUG 69 2205 GCT WIRE 00 DRY 63.7 WET 53.8 CRUISE C69ORA
WIND DIRECTION 35 VEL 10 KTS BAR 22 SWELL DIRECTION 29 H 06 T 07 CLOUD 8 AMT 2 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED δ (x10⁸)	ΔD (dynm)
0	15.49	30.838	6.92					0	15.49	30.84	22.70	517.4	0
10	12.09	31.016	7.78					10	12.09	31.02	23.51	439.3	.248
25	8.18	32.645	5.76					20	9.23	32.06	24.81	314.0	.286
50	8.46	33.450	2.86					30	8.24	32.92	25.63	237.0	.213
100	7.06	33.942	1.87					50	8.46	33.46	26.02	201.4	.157
								75	8.09	33.88	26.41	164.6	.203
								100	7.07	33.95	26.61	144.0	.242

SUF 9C 44 57.1 N 124 07.0 W DATE 05 AUG 69 2230 GCT WIRE 00 DRY 63.2 WET 59.6 CRUISE C69ORA
WIND DIRECTION 35 VEL 10 KTS BAR 22 SWELL DIRECTION 29 H 06 T 07 CLOUD 8 AMT 2 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED δ (x10⁸)	ΔD (dynm)
0	14.84	31.197	7.08	.19			1.4	0	14.84	31.20	23.11	477.8	0
10	10.53	32.668	6.22	1.29			12.2	10	10.53	32.67	25.07	290.7	.238
25	8.33	33.266	3.58	2.10			24.9	20	8.71	33.19	25.77	224.5	.244
50	7.61	33.808	2.72	2.25			29.3	30	7.89	33.42	26.08	195.6	.185
								50	7.61	33.81	26.42	162.8	.121

SUF10C 44 59.0 N 124 12.3 W DATE 06 AUG 69 0010 GCT WIRE 13 DRY 64.5 WET 59.5 CRUISE C69ORA
WIND DIRECTION 34 VEL 10 KTS BAR 22 SWELL DIRECTION 29 H 04 T 07 CLOUD 8 AMT 2 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED δ (x10⁸)	ΔD (dynm)
0	15.08	31.160	7.08					0	15.08	31.17	23.03	488.3	0
10	11.91	32.034	7.76					10	11.91	32.04	24.34	361.0	.242
25	8.04	32.546	5.68					20	9.12	32.43	25.12	284.5	.275
50	7.58	33.232	3.73					30	7.64	32.70	25.55	245.7	.121
110	7.15	33.930	2.33					50	7.58	33.24	25.98	205.2	.146
								75	7.29	33.69	26.37	168.1	.193
								100	7.16	33.91	26.58	150.3	.233

SUF11C 45 00.9 N 124 17.8 W DATE 06 AUG 69 0125 GCT WIRE 10 DRY 62.0 WET 58.9 CRUISE C69ORA
WIND DIRECTION 00 VEL 12 KTS BAR 22 SWELL DIRECTION 33 H 06 T 08 CLOUD 6 AMT 2 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED δ (x10⁸)	ΔD (dynm)
0	14.98	31.554	6.92					0	14.98	31.56	23.35	454.4	0
10	11.06	32.419	8.08					10	11.06	32.42	24.79	318.0	.239
25	7.74	32.458	6.27					20	8.55	32.44	25.22	277.2	.148
50	7.37	32.922	4.98					30	7.40	32.53	25.65	254.9	.195
150	7.10	33.936	2.18					50	7.38	32.93	25.76	225.5	.143
								75	7.12	33.30	26.09	194.5	.195
								100	7.23	33.60	26.31	174.3	.242
								150	7.10	33.94	26.59	148.0	.222

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
SUF12C 45 02.4 N 124 12.2 W DATE 06 AUG 69 0240 GCT WIRE 00 DRY 60.5 WET 57.1 CRUISE C690RA													
WIND DIRECTION 35 VEL 12 KTS BAR 21 SWELL DIRECTION 30 H 05 T 08 CLOUD 8 AMT 2 WEATHER 02													
0	13.53	31.889	7.47	.24			.6	0	13.53	31.89	23.91	401.2	0
10	10.24	32.382	7.24	.57			1.0	10	10.24	32.39	24.90	307.2	.135
25	7.28	32.631	5.65	1.31			12.0	20	8.00	32.57	25.40	259.9	.166
50	7.60	33.279	3.73	1.98			24.1	30	7.34	32.76	25.63	237.5	.189
100	7.28	33.849	2.57	2.25			29.3	50	7.60	33.28	26.01	202.1	.133
								75	7.60	33.70	26.34	171.3	.179
								100	7.29	33.90	26.54	152.2	.220
SUF13C 45 03.9 N 124 06.6 W DATE 06 AUG 69 0350 GCT WIRE 00 DRY 58.6 WET 56.0 CRUISE C690RA													
WIND DIRECTION 01 VEL 12 KTS BAR 21 SWELL DIRECTION 30 H 05 T 08 CLOUD 8 AMT 1 WEATHER 02													
0	13.69	31.923	7.31					0	13.69	31.93	23.91	401.8	0
10	10.37	32.682	5.84					10	10.38	32.69	25.11	287.1	.134
25	7.58	32.861	4.20					20	8.24	32.85	25.58	242.8	.161
50	7.71	33.763	2.65					30	7.61	33.04	25.82	219.9	.184
75	7.02	33.929	2.02					50	7.71	33.77	26.37	167.5	.123
								75	7.03	33.93	26.60	144.2	.162
WH 1A 45 06.4 N 124 07.0 W DATE 06 AUG 69 1735 GCT WIRE 00 DRY 61.9 WET 59.0 CRUISE C690RA													
WIND DIRECTION 35 VEL 07 KTS BAR 20 SWELL DIRECTION 32 H 04 T 05 CLOUD 8 AMT 2 WEATHER 02													
0	13.24	31.742	7.05	.51			3.5	0	13.24	31.93	24.00	393.2	0
10	8.07		4.59	1.57			16.1	10	8.07	32.69	25.48	252.4	.132
25	7.28		4.56	1.68			18.4	20	7.53	32.85	25.68	232.9	.157
50	7.66		2.41	2.30			29.8	30	7.29	33.04	25.86	215.6	.179
75	7.14		2.10	2.46			31.2	50	7.67	33.77	26.38	144.8	.117
								75	7.15	33.93	26.59	147.7	.157
WH 1B 45 04.4 N 124 09.0 W DATE 06 AUG 69 2150 GCT WIRE 05 DRY 63.0 WET 61.5 CRUISE C690RA													
WIND DIRECTION 34 VEL 14 KTS BAR 20 SWELL DIRECTION 32 H 04 T 05 CLOUD 8 AMT 1 WEATHER 02													
0	13.64	31.744	7.39	.34			1.5	0	13.64	31.75	23.78	414.0	0
10	12.28	32.136	7.27	.35			2.3	10	12.28	32.14	24.34	360.1	.039
25	8.40	32.582	4.98					20	9.68	32.44	25.04	294.3	.071
50	7.57	33.352	3.35	2.65			35.1	30	7.92	32.74	25.54	246.3	.198
75	7.52	33.914	2.57	2.22			32.3	50	7.57	33.36	26.07	196.2	.143
								75	7.53	33.92	26.52	154.0	.186
C14 1 45 09.7 N 124 07.3 W DATE 07 AUG 69 1455 GCT WIRE 00 DRY 56.9 WET 56.1 CRUISE C690RA													
WIND DIRECTION VEL 00 KTS BAR 20 SWELL DIRECTION 32 H 04 T 06 CLOUD 8 AMT 5 WEATHER 02													
0	12.50	31.957	7.36	.40			1.8	0	12.50	31.96	24.16	377.0	0
10	10.23		5.60	1.18			10.3	10	10.23	32.58	25.05	292.6	.133
15	9.95	32.676	5.52	1.20			11.8	20	8.76	32.78	25.44	255.5	.161
25	7.44	32.865	4.54	1.67			19.4	30	7.49	32.99	25.80	221.7	.185
50	7.67	33.750	2.49	2.26			30.9	50	7.68	33.75	26.37	167.9	.124
73	7.13		2.02	2.44			34.0						
C14 5 44 59.9 N 124 07.2 W DATE 08 AUG 69 0245 GCT WIRE 00 DRY 59.0 WET 58.5 CRUISE C690RA													
WIND DIRECTION VEL KTS BAR 21 SWELL DIRECTION 31 H 03 T 06 CLOUD 8 AMT 2 WEATHER 02													
0	13.83	31.019	9.21	.32			1.7	0	13.83	31.02	23.18	471.4	0
10	9.53	32.673	4.87	2.18			23.7	10	9.53	32.68	25.24	274.5	.137
15	8.34	32.783						20	7.71	32.89	25.69	232.3	.163
25	7.40	33.006	4.51	2.33			29.0	30	7.46	33.16	25.93	209.0	.185
50	7.72	33.719	2.68	2.57			31.4	50	7.72	33.72	26.34	171.0	.123
74	7.45	33.898	2.02										
DRDG 2 45 08.6 N 124 07.5 W DATE 08 AUG 69 1450 GCT WIRE 00 DRY 54.8 WET 52.7 CRUISE C690RA													
WIND DIRECTION 08 VEL 04 KTS BAR 20 SWELL DIRECTION 31 H 02 T 06 CLOUD 7 AMT 6 WEATHER 03													
0	12.77		8.56					0	12.77	31.02	23.38	451.5	0
10	10.13		6.22					10	10.13	32.68	25.14	289.9	.037
15	8.44		3.81					20	7.74	32.89	25.68	232.7	.163
25	7.53		4.36					30	7.56	33.16	25.92	210.3	.185
50	7.67		2.85					50	7.68	33.72	26.35	170.3	.123
DRDG 3 45 06.5 N 124 07.6 W DATE 08 AUG 69 1800 GCT WIRE 00 DRY 61.1 WET 57.7 CRUISE C690RA													
WIND DIRECTION 00 VEL 10 KTS BAR 18 SWELL DIRECTION 32 H 03 T 06 CLOUD 8 AMT 1 WEATHER 02													
0	12.67	31.874	7.62					0	12.67	31.90	24.08	384.8	0
10	8.48	32.455	5.88					10	8.48	32.46	25.21	277.9	.133
15	8.22	32.696	3.97					20	7.84	32.81	25.61	240.1	.159
25	7.56	32.887	4.28					30	7.58	33.01	25.80	221.7	.182
50	7.64	33.695	2.49					50	7.65	33.70	26.33	171.6	.121

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁵)	ΔD (d/n.m)
DB 65 45 00.0 N 125 35.2 W DATE 09 AUG 69 0910 GCT WIRE 00 DRY 62.0 WET 58.1 CRUISE C690RA													
WIND DIRECTION 33 VEL 12 KTS BAR 17 SWELL DIRECTION 32 H 04 T 05 CLOUD 6 AMT 8 WEATHER 02													
0	17.04	31.615	5.91	.20			.1	0	17.04	31.62	22.94	493.8	0
10	16.17	31.843	6.26	.29				10	16.17	31.85	23.31	459.4	.048
50	8.74	32.426	7.31	.57			.1	20	14.34	32.02	23.84	408.0	.091
100	7.64	32.965	5.29	1.33			16.9	30	12.49	32.18	24.33	361.5	.129
150	7.77	33.789	3.35	2.07			28.7	50	8.74	32.43	25.14	281.5	.194
200	7.26	33.8[illegible]	2.70	2.23			30.	75	8.19	32.69	25.45	254.6	.241
								100	7.65	32.97	25.75	226.6	.321
								150	7.78	33.79	26.39	167.9	.419
								200	7.26	33.90	26.54	153.8	.500
DB 55 45 00.0 N 125 21.2 W DATE 09 AUG 69 1045 GCT WIRE 00 DRY 61.0 WET 56.4 CRUISE C690RA													
WIND DIRECTION 34 VEL 10 KTS BAR 18 SWELL DIRECTION 32 H 04 T 06 CLOUD 6 AMT 8 WEATHER 03													
0	17.00	30.683	5.76	.24			.1	0	17.00	30.69	22.24	561.0	0
10	16.70		5.77	.23			.1	10	16.71	31.51	22.94	494.3	.053
50	8.86	32.462	7.06	.61			1.6	20	15.03	31.75	23.49	441.9	.100
101		33.670	4.36					30	13.17	31.99	24.05	388.1	.142
151	8.39	33.313	4.28	1.62			22.4	50	8.86	32.47	25.19	290.6	.208
200		33.907	3.42					75	8.74	33.19	25.77	225.4	.271
								100	8.63	33.66	26.15	189.5	.323
								150	8.39	33.32	25.93	211.7	.423
								200	7.26	33.91	26.55	153.1	.514
DB 45 44 59.8 N 125 07.0 W DATE 09 AUG 69 1225 GCT WIRE 00 DRY 61.3 WET 56.7 CRUISE C690RA													
WIND DIRECTION 33 VEL 07 KTS BAR 18 SWELL DIRECTION 32 H 03 T 06 CLOUD 6 AMT 7 WEATHER 02													
0	16.07	31.637	6.15	.28			.2	0	16.07	31.64	23.18	471.1	0
10	16.08	31.648	5.90	.26			.1	10	16.08	31.65	23.19	470.7	.047
50	8.01	32.467	6.61	.80			5.6	20	14.33	31.80	23.63	424.0	.093
101	8.12	33.312	4.28	1.57			20.6	30	12.41	31.99	24.20	372.9	.132
151	7.62	33.799	3.19	1.89			25.5	50	8.01	32.47	25.32	269.1	.195
200		33.956	2.49					75	8.06	32.92	25.66	236.0	.25[illegible]
								100	8.06	33.30	25.95	208.3	.31[illegible]
								150	7.64	33.79	26.41	166.3	.40[illegible]
								200	7.26	33.96	26.59	149.5	.48[illegible]
DB 35 44 59.9 N 124 52.9 W DATE 09 AUG 69 1355 GCT WIRE 00 DRY 57.0 WET 60.5 CRUISE C690RA													
WIND DIRECTION VEL 00 KTS BAR 19 SWELL DIRECTION 32 H 03 T 06 CLOUD 6 AMT 7 WEATHER 03													
0	14.69	32.273	6.28	.27			.2	0	14.69	32.28	23.97	395.8	0
10	14.65	32.278	6.43	.23			.2	10	14.65	32.28	23.98	394.3	.04[illegible]
50	8.24	33.485	6.46	.82			5.3	20	13.26	32.54	24.47	348.4	.07[illegible]
101	8.08	33.388	4.25	1.69			21.1	30	11.72	32.83	24.99	299.5	.10[illegible]
151	7.43	33.889	2.96	2.09			27.3	50	8.24	33.49	26.08	195.4	.159
200	6.68	33.978	2.33	2.37			31.9	75	8.16	33.44	26.05	198.7	.20[illegible]
								100	8.08	33.40	26.03	201.1	.25[illegible]
								150	7.45	33.88	26.[illegible]0	157.0	.347
								200	6.68	33.98	26.48	140.1	.422
DB 30 44 58.5 N 124 46.0 W DATE 09 AUG 69 1510 GCT WIRE 00 DRY 60.5 WET 57.9 CRUISE C690RA													
WIND DIRECTION VEL KTS BAR 19 SWELL DIRECTION 32 H 03 T 06 CLOUD 6 AMT 7 WEATHER 03													
0	14.75	32.138	6.15	.37			.1	0	14.75	32.14	23.85	406.9	0
10	13.41	32.252	6.69	.36			.1	10	13.41	32.26	24.22	372.5	.03[illegible]
50	7.85	32.610	6.11	1.02			8.8	20	11.80	32.33	24.58	337.6	.07[illegible]
101	8.08	33.623	3.78	1.82			23.1	30	10.33	32.42	24.91	306.8	.10[illegible]
151	7.54	33.883	3.42	1.94			25.7	50	7.85	32.61	25.65	255.2	.163
200		33.963	2.69					75	7.94	33.11	25.23	219.9	.22[illegible]
								100	8.04	33.60	26.20	185.0	.273
								150	7.56	33.88	26.49	158.3	.3[illegible]
								200	6.68	33.96	26.47	141.2	.433
DB 25 44 57.0 N 124 39.3 W DATE 09 AUG 69 1630 GCT WIRE 00 DRY 61.0 WET 58.0 CRUISE C690RA													
WIND DIRECTION 03 VEL 05 KTS BAR 19 SWELL DIRECTION 33 H 03 T 04 CLOUD 6 AMT 8 WEATHER 03													
0	14.93	31.636	6.40	.22			.1	0	14.93	31.64	23.43	447.4	0
10	13.04	32.212	6.72	.40			.1	10	13.04	32.22	24.26	368.6	.041
50	7.97	32.576	6.15	.94			7.4	20	11.38	32.43	24.74	323.0	.075
101	8.02	33.618	3.73					30	9.98	32.56	25.08	290.2	.10[illegible]
151	7.28	33.887	3.27	1.78			19.9	50	7.97	32.58	25.41	259.4	.14[illegible]
200	6.65	33.950	2.57	2.34			30.6	75	7.99	33.09	25.81	221.8	.221
								100	7.99	33.80	26.20	184.7	.272
								150	7.30	33.89	26.53	154.4	.35[illegible]
								200	6.65	33.95	26.47	141.7	.431

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (cynm)

DB 20 44 55.3 N 124 32.7 W DATE 09 AUG 69 1710 GCT WIRE 00 DRY 61.0 WET 67.9 CRUISE C69OR4
WIND DIRECTION VEL 00 KTS BAR 20 SWELL DIRECTION 33 H 03 T 05 CLOUD 6 AMT 8 WEATHER 03

0	14.46	31.663	6.69	.23	.2	0	14.46	31.67	23.95	434.0	0
10	12.56	32.344	7.06	.35	.2	10	12.56	32.35	24.45	349.8	.079
50	7.42	32.616	5.91	1.13	10.6	20	10.86	32.57	24.94	303.8	.072
101	7.92	33.704	3.50	1.90	24.8	30	9.44	32.68	25.10	288.0	.102
151	7.24	33.902	3.30	2.14	28.3	50	7.63	32.62	25.52	249.0	.155
200	6.65	33.966	2.41	2.47	31.5	75	7.87	33.15	25.90	217.9	.213
						100	7.88	33.68	26.28	176.8	.262
						150	7.26	33.90	26.54	153.0	.344
						200	6.65	33.97	26.68	140.6	.417

DB 15 44 53.4 N 124 26.3 W DATE 09 AUG 69 1825 GCT WIRE 00 DRY 61.7 WET 59.2 CRUISE C69OR4
WIND DIRECTION 04 VEL 04 KTS BAR 20 SWELL DIRECTION 33 H 03 T 05 CLOUD 6 AMT 8 WEATHER 03

0	14.08	31.789	6.85	.24	.2	0	14.08	31.79	23.72	419.2	0
10	11.31	32.373	7.24	.58	.2	10	11.31	32.38	24.71	325.6	.037
50	7.49	32.823	5.29	1.33	13.6	20	9.64	32.61	25.18	280.9	.048
100	7.42	33.747	3.35	1.93	24.2	30	8.45	32.77	25.49	251.7	.094
150	6.84	33.973	2.02	2.64	32.0	50	7.49	32.83	25.67	234.5	.143
						75	7.46	33.30	26.02	201.6	.197
						100	7.42	33.75	26.35	170.9	.244
						150	6.84	33.97	26.66	141.8	.322

DB 10 44 52.0 N 124 19.5 W DATE 09 AUG 69 1920 GCT WIRE 00 DRY 61.0 WET 58.5 CRUISE C69OR4
WIND DIRECTION VEL 00 KTS BAR 18 SWELL DIRECTION 33 H 03 T CLOUD 6 AMT WEATHER 02

0	13.03	31.888	7.03	.35	1.5	0	13.03	31.89	24.01	391.9	0
10	8.89	32.446	6.85	.60	1.5	10	8.89	32.45	25.17	281.7	.034
50	7.69	33.243	4.36	1.73	19.8	20	8.59	32.76	25.46	254.1	.040
100	7.43	33.888	1.94		25.7	30	8.29	33.00	25.69	232.1	.085
125	6.99	33.953	1.79	2.44	27.8	50	7.69	33.25	25.97	205.0	.129
						75	7.53	33.63	26.30	175.3	.176
						100	7.44	33.89	26.51	155.1	.217

DB 5 44 50.4 N 124 12.3 W DATE 09 AUG 69 2015 GCT WIRE 00 DRY 61.0 WET 58.5 CRUISE C69OR4
WIND DIRECTION VEL 00 KTS BAR 21 SWELL DIRECTION 33 H 03 T 08 CLOUD 6 AMT 8 WEATHER 02

0	13.02	31.978	7.78	.29	.8	0	13.02	31.98	24.08	385.1	0
10	9.35	32.519	5.68	1.15	10.0	10	9.35	32.52	25.15	283.1	.033
25	7.61	32.983	4.19	1.89	21.1	20	7.66	33.85	25.64	237.3	.089
50	7.70	33.739	2.65	2.38	29.1	30	7.63	33.16	25.91	211.5	.042
76	7.14	33.930	2.22	2.52	31.9	50	7.70	33.74	26.36	169.1	.120
						75	7.17	33.92	26.57	149.0	.140

DB 1 44 48.7 N 124 06.0 W DATE 09 AUG 69 2120 GCT WIRE 00 DRY 62.1 WET 58.1 CRUISE C69OR4
WIND DIRECTION VEL 00 KTS BAR 20 SWELL DIRECTION 33 H 03 T 10 CLOUD 6 AMT 8 WEATHER 02

0	11.08	31.820	6.30	1.18	12.0	0	11.08	31.82	24.32	362.4	0
10	8.63	33.264	3.60			10	8.63	33.27	25.85	217.1	.029
15	8.42	33.537	3.35	2.13	24.7	20	8.00	33.72	26.29	174.9	.049
25	7.53	33.831	2.49	2.21	26.8	30	7.18	33.91	26.57	149.1	.065
30	7.17	33.908	2.10	2.27	26.8						

OBSERVED									INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^3$)	ΔD (dyn.m)
CHAS 1 43 54.0 N 127 10.0 W DATE 19 AUG 69 0527 GCT WIRE 00 DRY WET CRUISE Y690AC														
WIND DIRECTION 28 VEL 29 KTS BAR 14 SWELL DIRECTI 4 29 H 05 T 10 CLOUD 8 AMT 7 WEATHER														
2335	1.76	34.633	1.83	2.93	7.600	2.499		177						
2534	1.79	34.642	1.92	2.91	7.612	2.500		174						
2634	1.74	34.643	2.03	91	7.615	2.49		177						
2683	1.72	34.639	2.07	2.84	7.619	2.500		168						
2733	1.73	34.643	2.09	2.89	7.615	2.500		177						
2783	1.70	34.643	2.14	2.89	7.622	2.500		177						
2833	1.71	34.642	2.16	2.73	7.624	2.504		180						
2883	1.70	34.650	2.23	2.81	7.625	2.505		177						
2932	1.68	34.654	2.27	2.89	7.627	2.507		176						
2982	1.65	34.653	2.31	2.91	7.631	2.509		178						
3002	1.69	34.654	2.30	2.89	7.631	2.505		176						
3017	1.67	34.653	2.31	2.81	7.631	2.505		177						
3026				2.82	7.631	2.509		181						
3029				2.79	7.632	2.507		183						
3031				2.67	7.631	2.509		178						
3032				2.89	7.631	2.505		179						
CHAS 2 46 04.4 N 126 32.3 W DATE 23 AUG 69 0529 GCT WIRE 00 DRY WET CRUISE Y690AC														
WIND DIRECTION VEL KTS BAR SWELL DIRECTION H T CLOUD AMT WEATHER														
1957	1.93	34.595	1.39	2.99	7.544	2.481		176						
2155	1.93	34.607	1.63	2.99	7.564	2.482		180						
2353	1.78	34.619	1.78	2.96	7.578	2.489		186						
2452	1.78	34.639	1.81		7.584	2.498		188						
2552	1.76	34.642	1.83	2.90	7.590	2.499		202						
2601	1.76	34.641	1.86	2.95	7.593	2.502		202						
2651	1.74	34.644	1.86	2.99	7.595	2.501		194						
2676	1.76	34.647	1.94	3.00	7.598	2.505		200						
2690	1.74													
2705	1.71	34.646		2.95	7.603	2.506		191						
2720	1.75	34.646		2.89	7.603	2.507		197						
2735	1.72	34.646	1.96	2.91	7.603	2.507		193						
2791				2.96	7.605	2.503		194						
2794				2.99	7.605	2.505		196						
2796				2.99	7.607	2.501		188						
2797				2.99	7.605	2.505		192						
CHAS 3 44 38.2 N 129 09.2 W DATE 24 AUG 69 1257 GCT WIRE 03 DRY WET CRUISE Y690AC														
WIND DIRECTION VEL KTS BAR SWELL DIRECTION H T CLOUD AMT WEATHER														
1617	2.19	34.556	0.96	3.15	7.497	2.467		172						
1815	2.02	34.587	1.28	3.12	7.521	2.475		176						
2012	1.90	34.605	1.55	3.04	7.545	2.485		179						
2211	1.81	34.618	1.75	2.96	7.564	2.485		180						
2409	1.79	34.638	1.88	2.98	7.581	2.488		185						
2458	1.78	34.634	2.04	2.97	7.584	2.487		185						
2508	1.77	34.634	2.00	2.94	7.584	2.485		174						
2558	1.76	34.635	1.97	2.97	7.588	2.481		180						
2577	1.79	34.636	1.99	2.95	7.588	2.488		187						
2592	1.77	34.637	1.93	2.95	7.588	2.484		190						
2601		34.634		2.96	7.590	2.488		187						
2604				2.98	7.591	2.494		185						
2606		34.633		2.97	7.591	2.490		185						
2607		34.636		2.97	7.590	2.489		185						

OBSERVED									INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)

CHAS 4 44 11.0 N 1[illegible] 04.9 W DATE 25 AUG 69 2[illegible] 3 GCT WIRE 00 DRY WET CRUISE Y690AF

WIND DIRECTION	VEL		KTS	BAR	SWELL DIRECTI		H	T	CLOUD	AMT	WEATHER
1765	2.19	34.581	1.16	3.11	7.521	2.483		171			
1962	1.96	34.594	1.42	.08	7.545	2.48		174			
2160	1.89	34.608	1.63	3.04	7.561	2.488		178			
2358	1.84	34.614	1.82	3.01	7.576	2.490		178			
2557	1.84	34.621	1.79	2.99	7.581	2.492		181			
2606	1.84	34.621	1.83	2.98	7.581	2.488		176			
2656	1.84	34.620	1.86	3.00	7.581	2.490		172			
2705	1.84	34.620	1.87	2.99	7.581	2.490		178			
2725	1.85	34.618	1.91	3.01	7.581	2.492		176			
2740	1.84	34.620	1.86	2.99	7.583	2.493		177			
2753		34.619		2.98	7.582	2.490		174			
2756		34.617		2.98	7.583	2.492		174			
2758		34.615		3.04	7.582	2.491		174			
2759		34.616		3.14	7.582	2.510		165			

CHAS 5 44 35.0 N 125 27.6 W DATE 28 AUG 69 1604 GCT WIRE 00 DRY WET CRUISE Y690AF

WIND DIRECTION	VEL		KTS	BAR	SWELL DIRECTION		H	T	CLOUD	AMT	WEATHER
1059	3.40	34.423	0.39	3.24	7.451	2.442		132			
1456	2.63	34.514	0.81	3.12	7.486	2.463		155			
1853	2.04	34.574	1.29	3.05	7.530	2.484		173			
2050	1.86	34.601	1.63	2.95	7.564	2.490		178			
2248	1.79	34.624	1.84	2.95	7.581	2.494		182			
2447	1.76	34.632	1.91	2.91	7.593	2.497		186			
2645	1.74	34.639	2.02	2.92	7.607	2.505		185			
2695	1.73	34.640		2.91	7.607	2.503		183			
2744	1.72	34.642			7.608	2.502		192			
2794	1.72	34.642	2.07	2.91	7.607	2.504		194			
2814	1.74	34.643		2.97	7.606	2.505		195			
2829	1.71	34.642	2.07	3.00	7.607	2.505		194			
2838		34.642		3.02	7.607	2.504		193			
2841		34.641		3.05	7.608	2.506		193			
2843		34.639		3.01	7.607	2.505		190			

CHAS 6 44 26.4 N 127 13.0 W DATE 29 AUG 69 1439 GCT WIRE 00 DRY WET CRUISE Y690AF

WIND DIRECTION	VEL		KTS	BAR	SWELL DIRECTION		H	T	CLOUD	AMT	WEATHER
2279	1.82	34.624	1.75	2.92	7.573	2.489		180			
2478	1.75	34.637	1.85	2.92	7.598	2.496		180			
2676	1.74	34.644	2.03	2.90	7.598	2.495		181			
2775	1.72	34.645	2.05	2.85	7.602	2.501		182			
2825	1.73	34.648	2.07	2.88	7.603	2.499		186			
2875	1.72	34.651	2.06	2.87	7.607	2.501		186			
2924	1.72	34.653	2.12	2.82	7.610	2.503		185			
2974	1.71	34.654	2.21	2.80	7.617	2.496		183			
3024	1.69										
3073	1.68	34.654	2.29	2.82	7.622	2.498		179			
3093	1.70	34.655	2.30	2.82	7.623	2.498		177			
3107	1.67	34.654	2.29	2.80	7.623	2.492		180			
3116		34.655		2.82	7.619	2.493		180			
3119		34.655		2.81	7.620	2.496		175			
3121		34.654		2.72	7.621	2.491		179			
3122		34.651		2.80	7.619	2.502		177			

OBSERVED								INTERPOLATED				DERIVED	
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	S ($\times 10^5$)	ΔD (dyn.m)

CHAS 7 43 39.1 N 124 14.9 W DATE 30 AUG 69 0948 OCT WIRE 00 DRY WET CRUISE Y6908F
WIND DIRECTION VEL KTS BAR SWELL DIRECTION H T CLOUD AMT WEATHER

2305	1.81	34.601	1.71	3.02	7.571	2.487	179	
2454	1.77	34.632	1.98	2.94	7.591	2.490	180	
2607	1.73	34.642	2.10	2.90	7.602	2.493	180	
2701	1.80	34.646	2.19	2.89	7.610	2.496	179	
2801	1.66	34.651	2.26	2.85	7.619	2.496	177	
2900	1.63	34.654	2.36	2.84	7.625	2.489	178	
2999	1.63	34.655	2.43	2.77	7.631	2.494	178	
3097	1.62	34.655	2.51	2.79	7.634	2.494	178	
3198	1.61	34.659	2.57	2.79	7.646	2.494	178	
3294	1.59	34.664	2.62	2.77	7.652	2.494	179	
3295	1.57	34.668	2.73	2.78	7.656	2.498	181	
3345	1.56	34.670	2.73	2.74	7.658	2.500	178	
3365	1.59	34.670	2.70	2.74	7.658	2.499	175	
3380	1.56	34.670	2.72	2.74	7.658	2.499	179	
3389		34.671		2.68	7.658	2.499	179	
3391		34.667		2.77	7.658	2.498	178	
3392		34.669		2.72	7.656	2.509	179	

OBSERVED								INTERPOLATED				DERIVED	
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	S ($\times 10^5$)	ΔD (dyn.m)

NH 3 44 39.2 N 124 08.2 W DATE 19 AUG 69 0932 OCT WIRE 00 DRY 53.5 WET 52.9 CRUISE C6908C
WIND DIRECTION 15 VEL 04 KTS BAR 13 SWELL DIRECTION 32 H 05 T 07 CLOUD 6 AMT R WEATHER

0	8.98	33.766	3.60	2.29	29.1	0	8.98	33.77	26.18	184.9	0
5	8.67	33.745	3.42	2.26	30.2	10	8.46	33.77	26.27	177.2	.018
10	8.46	33.768	3.23	2.37	30.0	20	7.67	33.89	26.48	157.1	.035
15	8.36	33.780	3.08	2.44	29.2	30	7.29	33.95	26.58	147.8	.050
20	7.66	33.888	2.31	2.69	25.7						
25	7.54	33.914	2.34	2.44	26.0						
30	7.28	33.945	2.10	2.38	31.4						
35	7.24	33.957	1.92	2.51	31.7						
40	7.24	33.965	1.96	2.47	31.1						

NH 5 44 39.1 N 124 10.4 W DATE 19 AUG 69 0702 OCT WIRE 03 DRY 52.5 WET 52.0 CRUISE C6908C
WIND DIRECTION VEL 00 KTS BAR 13 SWELL DIRECTION 32 H 05 T 07 CLOUD 6 AMT R WEATHER 46

0	10.99	33.080	3.80	1.58	16.5	0	10.99	33.08	25.31	267.8	0
5	10.07	33.161	4.37	1.78	20.0	10	8.72	33.46	25.98	204.1	.026
10	8.72	33.457	3.58	2.08	25.7	20	7.57	33.81	26.43	161.6	.042
15	7.95	33.740	2.31	2.31	28.5	30	7.31	33.95	26.57	148.4	.057
20	7.56	33.809	2.22	2.36	31.4						
25	7.52	33.882	2.17	2.37	30.6						
30	7.30	33.941	2.07	2.55	31.8						
35	7.26	33.957	1.92	2.42	32.0						
40	7.55	33.953	1.97	2.42	31.2						

NH 15 44 39.1 N 124 24.5 W DATE 19 AUG 69 0932 OCT WIRE 00 DRY 54.6 WET 54.0 CRUISE C6908C
WIND DIRECTION 21 VEL 04 KTS BAR 14 SWELL DIRECTION 32 H 05 T 07 CLOUD 7 AMT 2 WEATHER 02

0	11.89	32.000	4.34	.79	7.8	0	11.89	32.00	24.31	343.0	0
5	11.79	32.055	4.33	.84	8.7	10	11.15	32.30	24.68	328.5	.035
10	11.15	32.297	4.19	1.01	7.2	20	8.38	32.48	25.27	272.3	.065
15	9.36	32.344	5.70	1.17	11.9	30	7.44	32.77	25.61	240.1	.090
20	8.37	32.473	5.37	1.38	15.6	50	7.66	33.38	26.08	199.2	.134
25	7.44	32.655	4.71	1.53	19.6	75	7.58	33.84	26.45	161.0	.178
30	7.63	32.770	4.71	1.38	16.8						
35	7.42	32.943	5.01	1.26	11.6						
40	7.58	33.112	3.95	1.34	13.0						
45	7.57	33.193	3.93	1.72	26.8						
50	7.65	33.380	3.51	1.83	22.9						
60	7.68	33.526	3.60	1.84	25.2						
76	7.57	33.860	2.56	2.61	31.8						

NH 25 44 39.1 N 124 38.4 W DATE 19 AUG 69 1232 OCT WIRE DRY 57.0 WET 56.0 CRUISE C6908C
WIND DIRECTION 18 VEL 08 KTS BAR 13 SWELL DIRECTION 32 H 04 T 06 CLOUD 7 AMT R WEATHER 03

0	13.11	31.466	6.57	.46	1.8	0	13.11	31.47	23.67	424.4	0
5	12.12	31.686	6.54	.60	5.1	10	11.14	31.99	24.44	351.1	.039
10	11.14	31.988	6.00		9.5	20	8.54	32.49	25.25	273.5	.070
20	8.54	32.489	6.57	.82		30	7.85	32.53	25.38	261.4	.097
30	7.85	32.524	6.28	.95	7.8	50	7.42	32.63	25.53	248.1	.148
40	7.50	32.576	5.98	1.06	11.5	75	7.85	33.35	26.03	200.9	.204
50	7.41	32.626	5.76	1.20	13.6	100	7.89	33.79	26.36	169.3	.250
61	7.59	32.941	5.23	1.28	15.7	150	7.23	33.97	26.60	147.0	.329
75	7.85	33.345	4.33	1.31	16.5	200	6.74	34.05	26.73	135.8	.400
100	7.88	33.780	3.16	1.94	28.1	250	6.41	34.08	26.80	129.6	.466
125	7.59	33.895	2.91	2.05	28.2						
150	7.23	33.969	2.55	2.22	30.9						
175	6.93	34.012	2.11	2.32	30.6						
200	6.74	34.042	2.01	2.31	30.8						
250	6.41	34.081	2.06	2.45	32.3						

NM 35 44 39.1 N 124 52.6 W DATE 19 AUG 69 1512 GCT WIRE 04 DRY 59.5 WET 58.2 CRUISE C690RC
WIND DIRECTION 18 VEL 09 KTS BAR 13 SWELL DIRECTION 32 H 06 T 09 CLOUD 6 AMT 7 WEATHER 02

OBSERVED

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	15.16	31.048	6.38				
5	15.06	31.030	6.34	.26		.1	
10	14.37	32.651	6.48	.28		.8	
20	9.79	32.949	7.19	.39		1.1	
30	8.75	33.239	6.88	.54		.7	
40	8.24	33.412	4.45	.83		5.5	
50	8.03	33.713	6.02	.95		7.6	
61	7.88	33.782	5.74	1.19		8.7	
75	7.93	33.861	5.09			13.0	
101	8.16	33.938	3.88	1.67			
126	7.73	33.940	3.42	1.86		24.5	
151	7.37	33.950	3.09	1.92		24.9	
202	7.15	33.952	2.25			30.7	
303	6.15	34.099	1.55	2.56			
404	5.59	34.138	1.14	2.72		38.4	
						41.0	

INTERPOLATED

Z (m)	T (°C)	S (‰)
0	15.14	31.05
10	14.43	32.07
20	9.79	32.95
30	8.75	33.24
50	8.03	33.72
75	7.94	33.87
100	8.06	33.91
150	7.39	33.95
200	7.15	33.95
250	6.69	34.02
300	6.18	34.09
400	5.60	34.14

DERIVED

σ_t	δ (x10⁸)	ΔD (dyn.m)
22.93	495.2	0
23.74	414.4	.045
25.42	258.2	.079
25.81	221.0	.103
26.29	175.7	.143
26.42	163.7	.185
26.43	162.7	.226
26.57	150.8	.304
26.60	148.3	.379
24.71	134.1	.451
26.84	126.4	.517
26.95	117.5	.639

NM 45 44 39.0 N 125 05.2 W DATE 19 AUG 69 1836 GCT WIRE 07 DRY 63.5 WET 60.2 CRUISE C690RC
WIND DIRECTION 19 VEL 10 KTS BAR 14 SWELL DIRECTION 31 H 06 T 10 CLOUD 3 AMT 4 WEATHER 02

OBSERVED

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	16.15	31.075	5.94				
5	15.96	31.079	5.97	.14		.8	
10	15.92	31.076	5.96			.6	
20	12.19	32.337	6.91	.36		.1	
30	9.68	32.442	7.21	.47		.1	
50	8.43	32.538	6.38	.80		.8	
74	7.59	32.717	5.46	1.15			
100	7.40	33.400	4.48	1.49		13.8	
125	7.46	33.730	4.28	1.[illegible]		21.5	
150	7.46	33.879	3.86	1.65		23.6	
200	6.92	33.903	3.42	1.86		25.8	
300	5.93	33.920	2.67			27.5	
400	5.56	34.052	1.19	2.42			
500	5.20	34.139	.76	2.92		32.0	
600	4.75	34.227	.40	3.02		42.6	
						44.0	

INTERPOLATED

Z (m)	T (°C)	S (‰)
0	16.15	31.08
10	15.92	31.08
20	12.19	32.34
30	9.68	32.49
50	8.43	32.56
75	7.59	32.94
100	7.60	33.41
150	7.46	33.88
200	6.93	33.91
250	6.22	33.91
300	5.64	33.92
400	5.57	34.06
500	5.20	34.14
600	4.75	34.23

DERIVED

σ_t	δ (x10⁸)	ΔD (dyn.m)
22.73	513.9	0
22.78	509.2	.051
24.52	343.9	.094
25.07	291.3	.126
25.31	269.7	.182
25.74	228.0	.244
26.11	193.7	.296
26.50	154.9	.384
26.60	148.5	.460
26.49	140.1	.532
26.78	132.2	.600
26.89	122.9	.728
27.00	112.6	.846
27.12	102.5	.953

NM 65 44 39.0 N 125 35.1 W DATE 20 AUG 69 0120 GCT WIRE 06 DRY 66.0 WET 62.0 CRUISE C690RC
WIND DIRECTION 22 VEL 04 KTS BAR 14 SWELL DIRECTION 29 H 06 T 09 CLOUD 3 AMT 2 WEATHER 01

OBSERVED

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	17.38	31.701	5.79	.23			
10	16.86	31.753	5.83	.24		.3	
30	11.47	32.463	7.09	.38		.3	
49	8.53	32.539	6.68	.62		1.4	
74	7.74	32.608	6.33	.90		2.8	
100	7.79	33.178	4.99	1.30		9.6	
124	7.63	33.543	4.27	1.54		18.3	
149	7.40	33.608	3.33	1.78		23.4	
199	7.06	33.941	3.72	1.84		26.5	
299	6.13	34.059	1.92	2.44		29.4	
399	5.53	34.140	1.14	2.93		35.7	
599	4.67	34.272	.47	2.97		41.2	
797	4.35	34.331	.30	3.16		44.0	
996	3.62	34.488	.51			45.5	
1196	3.22	34.535	.59	3.13		43.0	
						41.9	

INTERPOLATED

Z (m)	T (°C)	S (‰)
0	17.38	31.71
10	16.86	31.76
20	14.38	32.10
30	11.47	32.47
50	8.46	32.56
75	7.74	32.63
100	7.79	33.18
150	7.89	33.81
200	7.05	33.94
250	6.50	34.02
300	6.12	34.06
400	5.62	34.14
500	5.12	34.21
600	4.66	34.27
700	4.32	34.34
800	4.04	34.39
1000	3.61	34.49
1200	3.21	34.54

DERIVED

σ_t	δ (x10⁸)	ΔD (dyn.m)
22.93	495.1	0
23.09	480.0	.069
23.90	403.2	.093
24.75	322.1	.129
25.31	269.1	.188
25.48	253.1	.254
25.91	212.7	.312
26.38	168.1	.407
26.61	147.6	.486
24.74	135.6	.557
26.82	128.2	.622
26.95	117.4	.765
27.06	106.6	.857
27.16	98.0	.959
27.25	90.0	1.053
27.33	83.2	1.140
27.45	72.8	1.296
27.52	65.8	1.434

NM 85 44 39.0 N 124 03.3 W DATE 20 AUG 69 1255 GCT WI[illegible] DRY 63.0 WET 62.8 C[illegible] ISE C690RC
WIND DIRECTION 20 VEL 14 KTS BAR 12 SWELL DIRECTION 30 H 06 [illegible] 03 CLOUD 6 AMT 7 WEATHER 03

OBSERVED

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	17.35	32.118	5.72	.18			
10	17.32	32.120	4.91	.28		.1	
30	17.13	32.121	5.63	.22		.1	
49	11.21	32.711	7.29	.33		.1	
74	9.71	32.749	6.45	.92		.7	
100	9.39	32.820	5.95	.96		5.8	
124	9.31	33.332	4.44	1.28		11.4	
149	8.45	33.440	3.43	1.83		16.9	
199	7.47	33.326	3.10	2.04		24.6	
299	6.67	34.310	2.46	2.18		28.7	
399	5.49	34.342	1.53	2.49		33.0	
597	4.09	34.316	.60	3.22		37.4	
797	4.21	34.342	.32	3.29		43.0	
996	3.72	34.439	.32			44.8	
1195	3.26	34.508	.48	3.12			
						44.7	

INTERPOLATED

Z (m)	T (°C)	S (‰)
0	17.35	32.12
10	17.32	32.13
20	17.22	32.12
30	17.13	32.13
50	11.07	32.72
75	9.68	32.75
100	9.39	32.83
150	8.83	33.70
200	7.95	33.93
250	7.24	34.00
300	6.66	34.01
400	5.86	34.08
500	5.19	34.15
600	4.68	34.22
700	4.40	34.29
800	4.20	34.35
1000	3.71	34.44
1200	3.25	34.51

DERIVED

σ_t	δ (x10⁸)	ΔD (dyn.m)
23.25	464.0	0
23.26	463.5	.166
23.28	461.8	.193
23.31	459.7	.139
25.02	296.9	.214
25.29	272.4	.285
25.38	262.9	.352
26.15	190.4	.468
25.47	181.3	.554
26.63	144.5	.630
26.71	138.9	.702
26.87	124.7	.834
27.01	111.9	.952
27.12	102.1	1.059
27.21	94.4	1.157
27.28	88.0	1.248
27.40	77.6	1.414
27.50	68.2	1.559

OBSERVED | INTERPOLATED | DERIVED

NH 109 44 34.9 N 124 30.5 W DATE 20 AUG 69 1743 GCT WIRE 00 DRY 64.8 WET 62.8 CRUISE C690RC
WIND DIRECTION 26 VEL 09 KTS BAR 14 SWELL DIRECTION 30 H 05 T 07 CLOUD 6 AMT 6 WEATHER 01

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	17.37	31.983	5.59	.19			.1
10	17.33	31.991	5.65	.16			.1
30	15.75	32.359	6.23	.23			.1
50	10.61	32.694	7.70	.30			2.4
75	9.55	32.750	6.19	.75			7.2
100	9.38	33.074	5.07	1.22			16.0
125	9.17	33.520	3.56	1.71			24.9
150	8.90	33.759	3.12	1.89			27.5
199	7.97	33.929	2.95	1.78			28.3
299	6.62	34.041	2.21	2.58			37.8
399	5.70	34.079	1.53				
599	4.74	34.225	.55	3.05			42.7
799	4.17	34.357	.44	3.30			46.8
999	3.81	34.421	.37	3.24			46.4
1199	3.22	34.521	.43	3.14			45.7

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁵)	ΔD (dyn.m)
0	17.38	31.99	23.15	474.3	0
10	17.33	32.00	23.16	473.1	.047
20	16.91	32.15	23.38	452.9	.094
30	15.75	32.36	23.80	412.2	.137
50	10.50	32.70	25.10	289.0	.207
75	9.54	32.76	25.31	269.5	.277
100	9.38	33.08	25.54	243.6	.341
150	8.88	33.76	26.20	186.3	.448
200	7.95	33.93	26.47	161.1	.535
250	7.21	34.01	26.64	145.6	.612
300	6.61	34.04	26.74	135.9	.682
400	5.69	34.08	26.89	122.7	.811
500	5.11	34.15	27.01	111.1	.928
600	4.73	34.23	27.12	102.3	1.035
700	4.41	34.30	27.21	93.9	1.133
800	4.16	34.36	27.29	87.2	1.223
1000	3.80	34.42	27.37	80.0	1.391
1200	3.21	34.52	27.51	66.7	1.537

NH 125 44 39.0 N 126 59.0 W DATE 20 AUG 69 2142 GCT WIRE 00 DRY 62.8 WET 62.4 CRUISE C690RC
WIND DIRECTION VEL 00 KTS BAR 15 SWELL DIRECTION 27 H 06 T 15 CLOUD 6 AMT 7 WEATHER 01

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	18.07	31.842	5.73	.18			2.2
10	17.56	31.939	5.72	.15			.1
30	15.87	32.306	6.19	.25			.1
50	10.39	32.478	7.37	.40			.3
75	8.53	32.513	6.71	.63			2.3
100	8.07	32.705	6.03	1.04			11.7
125	7.64	33.222	4.91	1.46			19.7
150	7.92	33.646	3.96	1.73			25.3
201	7.39	33.945	2.98	2.15			30.2
301	6.22	34.034	2.07	2.42			36.7
402	5.74	34.122	1.20	2.84			
603	4.93	34.255	.48				40.2
804	4.12	34.375	.32	2.90			45.0
1004	3.47	34.453	.40	2.87			44.6
1205	3.16	34.482	.40	3.24			44.8

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁵)	ΔD (dyn.m)
0	18.07	31.85	22.87	500.6	0
10	17.56	31.94	23.07	482.1	.049
20	17.01	32.12	23.33	457.0	.096
30	15.86	32.31	23.74	418.6	.140
50	10.38	32.48	24.95	303.0	.212
75	8.53	32.52	25.27	272.4	.284
100	8.07	32.71	25.49	251.9	.349
150	7.93	33.67	26.27	179.1	.457
200	7.41	33.94	26.56	152.3	.540
250	6.78	34.03	26.71	138.6	.613
300	6.23	34.03	26.79	131.6	.680
400	5.75	34.12	26.92	120.5	.806
500	5.33	34.19	27.02	110.6	.922
600	4.94	34.25	27.12	102.8	1.028
700	4.52	34.32	27.21	93.8	1.127
800	4.13	34.37	27.30	85.8	1.216
1000	3.68	34.45	27.41	76.4	1.378
1200	3.17	34.48	27.48	69.4	1.524

NH 145 44 39.0 N 127 27.0 W DATE 21 AUG 69 0157 GCT WIRE 06 DRY 67.2 WET 63.1 CRUISE C690RC
WIND DIRECTION 28 VEL 08 KTS BAR 14 SWELL DIRECTION 27 H 09 T 09 CLOUD 6 AMT 5 WEATHER 01

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	18.24	31.198	5.73				.1
10	17.88	31.197	5.81	.16			.1
30	15.53	32.213	6.33	.22			.1
50	11.78	32.488	6.87	.33			.7
74	8.68	32.512	6.83	.50			.4
100	7.93	32.551	6.18	.66			5.5
124	8.15	33.195	4.76	1.36			17.5
149	7.52	33.542	4.23	1.90			24.2
199	7.04	33.947	2.84	2.14			30.8
299	6.38	34.029	1.99	2.54			36.8
399	5.48	34.065	1.34	2.85			41.6
598	4.54	34.221	.41	3.11			
798	4.13	34.341	.31	3.26			41.6
997	3.49	34.459	.32	3.23			45.4
1197	3.19	34.509	.44				

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁵)	ΔD (dyn.m)
0	18.25	31.20	22.34	551.4	0
10	17.88	31.20	22.42	543.5	.055
20	16.94	31.67	23.00	488.6	.106
30	15.53	32.22	23.74	418.2	.152
50	11.42	32.49	24.74	323.2	.226
75	8.81	32.51	25.23	276.8	.301
100	7.94	32.56	25.39	261.4	.368
150	7.81	33.57	26.21	194.8	.480
200	7.63	33.95	26.53	155.0	.565
250	7.05	33.99	26.64	144.9	.639
300	6.37	34.03	26.77	133.6	.709
400	5.47	34.07	26.91	121.1	.836
500	4.90	34.14	27.03	109.3	.952
600	4.53	34.22	27.14	100.3	1.056
700	4.30	34.30	27.22	92.7	1.153
800	4.13	34.36	27.29	86.5	1.242
1000	3.68	34.46	27.42	75.8	1.405
1200	3.18	34.51	27.50	67.4	1.548

NH 165 44 39.1 N 127 55.2 W DATE 21 AUG 69 0645 GCT WIRE 00 DRY 62.0 WET 57.0 CRUISE C690RC
WIND DIRECTION 28 VEL 06 KTS BAR 18 SWELL DIRECTION 29 H 04 T 08 CLOUD 8 AMT 1 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	17.50	32.145	5.62	.40			.4
10	17.54	32.194	5.70	.40			.2
30	15.54	32.509	5.85	.46			2.9
50	11.35	32.514	6.91	.30			.1
74	8.91	32.532	6.92	.40			.8
100	7.86	32.546	6.45	.85			6.0
125	7.45	32.985	5.51	1.84			15.9
150	7.61	33.417	4.75				
201	7.19	33.885	3.54	1.72			27.3
301	5.45	33.971	2.48	2.43			32.6
401	5.00	34.024	1.69	2.57			33.7
602	4.44	34.248	.42	2.80			34.4
802	3.96	34.355	.47	3.19			39.9
1003	3.49	34.464	.40	3.22			41.7
1203	3.07	34.513	.52	3.26			45.1

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁵)	ΔD (dyn.m)
0	17.50	32.15	23.24	465.5	0
10	17.54	32.20	23.27	463.1	.046
20	16.85	32.35	23.55	434.5	.091
30	15.54	32.51	23.87	396.8	.133
50	11.35	32.52	24.81	316.6	.204
75	8.85	32.53	25.24	275.7	.278
100	7.86	32.60	25.44	257.1	.345
150	7.61	33.42	26.12	193.3	.458
200	7.20	33.88	26.54	154.4	.544
250	6.60	33.93	26.65	143.5	.619
300	5.96	33.97	26.77	132.9	.688
400	5.01	34.02	26.93	118.7	.814
500	4.61	34.13	27.06	106.4	.926
600	4.44	34.25	27.17	97.5	1.028
700	4.20	34.31	27.24	90.7	1.122
800	3.96	34.35	27.30	85.2	1.210
1000	3.50	34.46	27.44	73.5	1.368
1200	3.08	34.51	27.52	66.0	1.508

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)

NH 185 44 39.2 N 124 21.8 W DATE 21 AUG 69 1230 GCT WIRE 07 DRY 62.2 WET 56.5 CRUISE C6908C
WIND DIRECTION 24 VEL 12 KTS BAR SWELL DIRECTION 29 H 06 T 09 CLOUD 6 AMT 2 WEATHER 03

D	T	S	O_2	PO_4	pH	Alk.	NO_3
0	17.49	31.924	5.68	.28			.1
10	17.55	31.978	5.62	.13			
30	14.24	32.482	5.84	.41			.2
49	11.15	33.469	7.13	.31			
74	8.45	33.491	6.64	.73			2.8
99	7.67	33.931	5.39	1.11			13.4
124	7.66	33.484	4.22	1.41			18.0
149	7.49	33.689	4.01	1.85			24.6
199	6.80	33.892	3.91				
299	5.71	33.970	2.29	2.42			32.1
397	5.18	34.028	1.51	2.92			40.7
596	4.30	34.206	.50	3.35			42.7
795	3.39	34.351	.32	3.40			44.1
994	3.49	34.430	.33	3.13			45.0
1192	3.06	34.496	.52				

Z	T	S	σ_t	δ	ΔD
0	17.50	31.93	23.07	481.3	0
10	17.55	31.98	23.10	479.0	.048
20	17.27	32.23	23.35	454.9	.095
30	16.24	32.49	23.79	413.7	.138
50	10.98	32.47	24.84	313.8	.211
75	8.39	32.50	25.28	271.4	.284
100	7.66	32.96	25.74	227.9	.346
150	7.48	33.69	26.35	171.1	.446
200	6.79	33.89	26.60	147.7	.526
250	6.18	33.96	26.74	135.6	.597
300	5.70	33.97	26.80	129.5	.663
400	5.16	34.03	26.92	120.0	.788
500	4.68	34.12	27.04	108.3	.902
600	4.29	34.21	27.15	98.4	1.005
700	4.06	34.29	27.24	90.5	1.099
800	3.88	34.35	27.31	84.3	1.187
1000	3.48	34.43	27.41	75.5	1.346
1200	3.04	34.50	27.51	66.6	1.488

A 1 44 48.5 N 124 05.6 W DATE 21 AUG 69 1600 GCT WIRE 05 DRY 62.0 WET 57.0 CRUISE C6908C
WIND DIRECTION 31 VEL 07 KTS BAR 20 SWELL DIRECTION 29 H 04 T 08 CLOUD 8 AMT 3 WEATHER 01

D	T	S	O_2	PO_4	pH	Alk.	NO_3
0	17.35	32.262	5.62	.41			.7
5	17.35	32.256	5.62	.45			1.3
10	17.25	32.389	5.70	.50			1.6
20	17.18	32.422	5.70	.42			2.9
30	16.53	32.503	5.85	.52			.4
40	12.77	32.512	6.85	.46			.2
50	10.30	32.529	7.19				1.0
61	9.14	32.530	7.15	.43			
75	8.33	32.544	6.64	.73			2.1
100	7.44	32.651	6.26	1.05			8.6
125	7.32	33.040	5.64	1.33			14.8
150	7.49	33.624	4.43	1.51			21.7
175	7.31	33.772	3.54	1.67			23.7
200	6.93	33.854	3.54	2.71			27.9

Z	T	S	σ_t	δ	ΔD
0	17.35	32.27	23.36	453.5	0
10	17.25	32.39	23.48	442.3	.045
20	17.19	32.43	23.53	438.6	.089
30	16.53	32.51	23.74	418.5	.132
50	10.20	32.53	25.02	296.3	.203
75	8.33	32.55	25.33	267.2	.274
100	7.44	32.66	25.54	247.2	.338
150	7.49	33.63	26.30	176.2	.444
200	6.93	33.85	26.55	152.6	.526

A 2 44 58.0 N 127 51.3 W DATE 21 AUG 69 1917 GCT WIRE DRY 64.5 WET 59.5 CRUISE C6908C
WIND DIRECTION 35 VEL 07 KTS BAR 21 SWELL DIRECTION 29 H 05 T 08 CLOUD 8 AMT 2 WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO_3
0	17.59	32.049	5.62	.37			.8
5	17.52	32.003	5.62	.48			
200	7.16	33.848	3.49				
10	17.48	32.036	5.55	.41			.1
20	17.06	32.391	5.71	.47			.1
30	15.63	32.488	5.93	.49			.1
40	12.69	32.446	6.62				.1
50	10.42	32.454	7.03	.39			.1
61	9.06	32.476	7.18	.47			.1
75	8.43	32.483	6.58	.51			
100	7.58	32.664	5.99	.94			10.8
125	7.48	33.064	5.18	1.20			16.4
150	7.59	33.508	4.20	1.35			23.7
175	7.46	33.749	3.73	2.00			26.8

Z	T	S	σ_t	δ	ΔD
0	17.59	32.05	23.14	474.5	0
10	17.44	32.05	23.17	472.0	.047
20	17.31	32.14	23.28	461.9	.094
30	17.11	32.01	23.22	467.7	.140
50	16.59	32.06	23.39	452.7	.233
75	15.70	32.19	23.68	424.7	.342
100	14.53	32.39	24.09	386.9	.444
150	11.39	32.98	25.16	285.0	.612
200	7.17	33.85	26.52	155.8	.722

A 3 45 05.0 N 127 35.2 W DATE 21 AUG 69 2216 GCT WIRE 10 DRY 63.9 WET 58.5 CRUISE C6908C
WIND DIRECTION 31 VEL 12 KTS BAR 22 SWELL DIRECTION 29 H 05 T 10 CLOUD 8 AMT 2 WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO_3
0	18.04	31.391	5.70				.2
5	18.03	31.394	5.71				
10	17.77	31.551	5.77	.37			.5
20	17.60	31.809	5.77	.34			.2
30	16.96	31.948	5.85	.30			.6
40	13.33	32.405	6.65	.47			1.5
50	10.98	32.463	7.03	.56			.1
61	9.56	32.474	7.13	.54			.1
75	8.52	32.506	6.62	.67			3.0
100	7.67	32.580	6.38	1.37			8.8
125	7.23	32.865	5.70	1.67			14.3
150	7.38	33.426	4.68	1.53			22.4
175	7.43	33.699	4.20	1.77			24.2
200	7.29	33.815	4.21	1.70			25.4

Z	T	S	σ_t	δ	ΔD
0	18.04	31.40	22.53	532.8	0
10	17.77	31.56	22.72	515.2	.052
20	17.60	31.81	22.96	492.7	.103
30	16.96	31.95	23.21	468.5	.151
50	10.98	32.47	24.84	314.1	.229
75	8.52	32.51	25.27	272.7	.302
100	7.68	32.59	25.45	255.6	.368
150	7.39	33.43	26.16	189.4	.480
200	7.29	33.81	26.47	160.3	.567

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)

A 6 45 17.2 N 127 20.1 W DATE 22 AUG 69 0113 GCT WIRE 15 DRY 68.5 WET 58.0 CRUISE C690RC
WIND DIRECTION 01 VEL 12 KTS BAR 21 SWELL DIRECTION 29 H 04 T 09 CLOUD 8 AMT 2 WEATHER 02

0	17.88	31.605	5.77	.23	.6	0	17.88	31.61	22.74	513.5	0
5	17.86	31.648	5.70		.2	10	17.69	31.68	22.86	504.2	.051
10	17.69	31.674	5.75	.33	.4	20	17.00	31.99	23.23	466.6	.099
20	17.00	31.982	6.01	.20	.1	30	13.76	32.40	24.26	369.0	.141
30	13.76	32.397	6.62	.44	1.4	50	9.82	32.48	25.06	294.1	.207
40	11.54	32.461	6.99	.36	.2	75	8.38	32.50	25.28	271.7	.278
50	9.82	32.478	7.12			100	8.11	32.72	25.50	251.3	.344
60	9.14	32.470	6.94	.54	.2	150	7.47	33.54	26.23	192.3	.452
75	8.38	32.493	6.56	.70	2.9	200	6.95	33.83	26.53	154.7	.536
100	8.11	32.720	5.77	1.10	11.8						
125	7.48	33.133	5.13		17.5						
150	7.47	33.538	3.59	1.58	23.1						
175	7.28	33.732	4.12		25.5						
200	6.95	33.829	3.54	1.78	26.6						

A 5 45 27.3 N 127 03.9 W DATE 21 AUG 69 0430 GCT WIRE 12 DRY 61.8 WET 57.0 CRUISE C690RC
WIND DIRECTION 01 VEL 15 KTS BAR 20 SWELL DIRECTION 29 H 06 T 08 CLOUD 8 AMT 4 WEATHER 03

0	17.82	31.552	5.70	.17	.6	0	17.82	31.56	22.71	514.0	0
5	17.83	31.549	5.67	.29	.2	10	17.80	31.55	22.71	516.2	.052
10	17.80	31.546	5.73			20	16.98	31.95	23.21	468.5	.101
20	16.97	31.947	5.93			30	14.59	32.34	24.04	389.8	.144
30	14.59	32.337	6.41			50	9.97	32.47	25.01	297.4	.212
40	12.26	32.452	6.91	.70	.8	75	8.08	32.58	25.39	261.1	.282
50	9.97	32.465	7.26			100	7.44	32.74	25.61	241.0	.345
60	8.66	32.538	6.94			150	7.79	33.61	26.24	181.5	.451
75	8.08	32.578	6.57			200	7.26	33.91	26.55	153.2	.534
100	7.44	32.735	5.50								
125	7.49	33.126	5.14								
150	7.78	33.608	4.25								
175	7.39	33.788	4.04								
200	7.26	33.906	4.04								

A 6 45 35.1 N 126 50.0 W DATE 22 AUG 69 0837 GCT WIRE 11 DRY 61.0 WET 57.0 CRUISE C690RC
WIND DIRECTION 01 VEL 16 KTS BAR 18 SWELL DIRECTION 29 H 06 T 08 CLOUD 8 AMT 2 WEATHER 02

0	17.62	31.854	5.78			0	17.63	31.86	22.99	489.4	0
5	17.62	31.842	5.77			10	17.61	31.85	22.98	490.1	.049
10	17.61	31.845	5.81			20	17.55	31.87	23.01	487.6	.098
20	17.55	31.864	5.54			30	16.53	32.43	23.68	424.3	.143
30	16.53	32.424	5.99			50	11.52	32.53	24.79	318.7	.218
40	14.04	32.432	6.35			75	9.17	32.58	25.22	277.4	.292
50	11.52	32.526	6.94			100	8.65	32.79	25.47	254.1	.359
60	10.45	32.571	7.10			150	7.43	33.57	26.26	179.9	.467
75	9.17	32.573	6.63			200	7.12	33.90	26.57	151.5	.550
100	8.65	32.787	5.54								
125	7.62	33.127	5.05								
150	7.42	33.562	4.60								
175	7.45	33.803	3.95								
200	7.12	33.903	3.76								

A 7 45 48.3 N 126 27.5 W DATE 22 AUG 69 1359 GCT WIRE 04 DRY 59.0 WET 57.0 CRUISE C690RC
WIND DIRECTION 00 VEL 14 KTS BAR 14 SWELL DIRECTION 29 H 06 T 08 CLOUD 8 AMT 2 WEATHER 02

0	17.40	32.035	5.74			0	17.40	32.04	23.18	471.2	0
5	17.40	32.032	5.72			10	17.40	32.03	23.18	471.8	.047
10	17.39	32.028	5.75			20	17.15	32.30	23.43	447.2	.093
20	17.14	32.291	5.77			30	15.81	[illegible].38	23.80	412.5	.136
30	15.81	32.373	6.18			50	10.11	32.57	25.07	292.0	.207
40	11.41	32.549	7.08			75	9.03	32.64	25.29	270.7	.277
50	10.11	32.568	7.20			100	8.03	32.81	25.58	243.7	.341
60	9.58	32.635	7.13			150	7.65	33.67	26.[illegible]	175.0	.446
75	9.03	32.635	6.39	.69	5.6	200	7.34	33.90	26.53	154.5	.528
100	8.03	32.808	5.68								
125	7.82	33.314	4.76								
150	7.64	33.668	4.21								
175	7.56	33.847	4.12								
200	7.34	33.903	3.65								

A 8 44 01.8 N 126 07.2 W DATE 22 AUG 69 1830 GCT WIRE 04 DRY 62.0 WET 59.0 CRUISE C690RC
WIND DIRECTION 00 VEL 17 KTS BAR 14 SWELL DIRECTION 29 H 05 T [illegible] CLOUD [illegible] AMT 0 WEATHER 01

0	17.03	31.979	5.74			0	17.03	31.98	23.22	467.1	0
5	17.02	31.990	5.76			10	17.03	31.99	23.23	466.7	.047
10	17.03	31.987	5.81			20	16.38	32.01	23.39	451.3	.093
20	16.38	32.006	5.85			30	10.85	32.50	24.88	309.1	.131
30	10.85	32.495	7.44			50	8.29	32.53	25.32	267.7	.188
40	9.30	32.532	7.36			75	8.17	32.93	25.65	236.4	.251
50	9.29	32.525	6.63			100	9.24	33.59	26.00	203.4	.306
60	8.12	32.621	6.19			150	8.65	33.82	26.27	179.0	.402
75	8.17	32.927	5.29			200	8.03	33.90	26.44	164.2	.488
100	9.24	33.595	3.55								
125	8.99	33.709	3.06								
150	8.65	33.811	2.77								
175	8.36	33.879	2.61								
200	8.03	33.904	2.59								

	OBSERVED							INTERPOLATED			DERIVED	
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)

B 9 46 03.[illegible] N 125 39.0 W DATE 22 AUG 69 2152 GCT WIRE 05 DRY 64.0 WET 60.5 CRUISE C6908C
WIND DIRECTION 33 VEL 14 KTS BAR 14 SWELL DIRECTION 29 H 06 T 08 CLOUD 7 AMT 2 WEATHER 02

0	17.30	32.060	5.77					0	17.30	32.06	23.22	467.1	0
5	17.29	32.054	5.75					10	17.25	32.04	23.23	466.6	.047
10	17.25	32.055	5.74					20	17.19	32.16	23.32	458.0	.093
20	17.19	32.158	5.77					30	12.24	32.44	24.58	338.0	.133
30	12.24	32.432	7.12					50	9.30	32.47	25.12	287.3	.195
40	10.34	32.453	7.41					75	8.23	32.54	25.34	266.3	.264
50	9.30	32.461	7.36					100	7.69	32.71	25.55	244.5	.328
61	8.88	32.526	6.52					150	7.89	33.52	26.15	190.0	.438
75	8.23	32.537	6.35					200	7.50	33.89	26.50	157.4	.52[illegible]
100	7.68	32.705	5.92										
125	7.74	33.277	4.68	1.16			13.8						
150	7.88	33.512	3.96	1.96			24.2						
175	7.78	33.807	3.05	1.90			27.0						
200	7.50	33.894	2.86										

B 10 46 06.[illegible] N 125 11.0 W DATE 23 AUG 69 0140 GCT WIRE 04 DRY 62.5 WET 59.2 CRUISE C6908C
WIND DIRECTION 34 VEL 12 KTS BAR SWELL DIRECTION 29 H 06 T 08 CLOUD AMT 0 WEATHER 02

0	15.95	31.807	6.19					0	15.95	31.81	23.34	456.1	0
5	15.94	31.803	6.17					10	15.86	31.81	23.36	456.4	.046
10	15.84	31.801	6.22	.33			.6	20	12.02	32.13	24.39	354.3	.086
20	12.02	32.127	6.79	.53			.6	30	8.70	32.42	25.17	281.6	.118
30	8.70	32.413	6.64					50	7.55	32.57	25.46	254.5	.172
40	8.05	32.459	6.36					75	7.63	33.13	25.89	213.7	.230
50	7.54	32.563	6.03					100	8.04	33.57	26.17	187.3	.280
61	7.41	32.713	5.65					150	7.57	33.88	26.48	158.5	.367
75	7.62	33.130	4.81	1.29			17.8	200	6.93	33.95	26.63	145.6	.443
100	8.04	33.568	3.61	2.22			22.3						
125	7.91	33.785	3.17	2.70			29.2						
150	7.56	33.875	2.98										
175	7.16	33.932	2.69										
200	6.93	33.948	2.61	2.65			28.5						

B 11 46 07.1 N 124 56.0 W DATE 23 AUG 69 0405 GCT WIRE 05 DRY 60.4 WET 57.3 CRUISE C6908C
WIND DIRECTION 33 VEL 14 KTS BAR SWELL DIRECTION 30 H 06 T 08 CLOUD 7 AMT 1 WEATHER 03

0	15.76	31.796						0	15.76	31.80	23.37	452.9	0
5	15.73	31.794	6.03					10	15.40	31.83	23.47	443.4	.045
10	15.40	31.825	6.15					20	9.56	32.38	25.01	297.2	.082
20	9.56	32.375	6.72					30	8.07	32.46	25.30	269.5	.110
30	8.07	32.456	6.57					50	7.42	32.54	25.45	255.2	.163
40	7.63	32.464	6.49					75	7.97	33.11	25.82	220.7	.222
50	7.41	32.531	6.33					100	7.90	33.66	26.26	178.8	.272
61	7.02	32.763	5.54					150	7.66	33.86	26.46	161.0	.357
75	7.97	33.101	4.67					200	7.09	33.95	26.61	147.4	.434
100	7.89	33.654	3.80										
125	7.94	33.800	3.40										
150	7.65	33.859	3.24										
175	7.35	33.906	3.02										
200	7.09	33.953	2.58										

B 12 46 08.7 N 124 41.1 W DATE 23 AUG 69 0633 GCT WIRE 00 DRY 58.8 WET 56.9 CRUISE C6908C
WIND DIRECTION 35 VEL 13 KTS BAR 12 SWELL DIRECTION 29 H 06 T 08 CLOUD AMT 0 WEATHER 01

0	15.22	27.208	6.53					0	15.22	27.21	19.97	778.4	0
5	13.63	31.958	6.23					10	12.91	32.08	24.18	375.9	.058
10	12.91	32.077	6.42					20	8.85	32.48	25.20	278.7	.090
20	8.85	32.480	6.39					30	7.90	[illegible].52	25.37	262.4	.117
30	7.99	32.517	6.40					50	7.31	32.64	25.55	2[illegible]5.7	.168
40	7.56	32.535	6.42	1.11			9.1	75	7.85	33.41	26.[illegible]	196.6	.224
50	7.30	32.638	6.09					100	7.94	33.81	26.[illegible]	158.1	.269
61	7.50	33.022	6.83					150	7.15	33.99	26.63	144.8	.347
75	7.85	33.402	6.17					200	6.82	34.04	26.71	137.3	.418
100	7.94	33.808	3.27										
125	7.78	33.903	3.13										
150	7.14	33.983	2.39	1.88			25.9						
175	6.95	34.027	2.52										
200	6.82	34.040	2.36										

B 13 46 09.8 N 124 26.6 W DATE 23 AUG 69 1007 GCT WIRE 04 DRY 58.0 WET 56.0 CRUISE C6908C
WIND DIRECTION 35 VEL 14 KTS BAR 10 SWELL DIRECTION 29 H 04 T [illegible]9 CLOUD 7 AMT 2 WEATHER 03

0	14.48	25.765	6.39					0	14.48	25.77	19.02	870.3	0
10	11.88	32.211	6.10					10	11.88	32.22	24.48	347.6	.061
20	8.40	32.625	3.84					20	8.40	32.63	25.[illegible]	261.4	.091
30	7.15	32.770	5.06					30	7.14	32.77	25.8[illegible]	233.7	.116
40	7.02	32.944	5.14					50	7.73	33.42	26.10	193.6	.159
50	7.73	33.418	4.08					75	7.68	33.82	26.42	163.6	.203
60	7.85	33.658	3.58					100	7.07	34.00	26.65	142.0	.242
70	7.76	33.791	3.27										
80	7.56	33.848	2.93										
90	7.15	33.944	1.91										
100	7.06	33.996	1.89										

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	S ($\times 10^5$)	ΔD (dyn.m)
C 14 46 09.4 N 124 20.4 W DATE 23 AUG 69 1210 GCT WIRE 00 DRY 58.8 WET 56.0 CRUISE C690BC													
WIND DIRECTION 32 VEL 12 KTS BAR 10 SWELL DIRECTION 29 H 04 T 08 CLOUD 7 AMT 1 WEATHER 01													
0	13.31	31.309	6.32					0	13.31	31.31	23.51	439.7	0
5	13.27	31.908	6.41	.40			2.4	10	10.07	32.96	25.38	261.8	.035
10	10.07	32.958	3.72	1.64			17.1	20	7.59	33.67	26.32	172.7	.057
15	7.97	33.511	1.96	2.22			27.1	30	7.48	33.81	26.44	160.8	.073
20	7.59	33.666	1.71										
25	7.56	33.757	2.35	2.27			32.1						
30	7.48	33.807	1.91	2.11			30.4						
C 15 46 07.3 N 124 23.2 W DATE 23 AUG 69 1401 GCT WIRE 08 DRY 57.3 WET 55.5 CRUISE C690BC													
WIND DIRECTION 34 VEL 11 KTS BAR 10 SWELL DIRECTION 29 H 04 T 09 CLOUD 7 AMT 1 WEATHER 02													
0	14.26	27.367	6.37				4.2	0	14.26	27.37	20.29	747.9	0
5	14.28	27.423	6.33	.64			6.0	10	13.15	31.97	24.34	388.7	.057
10	13.15	31.964	6.45	.58				20	8.97	32.53	25.22	276.9	.090
20	8.47	32.528	4.24	1.53			19.5	30	7.53	33.04	25.43	219.0	.115
30	7.52	33.033	3.98	2.55			24.9	50	7.46	33.73	26.38	167.0	.153
40	7.40	33.559	3.14				27.8	75	7.13	33.90	26.57	149.7	.193
50	7.44	33.724	2.31	2.40			29.8	100	6.78	33.97	26.46	140.7	.229
60	7.35	33.807	2.61	2.42			32.3						
70	7.15	33.879	1.58				35.6						
80	7.11	33.924	1.67	2.43			35.3						
90	6.97	33.943	1.62	2.45			34.4						
100	6.77	33.963	1.65										
C 16 46 03.5 N 124 35.3 W DATE 23 AUG 69 1615 GCT WIRE 11 DRY 59.7 WET 57.0 CRUISE C690BC													
WIND DIRECTION 35 VEL 14 KTS BAR 10 SWELL DIRECTION 30 H 05 T 08 CLOUD 6 AMT 1 WEATHER 01													
0	14.94	24.521	6.38	.95			3.2	0	14.94	24.53	17.97	970.9	0
5	14.59	28.210	6.32	.60			2.8	10	13.51	31.92	23.94	399.1	.068
10	13.51	31.915	6.12	.65			4.7	20	8.27	32.42	25.24	274.9	.102
20	8.27	32.419	5.76	1.15			10.7	30	7.67	32.51	25.40	260.1	.129
30	7.66	32.506	6.07	1.11			10.1	50	7.48	33.15	25.93	210.1	.176
40	7.50	32.769	5.54	1.27			14.0	75	7.55	33.60	26.27	177.7	.224
50	7.48	33.148	4.96	1.44			20.3	100	7.31	33.95	26.58	148.8	.265
61	7.36	33.352	4.43	1.71			24.0	150	6.52	34.05	26.77	131.6	.335
75	7.54	33.599	3.64	2.53			33.2						
100	7.30	33.948	1.47	2.72			35.9						
125	6.88	34.036	1.58										
150	6.52	34.055	1.61	2.85			38.1						
C 17 45 59.6 N 124 47.5 W DATE 23 AUG 69 1815 GCT WIRE 12 DRY 60.8 WET 58.2 CRUISE C690BC													
WIND DIRECTION 35 VEL 11 KTS BAR 09 SWELL DIRECTION 30 H 05 T 08 CLOUD 3 AMT 2 WEATHER 03													
0	14.85	30.753	6.33	.43			1.2	0	14.85	30.76	22.77	510.5	0
5	14.96	31.733	6.01	.43			1.7	10	13.49	32.13	24.10	383.6	.045
10	13.49	32.124	6.38	.51			1.3	20	8.70	32.50	25.24	275.3	.078
20	8.70	32.497	6.87	.73			3.6	30	7.80	32.54	25.40	260.0	.104
30	7.79	32.532	6.38	.95			6.5	50	7.43	32.73	25.60	240.9	.154
40	7.53	32.562	6.39	1.01			7.9	75	8.02	33.40	26.04	199.5	.209
50	7.42	32.724	5.85				5.8	100	7.93	33.79	26.36	169.5	.256
61	7.62	33.029	5.14	1.59			15.2	150	7.56	34.00	26.58	149.2	.335
75	8.02	33.396	4.15	1.65			24.2	200	6.92	34.06	26.72	137.1	.407
100	7.42	33.746	3.48	2.23			27.6						
125	7.96	33.925	3.18				27.4						
150	7.55	33.999	2.88	2.51			31.7						
175	7.21	34.043	2.53										
200	6.92	34.060	2.29	2.40			34.9						
C 18 45 55.8 N 124 59.5 W DATE 23 AUG 69 2020 GCT WIRE 16 DRY 62.9 WET 60.3 CRUISE C690BC													
WIND DIRECTION 35 VEL 11 KTS BAR 18 SWELL DIRECTION 29 H 05 T 08 CLOUD 7 AMT 1 WEATHER 01													
0	16.17	31.944	5.92	.29			.6	0	16.17	31.95	23.39	450.8	0
5	16.16	31.945	5.96	.36			.2	10	16.03	31.96	23.43	447.1	.045
10	16.03	31.956	6.00	.47			.6	20	13.93	32.06	23.96	397.0	.087
20	13.93	32.057	6.47	.42			.9	30	8.84	32.42	25.15	283.5	.121
30	8.84	32.416	6.66	.88			5.0	50	7.59	32.49	25.39	261.1	.176
40	8.08	32.483	6.42	1.02			8.9	75	8.02	33.05	25.77	225.4	.238
50	7.59	32.484	6.40	.96			7.8	100	8.50	33.56	26.09	195.0	.289
61	7.55	32.655	5.82	.90			10.8	150	7.69	33.88	26.47	160.0	.378
75	8.02	33.047	4.82	1.57			18.6	200	7.06	33.92	26.59	149.2	.455
100	8.50	33.554	3.80										
125	7.95	33.819	3.39	1.96			29.4						
150	7.68	33.878	3.02										
175	7.36		2.96	2.17			33.6						
200	7.06	33.923	3.08	2.60			32.6						

	OBSERVED								INTERPOLATED			DERIVED		
	D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
C 19 45 47.8 N 125 24.0 W DATE 23 AUG 69 2342 GCT WIRE 03 DRY 64.9 WET 61.2 CRUISE C6908C														
WIND DIRECTION 33 VEL 07 KTS BAR 18 SWELL DIRECTION 31 H 04 T 09 CLOUD 7 AMT 2 WEATHER														
	0	16.96	31.907	5.74					0	16.96	31.91	23.18	470.7	0
	5	16.87	31.908	5.74					10	16.67	31.91	23.25	464.6	.047
	10	16.66	31.903	5.80					20	16.50	31.91	23.29	461.1	.093
	20	16.49	31.904	5.77					30	13.15	32.20	24.23	371.9	.135
	30	13.15	32.198	6.56					50	8.35	32.45	25.25	274.2	.199
	40	9.33	32.397	7.12					75	7.21	32.57	25.51	250.2	.265
	50	8.35	32.449	6.83					100	7.38	32.91	25.75	227.2	.324
	61	7.82	32.461	6.45	1.02			8.2	150	7.78	33.79	26.38	168.2	.423
	75	7.21	32.566	6.01	1.24			11.3	200	7.28	33.91	26.55	153.6	.504
	100	7.37	32.908	5.03	1.56			17.0						
	125	7.93	33.486	3.08	1.45			18.8						
	150	7.77	33.784	3.18										
	175	7.45	33.881	2.87										
	200	7.28	33.906	2.77										
D 20 45 41.4 N 125 00.0 W DATE 24 AUG 69 0405 GCT WIRE 03 DRY WET CRUISE C6908C														
WIND DIRECTION 21 VEL 06 KTS BAR 08 SWELL DIRECTION 32 H 03 T 05 CLOUD 4 AMT 2 WEATHER														
	0	16.33	31.915	5.79	.48			.5	0	16.33	31.92	23.33	456.3	0
	5	16.15	31.909	6.02	.40			.3	10	16.04	31.93	23.41	449.4	.045
	10	16.04	31.928	5.98	.34			.3	20	12.46	32.21	24.36	358.7	.086
	20	12.46	32.202	6.77	.37			1.9	30	9.90	32.56	25.09	289.1	.118
	30	9.90	32.557	7.29	.41			.2	50	8.31	32.54	25.32	267.5	.174
	40	9.02	32.546	6.77	.62			2.8	75	7.84	32.87	25.65	236.8	.237
	50	8.31	32.532	6.64	.76				100	8.26	33.61	26.17	187.9	.290
	61	7.91	32.587	6.29	.94			9.6	150	7.71	33.93	26.50	156.9	.376
	75	7.84	32.860	5.62				14.6	200	6.74	34.02	26.71	138.0	.450
	100	8.26	33.603	3.82	2.01			24.8						
	125	8.13	33.834	3.27	1.83			27.7						
	150	7.71	33.925	3.09	2.30			27.3						
	175	7.19	33.983	2.77	2.25			34.8						
	200	6.74	34.016	2.30	2.28									
D 21 45 43.1 N 125 10.5 W DATE 24 AUG 69 0837 GCT WIRE 11 DRY 62.0 WET 59.0 CRUISE C6908C														
WIND DIRECTION 17 VEL 18 KTS BAR 10 SWELL DIRECTION 31 H 05 T 08 CLOUD 6 AMT 2 WEATHER														
	0	16.95	31.926	5.62	.18			.4	0	16.96	31.93	23.20	469.1	0
	5	16.98	31.918	5.70	.20			.8	10	16.98	31.92	23.18	471.1	.047
	10	16.98	31.911	5.71	.36			.8	20	15.97	31.92	23.42	448.9	.093
	20	15.97	31.918	5.70	.27			.3	30	10.06	32.49	25.01	297.1	.130
	30	10.06	32.484	7.02	.39			.3	50	8.77	32.55	25.27	272.9	.187
	40	9.30	32.549	6.93	.48			1.0	75	7.97	32.61	25.43	257.7	.254
	50	8.77	32.548	6.72	.71			2.5	100	8.31	33.18	25.83	220.0	.313
	61	8.15	32.554	5.70	.70			6.2	150	7.76	33.83	26.42	164.6	.409
	75	7.97	32.603	5.20					200	7.16	33.96	26.60	148.0	.488
	100	8.31	33.140	2.46	.80			9.8						
	125	8.34	33.686	2.57										
	150	7.75	33.830	3.37	1.46			17.6						
	175	7.40	33.913	3.07	1.60			21.8						
	200	7.16	33.957	2.94	1.91			28.9						
D 22 45 37.5 N 124 46.6 W DATE 25 AUG 69 0737 GCT WIRE 08 DRY 61.0 WET 57.4 CRUISE C6908C														
WIND DIRECTION 26 VEL 08 KTS BAR 20 SWELL DIRECTION 31 H 09 T 09 CLOUD 6 AMT 6 WEATHER														
	0	15.87	31.943	5.87	.52			.3	0	15.88	31.95	23.46	444.4	0
	5	15.49	31.936	5.94	.43			.1	10	15.89	31.94	23.45	445.7	.045
	10	15.89	31.935	5.90	.38				20	14.93	32.00	23.70	421.7	.088
	20	14.93	31.993	6.07	.54			.3	30	9.63	32.46	25.06	292.4	.124
	30	9.63	32.456	6.64	1.03			7.4	50	7.92	32.58	25.41	259.9	.179
	40	8.32	32.500	6.11	1.12			9.2	75	7.59	33.11	25.94	221.0	.239
	50	7.91	32.572	5.96					100	7.39	33.66	26.25	180.4	.289
	61	7.92	32.754	5.50	1.75			18.5	150	7.57	33.91	26.51	156.4	.373
	75	7.39	33.101	4.70					200	6.85	33.97	26.66	142.6	.448
	100	7.39	33.652	3.65	1.90			14.8						
	125	7.93	33.830	3.25				42.8						
	150	7.56	33.904	3.08										
	175	7.20	33.932											
	200	6.85	33.974	2.29										
D 23 45 33.9 N 124 33.4 W DATE 25 AUG 69 1004 GCT WIRE 05 DRY 60.0 WET 57.0 CRUISE C6908C														
WIND DIRECTION 26 VEL 08 KTS BAR 20 SWELL DIRECTION 31 H 08 T 09 CLOUD 6 AMT 4 WEATHER														
	0	14.36	31.782		.26			.5	0	14.36	31.79	23.66	425.2	0
	5	14.36	31.886	6.26	.37			1.3	10	12.82	32.09	24.20	373.6	.040
	10	12.82	32.086	6.26	.45			2.2	20	8.52	32.47	25.24	275.0	.072
	20	8.52	32.466	6.58					30	7.64	32.51	25.40	260.0	.099
	30	7.63	32.502	6.31					50	7.60	32.81	25.64	237.1	.149
	40	7.65	32.612	6.00	.96			8.5	75	7.94	33.45	26.09	195.0	.203
	50	7.60	32.808	5.52					100	7.95	33.47	26.10	193.9	.251
	61	7.94	33.152	6.19	1.19			15.2	150	7.86	33.52	26.16	189.1	.347
	75		33.441						200	7.65	33.89	26.48	159.7	.434
	125	7.96												
	150	7.86	33.520	3.95	1.29			19.5						
	175		33.747	3.32	1.68			20.4						
	200	7.65	33.881	2.91										

	OBSERVED								INTERPOLATED			DERIVED		
	D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)

D 24 45 30.0 N 124 20.0 W DATE 25 AUG 69 1331 PCT WIRE DRY 59.0 WET 56.5 CRUISE C690RC
WIND DIRECTION 27 VEL 04 KTS BAR 21 SWELL DIRECTION 19 H 04 T 09 CLOUD 6 AMT 2 WEATHER

D	T	S	O_2	PO_4	pH	Alk.	NO_3
0	13.55	32.058	4.26	.41			1.3
5	13.55	32.058	4.23	.45			.5
10	13.43	32.058	4.23				
20	9.64	32.209	4.26				
30	7.79	32.553	5.85				
40	7.44	32.728	5.48				
50	7.44	32.979	4.84				
60	7.44	33.350	4.19				
74	7.86	33.521	3.79				
101	7.53	33.837	2.64				
124	7.27	33.972	2.38				
150	6.75	33.993	2.58				

Z	T	S	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	13.55	32.06	24.04	389.2	0
10	13.43	32.06	24.06	387.1	.039
20	9.64	32.21	24.46	310.7	.074
30	7.80	32.56	25.41	258.4	.102
50	7.44	32.98	25.80	222.2	.150
75	7.46	33.51	26.15	188.0	.202
100	7.55	33.83	26.44	161.4	.245
150	6.75	33.99	26.69	139.2	.321

D 25 45 25.9 N 124 05.4 W DATE 25 AUG 69 1447 PCT WIRE 03 DRY 57.2 WET 56.0 CRUISE C690RC
WIND DIRECTION 18 VEL 07 KTS BAR 22 SWELL DIRECTION 25 H 06 T 08 CLOUD 6 AMT 7 WEATHER

D	T	S	O_2	PO_4	pH	Alk.	NO_3
0	13.89	30.990	4.29	.33			1.1
5	13.89	30.987	4.27	.65			1.7
10	13.50		4.23	.41			2.7
15	11.83		4.49				
20	10.21		4.34	1.36			15.3
25	9.17		3.59				
30	8.54		3.16	1.90			22.2
35	7.88		1.99				
40	7.57		1.63				
45	7.51		1.49				
50	7.47		1.57				
55	7.28						
63	7.21		1.74				
74	7.23		1.72	2.98			35.0

Z	T	S	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	13.89	32.06	23.97	395.7	0
10	13.50	32.06	24.05	388.4	.039
20	10.21	32.21	24.77	319.7	.075
30	8.50	32.56	25.30	269.5	.104
50	7.47	32.98	25.79	222.6	.153
75	7.22	33.51	24.24	180.2	.204

E 26 45 20.2 N 124 20.8 W DATE 25 AUG 69 1735 PCT WIRE 07 DRY 61.0 WET 58.4 CRUISE C690RC
WIND DIRECTION VEL 00 KTS BAR 22 SWELL DIRECTION 25 H 07 T 08 CLOUD 8 AMT 2 WEATHER

D	T	S	O_2	PO_4	pH	Alk.	NO_3
0	14.68	31.948	4.11				
5	14.65	31.954	4.17				
10	14.42	31.964	4.18				
20	9.24	32.357	4.38				
30		32.479	4.06	1.05			8.3
40	8.30	32.647	5.95				
50	7.82	32.860	5.38				
61	7.73	33.129	4.59				
75	7.82	33.422	4.17				
100	7.83	33.746	4.22				
125	7.62	33.889	3.93				
150	7.20	33.978	3.69				

Z	T	S	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	14.68	31.95	23.72	419.5	0
10	14.42	31.97	23.79	413.3	.042
20	9.24	32.36	25.04	293.4	.077
30	8.77	32.49	25.21	277.7	.106
50	7.82	32.87	25.65	234.2	.157
75	7.82	33.43	26.09	194.7	.211
100	7.83	33.75	26.34	171.2	.256
150	7.20	33.98	26.61	144.3	.338

E 27 45 15.1 N 124 34.5 W DATE 25 AUG 69 2040 PCT WIRE DRY 63.3 WET 58.8 CRUISE C690RC
WIND DIRECTION VEL 00 KTS BAR 21 SWELL DIRECTION 26 H 07 T 09 CLOUD 8 AMT 2 WEATHER

D	T	S	O_2	PO_4	pH	Alk.	NO_3
0	16.06	31.915	5.91				
5	15.52	31.911	5.93	.29			.4
10	15.37	31.933	6.02				
20	12.03	32.229	6.61				
30	13.37	32.495	6.52				
40	10.06	32.521	6.25	.78			5.5
50	9.36	32.603	5.92	1.02			
61	8.43	32.735	5.61	1.47			14.9
75	8.01	33.044	4.98				
100	8.01	33.588	3.73	2.16			25.2
125	8.07	33.856	3.17	1.75			27.0
150	7.85	33.920	3.24	1.96			30.3
200	8.08	34.084					

Z	T	S	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	16.06	31.92	23.39	450.5	0
10	15.38	31.94	23.56	434.9	.044
20	12.03	32.23	24.46	349.0	.083
30	13.38	32.50	24.41	354.3	.119
50	9.36	32.61	25.22	277.7	.182
75	8.01	33.05	25.77	225.5	.245
100	8.01	33.59	26.19	185.4	.296
150	7.85	33.92	26.48	159.3	.392
200	8.08	34.08	26.57	151.6	.460

F 28 45 02.6 N 124 22.9 W DATE 25 AUG 69 2313 PCT WIRE DRY 62.7 WET 58.0 CRUISE C690RC
WIND DIRECTION 00 VEL 08 KTS BAR 19 SWELL DIRECTION 29 H 06 T 08 CLOUD 8 AMT 1 WEATHER

D	T	S	O_2	PO_4	pH	Alk.	NO_3
0	15.27	31.468	6.09	.32			.1
5	14.51	31.679	6.26	.41			.6
10	14.41	31.710	6.20				
20	11.71	32.092	6.30	.56			4.0
30	8.36	32.496	6.44				
40	7.86	32.522	6.41				
50	7.71	32.586	6.23	.97			10.8
61	7.49	32.797	5.62				
75	7.00	33.018	4.98				

Z	T	S	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	15.27	31.67	23.38	452.0	0
10	14.41	31.71	23.59	431.7	.044
20	11.71	32.10	24.62	337.4	.083
30	8.36	32.50	25.29	270.3	.115
50	7.71	32.59	25.45	255.1	.167
75	7.00	33.02	25.81	221.8	.227

OBSERVED

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	14.61	31.359	6.39	.58			.9
5	13.44	31.357	6.45	.37			.8
10	12.25	31.550	6.64	.52			3.1
15	9.41	32.049	5.46	1.11			11.5
20	7.42	32.749	4.49	1.50			19.9
25	7.18	33.063	3.81	2.28			26.2
30	7.52	33.208	3.48	2.52			28.5
35	7.60	33.361	3.44	2.33			26.3
40	7.64	33.745	3.36	1.88			25.2
45	7.71	33.876	3.00	1.91			25.7
50	7.74	33.963	2.92	2.04			

INTERPOLATED

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	14.01	31.36	23.41	449.4	0
10	12.25	31.55	23.90	402.7	.043
20	7.93	32.79	25.58	242.5	.075
30	7.53	33.21	25.97	205.9	.097
50	7.74	33.96	26.52	153.3	.133

DERIVED

B 29 44 49.7 N 124 11.4 W DATE 24 AUG 69 0141 GCT WIRE 00 DRY 61.4 WET 58.2 CRUISE C690BC
WIND DIRECTION 34 VEL 09 KTS BAR 18 SWELL DIRECTION 29 H 04 T 09 CLOUD 4 AMT 1 WEATHER

B 30 44 53.5 N 124 24.6 W DATE 24 AUG 69 0902 GCT WIRE 00 DRY 58.0 WET 56.0 CRUISE C690BC
WIND DIRECTION VEL 00 KTS BAR 14 SWELL DIRECTION 29 H 03 T 09 CLOUD 0 AMT 1 WEATHER

B 31 44 57.3 N 124 38.0 W DATE 26 AUG 69 1340 GCT WIRE 04 DRY 59.8 WET 55.6 CRUISE C690BC
WIND DIRECTION 22 VEL 03 KTS BAR 14 SWELL DIRECTION 29 H 03 T 08 CLOUD 6 AMT 4 WEATHER 03

B 32 45 00.9 N 124 51.2 W DATE 24 AUG 69 1747 GCT WIRE 00 DRY 59.9 WET 57.0 CRUISE C690BC
WIND DIRECTION 17 VEL 15 KTS BAR 14 SWELL DIRECTION 27 H 06 T 08 CLOUD 6 AMT 7 WEATHER 02

B 33 45 04.8 N 125 03.0 W DATE 24 AUG 69 2045 GCT WIRE 00 DRY 63.0 WET 59.4 CRUISE C690BC
WIND DIRECTION 25 VEL 07 KTS BAR 14 SWELL DIRECTION 27 H 08 T 06 CLOUD 6 AMT 7 WEATHER 01

OBSERVED — INTERPOLATED — DERIVED

Observed columns: D (m), T (°C), S (‰), O_2 (ml/l), PO_4 (µM), pH, Alk. (meq/l), NO_3 (µM)
Interpolated / Derived columns: Z (m), T (°C), S (‰), σ_t, δ ($\times 10^5$), ΔD (dyn.m)

8 [illegible] 45 12.2 N 125 30.1 W DATE 27 AUG 69 0015 GCT WIRE 00 DRY 64.8 WET 60.4 CRUISE C6908C
WIND DIRECTION 26 VEL 11 KTS BAR 16 SWELL DIRECTION 25 H 07 T 06 CLOUD 8 AMT 3 WEATHER 01

D	T	S	O2	PO4	pH	Alk.	NO3
0	16.85	31.774	6.45	.47			.4
5	16.87	31.779	6.77				
10	16.86	31.776	6.92				
20	16.52	31.792	6.92	.15			.2
30	11.58	32.266	6.80	.39			.1
40	8.85	32.470	7.02	.69			.1
50	8.07	32.455	6.71	.75			1.7
61	7.86	32.459	6.50	1.17			5.9
75	7.54	32.437	6.39	1.53			13.1
100	7.41	32.946	5.06				
125	8.09	33.400	3.64	1.67			14.2
150	7.86	33.407	3.23	1.86			25.2
175	7.44	33.905	2.85	2.03			27.2
200	7.18	33.942	2.77	2.81			31.3

Z	T	S	σt	δ	ΔD
0	16.85	31.78	23.11	477.7	0
10	16.86	31.78	23.11	478.1	.048
20	16.52	31.80	23.20	469.0	.095
30	11.58	32.27	24.57	338.7	.136
50	8.07	32.46	25.30	264.6	.196
75	7.55	32.50	25.41	254.7	.243
100	7.87	32.99	25.75	227.[illegible]	.323
150	7.86	33.81	26.39	147.8	.422
200	7.18	33.96	26.59	149.4	.501

8 36 45 23.0 N 125 55.6 W DATE 27 AUG 69 0512 GCT WIRE 00 DRY 61.9 WET 57.0 CRUISE C6908C
WIND DIRECTION 26 VEL 13 KTS BAR 16 SWELL DIRECTION 26 H 07 T 07 CLOUD 8 AMT 5 WEATHER 01

D	T	S	O2	PO4	pH	Alk.	NO3
0	17.25	31.455	5.70	.27			.1
5	17.27	31.455	5.71	.23			.1
10	17.07	31.547	5.85	.22			.1
20	16.60	31.766	5.89	.29			.1
30	13.91	32.092	5.86	.40			.1
40	11.09	32.402	7.09	.60			.1
50	9.16	32.496	7.02	.71			.1
61	8.31	32.516	6.26	.75			.6
75	7.86	32.528	6.42	.84			4.7
100	7.97	32.941	5.00	1.44			7.3
125	8.11	33.549	3.85	2.00			14.3
150	7.83	33.730	3.36				24.3
175	7.66	33.846	3.01				27.3
200	7.33	33.961	2.76				

Z	T	S	σt	δ	ΔD
0	17.25	31.44	22.77	510.2	0
10	17.07	31.55	22.88	499.7	.050
20	16.60	31.77	23.14	473.6	.099
30	13.91	32.10	23.99	396.3	.143
50	9.16	32.50	25.16	287.5	.210
75	7.86	32.53	25.39	261.8	.278
100	7.97	33.00	25.73	229.2	.340
150	7.83	33.76	26.33	173.1	.440
200	7.33	33.96	26.58	150.1	.521

8 36 45 27.2 N 126 39.0 W DATE 27 AUG 69 1045 GCT WIRE 00 DRY 59.9 WET 57.0 CRUISE C6908C
WIND DIRECTION 26 VEL 12 KTS BAR 16 SWELL DIRECTION 26 H 07 T 06 CLOUD 6 AMT 7 WEATHER 01

D	T	S	O2	PO4	pH	Alk.	NO3
0	17.40	31.996	5.85	.29			.5
5	17.40	31.976	5.92	.40			.1
10	17.41	31.979	5.87	.31			.6
20	17.40	31.978	5.85	.32			.1
30	15.09	32.292	6.26	.41			.1
40	11.71	32.515	6.89	.51			.1
50	9.91	32.597	6.57	.41			.1
61	9.36	32.605	6.53	.76			5.6
75	8.81	32.666	6.17	.88			6.7
100	8.39	33.028	5.16	1.22			16.9
125		33.429	3.83				
150	8.56	33.616	4.20	1.72			23.0
175	8.48	33.736	3.59	1.80			25.5
200	8.22	33.878	3.18	1.98			28.0

Z	T	S	σt	δ	ΔD
0	17.40	32.00	23.15	476.2	0
10	17.42	31.98	23.13	475.8	.047
20	17.40	31.98	23.13	475.9	.095
30	15.09	32.30	23.97	403.3	.139
50	9.91	32.60	25.12	288.7	.208
75	8.81	32.65	25.34	268.6	.277
100	8.39	33.03	24.92	306.7	.349
150	8.56	33.62	26.13	192.0	.473
200	8.22	33.83	26.39	168.9	.564

8 37 45 36.8 N 126 44.0 W DATE 27 AUG 69 1541 GCT WIRE 07 DRY WET CRUISE C6908C
WIND DIRECTION 26 VEL 10 KTS BAR 17 SWELL DIRECTION 26 H 08 T 08 CLOUD 8 AMT 5 WEATHER 03

D	T	S	O2	PO4	pH	Alk.	NO3
0	17.10	31.953	5.79	.33			.3
5	17.18	31.950	5.81	.33			.1
10	17.38	31.936	5.86	.32			.2
20	17.19	31.967	5.85	.26			.1
30	17.17	32.001	5.85	.25			.1
40	14.97	32.431	6.51	.29			.1
50	11.52	32.506	7.31	.46			.1
61	9.79	32.513	7.12	.49			.5
75	8.96	32.551	6.59				3.6
100	8.61	32.812	5.66	1.02			10.6
125	7.92	33.297	4.77	1.61			18.3
150	7.43	33.533	4.51	1.59			21.9
175	7.28	33.800	4.07	1.86			26.4
200	7.19	33.869	3.80	1.99			28.3

Z	T	S	σt	δ	ΔD
0	17.38	31.96	23.12	476.7	0
10	17.38	31.96	23.11	478.2	.048
20	17.40	31.95	23.11	478.2	.096
30	17.17	32.01	23.21	469.3	.143
50	11.52	32.51	24.77	320.3	.222
75	8.96	32.56	25.26	276.6	.296
100	8.61	32.82	25.50	251.7	.362
150	7.44	33.56	26.23	182.2	.471
200	7.19	33.87	26.53	155.0	.555

8 38 45 42.0 N 127 14.0 W DATE 27 AUG 69 2003 GCT WIRE 05 DRY 63.2 WET 57.3 CRUISE C6908C
WIND DIRECTION 27 VEL 10 KTS BAR SWELL DIRECTION 28 H 08 T 06 CLOUD 8 AMT 3 WEATHER

D	T	S	O2	PO4	pH	Alk.	NO3
0	17.21	31.978	5.77	.35			.2
5	17.21	31.973	5.83	.25			.1
10	17.17	31.972	5.77	.29			.1
20	17.10	32.008	5.79	.29			.2
30	14.32	32.336	6.44	.38			.1
40	10.80	32.464	7.20	.54			.4
50	9.28	32.479	7.21	.46			.2
61	8.73	32.499	6.92	.42			1.2
75	8.12	32.520	6.62	.76			5.8
100	7.46	32.593	6.34				7.9
125	7.23		5.35	1.30			14.0
150	7.48		4.33	1.39			25.3
175	7.45		3.56	1.92			27.3
200	7.21		3.83				

Z	T	S	σt	δ	ΔD
0	17.21	31.98	23.18	471.1	0
10	17.17	31.98	23.18	470.9	.047
20	17.10	32.01	23.23	467.0	.094
30	14.32	32.34	24.09	384.5	.137
50	9.28	32.48	25.13	285.6	.204
75	8.12	32.52	25.34	266.0	.272
100	7.46	32.60	25.49	251.8	.337
150	7.48	33.54	26.23	182.9	.446
200	7.21	33.87	26.53	155.2	.530

	OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)		Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0 3[illegible] 45 49.2 N 127 40.0 W DATE 28 AUG 69 0010 GCT WIRE DRY 84.0 WET 59.5 CRUISE C690RC														
WIND DIRECTION 25 VEL 0[illegible] KTS BAR 18 SWELL DIRECTION 27 H 06 T 08 CLOUD 6 AMT 5 WEATHER														
[illegible]	16.72	32.346	5.77	.43			1.6		0	16.73	32.35	21.57	433.4	0
[illegible]	16.72	32.341	5.77	.59			.2		10	16.63	32.34	23.59	432.5	.043
1[illegible]	16.63		5.77	.35			.4		20	16.59	32.34	23.60	431.8	.086
2[illegible]	16.59	32.336	5.76	.54			.1		30	14.96	32.39	24.00	393.5	.128
3	16.96	32.390	4.28	.39			.2		50	9.90	32.49	25.03	295.3	.197
4[illegible]	11.05	32.445	7.31	.39			.1		75	8.13	32.44	25.27	272.3	.268
5[illegible]	9.90	32.478	7.50	.60			.7		100	7.15	32.63	25.56	245.0	.332
6[illegible]	9.20	32.445	7.53	.52			1.0		150	7.27	33.60	26.31	175.4	.437
7[illegible]	8.13	32.437	4.85	.53			4.0		200	6.90	33.84	26.54	153.3	.519
10[illegible]	7.14	32.628	4.08	1.26			13.2							
12[illegible]	7.34	33.251	4.74	1.60			22.2							
17[illegible]	7.20	33.764	3.64	2.06			28.6							
20[illegible]	6.90	33.839	3.48	1.92			29.3							
NH 3 44 39.2 N 124 09.2 W DATE 09 SEP 69 1920 GCT WIRE 05 DRY 54.9 WET 52.1 CRUISE Y6909A														
WIND DIRECTION 14 VEL 0[illegible] KTS BAR 19 SWELL DIRECTION 30 H 03 T 06 CLOUD AMT WEATHER 45														
[illegible]	8.92	33.713	4.39	2.22	7.67	2.30	25.4		0	8.92	33.72	26.15	187.9	0
[illegible]	8.75	33.745	4.14	2.13	7.71	2.28	23.1		10	8.38	33.81	26.31	173.1	.018
1[illegible]	8.38	33.808	3.59	2.42	7.65	2.31	29.4		20	7.60	33.86	26.47	158.4	.035
1[illegible]	7.83	33.831	2.62	2.45	7.62	2.30	30.4		30	7.36	33.89	26.52	153.4	.050
2[illegible]	7.60	33.859	2.27	2.55	7.61	1.86	31.2							
2[illegible]	7.45	33.870	2.12	2.27	7.60	1.98	24.2							
3[illegible]	7.36	33.884	2.18	2.19	7.59	2.21	24.3							
3[illegible]	7.35		1.99	2.33	7.58	2.30	26.5							
NH 5 44 38.9 N 124 11.0 W DATE 09 SEP 69 2103 GCT WIRE 01 DRY 55.0 WET 54.2 CRUISE Y6909A														
WIND DIRECTION 19 VEL 0[illegible] KTS BAR 19 SWELL DIRECTION 30 H 03 T 07 CLOUD AMT WEATHER 02														
[illegible]	8.94	33.545	4.45	2.27	7.77	2.26	26.1		0	8.94	33.55	26.02	200.7	0
[illegible]	8.74	33.561	4.28	2.25	7.83	2.26	26.7		10	8.63	33.68	26.17	186.4	.019
1[illegible]	8.43	33.677	3.92	2.31	7.82	2.28	27.9		20	7.57	33.76	26.39	165.8	.037
1[illegible]	7.79	33.715	2.64	2.50	7.76	2.26	29.6		30	7.47	33.82	26.45	159.9	.053
2[illegible]	7.56	33.753	2.32	2.36	7.75	2.26	30.1							
2[illegible]	7.52	33.801	2.22	2.54	7.75	2.26	30.4							
3[illegible]	7.47	33.817	2.40	2.51	7.76	2.26	30.7							
3[illegible]	7.37	33.873	2.06	2.49	7.74	2.28	31.0							
4[illegible]	7.27	33.899	1.94	2.62	7.76	2.30	31.9							
4[illegible]	7.18	33.920	1.69	2.64	7.72	2.28	32.2							
NH 1[illegible] 44 39.0 N 124 24.7 W DATE 09 SEP 69 2357 GCT WIRE 00 DRY 60.0 WET 58.5 CRUISE Y6909A														
WIND DIRECTION 33 VEL 0[illegible] KTS BAR 49 SWELL DIRECTION 30 H 03 T 07 CLOUD 6 AMT 7 WEATHER 42														
[illegible]	9.82	33.623	5.16	1.64	8.01	1.66	17.3		0	9.82	33.63	25.94	208.5	0
[illegible]	8.34	32.691	4.48		7.97	2.30			10	7.53	32.79	25.64	237.2	.022
1[illegible]	7.52	32.786	4.98	1.70	8.02	2.30	17.4		20	7.36	32.95	25.78	223.2	.045
1[illegible]	7.40	32.906	5.03	1.62	8.03	2.30	16.9		30	7.55	33.26	26.00	202.3	.067
2[illegible]	7.36	32.946	5.16	1.64	8.02	2.30	17.6		50	7.76	33.64	26.27	177.7	.105
2[illegible]	7.52		4.55	1.78	7.99	2.34								
3[illegible]	7.54	33.260	4.27	1.89	7.97	2.36	21.5							
3[illegible]	7.61	33.313	4.16	2.05	7.97	2.33	22.3							
4[illegible]	7.79	33.422	3.86	2.11	7.94	2.33	23.8							
4[illegible]	7.81	33.565	3.55	2.04	7.91	2.33	24.7							
5[illegible]	7.75	33.633	3.31	2.18	7.84	2.34	25.8							
5[illegible]		33.764	2.63	2.51	7.80	2.34	29.1							
6[illegible]		33.818	2.39	2.59	7.73	2.34	30.4							
6[illegible]		33.843	2.25	2.62	7.76	2.33	31.0							
7[illegible]		33.851	2.23	2.78	7.70	2.34	30.9							
NH 2[illegible] 44 38.0 N 124 38.2 W DATE 10 SEP 69 0227 GCT WIRE 07 DRY 58.8 WET 57.8 CRUISE Y6909A														
WIND DIRECTION 00 VEL 14 KTS BAR 19 SWELL DIRECTION 34 H 04 T 03 CLOUD 6 AMT 8 WEATHER 03														
[illegible]	13.59	31.725	6.84	.94	8.19	2.23	1.4		0	13.59	31.73	23.77	414.4	0
1[illegible]	9.63	32.397	4.98	1.46	7.01	2.30	16.2		10	9.63	32.40	25.01	296.5	.036
1[illegible]	7.46	32.770	5.38	1.49	7.05	2.34	15.4		20	7.46	32.80	25.65	235.7	.062
2[illegible]	7.49		4.91	1.48	7.02	2.34	17.7		30	7.55	33.07	25.85	214.7	.085
3[illegible]	7.49	33.236	4.38	1.47	7.97	2.39	19.6		50	7.89	33.48	26.12	191.6	.126
4[illegible]	7.59	33.434	4.02	1.60	7.93	2.37	22.3		75	7.79	33.75	26.35	170.2	.171
5[illegible]	7.93	33.615	3.66	1.74	7.91	2.39	24.4		100	7.56	33.84	26.46	160.4	.212
6[illegible]	7.94	33.657	3.53	1.72	7.90	2.37	24.7		150	7.16	33.95	26.59	148.1	.289
7[illegible]	7.77	33.762	3.35	1.90	7.88	2.37	25.6							
8[illegible]	7.73	33.796	3.59	1.85	7.87	2.37	26.8							
9[illegible]	7.63	33.820	3.25	1.80	7.85	2.37	27.0							
11[illegible]	7.31	33.927	2.77	1.98	7.80	2.39	30.0							
16[illegible]	7.17	33.919	2.54	2.05			30.4							
18[illegible]	7.14	33.960	2.50	2.06	7.82	2.41	30.8							
19[illegible]	7.09	33.971	2.35	2.14	7.78	2.41	31.5							

OBSERVED								INTERPOLATED				DERIVED	
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	S ($\times 10^6$)	ΔD (dyn.m)
NM 39 44 37.0 N 124 53.0 W DATE 10 SEP 69 1415 PCT WIRE 09 DRY 58.1 WET 56.3 CRUISE YA9004													
WIND DIRECTION 34 VEL 14 KTS BAR 20 SWELL DIRECTION 35 H 04 T 03 CLOUD 4 AMT 4 WEATHER 02													
0	13.46	31.479	4.19	.44	8.31		.9	0	13.46	31.58	23.41	430.3	0
10	9.53	32.346	4.51	.83	8.27		4.2	10	9.53	32.35	23.99	298.7	.036
20	8.60	32.433	4.65	.82	8.19		4.6	20	8.60	32.44	25.20	278.4	.065
30	8.15	32.473	4.62	.95	8.17		6.7	30	8.15	32.48	25.30	264.3	.093
40	7.90	32.796	4.77	1.28	8.13		14.0	50	7.96	32.96	25.69	232.9	.163
50	7.46	32.931	5.11	1.51	8.08		15.7	75	7.85	33.04	26.10	196.1	.196
60	7.47	33.143	4.58	1.53	7.99		19.0	100	7.72	33.16	26.35	170.1	.242
75	7.53	33.317	4.24	1.61	7.85		21.1	150	7.38	33.94	26.56	151.4	.322
80	7.48	33.555	3.72		7.86			200	6.46	34.07	26.48	140.1	.395
90	7.42	33.654	3.37	1.92	7.86		23.6	250	6.48	34.06	26.77	137.5	.463
101	7.71	33.751	3.25		7.85			300	6.19	34.07	26.82	128.5	.528
126	7.57	33.942	2.75	2.20	7.85		25.9	400	5.73	34.09	26.87	126.8	.645
151	7.17	33.941	2.67	2.22	7.84		27.2						
176	7.17	33.943	2.51	2.21			31.1						
212	6.26	34.012	2.06	2.30	7.86		32.7						
252	6.47	34.056	1.54	2.47	7.77		35.0						
303	6.18	34.040	1.14		7.71								
404	5.43	34.046	1.20	2.77	7.66		38.1						
NM 48 44 39.1 N 125 06.7 W DATE 10 SEP 69 1630 PCT WIRE 08 DRY 58.2 WET 54.9 CRUISE YA9004													
WIND DIRECTION 30 VEL 18 KTS BAR 20 SWELL DIRECTION 35 H 06 T 05 CLOUD 4 AMT 7 WEATHER 02													
0	14.04	31.455	4.39	.71	8.31	2.21	1.4	0	14.04	31.46	23.47	443.3	0
10	14.04	31.449	4.32	.74	8.27	2.19	1.6	10	14.04	31.47	23.48	442.1	.144
20	8.45	32.416	4.31	.99	8.19	2.19	6.0	20	8.45	32.42	25.15	283.8	.181
30	8.16	32.477	4.25	1.10	8.17	2.19	8.2	30	8.16	32.48	25.30	264.2	.108
40	7.79	32.626	4.49	1.22	8.13	2.19	11.0	50	7.71	32.84	25.65	234.3	.159
50	7.71	32.838	4.30	1.37	8.08	2.21	14.9	75	7.76	33.30	26.00	203.8	.214
60	7.42	33.075	4.47	1.49	7.99	2.21	19.7	100	7.49	33.63	24.24	180.7	.262
70	7.49	33.192	4.11	1.76	7.95	2.22	21.7	150	7.35	33.90	26.53	153.8	.345
80	7.43	33.349	3.69	2.02	7.86	2.21	24.3	200	6.81	33.93	26.63	144.1	.420
90	7.48	33.518	3.61	2.04	7.84	2.25	24.6	250	6.58	34.01	26.72	137.2	.491
101	7.49	33.663	3.46		7.85	2.25	24.6	300	6.33	34.05	26.78	132.0	.558
126		33.811	3.26	2.04	7.85	2.26	27.0	400	5.77	34.10	26.89	122.6	.685
151	7.15	33.905	3.27	2.12	7.88	2.26	28.3	500	5.21	34.16	27.01	111.4	.802
201	6.80	33.934	2.86	2.20	7.84	2.26	29.8	600	4.78	34.22	27.11	103.6	.909
251	6.58	34.011	2.02	2.54	7.77	2.26	33.4						
302	6.32	34.046	1.73	3.18	7.71	2.28	35.3						
403	5.75	34.097	1.21		7.66	2.30	37.7						
503	5.19	34.141	.92	3.26	7.67	2.30	39.3						
604	4.77	34.223	.66	3.32	7.66	2.33	39.1						
NM 49 44 39.1 N 125 34.9 W DATE 10 SEP 69 2132 PCT WIRE 00 DRY 62.0 WET 60.1 CRUISE YA9004													
WIND DIRECTION 30 VEL 18 KTS BAR 20 SWELL DIRECTION 00 H 03 T 04 CLOUD 7 AMT 2 WEATHER 01													
0	16.10	31.490	4.90	.44	8.26	2.17	.1	0	16.00	32.00	23.67	443.8	0
10	15.98	31.385	4.91	.42	8.22	2.17	.1	10	15.98	31.99	23.67	443.0	.044
20	15.92	31.348	4.96	.42	8.22	2.15	.1	20	15.92	31.99	23.68	442.7	.089
30	14.26	32.112	4.66	.56	8.25	2.17	.1	30	14.26	32.12	23.93	399.7	.131
40	10.19	32.434	7.36	.60	8.25	2.17	.1	50	8.49	32.46	25.17	281.7	.199
50	8.49	32.454	6.92	.74	8.20	2.17	2.0	75	7.77	32.55	25.61	259.1	.267
60	8.40	32.458	6.58		8.20	2.09	5.1	100	7.49	33.15	25.85	217.0	.326
70	7.79	32.642	6.41	.82	8.15	2.30	5.5	150	7.42	33.81	26.62	144.5	.422
80	7.75	32.665	6.93	1.16	8.11	2.26	11.0	200	6.96	33.89	26.58	140.1	.500
101	8.00	33.177	6.28	1.31	8.00	2.30	12.7	250	6.31	33.92	26.69	140.3	.573
126	7.49	33.633	7.64	2.00	7.93	2.36		300	5.77	33.93	26.77	133.2	.641
151	7.01	33.815	3.20	3.12	7.87	2.34	24.9	400	5.22	34.03	26.91	120.8	.768
202	6.43	33.896	3.37	2.16	7.85	2.37	28.2	500	4.48	34.14	27.03	109.2	.883
303	5.74	33.316	2.67	2.40	7.78	2.39	33.1	600	4.57	34.10	27.11	103.2	.989
403	5.21	34.033	1.56		7.70	2.56	37.5	700	4.18	34.28	27.20	95.2	1.088
504	4.47	34.140	.96	2.58	7.60	2.51		800	4.09	34.36	27.28	87.6	1.180
605	4.56	34.172	.89	3.01	7.57	2.55		1000	3.50	34.41	27.39	77.4	1.345
706	4.17	34.240	.62	3.33	7.59	2.51		1200	3.11	34.46	27.47	70.1	1.492
807	4.07	34.344	.52	3.34	7.61	2.53							
1009	3.68	34.413	.61	3.34	7.59	2.40							
1210	3.10	34.465	.54	3.35	7.70	2.43							
NM 55 44 38.2 N 125 23.5 W DATE 11 SEP 69 0312 PCT WIRE 03 DRY 60.0 WET 59.0 CRUISE YA9004													
WIND DIRECTION 35 VEL 22 KTS BAR 18 SWELL DIRECTION 35 H 05 T 06 CLOUD 6 AMT 8 WEATHER 03													
0	15.06	31.715	4.27	.38	8.23	2.23	.2	0	15.06	31.72	23.46	444.3	0
10	15.02	31.726	4.28	.38	8.29	2.23	.2	10	15.02	31.73	23.48	442.9	.044
20	11.64	32.344	6.90	.62	8.18	2.21	.8	20	11.64	32.35	24.63	333.5	.083
30	9.53	32.456	7.02	.64	8.18	2.23	1.8	30	9.53	32.46	25.07	290.9	.114
40	8.40	32.471	6.65	.81	8.15	2.21	4.9	50	8.39	32.47	25.26	273.2	.171
50	8.39	32.470	6.46	.89	8.15	2.23	6.8						
NM 57 44 39.1 N 125 24.8 W DATE 11 SEP 69 0352 PCT WIRE 02 DRY 60.0 WET 59.0 CRUISE YA9004													
WIND DIRECTION 35 VEL 22 KTS BAR 18 SWELL DIRECTION 35 H 06 T 06 CLOUD 6 AMT 8 WEATHER 02													
0	15.15	31.812	6.20	.45	8.26	2.23	.1	0	15.15	31.82	23.52	439.0	0
10	14.93	31.810	6.20	.48	8.25	2.23	.1	10	14.93	31.81	23.56	434.9	.044
20	14.72	31.840	6.20	.44	8.25	2.21	.1	20	14.72	31.84	23.63	428.6	.087
30	9.68	32.450	7.13	.61	8.20	2.21	.7	30	9.68	32.46	25.05	293.6	.123
40	8.79	32.460	6.76	.77	8.16	2.23	3.6	50	8.56	32.47	25.23	275.9	.180
50	8.56	32.466	6.60	.81	8.18	2.23	5.2						

	OBSERVED								INTERPOLATED				DERIVED	
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)		Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
NM 59 44 39.1 N 125 26.5 W DATE 11 SEP 69 0519 GCT WIRE 07 DRY 61.8 WET 59.0 CRUISE Y6909A														
WIND DIRECTION 35 VEL 22 KTS BAR 18 SWELL DIRECTION 35 H 05 T 06 CLOUD 6 AMT 4 WEATHER 01														
0	14.83	31.865	6.15	.44	8.26	2.21	.1		0	14.83	31.87	23.62	428.6	0
10	14.80	31.869	6.10	.46	8.27	2.21	.1		10	14.80	31.87	23.63	427.9	.043
20	13.73	32.040	6.32	.55	8.25	2.21	.1		20	13.73	32.04	23.99	394.4	.044
30	10.81	32.350	7.06	.66	8.24	2.23	.1		30	10.81	32.35	24.78	319.2	.120
40	9.34	32.453	7.10	.66	8.20	2.23	.8		50	8.50	32.47	25.24	275.3	.179
50	8.50	32.463	6.62	.86	8.17	2.23	5.3							
NM 61 44 39.0 N 125 24.4 W DATE 11 SEP 69 0547 GCT WIRE 04 DRY 61.0 WET 58.6 CRUISE Y6909A														
WIND DIRECTION 35 VEL 22 KTS BAR 18 SWELL DIRECTION 35 H 05 T 06 CLOUD 6 AMT 8 WEATHER 03														
0	15.43	31.850	6.13	.45	8.25	2.21	.1		0	15.43	31.85	23.48	442.0	0
10	15.21	31.847	6.15	.46	8.27	2.30	.1		10	15.21	31.85	23.53	437.9	.044
20	15.05	31.858	6.14	.41	8.27	2.26	.1		20	15.05	31.86	23.57	434.0	.088
30	11.34	32.405	7.16	.57	8.23	2.26	.1		30	11.34	32.41	24.73	324.1	.125
40	9.93	32.451	7.02	.71	8.20	2.30	1.3		50	8.77	32.48	25.21	278.3	.186
50	8.77	32.475	6.50	.90	8.12									
NM 63 44 39.0 N 125 32.2 W DATE 11 SEP 69 0622 GCT WIRE 04 DRY 60.0 WET 58.3 CRUISE Y6909A														
WIND DIRECTION 35 VEL 23 KTS BAR 18 SWELL DIRECTION 35 H 05 T 06 CLOUD 6 AMT 6 WEATHER 02														
0	16.19	31.949	5.95	.44	8.19	2.19	.1		0	16.19	31.95	23.39	450.8	0
10	15.80	31.950	6.02	.41	8.21	2.17	.1		10	15.80	31.96	23.48	442.7	.045
20	15.60	31.927	6.02	.71	8.16	1.60	.1		20	15.60	31.93	23.51	440.4	.089
30	12.59	32.324	7.02	1.13	8.17	2.21	.1		30	12.59	32.33	24.43	352.3	.128
40	10.55	32.425	7.06	1.18	8.16	2.21	.7		50	9.33	32.46	25.11	287.8	.192
50	9.33	32.460	6.87	1.34	8.14	1.91	2.6							
NM 45 44 39.0 N 126 03.0 W DATE 11 SEP 69 1401 GCT WIRE 02 DRY 60.9 WET 59.8 CRUISE Y6909A														
WIND DIRECTION 35 VEL 22 KTS BAR 19 SWELL DIRECTION 34 H 05 T 06 CLOUD AMT 9 WEATHER 02														
0	16.54	31.020	5.82				.1		0	16.54	31.02	22.60	526.3	0
10	16.54	33.022	5.87				.1		10	16.54	33.03	24.13	380.3	.045
20	16.56	32.021	5.84	.28			.1		20	16.56	32.03	23.36	454.1	.087
30	15.04	32.294	6.50	.29			.1		30	15.04	32.30	23.91	402.1	.130
40	11.03	32.428	7.42	.36			.1		50	9.40	32.47	25.10	288.3	.199
50	9.40	32.468	7.28	.35			.2		75	8.02	32.50	25.34	264.2	.268
60	8.63	32.497	6.72	.52			2.7		100	7.61	32.75	25.59	242.9	.332
70	8.23	32.496	6.51	.66			5.2		150	7.82	33.62	26.24	181.4	.438
80	7.55	32.522	6.40	.96			8.2		200	7.30	33.89	26.53	154.8	.522
100	7.41	32.740	5.80	1.09			12.2		250	6.75	33.92	26.63	145.7	.597
125	7.76	33.229	4.86	1.45			18.5		300	6.18	33.96	26.73	136.7	.668
150	7.81	33.614	4.00	1.76			23.6		400	5.09	33.97	26.88	123.6	.798
201	7.23	33.894	3.36	2.04			27.8		500	4.47	34.02	26.99	112.9	.916
301	6.17	33.956	2.57	2.47			33.0		600	4.47	34.16	27.10	104.0	1.024
402	5.07	33.974	1.90	2.84			36.8		700	4.33	34.26	27.19	95.6	1.124
502	4.44	34.024	1.45	3.13			39.6		800	4.03	34.32	27.27	88.7	1.216
603	4.47	34.166	.70				42.3		1000	3.52	34.41	27.39	77.5	1.382
702	4.33	34.264	.41				42.6		1200	3.10	34.47	27.48	69.2	1.529
804	4.02	34.319	.40				42.6							
1005	3.51	34.416	.39				42.8							
1206	3.09	34.475	.59				42.6							
NM 105 44 39.1 N 126 31.1 W DATE 11 SEP 69 1835 GCT WIRE 05 DRY 62.0 WET 60.1 CRUISE Y6909A														
WIND DIRECTION 33 VEL 18 KTS BAR 21 SWELL DIRECTION 34 H 04 T 05 CLOUD 6 AMT 8 WEATHER 02														
0	17.33	32.182	5.74	.34	8.04	2.17			0	17.33	32.19	23.31	458.9	0
10	17.32	32.178	5.75	.34	8.14	2.17	.1		10	17.32	32.18	23.31	459.2	.046
20	17.34	32.179	5.74	.35	8.16	2.21	.1		20	17.34	32.18	23.30	459.9	.092
30	17.33	32.176	5.74	.42	8.19	2.21	.1		30	17.33	32.18	23.30	460.1	.138
40	12.57	32.443	7.06	.51	8.21	2.23	.1		50	10.66	32.52	24.93	304.6	.214
50	10.66	32.519	7.30	.52	8.21	2.21	.1		75	9.14	32.61	25.25	274.8	.287
59	9.50	32.550	7.00	.60	8.18	2.30	.6		100	8.76	32.85	25.50	251.5	.352
69	9.48	32.599	6.45	.79	8.15	2.30	4.2		150	8.77	33.73	26.19	187.2	.482
79	8.43	32.621	6.20	.89	8.14	2.31	6.9		200	7.61	33.86	26.46	161.6	.549
100	8.76	32.845	5.59	1.15	8.09	2.33	11.5		250	6.92	33.93	26.61	147.6	.427
125	9.30	33.454	3.97	1.47	7.95	2.34	20.8		300	6.47	33.98	26.71	138.6	.698
150	8.77	33.725	3.23	1.96	7.85	2.36	24.7		400	5.63	34.04	26.86	125.2	.830
200	7.61	33.854	2.41	2.04	7.86	2.36	26.5		500	5.06	34.12	26.99	112.0	.949
300	6.47	33.976	1.22	2.50	7.76	2.37	32.0		600	4.78	34.19	27.09	105.2	1.058
400	5.62	34.031	1.58	2.81	7.69	2.37	36.3		700	4.45	34.26	27.18	96.9	1.159
500	5.05	34.110	.97	3.07	7.66	2.37	39.0		800	4.19	34.33	27.26	89.7	1.252
600	4.77	34.149	.61	3.19	7.62	2.44	39.9		1000	3.58	34.41	27.38	78.7	1.421
699	4.45	34.202	.45	3.27	7.60	2.44	40.7		1200	3.14	34.46	27.47	70.5	1.570
800	4.18	34.323	.37	3.30	7.61	2.39	41.1							
1001	3.58	34.406	.47	3.36	7.62	2.47	41.6							
1201	3.14	34.462	.58	3.36	7.66	2.49	41.9							

OBSERVED								INTERPOLATED				DERIVED	
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)

NH 125 44 39.1 N 124 58.9 W DATE 11 SEP 69 2219 GCT WIRE 00 DRY 63.9 WET 62.1 CRUISE Y6909A
WIND DIRECTION 32 VEL 14 KTS BAR 22 SWELL DIRECTION 10 H 04 T 07 CLOUD 6 AMT A WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO_3	Z	T	S	σ_t	δ	ΔD
0	17.57	32.118	5.76	.36			.1	0	17.57	32.12	23.20	469.0	0
10	17.53	32.118	5.77	.44			.1	10	17.53	32.12	23.21	468.4	.047
20	17.44	32.122	5.77	.41			.1	20	17.44	32.13	23.24	466.3	.094
30	17.40	32.136	5.79	.37			.1	30	17.40	32.14	23.26	464.6	.140
40	12.50	32.527	7.33	.54			.1	50	10.63	32.65	25.04	294.7	.216
50	10.62	32.644	7.59	.56				75	9.71	32.73	25.25	274.7	.287
60	10.02	32.693	6.88	.75			1.3	100	9.41	32.85	25.39	261.6	.354
70	9.40	32.722	6.20	1.01			7.4	150	9.12	33.68	26.09	195.9	.469
80	9.04	32.732	6.13	1.03			7.3	200	8.23	33.88	26.39	168.9	.540
101	9.40	32.856	5.72	1.20			10.9	250	7.44	33.95	26.56	153.2	.440
126	8.41	33.390	4.17	1.79			20.2	300	6.79	33.97	26.66	143.4	.714
151	8.10	33.691	3.24	1.39			24.0	400	5.91	34.03	26.82	129.4	.851
202	8.19	33.880	3.08	2.12			26.9	500	5.35	34.09	26.94	118.6	.975
303	6.75	33.972	2.72	2.34			28.9	600	4.81	34.16	27.06	108.4	1.088
404	5.28	34.029	1.78	2.90			36.0	700	4.56	34.24	27.15	99.9	1.192
505	5.33		1.85					800	4.19	34.29	27.23	92.8	1.289
606	4.79	34.141	.70	3.19			40.0	1000	3.70	34.40	27.37	80.3	1.462
705	4.55	34.244	.72	3.34			40.8	1200	3.22	34.46	27.46	71.8	1.614
807	4.16	34.289	.39	3.43			41.0						
1009	3.68	34.407	.54										
1211	3.19	34.457	.46	3.43			41.3						

NH 145 44 39.5 N 127 26.8 W DATE 12 SEP 69 0239 GCT WIRE 03 DRY 64.2 WET 62.9 CRUISE Y6909A
WIND DIRECTION 35 VEL 10 KTS BAR 22 SWELL DIRECTION 29 H 05 T 05 CLOUD 7 AMT A WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO_3	Z	T	S	σ_t	δ	ΔD
0	17.60	32.073				2.17		0	17.60	32.08	23.16	473.0	0
10	17.60	32.073	5.77	.36	8.16	2.15		10	17.60	32.08	23.16	473.2	.047
20	17.47	32.078	5.75	.31	8.16	2.17	.1	20	17.54	32.08	23.17	472.1	.095
50	13.80	32.350	4.55	.40	8.19	2.17	.2	30	17.48	32.09	23.19	470.4	.142
100	8.32	32.704	5.86	.40	8.10	2.23	9.0	50	13.40	32.35	24.21	373.7	.226
150	8.78	33.623	3.57	1.36	7.43	2.30	12.8	75	10.36	32.52	24.98	300.2	.310
200	8.17	33.866	3.02	1.54	7.75	2.30	16.7	100	8.32	32.71	25.66	255.5	.380
300	6.75	33.990	2.26	2.43	7.76	2.31	31.0	150	8.78	33.63	25.10	194.9	.492
								200	8.17	33.87	26.39	168.7	.583
								250	7.49	33.99	26.58	151.1	.663
								300	6.75	33.99	26.68	141.6	.736

NH 165 44 39.0 N 127 55.0 W DATE 12 SEP 69 1505 GCT WIRE 11 DRY 65.2 WET 62.0 CRUISE Y6909A
WIND DIRECTION 22 VEL 71 KTS BAR 20 SWELL DIRECTION 30 H 03 T 02 CLOUD 8 AMT A WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO_3	Z	T	S	σ_t	δ	ΔD
0	17.54	32.014	5.67	.24	8.13	2.15	.1	0	17.54	32.02	23.13	475.9	0
10	17.53	32.014	5.72	.23	8.14	2.25	.1	10	17.53	32.02	23.13	475.9	.048
20	17.46	32.049	5.72	.22	8.16	2.23	.1	20	17.46	32.05	23.17	472.1	.095
30	15.86	32.490	6.10	.27	8.16	2.25	.1	30	15.86	32.50	23.83	405.0	.139
50	10.37	32.483	7.27	.37	8.21	2.25	.1	50	10.38	32.49	24.96	302.5	.210
75	8.49	32.519	6.58	.56	8.18	2.23	3.1	75	8.44	32.52	25.29	270.8	.281
95	7.59	32.564	6.38	.80	8.13	2.23	7.1	100	7.68	32.58	25.45	254.2	.347
145	7.56	33.374	4.81	1.34	7.98	2.28	18.0	150	7.56	33.38	26.10	195.3	.460
195	7.37	33.749	4.28	1.57	7.75	2.30	22.9	200	7.35	33.76	26.42	165.5	.550
395	5.00	33.952	3.03	2.61	7.73	2.33	36.0	250	6.78	33.90	26.61	147.6	.628
595	4.49	34.140	.90	2.97	7.65	2.34	39.5	300	6.19	33.85	26.65	144.5	.701
795	4.15	34.313	.36	3.25	7.61	2.36	40.8	400	4.98	33.96	26.88	123.6	.835
99	3.61	34.411	.50	3.23	7.44	2.44	40.0	500	4.61	34.05	27.00	112.3	.953
1165	3.13	34.464	.56	3.18	7.66	2.44	41.7	600	4.48	34.14	27.08	105.4	1.062
1385	2.70	34.506	.72	3.32	7.67	2.46	41.0	700	4.31	34.26	27.17	97.2	1.163
1585	2.38	34.550	.97	3.37	7.69	2.46	40.4	800	4.13	[illegible].32	27.26	89.8	1.256
1785	2.15	34.574	1.32		7.72	2.47	40.0	1000	3.58	34.41	27.39	78.0	1.424
1985	1.97	34.600	1.54	3.35	7.74	2.48	39.0	1200	3.10	34.47	27.48	69.4	1.572
2174	1.87	34.615	1.63	3.23	7.82	2.48	38.8	1500	2.49	34.53	27.59	59.7	1.765
2394	1.78	34.628	1.94	3.11	7.78	2.48	37.8	2000	1.96	34.60	27.[illegible]	50.7	2.041

SR 145 44 34.7 N 127 26.4 W DATE 12 SEP 69 1840 GCT WIRE 00 DRY 64.7 WET 63.0 CRUISE Y6909A
WIND DIRECTION 23 VEL 07 KTS BAR 20 SWELL DIRECTION 28 H 04 T 08 CLOUD 6 AMT A WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO_3	Z	T	S	σ_t	δ	ΔD
0	17.42	31.832	5.75	.16			.1	0	17.42	31.84	23.02	486.5	0
10	17.34	31.832	5.76	.25			.1	10	17.34	31.84	23.04	486.9	.049
20	17.20	31.789	5.76	.28			.1	20	17.21	31.79	23.04	485.3	.097
30	16.10	31.942	5.94	.35			.1	30	16.10	31.95	23.41	450.2	.144
40	12.42	32.402	6.93	.52			.1	50	10.51	32.48	24.92	305.6	.219
50	10.51	32.472	7.23	.53			.1	75	9.47	32.60	25.19	280.2	.293
59	10.00	32.538	7.28	.42			.1	100	8.64	32.70	25.40	261.1	.360
64	9.50	32.554	6.81	.51			1.1	150	8.84	33.69	26.15	191.1	.473
79	9.42	32.624	6.30	.49			5.1	200	8.05	33.87	26.41	166.6	.563
89	8.56	32.558	6.28	.66			6.4	250	7.49	33.94	26.54	154.5	.643
99	8.61	32.669	5.99	.76			8.7						
124	9.28	33.181	4.10	1.50			19.8						
149	8.86	33.684	3.31	1.91			25.1						
174	8.43	33.804	3.02	2.04			26.7						
194	8.07	33.869	2.94	2.03			26.9						
224	7.80	33.925	2.78	2.17			29.1						
244	7.51	33.941	2.70	2.29			29.2						

OBSERVED | INTERPOLATED | DERIVED

NH 65 44 39.5 N 125 34.5 W DATE 14 SEP 69 1433 GCT WIRE 04 DRY 58.9 WET 53.7 CRUISE Y6903A
WIND DIRECTION 35 VEL 12 KTS BAR 21 SWELL DIRECTION 30 H 05 T 04 CLOUD 8 AMT 2 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
197	6.92	33.925	2.81	2.29	7.76	2.28	29.5
202	6.86	33.931	2.81	2.44	7.73	2.28	30.2
207	6.85	33.940	2.72	2.40	7.72	2.26	30.7
212	6.79	33.935	2.69	2.41	7.84	2.31	30.6
217	6.77	33.941	2.67	2.56	7.84	2.30	30.6
222	6.71	33.952	2.63	2.48	7.83	2.30	30.6
232	6.60	33.951	2.46	2.72	7.82	2.28	31.8
237	6.48	33.957	2.50	2.51	7.81	2.28	31.0
242	6.45	33.951	2.35	2.48	7.80	2.30	32.6
247	6.33	33.951	2.46	2.39	7.81	2.30	32.9
252	6.33	33.953	2.41	2.47	7.79	2.30	32.9
257	6.27	33.952	2.58	2.35	7.80	2.30	30.0
262	6.13	33.950	2.46	2.46	7.81	2.30	32.7
264	5.49	33.935	2.61	2.39	7.82	2.30	29.8
271	5.94	33.927	2.69	2.44	7.82	2.31	31.8
276	5.85	33.917	2.80	2.44	7.83	2.34	32.0
281	5.71	33.909	2.80	2.61	7.83	2.33	31.9
284	5.65	33.913	2.77	2.60	7.83	2.30	32.0
291	5.58	33.905	2.73	2.58	7.81	2.30	32.6
294	5.59	33.912	2.71	2.52	7.82	2.33	30.0
296	5.57	33.909	2.73	2.55	7.82	2.33	32.7

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dynm)
0	17.42	31.84	23.02	486.5	0
10	17.34	31.84	23.04	486.9	.049
20	17.21	31.79	23.04	485.2	.097
30	16.10	31.95	23.41	450.2	.144
50	10.51	32.48	24.92	305.6	.219
75	9.47	32.60	25.19	280.2	.293
100	8.44	32.70	25.40	261.1	.360
150	8.84	33.09	26.15	191.1	.473
200	6.44	33.93	26.62	144.2	.558
250	6.33	33.95	26.71	139.2	.629
300	5.53	33.90	26.77	132.5	.696

A 1 44 23.3 N 125 08.2 W DATE 14 SEP 69 1938 GCT WIRE 03 DRY 59.1 WET 54.8 CRUISE Y6909A
WIND DIRECTION 00 VEL 12 KTS BAR 22 SWELL DIRECTION 30 H 04 T 10 CLOUD 0 AMT 4 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	14.64	32.160	6.27	.38	8.30	2.17	.1
10	12.47	32.190	6.73	.43	8.20	2.19	4.0
20	8.38	32.426	6.11	.66	8.14	2.19	7.8
30	8.20	32.632	5.27	1.05	8.08	2.19	12.7
49	7.43	33.041	4.63	1.34	8.01	2.21	19.0
74	8.08	33.496	4.06	1.52	7.97	2.25	22.1
99	8.07	33.728	3.33	1.73	7.90	2.26	25.9
124	7.48	33.863	3.10	2.00	7.86	2.28	28.3
144	7.49	33.926	2.80	2.11	7.83	2.26	29.3
173	7.17	33.966	2.54	2.21	7.83	2.28	30.3
198	6.92	33.989	2.58	2.31	7.80	2.28	31.7
203	6.90	34.015	2.34	2.32	7.79	2.28	32.0
213	6.86		2.44	2.43	7.78	2.30	32.3
227	6.80	34.016	2.13	2.50	7.77	2.30	32.6
237	6.76	34.024	2.03	2.43	7.77	2.30	32.7
247	6.67	34.025	2.24		7.77	2.30	
257	6.70	34.051	1.99	2.45	7.75	2.30	33.4
267	6.60	34.042	2.06	2.55	7.75	2.30	34.5
277	6.58		1.82	2.64	7.74	2.30	34.5
287	6.44	34.047	1.70	2.65	7.74	2.30	
297	6.23	34.041	1.64	2.66	7.75	2.30	35.0

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dynm)
0	14.64	32.17	23.89	403.1	0
10	12.47	32.19	24.35	359.5	.038
20	8.88	32.43	25.15	283.2	.070
30	8.20	32.64	25.42	258.2	.097
50	7.83	33.08	25.82	220.2	.145
75	8.08	33.50	26.11	193.0	.197
100	8.07	33.74	26.30	175.6	.243
150	7.46	33.93	26.54	153.4	.325
200	6.91	33.99	26.67	141.9	.399
250	6.68	34.03	26.73	136.7	.449
300	6.17	34.04	26.80	130.3	.535

A 2 43 51.5 N 125 36.8 W DATE 1[illegible] SEP 69 0220 GCT WIRE 00 DRY 60.9 WET 56.5 CRUISE Y6909A
WIND DIRECTION 01 VEL 18 KTS BAR 20 SWELL DIRECTION 35 H 06 T 04 CLOUD 0 AMT 4 WEATHER 03

D (m)	T (°C)	O_2 (ml/l)
0	14.82	6.30
10	12.89	6.86
20	9.03	6.20
30	7.82	5.85
49	7.65	4.54
74	8.01	3.54
99	7.99	3.07
123	7.74	3.34
148	7.42	3.06
173	7.20	2.93
197	6.92	2.53
207	6.80	2.42
217	6.72	2.51
227	6.60	2.18
237	6.51	2.10
247	6.47	1.97
256	6.49	1.89
266	6.48	2.24
276	6.51	1.84
286	6.31	1.64
296	6.27	1.54

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁵)	ΔD (dyn.m)

A 3 43 21.8 N 125 11.0 W DATE 15 SEP 69 0703 GCT WIRE 07 DRY 57.6 WET 54.9 CRUISE Y6909A
WIND DIRECTION 01 VEL 24 KTS BAR 18 SWELL DIRECTION 32 H 05 T 08 CLOUD 8 AMT 1 WEATHER 01

0	13.78		6.37										
10	13.76		6.37										
20	11.09		6.90										
30	7.77		5.98										
49	8.64		4.44										
74	8.41		3.85										
99	8.23		3.64										
124	7.98		3.19										
149	7.77		2.57										
173	7.44		2.47										
199	7.42		2.20										
204	7.37		2.13										
219	7.33		2.22										
227	7.30		2.03										
237	7.25		1.99										
247	7.20		1.94										
257	7.19		1.95										
267	7.13		1.89										
277	7.09		1.80										
287	7.05		1.80										
297	7.02		1.54										

BC 1 43 07.4 N 125 18.1 W DATE 15 SEP 69 1753 GCT WIRE 04 DRY 55.2 WET 55.0 CRUISE Y6909A
WIND DIRECTION 17 VEL 22 KTS BAR 16 SWELL DIRECTION 30 H 03 T 08 CLOUD 6 AMT 8 WEATHER 03

0	13.82	32.788	6.18	.26	8.21	2.21	.2	0	13.82	32.79	24.55	340.8	0
5	13.80	32.798		.31	8.21	2.19	.2	10	13.91	32.79	24.55	340.8	.034
10	13.81	32.798	6.20	.37	8.22	2.19	.4	20	10.54	33.22	25.50	250.7	.064
15	12.45	33.070		.68	8.19	2.21	4.1	30	8.51	33.14	25.77	224.9	.097
20	10.54	33.214	5.65	1.08	8.09	2.21	11.3	50	8.06	33.52	26.13	191.1	.129
25	9.45	32.973	5.35	1.17	8.03	2.19	14.7	75	8.53	33.74	26.23	181.5	.176
30	9.51	33.139	4.88	1.22	7.96	2.19	13.3	100	8.48	33.86	26.34	172.1	.220
35	9.39	33.204	4.71	1.38	7.96	2.19	17.2	150	7.57	33.89	26.49	157.7	.302
40	8.27	33.290	4.63	1.53	7.98	2.21	19.9	200	6.97	33.95	26.62	146.0	.378
50	8.06	33.512	4.48		7.86	2.21							
60	8.13	33.722	4.35	1.58	7.86	2.25	22.7						
70	8.52	33.744	4.24	1.87	7.89	2.23	27.3						
80	8.55	33.703	4.27	1.97	7.85	2.25	28.0						
90	8.53	33.819	4.24	1.97	7.85	2.25	28.7						
100	8.43	33.859	4.15	1.99	7.85	2.26	29.2						
125	8.09	33.882	3.60										
150	7.59	33.887	3.43										
175	7.14	33.919	3.48										
200	6.47	33.950	3.24										

BC 2 43 08.2 N 125 12.0 W DATE 16 SEP 69 2102 GCT WIRE 01 DRY 55.6 WET 55.4 CRUISE Y6909A
WIND DIRECTION 17 VEL 22 KTS BAR 15 SWELL DIRECTION 30 H 05 T 10 CLOUD 6 AMT 8 WEATHER 02

0	10.26	33.482	6.82	1.10	8.10	2.26	12.8	0	10.26	33.49	25.75	224.0	0
5	10.25	33.476	6.79	1.18	8.04	2.25	13.2	10	9.45	33.60	25.[illegible]	204.6	.022
10	9.43	33.599	5.64	1.64	7.96	2.25	21.9	20	8.72	33.71	26.18	185.5	.041
15	9.10	33.640	5.26	1.66	7.96	2.23	21.9	30	8.29	33.78	26.30	174.7	.059
20	8.72	33.710	4.59		7.91	2.23		50	8.02	33.84	26.38	166.8	.093
25	8.43	33.759	4.05	1.82	7.89	2.25	23.7	75	7.82	33.88	26.44	161.3	.134
30	8.29	33.773	3.63	1.91	7.86	2.25	25.3	100	7.88	33.95	26.49	157.3	.174
35	8.28	33.808	3.72	1.97	7.85	2.25	26.0	150	6.99	33.93	26.60	147.1	.250
40	8.27	33.829	3.42	2.02	7.86	2.25	27.3	200	6.63	33.97	26.69	139.9	.322
50	8.22	33.831	3.38		7.87	2.25	27.3						
60	7.94	33.849	3.22		7.86	2.25							
70	7.90	33.852	3.42		7.86	2.25							
80	7.86	33.932	3.36	2.10	7.83	2.25	28.6						
90	7.81	33.925	3.33		7.82	2.25							
100	7.87	33.940	3.09	2.37	7.82	2.25	29.8						
125	7.94	33.925	2.81	2.28	7.81	2.28	30.5						
150	6.99	33.925	2.95		7.84	2.28	30.6						
175	6.35	33.959	2.69										
200	6.03	33.971	2.46	2.29	7.81	2.28	31.4						

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)

BC 1 43 10.5 N 124 05.2 W DATE 17 SEP 69 0245 GCT WIRE 00 DRY 59.9 WET 59.9 CRUISE Y6909A
WIND DIRECTION 18 VEL 21 KTS BAR 12 SWELL DIRECTION 30 H 08 T 06 CLOUD 8 AMT 8 WEATHER 45

0	14.04	32.653	6.28	.32	8.22	2.21	.2	0	14.04	32.66	24.40	355.0	0
5	14.03	32.643	6.41	.38	8.23	2.21	.1	10	13.94	32.65	24.41	354.2	.035
10	13.94	32.641	6.30	.34	8.24	2.21	.2	20	9.76	32.70	25.23	276.0	.067
15	11.46	32.595	6.83	.54	8.23	2.19	1.4	30	9.26	33.02	25.95	245.2	.093
20	9.74	32.699	6.34	.78	8.15	2.21	6.7	50	9.11	33.45	25.91	211.5	.139
25	8.70	32.721	5.94	.98	8.11	2.23	9.2	75	8.53	33.71	26.21	181.7	.188
30	9.26	33.016	5.73	1.26	8.05	2.23	14.0	100	7.93	33.82	26.38	167.6	.232
35	8.79	33.070	5.32	1.35	8.01	2.23	15.3	150	7.30	33.93	26.57	150.7	.312
40	8.60	33.168	5.06	1.45	7.99	2.23	18.0	200	6.59	33.97	26.69	139.4	.384
50	9.11	33.444	5.18		7.96	2.25	21.7						
60	8.26	33.390	4.41	1.59	7.96	2.25							
70	8.66	33.635	3.69	1.87	7.95	2.25	25.6						
80	8.34	33.764	3.57	2.00	7.94	2.26	27.4						
90	8.23	33.824	3.46	1.99	7.94	2.26	29.2						
100	7.92	33.811	3.11		7.95	2.26							
125	7.51	33.906	2.99		7.92	2.26							
150	7.29	33.930	2.86		7.83	2.26	31.8						
175	6.82	33.956	2.52		7.80	2.26	32.2						
200	6.59	33.971	2.51		7.78	2.28							

BC 4 42 59.0 N 125 37.2 W DATE 18 SEP 69 0050 GCT WIRE 05 DRY 58.0 WET 58.0 CRUISE Y6909A
WIND DIRECTION 19 VEL 18 KTS BAR 09 SWELL DIRECTION 30 H 06 T 06 CLOUD 8 AMT 8 WEATHER 01

0	9.91	33.146	6.24					0	9.91	33.15	25.55	245.2	0
10	9.91	33.434	5.97					10	9.91	33.44	25.77	224.0	.023
20	8.90	33.658	4.99					20	8.90	33.66	26.11	192.0	.044
30	8.30	33.641	4.43					30	8.30	33.65	26.19	184.6	.063
40	8.53	33.784	4.32					50	8.45	33.83	26.31	173.8	.099
50	8.45	33.820	4.16					75	8.35	33.89	26.38	167.8	.142
60	8.39	33.851	4.28					100	8.30	33.92	26.40	165.6	.183
75	8.35	33.886	4.24					150	7.57	33.94	26.53	154.0	.263
100	8.30	33.912	3.89					200	6.82	33.95	26.64	144.0	.338
125	7.82	33.926	3.21					250	6.38	33.99	26.73	135.9	.408
150	7.57	33.938	2.97					300	6.11	34.06	26.82	128.3	.474
175	7.22	33.959	2.67					400	5.45	34.09	26.92	119.4	.597
200	6.82	33.946	2.72					500	4.96	34.17	27.05	107.7	.711
250	6.12	34.056	1.61					600	4.52	34.23	27.15	99.2	.814
300	5.46	34.085	1.12					700	4.33	34.29	27.21	93.5	.911
400	4.97	34.169	.72					800	4.06	34.33	27.27	88.1	1.001
500	4.52	34.234	.42					1000	3.52	34.43	27.41	75.8	1.165
600	4.34	34.290	.42										
700	4.07	34.329	.25										
800	3.80	34.389	.38										
1000	3.50	34.437	.54										

BC 5 43 00.2 N 125 18.2 W DATE 18 SEP 69 0507 GCT WIRE 00 DRY 58.9 WET 57.5 CRUISE Y6909A
WIND DIRECTION 20 VEL 10 KTS BAR 10 SWELL DIRECTION 18 H 05 T 06 CLOUD 6 AMT 6 WEATHER 02

0	13.50	32.846	6.11					0	13.50	32.85	24.66	330.3	0
10	13.45	32.844	6.11					10	13.45	32.85	24.66	329.7	.033
20	10.25	33.465	5.48					20	10.25	33.47	25.74	227.4	.061
30	9.24	33.700	5.08					30	9.24	33.71	26.09	194.2	.082
40	8.36	33.845	4.30					50	8.17	33.89	26.41	164.6	.118
50	8.17	33.889	3.80					75	7.78	33.94	26.50	154.2	.158
60	7.95	33.909	3.41					100	7.72	33.98	26.54	152.8	.197
75	7.77	33.931	2.96					150	7.52	34.00	26.58	149.2	.272
99	7.72	33.975	2.90					200	7.31	34.03	26.64	144.4	.345
124	7.67	33.947	2.86					250	7.10	.05	26.69	140.8	.417
149	7.53	33.999	2.45					300	6.80	34.07	26.74	134.6	.486
174	7.37	34.012	2.23					400	5.97	34.09	26.87	125.3	.617
199	7.31	34.032	2.26					500	5.11	34.15	27.01	111.1	.735
249	6.71	34.065	1.68					600	4.72	34.21	27.	103.2	.842
299	5.49	34.093	1.20					700	4.41	34.28	27.20	94.8	.941
399	5.13	34.147	0.93					800	4.09	34.34	27.28	87.8	1.032
499	4.73	34.211	0.60					1000	3.57	34.41	7.39	78.0	1.198
599	4.43	34.292	0.40										
799	4.10	34.335	0.34										
899	3.83	34.380	0.39										
1099	3.56	34.413	0.44										

BC 6 43 00.3 N 125 28.0 W DATE 18 SEP 69 0558 GCT WIRE 00 DRY 56.9 WET 56.0 CRUISE Y6909A
WIND DIRECTION 20 VEL 12 KTS BAR 11 SWELL DIRECTION 19 H 03 T 05 CLOUD 6 AMT 2 WEATHER 02

0	10.80	33.166	6.16					0	10.80	33.17	25.41	258.2	0
10	9.73	33.154	5.58					10	9.73	33.16	25.59	241.9	.025
20	8.70	33.395	4.89					20	8.70	33.40	25.94	208.6	.048
30	9.00	33.625	4.98					30	9.00	33.63	26.07	196.1	.068
50	8.59	33.757	4.65					50	8.59	33.76	26.26	180.5	.105
60	8.75	33.843	4.86					75	8.63	33.88	26.33	172.4	.150
75	8.63	33.840	4.70					100	8.13	33.90	26.42	164.4	.192
100	8.13	33.896	3.59					150	6.98	33.91	26.59	148.8	.270
125	7.26	33.871	3.45					200	6.74	33.96	26.66	142.3	.343
150	6.98	33.900	3.27										
175	6.75	33.900	3.07										
200	6.74	33.949	2.62										

OBSERVED | INTERPOLATED | DERIVED

RC 7 43 00.8 N 126 02.1 W DATE 18 SEP 69 1050 GCT WIRE 00 DRY 61.5 WET 60.0 CRUISE Y6909A
WIND DIRECTION 19 VEL 18 KTS BAR 11 SWELL DIRECTION 29 H 03 T 10 CLOUD AMT 0 WEATHER 01

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	14.09	32.580					
10	13.26	32.569					
20	10.88	33.240					
30	9.26	33.459					
40	9.01	33.543					
50	8.72	33.582					
60	8.42	33.682					
75	8.21	33.728					
100	7.79	33.842					
125	7.48	33.900					
150	7.28	33.929					
175	7.07	33.950					
200	6.77						
300	5.66	33.993					
400	5.31	34.110					
500	4.89	34.169					
593	4.52	34.233					
694	4.25	34.291					
793	4.09	34.353					
898	3.82	34.394					
1004	3.57	34.439					

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	14.09	32.58	24.33	361.4	0
10	13.26	32.57	24.69	346.3	.035
20	10.89	33.25	25.46	254.5	.065
30	9.26	33.46	25.90	212.4	.089
50	8.72	33.59	26.08	195.4	.130
75	8.21	33.73	26.27	177.5	.176
100	7.80	33.85	26.43	163.5	.219
150	7.29	33.93	26.57	150.7	.297
200	6.78	33.96	26.66	142.8	.371
250	6.16	33.98	26.75	134.3	.440
300	5.67	34.00	26.83	127.1	.505
400	5.32	34.12	26.96	115.5	.626
500	4.90	34.17	27.06	106.6	.737
600	4.52	34.23	27.15	99.2	.840
700	4.25	34.29	27.22	92.4	.936
800	4.08	34.35	27.29	86.6	1.025
1000	3.59	34.44	27.41	76.5	1.188

NH 65 44 40.0 N 125 37.0 W DATE 24 SEP 69 1435 GCT WIRE 00 DRY 62.0 WET 60.8 CRUISE Y6909C
WIND DIRECTION 20 VEL 12 KTS BAR 16 SWELL DIRECTION 30 H 08 T 07 CLOUD 7 AMT 6 WEATHER 02

D (m)	T (°C)	O_2 (ml/l)
0	16.24	5.75
10	16.23	5.76
20	16.22	5.75
30	14.05	6.02
40	10.00	5.86
50	8.88	6.73
75	7.84	6.03
101	7.43	5.20
151	7.58	4.80
201	7.06	3.14
403	5.45	1.47
503	4.92	0.93
604	4.60	0.69
804	4.04	
1006	3.51	0.65
1207	3.08	0.72

TH 65 45 59.3 N 125 36.9 W DATE 26 SEP 69 1815 GCT WIRE 00 DRY 62.5 WET 61.5 CRUISE Y6909C
WIND DIRECTION VEL 00 KTS BAR 14 SWELL DIRECTION 28 H 09 T 09 CLOUD 3 AMT 7 WEATHER 02

D (m)	T (°C)	O_2 (ml/l)
0	16.35	5.83
10	16.30	5.99
20	16.10	5.96
30	10.61	7.14
40	8.64	6.94
50	7.90	6.34
75	7.44	5.92
101	7.72	4.57
151	7.52	3.27
201	6.79	2.86
403	5.41	1.42
503	5.10	0.74
604	4.52	
804	3.81	0.52
1006	3.52	0.50
1207	3.06	0.69

TH 5 45 56.0 N 124 06.4 W DATE 31 OCT 69 0219 GCT WIRE 03 DRY 56.1 WET 56.1 CRUISE Y6910E
WIND DIRECTION VEL 02 KTS BAR 25 SWELL DIRECTION 27 H 04 T 05 CLOUD AMT WEATHER 45

D (m)	T (°C)	S (‰)	O_2 (ml/l)
0	12.44	32.038	6.45
10	12.23	32.111	6.37
20	11.48	32.333	6.16
30	10.68	32.551	5.85
40	9.19	32.911	4.85
50	9.10	33.337	4.32
60	8.74	33.432	4.00

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	12.44	32.04	24.24	370.0	0
10	12.23	32.12	24.34	361.0	.037
20	11.48	32.34	24.65	331.6	.071
30	10.68	32.56	24.96	302.2	.103
50	9.10	33.34	25.83	219.3	.155

TH 3 45 56.0 N 124 03.4 W DATE 31 OCT 69 0325 GCT WIRE 01 DRY 56.7 WET 56.4 CRUISE Y6910F
WIND DIRECTION VEL 00 KTS BAR 26 SWELL DIRECTION 27 H 04 T 05 CLOUD 6 AMT 6 WEATHER 42

D (m)	T (°C)	S (‰)	O_2 (ml/l)
0	12.14	32.135	6.55
10	11.48	32.211	6.56
20	11.05	32.304	6.48
30	11.52	32.376	6.40
40	10.46	32.816	5.45
50	9.74	33.143	4.78

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	12.14	32.14	24.37	357.5	0
10	11.48	32.22	24.48	347.6	.035
20	11.05	32.31	24.59	336.7	.069
30	11.52	32.38	24.67	329.6	.103
50	9.78	33.15	25.57	244.3	.160

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
NH 3 44 39.1 N 124 07.8 W DATE 22 OCT 69 2221 GCT WIRE 03 DRY 54.6 WET 51.0 CRUISE Y6910E													
WIND DIRECTION 26 VEL 06 KTS BAR 18 SWELL DIRECTION 30 H 03 T 07 CLOUD AMT WEATHER 10													
0	11.75	32.710	6.72	.91				0	11.75	32.71	24.89	308.2	0
5	11.50	32.772	6.58	.94	8.20	2.30	5.6	10	10.74	32.92	25.22	274.3	.029
10	10.74	32.915	5.99	1.30	8.15	2.30	10.7	20	10.33	33.29	25.59	242.1	.055
15	10.35	33.142	5.50	1.67	8.05	2.31	15.6	30	9.58	33.57	25.93	209.4	.078
20	10.33	33.2[illegible]	5.50	1.68	8.02	2.31	17.2						
25	10.05	33.395	5.35	1.76	8.01	2.31	18.7						
30	9.58	33.546	4.74	2.59	7.95	2.30	23.5						
35	9.50	33.590	4.32	2.62	7.93	2.33	24.2						
NH 5 44 39.0 N 124 10.6 W DATE 23 OCT 69 0045 GCT WIRE 00 DRY 56.1 WET 53.9 CRUISE Y6910E													
WIND DIRECTION 25 VEL 04 KTS BAR 18 SWELL DIRECTION 29 H 03 T 07 CLOUD AMT WEATHER 02													
0	12.11	32.368	6.90	.53	8.26	2.31		0	12.11	32.37	24.56	339.7	0
5	11.83	32.394	6.92	.60	8.27	2.30		10	11.65	32.73	24.92	305.3	.032
10	11.65	32.727	6.76	.76	8.21	2.33		20	9.72	33.08	25.53	247.6	.060
15	11.09	32.842	6.19	1.14	8.15	2.33		30	9.41	33.51	25.91	211.3	.083
20	9.72	33.077	5.14	1.50	8.01	2.34							
25	9.64	33.475	4.88	1.73	7.96	2.36							
30	9.41	33.505	4.69	1.79	7.93	2.34	23.5						
35	9.47	33.553	4.68	1.86	7.85	2.36	23.9						
40	9.44	33.595	4.58	1.99	7.90	2.34	24.4						
NH 15 44 38.8 N 124 24.8 W DATE 23 OCT 69 1600 GCT WIRE 02 DRY 56.0 WET 54.9 CRUISE Y6910E													
WIND DIRECTION VEL 00 KTS BAR 20 SWELL DIRECTION 29 H 04 T 06 CLOUD 8 AMT 7 WEATHER 02													
0	12.19	32.311	6.56		8.27	2.26	.1	0	12.19	32.32	24.50	345.4	0
5	12.21	32.309		.58	8.26	2.26	.1	10	12.08	32.31	24.51	344.0	.034
10	12.08	32.305		.72	8.26	2.26	.4	20	10.02	32.47	25.01	297.3	.067
15	11.17	32.337		.92	8.20	2.25	4.9	30	8.25	33.01	25.70	231.5	.093
20	10.02	32.470	5.85	1.38	8.14	2.25	9.5	50	8.11	33.50	26.11	192.7	.135
25	8.39	32.593	4.76	1.81	8.01	2.26	17.7	75	8.45	33.86	26.34	171.7	.181
30	8.25	33.001	5.39	1.86	7.96	2.26	20.0						
35	8.59	33.270	4.35	1.98	7.93	2.28	22.6						
40	8.61	33.419	4.23	2.12	7.91	2.30	24.9						
45	8.25	33.423	3.87	2.11	7.90	2.28	25.1						
50	8.11	33.493	3.60	2.10	7.88	2.30	26.3						
55	8.01	33.546	3.36	2.40	7.85	2.28	27.7						
60	8.22	33.705	3.38	2.37	7.85	2.31	28.8						
65	8.44	33.839	3.41	2.49	7.82	2.30	29.9						
70	8.44	33.850	3.39	2.67	7.81	2.31	30.1						
75	8.45	33.853	3.47		7.81	2.31							
NH 20 44 39.1 N 124 18.3 W DATE 23 OCT 69 1829 GCT WIRE 05 DRY 55.4 WET 53.9 CRUISE Y6910E													
WIND DIRECTION 17 VEL 05 KTS BAR 20 SWELL DIRECTION 29 H 03 T 07 CLOUD 6 AMT 7 WEATHER 02													
0	12.17	32.424	6.80	.47	8.28	2.26	.1	0	12.17	32.43	24.59	336.7	0
5	12.18	32.416	6.81	.46	8.27	2.26	.1	10	12.14	32.42	24.59	337.2	.034
10	12.14	32.413	6.81	.47	8.27	2.26	.1	20	11.86	32.43	24.64	331.8	.067
15	12.09	32.409	5.97	.45	8.27	2.26	.3	30	9.07	32.71	25.34	265.6	.097
20	11.86	32.421	6.74	.48	8.27	2.25	.3	50	8.51	33.48	26.03	200.0	.144
25	10.46	32.477	6.19	.94	8.21	2.26	4.2						
30	9.37	32.703	5.25	1.45	8.09	2.26	12.9						
35	8.37	32.951	4.73		7.93	2.26	18.6						
40	8.12	33.073	4.37	1.45	7.96	2.26	22.1						
45	8.09	33.182	4.26	1.49	7.97	2.28	22.2						
50	8.51	33.479	4.22	1.67	7.91	2.30	26.7						
55	8.23	33.417	3.68	1.77	7.86	2.30	28.7						
NH 25 44 39.2 N 124 38.6 W DATE 23 OCT 69 2212 GCT WIRE 04 DRY 55.8 WET 53.4 CRUISE Y6910E													
WIND DIRECTION 20 VEL 04 KTS BAR 20 SWELL DIRECTION 29 H 03 T 06 CLOUD 6 AMT 8 WEATHER 02													
0	12.52	32.102	6.79	.73	8.28	2.23	.2	0	12.52	32.11	24.27	366.7	0
10	11.65	32.194	6.46	.87	8.22	2.23	3.6	10	11.65	32.20	24.51	344.5	.036
30	8.52	32.678	5.36	1.44	8.06	2.23	14.6	20	10.01	32.41	24.95	302.2	.068
40	8.07	32.953	4.94	1.59	8.02	2.25	18.1	30	8.52	32.68	25.41	259.3	.098
50	8.30	33.207	4.62	1.68	7.99	2.26	20.6	50	8.30	33.21	25.85	217.1	.144
60	8.67	33.514	4.35	1.95	7.95	2.31	23.4	75	8.57	33.67	26.17	187.1	.194
70	8.61	33.647	4.16	1.99	7.92	2.33	25.4	100	8.40	33.80	26.30	175.8	.239
80	8.53	33.646	4.00	2.08	7.92	2.33	25.9	150	8.00	33.91	26.44	162.7	.324
90	8.47	33.701	3.72	1.90	7.89	2.33	25.6	200	7.71	33.94	26.51	156.7	.404
100	8.40	33.734	3.69	1.94	7.87	2.33	27.0						
124	8.14	33.883	3.26	2.15	7.85	2.33	29.3						
149	8.00	33.906	3.05	2.14	7.85	2.33	29.6						
174	7.90	33.925	2.95	2.13	7.85	2.33	29.9						
199	7.72	33.943	2.70	2.31	7.82	2.33	31.7						

NH 035 44 39.8 N 124 52.6 W DATE 24 OCT 69 0117 GCT WIRE 01 DRY 57.5 WET 53.0 CRUISE Y6910E
WIND DIRECTION 24 VEL 04 KTS BAR 19 SWELL DIRECTION 30 M 04 T 05 CLOUD 3 AMT 2 WEATHER 02

OBSERVED								INTERPOLATED			DERIVED	
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.cm)
0	14.10	32.135	4.21	.42	8.26	2.23	.2	0	14.10	32.14	23.99	394.2	0
10	14.04	32.138	4.17	.41	8.26	2.19	.1	10	14.04	32.14	24.00	393.0	.039
20	13.75	32.146	4.25	.41	8.26	2.21	.1	20	13.75	32.19	24.10	384.1	.078
30	12.13	32.307	4.56	.54	8.25	2.23	.1	30	12.13	32.31	24.51	345.2	.115
40	9.03	32.455	4.38	.76	8.22	2.21	1.5	50	7.95	32.47	25.32	267.5	.176
50	7.95	32.464	4.54	1.02	8.17	2.23	4.8	75	7.73	33.10	25.85	217.4	.237
59	7.65	32.501	4.38	1.12	8.14	2.23	8.3	100	7.42	33.49	26.14	190.2	.287
69	7.69	32.919	4.32	1.53	8.04	2.25	15.7	150	7.43	33.86	26.43	164.1	.379
79	7.75	33.203	4.68	1.80	8.00	2.26	19.5	200	7.19	33.94	26.58	150.1	.455
89	7.78	33.374	4.27	1.94	7.96	2.26	22.0	250	6.94	34.03	26.69	140.5	.427
100	7.92	33.488	3.99	1.87	7.94	2.23	23.4	300	6.53	34.05	26.76	134.4	.496
125	8.10	33.754	3.86	2.09	7.92	2.28	26.5	400	5.93	34.08	26.84	124.6	.726
150	7.83	33.851	3.45	2.17	7.85	2.28	28.9						
174	7.44	33.905	2.94	2.44	7.86	2.28	29.9						
200	7.19	33.931	2.87	2.51	7.85	2.30	31.1						
250	6.93	34.023	2.05	2.86	7.76	2.31	34.3						
300	6.52	34.041	1.80	2.94	7.73	2.31	36.0						
400	5.93	34.082	1.26	3.22	7.47	2.33	39.4						

NH 45 44 39.1 N 124 06.8 W DATE 24 OCT 69 0410 GCT WIRE 05 DRY 54.0 WET 51.0 CRUISE Y6910F
WIND DIRECTION 31 VEL 07 KTS BAR 19 SWELL DIRECTION 29 M 03 T 07 CLOUD 8 AMT 5 WEATHER 02

0	13.66	32.225	4.25	.41	8.26	2.23	.1	0	13.66	32.23	24.14	379.0	0
10	13.70	32.228	4.24	.40	8.26	2.21	.1	10	13.70	32.23	24.14	379.9	.038
20	12.61	32.278	4.44	.40	8.25	2.19	.1	20	12.61	32.28	24.59	355.4	.075
30	12.12	32.294	4.42	.44	8.24	2.23	.7	30	12.13	32.30	24.50	345.9	.110
40	10.75	32.396	4.78	.52	8.23	2.21	1.1	50	9.38	32.47	25.11	287.8	.173
50	9.38	32.470	4.63	.79	8.14	2.21	5.1	75	9.01	33.36	25.86	217.3	.236
60	8.89	32.755	5.42	1.19	8.10	2.25	12.1	100	8.35	33.50	26.07	197.1	.288
70	8.45	33.270	4.98	1.66	8.00	2.26	20.2	150	7.44	33.83	26.45	161.7	.378
80	8.04	33.386	4.42	1.76	7.99	2.26	21.6	200	6.98	33.93	26.61	147.4	.455
90	8.85	33.445	4.63	1.80	7.97	2.26	23.2	250	6.29	33.95	26.71	137.8	.526
101	8.70	33.504	4.07	2.02	7.93	2.28	25.1	300	5.96	33.97	26.77	132.5	.594
125	7.83	33.675	3.81	2.08	7.93	2.28	26.9	400	5.56	34.08	26.91	121.0	.721
150	7.49	33.820	3.61	2.22	7.91	2.31	28.7	500	5.02	34.17	27.04	108.5	.835
201	6.97	33.934	2.77	2.53	7.83	2.33	32.4	600	4.76	34.21	27.11	103.6	.941
251	6.28	33.951	2.63	2.71	7.80	2.33	35.1						
302	5.45	33.975	2.22	2.94	7.77	2.34	37.4						
402	5.55	34.084	1.21	3.45	7.67	2.36	41.7						
503	5.01	34.171	.66	3.62	7.62	2.37	44.2						
603	4.76	34.215	.53	3.70	7.61	2.37	45.1						

NH 65 44 39.0 N 124 35.0 W DATE 25 OCT 69 0239 GCT WIRE 02 DRY 54.0 WET 53.0 CRUISE Y6910F
WIND DIRECTION 11 VEL 12 KTS BAR 17 SWELL DIRECTION M T CLOUD 3 AMT 8 WEATHER 02

0	13.17	32.060	4.27	.62	8.26	2.19	.1	0	13.17	32.06	24.11	381.8	0
10	13.15	32.096	4.36	.61	8.26	2.21	.1	10	13.15	32.06	24.12	382.0	.038
20	11.87	32.118	4.54	.61	8.22	2.23	2.2	20	11.88	32.12	24.41	354.3	.075
30	10.72	32.244	4.13	.64	8.18	2.21	5.5	30	10.72	32.29	24.74	322.6	.109
40	8.48	32.471	4.03	.92	8.13	2.21	9.8	50	7.96	32.61	25.43	257.0	.167
50	7.96	32.607	5.82	1.02	8.10	2.21	11.6	75	7.82	32.91	25.68	233.4	.228
60	7.49	32.740	5.49	1.22	8.06	2.23	14.4	100	8.07	33.32	25.97	206.8	.283
70	7.60	32.835	5.32	1.26	8.05	2.23	15.1	150	7.95	33.70	26.29	177.1	.379
80	7.66	32.944	5.01	1.43	8.01	2.25	17.4	200	7.02	33.95	26.62	146.7	.460
101	8.08	33.331	4.27	1.60	7.85	2.26	21.7	250	6.23	34.03	26.78	131.5	.529
128	8.05	33.547	3.72	1.79	7.82	2.28	24.0	300	5.67	34.02	26.85	125.2	.594
151	7.94	33.708	3.22	1.93			26.6	400	5.20	34.08	26.95	116.9	.715
202	6.37	33.956	2.32	2.37	7.76	2.31	33.9	500	4.82	34.14	27.04	108.6	.827
302	5.05	34.026	1.57	2.68	7.68	2.33	38.6	600	4.55	34.21	27.13	101.2	.932
403	5.19	34.079	1.11	2.90	7.65	2.34	40.8	700	4.30	34.29	27.21	93.4	1.029
504	4.41	34.138	.46	2.94	7.60	2.36	42.0	800	4.04	34.34	27.28	87.1	1.120
605	4.54	34.217	.43	3.17	7.58	2.37	43.6	1000	3.50	34.42	27.40	76.7	1.293
704	4.29	34.291	.34	3.22	7.59	2.39	44.8	1200	3.09	34.48	27.49	68.7	1.429
804	4.02	34.342	.42	3.21	7.59	2.40	45.1						
1008	3.48	34.422	.41	3.20	7.61	2.41	45.9						
1210	3.07	34.440	.48	3.21	7.62	2.43	45.8						

NH 85 44 38.3 N 124 11.0 W DATE 24 OCT 69 2200 GCT WIRE DRY 53.8 WET 49.6 CRUISE Y6910E
WIND DIRECTION 21 VEL 10 KTS BAR 18 SWELL DIRECTION 30 M 04 T 07 CLOUD 8 AMT 6 WEATHER 18

0	15.08	32.322	5.86	.43	8.23	2.14	.1	0	15.08	32.33	23.92	400.2	0
10	15.08	32.319	5.87	.42	8.22	1.91	.1	10	15.08	32.32	23.92	400.7	.040
20	15.08	32.317	5.83	.41	8.22	1.86	.1	20	15.08	32.32	23.92	401.0	.080
30	14.99	32.325	5.86	.40	8.23	2.31	.1	30	14.99	32.33	23.94	398.8	.120
40	14.48	32.342	5.91	.40	8.22	1.98	.1	50	10.53	32.47	24.91	306.7	.191
50	10.53	32.461	7.46	.44	8.24	2.09		75	9.19	33.53	25.34	266.5	.262
60	8.95	32.488	7.10	.51	8.23	2.44	.1	100	7.25	33.77	25.66	236.2	.325
70	8.53	32.524	6.46	.71	8.18	2.61	4.3	150	7.80	33.72	26.33	173.5	.428
80	7.95	32.542	6.40	.81	8.18	2.17	6.6	200	7.16	33.92	26.57	151.2	.509
101	7.24	32.787	5.73	1.16	8.10	2.19	13.5	250	6.60	33.97	26.69	140.2	.581
126	7.78	33.455	4.12	1.75	7.97	2.45	21.8	300	6.13	33.98	26.75	134.5	.650
151	7.80	33.729	3.45	1.94	7.91	2.30	25.4	400	5.44	34.03	26.89	123.0	.779
202	7.13	33.917	2.83	2.26	7.83	2.50	29.9	500	4.74	34.07	27.00	112.4	.896
302	6.11	33.977	2.12	2.50	7.77	2.57	33.9	600	4.62	34.19	27.11	103.4	1.004
403	5.42	34.036	1.41	2.78	7.69	2.50	37.5	700	4.37	34.28	27.20	94.7	1.103
504	4.72	34.074	1.07	2.86	7.66	2.56	39.2	800	4.09	34.33	27.27	88.7	1.195
605	4.62	34.201	.52	3.13	7.62	2.51	41.4	1000	3.54	34.41	27.39	78.1	1.362
706	4.35	34.283	.34	3.20	7.60	2.59	42.2	1200	3.09	34.47	27.48	69.5	1.509
807	4.07	34.329	.25	3.25	7.62	2.57	42.2						
1008	3.52	34.409	.37	3.31	7.64	2.51	42.6						
1210	3.07	34.470	.45	3.31	7.66	2.50	42.6						

NH 105 44 39.0 N 124 30.4 W DATE 26 OCT 69 1944 GCT WIRE 04 DRY 59.5 WET 58.9 CRUISE Y6910F
WIND DIRECTION 20 VEL 14 KTS BAR 14 SWELL DIRECTION 21 H 10 T 08 CLOUD 8 AMT 4 WEATHER 01

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	15.06	32.315	5.98	.44	8.23	2.25	.1
10	15.08	32.314	5.92	.43	8.24	2.21	.1
20	15.09	32.314	4.10	.42	8.23	2.23	.1
30	15.06	32.322	5.92	.42	8.23	2.21	.1
40	15.02	32.327	5.91	.41	8.23	2.23	.1
50	11.02	32.447	7.24	.40	8.26	2.23	.1
60	9.55	32.549	4.99				
70	9.41	32.603	4.39	.80	8.17	2.23	4.9
80	8.81	32.547	4.42	.79	8.18	2.23	4.9
101	7.74	32.549	4.41	.79	8.17	2.23	7.1
126	7.46	33.164	5.00	1.08	8.03	2.26	17.6
151	7.58	33.495	4.50	1.28	7.99	2.28	21.3
202	7.47	33.906		1.46	7.86	2.30	28.3
302	6.31	33.994	2.44	2.05	7.76	2.33	34.0
403	5.59	34.057	1.35	2.27	7.68	2.34	38.3
504	5.01	34.111	1.04	2.51	7.63	2.34	38.8
605	4.62	34.210	.43	2.68	7.60	2.35	40.1
705	4.35	34.287	.43	2.72	7.60	2.39	43.2
806	4.05	34.335	.34	2.78	7.58	2.40	43.7
1008	3.73	34.425	.34	2.77	7.59	2.40	45.5
1209	3.02	34.474	.53	2.77	7.60	2.43	45.0

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	15.06	32.32	23.92	400.3	0
10	15.08	32.32	23.92	401.0	.040
20	15.09	32.32	23.91	401.5	.080
30	15.06	32.33	23.93	400.5	.120
50	11.02	32.49	24.85	313.0	.192
75	9.03	32.58	25.25	275.1	.265
100	7.76	32.55	25.41	250.5	.332
150	7.59	33.49	26.17	184.3	.444
200	7.47	33.90	26.51	156.9	.530
250	6.96	33.95	26.62	146.8	.606
300	6.34	33.99	26.74	136.0	.677
400	5.61	34.06	26.88	123.5	.806
500	5.03	34.11	26.99	113.1	.925
600	4.64	34.20	27.11	102.8	1.032
700	4.36	34.28	27.21	94.3	1.131
800	4.07	34.33	27.28	88.0	1.222
1000	3.55	34.42	27.40	77.1	1.387
1200	3.04	34.47	27.49	68.6	1.533

NH 125 44 39.1 N 126 59.0 W DATE 26 OCT 69 2355 GCT WIRE 03 DRY 55.5 WET 54.8 CRUISE Y6910F
WIND DIRECTION 27 VEL 18 KTS BAR 10 SWELL DIRECTION 20 H 10 T 05 CLOUD 6 AMT 8 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	15.06	32.214	5.96	.35	8.22		.1
10	15.06	32.213	5.96	.42	8.23		.1
20	15.06	32.215	5.96	.48	8.23		.1
30	15.04	32.215	4.01	.32			.1
40	14.97	32.221	5.99	.30	8.23		.1
50	11.42	32.446	7.07	.30	8.24		.1
60	10.38	32.509	7.31	.52	8.23		.1
70	9.31	32.554	4.60	.91	8.19		4.4
80	8.79	32.520	4.61		8.19		
101	7.94	32.581	4.41	1.00	8.16		6.8
126	8.05	32.970	5.48	1.30	8.08		13.6
151	7.68	33.418	4.58	1.31	7.97		19.9
202	7.41	33.775	4.20	1.59	7.93		23.8
302	6.35	33.937	2.79	1.96	7.79		31.6
403	5.63	34.021	1.57	2.18	7.68		37.2
504	4.82	34.084	1.05	2.67	7.66		40.6
605	4.01	34.193	.57	2.68	7.55		41.2
706	4.39	34.251	.60	2.77	7.57		41.9
807	4.15	34.320	.39	3.00	7.57		42.3
1009	3.57	34.412	.40		7.59		43.0
1210	3.39	34.463	.50	3.64	7.59		43.9

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	15.06	32.22	23.84	407.7	0
10	15.06	32.22	23.84	408.0	.041
20	15.06	32.22	23.84	408.1	.082
30	15.04	32.22	23.85	407.9	.122
50	11.82	32.45	24.67	330.0	.196
75	9.01	32.54	25.22	277.8	.272
100	7.97	32.57	25.40	260.5	.339
150	7.70	33.40	26.09	194.0	.453
200	7.42	33.77	26.42	165.4	.544
250	6.92	33.90	26.59	149.7	.623
300	6.37	33.93	26.69	140.8	.695
400	5.65	34.02	26.85	124.8	.829
500	4.85	34.08	26.99	112.9	.949
600	4.41	34.19	27.10	103.8	1.057
700	4.40	34.25	27.17	97.5	1.158
800	4.17	34.32	27.25	90.4	1.251
1000	3.60	34.41	27.38	78.6	1.420
1200	3.11	34.46	27.47	70.2	1.569

NH 145 44 39.0 N 127 27.0 W DATE 27 OCT 69 0357 GCT WIRE 04 DRY 57.2 WET 52.6 CRUISE Y6910F
WIND DIRECTION 28 VEL 13 KTS BAR 12 SWELL DIRECTION 20 H 06 T 05 CLOUD 8 AMT 5 WEATHER 01

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	14.69	32.150	5.98	.38	8.24	2.25	.1
10	14.71	32.146	4.93	.38	8.24	2.25	.1
20	14.71	32.146	4.00	.39	8.23	2.25	.1
30	14.71	32.148	4.01	.40	8.24	2.26	.1
40	14.62	32.159	4.07	.41	8.24	2.25	.1
50	14.08						
60	9.35	32.490	4.97	1.14	8.22	2.25	.8
70	8.63	32.499	4.54	1.15	8.17	2.25	4.0
80	8.19	32.523	4.42	1.18	8.16	2.25	6.2
101	7.71	32.760	5.74	1.51	8.10	2.26	11.1
126	8.20	32.402	4.19		7.95	2.30	20.8
151	8.18	33.709	3.40		7.90	2.31	25.5
201	7.61	33.902	3.13		7.82	2.33	29.0
302	6.57	33.996	2.15		7.76	2.36	33.4
403	5.79	34.043	1.40	2.41	7.69	2.36	36.9
504	5.19	34.116	.95	2.78	7.63	2.37	39.6
604	4.76	34.197	.42	2.88	7.60	2.40	40.7
705	4.45	34.260	.41	3.11	7.60	2.41	41.5
806	4.18	34.315	.49	3.20	7.59	2.43	43.1
1008	3.60	34.400	.37	3.29	7.61	2.44	42.6
1209	3.18	34.455	.52	3.31	7.60	2.45	42.8

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	14.69	32.15	23.87	404.9	0
10	14.71	32.15	23.87	405.8	.041
20	14.71	32.15	23.87	405.0	.041
30	14.71	32.15	23.87	404.1	.122
50	14.08	32.32	25.13	381.4	.200
75	8.38	32.51	25.29	271.0	.282
100	7.92	32.75	25.55	244.7	.347
150	8.19	33.85	2 .21	185.8	.454
200	7.82	33.90	26.49	154.8	.540
250	7.08	33.98	26.63	146.3	.617
300	6.59	33.99	26.71	139.1	.688
400	5.41	34.04	26.85	127.1	.821
500	5.21	34.11	26.97	116.9	.942
600	4.77	34.19	27.09	105.2	1.052
700	4.46	34.26	27.17	97.5	1.153
800	4.20	34.31	27.25	91.0	1.247
1000	3.62	34.40	27.37	79.7	1.418
1200	3.20	34.45	27.46	71.8	1.570

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	B ($\times 10^8$)	ΔD (dyn.m)

NH 165 44 39.0 N 127 54.6 W DATE 27 OCT 69 1518 GCT WIRE 04 DRY 56.5 WET 51.5 CRUISE Y6910E
WIND DIRECTION 25 VEL 22 KTS BAR 13 SWELL DIRECTION 25 H 11 T 07 CLOUD 8 AMT 2 WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO_3
0	14.68	32.234	5.98	.21	8.23	2.21	.1
10	14.66	32.228	6.01	.17	8.23	2.19	.1
20	14.65	32.225	6.01	.17	8.23	2.21	.1
30	14.65	32.226	6.02	.16	8.23	2.21	.1
40	14.49	32.240	6.05	.16	8.24	2.21	.1
50	12.81	32.455	6.39	.35	8.23	2.23	.8
60	11.58	32.475	6.77	.44	8.23	2.21	.7
75	9.42	32.479	6.98	.42	8.21	2.21	1.6
80	8.74	32.500	6.45	.73	8.17	2.19	3.9
101	8.37	32.707	5.85	1.05	8.11	2.21	11.5
124	7.84	33.016	5.17	1.30	8.04	2.23	16.6
151	7.49	33.515	4.25	1.71	7.96	2.25	23.0
201	7.00	33.859	3.50	1.99	7.89	2.28	
302	6.40	33.975	2.35	2.57	7.78	2.30	
403	5.73	34.018	1.65	2.66	7.70	2.31	
503	5.20	34.100		2.98	7.64	2.33	39.8
606	4.85	34.199	.61	3.02	7.61	2.40	42.5
705	4.50	34.259	.43	3.20	7.60	2.40	44.1
804	4.19	34.318	.43	3.33	7.59	2.43	45.0
1007	3.60	34.407	.39		7.61	2.43	
1209	3.15	34.474	.57	3.53	7.62	2.45	45.8

Z	T	S	σ_t	B	ΔD
0	14.68	32.24	23.94	399.5	0
10	14.66	32.23	23.94	399.8	.040
20	14.65	32.23	23.94	399.0	.080
30	14.65	32.23	23.94	399.2	.120
50	12.81	32.46	24.49	347.1	.194
75	8.97	32.49	25.18	291.1	.273
100	8.37	32.69	25.44	257.3	.340
150	7.88	33.50	26.14	191.6	.452
200	7.61	33.86	26.46	161.6	.541
250	7.09	33.97	26.62	147.0	.618
300	6.52	33.97	26.70	139.9	.689
400	5.75	34.02	26.83	128.2	.823
500	5.21	34.10	26.96	116.1	.945
600	4.86	34.20	27.08	104.2	1.057
700	4.52	34.26	27.17	94.2	1.159
800	4.21	34.31	27.25	91.0	1.253
1000	3.62	34.40	27.38	79.2	1.423
1200	3.17	34.47	27.47	70.1	1.572

DR 45 45 00.0 N 125 02.5 W DATE 28 OCT 69 1439 GCT WIRE 00 DRY 55.1 WET 53.4 CRUISE Y6910E
WIND DIRECTION 30 VEL 10 KTS BAR 19 SWELL DIRECTION 28 H 10 T 08 CLOUD 6 AMT 6 WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO_3
0	13.40	32.165	6.19	.52			.1
10	13.42	32.154	6.22	.54	8.25	2.17	.1
20	13.42	32.158	6.23	.52	8.24	2.17	.2
30	9.84	32.442	6.98		8.24	2.17	
40	8.62	32.456	6.75	1.02	8.20	2.17	5.5
50	7.92	32.486	6.48	1.01	8.18	2.17	7.4
74	8.77	33.266	4.70	1.87	7.99	2.25	20.7
101	8.33	33.597	4.02	2.12	7.93	2.26	25.0
124	8.21	33.777	3.70	2.45	7.88	2.28	28.2
151	7.98	33.856	3.36	2.53	7.86	2.28	29.3
202	7.30	33.943	2.76	2.65	7.82	2.30	31.1

Z	T	S	σ_t	B	ΔD
0	13.40	32.17	24.15	378.5	0
10	13.42	32.16	24.14	379.9	.038
20	13.42	32.16	24.14	379.8	.076
30	9.84	32.45	25.01	296.7	.110
50	7.93	32.49	25.34	255.4	.166
75	8.71	33.23	25.80	222.1	.227
100	8.36	33.59	26.14	190.6	.278
150	7.99	33.85	26.40	166.5	.368
200	7.33	33.94	26.57	151.5	.447

DR 38 45 00.1 N 124 48.5 W DATE 28 OCT 69 1702 GCT WIRE 00 DRY 55.3 WET 54.7 CRUISE Y6910E
WIND DIRECTION 32 VEL 04 KTS BAR 22 SWELL DIRECTION 27 H 06 T 09 CLOUD 6 AMT 8 WEATHER 03

D	T	S	O_2	PO_4	pH	Alk.	NO_3
0	12.86	32.021	6.28	.59	8.27	2.19	.2
10	13.07	32.072	6.24	.35	8.26	2.19	.3
20	12.83	32.009	6.28	.58	8.26	2.19	.2
30	10.56	32.272	6.07	.86	8.19	2.21	5.7
42	8.36	32.516	5.92	1.17	8.13	2.21	11.0
50	7.69	32.640	5.76	1.30	8.10	2.28	13.6
74	7.98	33.257	4.26	1.74	7.97	2.28	22.2
101	8.33	33.648	3.86	1.92	7.92	2.26	26.5
124	8.01	33.814	3.31	2.07	7.90	2.23	29.5
151	7.71	33.876	3.13	2.14	7.86	2.21	30.5
202	7.34	33.944	2.07	2.30	7.81	2.30	32.6

Z	T	S	σ_t	B	ΔD
0	12.86	32.03	24.15	378.9	0
10	13.07	32.08	24.14	379.3	.038
20	12.83	32.01	24.14	379.7	.076
30	10.56	32.28	24.76	320.9	.111
50	7.69	32.64	25.50	250.8	.168
75	7.94	33.23	25.92	210.9	.226
100	8.32	33.64	26.18	186.6	.275
150	7.72	33.87	26.46	151.1	.362
200	7.35	33.96	26.58	150.3	.440

DR 28 45 00.0 N 124 33.6 W DATE 28 OCT 69 1907 GCT WIRE 00 DRY 56.3 WET 55.2 CRUISE Y6910E
WIND DIRECTION 27 VEL 02 KTS BAR 23 SWELL DIRECTION 27 H 06 T 09 CLOUD 6 AMT 8 WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO_3
0	13.03	32.075	6.18	.35	8.26	2.19	.3
10	12.95	32.006	6.38	.59	8.26	2.21	.2
20	13.08	32.138	6.26	.37	8.27	2.19	.3
30	11.04	32.421	6.56	.55	8.23	2.21	.8
40	9.19	32.448	6.48	.76	8.20	2.21	5.0
50	8.66	32.546	6.31	.97	8.17	2.21	7.7
75	8.35	33.141	4.99	1.41	8.02	2.25	17.6
101	8.38	33.544	4.18	1.73	7.94	2.26	23.4
125	8.19	33.767	3.70	1.98	7.88	2.28	26.8
151	7.93	33.836	3.34	2.10	7.87	2.28	28.5
202	7.23	33.941	2.72	2.22	7.83	2.30	30.6

Z	T	S	σ_t	B	ΔD
0	13.03	32.08	24.15	378.1	0
10	12.95	32.01	24.14	380.0	.038
20	13.08	32.20	24.24	370.4	.075
30	11.04	32.43	24.79	317.8	.110
50	8.66	32.55	25.28	271.4	.169
75	8.36	33.11	25.77	225.4	.231
100	8.38	33.53	26.09	195.2	.283
150	7.94	33.83	26.39	167.2	.374
200	7.26	33.94	26.57	150.8	.454

DR 3 44 49.5 N 124 07.8 W DATE 29 OCT 69 0156 GCT WIRE 02 DRY 58.5 WET 54.8 CRUISE Y6910E
WIND DIRECTION 15 VEL 10 KTS BAR 23 SWELL DIRECTION 27 H 06 T 08 CLOUD 8 AMT 2 WEATHER 01

D	T	S	O_2	PO_4	pH	Alk.	NO_3
0	11.88	32.245	6.48	.54	8.25	2.25	2.5
10	11.89	32.275	6.50	.55	8.25	2.23	2.4
20	11.95	32.483	6.49	.65	8.26	2.21	1.7
30	10.08	33.148	5.05	1.81	8.01	2.19	17.5
40	9.31	33.340	4.50	1.93	7.94	2.19	23.1

Z	T	S	σ_t	B	ΔD
0	11.88	32.27	24.52	343.3	0
10	11.89	32.28	24.53	342.9	.034
20	11.95	32.49	24.68	328.8	.068
30	10.08	33.19	25.55	245.3	.097

DR 5 44 50.4 N 124 10.2 W DATE 29 OCT 69 0355 GCT WIRE 03 DRY 57.7 WET 57.1 CRUISE Y6910E
WIND DIRECTION 15 VEL 10 KTS BAR 23 SWELL DIRECTION 27 H 06 T 08 CLOUD 8 AMT 8 WEATHER 03

D	T	S	O_2	PO_4	pH	Alk.	NO_3
0	11.66	32.247	6.64	.62	8.23	2.23	3.5
10	11.64	32.248	6.48	.70	8.23	2.23	3.7
20	10.49	32.524	5.49	.88	8.16	2.23	8.0
30	9.76	33.044	5.73	1.26	8.05	2.25	15.7
40	8.78	33.283	4.35	1.71	7.95	2.25	22.7
50	8.63	33.482	4.25	1.82	7.91	2.26	25.8

Z	T	S	σ_t	B	ΔD
0	11.66	32.25	24.55	340.7	0
10	11.64	32.25	24.55	340.5	.034
20	10.49	32.53	24.90	307.3	.066
30	9.76	33.07	25.35	264.2	.095
50	8.63	33.49	26.02	201.5	.142

	OBSERVED								INTERPOLATED				DERIVED	
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)		Z (m)	T (°C)	S (‰)	σ_t	S ($\times 10^6$)	ΔD (dyn.m)
CM 13 44 53.[illegible] N 124 14.6 W DATE 29 OCT 69 1416 GCT WIRE 01 DRY 54.3 WET 54.3 CRUISE YA9108														
WIND DIRECTION 16 VEL 18 KTS BAR 21 SWELL DIRECTION 27 H 04 T 05 CLOUD 4 AMT 4 WEATHER 03														
0	11.46	32.176	4.42	.44	8.24	2.21	2.4		0	11.46	32.18	24.43	344.1	0
10	11.45	32.177	4.42	.54	8.24	2.21	2.5		10	11.45	32.18	24.44	343.6	.139
20	11.16	32.172	4.16	.47	8.20	2.21	4.1		20	10.56	32.33	24.90	317.0	.148
30	9.16	32.319	4.73	1.21	8.01	2.23	14.4		30	9.16	32.92	25.65	236.3	.196
40	9.20	33.246	4.17	1.60	7.96	2.23	22.9		50	8.54	33.21	25.95	148.8	.119
51	8.61	33.377	4.24	1.39	7.93	2.25	26.4		75	8.44	33.29	25.99	177.7	.147
61	8.44	33.430	4.04	1.43	7.91	2.26	26.0		100	8.39	33.41	26.11	176.8	.231
76	8.43	33.753	3.84	1.53	7.89	2.26	28.2							
101	8.33	33.416	3.34	1.69	7.83	2.28	29.4							
CM 15 44 55.3 N 124 22.6 W DATE 29 OCT 69 1632 GCT WIRE 05 DRY 54.0 WET 54.0 CRUISE YA9108														
WIND DIRECTION 14 VEL 14 KTS BAR 23 SWELL DIRECTION 26 H 04 T 08 CLOUD 4 AMT 4 WEATHER 11														
0	12.39	32.115	4.37	.49	8.26	2.19	1.2		0	12.39	32.12	24.31	367.6	0
10	12.40	32.113	4.41	.58	8.26	2.19	1.2		10	12.40	32.12	24.31	367.3	.036
20	12.20	32.157	4.40	.61	8.26	2.19	1.7		20	12.20	32.16	24.34	357.3	.072
30	9.42	32.508	4.73	1.20	8.14	2.21	10.2		30	9.63	32.31	25.10	244.6	.105
40	8.13	32.741	4.47	1.44	8.09	2.21	14.7		50	7.43	33.08	25.81	220.6	.184
50	7.13	33.071	4.42	1.70	8.04	2.23	17.3		75	8.44	33.57	26.24	144.4	.238
60	8.14	33.315	4.19	1.90	7.99	2.25	20.4		100	8.54	33.71	26.20	145.0	.255
76	8.19	33.574	4.14	2.09	7.96	2.25	24.2		150	8.11	33.86	26.37	144.1	.343
101	8.35	33.734	3.84	2.30	7.90	2.26	24.1							
126	8.25	33.816	3.34	2.40	7.87	2.26	27.4							
151	8.11	33.843	2.95	2.56	7.83	2.26	29.5							
CM 3 45 29.2 N 124 12.7 W DATE 29 OCT 69 2044 GCT WIRE 02 DRY 54.0 WET 55.7 CRUISE YA9108														
WIND DIRECTION 17 VEL 12 KTS BAR 24 SWELL DIRECTION 25 H 04 T 07 CLOUD 4 AMT 4 WEATHER 12														
0	11.46	32.349	4.62	.72	8.23	2.23	2.4		0	11.46	32.35	24.43	332.8	0
10	11.46	32.353	4.56	.70	8.23	2.23	2.5		10	11.46	32.36	24.43	332.8	.33
20	11.41	32.341	4.53	.78	8.23	2.23	2.5		20	11.41	32.37	24.46	331.8	.67
30	11.54	32.406	4.51	.80	8.22	2.23	2.4		30	11.58	32.37	24.45	331.1	.100
40	11.54	32.509	4.39	.92	8.22	2.23	3.3							
CM 5 45 29.3 N 124 05.7 W DATE 29 OCT 69 2147 GCT WIRE 01 DRY 54.5 WET 55.7 CRUISE YA9108														
WIND DIRECTION 20 VEL 14 KTS BAR 24 SWELL DIRECTION 25 H 05 T 07 CLOUD 4 AMT 4 WEATHER 02														
0	11.46	32.217	4.46	.53	8.25	2.25	2.4		0	11.46	32.22	24.47	347.9	0
10	11.78	32.303	4.44	.51	8.25	2.25	2.5		10	11.78	32.30	24.56	339.1	.136
20	11.49	32.555	4.32	.46	8.22	2.31	3.4		20	11.49	32.54	24.80	317.2	.147
30	10.67	32.939	4.59	1.26	8.12	2.31	11.2		30	10.67	32.90	25.23	276.3	.147
40	10.18	33.030	4.33	1.52			13.9		50	9.16	33.18	25.88	231.2	.168
50	9.16	33.158	4.71	1.87	7.99	2.31	15.0							
60	8.47	33.317	4.45	2.05	7.94	2.31	22.4							
CM 10 45 29.3 N 124 12.8 W DATE 29 OCT 69 2300 GCT WIRE 01 DRY 55.9 WET 55.7 CRUISE YA9108														
WIND DIRECTION 20 VEL 12 KTS BAR 23 SWELL DIRECTION 25 H 04 T 07 CLOUD 4 AMT 4 WEATHER 02														
0	12.43	32.040	4.35	.50	8.23	2.25	1.4		0	12.43	32.04	24.24	369.7	0
10	11.97	32.093	4.40	.47	8.23	2.25	1.4		10	11.97	32.10	24.37	357.7	.136
20	10.02	32.478	5.59	1.20	8.13	2.26	9.4		20	10.02	32.58	25.09	284.3	.149
30	8.20	32.956	4.64	1.84	7.99	2.28	18.8		30	8.20	32.96	25.87	234.1	.195
40	7.47	33.175	4.21	2.04			21.5		50	7.99	33.39	26.04	199.5	.138
51	7.39	33.407	3.79	2.21	7.91	2.30	20.6		75	8.07	33.74	26.30	174.1	.145
76	8.27	33.745	3.14	2.63	7.82	2.33	24.7		100	8.19	33.84	26.38	169.7	.228
101	8.20	33.844	3.12	2.77	7.79	2.33	30.4							
CM 15 45 29.3 N 124 20.0 W DATE 30 OCT 69 0023 GCT WIRE 04 DRY 55.8 WET 55.5 CRUISE YA9108														
WIND DIRECTION 16 VEL 12 KTS BAR 23 SWELL DIRECTION 25 H 05 T 06 CLOUD 4 AMT 4 WEATHER 02														
0	12.47	32.017	4.21	.39	8.24	2.28	.7		0	12.48	32.02	24.14	379.4	0
25	12.40	32.017	4.22	.38	8.25	2.28	.7		10	12.49	32.01	24.13	380.4	.138
50	12.47	32.021	4.19	.37	8.24	2.26	.8		20	12.90	32.02	24.13	380.7	.176
75	12.61	32.438	4.30	1.15	8.10	2.30	10.6		30	12.49	32.02	24.13	380.7	.114
100	8.06	32.965	4.71	1.53	8.01	2.30	18.1		50	12.48	32.03	24.14	380.1	.190
111	7.91	33.192	4.34	1.62	7.97	2.30	19.9		75	10.61	32.84	25.23	277.3	.272
121	8.16	33.613	3.54	1.96	7.87	2.31	25.2		100	8.06	32.97	25.70	232.4	.336
131	8.10	33.641	2.97	2.22	7.82	2.33	28.5		150	7.97	33.86	26.41	144.0	.136
141	8.05	33.452	2.77	2.36	7.79	2.37	29.4							
151	7.96	33.957	2.58	2.40	7.77	2.37	30.1							
CM 25 45 29.3 N 124 34.0 W DATE 30 OCT 69 0224 GCT WIRE 00 DRY 55.5 WET 55.5 CRUISE YA9108														
WIND DIRECTION 16 VEL 12 KTS BAR 23 SWELL DIRECTION 26 H 04 T 04 CLOUD 6 AMT 4 WEATHER 02														
0	13.10	32.005	4.28	.34	8.25	2.21	.4		0	13.10	32.01	24.09	384.4	0
10	13.13	31.998	4.31	.38	8.25	2.21	.4		10	13.13	32.00	24.07	385.9	.039
20	12.94	31.972	4.24	.46	8.25	2.21	.6		20	12.94	31.98	24.09	384.4	.077
30	11.93	32.122	4.00	.86	8.19	2.23	5.4		30	11.93	32.13	24.40	355.3	.114
40	9.28	32.669	5.05	1.38	8.04	2.25	15.8		50	8.18	32.92	25.65	234.7	.173
51	8.13	32.942	4.76	1.63	7.99	2.25	19.2		75	7.99	33.43	26.07	194.4	.227
76	7.98	33.449	4.10	1.82	7.95	2.28	22.9		100	8.04	33.70	26.28	177.5	.274
101	8.04	33.711	3.62	2.05	7.88	2.30	26.4		150	7.81	33.90	26.46	160.7	.359
126	7.50	33.840	2.94		7.82	2.30	28.9		200	7.49	33.95	26.55	153.0	.437
151	7.41	33.899	2.95	2.26	7.83	2.30	29.2							
202	7.47	33.952	2.71	2.27	7.81	2.31	29.9							

NOT REPRODUCIBLE

CH 40 45 30.3 N 126 54.0 W DATE 30 OCT 69 1455 GCT WIRE 00 DRY 54.4 WET 54.4 CRUISE YA9106
WIND DIRECTION 18 VEL 10 KTS BAR 29 SWELL DIRECTION 27 H 04 T 05 CLOUD 0 AMT 0 WEATHER 10

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	S ($\times 10^5$)	ΔD (dynm)
0	13.04	32.034	6.33	.58	8.25	2.17	.1	0	13.04	32.04	24.12	381.2	0
10	12.93	32.010	6.33	.58	8.25	2.17	.1	10	12.93	32.04	24.15	379.1	.039
20	12.57	32.073	6.34	.62	8.24	2.17	.7	20	12.57	32.08	24.26	370.2	.175
30	8.12	32.442	6.53	.98	8.16	2.19	4.5	30	8.32	32.47	25.27	272.5	.108
40	7.82	32.663	6.63	1.30	8.10	2.19	12.1	50	7.43	32.76	25.58	243.0	.189
51	7.65	32.745	6.63	1.42	8.05	2.19	14.5	75	8.01	33.42	26.06	198.1	.214
76	8.13	33.669	6.09	1.74	7.96	2.23	22.6	100	8.27	33.82	26.33	172.5	.241
101	8.38	33.876	5.32	1.96	7.82	2.26	28.9	150	8.08	33.91	26.44	163.3	.265
126	8.19	33.897	2.90	2.20	7.78	2.28	29.6	200	7.85	33.96	26.49	159.0	.325
151	8.07	33.913	2.48	2.27	7.78	2.28	30.9						
202	7.86	33.960	2.65	2.25	7.77	2.28	31.1						

CH 50 45 29.1 N 125 09.5 W DATE 30 OCT 69 1651 GCT WIRE 02 DRY 54.5 WET 54.5 CRUISE YA9106
WIND DIRECTION 26 VEL 08 KTS BAR 26 SWELL DIRECTION 27 H 03 T 08 CLOUD AMT WEATHER 10

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	S ($\times 10^5$)	ΔD (dynm)
0	12.75	32.011	6.27	.47	8.24	2.19	.6	0	12.75	32.02	26.14	377.4	0
10	12.75	32.013	6.33	.50	8.26	2.17	.6	10	12.75	32.02	26.14	377.7	.038
20	12.41	32.091	6.50	.54	8.25	2.17	.9	20	12.41	32.10	26.29	366.6	.075
30	10.37	32.354	6.38	.75	8.20	2.19	3.7	30	10.38	32.36	26.46	311.7	.104
40	8.68	32.511	6.52	.78	8.20	2.19	6.6	50	8.28	32.54	25.33	266.0	.147
51	8.28	32.56[illegible]	6.16	.87	8.18	2.19	8.8	75	7.87	33.02	26.77	225.6	.228
76	7.86	33.[illegible]44	5.16	1.28	8.05	2.23	16.8	100	7.85	33.30	26.15	199.9	.290
101	7.85	33.518	4.03	1.60	7.96	2.25	23.7	150	7.82	33.84	26.42	166.4	.369
126	7.87	33.701	3.66	1.73	7.92	2.26	28.1	200	7.16	33.97	26.48	160.8	.447
151	7.82	33.848	3.40	1.84	7.87	2.28	28.6						
202	7.33	33.970	2.42	2.00	7.80	2.28	31.0						

TH 38 45 58.3 N 126 50.0 W DATE 30 OCT 69 2038 GCT WIRE 01 DRY 54.5 WET 54.4 CRUISE YA9106
WIND DIRECTION 24 VEL 04 KTS BAR 25 SWELL DIRECTION 27 H 03 T 10 CLOUD 0 AMT 7 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	S ($\times 10^5$)	ΔD (dynm)
0	13.12	32.047	6.26	.43	8.26	2.19	.1	0	13.32	32.05	24.08	385.4	0
10	13.18	32.043	6.26	.44	8.26	2.19	.2	10	13.13	32.05	24.10	383.5	.038
20	13.00	32.036	6.25	.48	8.26	2.19	.6	20	13.00	32.04	24.13	380.9	.077
30	9.52	32.443		1.01	8.23	2.21	1.6	30	9.52	32.45	24.97	291.7	.110
40	8.42	32.652	6.08	1.06	8.22	2.21	2.6	50	7.85	32.69	25.35	264.4	.166
51	7.76	32.697	6.70	1.36	8.18	2.21	7.9	75	7.44	33.92	25.72	230.2	.228
76	7.64	32.941	5.07	1.77	8.04	2.25	17.4	100	7.97	33.52	26.16	190.8	.280
101	7.49	33.540	3.92	2.10	7.84	2.26	24.8	150	7.77	33.96	26.42	165.5	.347
126	7.48	33.813	3.27		7.85	2.28	28.9	200	7.35	33.97	26.54	154.4	.443
151	7.76	33.963	2.86	2.29	7.83	2.30	30.5						
202	7.33		2.24	2.42	7.77	2.30	32.3						

TH 29 45 58.3 N 126 35.2 W DATE 30 OCT 69 2219 GCT WIRE 01 DRY 57.0 WET 57.0 CRUISE YA9106
WIND DIRECTION VEL 06 KTS BAR 29 SWELL DIRECTION 27 H 02 T 10 CLOUD AMT WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	S ($\times 10^5$)	ΔD (dynm)
0	12.73	30.333	6.42	.54	8.23	2.15	2.5	0	12.73	30.26	22.87	500.9	0
10	12.56	31.109	6.22	.54	8.23	2.17	2.6	10	12.56	31.11	23.50	440.4	.147
20	11.58	32.119	6.51	.91	8.15	2.23	8.3	20	11.58	32.12	24.46	369.2	.287
30	10.31	32.530	6.35	1.36	8.04	2.25	15.[illegible]	30	10.31	32.53	25.00	297.7	.419
40	8.01	32.724	5.23	1.65	8.05	2.25	16.7	50	7.83	32.85	25.64	237.8	.572
51	7.41	32.458	5.29		8.05	2.25		75	7.90	33.30	25.90	204.4	.729
80	7.45	33.400	3.40	1.94	7.92	2.26	26.9	100	7.49	33.63	26.24	190.6	.876
101	7.48	33.663	3.03	2.20	7.84	2.28	28.3						

TH 15 45 58.0 N 126 21.0 W DATE 31 OCT 69 0035 GCT WIRE 01 DRY 55.0 WET 55.0 CRUISE YA9106
WIND DIRECTION VEL 02 KTS BAR 13 SWELL DIRECTION 27 H 04 T 05 CLOUD AMT WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	S ($\times 10^5$)	ΔD (dynm)
0	12.44	30.734	6.47	.47	8.24	2.14	2.0	0	12.44	30.74	23.23	466.1	0
10	12.[illegible]	31.935	6.17	.55	8.23	2.19	3.2	10	12.98	31.94	24.04	387.2	.063
20	12.74	32.081	5.93	.57	8.20	2.19	17.6	20	12.74	32.08	24.21	372.7	.181
30	9.09	32.719	4.95	1.48	8.03	2.23	21.9	30	9.88	32.72	25.22	274.4	.313
40	8.56	33.042	4.61	1.70	7.96	2.25	23.7	50	8.04	33.15	25.99	203.7	.161
51	8.34	33.173	3.86	1.85	7.93	2.26	27.1	75	8.05	33.69	26.23	181.5	.209
76	8.17	33.652	3.45	1.98	7.87	2.28	30.0	100	7.49	33.78	26.36	170.0	.253
101	7.18	33.780	2.64	2.31	7.79	2.28	29.3						

TH 5 45 56.0 N 126 06.6 W DATE 31 OCT 69 0219 GCT WIRE 03 DRY 56.1 WET 56.1 CRUISE YA9106
WIND DIRECTION VEL 03 KTS BAR 29 SWELL DIRECTION 27 H 04 T 05 CLOUD AMT WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	S ($\times 10^5$)	ΔD (dynm)
0	12.44	32.014	6.45	.38	8.25	2.21	.9	0	12.44	32.06	24.29	370.0	0
10	12.23	32.111	6.37	.52	8.25	2.21	1.8	10	12.23	32.12	24.34	361.0	.037
20	11.48	32.333	6.16	.67	8.20	2.23	4.9	20	11.48	32.34	24.64	331.6	.171
30	10.68	32.551	5.85	.90	8.17	2.23	8.4	30	10.68	32.56	24.96	302.2	.103
40	9.19	32.911	4.85	1.32	8.04	2.25	16.7	50	9.10	33.34	25.83	219.3	.155
50	9.10	33.337	4.32	1.56	7.94	2.26	23.9						
60	8.78	33.432	4.00	1.70	7.90	2.26	25.8						

TH 3 45 56.0 N 126 03.8 W DATE 31 OCT 69 0325 GCT WIRE 01 DRY 56.7 WET 56.6 CRUISE YA9106
WIND DIRECTION VEL 0 KTS BAR 26 SWELL DIRECTION 27 H 04 T 09 CLOUD 0 AMT 4 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	S ($\times 10^5$)	ΔD (dynm)
0	12.14	32.135	6.55	.62	8.26	2.23	1.5	0	12.14	32.14	24.37	397.5	0
10	11.88	32.211	6.56	.73	8.25	2.21	2.4	10	11.88	32.22	24.48	387.4	.035
20	11.65	32.304	6.48	.73	8.25	2.23	2.6	20	11.65	32.31	24.59	334.7	.069
30	11.52	32.376	6.40	.74	8.23	2.23	3.3	30	11.52	32.38	24.67	329.4	.103
40	10.44	32.816	5.65	1.27	8.10	2.25	12.4	50	9.78	33.15	25.57	244.3	.160
50	9.78	33.142	4.78	1.65	3.00	2.26	19.2						

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
CP 01 45 48.5 N 124 00.0 W DATE 02 NOV 69 0349 GCT WIRE 02 DRY 65.0 WET 57.0 CRUISE Y69114													
WIND DIRECTION 15 VEL 10 KTS BAR 14 SWELL DIRECTION 29 H 03 T 05 CLOUD 0 AMT 2 WEATHER 00													
0	11.78	32.095	6.68					0	11.78	32.10	24.41	354.1	0
5	11.77	32.110						10	11.58	32.30	24.60	336.1	.035
10	11.58	32.294	6.38					20	11.32	32.65	24.91	304.1	.047
15	11.40	32.459	6.15										
20	11.32	32.642	5.97										
CP 02 45 48.4 N 124 14.2 W DATE 02 NOV 69 0549 GCT WIRE 03 DRY 57.0 WET 53.0 CRUISE Y69114													
WIND DIRECTION 17 VEL 14 KTS BAR 15 SWELL DIRECTION 29 H 03 T 08 CLOUD AMT 0 WEATHER 02													
0	12.42	32.088	6.47					0	12.42	32.09	24.28	365.9	0
5	12.33	32.101	6.44					10	12.15	32.19	24.41	354.0	.036
10	12.15	32.187	6.26					20	11.47	32.43	24.72	324.6	.070
15	11.70	32.279	6.28					30	10.43	32.55	24.99	298.6	.101
20	11.47	32.426	6.33					50	8.63	33.59	26.10	193.6	.150
25	10.77	32.524	5.97					75	8.32	33.66	26.20	184.8	.198
30	10.43	32.544	5.99					100	8.03	33.75	26.32	173.7	.242
35	9.97	32.771	5.17										
40	9.28	33.029	4.60										
50	8.63	33.589	3.88										
75	8.32	33.651	3.50										
100	8.03	33.750	3.10										
CP 03 45 48.4 N 124 28.5 W DATE 02 NOV 69 0732 GCT WIRE 01 DRY 56.5 WET 55.2 CRUISE Y69114													
WIND DIRECTION 16 VEL 08 KTS BAR 15 SWELL DIRECTION 29 H 04 T 08 CLOUD AMT WEATHER 02													
0	12.77	31.007	6.47					0	12.77	31.01	23.38	451.9	0
5	12.79	31.110	6.42					10	13.18	31.99	24.05	387.7	.042
10	13.18	31.985	5.90					20	11.75	32.15	24.45	350.5	.079
15	12.24	32.012	5.87					30	9.38	32.92	25.46	254.4	.109
20	11.75	32.141	5.71					50	8.10	33.39	26.02	200.8	.155
25	10.34	32.690	5.05					75	8.09	33.69	26.26	179.2	.202
30	9.37	32.915	3.82					100	7.96	33.83	26.39	167.1	.245
35	7.93	32.939	5.00					150	7.87	33.86	26.43	164.1	.328
40	7.91	33.000	4.27										
50	8.10	33.388	3.10										
75	8.09	33.682	3.35										
100	7.96	33.826	2.94										
125	7.84	33.834	2.61										
150	7.87	33.863	2.37										
CP 04 45 48.5 N 124 42.8 W DATE 02 NOV 69 0934 GCT WIRE 03 DRY 56.5 WET 55.7 CRUISE Y69114													
WIND DIRECTION 16 VEL 12 KTS BAR 15 SWELL DIRECTION 29 H 03 T 07 CLOUD AMT 0 WEATHER 02													
0	12.79	31.233	6.38					0	12.79	31.24	23.55	435.7	0
5	12.78	31.223	6.33					10	12.79	31.24	23.55	435.9	.044
10	12.79	31.232	6.43					20	13.28	31.90	23.97	396.2	.085
15	12.90	31.570	6.24					30	12.42	32.01	24.21	372.0	.124
20	13.28	31.898	6.32					50	7.81	32.4	25.55	245.5	.185
25	13.04	31.958	5.74					75	8.03	33.37	26.02	201.9	.241
30	12.42	32.001	5.60					100	8.04	33.78	26.34	172.1	.288
35	11.28	32.204	5.55					150	7.76	33.93	26.49	157.8	.371
40	9.60	32.467	4.29										
50	7.80	32.732	4.00										
75	8.03	33.365	3.99										
100	8.04	33.774	3.41										
125	7.71	33.881	3.01										
150	7.76	33.927	2.63										
CP 05 45 48.4 N 124 57.2 W DATE 02 NOV 69 1125 GCT WIRE 01 DRY 56.0 WET 55.2 CRUISE Y69114													
WIND DIRECTION 19 VEL 12 KTS BAR 15 SWELL DIRECTION 29 H 03 T 07 CLOUD AMT 0 WEATHER 02													
0	13.04	32.040	6.35					0	13.04	32.04	24.12	380.9	0
5	13.02	32.036	6.46					10	13.02	32.04	24.12	381.1	.038
10	13.02	32.034	6.50					20	12.85	32.05	24.17	377.2	.076
15	12.89	32.041	6.48					30	12.48	32.10	24.29	367.0	.113
20	12.85	32.048	6.57					50	8.20	32.57	25.37	283.1	.176
25	12.68	32.074	6.32					75	8.01	33.27	25.94	209.4	.235
30	12.48	32.097	6.32					100	8.25	33.73	26.26	179.0	.284
35	11.51	32.230	6.31					150	7.81	33.90	26.47	160.1	.369
40	9.36	32.389	6.50										
50	8.20	32.570	5.96										
75	8.01	33.261	4.35										
100	8.25	33.721	3.68										
125	7.97	33.864	3.20										
150	7.81	33.905	2.93										

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)

CP 04 45 48.5 N 125 11.4 W DATE 02 NOV 69 1312 GCT WIRE 00 DRY 56.2 WET 56.6 CRUISE Y6911A
WIND DIRECTION 19 VEL 12 KTS BAR 15 SWELL DIRECTION 19 H 06 T 07 CLOUD 3 AMT 8 WEATHER 02

0	13.38	31.827	6.20	0	13.38	31.83	23.89	402.9	0
5	13.38	31.828	6.19	10	13.39	31.83	23.89	402.9	.040
10	13.39	31.829	6.22	20	13.39	31.84	23.90	402.7	.081
15	13.39	31.832	6.22	30	10.45	32.28	24.78	319.1	.117
20	13.39	31.839	6.20	50	7.73	32.51	25.38	261.5	.175
25	12.82	32.004	6.16	75	7.55	32.99	25.79	223.6	.235
30	10.45	32.271	6.40	100	7.83	33.44	26.10	194.6	.288
35	8.40	32.445	6.50	150	7.62	33.82	26.43	163.5	.377
40	8.09	32.453	6.67						
50	7.73	32.504	6.21						
75	7.54	32.982	5.10						
100	7.83	33.431	3.97						
125	7.80	33.693	3.64						
150	7.62	33.824	3.35						

CP 07 46 00.0 N 125 10.5 W DATE 02 NOV 69 1500 GCT WIRE 03 DRY 56.2 WET 56.0 CRUISE Y6911A
WIND DIRECTION 17 VEL 10 KTS BAR 15 SWELL DIRECTION 27 H 05 T 06 CLOUD AMT WEATHER 02

0		31.994	6.23	0	13.38	32.00	24.02	390.7	0
5	13.30	31.993	6.24	10	12.88	32.00	24.12	381.6	.039
10	12.87	31.990	6.25	20	11.86	32.03	24.34	361.1	.076
15	12.67	31.973	6.30	30	9.25	32.31	25.01	297.4	.109
20	11.86	32.023	6.28	50	7.64	32.56	25.44	256.2	.164
25	10.36	32.148	6.35	75	7.88	33.02	25.76	225.8	.224
30	9.25	32.310	6.63	100	7.84	33.40	26.07	197.4	.277
35	8.60	32.400	6.62	150	7.11	33.82	26.50	156.9	.346
40	7.89	32.453	6.42						
50	7.65	32.560	6.03						
75	7.87	33.013	4.94						
100	7.84	33.395	4.12						
125	7.64	33.690	3.48						
150	7.11	33.818	3.13						

CP 08 44 00.1 N 124 57.2 W DATE 02 NOV 69 1712 GCT WIRE 01 DRY 55.0 WET 54.8 CRUISE Y6911A
WIND DIRECTION 19 VEL 14 KTS BAR 16 SWELL DIRECTION 29 H 04 T 08 CLOUD AMT 9 WEATHER 67

0	13.36	31.843	6.28	0	13.36	31.85	23.91	401.4	0
5	13.30	31.875	6.28	10	13.33	32.05	24.07	386.4	.039
10	13.33	32.042	6.29	20	13.10	32.06	24.12	381.6	.078
15	13.29	32.042	6.26	30	11.93	32.14	24.41	354.1	.115
20	13.10	32.051	6.22	50	8.06	32.56	25.38	262.4	.176
25	12.44	32.071	6.23	75	7.84	33.16	25.88	214.6	.236
30	11.93	32.138	6.26	100	7.98	33.60	26.21	184.2	.286
35	9.33	32.432	6.18	150	7.60	33.84	26.44	162.3	.372
40	8.70	32.461	6.32						
50	8.06	32.552	6.01						
75	7.84	33.158	4.82						
100	7.48	33.599	3.77						
125	7.80	33.786	3.38						
150	7.60	33.836	3.27						

CP 09 45 59.9 N 124 42.8 W DATE 02 NOV 69 1917 GCT WIRE 01 DRY 58.4 WET 55.1 CRUISE Y6911A
WIND DIRECTION 18 VEL 10 KTS BAR 17 SWELL DIRECTION 29 H 03 T 08 CLOUD AMT 9 WEATHER 02

	13.06	31.446	6.33	0	13.06	31.45	23.66	425.0	0
5	13.04	31.442	6.36	10	13.22	31.78	23.89	403.6	.041
10	13.22	31.779	6.29	20	13.11	32.02	24.10	384.1	.081
15	13.17	31.994	6.27	30	11.24	32.45	24.62	334.4	.117
20	13.11	32.020	6.28	50	7.73	32.65	25.49	251.0	.175
25	12.47	32.092	6.29	75	8.04	33.38	26.02	201.4	.232
30	11.24	32.240	6.62	100	7.97	33.71	26.29	174.3	.279
35	9.24	32.422	7.24	150	7.73	33.91	26.49	158.5	.343
40	8.28	32.455	4.78						
50	7.73	32.644	5.93						
75	8.04	33.374	4.32						
100	7.97	33.704	3.64						
125	7.89	33.862	3.06						
150	7.73	33.912	2.81						

CP 10 45 59.9 N 124 28.4 W DATE 02 NOV 69 2050 GCT WIRE 03 DRY 54.8 WET 54.8 CRUISE Y6911A
WIND DIRECTION 18 VEL 12 KTS BAR 17 SWELL DIRECTION 29 H 03 T 10 CLOUD AMT 9 WEATHER 02

0	12.84	31.216	6.43	0	12.84	31.24	23.54	436.4	0
5	12.83	31.235	6.48	10	12.83	31.25	23.55	435.5	.044
10	12.83	31.249	6.50	20	12.15	32.05	24.30	384.6	.086
15	12.54	31.570	6.28	30	10.00	32.47	24.85	311.9	.117
20	12.15	32.046	6.17	50	8.49	33.21	25.82	220.1	.171
25	11.77	32.144	6.05	75	7.88	33.85	26.26	179.2	.220
30	10.47	32.462	5.66	100	7.81	33.86	26.43	162.6	.263
35	8.96	32.778	4.82						
40	8.49	32.865	4.73						
50	8.49	33.204	4.18						
75	7.87	33.641	3.09						
100	7.40	33.855	2.91						
125	7.71	33.884	2.24						

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
CP 11 45 59.3 N 124 21.4 W DATE 02 NOV 69 2201 GCT WIRE 05 DRY 54.6 WET 54.5 CRUISE Y69114													
WIND DIRECTION 14 VEL 12 KTS BAR 17 SWELL DIRECTION 29 H 03 T 10 CLOUD AMT 9 WEATHER 02													
0	12.69	31.262	6.47					0	12.69	31.27	23.59	431.7	0
5	12.59	31.765	6.47					10	12.55	32.01	24.19	374.7	.040
10	12.55	32.004	6.56					20	11.68	32.27	24.55	340.4	.076
15	12.43	32.034	6.53					30	9.92	32.72	25.21	277.9	.107
20	11.68	32.262	6.29					50	8.08	33.35	26.00	203.5	.155
25	10.89	32.488	5.49					75	8.09	33.70	26.26	178.6	.203
30	9.42	32.713	5.17					100	7.92	33.84	26.41	164.5	.246
35	8.40	32.998	5.05										
40	8.31	33.127	4.34										
50	8.08	33.348	3.87										
75	8.09	33.690	3.58										
100	7.81	33.832	2.54										
CP 12 46 00.1 N 124 14.4 W DATE 02 NOV 69 2301 GCT WIRE 06 DRY 54.3 WET 54.3 CRUISE Y69114													
WIND DIRECTION 12 VEL 12 KTS BAR 17 SWELL DIRECTION 29 H 03 T 10 CLOUD 6 AMT 8 WEATHER 03													
0	12.78	31.927	4.34					0	12.78	31.93	24.09	384.4	0
5	12.77	31.923	4.35					10	12.79	31.93	24.08	385.1	.038
10	12.79	31.922	4.35					20	11.91	32.18	24.45	350.4	.075
15	12.73	31.931	4.33					30	10.56	32.74	25.12	284.3	.107
20	11.91	32.180	5.81					50	8.27	33.43	26.03	200.6	.156
25	11.20	32.519	5.71					75	8.13	33.66	26.22	182.2	.204
30	10.56	32.739	5.42										
35	10.06	32.975	5.17										
40	9.48	33.045	4.92										
50	8.27	33.424	3.79										
75	8.13	33.650	3.25										
CP 13 46 00.1 N 124 07.4 W DATE 03 NOV 69 0012 GCT WIRE 01 DRY 53.2 WET 53.2 CRUISE Y69114													
WIND DIRECTION 14 VEL 14 KTS BAR 17 SWELL DIRECTION 29 H 03 T 10 CLOUD 7 AMT 8 WEATHER 02													
0	12.12	32.069	6.64					0	12.13	32.07	24.32	362.0	0
5	12.09	32.072	6.64					10	12.05	32.24	24.46	348.9	.036
10	12.05	32.232	6.65					20	11.60	32.59	24.82	315.4	.069
15	11.77	32.461	6.46					30	9.16	32.84	25.43	257.1	.097
20	11.60	32.581	4.31					50	8.67	33.37	25.92	211.2	.144
25	11.36	32.654	4.10										
30	9.16	32.835	4.99										
35	8.69	32.933	4.71										
40	8.41	33.115	4.38										
50	8.67	33.360	4.13										
60	8.48	33.555	3.74										
CP 14 46 00.1 N 124 00.0 W DATE 03 NOV 69 0201 GCT WIRE 03 DRY 53.2 WET 53.2 CRUISE Y69114													
WIND DIRECTION 17 VEL 12 KTS BAR 17 SWELL DIRECTION 29 H 04 T 05 CLOUD AMT WEATHER 47													
0	12.29	31.797	6.24					0	12.29	31.80	24.08	385.1	0
5	12.29	31.799	6.63					10	12.27	31.81	24.09	384.0	.038
10	12.27	31.809	4.60					20	11.53	32.36	24.66	330.5	.074
15	12.18	31.846	4.56										
20	11.53	32.360	4.18										
CP 15 46 05.1 N 124 00.0 W DATE 03 NOV 69 0258 GCT WIRE 01 DRY 54.2 WET 53.1 CRUISE Y69114													
WIND DIRECTION 19 VEL 15 KTS BAR 19 SWELL DIRECTION 29 H 04 T 06 CLOUD 7 AMT 8 WEATHER 02													
0	12.17	31.883	4.59										
5	12.15	31.881	4.60										
10	12.01	32.044	4.45										
CP 16 46 07.5 N 124 03.5 W DATE 03 NOV 69 0349 GCT WIRE 01 DRY 59.4 WET 53.9 CRUISE Y69114													
WIND DIRECTION 22 VEL 14 KTS BAR 19 SWELL DIRECTION 29 H 04 T 06 CLOUD 7 AMT 8 WEATHER													
0	11.92	32.042	4.49					0	11.92	32.05	24.34	360.4	0
5	11.92	32.040	4.47					10	11.90	32.04	24.34	360.4	.036
10	11.90	32.040	4.47					20	11.74	32.26	24.54	341.6	.071
15	11.89	32.042	4.50										
20	11.74	32.260	4.50										
CP 17 46 05.1 N 124 07.5 W DATE 03 NOV 69 0510 GCT WIRE 00 DRY 54.8 WET 54.2 CRUISE Y69114													
WIND DIRECTION 19 VEL 12 KTS BAR 19 SWELL DIRECTION 29 H 04 T 08 CLOUD 6 AMT 1 WEATHER 01													
0	12.21	32.073	4.52					0	12.21	32.08	24.31	363.3	0
5	12.20	32.073	4.51					10	12.18	32.08	24.32	362.6	.036
10	12.18	32.077	4.52					20	12.13	32.11	24.35	359.3	.072
15	12.11	32.097	4.53					30	11.69	32.25	24.54	341.9	.107
20	12.12	32.110	4.53					50	10.28	32.90	25.29	270.8	.169
25	11.41	32.131	4.53										
30	11.69	32.246	4.46										
35	11.66	32.309	4.37										
40	11.43	32.370	4.33										
50	10.28	32.892	5.15										

NOT REPRODUCIBLE

CP 18 46 05.0 N 124 14.5 W DATE 03 NOV 69 0619 GCT WIRE 01 DRY 55.0 WET 54.9 CRUISE Y69114
WIND DIRECTION 18 VEL 14 KTS BAR 19 SWELL DIRECTION 29 H 04 T 08 CLOUD AMT WEATHER 47

OBSERVED

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	12.86	31.459	6.34				
5	12.83	31.858	6.36				
10	12.82	31.871	6.34				
15	12.38	32.097	6.15				
20	12.11	32.137	6.43				
25	11.53	32.393	6.39				
30	10.66	32.771	5.37				
35	9.57	33.046	4.90				
40	9.26	33.312	4.54				
50	8.40	33.530	3.79				
75	8.07	33.660	3.01				

INTERPOLATED DERIVED

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	12.86	31.86	24.02	390.9	0
10	12.82	31.88	24.04	389.6	.039
20	12.11	32.14	24.38	357.2	.076
30	10.66	32.78	25.13	285.6	.108
50	8.40	33.54	26.09	194.6	.156
75	8.07	33.67	26.24	180.6	.203

CP 19 46 04.9 N 124 21.6 W DATE 03 NOV 69 0757 GCT WIRE 00 DRY 54.0 WET 53.0 CRUISE Y69114
WIND DIRECTION 35 VEL 10 KTS BAR 20 SWELL DIRECTION 29 H 04 T 09 CLOUD 6 AMT 8 WEATHER 02

OBSERVED

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	12.69	31.453	6.43				
5	12.61	31.815	5.31				
10	12.31	32.029	7.34				
15	11.75	32.229	6.61				
20	10.86	32.504	6.08				
25	10.16	32.686	5.33				
30	9.63	32.880	4.05				
35	8.39	33.028	4.38				
40	8.19	33.235	4.29				
50	8.05	33.463	4.05				
75	8.09	33.737	3.76				

INTERPOLATED DERIVED

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	12.69	31.46	23.74	417.6	0
10	12.31	32.03	24.26	368.5	.039
20	10.86	32.51	24.89	303.5	.073
30	9.63	32.88	25.39	251.0	.102
50	8.05	33.47	26.09	194.6	.147
75	8.09	33.74	26.30	175.1	.193

CP 20 46 05.1 N 124 28.6 W DATE 03 NOV 69 0846 GCT WIRE 03 DRY 54.5 WET CRUISE Y69114
WIND DIRECTION 35 VEL 12 KTS BAR 20 SWELL DIRECTION 29 H 04 T 07 CLOUD 6 AMT 8 WEATHER 02

OBSERVED

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	12.71	31.142	6.31				
5	12.68	31.146	6.34				
10	12.35	31.312	6.30				
15	11.87	32.107	5.70				
20	10.97	32.440	5.29				
25	10.32	32.679	4.82				
30	9.42	32.980	4.50				
35	8.56	33.147	4.04				
40	8.14	33.289	3.97				
50	8.10	33.470	3.53				
75	7.92	33.795	2.98				
100	7.70	33.847	2.04				

INTERPOLATED DERIVED

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	12.71	31.15	23.50	440.9	0
10	12.35	31.32	23.69	422.1	.043
20	10.97	32.44	24.82	315.1	.080
30	9.42	32.99	25.50	250.3	.108
50	8.10	33.47	26.09	194.7	.153
75	7.93	33.80	26.37	168.4	.198
100	7.70	33.85	26.44	161.8	.239

CP 21 46 04.9 N 124 43.0 W DATE 03 NOV 69 1029 GCT WIRE 08 DRY 54.0 WET CRUISE Y69114
WIND DIRECTION 00 VEL 14 KTS BAR 20 SWELL DIRECTION 29 H 04 T 10 CLOUD 6 AMT 8 WEATHER 02

OBSERVED

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	13.22	31.951	6.26				
5	13.22	31.951	6.28				
10	13.25	31.954	6.27				
15	13.22	31.994	6.27				
20	12.96	32.027	6.26				
25	9.94	32.343	6.92				
30	8.66	32.447	6.78				
35	8.06	32.469	6.30				
40	7.81	32.503	6.30				
50	7.66	32.590	6.05				
75	7.70	33.188	4.76				
100	8.32	33.627	4.09				
125	7.87	33.783	3.36				
150	7.80	33.850	2.93				

INTERPOLATED DERIVED

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	13.22	31.96	24.02	390.8	0
10	13.25	31.96	24.02	391.3	.039
20	12.96	32.03	24.13	380.7	.078
30	8.66	32.45	25.20	278.5	.111
50	7.67	32.59	25.46	254.1	.164
75	7.70	33.19	25.93	210.5	.222
100	8.32	33.[illegible]1	26.18	187.0	.272
150	7.80	33.85	26.43	164.1	.359

CP 22 46 10.0 N 125 11.7 W DATE 03 NOV 69 1316 GCT WIRE 06 DRY 54.9 WET CRUISE Y69114
WIND DIRECTION 00 VEL 14 KTS BAR 20 SWELL DIRECTION 29 H 05 T 06 CLOUD 7 AMT 6 WEATHER 01

OBSERVED

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	13.51	32.074	6.19				
5	13.49	32.071	6.19				
10	13.54	32.069	6.19				
15	13.52	32.070	6.20				
20	13.54	32.070	6.19				
25	13.23	32.095	6.27				
30	11.27	32.279	6.79				
35	9.59	32.393	7.04				
40	9.67	32.444	6.59				
50	9.24	32.462	6.59				
75	7.67	32.727	5.73				
100	8.04	33.109	4.17				
125	8.12	33.580	3.83				
150	7.83	33.768	3.31				

INTERPOLATED DERIVED

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	13.51	32.08	24.06	387.2	0
10	13.54	32.07	24.05	388.6	.039
20	13.54	32.07	24.05	388.5	.078
30	11.27	32.28	24.64	332.2	.114
50	8.24	32.47	25.28	271.7	.174
75	7.68	32.73	25.57	244.6	.239
100	8.04	33.31	25.97	206.6	.295
150	7.83	33.77	26.36	170.6	.389

CP 23 46 10.0 N 124 57.3 W DATE 03 NOV 69 1601 GCT WIRE 03 DRY 54.1 WET CRUISE Y6911A
WIND DIRECTION 01 VEL 10 KTS BAR 20 SWELL DIRECTION 29 H 12 T 10 CLOUD 8 AMT 2 WEATHER 01

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED S ($\times 10^5$)	ΔD (dyn.m)
0	13.20	31.973						0	13.20	31.98	24.04	388.8	0
5	13.19	31.969	6.16					10	13.21	31.98	24.04	389.3	.039
10	13.21	31.972	6.19					20	12.72	32.06	24.20	374.0	.077
15	13.18	31.985	6.25					30	10.44	32.37	24.85	312.3	.111
20	12.72	32.058	6.22					50	8.23	32.47	25.28	271.3	.170
25	11.67	32.210	6.60					75	7.59	32.83	25.66	236.0	.233
30	10.44	32.361	6.93					100	8.06	33.38	26.02	201.7	.288
35	9.55	32.432	7.04					150	8.04	33.83	26.38	168.6	.380
40	8.79	32.444	6.82										
50	8.23	32.465	6.51										
75	7.59	32.825	5.34										
100	8.06	33.379	3.77										
125	8.08	33.687	3.55										
150	8.04	33.835	3.35										

CP 24 46 09.9 N 124 43.0 W DATE 03 NOV 69 1639 GCT WIRE 00 DRY 55.0 WET CRUISE Y6911A
WIND DIRECTION 01 VEL 08 KTS BAR 20 SWELL DIRECTION 29 H 08 T 10 CLOUD 8 AMT 6 WEATHER 03

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED S ($\times 10^5$)	ΔD (dyn.m)
0	12.87	31.219	6.30					0	12.88	31.22	23.52	438.2	0
5	13.09	31.763	6.31					10	13.30	31.94	24.00	393.3	.042
10	13.30	31.940	6.25					20	13.20	31.99	24.05	388.3	.081
15	13.28	31.971	6.25					30	11.30	32.29	24.64	332.3	.117
20	11.20	31.986	6.25					50	8.48	33.04	25.69	232.3	.173
25	13.06	32.024	6.27					75	7.59	33.63	26.28	176.8	.224
30	11.30	32.285	6.72					100	8.35	33.70	26.23	182.2	.269
35	9.88	32.402	7.04					150	7.88	33.90	26.45	161.7	.355
40	9.12	32.432	6.91										
50	8.48	33.038	4.01										
75	7.59	33.621	5.05										
100	8.35	33.697	3.99										
125	8.09	33.820	3.41										
150	7.88	33.897	3.10										

CP 25 46 10.0 N 124 29.7 W DATE 03 NOV 69 1907 GCT WIRE 00 DRY 54.0 WET 49.5 CRUISE Y6911A
WIND DIRECTION 03 VEL 12 KTS BAR 20 SWELL DIRECTION 29 H 08 T 10 CLOUD 8 AMT 6 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED S ($\times 10^5$)	ΔD (dyn.m)
0	12.53	30.986	6.43					0	12.53	30.99	23.41	449.1	0
5	12.50	30.993	6.45					10	12.33	31.60	23.92	400.8	.042
10	12.33	31.595	6.29					20	10.31	32.67	25.11	287.6	.077
15	11.28	32.366	5.45					30	9.28	32.95	25.49	251.1	.104
20	10.31	32.664	5.06					50	8.09	33.41	26.04	193.1	.149
25	9.65	32.774	4.80					75	7.85	33.71	26.31	174.0	.195
30	9.28	32.941	4.69					100	7.76	33.85	26.44	162.5	.238
35	8.92	33.036	4.62										
40	8.53	33.159	4.47										
50	8.09	33.409	3.93										
75	7.85	33.706	3.08										
100	7.75	33.848	2.57										

CP 26 46 09.9 N 124 21.5 W DATE 03 NOV 69 2017 GCT WIRE 04 DRY 50.6 WET 50.0 CRUISE Y6911A
WIND DIRECTION 01 VEL 10 KTS BAR 18 SWELL DIRECTION 29 H 03 T 06 CLOUD 0 AMT 7 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED S ($\times 10^5$)	ΔD (dyn.m)
0	12.66	31.415	6.43					0	12.66	31.62	23.87	405.1	0
5	12.62	31.524	6.49					10	12.56	31.86	24.08	385.6	.040
10	12.56	31.959	6.52					20	10.67	32.59	24.99	299.2	.074
15	11.96	32.217	6.25					30	9.61	32.[illegible]	25.39	260.8	.102
20	10.67	32.587	5.16					50	8.04	33.36	25.99	231.9	.148
25	10.25	32.719	4.95					75	8.13	33.73	26.28	174.8	.196
30	9.61	32.879	4.70										
35	9.32	32.950	4.62										
40	8.32	33.126	4.37										
50	8.04	33.337	3.69										
70	8.15	33.678	3.33										
90	7.94	33.776	2.91										

CP 27 46 09.8 N 124 14.6 W DATE 03 NOV 69 2119 GCT WIRE 04 DRY 54.8 WET 50.0 CRUISE Y6911A
WIND DIRECTION 01 VEL 08 KTS BAR 17 SWELL DIRECTION 29 H 06 T 07 CLOUD 6 AMT 8 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED S ($\times 10^5$)	ΔD (dyn.m)
0	12.32	31.970	6.51					0	12.32	31.98	24.21	372.8	0
5	12.29	31.988	6.43					10	12.26	31.99	24.24	370.6	.037
10	12.26	31.983	6.52					20	11.77	32.32	24.58	338.2	.073
15	12.08	32.065	6.56					30	10.26	32.81	25.23	276.3	.103
20	11.77	32.313	6.54					50	8.39	33.46	26.03	200.4	.151
25	11.36	32.420	6.23										
30	10.26	32.408	5.45										
35	9.30	33.171	4.84										
40	8.76	33.360	4.23										
50	8.39	33.450	3.81										
60	8.14	33.500	3.62										

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)

CP 29 46 10.1 N 124 07.1 W DATE 03 NOV 69 2213 GCT WIRE 03 DRY 53.9 WET 50.0 CRUISE Y6911A
WIND DIRECTION 01 VEL 06 KTS BAR 14 SWELL DIRECTION 29 H 06 T 07 CLOUD 6 AMT 8 WEATHER 02

0	12.05	31.919	6.56	0	12.05	31.92	24.22	371.8	0
5	12.01	31.950	6.56	10	11.98	32.05	24.33	361.4	.037
10	11.98	32.045	6.49	20	11.78	32.23	24.51	344.8	.072
15	11.90	32.105	6.59						
20	11.78	32.225	6.52						
25	11.64	32.279	6.48						

CP 30 46 15.0 N 123 57.4 W DATE 03 NOV 69 2353 GCT WIRE 00 DRY 54.5 WET 51.0 CRUISE Y6911A
WIND DIRECTION 01 VEL 04 KTS BAR 14 SWELL DIRECTION H T CLOUD 6 AMT 8 WEATHER 02

0	12.54	7.205	6.86
4	12.35	10.229	6.64
8	12.06	22.456	6.16

CP 31 46 15.0 N 124 00.0 W DATE 04 NOV 69 0030 GCT WIRE 04 DRY 54.0 WET 51.0 CRUISE Y6911A
WIND DIRECTION 29 VEL 06 KTS BAR 14 SWELL DIRECTION H T CLOUD 7 AMT 8 WEATHER 02

0	12.42	10.337	7.00	0	12.42	10.34	7.52	1990.1	0
5	12.05	23.288	6.52	10	11.82	29.69	22.53	533.0	.126
10	11.82	29.684	6.15						
15	11.78	30.206	6.16						

CP 32 46 15.0 N 124 03.0 W DATE 04 NOV 69 0111 GCT WIRE 05 DRY 54.0 WET 51.5 CRUISE Y6911A
WIND DIRECTION 27 VEL 05 KTS BAR 14 SWELL DIRECTION 27 H 04 T 05 CLOUD 8 AMT 8 WEATHER 02

0	12.09	22.984	6.54	0	12.09	22.99	17.32	1034.4	0
5	11.81	29.849	6.43	10	11.61	31.86	24.25	369.0	.070
10	11.61	31.855	6.25						
0	11.90	23.896	6.52						
5	11.72	31.560	6.25						
10	11.78	31.762	6.29						

CP 28 46 12.5 N 124 11.0 W DATE 04 NOV 69 0250 GCT WIRE 06 DRY 54.0 WET 51.0 CRUISE Y6911A
WIND DIRECTION 01 VEL 04 KTS BAR 13 SWELL DIRECTION 27 H 05 T 08 CLOUD 8 AMT 8 WEATHER 02

0	12.11	29.840	6.57	0	12.11	29.84	22.60	526.3	0
5	12.72	31.812	6.37	10	12.22	31.93	24.19	374.6	.045
10	12.22	31.924	6.51	20	11.46	32.34	24.65	331.5	.080
15	11.09	32.210	6.37	30	10.80	32.68	25.03	294.7	.112
20	11.46	32.331	6.23						
25	11.48	32.511	6.25						
30	10.80	32.679	6.64						

CP 34 46 15.0 N 124 14.5 W DATE 04 NOV 69 0339 GCT WIRE 01 DRY 54.0 WET 51.0 CRUISE Y6911A
WIND DIRECTION VEL 00 KTS BAR 11 SWELL DIRECTION 28 H 06 T 06 CLOUD 7 AMT 8 WEATHER 02

0	12.03	25.998	6.63	0	12.03	26.00	19.65	809.3	0
5	12.44	29.693	6.51	10	12.75	31.[illegible]	23.85	407.2	.061
10	12.75	31.612	6.34	20	12.15	32.00	24.26	368.3	.100
15	12.72	31.912	6.31	30	10.38	32.64	25.08	290.8	.133
20	12.15	31.995	6.10						
25	11.29	32.448	6.26						
30	10.37	32.637	5.62						
35	9.78	32.903	5.12						
40	8.93	33.159	4.54						

CP 35 46 15.1 N 124 21.6 W DATE 04 NOV 69 0440 GCT WIRE 01 DRY 54.0 WET 52.0 CRUISE Y6911A
WIND DIRECTION 21 VEL 07 KTS BAR 10 SWELL DIRECTION 29 H 06 T 09 CLOUD 6 AMT 8 WEATHER 02

0	12.18	26.152	6.66	0	12.18	26.16	19.74	800.4	0
5	12.55	31.086	6.39	10	12.63	31.44	23.74	417.9	.061
10	12.63	31.437	6.40	20	11.63	32.24	24.54	341.4	.099
15	12.44	31.988	6.46	30	9.63	32.88	25.39	261.4	.129
20	11.63	32.236	5.74	50	8.11	33.27	25.93	210.1	.176
25	10.38	32.640	5.06	75	8.04	33.66	26.24	180.7	.225
30	9.63	32.875	4.68	100	8.05	33.71	26.28	177.5	.270
35	8.73	33.041	4.43						
40	8.63	33.102	4.38						
50	8.11	33.266	4.18						
75	4.04	33.652	3.25						
100	8.05	33.703	3.23						

	OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)		Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)

CP 36 6A 15.0 N 124 29.2 W DATE 04 NOV 69 0592 GCT WIRE 03 DRY 54.0 WET 52.0 CRUISE YA9114
WIND DIRECTION 21 VEL 10 KTS HAR 09 SWELL DIRECTION 39 H 04 T 09 CLOUD 6 AMT 8 WEATHER 02

0	12.16	29.396	6.49	0	12.16	29.39	23.21	586.2	0
4	12.49	31.775	6.41	10	12.45	31.64	23.92	400.0	.168
10	12.45	31.677	6.31	20	11.84	32.12	24.41	346.4	.296
15	12.35	31.941	6.30	30	9.74	32.87	25.35	266.7	.117
20	11.48	32.119	5.75	50	8.06	33.39	26.03	200.1	.143
25	10.57	32.621	5.06	75	7.98	33.68	26.27	179.0	.211
30	9.74	32.862	4.73	100	7.86	33.76	26.35	173.6	.256
35	9.10	33.053	4.57	150	7.69	33.83	26.42	166.2	.338
40	8.19	33.203	4.14						
50	8.36	33.346	3.86						
75	7.94	33.677	3.26						
100	7.46	33.758	3.67						
125	7.43	33.740	3.59						
150	7.44	33.835	3.20						

CP 37 6A 15.0 N 124 43.6 W DATE 04 NOV 69 0732 GCT WIRE 01 DRY 54.5 WET 51.0 CRUISE YA9114
WIND DIRECTION 21 VEL 14 KTS HAR 08 SWELL DIRECTION 39 H 06 T 09 CLOUD 6 AMT 8 WEATHER 02

0	13.03	31.124	6.33	0	13.00	31.13	23.43	447.2	0
4	13.15	31.583	6.32	10	13.31	32.03	24.04	387.0	.162
10	13.31	32.028	6.24	20	13.22	32.02	24.07	384.3	.280
15	13.27	32.024	6.25	30	10.24	32.36	24.88	309.7	.115
20	11.73	32.018	6.26	50	7.78	32.44	25.35	264.3	.173
25	13.06	32.033	6.27	75	7.84	33.23	25.93	209.9	.232
30	10.24	32.353	7.25	100	8.19	33.68	26.23	181.6	.281
35	9.23	32.631	6.84	150	7.71	33.93	26.50	157.1	.365
40	8.39	32.658	6.47						
50	7.77	32.673	6.29						
75	7.46	33.232	6.74						
100	8.19	33.674	3.74						
125	7.42	33.848	3.00						
150	7.71	33.927	2.51						

CP 38 6A 20.0 N 125 12.0 W DATE 04 NOV 69 1017 GCT WIRE 04 DRY 54.2 WET CRUISE YA9114
WIND DIRECTION 14 VEL 14 KTS HAR 04 SWELL DIRECTION 18 H 04 T 10 CLOUD 6 AMT 8 WEATHER 64

0	13.11	31.941	6.27	0	13.11	31.95	24.03	382.5	0
4	13.11	31.944	6.21	10	13.14	31.94	24.04	348.1	.139
10	13.14	31.957	6.24	20	13.10	31.97	24.15	348.3	.278
15	13.13	31.946	6.27	30	11.16	32.22	24.61	334.4	.114
20	13.13	31.946	6.25	50	8.12	32.46	25.29	270.3	.174
25	12.41	31.985	6.24	75	7.61	32.75	25.59	242.6	.239
30	11.16	32.219	6.53	100	7.91	33.49	26.13	191.6	.293
35	10.23	32.350	6.79	150	7.67	33.85	26.44	159.1	.380
40	9.31	32.434	6.93						
50	8.12	32.658	6.46						
75	7.81	32.740	5.63						
100	7.40	33.447	3.45						
125	7.79	33.750	3.35						
150	7.67	33.855	3.15						

CP 39 6A 19.6 N 124 58.6 W DATE 04 NOV 69 2016 GCT WIRE 05 DRY 50.0 WET 49.9 CRUISE YA9114
WIND DIRECTION 24 VEL 14 KTS HAR 97 SWELL DIRECTION 20 H 10 T 08 CLOUD 6 AMT 8 WEATHER 02

0	13.31	32.001	6.12	0	13.31	32.01	24.04	388.8	0
5	13.29	31.997	6.14	10	13.33	32.00	24.03	389.9	.039
10	13.33	31.994	6.31	20	13.29	32.02	24.05	388.0	.078
15	13.30	31.994	6.20	30	11.16	32.26	24.65	331.5	.114
20	13.29	32.012	6.23	50	8.32	32.46	25.26	273.6	.174
25	12.76	32.170	6.43	75	7.57	32.86	25.68	233.6	.238
30	11.14	32.258	6.43	100	8.03	33.55	26.16	188.8	.290
35	9.44	32.392	6.76	150	7.88	33.84	26.42	166.7	.379
40	9.12	32.411	6.82						
50	8.32	32.441	6.61						
75	7.57	32.453	5.35						
100	8.03	33.546	3.80						
125	8.01	33.758	3.39						
150	7.88	33.857	3.09						

CP 40 6A 19.5 N 124 44.0 W DATE 04 NOV 69 2248 GCT WIRE 00 DRY 50.0 WET 48.5 CRUISE YA9114
WIND DIRECTION 24 VEL 20 KTS HAR 94 SWELL DIRECTION 20 H 10 T 08 CLOUD 6 AMT 8 WEATHER 02

0	13.18	32.023	6.20	0	13.18	32.03	24.08	386.7	0
50	13.19	32.018	6.21	10	13.19	32.02	24.08	385.6	.039
10	13.19	32.020	6.21	20	13.19	32.02	24.08	386.0	.077
15	13.19	32.019	6.25	30	13.19	32.02	24.08	386.1	.116
20	13.14	32.024	6.21	50	13.19	32.02	24.08	386.3	.193
25	12.90	32.044	6.21	75	7.48	33.28	25.97	206.2	.267
30	11.29	32.209	5.78	100	8.02	33.70	26.28	177.6	.315
35	8.97	32.431	6.93	150	7.86	33.89	26.45	161.6	.400
40	8.16	32.447	6.60						
50	7.41	32.626	5.87						
75	7.47	33.277	6.26						
100	8.02	33.694	3.54						
125	7.45	33.857	3.11						
150	7.86	33.895	2.82						

NOT REPRODUCIBLE

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	S ($\times 10^5$)	ΔD (dyn.m)

CP 41 46 20.0 N 124 29.0 W DATE 05 NOV 69 0052 GCT WIRE 03 DRY 54.0 WET 50.0 CRUISE Y69116
WIND DIRECTION 24 VEL 18 KTS RAR 98 SWELL DIRECTION 20 H 10 T 08 CLOUD 7 AMT 8 WEATHER 02

0	12.16	28.641	6.33	0	12.16	28.65	21.67	615.8	0
4	12.16	28.642	6.30	10	12.30	29.36	22.19	565.9	.059
11	12.30	29.351	6.30	20	12.52	31.47	23.78	413.7	.108
15	12.46	30.626	6.34	30	11.63	32.12	24.45	350.0	.140
21	12.52	31.669	6.25	50	8.40	33.11	25.76	226.0	.204
25	12.27	31.771	6.12	75	8.04	33.51	26.13	191.5	.256
30	11.62	32.111	5.82	100	7.42	33.63	26.40	165.6	.301
35	10.79	32.509	5.22						
40	8.47	32.771	4.80						
50	8.40	33.107	4.32						
75	8.04	33.507	3.66						
100	7.42	33.621	2.59						

CM 1 45 01.6 N 124 46.6 W DATE 14 NOV 69 0405 GCT WIRE 00 DRY WET CRUISE C69110
WIND DIRECTION 00 VEL 10 KTS RAR 22 SWELL DIRECTION 29 H 04 T 07 CLOUD AMT WEATHER 00

0	12.49
20	12.83
40	12.08
60	7.79
80	8.10
100	8.36
120	8.26
140	7.47
160	7.78
180	7.52
200	7.34
220	7.21

CM 2 44 59.8 N 124 44.7 W DATE 14 NOV 69 1515 GCT WIRE 00 DRY WET CRUISE C69110
WIND DIRECTION VEL KTS RAR 10 SWELL DIRECTION 27 H 03 T 07 CLOUD 6 AMT 1 WEATHER 00

0	13.22
20	13.23
40	11.45
60	8.36
80	7.87
100	8.12
120	8.09
140	7.41
160	7.73
180	7.60
200	7.48
220	7.27

NOT REPRODUCIBLE

NM A5 44 39.0 124 35.1 W DATE 17 NOV 69 0615 GCT WIRE 04 DRY 50.0 WET 44.0 CRUISE Y69119
WIND DIRECTION 23 VEL 14 KTS RAR 24 SWELL DIRECTION 32 H 07 T 08 CLOUD 6 AMT 8 WEATHER 01

0	13.33	32.243	6.35	0	13.33	32.29	24.26	368.0	0
10	13.34	32.247	6.21	10	13.34	32.29	24.26	368.6	.037
20	13.32	32.255	6.13	20	13.32	32.29	24.26	368.5	.076
30	13.27	32.241	6.21	30	13.27	32.30	24.27	367.6	.110
40	11.40	32.471	6.15	50	11.30	32.82	24.90	308.0	.178
76	9.37	33.146	6.24	75	9.34	33.17	25.66	236.3	.246
100	8.49	33.564	6.61	100	8.49	33.57	26.04	200.0	.301
126	8.78	33.749	3.59	150	8.09	33.85	26.38	168.1	.393
149	8.10	33.844	3.25	200	7.40	33.95	26.53	154.9	.473
199	7.61	33.945	2.65	250	7.21	33.99	26.62	146.8	.549
299	6.96	34.016	2.26	300	6.83	34.02	26.69	140.7	.621
399	5.88	34.063	1.63	400	5.87	34.06	26.85	126.5	.754
499	4.63	34.176	0.79	500	5.15	34.12	26.98	116.0	.874
749	4.13	34.314	0.67	600	4.62	34.18	27.09	106.7	.984
997	3.59		0.14	700	4.31	34.24	27.18	96.7	1.086
				800	4.09	34.32	27.26	89.6	1.177
				1000	3.58	34.40	27.38	78.5	1.346

NM 135 44 39.1 N 124 30.9 W DATE 24 NOV 69 0844 GCT WIRE 01 DRY 54.0 WET 48.5 CRUISE Y69110
WIND DIRECTION 32 VEL 04 KTS RAR 31 SWELL DIRECTION 30 H 09 T 10 CLOUD 4 AMT 7 WEATHER 02

0	13.10	32.373	6.06	0	13.10	32.38	24.37	357.5	0
10	13.11	32.381	6.08	10	13.11	32.37	24.36	358.4	.036
20	13.05	32.381	6.05	20	13.05	32.37	24.37	357.9	.072
30	13.02	32.365	6.07	30	13.02	32.37	24.39	357.2	.107
40	13.06	32.368	6.06	50	12.53	32.40	24.50	346.0	.178
50	12.53	32.400	6.28	75	8.74	32.54	25.26	273.4	.255
62	9.12	32.435	6.62	100	7.67	32.77	25.60	241.8	.319
75	8.74	32.540	6.35	150	7.72	33.63	26.27	179.1	.425
100	7.66	32.744	5.09	200	7.39	33.90	26.53	155.1	.505
125	8.44	33.499	4.31	250	6.81	33.98	26.67	142.[illegible]	.582
150	7.72	33.629	3.94	300	6.24	34.00	26.76	134.5	.652
200	7.38	33.898	3.17	400	5.73	34.08	26.89	123.6	.780
300	6.24	33.992	2.05	500	5.15	34.12	26.99	113.6	.899
401	5.73	34.080	1.25	600	4.62	34.20	27.11	103.3	1.007
602	4.61	34.197	0.63	700	4.32	34.43	27.32	83.3	1.100
803	4.10	34.625	0.40	800	4.11	34.62	27.50	67.2	1.176
1003	3.58	34.403	0.47	1000	3.59	34.41	27.38	78.6	1.321
1204	3.66	34.464	0.52	1200	3.65	34.46	27.42	76.7	1.476

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dynm)
NH 125 44 39.3 N 124 59.0 W DATE 24 NOV 69 1217 GCT WIRE 00 DRY 54.2 WET 48.8 CRUISE Y6911C													
WIND DIRECTION VEL 00 KTS BAR 31 SWELL DIRECTION 30 H 08 T 10 CLOUD 8 AMT 3 WEATHER 01													
0	13.07	32.434	6.10					0	13.07	32.44	24.42	352.5	0
10	13.07	32.428	6.08					10	13.07	32.43	24.42	351.1	.035
20	13.06	32.432	6.09					20	13.06	32.44	24.42	352.8	.071
30	13.04	32.424	6.08					30	13.04	32.43	24.42	351.3	.106
40	13.02	32.468	6.09					50	12.95	32.47	24.47	347.1	.176
50	12.95	32.463	6.10					75	8.82	32.51	25.23	276.8	.254
62	12.27	32.467	6.15					100	7.90	32.67	25.49	252.0	.320
75	8.82	32.510	6.62					150	7.85	33.50	26.14	191.0	.431
100	7.89	32.670	6.01					200	7.28	33.83	26.49	159.0	.519
125	7.82	33.035	5.29					250	6.69	33.94	26.65	144.0	.594
150	7.85	33.493	4.22					300	6.15	33.95	26.73	134.6	.664
200	7.27	33.825	3.56					400	5.32	34.04	26.90	121.3	.793
301	6.14	33.953	2.40					500	4.86	34.12	27.02	110.0	.909
402	5.31	34.040	1.46					600	4.59	34.20	27.12	102.4	1.015
603	4.58	34.204	0.56					700	4.31	34.27	27.20	94.8	1.114
804	4.06	34.330	0.41					800	4.07	34.33	27.27	88.6	1.205
1005	3.60	34.427	0.38					1000	3.61	34.43	27.40	77.6	1.371
1206	3.10	34.479	0.50					1200	3.12	34.48	27.49	69.0	1.518
NH 145 44 39.0 N 127 27.0 W DATE 24 NOV 69 1542 GCT WIRE 00 DRY 52.3 WET 51.0 CRUISE Y6911C													
WIND DIRECTION VEL 00 KTS BAR 31 SWELL DIRECTION 29 H 08 T 06 CLOUD 6 AMT 2 WEATHER 02													
0	12.74	32.471	6.01					0	12.74	32.48	24.52	343.6	0
10	12.86	32.466	5.56					10	12.86	32.47	24.49	344.4	.034
20	12.85	32.466	6.01					20	12.85	32.47	24.49	344.4	.069
30	12.82	32.463	5.98					30	12.82	32.47	24.49	344.3	.104
40	12.84	32.466	6.01					50	12.85	32.47	24.49	347.0	.173
50	12.85	32.466	5.98					75	8.74	32.59	25.30	290.8	.250
62	10.79	32.526	6.44					100	7.85	32.86	25.64	237.5	.314
75	8.74	32.589	6.07					150	7.90	33.64	26.25	180.9	.418
100	7.65	32.857	5.54					200	7.43	33.91	26.53	155.3	.502
125	7.49	33.258	4.70					250	6.83	33.93	26.63	144.2	.578
150	7.89	33.636	3.72					300	6.25	33.96	26.73	137.1	.648
200	7.42	33.903	3.02					400	5.43	34.01	26.87	124.7	.779
301	6.24	33.963	2.35					500	5.02	34.10	26.99	113.7	.898
401	5.42	34.010	1.57					600	4.76	34.19	27.09	105.1	1.008
602	4.76	34.196	0.51					700	4.36	34.25	27.18	96.5	1.108
803	3.97	34.305	0.35					800	3.98	34.30	27.26	89.1	1.201
1003	3.50	34.397	0.35					1000	3.51	34.40	27.38	78.5	1.369
1204	3.10	34.464	0.48					1200	3.11	34.46	27.47	70.0	1.517
NH 165 44 39.2 N 127 55.0 W DATE 24 NOV 69 1938 GCT WIRE DRY 54.1 WET 49.9 CRUISE Y6911C													
WIND DIRECTION 14 VEL 04 KTS BAR 30 SWELL DIRECTION 29 H 08 T 10 CLOUD 8 AMT 4 WEATHER 03													
0	12.97	32.462	5.98					0	12.97	32.47	24.46	348.5	0
10	12.93	32.459	6.04					10	12.93	32.46	24.47	348.2	.035
20	12.95	32.461	6.01					20	12.95	32.47	24.47	348.6	.070
30	12.91	32.462	5.93					30	12.91	32.47	24.48	348.0	.104
40	12.93	32.471	6.01					50	12.93	32.48	24.48	348.2	.174
50	12.93	32.471	5.95					75	9.69	32.58	25.14	245.0	.253
62	12.30	32.504	5.96					100	7.80	32.84	25.48	252.9	.320
75	9.69	32.578	6.82					150	7.56	33.44	26.14	190.9	.431
100	7.79	32.639	6.30					200	7.49	33.89	26.50	157.8	.519
125	7.47	32.895	5.82					250	7.05	33.93	26.59	149.6	.595
150	7.55	33.437	6.81					300	6.48	33.98	26.71	139.1	.667
200	7.49	33.882	3.29					400	5.56	34.05	26.85	126.9	.800
301	6.47	33.977	2.32					500	5.06	34.09	26.97	115.1	.921
401	5.55	34.003	1.65					600	4.75	34.13	27.09	105.5	1.032
602	4.75	34.189	0.64					700	4.41	34.27	27.19	96.2	1.132
803	4.08	34.336	0.46					800	4.09	34.33	27.27	88.3	1.225
1004	3.49	34.407	0.55					1000	3.50	34.41	27.39	77.7	1.390
1204	3.03	34.468	0.63					1200	3.04	34.47	27.48	68.9	1.537
NH 3 44 39.2 N 124 07.7 W DATE 21 NOV 69 2101 GCT WIRE 00 DRY 54.2 WET 52.9 CRUISE Y6911C													
WIND DIRECTION 18 VEL 04 KTS BAR 25 SWELL DIRECTION 26 H 05 T 10 CLOUD 3 AMT 4 WEATHER 01													
0	11.25	32.194	6.35					0	11.25	32.20	24.58	337.6	0
10	11.25	32.256	6.36					10	11.25	32.26	24.63	333.2	.034
20	11.11	32.327	6.27					20	11.11	32.33	24.71	325.8	.066
30	11.10	32.598	6.00					30	11.10	32.59	24.91	306.5	.098
NH 5 44 39.2 N 124 10.7 W DATE 21 NOV 69 2210 GCT WIRE 00 DRY 55.1 WET 52.0 CRUISE Y6911C													
WIND DIRECTION 24 VEL 04 KTS BAR 25 SWELL DIRECTION 27 H 05 T 10 CLOUD 3 AMT 4 WEATHER 02													
0	11.19	32.250	6.36					0	11.19	32.25	24.60	335.9	0
5	11.18	32.252	6.41					10	11.23	32.29	24.65	330.7	.033
10	11.23	32.285	6.33					20	11.20	32.32	24.69	328.0	.066
15	11.21	32.294	6.34					30	11.07	32.45	24.80	316.6	.098
20	11.20	32.318	6.30										
25	11.18	32.341	6.33										
30	11.07	32.444	6.24										
35	11.05	32.515	5.85										
40	11.04	32.776	5.71										
45	10.73	32.972	5.15										

OBSERVED

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)

NM 15 44 39.0 N 124 24.8 W DATE 21 NOV 69 2359 GCT WIRE 00 DRY 55.1 WET 40.5 CRUISE Y6911C
WIND DIRECTION VEL 00 KTS BAR 26 SWELL DIRECTION 26 H 05 T 10 CLOUD 0 AMT 3 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	12.29	32.230	6.69				
5	12.18	32.258	6.25				
10	12.11	32.264	6.77				
15	11.98	32.270	6.16				
20	11.15	32.426	6.58				
25	10.40	32.603	5.71				
30	10.19	32.693	4.99				
35	10.06	33.013	5.29				
40	9.82	33.062	5.05				
45	9.30	33.178	3.90				
50	9.29	33.397	4.21				
55	9.24	33.408	4.34				
60		33.416	4.21				
65	9.21	33.426	3.90				
70	9.14	33.474	3.98				
75	9.04	33.521	4.08				

INTERPOLATED

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	12.29	32.23	24.62	353.1	0
10	12.11	32.27	24.68	347.6	.035
20	11.15	32.43	24.79	319.1	.068
30	10.19	32.70	25.15	283.7	.099
50	9.29	33.40	25.85	217.8	.149
75	9.04	33.53	25.98	205.2	.201

NM 25 44 39.0 N 124 39.6 W DATE 22 NOV 69 0208 GCT WIRE 00 DRY 59.0 WET 58.0 CRUISE Y6911C
WIND DIRECTION VEL 00 KTS BAR 26 SWELL DIRECTION 26 H 07 T 10 CLOUD 8 AMT 2 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	12.99	32.213	6.09				
10	12.98	32.265	5.89				
20	12.93	32.266	5.85				
30	12.84	32.269	6.00				
40	11.03	32.397	6.18				
50	8.77	32.470	6.01				
62	8.11	32.600	5.77				
75	9.02	33.083	4.73				
100	8.70	33.488	4.01				
125	8.37	33.749	3.44				
150	8.28	33.809	3.29				
175	7.93	33.879	3.03				

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	12.99	32.28	24.31	362.8	0		
10	12.98	32.27	24.31	363.4	.036		
20	12.93	32.27	24.32	362.6	.073		
30	12.84	32.27	24.34	361.0	.109		
50	8.77	32.47	25.20	279.7	.173		
75	9.02	33.09	25.64	237.3	.237		
100	8.70	33.49	26.01	202.9	.292		
150	8.28	33.81	26.33	173.7	.386		

NM 35 44 39.2 N 124 52.6 W DATE 22 NOV 69 0408 GCT WIRE 02 DRY 53.2 WET 52.1 CRUISE Y6911C
WIND DIRECTION VEL 00 KTS BAR 26 SWELL DIRECTION 26 H 07 T 06 CLOUD 8 AMT 2 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	13.02	32.284	6.39				
10	13.02	32.279	6.12				
20	12.97	32.280	6.11				
30	12.93	32.281	6.11				
40	12.73	32.311	6.16				
50	9.68	32.450	5.36				
62	8.25	32.510	4.55				
75	7.90	32.617	4.19				
100	7.44	32.710	5.39				
125	7.57	33.346	4.51				
150	7.66	33.610	3.93				
200	7.26	33.860	3.42				
300	6.76	33.979	2.13				
400	5.37	34.006	1.94				

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	13.02	32.29	24.32	362.4	0		
10	13.02	32.28	24.31	363.1	.036		
20	12.97	32.28	24.32	362.3	.073		
30	12.93	32.29	24.33	361.7	.109		
50	9.68	32.46	25.05	293.9	.176		
75	7.91	32.82	25.45	255.7	.243		
100	7.44	32.71	25.59	242.8	.305		
150	7.67	33.62	26.26	179.6	.411		
200	7.27	33.87	26.52	156.3	.495		
250	6.77	33.96	26.66	143.5	.570		
300	6.27	33.98	26.74	135.7	.640		
400	5.37	34.01	26.87	124.3	.769		

NM 45 44 39.[illegible] N 125 07.2 W DATE 22 NOV 69 0625 GCT WIRE DRY 57.3 WET 55.0 CRUISE Y6911C
WIND DIRECTION VEL 00 KTS BAR 26 SWELL DIRECTION 26 H 08 T 09 CLOUD 8 AMT 1 WEATHER 01

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	12.57	32.301	6.20				
10	12.59	32.289	6.29				
20	12.56	32.246	6.19				
30	12.51	32.276	6.19				
39	12.52	32.273	6.17				
49	12.49	32.269	6.21				
61	9.09	32.497	6.99				
74	8.41	32.583	6.18				
99	7.72	32.828	5.58				
123	7.35	33.269	4.79				
149	7.59	33.627	3.43				
197	7.24	33.901	3.37				
247	6.68	33.933	3.32				
298	6.10	33.977	2.22				
398	5.39	34.060	1.62				

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)
0	12.57	32.31	24.42	353.0	0		
10	12.59	32.29	24.40	354.4	.035		
20	12.56	32.29	24.41	354.3	.071		
30	12.51	32.28	24.41	354.3	.106		
50	12.22	32.29	24.47	349.1	.177		
75	8.57	32.59	25.33	267.5	.254		
100	7.69	32.84	25.65	234.7	.317		
150	7.55	33.65	26.30	175.7	.420		
200	7.20	33.91	26.56	152.3	.502		
250	6.45	33.96	26.68	141.0	.575		
300	6.07	33.98	26.77	133.4	.644		
400	5.32	34.06	26.92	119.4	.770		

NH 65 44 39.0 N 125 35.0 W DATE 22 NOV 69 0941 GCT WIRE 03 DRY 55.0 WET 50.1 CRUISE Y6911C
WIND DIRECTION 18 VEL 04 KTS BAR 26 SWELL DIRECTION 26 H 08 T 10 CLOUD 8 AMT 1 WEATHER 02

OBSERVED								INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	12.99	32.361	4.09					0	12.99	32.37	24.38	356.3	0
10	13.01	32.353	4.09					10	13.01	32.36	24.37	357.5	.036
20	12.99	32.355	4.08					20	12.99	32.36	24.38	357.2	.071
30	12.96	32.355	4.09					30	12.96	32.36	24.39	356.9	.107
40	12.97	32.355	4.09					50	9.51	32.52	25.12	284.[illegible]	.171
50	9.51	32.513	4.92					75	7.45	32.63	25.49	251.8	.239
62	8.16	32.509	6.49					100	7.55	33.06	25.84	213.7	.298
75	7.64	32.622	6.10					150	7.57	33.67	26.32	174.2	.396
100	7.54	33.053	5.27					200	7.29	33.90	26.54	154.2	.478
125	7.81	33.432	4.36					250	6.79	33.96	26.66	143.5	.552
150	7.54	33.664	4.09					300	6.24	33.97	26.73	136.6	.622
200	7.28	33.892	3.34					400	5.40	34.01	26.88	126.0	.752
300	6.24	33.963	2.44					500	4.95	34.11	27.00	117.3	.871
401	5.39	34.015	1.60					600	4.67	34.20	27.11	103.6	.978
602	4.67	34.204	0.58					700	4.36	34.27	27.20	95.3	1.078
802	4.07	34.328	0.31					800	4.08	34.33	27.27	88.5	1.173
1003	3.56	34.407	0.47					1000	3.57	34.41	27.38	79.6	1.336
1204	3.47	34.471	0.59					1200	3.47	34.47	27.44	73.8	1.489

T 1 45 02.7 N 124 44.2 W DATE 23 NOV 69 1655 GCT WIRE DRY WET CRUISE Y6911C
WIND DIRECTION 27 VEL 14 KTS BAR 21 SWELL DIRECTION 26 H 11 T 12 CLOUD 6 AMT 8 WEATHER

0	12.25							0	12.25	32.37	24.52	342.8	0
20	12.20							10	12.29	32.36	24.51	344.3	.034
40	12.01							20	12.20	32.36	24.53	342.7	.069
60	8.42							30	12.10	32.36	24.55	341.1	.103
80	7.49							50	10.26	32.52	25.00	299.4	.167
100	7.47							75	7.56	32.63	25.50	250.6	.235
120	7.48							100	7.47	33.06	25.85	217.7	.294
140	7.71							150	7.68	33.67	26.30	175.9	.392
160	7.66							200	7.55	33.90	26.50	157.9	.476
180	7.41												
200	7.55												

NH 85 44 39.0 N 124 03.0 W DATE 24 NOV 69 0456 GCT WIRE 02 DRY 52.9 WET 50.5 CRUISE Y6911C
WIND DIRECTION 34 VEL 04 KTS BAR 30 SWELL DIRECTION 27 H 09 T 08 CLOUD 7 AMT 7 WEATHER 02

0	12.99	32.337	5.96					0	12.99	32.34	24.36	358.1	0
10	12.97	32.335	5.84					10	12.97	32.34	24.37	358.1	.036
20	12.95	32.331	5.94					20	12.95	32.34	24.37	358.2	.072
30	12.91	32.330	5.93					30	12.91	32.33	24.37	357.7	.107
40	11.53	32.421	6.13					50	9.70	32.66	25.20	279.6	.171
50	9.70	32.651	6.15					75	8.05	32.66	25.66	256.9	.238
62	9.08	32.693	5.88					100	8.44	33.5[illegible]	26.00	204.3	.295
75	8.05	32.656	5.85					150	8.29	33.7[illegible]	26.31	175.6	.390
100	8.84	33.497	6.20					200	7.73	33.93	26.50	157.9	.473
125	8.70	33.701	3.75					250	7.19	33.98	26.62	147.1	.550
150	8.29	33.788	3.35					[illegible]0	6.66	34.00	26.71	139.5	.621
200	7.73	33.927	2.81					[illegible]00	5.69	34.04	26.86	126.0	.754
301	6.65	34.009	2.13					500	5.05	34.10	26.98	116.2	.874
402	4.67	34.036	1.47					600	4.63	34.17	27.[illegible]	105.2	.986
603	4.62	34.174	0.54					700	4.34	34.24	27.18	95.9	1.085
804	4.10	34.315	0.38					800	4.11	34.31	27.26	90.0	1.178
1005	3.57	34.409	0.37					1000	3.58	34.41	27.38	79.6	1.347
1206	3.11	34.470	0.56					1200	3.12	34.47	27.48	69.8	1.495

Table III. Hydrographic data from YALOC-69.

YNS 1 41 10.8 N 124 36.2 W DATE 03 JAN 69 1926 GCT WIRE 00 DRY 52.8 WET 52.8 CRUISE YALOC69
WIND DIRECTION 11 VEL 02 KTS BAR 28 SWELL DIRECTION 22 M 02 T 06 CLOUD 4MT WEATHER 65

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	10.57	32.910	4.23					
10	10.51	32.918	4.14					
20	10.44	33.004	4.10					
30	10.71	33.061	4.06					
49	10.64	33.208	4.96					
75	10.45	33.254	4.80					
99	10.42	33.352	4.50					
149	9.64	33.717	3.43					
199	9.13	33.911	2.72					
299	7.61	33.979	2.59					
400	6.55	34.058	1.82					
501	5.91	34.144	1.06					
601	5.31	34.222	0.61					
802	4.39	34.335	0.38					
1001	3.76	34.432	0.45					

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	10.57	32.92	25.25	273.3	0
10	10.51	32.92	25.27	271.9	.027
20	10.44	33.01	25.31	267.9	.054
30	10.71	33.07	25.35	265.0	.081
50	10.64	33.21	25.47	253.4	.133
75	10.45	33.26	25.51	250.5	.196
100	10.60	33.30	25.54	242.8	.257
150	9.62	33.73	26.05	200.5	.368
200	9.12	33.91	26.27	179.8	.463
250	8.37	33.97	26.44	165.1	.549
300	7.60	33.98	26.54	154.1	.629
400	6.56	34.06	26.77	134.2	.774
500	5.92	34.14	26.91	121.4	.902
600	5.32	34.22	27.04	109.8	1.018
700	4.82	34.28	27.14	99.8	1.122
800	4.40	34.33	27.24	91.8	1.218
1000	3.76	34.43	27.39	78.9	1.384

YNS 2 33 27.0 N 119 32.2 W DATE 09 FEB 69 2010 GCT WIRE 03 DRY 61.0 WET 58.5 CRUISE YALOC69
WIND DIRECTION VEL 00 KTS BAR 17 SWELL DIRECTION 28 M 02 T 06 CLOUD 0 4MT 4 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	14.06	33.479	4.20					
10	13.76	33.44[illegible]	4.22					
19	13.61	33.460	4.20					
29	13.23	33.453	4.90					
49	12.00	33.452	4.08					
75	10.86	33.534	4.34					
98	10.14	33.644	3.89					
146	9.36	33.811	3.22					
198	8.12	33.871	2.51					
299	8.33	34.240	1.39					
401	7.47	34.270	0.87					
500	6.43	34.304	0.51					
600	5.76	34.357	0.28					
800	4.70	34.443	0.41					
887*	4.44	34.466	0.30					
1001	4.31	34.476	0.32					
1086*	4.22	34.483	0.51					
1202	4.20	34.487	0.28					
1488*	4.19	34.447	0.34					
1689*	4.20	34.486	0.27					
1789*	4.18	34.488	0.23					
1839*	4.22	34.485	0.26					

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	14.06	33.48	25.03	294.8	0
10	13.76	33.49	25.09	289.4	.029
20	13.48	33.49	25.17	286.3	.058
30	13.17	33.49	25.19	280.4	.086
50	11.98	33.49	25.42	258.2	.140
75	10.86	33.54	25.49	233.1	.202
100	10.09	33.66	25.92	212.1	.257
150	9.31	33.52	25.93	211.3	.363
200	9.11	33.68	26.10	196.7	.465
250	8.75	33.98	26.34	170.4	.557
300	8.32	34.24	26.64	145.3	.636
400	7.48	34.27	26.80	132.7	.775
500	6.44	34.31	26.95	118.8	.900
600	5.77	34.36	27.10	105.2	1.012
700	5.13	34.40	27.21	94.8	1.112
800	4.70	34.45	27.30	87.1	1.203
1000	4.31	34.48	27.36	82.2	1.372
1200	4.20	34.48	27.38	81.8	1.536
1500	4.19	34.49	27.39	84.0	1.785

YNS 3 33 45.0 N 118 46.0 W DATE 06 JAN 69 0400 GCT WIRE 01 DRY 61.0 WET 58.8 CRUISE YALOC69
WIND DIRECTION 27 VEL 08 KTS BAR 15 SWELL DIRECTION 25 M 02 T 08 CLOUD 4MT 0 WEATHER 32

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	14.77	33.544	4.11					
10	14.16	33.486	4.22					
20	13.78	33.479	4.05					
30	13.56	33.475	4.13					
50	12.95	33.513	4.95					
76	11.36	33.530	4.41					
100	10.33	33.619	4.02					
150	9.70	33.881	3.09					
199	9.22	34.068	2.64					
300	8.14	34.119	2.10					
400	7.54	34.281	0.87					
430*	7.24	34.283	0.78					
501	6.51	34.312	0.53					
581*	5.95	34.338	0.35					
601	5.83	34.349	0.34					
631*	5.68	34.359	0.39					
683*		34.375	0.22					
734*		34.388	0.34					
783*	5.15	34.402	0.16					
834*		34.408	0.20					

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	14.77	33.55	24.93	304.2	0
10	14.16	33.49	25.01	296.5	.030
20	13.78	33.48	25.09	289.8	.059
30	13.56	33.48	25.13	286.0	.088
50	12.95	33.52	25.28	272.0	.144
75	11.42	33.53	25.58	243.9	.208
100	10.33	33.62	25.85	218.8	.266
150	9.70	33.89	26.16	190.2	.368
200	9.21	34.07	26.38	169.7	.458
250	8.65	34.11	26.51	158.7	.540
300	8.14	34.12	26.59	151.3	.618
400	7.55	34.29	26.81	132.5	.760
500	6.52	34.31	26.97	117.1	.885
600	5.84	34.35	27.09	107.1	.997
700	5.19	34.38	27.16	99.9	1.100
800	5.09	34.40	27.22	95.1	1.197

YSP 4 30 23.7 N 116 33.0 W DATE 08 JAN 69 1750 GCT WIRE 05 DRY 58.8 WET 56.0 CRUISE YALOC69
WIND DIRECTION 34 VEL 12 KTS BAR 13 SWELL DIRECTION 30 M 03 T 05 CLOUD 8 4MT 8 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	16.08	33.652	5.44					
10	16.08	33.652	5.70					
20	16.08	33.638	5.67					
29	16.09	33.647	5.67					
30*	15.92	33.534	5.71					
35*	15.47	33.582	5.78					
40*	15.41	33.575	5.76					
45*	15.24	33.562	5.74					
50	14.97	33.527	5.65					
76	12.10	33.736	4.89					
99	11.09	33.607	4.02					
147	10.24	34.000	2.63					
198	9.88	34.235	1.81					
299	8.27	34.224	1.46					
401	7.49	34.302	0.72					
500	6.70	34.315	0.51					
599	5.88	34.373	0.22					
800	5.00	34.420	0.28					
1001	4.04	34.484	0.59					
1201	3.51	34.533	0.89					

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	16.08	33.66	24.72	324.1	0
10	16.08	33.66	24.72	324.	.032
20	16.08	33.64	24.71	325.6	.065
30	15.92	33.54	24.67	330.0	.098
50	14.97	33.53	24.87	311.0	.162
75	12.22	33.73	25.58	243.8	.231
100	11.06	33.61	25.71	232.0	.291
150	10.22	34.02	26.17	184.7	.396
200	9.85	34.23	26.41	167.8	.488
250	9.07	34.23	26.53	156.8	.566
300	8.26	34.22	26.65	145.6	.641
400	7.50	34.30	26.82	130.6	.779
500	6.70	34.32	26.95	119.0	.904
600	5.87	34.37	27.10	105.7	1.017
700	5.18	34.41	27.19	97.7	1.118
800	5.01	34.43	27.25	91.9	1.213
1000	4.04	34.48	27.40	78.4	1.343
1200	3.51	34.53	27.49	69.8	1.531

OBSERVED | INTERPOLATED | DERIVED

YSP 5 28 15.0 N 115 55.0 W DATE 09 JAN 69 0931 GCT WIRE 07 DRY 60.0 WET 56.2 CRUISE YALOCA9
WIND DIRECTION 00 VEL 06 KTS BAR 12 SWELL DIRECTION 18 H 01 T 06 CLOUD 6 AMT 8 WEATHER 01

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	16.84	33.885	5.65					
9	16.88	33.886	5.66					
20	16.85	33.888	5.62					
29	16.84	33.882	5.59					
49	16.45	33.841	5.27					
75	14.33	33.729	4.32					
100	12.64	33.783						
149	11.72	34.348	1.47					
199	11.01	34.436	1.10					
300	9.31	34.452	0.61					
400	8.43	34.471	0.28					
501	7.11	34.409	0.32					
602	6.01	34.392	0.28					
801	5.05	34.441	0.28					
1002	4.24	34.498	0.52					
1203	3.62	34.531	0.86					

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^6$)	ΔD (dyn.m)
0	16.84	33.89	24.72	323.8	0
10	16.88	33.89	24.71	325.0	.032
20	16.85	33.89	24.72	324.3	.065
30	16.84	33.89	24.72	325.1	.097
50	16.38	33.84	24.79	318.8	.162
75	14.33	33.73	25.16	283.7	.237
100	12.64	33.79	25.55	247.5	.303
150	11.71	34.35	26.17	189.9	.413
200	10.99	34.44	26.36	172.2	.503
250	10.12	34.44	26.52	157.9	.586
300	9.31	34.46	26.67	144.8	.661
400	8.43	34.48	26.82	131.7	.800
500	7.12	34.41	26.96	118.2	.925
600	6.03	34.39	27.10	106.4	1.037
700	5.43	34.41	27.18	98.2	1.139
800	5.05	34.44	27.25	92.0	1.234
1000	4.25	34.50	27.39	79.8	1.406
1200	3.63	34.53	27.48	71.2	1.557

YSP 6 25 35.1 N 114 00.1 W DATE 10 JAN 69 0547 GCT WIRE 02 DRY 64.5 WET 60.0 CRUISE YALOCA9
WIND DIRECTION 30 VEL 10 KTS BAR 13 SWELL DIRECTION 32 H 02 T 05 CLOUD AMT 0 WEATHER 01

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	18.98	34.109	6.03			2.366		
10	18.98	34.120	6.03					
19	18.97	34.125	6.03					
29	18.47	34.054	5.47					
49	17.76	33.949	5.36					
75	14.53	33.771	4.15			2.354		
100	12.82	33.962	3.05			2.255		
101*	12.79	33.979	2.99			2.326		
104*	13.13	34.133	2.29					
111*	13.19	34.217	1.97					
116*	12.30	34.088	2.47					
121*	12.20	34.147	2.18					
148	11.58	34.364	1.45					
199	11.01	34.534	0.78			2.336		
299	9.53	34.507	0.35					
400	8.29	34.488	0.17			2.363		
500	7.21	34.445	0.30			2.394		
601	6.33	34.461	0.18					
802	5.17	34.489	0.26					
1001	4.24	34.527	0.58			2.427		
1203	3.69	34.561	0.73					
1293*	3.44	34.568	0.87			2.466		
1598*	2.79	34.609	1.33					
2091*	2.07	34.654	2.13					
2345*	1.69	34.680	2.72					
3388*	1.66	34.686	2.89					
3790*	1.64	34.685	2.87					
3850*	1.68	34.686	2.85					

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^6$)	ΔD (dyn.m)
0	18.98	34.11	24.37	357.2	0
10	18.98	34.13	24.38	356.7	.036
20	18.93	34.12	24.39	356.1	.071
30	18.45	34.05	24.46	350.0	.107
50	17.45	33.94	24.57	339.8	.176
75	14.53	33.78	25.15	284.7	.254
100	12.82	33.97	25.65	237.7	.319
150	11.55	34.37	26.21	185.5	.425
200	11.00	34.53	26.44	165.1	.512
250	10.27	34.52	26.56	154.8	.592
300	9.52	34.51	26.67	144.6	.667
400	8.29	34.49	26.86	128.3	.803
500	7.21	34.45	26.98	116.6	.926
600	6.34	34.46	27.11	105.5	1.037
700	5.70	34.47	27.20	96.8	1.138
800	5.18	34.49	27.28	90.1	1.231
1000	4.24	34.53	27.41	77.6	1.399
1200	3.70	34.56	27.49	69.8	1.546
1500	2.97	34.60	27.59	60.7	1.742
2000	2.17	34.65	27.70	50.0	2.018
2500	1.80	34.67	27.75	46.1	2.258
3000	1.68	34.68	27.77	45.4	2.486

YSP 7 22 57.0 N 112 05.0 W DATE 11 JAN 69 0928 GCT WIRE 03 DRY 68.5 WET 63.0 CRUISE YALOCA9
WIND DIRECTION 35 VEL 16 KTS BAR 12 SWELL DIRECTION 32 H 02 T 05 CLOUD 8 AMT 1 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	22.52	34.529	5.10					
10	22.52	34.528	5.10					
20	22.52	34.527	5.09					
29	22.53	34.527	5.06					
49	19.36	34.234	4.56					
75	14.95	34.319	2.01					
100	13.51	34.449	1.14					
149	11.63	34.567	0.66					
199	10.95	34.577	0.44					
299	10.04	34.620	0.12					
399	8.83	34.563	0.10					
599	6.49	34.483	0.10					
801	5.25	34.506	0.41					
1001	4.27	34.539	0.41					
1201	3.67	34.568	0.73					

Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^6$)	ΔD (dyn.m)
0	22.52	34.53	23.74	417.4	0
10	22.52	34.53	23.74	417.8	.042
20	22.52	34.53	23.74	418.2	.084
30	22.43	34.51	23.75	417.3	.125
50	19.17	34.24	24.42	354.2	.202
75	14.95	34.32	25.48	253.3	.278
100	13.51	34.45	25.89	215.3	.337
150	11.57	34.57	26.36	171.5	.434
200	10.93	34.58	26.48	160.7	.517
250	10.46	34.60	26.59	152.0	.595
300	10.03	34.62	26.67	144.5	.669
400	8.82	34.56	26.83	131.3	.807
500	7.57	34.51	26.98	117.1	.931
600	6.48	34.48	27.11	105.8	1.042
700	5.78	34.49	27.20	97.1	1.144
800	5.25	34.51	27.28	89.8	1.237
1000	4.27	34.54	27.42	77.1	1.404
1200	3.67	34.57	27.50	69.0	1.550

OBSERVED									INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)

YSP 8 21 00.0 N 108 32.0 W DATE 12 JAN 69 1131 GCT WIRE 02 DRY 73.0 WET 68.0 CRUISE YALOC69
WIND DIRECTION 00 VEL 10 KTS BAR 11 SWELL DIRECTION 30 H 02 T 05 CLOUD AMT 0 WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO_3	SiO_2	Z	T	S	σ_t	δ	ΔD
0	24.85	34.281	4.86			2.347			0	24.85	34.29	22.87	500.4	0
10	24.18	34.435	4.87						10	24.19	34.44	23.19	470.5	.049
20	23.97	34.461	4.91						20	23.98	34.47	23.27	463.1	.095
30	23.73	34.501	4.97			2.379			30	23.73	34.51	23.37	453.8	.141
49	23.40	34.491	4.97			2.375			50	23.22	34.49	23.51	441.5	.231
75	17.72	34.408	2.50			2.363			75	17.73	34.41	26.91	307.9	.324
100	13.89	34.445	1.02						100	13.89	34.45	25.81	223.2	.391
148	12.81	34.735	0.13			2.372			150	12.77	34.74	26.26	181.4	.492
199	11.93	34.750	0.12						200	11.91	34.75	26.43	165.8	.578
299	10.48	34.652	0.15						250	11.15	34.71	26.54	156.5	.659
401	8.06	34.609	0.08			2.401			300	10.47	34.65	26.62	149.6	.736
602	6.78	34.518	0.09						400	9.07	34.61	26.82	132.0	.876
803	5.34	34.523	0.15			2.440			500	7.84	34.56	26.98	117.8	1.001
1003	4.56	34.544	0.27						600	6.40	34.52	27.09	107.6	1.114
1204	3.80	34.576	0.56			2.467			700	5.98	34.52	27.20	97.3	1.216
1496*	2.98	34.610	1.31						800	5.36	34.52	27.28	89.9	1.310
1695*	2.64	34.625	1.57						1000	4.57	34.54	27.39	80.4	1.480
1996*	2.22	34.647	2.07						1200	3.81	34.58	27.49	70.2	1.630
2495*	1.84	34.669	2.55						1500	2.97	34.61	27.60	59.6	1.825
2696*	1.81	34.670	2.58						2000	2.22	34.65	27.70	50.5	2.100
2795*	1.82	34.669	2.59						2500	1.84	34.67	27.75	46.8	2.343
2846*	1.82	34.669	2.59											

YSP 9 19 05.2 N 104 00.0 W DATE 13 JAN 69 1549 GCT WIRE 04 DRY 79.9 WET 75.5 CRUISE YALOC69
WIND DIRECTION 08 VEL 01 KTS BAR 15 SWELL DIRECTION 33 H 02 T 06 CLOUD 8 AMT 2 WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO_3	SiO_2	Z	T	S	σ_t	δ	ΔD
0	27.10	33.983	4.73						0	27.10	33.99	21.95	588.7	0
9	27.10	33.985	4.81						10	27.09	34.00	21.96	588.0	.059
19	27.04	34.146	4.78						20	26.96	34.16	22.13	572.6	.117
29	25.68	34.280	4.78						30	25.38	34.29	22.71	516.8	.171
48	19.61	34.357	2.87						50	19.21	34.37	24.51	345.3	.258
75	15.92	34.570	0.68						75	15.92	34.58	25.46	255.7	.333
99	14.16	34.658	0.12						100	14.11	34.66	25.93	212.0	.391
147	12.87	34.812	0.11						150	12.83	34.81	26.31	177.0	.488
198	12.32	34.812	0.11						200	12.30	34.81	26.51	168.3	.575
298		34.759	0.10						250	11.69	34.79	26.51	159.9	.657
398	8.77	34.673	0.10						300	11.06	34.76	26.60	152.3	.735
597	7.14	34.548	0.10						400	9.74	34.67	26.76	138.2	.880
798	5.53	34.538	0.13						500	8.36	34.60	26.93	122.8	1.010
									600	7.11	34.55	27.07	109.9	1.127
									700	6.18	34.54	27.19	98.3	1.231
									800	5.51	34.54	27.28	90.8	1.325

YSP 10 17 39.9 N 102 30.0 W DATE 14 JAN 69 1122 GCT WIRE 02 DRY 78.2 WET 75.2 CRUISE YALOC69
WIND DIRECTION 02 VEL 02 KTS BAR 13 SWELL DIRECTION 27 H 02 T 07 CLOUD 8 AMT 2 WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO_3	SiO_2	Z	T	S	σ_t	δ	ΔD
0	27.72	33.992	4.85						0	27.73	34.00	21.76	607.2	0
10	27.72	33.996	4.79						10	27.71	34.00	21.74	607.2	.061
20	27.71	33.990	4.77						20	27.71	34.00	21.76	607.7	.121
30	27.62	33.991	4.77						30	27.63	34.00	21.79	605.2	.182
40	25.04	34.189	4.39						50	21.35	34.38	24.95	398.8	.292
49	21.55	34.372	2.16						75	18.95	34.53	24.80	319.1	.372
78	15.55	34.523	0.88						100	14.60	34.76	25.90	214.5	.439
100	14.60	34.760	0.09						150	13.11	34.84	26.27	180.8	.538
150	13.11	34.831	0.11						200	12.32	34.82	26.41	168.1	.625
201	12.31	34.820	0.09						250	11.80	34.80	26.49	161.3	.707
302	11.28	34.765	0.11						300	11.30	34.77	26.56	155.8	.787
402	9.74	34.675	0.09						400	9.77	34.68	26.76	138.4	.934
604	6.79	34.551	0.09						500	8.19	34.60	26.94	119.8	1.063
807	5.49	34.548	0.09						600	6.84	34.55	27.11	105.7	1.173
									700	5.97	34.55	27.23	94.9	1.278
									800	5.51	34.55	27.28	90.0	1.368

YSP 10 17 39.9 N 102 30.0 W DATE 14 JAN 69 131A GCT WIRE DRY 78.2 WET 75.2 CRUISE YALOC69
WIND DIRECTION 02 VEL 02 KTS BAR 13 SWELL DIRECTION 27 H 01 T 07 CLOUD 8 AMT 2 WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO_3	SiO_2	Z	T	S	σ_t	δ	ΔD
25	27.69	34.005	4.68						0	27.73	34.00	21.76	607.2	0
30	27.68	33.998	4.68						10	27.73	34.00	21.76	607.2	.061
35	26.71	34.166	4.58						20	27.71	34.00	21.76	607.7	.121
40	22.10	34.339	3.73						30	27.69	34.00	21.77	606.6	.182

YSP 11 17 03.6 N 102 45.5 W DATE 14 JAN 69 1822 GCT WIRE 02 DRY 80.0 WET 74.0 CRUISE YALOC49
WIND DIRECTION 30 VEL 06 KTS BAR 15 SWELL DIRECTION 16 H 02 T 07 CLOUD 8 AMT 1 WEATHER 02

OBSERVED

D (m)	T (°C)	S (‰)	O_2 (ml/l)
0	28.69	33.213	4.68
10	28.60	33.202	4.64
20	28.59	33.216	4.65
30	28.55	33.275	4.61
40	27.93	33.399	4.68
49	27.42	33.480	3.64
76	19.84	34.498	1.05
99	14.96	34.730	0.12
147	12.86	34.830	0.11
198	12.32	34.806	0.11
299	11.03	34.749	0.11
399	9.47	34.661	0.09
600	7.20	34.574	0.09
801	5.61	34.546	0.09
1001	4.43	34.559	0.30
1202	3.74	34.582	0.71

PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)

INTERPOLATED

Z (m)	T (°C)	S (‰)
0	28.69	33.22
10	28.60	33.21
20	28.59	33.22
30	28.55	33.28
50	27.20	33.51
75	20.18	34.46
100	14.85	34.74
150	12.81	34.83
200	12.30	34.81
250	11.69	34.78
300	11.01	34.75
400	9.45	34.66
500	8.21	34.61
600	7.20	34.58
700	6.34	34.55
800	5.62	34.55
1000	4.43	34.56
1200	3.74	34.58

DERIVED

σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
20.86	693.6	
20.88	691.9	.06[illegible]
20.89	691.0	.13[illegible]
20.95	684.8	.2[illegible]
21.56	627.6	.33[illegible]
24.32	364.3	.46[illegible]
25.82	221.8	.53[illegible]
26.32	175.4	.63[illegible]
26.40	168.8	.72[illegible]
26.50	161.7	.80[illegible]
26.60	152.1	.86[illegible]
26.80	134.3	1.02[illegible]
26.96	118.9	1.15[illegible]
27.08	105.0	1.26[illegible]
27.18	95.7	1.37[illegible]
27.27	91.6	1.46[illegible]
27.42	77.6	1.63[illegible]
27.51	68.8	1.78[illegible]

YSP 12 16 30.0 N 100 00.0 W DATE 15 JAN 69 1256 GCT WIRE DRY 78.8 WET 76.0 CRUISE YALOC49
WIND DIRECTION 33 VEL 10 KTS BAR 12 SWELL DIRECTION 16 H 02 T 08 CLOUD 8 AMT 1 WEATHER 02

OBSERVED

D (m)	T (°C)	S (‰)	O_2 (ml/l)
0	27.90	33.676	4.75
10	27.93	33.678	4.75
20	27.82	33.698	4.75
30	24.46	33.923	3.19
40	23.12	34.017	2.91
49	21.93	34.115	2.46
75	18.30	34.515	1.01
99	13.96	34.821	0.09
148	12.95	34.835	0.13
199	12.32	34.815	0.19
299	11.26	34.758	0.16
400	9.87	34.682	0.23
601	7.23	34.570	0.09
801	5.70	34.557	0.19
1001	4.41	34.567	0.52
1203	3.71	34.586	0.76

PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)

INTERPOLATED

Z (m)	T (°C)	S (‰)
0	27.90	33.68
10	27.94	33.68
20	27.82	33.70
30	24.46	33.93
50	21.80	34.13
75	18.30	34.52
100	13.89	34.83
150	12.92	34.83
200	12.31	34.81
250	11.78	34.79
300	11.25	34.76
400	9.88	34.69
500	8.48	34.62
600	7.24	34.57
700	6.39	34.56
800	5.71	34.56
1000	4.42	34.57
1200	3.72	34.59

DERIVED

σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
21.46	635.5	
21.45	636.6	.06[illegible]
21.50	632.1	.12[illegible]
22.72	31[illegible].1	.16[illegible]
23.64	42[illegible].0	.27[illegible]
24.85	313.7	.37[illegible]
26.10	195.5	.43[illegible]
26.30	17[illegible].2	.52[illegible]
26.41	16[illegible].3	.61[illegible]
26.49	161.8	.69[illegible]
26.57	155.5	.77[illegible]
26.75	135.3	.92[illegible]
26.93	123.2	1.05[illegible]
27.07	11[illegible].1	1.17[illegible]
27.18	9[illegible].7	1.27[illegible]
27.27	91.9	1.37[illegible]
27.42	7[illegible].8	1.54[illegible]
27.51	68.2	1.68[illegible]

YSP 13 16 00.0 N 100 10.5 W DATE 15 JAN 69 1900 GCT WIRE 10 DRY 83.5 WET 76.0 CRUISE YALOC49
WIND DIRECTION 28 VEL 04 KTS BAR 14 SWELL DIRECTION 30 H 02 T 04 CLOUD 8 AMT 2 WEATHER 02

OBSERVED

D (m)	T (°C)	S (‰)	O_2 (ml/l)
0	28.21	33.728	4.75
10	27.41	33.711	4.76
20	27.98	33.712	4.76
29	26.68	33.773	4.76
39	24.83	33.969	2.87
48	22.21	34.229	1.85
73	18.91	34.666	0.45
97	14.37	34.821	0.13
146	12.93	34.820	0.09
196	11.97	34.787	0.21
295	10.85	34.735	0.09
395	9.80	34.677	0.09
592	7.21	34.582	0.08
793	5.80	34.561	0.09
989	4.79	34.553	0.29
1187	3.88	34.571	0.29
1227*	3.73	34.586	0.41
1526*	3.01	34.614	
2016*	2.16	34.654	2.13
2525*	1.89	34.671	2.60
2924*	1.88	34.673	2.60
3328*	1.90	34.673	2.59
3428*		34.673	2.59
3476*	1.90	34.665	2.59

PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)

INTERPOLATED

Z (m)	T (°C)	S (‰)
0	28.21	33.73
10	27.42	33.72
20	27.58	33.72
30	26.53	33.79
50	21.58	34.28
75	16.63	34.69
100	14.20	34.82
150	12.84	34.82
200	11.91	34.78
250	11.29	34.76
300	10.80	34.73
400	9.73	34.67
500	8.39	34.62
600	7.14	34.59
700	6.35	34.57
800	5.76	34.56
1000	4.73	34.55
1200	3.83	34.59
1500	3.06	34.61
2000	2.18	34.65
2500	1.89	34.67
3000	1.88	34.67

DERIVED

σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
21.40	641.4	
21.65	413.2	.063
21.46	435.1	.129
21.98	5[illegible]5.8	.1[illegible]
23.79	413.2	.2[illegible]
25.38	261.1	.372
26.03	202.2	.4[illegible]
26.31	179.9	.5[illegible]
26.46	163.2	.6[illegible]
26.56	155.0	.6[illegible]
26.63	143.5	.7[illegible]
26.77	137.9	.9[illegible]
26.96	121.5	1.039
27.09	107.9	1.153
27.19	9[illegible].0	1.2[illegible]
27.26	9[illegible].4	1.3[illegible]
27.38	81.8	1.5[illegible]
27.49	7[illegible].3	1.6[illegible]
27.60	6[illegible].5	1.8[illegible]
27.71	4[illegible].7	2.1[illegible]
27.74	47.4	2.3[illegible]
27.75	44.8	2.6[illegible]

YSP 14 15 10.1 N 096 34.9 W DATE 17 JAN 69 0001 GCT WIRE 08 DRY 85.5 WET 78.0 CRUISE YALOCAG
WIND DIRECTION 28 VEL 04 TS BAR 14 SWELL DIRECTION 10 H 02 T 10 CLOUD 8 AMT 2 WEATHER 02

OBSERVED

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	28.53	33.655	4.81					
10	28.15	33.635	4.87					
20	26.96	33.710	4.93					
30	25.17	33.806	4.41					
40	23.53	33.862	3.77					
49	22.57	33.955	3.41					
74	18.25	34.543	0.92					
98	15.11	34.820	0.17					
147	13.66	34.864	0.11					
197		34.843	0.13					
298	11.45	34.776	0.08					
398	9.94	34.697	0.09					
598	7.15	34.578	0.06					
797	5.63	34.554	0.09					
997	4.77	34.558	0.27					
1197	3.87	34.577	0.36					

INTERPOLATED

Z (m)	T (°C)	S (‰)
0	28.53	33.66
10	28.15	33.64
20	26.96	33.71
30	25.17	33.81
50	22.41	33.98
75	18.00	34.56
100	14.98	34.83
150	13.60	34.86
200	12.69	34.84
250	11.97	34.81
300	11.42	34.77
400	8.91	34.70
500	8.42	34.63
600	7.13	34.58
700	6.25	34.56
800	5.61	34.55
1000	4.76	34.56
1200	3.86	34.58

DERIVED

σ_t	S ($\times 10^8$)	ΔD (dyn.m)
21.24	456.8	0
21.35	446.3	.065
21.79	404.8	.128
22.42	545.0	.185
23.35	456.1	.285
24.96	303.6	.380
25.87	217.7	.445
26.19	188.3	.547
26.35	173.7	.637
26.47	163.8	.722
26.55	157.4	.802
26.75	139.3	.950
26.94	121.5	1.080
27.09	108.0	1.195
27.20	98.2	1.298
27.28	90.9	1.393
27.38	81.7	1.565
27.49	70.5	1.717

YSP 15 14 28.9 N 093 25.4 W DATE 17 JAN 69 2218 GCT WIRE 02 DRY 83.5 WET 78.0 CRUISE YALOCAG
WIND DIRECTION 28 VEL 08 KTS BAR 10 SWELL DIRECTION 10 H 02 T 07 CLOUD 8 AMT 1 WEATHER 01

OBSERVED

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	28.14	33.184	4.91					
9	27.47	33.242	4.91					
19	26.56	33.420	5.18					
29	25.08	33.688	4.19					
39	23.02	33.925	3.65					
49	20.99	34.062	2.99					
76	14.42	34.813	0.09					
100	13.30	34.811	0.09					
148	12.60	34.822	0.09					
199	12.04	34.804	0.09					
298	10.89	34.744	0.09					
400	9.53	34.675	0.09					
601	6.96	34.577	0.09					
801	5.52	34.557	0.09					
1000	4.46	34.570	0.28					
1202	3.77	34.581	0.70					

INTERPOLATED

Z (m)	T (°C)	S (‰)
0	28.15	33.19
10	27.40	33.26
20	26.44	33.45
30	24.89	33.71
50	20.71	34.09
75	14.63	34.79
100	13.30	34.82
150	12.58	34.82
200	12.03	34.80
250	11.46	34.78
300	10.86	34.74
400	9.53	34.68
500	8.17	34.62
600	6.97	34.58
700	6.15	34.56
800	5.53	34.56
1000	4.46	34.58
1200	3.77	34.58

DERIVED

σ_t	S ($\times 10^8$)	ΔD (dyn.m)
21.01	678.4	0
21.31	650.7	.066
21.75	608.3	.129
22.43	543.6	.187
23.91	403.3	.282
25.91	212.7	.359
26.21	184.7	.408
26.36	171.6	.497
26.45	163.9	.581
26.54	156.9	.661
26.62	149.8	.738
26.81	134.2	.880
26.97	118.3	1.006
27.12	105.7	1.118
27.21	96.7	1.219
27.29	89.5	1.312
27.43	76.8	1.479
27.50	69.3	1.625

YSP 16 14 02.8 N 093 29.8 W DATE 18 JAN 69 0325 GCT WIRE 00 DRY 78.0 WET 74.0 CRUISE YALOCAG
WIND DIRECTION 30 VEL 03 KTS BAR 12 SWELL DIRECTION 27 H 01 T 08 CLOUD ANT 0 WEATHER 02

OBSERVED

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	26.46	33.510	4.95					
10	25.65	33.823	4.97		2.297			
20	25.10	33.875	4.94					
30	24.55	33.898	4.70		2.330			
40	23.38	33.973	4.26					
50	17.46	34.529	0.87					
75	13.66	34.884	0.07		2.357			
99	13.22	34.877	0.09		2.409			
149	12.52	34.838	0.16					
198	11.97	34.808	0.09					
248	11.42	34.771	0.09					
300	10.78	34.738	0.09		2.382			
401	9.26	34.647	0.09					
600		34.579	0.09					
801	5.62	34.563	0.09					
1001	4.63	34.568	0.27		2.428			
1202	3.94	34.583	0.62					
1502	3.07	34.608	1.21		2.467			
2003	2.23	34.649	2.12		2.487			
2407*	1.90	34.670	2.62		2.508			
2909*	1.85	34.674	2.60		2.519			
3411*	1.91	34.676	2.66		2.514			
3914*	1.95	34.677	2.67		2.519			
4412*	2.01	34.677	2.67		2.516			
4918*	2.07	34.677	2.85		2.516			
5018*	2.08	34.678	2.71		2.514			
5069*	2.09	34.676	2.68		2.519			
					2.519			

INTERPOLATED

Z (m)	T (°C)	S (‰)
0	26.46	33.51
10	25.65	33.83
20	25.10	33.88
30	24.55	33.90
50	17.46	34.53
75	13.66	34.89
100	13.20	34.88
150	12.51	34.84
200	11.95	34.81
250	11.40	34.77
300	10.78	34.74
400	9.28	34.65
500	8.08	34.60
600	7.07	34.58
700	6.26	34.57
800	5.63	34.56
1000	4.63	34.57
1200	3.95	34.58
1500	3.08	34.61
2000	2.23	34.65
2500	1.87	34.67
3000	1.86	34.67
4000	1.96	34.68
5000	2.08	34.68

DERIVED

σ_t	S ($\times 10^8$)	ΔD (dyn.m)
21.80	603.4	0
22.28	557.1	.058
22.49	537.6	.113
22.67	520.5	.166
25.07	292.3	.247
26.19	185.8	.307
26.28	178.3	.352
26.39	169.1	.439
26.47	162.2	.522
26.55	156.1	.601
26.66	148.4	.677
26.83	132.3	.818
26.97	118.2	.943
27.11	106.7	1.055
27.26	97.6	1.158
27.28	90.4	1.251
27.40	79.5	1.421
27.49	71.2	1.572
27.59	61.0	1.770
27.70	50.7	2.049
27.75	47.1	2.293
27.75	48.3	2.531
27.76	52.4	3.034
27.73	58.0	3.586

OBSERVED									INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)

YSP 17 13 30.0 N 093 30.3 W DATE 18 JAN 69 2221 GCT WIRE 09 DRY 79.2 WET 72.3 CRUISE YALOCAG
WIND DIRECTION 32 VEL 04 KTS BAR 10 SWELL DIRECTION 18 H 01 T 14 CLOUD 6 AMT 1 WEATHER 02

0	27.05	33.474	[illegible].80				0	27.05	33.48	21.59	A23.4	0
10	26.60	33.454	4.80				10	26.60	33.46	21.71	A12.[illegible]	.062
19	25.78	33.6[illegible]4	5.08				20	25.43	33.68	22.25	561.[illegible]	.120
29	22.08	34.0.2	3.72				30	21.94	34.02	23.51	440.[illegible]	.170
39	20.61	34.117	3.03				50	16.27	34.77	25.53	248.1	.239
49	16.50	34.746	0.23				75	13.77	34.87	26.14	189.[illegible]	.294
74	13.81	34.864	0.19				100	13.35	34.88	26.25	180.7	.340
99	13.36	34.882	0.21				150	12.73	34.86	26.36	171.[illegible]	.428
147	12.77	34.862	0.28				200	12.10	34.82	26.45	164.[illegible]	.512
197	12.13	34.821	0.17				250	11.61	34.80	26.53	157.7	.593
248	11.63	34.801	0.19				300	11.04	34.76	26.61	151.6	.670
299	11.05	34.761	0.19				400	9.88	34.69	26.74	138.[illegible]	.815
403	9.84	34.693	0.09				500	8.58	34.63	26.82	123.5	.946
599	7.38	34.589	0.07				600	7.37	34.59	27.[illegible]7	110.7	1.063
800	5.78	34.562	0.09				700	6.48	34.57	27.19	100.6	1.169
998	4.76	34.566	0.28				800	5.79	34.57	27.26	92.3	1.265
1199	4.07	34.540	0.63				1000	4.75	34.57	27.39	81.1	1.438
							1200	4.07	34.54	27.44	75.9	1.595

YSP 18 12 18.5 N 091 20.5 W DATE 19 JAN 69 1435 GCT WIRE 07 DRY 80.0 WET 74.3 CRUISE YALOCAG
WIND DIRECTION 00 VEL 06 KTS BAR 13 SWELL DIRECTION 32 H 01 T 08 CLOUD 8 AMT 2 WEATHER 02

0	27.09	33.350	4.83				0	27.09	33.35	21.48	A34.0	0
10	27.08	33.350	4.83				10	27.08	33.35	21.48	634.0	.063
20	26.58	33.470	4.83				20	26.58	33.47	21.73	610.6	.124
30	25.69	33.556	4.26				30	25.69	33.55	22.07	578.2	.185
40	25.41	33.605	3.91				50	23.45	34.05	23.11	479.5	.291
48	23.97	33.968	3.55				75	17.38	34.74	25.24	276.6	.385
75	17.38	34.731	0.94				100	15.22	34.83	25.81	223.1	.448
98	15.34	34.821	0.28				150	13.57	34.86	26.19	187.9	.550
148	13.61	34.863	0.17				200	12.94	34.86	26.32	177.0	.642
199	12.95	34.860	0.13				250	12.20	34.81	26.43	167.8	.728
248	12.23	34.813	0.09				300	11.53	34.78	26.53	159.1	.810
298	11.56	34.781	0.13				400	10.08	34.71	26.73	141.4	.960
398	10.11	34.707	0.09				500	8.53	34.64	26.93	122.5	1.092
597	7.18	34.585	0.09				600	7.15	34.58	27.10	107.8	1.207
796	5.57	34.560	0.11				700	6.23	34.56	27.20	97.4	1.309
994	4.52	34.568	0.39				800	5.54	34.56	27.29	89.6	1.403
1194	3.84	34.583	0.73				1000	4.49	34.57	27.42	77.7	1.570
							1200	3.82	34.58	27.50	69.6	1.717

YSP 19 11 05.5 N 089 09.5 W DATE 20 JAN 69 0747 GCT WIRE 07 DRY 77.9 WET 75.0 CRUISE YALOCAG
WIND DIRECTION 34 VEL 02 KTS BAR 12 SWELL DIRECTION 32 H 01 T 12 CLOUD 8 AMT 1 WEATHER 02

0	25.78	33.925	4.60				0	25.78	33.93	22.32	553.2	0
10	25.39	33.923	4.56				10	25.40	33.93	22.44	542.3	.055
20	25.27	33.932	4.51				20	25.27	33.94	22.48	534.5	.109
30	25.12	33.959	4.50				30	25.13	33.96	22.55	532.5	.162
40	24.09	34.273	4.00				50	19.81	34.51	24.46	350.4	.251
50	19.81	34.505	1.56				75	15.44	34.59	25.58	244.4	.325
75	15.44	34.583	0.73				100	14.21	34.89	26.08	197.0	.380
99	14.24	34.890	0.39				150	13.45	34.90	26.24	183.0	.475
149	13.48	34.901	0.39				200	12.75	34.85	26.35	174.0	.564
199	12.79	34.862	0.38				250	12.27	34.84	26.44	167.0	.65[illegible]
247	12.32	34.843	0.24				300	11.59	34.81	26.54	156.1	.731
264*	11.98	34.821					400	9.79	34.69	26.77	137.5	.879
291*	11.56	34.791	0.14				500	8.23	34.62	26.97	11[illegible].8	1.007
300	11.58	34.801	0.11				600	7.01	34.59	27.12	105.7	1.119
316*	11.25		0.09				700	6.24	34.57	27.21	97.0	1.220
341*	10.84	34.751	0.13				800	5.49	34.57	27.28	90.5	1.314
365*	10.45	34.728	0.11				1000	4.72	34.57	27.39	80.6	1.445
402	9.79	34.688	0.09				1200	4.01	34.58	27.48	71.9	1.637
598	7.03	34.586	0.15				1500	3.15	34.62	27.60	61.0	1.838
800	5.69	34.569	0.15				2000	2.27	34.65	27.70	53.9	2.116
999	4.72	34.567	0.28				2500	1.89	34.67	27.75	47.2	2.361
1199	4.01	34.583	0.73				3000	1.85	34.68	27.75	44.1	2.549
1221*		34.601	0.91									
1620*	2.87	34.628	1.45									
2120*	2.15	34.658	2.20									
2620*	1.85	34.676	2.59									
3119*	1.87	34.677	2.67									
3420*	1.88	34.677	2.67									
3520*	1.87	34.677	2.69									
3581*	1.90	34.677	2.69									

OBSERVED									INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)

YSP 20 10 06.0 N 087 28.0 W DATE 20 JAN 69 0543 GCT WIRE 06 DRY 79.4 WET 76.0 CRUISE YALOC49
WIND DIRECTION 33 VEL 02 KTS BAR SWELL DIRECTION 08 H 01 T 08 CLOUD 8 AMT 2 WEATHER 02

D	T	S	O_2	Z	T	S	σ_t	δ	ΔD
0	27.25	34.863	4.82	0	27.25	34.87	22.56	530.0	0
10	25.81	33.927	5.27	10	25.81	33.93	22.31	554.3	.054
20	22.31	34.166	3.8	20	22.31	34.17	23.53	438.7	.104
30	16.18	34.830	1.10	30	16.18	34.83	25.60	241.1	.138
40	15.61	34.850	0.80	50	14.96	34.88	25.91	212.6	.183
50	14.96	34.871	0.68	75	14.38	34.91	26.06	194.9	.235
75	14.37	34.900	0.67	100	13.96	34.91	26.15	190.6	.243
99	13.97	34.912	0.61	150	13.43	34.90	26.25	182.3	.376
148	13.45	34.902	0.36	200	13.00	34.88	26.33	176.5	.466
198	13.02	34.885	0.22	250	12.51	34.85	26.40	170.6	.553
248	12.53	34.854	0.13	300	11.84	34.82	26.50	162.0	.636
300	11.84	34.813	0.09	400	9.72	34.71	26.80	134.9	.784
400	9.72	34.708	0.09	500	8.14	34.64	26.99	116.6	.910
600	6.98	34.590	0.09	600	6.98	34.59	27.13	104.6	1.021
801	5.58	34.568	0.17	700	6.17	34.57	27.22	96.1	1.121
1001	4.57	34.570	0.59	800	5.58	34.57	27.29	89.5	1.214
1201	3.86	34.586	0.89	1000	4.57	34.57	27.41	78.6	1.382
				1200	3.86	34.59	27.50	70.0	1.530

YSP 21 08 40.2 N 085 00.0 W DATE 22 JAN 69 0407 GCT WIRE 00 DRY 80.4 WET 76.0 CRUISE YALOC49
WIND DIRECTION 22 VEL 02 KTS BAR 12 SWELL DIRECTION H 00 T CLOUD 8 AMT 1 WEATHER 02

D	T	S	O_2	Z	T	S	σ_t	δ	ΔD
0	28.79	31.485	4.68	0	28.79	31.49	19.53	821.1	0
5	28.98	32.590	4.80	10	28.63	32.49	20.63	715.4	.077
10	28.62	32.884	4.85	20	28.01	33.22	21.08	672.9	.146
15	28.42	33.033	4.76	30	26.50	33.61	21.86	598.2	.210
20	28.01	33.214	4.85	50	21.81	34.60	23.99	395.3	.309
25	27.19	33.286	4.87						
30	26.49	33.609	4.90						
35	26.42	33.652	4.95						
40	24.88	33.830	5.02						
45		34.077	3.67						
50		34.593	2.95						
55	20.28	34.645	2.69						

YSP 21 08 40.0 N 085 00.0 W DATE 22 JAN 69 0035 GCT WIRE 04 DRY 82.0 WET 76.1 CRUISE YALOC49
WIND DIRECTION 26 VEL 05 KTS BAR 11 SWELL DIRECTION H 00 T CLOUD 8 AMT 6 WEATHER 02

D	T	S	O_2	Z	T	S	σ_t	δ	ΔD
0	29.06	31.603	4.69	0	29.06	31.61	19.53	821.2	0
10	29.01	32.465	4.84	10	29.01	32.47	20.19	758.0	.079
20	28.30	33.010	4.85	20	28.30	33.01	20.83	696.6	.152
30	26.73	33.531	4.96	30	24.73	33.54	21.73	611.1	.217
40	23.56	33.899	3.85	50	20.65	34.64	24.34	361.8	.314
50	20.64	34.637	2.90	75	17.82	34.77	25.16	284.1	.395
76	17.78	34.776	1.74	100	16.01	34.83	25.64	239.4	.460
100	16.01	34.830	1.39	150	13.87	34.91	26.17	190.3	.568
149	13.89	34.911	0.69	200	13.33	34.90	26.27	181.8	.661
200	13.33	34.895	0.71	250	12.85	34.88	26.35	175.1	.750
249	12.86	34.880	0.30	300	12.04	34.83	26.47	164.7	.835
300	12.04	34.827	0.15	400	9.47	34.69	26.83	132.2	.983
401	9.44	34.690	0.07	500	7.80	34.63	27.03	112.2	1.106
602	6.74	34.599	0.25	600	6.75	34.60	27.16	101.0	1.212
804	5.71	34.586	0.65	700	6.14	34.59	27.24	94.4	1.310
1003	4.68	34.587	0.88	800	5.72	34.59	27.29	90.0	1.402
1204	3.95	34.595	1.08	1000	4.69	34.59	27.41	78.8	1.571
				1200	3.96	34.59	27.49	70.5	1.720

YPT 22 09 06.4 N 084 26.2 W DATE 25 JAN 69 2226 GCT WIRE 00 DRY 84.7 WET 77.9 CRUISE YALOC49
WIND DIRECTION 20 VEL 06 KTS BAR 08 SWELL DIRECTION 20 H 01 T 14 CLOUD 8 AMT 2 WEATHER 02

D	T	S	O_2	Z	T	S	σ_t	δ	ΔD
0	29.42	31.046	4.84	0	29.42	31.05	18.99	872.8	0
10	28.55	31.798	4.81	10	28.55	31.80	19.84	791.3	.083
20	28.37	32.667	4.82	20	28.38	32.67	20.55	723.5	.159
30	27.83	33.255	4.80	30	27.83	33.26	21.17	664.7	.228
40	24.18	34.096	3.96	50	20.60	34.50	24.24	371.3	.332
50	20.60	34.491	2.25	75	16.23	34.83	25.59	243.8	.409
75	16.23	34.826	0.95	100	15.05	34.89	25.90	214.5	.466
99	15.08	34.890	0.79	150	14.00	34.92	26.15	192.5	.568
149	14.01	34.916	0.70	200	13.58	34.91	26.23	185.8	.642
199	13.59	34.912	0.70	250	13.02	34.89	26.33	177.9	.753
249	13.04	34.888	0.37	300	11.74	34.83	26.53	159.6	.838
300	11.74	34.820	0.19	400	9.38	34.69	26.66	130.5	.983
400	9.37	34.689	0.09	500	7.96	34.63	27.01	114.6	1.105
601	7.04	34.599	0.19	600	7.05	34.60	27.12	105.2	1.215
804	5.44	34.576	0.56	700	6.17	34.58	27.23	95.2	1.315
905		34.577	0.78	800	5.46	34.58	27.31	87.3	1.406

YPT 23 08 31.1 N 083 53.0 W DATE 26 JAN 69 0503 GCT WIRE 05 DRY 81.9 WET 77.0 CRUISE YALOCAG
WIND DIRECTION 22 VEL 04 KTS BAR 11 SWELL DIRECTION 19 H 01 T 04 CLOUD 8 AMT 2 WEATHER 33

OBSERVED

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	29.29	30.719	4.80					
10	29.32	30.772	4.45					
20	28.86	32.527	4.84					
30	26.16	33.091	4.50					
40	21.09	34.11	2.79					
50	19.53	34.367	1.82					
75	15.43	34.900	0.98					
100	14.69	34.925	0.93					
150	14.08	34.917	0.74					
201	13.63	34.914	0.53					
250	13.37	34.903	0.43					

INTERPOLATED

Z (m)	T (°C)	S (‰)
0	29.29	30.72
10	29.32	30.78
20	28.86	32.53
30	26.17	33.10
50	19.53	34.37
75	15.43	34.91
100	14.69	34.93
150	14.08	34.92
200	13.64	34.91
250	13.37	34.90

DERIVED

σ_t	δ (x10⁸)	ΔD (dyn.m)
18.76	892.2	0
18.87	889.7	.089
20.26	749.1	.171
21.54	625.6	.240
24.43	353.4	.339
25.82	221.1	.409
26.01	204.6	.463
26.13	193.6	.562
26.22	186.7	.657
26.2[illegible]	183.[illegible]	.750

YPT 24 08 21.2 N 083 12.5 W DATE 26 JAN 69 1040 GCT WIRE DRY 79.9 WET 76.4 CRUISE YALOCAG
WIND DIRECTION VEL 00 KTS BAR 09 SWELL DIRECTION 18 H 01 T 10 CLOUD 8 AMT 0 WEATHER 32

D (m)	T (°C)	S (‰)	O_2 (ml/l)
0	29.03	30.791	4.71
10	28.78	31.265	4.76
20	27.38	32.022	4.15
30	25.54	32.773	3.52
40	21.55	34.033	2.53
50	18.41	34.562	1.43
76	15.81	34.849	0.91
91	14.98	34.897	0.70

Z (m)	T (°C)	S (‰)
0	29.03	30.80
10	28.78	31.27
20	27.38	32.03
30	25.54	32.78
50	18.42	34.57
75	15.82	34.84

σ_t	δ (x10⁸)	ΔD (dyn.m)
18.93	878.2	0
19.37	837.[illegible]	.086
20.33	739.1	.165
21.53	430.2	.233
24.84	312.2	.327
25.83	234.3	.396

YPT 25 08 09.1 N 083 19.3 W DATE 26 JAN 69 1431 GCT WIRE DRY 82.0 WET 77.0 CRUISE YALOCAG
WIND DIRECTION 27 VEL 06 KTS BAR 11 SWELL DIRECTION 19 H 01 T 04 CLOUD 8 AMT 6 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)
0	29.05	30.693	5.05
10	28.73	31.490	4.82
20	27.83	32.502	4.78
30	26.08	33.209	4.52
39	21.00	34.264	2.38
49	17.54	34.702	1.19
74	15.18	34.903	0.85
98	14.61	34.924	0.94
149	13.90	34.931	0.68
198	13.37	34.911	0.63
249	13.07	34.886	0.30
300	12.14	34.831	0.13
400	9.64	34.706	0.07
601	6.62	34.595	0.29
802	5.40	34.581	0.72
1003	4.51	34.584	1.09
1189*	4.03	34.597	1.26
1203	3.99	34.595	1.33
1489*	3.09	34.623	1.76
1587*	3.07	34.624	1.73
1688*	3.00	34.623	1.73
1737*		34.625	1.76
1763*	3.01	34.626	1.76

Z (m)	T (°C)	S (‰)
0	29.05	30.70
10	28.73	31.50
20	27.83	32.51
30	26.08	33.21
50	17.34	34.72
75	15.14	34.91
100	14.57	34.93
150	13.89	34.93
200	13.36	34.91
250	13.06	34.89
300	12.14	34.84
400	9.64	34.71
500	7.88	34.63
600	6.63	34.60
700	5.89	34.59
800	5.41	34.58
1000	4.52	34.58
1200	4.00	34.60
1500	3.09	34.62

σ_t	δ (x10⁸)	ΔD (dyn.m)
18.85	886.4	0
19.55	819.2	.085
20.69	718.5	.162
21.69	614.4	.229
25.24	275.7	.318
25.59	214.7	.379
26.03	202.2	.431
26.19	189.2	.529
26.27	181.5	.622
26.32	178.7	.712
26.46	166.2	.798
26.41	133.7	.948
27.03	112.5	1.071
27.19	99.5	1.177
27.27	91.0	1.272
27.32	86.2	1.361
27.43	76.9	1.524
27.49	71.0	1.671
27.50	60.0	1.868

YPT 26 07 41.3 N 083 47.1 W DATE 27 JAN 69 0004 GCT WIRE 10 DRY 81.5 WET 76.9 CRUISE YALOCAG
WIND DIRECTION 22 VEL 05 KTS BAR 07 SWELL DIRECTION 20 H 01 T 06 CLOUD 8 AMT 2 WEATHER 00

D (m)	T (°C)	S (‰)	O_2 (ml/l)
0	28.97	32.014	4.67
10	28.66	32.420	4.73
19	27.93	33.473	4.83
29	25.68	34.415	4.99
39	23.40	34.398	4.07
49	19.87	34.572	2.25
73	17.00	34.817	1.35
98	15.16	34.947	1.46
147	14.07	34.936	1.17
198	13.61	34.920	0.72
247	13.05	34.887	0.30
299	12.34	34.853	0.24
398	10.16	34.734	0.09
598	6.75	34.599	0.21
798	5.41	34.579	0.65
996	4.66	34.585	1.05
1197	3.84	34.598	1.30
1345	3.49	34.609	1.45

Z (m)	T (°C)	S (‰)
0	28.98	32.02
10	28.67	32.42
20	27.74	33.59
30	25.48	34.41
50	19.66	34.59
75	16.82	34.83
100	15.08	34.95
150	14.04	34.94
200	13.59	34.92
250	13.01	34.89
300	12.37	34.85
400	10.12	34.73
500	8.21	34.65
600	6.73	34.60
700	5.93	34.58
800	5.40	34.58
1000	4.64	34.59
1200	3.83	34.60

σ_t	δ (x10⁸)	ΔD (dyn.m)
19.96	788.8	0
20.27	750.1	.077
21.65	437.3	.146
22.79	510.5	.204
24.56	341.1	.294
25.45	256.7	.364
25.94	211.1	.422
26.19	191.8	.523
26.23	185.4	.617
26.32	177.9	.708
26.44	168.1	.794
26.76	140.1	.968
26.99	116.7	1.077
27.17	100.8	1.186
27.26	91.8	1.282
27.32	86.3	1.371
27.41	78.3	1.535
27.51	6[illegible].7	1.682

OBSERVED									INTERPOLATED				DERIVED	
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	B ($\times 10^6$)	ΔD (dyn.m)

YPT 27 07 14.5 N 084 16.0 W DATE 27 JAN 69 0645 GCT WIRE 04 DRY 80.3 WET 75.9 CRUISE YALOC69
WIND DIRECTION 25 VEL 04 KTS BAR 18 SWELL DIRECTION 20 H 01 T 08 CLOUD 8 AMT 2 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	28.75	31.964	4.70					
10	28.58	32.731	4.82					
20	27.08	33.560	4.88					
30	26.53	34.016	4.90					
49	21.19	34.518	2.94					
75	17.02	34.826	1.[illegible]					
99	15.77	34.893	1.15					
148	14.11	34.919	0.68					
199	13.48	34.907	0.41					
247	12.98	34.882	0.23					
298	12.69	34.863	0.19					
398	10.16	34.746	0.09					
597	6.54	34.591	0.19					
797	5.34	34.580	0.62					
994	4.51	34.586	0.98					
1143	4.01							

Z (m)	T (°C)	S (‰)	σ_t	B ($\times 10^6$)	ΔD (dyn.m)
0	28.75	31.97	19.90	785.3	0
10	28.58	32.74	20.53	725.2	.076
20	27.08	33.56	21.64	619.3	.143
30	26.53	34.02	22.16	570.1	.232
50	20.97	34.54	24.17	377.8	.297
75	17.02	34.83	25.40	261.4	.377
100	15.72	34.89	25.75	228.8	.434
150	14.07	34.92	26.13	193.8	.544
200	13.47	34.91	26.25	183.9	.614
250	12.97	34.88	26.33	177.3	.728
300	12.65	34.86	26.38	174.0	.816
400	10.11	34.74	26.76	139.2	.973
500	8.04	34.65	27.02	113.8	1.039
600	6.51	34.59	27.19	98.3	1.235
700	5.75	34.59	27.28	89.3	1.249
800	5.33	34.58	27.33	85.2	1.346
1000	4.49	34.59	27.43	76.3	1.548

YPT 28 06 45.6 N 084 44.4 W DATE 27 JAN 69 1318 GCT WIRE 03 DRY 83.8 WET 77.0 CRUISE YALOC69
WIND DIRECTION 17 VEL 08 KTS BAR 07 SWELL DIRECTION 18 H 01 T 06 CLOUD 8 AMT 6 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	28.41	33.279	4.67		8.291	2.242		
10	28.17	33.408	4.77					
20	27.45	33.505	4.82					
30	26.99	33.670	4.86					
40	27.00	34.041	4.89					
50	23.84	34.299	4.75					
76	17.77	34.748	1.41					
99	15.07	34.903	0.89					
149	13.70	34.910	0.57					
198	13.20	34.900	0.30					
248	12.77	34.876	0.31					
299	11.75	34.818	0.15					
401	9.55	34.697	0.07					
600	6.68	34.593	0.20					
800	5.46	34.581	0.62					
1007	4.44	34.587	0.99					
1201	3.71	34.601	1.33					

Z (m)	T (°C)	S (‰)	σ_t	B ($\times 10^6$)	ΔD (dyn.m)
0	28.42	33.28	21.00	680.0	0
10	28.17	33.41	21.17	663.6	.057
20	27.46	33.51	21.48	636.4	.132
30	27.00	33.67	21.75	609.0	.194
50	25.84	34.30	22.58	529.9	.308
75	18.10	34.74	25.07	293.1	.411
100	15.01	34.91	25.92	212.7	.474
150	13.69	34.91	26.21	185.6	.574
200	13.19	34.90	26.30	178.9	.665
250	12.74	34.87	26.37	173.4	.753
300	11.73	34.82	26.52	159.9	.837
400	9.57	34.70	26.81	133.4	.983
500	7.90	34.63	27.02	113.5	1.107
600	6.69	34.60	27.17	100.2	1.214
700	5.95	34.59	27.26	91.9	1.309
800	5.46	34.59	27.32	86.6	1.399
1000	4.47	34.59	27.43	76.0	1.561
1200	3.71	34.60	27.52	67.0	1.704

YPT 29 06 18.0 N 085 12.2 W DATE 27 JAN 69 1935 GCT WIRE 04 DRY 83.0 WET 77.3 CRUISE YALOC69
WIND DIRECTION 24 VEL 04 KTS BAR 16 SWELL DIRECTION 19 H 01 T CLOUD 8 AMT 2 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	28.73	32.686	4.71		8.302	2.216		
10	28.33	32.785	4.80					
20	28.03	33.038	4.80					
30	26.85	33.269	4.80					
40	25.82	33.443	4.71					
50	23.32	33.935	3.76					
75	17.41	34.783	1.43					
100	14.82	34.907	0.82					
149	13.92	34.914	0.87					
199	13.32	34.907	0.69					
300	11.79	34.815	0.30					
403	9.99	34.722	0.19					
600	7.21	34.608	0.19					
802	5.55	34.579	0.55					
1001	4.51	34.583	1.11					
1203	3.85	34.598	1.38					
1501	3.09	34.619	1.71					
1752	2.55	34.639	2.01					

Z (m)	T (°C)	S (‰)	σ_t	B ($\times 10^6$)	ΔD (dyn.m)
0	28.73	32.69	20.45	732.8	0
10	28.33	32.79	20.65	713.4	.072
20	28.03	33.04	20.94	685.2	.142
30	26.85	33.27	21.49	633.6	.208
50	23.32	33.94	23.04	483.9	.320
75	17.42	34.79	25.28	273.5	.415
100	14.82	34.91	25.97	208.4	.475
150	13.91	34.91	26.16	190.8	.575
200	13.31	34.91	26.28	180.7	.667
250	12.59	34.87	26.40	171.0	.755
300	11.79	34.82	26.51	160.9	.838
400	10.04	34.72	26.75	139.4	.988
500	8.50	34.66	26.95	120.6	1.118
600	7.21	34.61	27.11	105.6	1.232
700	6.27	34.59	27.22	95.4	1.333
800	5.56	34.58	27.30	88.4	1.426
1000	4.51	34.58	27.43	76.8	1.591
1200	3.86	34.60	27.51	69.0	1.737
1500	3.09	34.62	27.60	60.4	1.931

YPT 30 05 50.0 N 085 41.0 W DATE 28 JAN 69 0256 GCT WIRE 00 DRY 79.0 WET 76.0 CRUISE YALOC69
WIND DIRECTION VEL 00 KTS BAR 06 SWELL DIRECTION 20 H 02 T 06 CLOUD 8 AMT 1 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	28.58	32.916			8.293	2.271		
10	28.37	33.230	4.66					
20	28.28	33.284	4.67					
29	28.21	33.329	4.67					
40	28.15	33.558	4.73					
50	26.47	33.645	4.78					
74	17.47	34.818	1.97					
99	15.48	34.930	1.26					
148	14.14	34.936	1.19					
198	13.59	34.924	0.89					
298	12.17	34.843	0.35					
398	9.97	34.736	0.13					
598	7.06	34.606	0.24					
799	5.69	34.581	0.53					
997	4.62	34.583	1.06					
1198	3.95	34.596	1.38					
1498	3.07	34.624	1.73					
1648	2.83	34.635	1.86					

Z (m)	T (°C)	S (‰)	σ_t	B ($\times 10^6$)	ΔD (dyn.m)
0	28.58	32.92	20.67	711.5	0
10	28.38	33.24	20.97	682.6	.070
20	28.28	33.29	21.04	675.3	.138
30	28.20	33.35	21.11	669.8	.205
50	26.48	33.65	21.89	595.8	.33[illegible]
75	17.31	34.83	25.34	267.7	.439
100	15.43	34.93	25.85	219.7	.500
150	14.11	34.94	26.14	195.3	.604
200	13.57	34.92	26.26	184.7	.698
250	12.93	34.89	26.34	175.0	.788
300	12.13	34.84	26.46	165.6	.874
400	9.93	34.73	26.78	135.8	1.025
500	8.27	34.66	26.99	117.0	1.152
600	7.04	34.61	27.13	105.7	1.252
700	6.25	34.58	27.22	98.1	1.343
800	5.68	34.58	27.29	89.9	1.436
1000	4.61	34.58	27.42	74.0	1.621
1200	3.94	34.60	27.50	70.2	1.772
1500	3.07	34.62	27.61	59.7	1.966

OBSERVED							INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)

YPT 31 05 13.2 N 086 10.0 W DATE 28 JAN 69 0805 GCT WIRE 01 DRY 79.2 WET 76.0 CRUISE YALOC49
WIND DIRECTION 12 VEL 04 KTS BAR 06 SWELL DIRECTION 19 H 01 T 10 CLOUD 8 AMT 2 WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO	Z	T	S	σ_t	δ	ΔD
0	28.09	30.030	4.74		8.287	2.125		0	28.09	30.03	18.67	903.9	0
10	28.56	32.547	4.71					10	28.56	32.55	20.40	737.4	.082
20	28.74	32.868	4.78					20	28.75	32.87	20.58	720.7	.155
30	28.05	32.908	4.83					30	28.05	32.91	20.84	496.5	.226
40	27.06	33.328	[illegible].90					50	22.15	34.21	23.60	432.6	.339
50	22.15	34.207	3.22					75	15.90	34.91	25.72	230.7	.422
75	15.90	34.907	1.26					100	14.98	34.94	25.96	209.3	.477
99	15.01	34.[illegible]3	1.24					150	13.85	34.94	26.20	187.3	.576
149	13.86	34.945	1.35					200	13.30	34.91	26.29	180.2	.668
198	13.32	34.913	0.86					250	12.77	34.89	26.37	173.6	.756
300	12.15	34.842	0.41					300	12.15	34.85	26.46	165.4	.841
400	10.37	34.747	0.19					400	10.38	34.75	26.72	143.1	.995
600	7.14	34.608	0.19					500	8.63	34.67	26.94	121.9	1.128
801	5.51	34.580	0.72					600	7.15	34.61	27.12	105.6	1.241
1000	4.66	34.583	0.98					700	6.18	34.59	27.23	95.2	1.342
1201	3.95	34.594	1.41					800	5.52	34.59	27.31	87.7	1.433
1412	3.32	34.614	1.61					1000	4.67	34.59	27.41	79.6	1.599
1476	3.17	34.621	1.72					1200	3.95	34.59	27.49	70.5	1.748
								1500	3.11	34.62	27.60	60.3	1.944

YPT 31 05 37.5 N 086 53.2 W DATE 28 JAN 69 1447 GCT WIRE DRY 82.9 WET 77.5 CRUISE YALOC49
WIND DIRECTION 14 VEL 04 KTS BAR 18 SWELL DIRECTION 17 H 02 T 05 CLOUD 8 AMT 2 WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO	Z	T	S	σ_t	δ	ΔD
0	28.31	31.639	4.80		8.304	2.166		0	28.31	31.64	19.80	794.9	0
10	28.32	31.632	4.79					10	28.32	31.64	19.79	796.0	.080
20	27.71	32.313	4.85					20	27.71	32.32	20.50	729.4	.156
30	27.44	32.544	4.80					30	27.44	32.55	20.76	703.9	.227
40	27.26	33.179	4.91					50	22.27	34.25	23.59	433.1	.341
50	22.27	34.242	3.22					75	16.40	34.87	25.49	253.5	.427
76	16.72	34.896	1.93					100	14.67	34.93	26.01	203.9	.484
100	14.67	34.927	1.06					150	13.75	34.93	26.21	184.9	.582
148	13.78	34.927	1.02					200	13.19	34.91	26.31	174.5	.673
199	13.20	34.907	0.72					250	12.72	34.87	26.37	173.7	.761
300	12.17	34.818	0.34					300	12.17	34.82	26.44	167.8	.846
400	10.32	34.744	0.09					400	10.32	34.75	26.72	142.6	1.001
599	7.00	34.605	0.19					500	8.40	34.66	26.97	118.5	1.132
650	6.72	34.596	0.28					600	6.99	34.60	27.13	104.0	1.243

YPT 32 04 52.3 N 086 38.0 W DATE 29 JAN 69 0247 GCT WIRE 05 DRY 80.9 WET 77.1 CRUISE YALOC49
WIND DIRECTION 12 VEL 07 KTS BAR 17 SWELL DIRECTION 27 H 02 T 06 CLOUD 8 AMT 2 WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO	Z	T	S	σ_t	δ	ΔD
0	28.46	31.113	4.71		8.263	2.110		0	28.46	31.12	19.36	837.5	0
10	28.29	31.342	4.73					10	28.29	31.35	19.59	816.0	.083
20	27.81	32.055	4.80					20	27.81	32.06	20.27	750.0	.161
30	27.42	32.602	4.80					30	27.42	32.61	20.81	699.0	.233
40	25.11	32.519	4.34					50	20.58	34.44	24.20	374.3	.341
50	20.58	34.435	2.81					75	16.31	34.91	25.63	232.8	.418
74	16.41	34.904	1.67					100	14.85	34.94	25.98	205.7	.473
99	14.88	34.940	1.44					150	13.91	34.95	26.19	184.4	.572
149	13.92	34.948	1.33					200	13.32	34.91	26.28	181.5	.664
199	13.33	34.912	0.79					250	12.59	34.91	26.43	167.9	.751
248	12.61	34.910	0.53					300	11.72	34.83	26.53	159.1	.833
300	11.72	34.822	0.25					400	9.99	34.72	26.76	138.7	.982
401	9.97	34.720	0.14					500	8.35	34.65	26.97	118.9	1.111
600	6.98	34.603	0.33					600	6.98	34.61	27.14	103.7	1.222
801	5.40	34.570	0.93					700	6.05	34.58	27.24	93.9	1.321
1000	4.64	34.577	1.24					800	5.41	34.57	27.31	87.0	1.411
1101	4.14	34.588	1.39					1000	4.65	34.58	27.41	79.6	1.577

YPT 33 04 26.1 N 087 06.5 W DATE 29 JAN 69 0850 GCT WIRE 05 DRY 80.5 WET 76.1 CRUISE YALOC49
WIND DIRECTION 16 VEL 10 KTS BAR 06 SWELL DIRECTION 20 H 02 T 12 CLOUD 8 AMT 2 WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO	Z	T	S	σ_t	δ	ΔD
0	28.16	30.848	4.79		8.287	2.079		0	28.17	30.85	19.26	847.1	0
10	28.18	30.893	4.80					10	28.19	30.90	19.28	844.9	.085
20	27.67	31.748	4.82					20	27.67	31.75	20.09	767.8	.165
30	27.42	32.202	4.90					30	27.42	32.21	20.51	727.8	.240
40	26.27	33.058	4.80					50	23.67	33.92	22.95	494.9	.362
50	23.67	33.917	3.94					75	17.74	34.79	25.20	281.7	.459
74	17.90	34.778	1.94					100	15.07	34.94	25.94	211.3	.521
99	15.13	34.941	1.18					150	13.91	34.95	26.19	188.3	.621
148	13.93	34.949	1.32					200	13.47	34.93	26.26	182.7	.713
198	13.50	34.927	0.47					250	12.75	34.88	26.38	172.9	.802
299	11.84	34.830	0.28					300	11.82	34.83	26.51	165.7	.886
400	9.63	34.715	0.15					400	9.63	34.72	26.82	132.9	1.032
600	7.15	34.610	0.30					500	8.16	34.65	27.00	115.0	1.157
801	5.81	34.576	1.00					600	7.16	34.62	27.12	105.4	1.267
998	4.69	34.578	1.24					700	6.40	34.59	27.20	99.1	1.349
1199	3.81	34.599	1.54					800	5.81	34.58	27.27	92.0	1.466
1401	3.39	34.614	1.62					1000	4.48	34.58	27.40	79.3	1.635
								1200	3.81	34.60	27.51	69.3	1.783

OBSERVED

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)

YPT 34 03 57.5 N ORT 34.4 W DATE 29 JAN 69 1444 GCT WIRE 04 DRY 83.0 WET 78.5 CRUISE YALOCAO
WIND DIRECTION 13 VEL 11 KTS BAR 14 SWELL DIRECTION 16 H 02 T 06 CLOUD 8 AMT 2 WEATHER 02

0	27.92	30.594	4.80			
10	27.92	30.602	4.80			
20	27.95	30.707	4.81			
30	27.76	31.453	4.80			
40	27.61	32.090	4.91			
50	22.81	34.13A	3.57			
75	14.94	34.860	1.77			
100	14.44	34.950				
149	14.02	34.953	1.32			
199	13.27	34.927	0.89			
299	11.48	34.813	0.19			
500	8.01	34.648	0.24			
600	7.20	34.613	0.45			
803	5.82	34.576	0.89			
1003	4.72	34.575	1.41			
1204	4.02		1.54			
1406	3.34	34.614	1.63			
1558	3.03	34.627	1.80			

8.294 2.079

INTERPOLATED DERIVED

Z (m)	T (°C)	S (‰)	σ_T	δ (10^5)	ΔD (dynm)
0	27.92	30.60	19.15	859.0	0
10	27.92	30.61	19.15	857.7	.086
20	27.96	30.71	19.22	851.4	.171
30	27.76	31.46	19.84	792.2	.253
50	22.81	34.14	23.36	455.4	.378
75	18.94	34.87	25.45	257.2	.467
100	14.94	34.96	25.97	207.7	.525
150	14.00	34.95	26.17	189.9	.625
200	13.29	34.93	26.31	174.3	.717
250	12.38	34.87	26.44	160.4	.803
300	11.48	34.81	26.57	155.4	.883
400	9.57	34.72	26.83	132.1	1.027
500	8.01	34.65	27.07	113.4	1.150
600	7.20	34.62	27.12	105.3	1.259
700	6.48	34.59	27.19	99.0	1.342
800	5.94	34.58	27.24	92.3	1.458
1000	4.73	34.58	27.40	80.2	1.630
1200	4.03	34.59	27.49	71.4	1.782
1500	3.13	34.62	27.60	60.8	1.980

YPT 35 03 29.6 N ORA 04.0 W DATE 29 JAN 69 2138 GCT WIRE 05 DRY 82.0 WET 76.6 CRUISE YALOCAO
WIND DIRECTION 17 VEL 12 KTS BAR 04 SWELL DIRECTION 16 H 02 T CLOUD 8 AMT 5 WEATHER 02

0	28.05	30.899	4.78
1	28.05	30.899	4.78
11	28.05	30.899	4.78
21	27.96	30.877	4.79
31	27.72	31.983	4.88
41	25.43	33.523	4.52
50	20.27	34.543	2.72
76	16.78	34.942	2.04
99	15.76	34.939	2.01
149	14.46	34.960	2.05
199	13.49	34.929	0.98
298		34.817	0.28
594	7.11	34.614	0.54
794	5.85	34.577	0.99
997	5.01	34.573	1.26
1196	4.01	34.592	1.48
1495	3.16	34.623	1.82
1794	2.52	34.642	2.19

8.288 2.129

0	28.05	30.90	19.33	840.0	0
10	28.05	30.90	19.33	840.4	.084
20	27.97	30.94	19.36	840.0	.168
30	27.79	31.84	20.11	765.7	.248
50	20.27	34.55	24.37	359.2	.361
75	14.91	34.93	25.50	252.0	.437
100	15.71	34.94	25.79	225.1	.497
150	14.44	34.94	26.07	199.7	.603
200	13.47	34.92	26.24	182.4	.699
250	12.46	34.87	26.42	164.3	.786
300	11.52	34.82	26.54	154.2	.867
400	9.80	34.73	26.80	135.1	1.013
500	8.33	34.66	26.98	117.6	1.139
600	7.09	34.61	27.13	104.8	1.250
700	6.36	34.59	27.21	97.6	1.352
800	5.66	34.58	27.26	92.3	1.445
1000	4.99	34.57	27.36	83.7	1.622
1200	4.00	34.59	27.49	71.1	1.777
1500	3.15	34.62	27.60	60.7	1.975

YPT 36 03 02.6 N ORA 33.2 W DATE 30 JAN 69 0315 GCT WIRE 06 DRY 78.2 WET 75.5 CRUISE YALOCAO
WIND DIRECTION 17 VEL 10 KTS BAR 08 SWELL DIRECTION 17 H 02 T 06 CLOUD 8 AMT 6 WEATHER 01

0	28.03	30.598	4.78
10	28.05	30.645	4.80
20	27.94	33.954	4.73
30	25.28	33.504	4.60
40	21.46	34.822	3.01
50	19.88	34.928	2.94
74	17.09	35.029	2.06
100	15.42	35.016	2.25
149	14.67	34.989	2.19
200	14.01	34.975	2.23
301		34.984	0.64
402	8.14	34.692	0.21
603		34.601	0.63
804	5.71	34.572	1.31
1004	4.81	34.575	1.35
1205	3.93	34.590	1.65
1406	2.93	34.627	1.91

8.289 2.099

0	28.03	30.60	19.11	861.1	0
10	28.05	30.65	19.14	858.7	.084
20	27.94	30.94	19.41	833.2	.171
30	25.28	33.51	22.16	469.0	.261
50	19.88	34.93	24.77	321.5	.330
75	17.31	35.03	25.48	253.7	.402
100	15.42	35.02	25.92	213.1	.460
150	14.68	34.99	26.04	200.7	.563
200	14.01	34.98	26.19	189.4	.661
250	12.87	34.98	26.43	168.3	.750
300	11.49	34.94	26.66	147.0	.829
400	9.19	34.70	26.88	127.2	.966
500	7.82	34.60	27.01	114.1	1.087
600	6.79	34.60	27.14	101.4	1.195
700	6.09	34.58	27.24	94.3	1.292
800	5.72	34.57	27.28	91.0	1.385
1000	4.83	34.57	27.38	81.4	1.557
1200	3.85	[illegible]	27.49	[illegible]	[illegible]
1500	2.95	34.63	27.62	58.1	1.903

YPT 37 02 34.0 N ORA 01.1 W DATE 30 JAN 69 1038 GCT WIRE 00 DRY 77.0 WET 74.5 CRUISE YALOCAO
WIND DIRECTION 14 VEL 12 KTS BAR 14 SWELL DIRECTION 15 H 02 T 05 CLOUD 6 AMT 4 WEATHER 02

0	27.82	30.414	4.80
10	27.84	30.426	4.73
20	27.92	30.699	4.80
30	25.84	33.213	4.73
40	22.39	34.231	3.39
50	18.02	34.864	2.71
74	16.50	35.003	2.23
99	15.27	34.977	1.84
149	14.11	34.973	2.10
199	13.83	34.967	1.91
300	11.94	34.829	0.40
401	9.30	34.698	0.19
604	6.71	34.594	0.85
803	5.75	34.567	1.33
1002	4.70	34.571	1.37
1205	3.94	34.585	1.71
1505	3.10	34.613	1.91
1807	2.40	34.645	2.23

8.283 2.073

0	27.82	30.42	19.04	867.9	0
10	27.84	30.43	19.04	867.9	.087
20	27.92	30.70	19.22	851.1	.173
30	25.84	33.22	21.77	607.3	.266
50	18.02	34.87	25.19	281.0	.336
75	16.44	35.00	25.67	235.9	.399
100	15.23	34.98	25.99	212.3	.455
150	14.10	34.97	26.17	190.4	.558
200	13.82	34.97	26.22	186.5	.650
250	13.03	34.91	26.36	174.7	.741
300	11.94	34.83	26.49	162.7	.824
400	9.33	34.70	26.84	129.4	.971
500	7.71	34.63	27.04	110.5	1.091
600	6.76	34.59	27.16	101.1	1.197
700	6.15	34.57	27.22	95.8	1.295
800	5.76	34.57	27.27	91.9	1.389
1000	4.71	34.57	27.38	80.2	1.581
1200	3.98	34.58	27.48	71.2	1.713
1500	3.11	34.61	27.59	61.1	1.911

YPT 38 02 05.0 N 080 29.3 W DATE 30 JAN 69 1715 GCT WIRE 00 DRY 80.0 WET 74.6 CRUISE YALOCAG
WIND DIRECTION 16 VEL 14 KTS BAR 09 SWELL DIRECTION 18 H 02 T 04 CLOUD 6 AMT 8 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	27.15	31.137	4.77	8.281		2.141		
10	27.15	31.136	4.77	8.280		2.141		
20	27.27	31.335	4.78	8.279		2.144		
30	26.54	32.617	4.80	8.246		2.244		
40	24.67	33.652	4.79	8.179		2.296		
49	18.59	34.53	3.12	7.992		2.[illegible]9		
75	15.75	35.058	2.58	7.944		2.392		
97	15.44	35.019	2.57	7.924		2.389		
147	14.18	34.990	2.11	7.861		2.408		
197	13.89	34.972	1.84	7.842		2.419		
298	12.54	34.877	0.68	7.687		2.379		
399	9.76	34.735	0.22	7.568		2.409		
600	6.91	34.601	0.79	7.554		2.419		
800	5.87	34.570	1.29	7.574		2.417		
999	4.45	34.578	1.51	7.581		2.450		
1124*	4.23	34.583	1.57	7.592		2.434		
1200	3.90	34.589	1.73	7.591				
1422*	3.27	34.611	1.82	7.598		2.459		
1500	3.13	34.616	1.91	7.614		2.477		
1674*	2.75	34.633	2.08	7.617		2.477		
1924*	2.37	34.650	2.21	7.641		2.480		
2173*	2.17	34.662	2.38	7.649		2.500		
2222*	2.13	34.664	2.32	7.649		2.500		
2247*	2.13	34.444	2.34	7.656		2.505		
2257*				7.646				
2271*				7.661				
2266*				7.631				
2272*				7.656				

INTERPOLATED Z (m)	T (°C)	S (‰)	DERIVED σ_t	a ($\times 10^5$)	ΔD (dyn.m)
0	27.15	31.14	19.80	795.2	0
10	27.15	31.14	19.80	795.6	.080
20	27.27	31.34	19.91	785.3	.159
30	26.54	32.62	21.10	671.1	.231
50	18.25	34.59	24.92	306.8	.329
75	15.75	35.06	25.87	216.4	.395
100	15.35	35.02	25.93	212.1	.448
150	14.15	34.99	26.17	190.3	.549
200	13.87	34.97	26.22	187.3	.643
250	13.33	34.93	26.29	180.9	.735
300	12.49	34.87	26.42	169.9	.823
400	9.74	34.73	26.81	133.6	.974
500	7.99	34.65	27.02	113.3	1.098
600	6.92	34.61	27.15	102.8	1.206
700	6.30	34.58	27.21	97.5	1.306
800	5.88	34.58	27.26	92.9	1.401
1000	4.45	34.58	27.43	76.4	1.570
1200	3.91	34.59	27.50	69.9	1.716
1500	3.14	34.62	27.60	60.8	1.912
2000	2.30	34.65	27.70	51.1	2.192

YPT 39 01 28.4 N 090 08.8 W DATE 30 JAN 69 1735 GCT WIRE DRY 76.8 WET 73.7 CRUISE YALOCAG
WIND DIRECTION 16 VEL 13 KTS BAR 09 SWELL DIRECTION 17 H 02 T 05 CLOUD 8 AMT 3 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	25.81	33.791	4.87	8.245		2.302		
10	25.60	33.831	4.90					
20	25.34	33.886	4.91					
30	24.05	34.031	4.88					
40	19.15	35.049	3.42					
49	17.31	35.073	2.97					
75	15.61	35.050	2.75					
99	15.43	35.054	2.58					
147	14.22	34.984	2.10					
198	13.74	34.957	1.73					
299	12.07	34.859	0.37					
400	9.73	34.728	0.28					
600	7.11	34.605	0.66					
801	5.84	34.570	1.19					
1001	4.59	34.574	1.60					
1203	4.00	34.584	1.71					
1503	3.08	34.612	2.00					
1703	2.59	34.636	2.19					

INTERPOLATED Z (m)	T (°C)	S (‰)	DERIVED σ_t	a ($\times 10^5$)	ΔD (dyn.m)
0	25.81	33.80	22.21	563.8	0
10	25.60	33.84	22.31	555.0	.056
20	25.34	33.89	22.43	543.8	.111
30	24.05	34.04	22.92	496.7	.163
50	17.18	35.07	25.55	246.7	.237
75	15.61	35.05	25.90	214.0	.295
100	15.41	35.05	25.95	210.4	.348
150	14.18	34.98	26.16	191.4	.448
200	13.71	34.96	26.24	185.3	.542
250	12.98	34.91	26.35	175.3	.632
300	12.05	34.86	26.49	162.8	.717
400	9.73	34.73	26.81	133.6	.865
500	8.17	34.65	27.00	116.0	.990
600	7.11	34.61	27.12	105.4	1.101
700	6.39	34.58	27.20	98.5	1.202
800	5.84	34.57	27.26	92.9	1.298
1000	4.60	34.57	27.41	78.5	1.469
1200	4.01	34.58	27.48	71.9	1.620
1500	3.09	34.61	27.59	60.9	1.819

YPT 40 00 47.0 N 090 08.7 W DATE 31 JAN 69 1125 GCT WIRE 01 DRY 75.5 WET 72.8 CRUISE YALOCAG
WIND DIRECTION 17 VEL 12 KTS BAR 08 SWELL DIRECTION 17 H 03 T 05 CLOUD 8 AMT 7 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	24.41	34.252	4.82	8.192		2.338		
10	24.31	34.258	4.80					
20	23.36	34.303	4.52					
30	18.99	34.953	3.29					
40	17.42	35.092	2.77					
49	16.66	35.100	2.66					
75	15.67	35.076	2.53					
98	15.32	35.059	2.53					
147	14.25	34.991	2.08					
198	13.48	34.948	1.22					
299	12.02	34.864	0.37					
399	10.02	34.753	0.24					
600	7.17	34.613	0.91					
801	5.92	34.577	1.20					
1001	4.75	34.576	1.45					
1202	3.93	34.595	1.73					
1502	3.02	34.618	2.08					
1803	2.40	34.649	2.23					
2002	2.28	34.658						

INTERPOLATED Z (m)	T (°C)	S (‰)	DERIVED σ_t	a ($\times 10^5$)	ΔD (dyn.m)
0	24.42	34.26	22.98	489.9	0
10	24.31	34.26	23.02	487.0	.049
20	23.36	34.31	23.33	457.4	.096
30	19.00	34.96	25.01	297.1	.134
50	16.40	35.10	25.71	231.4	.187
75	15.67	35.08	25.91	213.4	.242
100	15.28	35.06	25.98	207.4	.295
150	14.20	34.99	26.16	191.7	.394
200	13.45	34.95	26.28	180.7	.487
250	12.76	34.91	26.39	171.4	.575
300	12.00	34.86	26.51	161.4	.659
400	10.00	34.75	26.78	136.7	.808
500	8.39	34.47	26.98	117.9	.935
600	7.18	34.62	27.12	105.7	1.047
700	6.44	34.59	27.19	98.7	1.149
800	5.92	34.58	27.25	93.4	1.245
1000	4.76	34.58	27.39	80.4	1.419
1200	3.94	34.59	27.50	70.2	1.569
1500	3.02	34.62	27.60	59.7	1.764
2000	2.28	34.66	27.70	50.4	2.039

OBSERVED									INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁵)	ΔD (dyn.m)

YPT 41 00 07.2 N 090 09.3 W DATE 31 JAN 69 1805 GCT WIRE 02 DRY 77.0 WET 74.0 CRUISE YALOCAG
WIND DIRECTION 17 VEL 11 KTS BAR 10 SWELL DIRECTION 19 H 02 T 04 CLOUD 3 AMT 6 WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO_3	SiO_2	Z	T	S	σ_t	δ	ΔD
0	24.53	34.404	4.99		8.193	2.321			0	24.53	34.41	23.06	482.4	0
10	24.12	34.443	4.82						10	24.13	34.45	23.21	468.2	.048
20	22.62	34.744	4.14						20	22.63	34.75	23.88	405.3	.091
30	20.09	34.971	3.14						30	20.09	34.98	24.74	323.0	.128
50	18.34	35.072	2.85						50	17.25	35.09	25.54	247.2	.185
49	17.33	35.086	[illegible]						75	15.99	35.06	25.84	220.0	.243
75	15.99	35.080	[illegible]						100	15.66	35.09	25.92	213.0	.297
99	15.68	35.092	2.47						150	14.52	[illegible]	26.11	196.4	.399
147	14.58	35.017	2.28						200	13.64	[illegible]	26.25	183.6	.494
198	13.66	34.954	1.35						250	13.01	34.92	26.35	175.3	.584
298	12.36	34.883	0.37						300	12.31	34.88	26.46	165.2	.669
399	9.96	34.749	0.22						400	9.94	34.75	26.79	135.0	.821
600	7.26	34.619	0.79						500	8.35	34.67	26.98	117.5	.947
800	5.91	34.579	1.17						600	7.27	34.62	27.11	106.5	1.059
999	4.86	34.576	1.47						700	6.48	34.59	27.19	99.9	1.162
1200	4.04	34.589	1.70						800	5.92	34.58	27.26	92.8	1.258
1449	3.11	34.617	1.93						1000	4.86	34.58	27.38	81.7	1.432
									1200	4.04	34.59	27.49	71.6	1.585

YPT 42 00 07.0 S 090 09.5 W DATE 01 FEB 69 0041 GCT WIRE DRY 76.0 WET 74.0 CRUISE YALOCAG
WIND DIRECTION 16 VEL 12 KTS BAR 07 SWELL DIRECTION 17 H 03 T 05 CLOUD 3 AMT 4 WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO_3	SiO_2	Z	T	S	σ_t	δ	ΔD
0	24.06	34.473	4.77		8.164	2.348			0	24.06	34.48	23.25	464.0	0
10	23.62	34.496	4.67						10	23.63	34.50	23.40	450.4	.046
20	19.63	34.924	3.55						20	19.63	34.93	24.83	314.6	.084
30	17.92	35.051	2.99						30	17.92	35.06	25.34	264.5	.113
40	16.74	35.045	2.66						50	16.39	35.05	25.72	230.4	.162
49	16.43	35.048	2.51						75	15.55	35.09	25.94	210.2	.217
75	15.55	35.084	2.49						100	15.29	35.06	25.98	207.5	.270
99	15.30	35.059	2.55						150	14.65	35.01	26.08	199.8	.371
148	14.69	35.015	2.38						200	13.64	34.96	26.25	183.7	.467
199	13.66	34.958	1.45						250	12.64	34.90	26.41	169.6	.555
300		34.844	0.23						300	11.66	34.85	26.56	156.2	.637
401	9.70	34.731	0.24						400	9.72	34.73	26.82	133.4	.781

YPT 43 00 28.8 S 090 10.0 W DATE 01 FEB 69 0458 GCT WIRE 00 DRY 74.2 WET 73.0 CRUISE YALOCAG
WIND DIRECTION 17 VEL 10 KTS BAR 09 SWELL DIRECTION 16 H 02 T 04 CLOUD 3 AMT 7 WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO_3	SiO_2	Z	T	S	σ_t	δ	ΔD
0	22.61	34.620	4.37		8.122	2.359			0	22.61	34.63	23.79	413.3	0
10	19.70	34.909	3.55						10	19.71	34.91	24.80	317.1	.037
20	18.74	35.018	3.22						20	18.75	35.02	25.13	286.0	.067
30	18.40	35.031	3.03						30	18.40	35.04	25.22	277.3	.095
40	18.09	35.004	2.96						50	17.17	34.99	25.49	252.6	.148
49	17.26	34.987	2.75						75	15.59	35.07	25.92	212.4	.206
75	15.59	35.066	2.47						100	15.24	35.06	25.99	206.5	.258
99	15.25	35.059	2.47						150	14.90	35.03	26.04	202.9	.361
147	14.95	35.029	2.44						200	13.80	34.97	26.23	185.8	.459
198	13.84	34.972	1.63						250	12.74	34.93	26.42	169.2	.546
299		34.893	0.82						300	11.74	34.89	26.58	154.7	.627
399	9.93	34.748	0.28						400	9.91	34.75	26.73	135.6	.772
600	7.08	34.611	0.87						500	8.34	34.66	26.93	117.8	.899
801	5.77	34.580	1.26						600	7.08	34.62	27.13	104.5	1.010
1000	4.84	34.575	1.54						700	6.31	34.59	27.21	96.8	1.111
									800	5.77	34.58	27.28	91.2	1.205
									1000	4.84	34.58	27.38	81.6	1.377

YPT 44 00 50.[illegible] S 089 41.2 W DATE 01 FEB 69 1213 GCT WIRE DRY 75.5 WET 74.0 CRUISE YALOCAG
WIND DIRECTION 17 VEL 12 KTS BAR 16 SWELL DIRECTION 18 H 01 T 05 CLOUD 6 AMT 8 WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO_3	SiO_2	Z	T	S	σ_t	δ	ΔD
0	21.48	34.737	4.08		8.100	2.363			0	21.48	34.74	24.19	374.7	0
10	20.67	34.837	3.76						10	20.67	34.84	24.49	346.8	.036
20		34.905	3.57						20	19.58	34.91	24.83	314.7	.069
30	18.66	34.980	3.11						30	18.67	34.99	25.12	287.2	.099
40	18.33	35.008	2.98						50	17.58	35.05	25.44	257.1	.154
49	17.68	35.052	2.82						75	15.41	35.08	25.94	208.2	.212
75	15.41	35.071	2.40						100	15.27	35.06	25.99	206.6	.264
99	15.27	35.064	2.35						150	15.04	35.05	26.02	204.4	.366
148	15.07	35.048	2.35						200	14.23	35.00	26.16	192.3	.466
199	14.25	35.002	1.90						250	13.20	34.95	26.34	176.7	.558
300		34.893	0.79						300	12.14	34.90	26.51	161.6	.642
401	9.94	34.749	0.24						400	9.96	34.75	26.79	136.1	.791
480	8.52	34.681	0.53											

YPT 45 00 40.0 S 090 33.4 W DATE 02 FEB 69 0719 GCT WIRE DRY 74.0 WET 74.0 CRUISE YALOCAG
WIND DIRECTION 16 VEL 04 KTS BAR 07 SWELL DIRECTION H T CLOUD 3 AMT 7 WEATHER 02

D	T	S	O_2	PO_4	pH	Alk.	NO_3	SiO_2	Z	T	S	σ_t	δ	ΔD
0	24.48	34.417	4.90						0	24.48	34.42	23.09	480.0	0
10	22.64	34.610	4.43						10	22.65	34.62	23.77	415.2	.045
20	20.52	34.876	3.78						20	20.52	34.88	24.54	340.4	.083
30	20.26	34.867	3.59						30	20.26	34.87	24.62	334.8	.116
49	17.14	35.018	2.73						50	17.06	35.02	25.54	247.4	.175
75	15.97	35.038	2.40						75	15.97	35.04	25.81	222.4	.233
99	15.21	35.024	2.23											

OBSERVED									INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)

YPT 46 00 42.8 S 090 39.8 W DATE 02 FEB 69 0912 GCT WIRE DRY 74.9 WET 73.9 CRUISE YALOC69
WIND DIRECTION 16 VEL 04 KTS BAR 06 SWELL DIRECTION H T CLOUD 3 AMT 6 WEATHER 02

0	24.34	34.409	4.77						0	24.34	34.41	23.12	476.6	0
10	23.41	34.525	4.62						10	23.42	34.53	23.48	442.6	.048
20	19.76	34.889	3.53						20	19.76	34.89	24.77	320.3	.084
30	19.20	34.956	3.25						30	19.21	34.96	24.96	302.0	.115
40	16.79	35.022	2.60						50	15.87	35.02	25.81	221.7	.145
49	15.91	35.015	2.37						75	15.70	35.03	25.86	217.7	.223
75	15.70	35.025	2.34						100	15.57	35.03	25.89	215.5	.277
99	15.58	35.030	2.34						150	14.82	35.01	26.04	202.6	.381
148	14.84	35.010	2.19						200	14.65	35.00	26.07	201.2	.482
198	14.65	35.001	2.14											

YPT 47 00 44.2 S 090 44.7 W DATE 02 FEB 69 1042 GCT WIRE 04 DRY 75.0 WET 73.5 CRUISE YALOC69
WIND DIRECTION 17 VEL 08 KTS BAR 16 SWELL DIRECTION H 00 T CLOUD 8 AMT 1 WEATHER 01

0	24.23	34.424	4.75		8.162	2.341			0	24.23	34.43	23.17	472.4	0
10	22.95	34.580	4.40						10	22.96	34.58	23.66	425.8	.048
20	19.60	34.909	3.40						20	19.60	34.91	24.82	314.9	.082
30	18.97	34.929	3.16						30	18.98	34.93	25.00	298.4	.113
40	16.88	34.984	2.65											
49	16.49	34.991	2.42											

YPT 48 00 31.0 S 090 44.1 W DATE 02 FEB 69 1318 GCT WIRE 01 DRY 75.5 WET 74.0 CRUISE YALOC69
WIND DIRECTION 18 VEL 10 KTS BAR 06 SWELL DIRECTION 18 H 01 T 08 CLOUD 3 AMT 2 WEATHER 02

0	23.74	34.498	4.68		8.161	2.351			0	23.75	34.49	23.36	453.9	0
10	23.21	34.545	4.62						10	23.21	34.55	23.56	435.5	.044
15	20.72	34.910	3.85						20	20.15	34.88	24.66	337.7	.083
20	20.14	34.878	3.54						30	19.55	34.92	24.84	313.4	.115
30	19.55	34.918	3.40						50	16.29	35.01	25.71	231.1	.164
40	17.89	34.953	2.89						75	15.80	35.03	25.84	220.1	.225
49	16.36	35.009	2.47						100	15.07	35.02	26.00	205.5	.274
75	15.80	35.022	2.40						150	14.45	35.00	26.11	195.9	.375
99	15.09	35.023	2.29						200	13.86	34.97	26.22	187.0	.475
148	14.48	34.998	2.12						250	13.20	34.93	26.33	177.4	.564
199	13.87	34.971	1.88						300	12.14	34.89	26.50	161.8	.651
300		34.890	1.17						400	9.65	34.77	26.80	134.4	.794
401		34.770	0.53						500	8.34	34.70	27.01	115.1	.924
501		34.696	0.74											

YPT 49 00 24.0 S 090 55.4 W DATE 02 FEB 69 1533 GCT WIRE 00 DRY 76.8 WET 74.2 CRUISE YALOC69
WIND DIRECTION 16 VEL 07 KTS BAR 20 SWELL DIRECTION 15 H 02 T 06 CLOUD 6 AMT 8 WEATHER 03

0	24.49	34.488	5.44		8.223	2.335			0	24.50	34.49	23.14	475.2	0
10	23.97	34.489	5.05						10	23.98	34.49	23.29	467.7	.047
20	22.70	34.612	4.52						20	22.71	34.62	23.75	417.0	.091
30	21.85	34.716	4.22						30	21.85	34.72	24.07	387.0	.131
40	20.64	34.802	3.74						50	18.20	34.91	25.18	282.0	.194
49	18.38	34.905	2.99						75	15.69	35.01	25.85	218.6	.262
75	15.69	35.010	2.30											
99	15.28	35.018	2.27											

YPT 50 00 21.9 S 090 52.8 W DATE 02 FEB 69 1802 GCT WIRE 05 DRY 79.8 WET 75.6 CRUISE YALOC69
WIND DIRECTION 14 VEL 05 KTS BAR 10 SWELL DIRECTION 17 H 01 T 06 CLOUD 8 AMT 7 WEATHER 02

0	24.49	34.420	4.80		8.184	2.341			0	24.50	34.42	23.09	480.1	0
10	24.07	34.440	4.91						10	24.07	34.45	23.23	467.0	.047
13	23.83	34.769	4.98						20	23.44	34.52	23.47	444.1	.093
20	23.43	34.514	4.80						30	20.90	34.75	24.36	359.5	.133
30	20.89	34.749	4.01						50	18.65	34.90	25.06	293.3	.194
40	19.83	34.868	3.58						75	15.49	35.04	25.87	219.6	.262
49	18.79	34.897	3.21						100	15.12	35.02	25.99	206.4	.315
75	15.68	35.034	2.38						150	14.51	35.00	26.10	195.7	.414
99	15.14	35.025	2.30						200	13.78	34.97	26.23	184.5	.511
149	14.52	35.001	2.19						250	12.99	34.94	26.37	173.3	.60[illegible]
189*	13.95	34.976	1.91						300	12.12	34.90	26.51	161.1	.685
290*		34.911	1.17						400	10.18	34.76	26.76	139.3	.835
394*	10.29	34.767	0.60											

YPT 51 00 20.2 S 090 51.0 W DATE 02 FEB 69 2007 GCT WIRE DRY 76.8 WET 74.5 CRUISE YALOC69
WIND DIRECTION 11 VEL 07 KTS BAR 07 SWELL DIRECTION H T CLOUD 8 AMT 7 WEATHER 02

0	24.12	34.443	4.82		8.170	2.324			0	24.13	34.45	23.21	467.9	0
10	23.97	34.453	4.80						10	23.98	34.46	23.26	463.3	.047
20	23.54	34.502	4.71						20	23.54	34.51	23.43	444.1	.092
30	19.98	34.860	3.61						30	19.98	34.87	24.69	324.3	.131
40	19.53	34.896	3.45						50	18.88	34.92	25.02	297.5	.193
49	19.00	34.917	3.26						75	15.89	35.02	25.81	222.5	.254
74	15.95	35.021	2.44						100	15.15	35.02	25.98	207.2	.312
98	15.18	35.020	2.36						150	14.52	35.00	26.10	197.1	.411
146	14.59	35.002	2.20						200	13.58	34.95	26.26	182.8	.504
197	13.63	34.954	1.75						250	12.82	34.92	26.39	171.3	.597
298	12.06	34.867	0.91						300	12.02	34.86	26.50	162.0	.645
398	9.93	34.547	0.42						400	9.99	34.54	26.64	153.3	.826

OBSERVED | INTERPOLATED | DERIVED

YPT 52 00 06.7 S 091 03.1 W DATE 02 FEB 69 2219 GCT WIRE DRY 75.1 WET 73.1 CRUISE YALOCAG
WIND DIRECTION 13 VEL 14 KTS BAR 14 SWELL DIRECTION 18 H 02 T 06 CLOUD 6 AMT 8 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.334		
[illegible]	[illegible]	[illegible]	[illegible]					
[illegible]	[illegible]	[illegible]	[illegible]					
[illegible]	[illegible]	[illegible]	4.34					
[illegible]	[illegible]	34.811	[illegible]					
[illegible]	[illegible]	34.963	[illegible]					
13	15.78	35.076	2.53					
98	15.15	35.030	2.30					
147	14.09	34.987	2.01					
197	13.37	34.946	1.39					
298	11.53	34.841	0.68					
399	9.42	34.726	0.53					
600	6.81	34.596	1.00					
800	5.51	34.572	1.37					
999	4.83	34.570	1.61					
1200	3.71	34.592	1.91					
1500	3.09	34.612	2.11					
2000	2.14	34.655	2.66					

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁵)	ΔD (dyn.m)
0	24.19	34.48	23.22	467.4	0
10	23.96	34.52	23.32	458.2	.046
20	23.51	34.61	23.52	439.5	.091
30	21.88	34.72	24.07	387.8	.133
50	18.69	34.97	25.10	289.3	.200
75	15.78	35.08	25.88	215.7	.263
100	15.10	35.03	25.99	205.7	.316
150	14.04	34.98	26.19	188.4	.414
200	13.32	34.94	26.31	178.3	.506
250	12.45	34.89	26.44	166.5	.592
300	11.49	34.84	26.58	153.3	.672
400	9.40	34.73	26.86	128.7	.814
500	7.89	34.65	27.04	112.1	.934
600	6.82	34.60	27.16	101.5	1.041
700	6.04	34.58	27.24	93.3	1.139
800	5.52	34.58	27.31	87.5	1.230
1000	4.82	34.57	27.38	81.7	1.399
1200	3.72	34.60	27.52	67.3	1.548
1500	3.10	34.62	27.60	60.4	1.740
2000	2.14	34.65	27.71	49.1	2.014

YPT 53 00 13.2 N 091 27.8 W DATE 03 FEB 69 0535 GCT WIRE 05 DRY 76.2 WET 74.8 CRUISE YALOCAG
WIND DIRECTION 21 VEL 08 KTS BAR 08 SWELL DIRECTION 34 H 02 T 06 CLOUD 6 AMT 8 WEATHER 03

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	24.43	34.563	5.68		8.248	2.348		
10	22.78	34.713	4.62					
20	21.41	34.929	4.06					
30	19.49	34.973	3.40					
40	17.03	35.030	2.89					
49	15.91	35.039	2.51					
75	15.42	35.062	2.61					
99	15.08	35.062	2.70					
148	14.97	35.061	2.66					
198	14.60	35.029	2.44					
299	11.81	34.854	0.60					
399	9.59	34.673	0.41					
605	6.95	34.598	0.98					
801	5.48	34.568	1.45					
1000		34.565	1.73					
1201	3.60	34.594	2.02					
1490	3.00	34.620	2.10					
2001	2.19	34.651	2.58					

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁵)	ΔD (dyn.m)
0	24.44	34.57	23.21	468.3	0
10	22.78	34.72	23.81	411.5	.044
20	21.42	34.93	24.35	359.4	.083
30	19.50	34.98	24.90	307.5	.116
50	15.85	35.04	25.94	219.5	.169
75	15.42	35.07	25.95	209.3	.222
100	15.08	35.06	26.03	202.7	.274
150	14.96	35.05	26.05	201.2	.375
200	14.56	35.03	26.11	197.3	.474
250	13.36	34.95	26.30	180.1	.569
300	11.78	34.85	26.54	158.2	.653
400	8.57	34.67	26.95	119.4	.792
500	7.36	34.61	27.09	107.3	.905
600	6.99	34.60	27.13	104.3	1.011
700	6.21	34.58	27.22	96.3	1.111
800	5.49	34.57	27.30	88.2	1.203
1000	4.37	34.57	27.43	76.3	1.367
1200	3.60	34.59	27.53	66.2	1.509
1500	2.95	34.62	27.61	58.3	1.697
2000	2.19	34.65	27.70	50.3	1.969

YPT 54 00 09.4 S 091 33.4 W DATE 03 FEB 69 0932 GCT WIRE 00 DRY 74.8 WET 73.2 CRUISE YALOCAG
WIND DIRECTION VEL 00 KTS BAR 08 SWELL DIRECTION H 00 T CLOUD 6 AMT 8 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	23.58	34.901	5.74		8.200	2.387		
10	21.68	34.984	4.59					
20	21.49	34.996	4.43					
30	20.68	35.089	4.06					
40		35.183	3.22					
49	17.18	35.139	2.85					
75	16.06	35.083	2.85					
99	16.01	35.126	2.93					
147	15.41	35.095	2.87					
198	13.22	34.945	1.54					
299	12.18	34.874	0.85					
399	9.51	34.718	0.37					
600	6.78	34.588	1.12					
801	5.50	34.565	1.50					
1001	4.85	34.561	1.73					
1202	3.75	34.583	1.91					
1502	3.04	34.610	2.10					
2002	2.24	34.646	2.55					

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁵)	ΔD (dyn.m)
0	23.58	34.91	23.72	419.7	0
10	21.69	34.99	24.32	362.4	.039
20	21.50	35.00	24.38	356.3	.075
30	20.69	35.09	24.57	329.4	.109
50	17.09	35.13	25.62	240.7	.144
75	16.06	35.09	25.92	221.3	.224
100	16.01	35.13	25.97	218.1	.279
150	15.29	35.09	26.00	206.8	.385
200	13.19	34.94	26.33	175.7	.481
250	12.51	34.90	26.43	167.4	.566
300	12.16	34.87	26.48	163.3	.649
400	9.49	34.72	26.96	130.7	.796
500	7.82	34.63	27.04	112.1	.918
600	6.79	34.59	27.15	101.3	1.025
700	6.07	34.57	27.23	94.3	1.123
800	5.60	34.57	27.29	90.1	1.216
1000	4.85	34.56	27.37	82.8	1.388
1200	3.76	34.58	27.51	69.3	1.540
1500	3.04	34.61	27.59	60.7	1.734
2000	2.24	34.65	27.70	51.3	2.013

YPT 55 01 07.4 S 089 03.0 W DATE 05 FEB 69 0851 GCT WIRE 05 DRY 76.8 WET 75.0 CRUISE YALOCAG
WIND DIRECTION 14 VEL 08 KTS BAR 10 SWELL DIRECTION 19 H 02 T 12 CLOUD 3 AMT 2 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	25.34	34.707	5.00		8.181	2.383		
10	24.97	34.799	4.94					
20	24.14	34.904	4.74					
30	23.48	34.923	4.54					
40	22.14	34.949	4.15					
49	18.91	35.018	3.14					
75	18.02	35.167	2.45					
99	15.95	35.092	2.38					
148	14.43	35.011	1.98					
199	13.84	34.978	1.63					
248	13.37	34.910	1.26					

Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁵)	ΔD (dyn.m)
0	25.34	34.71	23.04	484.3	0
10	24.99	34.80	23.23	466.3	.048
20	24.15	34.91	23.56	435.3	.093
30	23.48	34.93	23.76	415.4	.135
50	18.77	35.03	25.12	287.4	.206
75	18.02	35.17	25.42	259.8	.274
100	15.93	35.09	25.86	218.3	.336
150	14.40	35.01	26.13	193.4	.437
200	13.83	34.99	26.23	185.0	.532
250	13.35	34.91	26.27	182.3	.624

OBSERVED									INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)

YPT 56 01 08.9 S 088 23.1 W DATE 05 FEB 69 1511 GCT WIRE DRY 79.1 WET 77.1 CRUISE YALOCAG
WIND DIRECTION 16 VEL 10 KTS BAR 12 SWELL DIRECTION 18 H 02 T 05 CLOUD 8 AMT 1 WEATHER 02

0	24.61	34.490	4.96		8.186	2.354			0	24.61	34.50	23.10	478.5	0
10	24.51	34.499	4.91						10	24.51	34.50	23.14	475.3	.048
20	23.96	34.692	4.80						20	23.96	34.70	23.45	446.1	.094
30	23.85	34.913	4.80						30	23.85	34.92	23.65	427.4	.137
40	22.58	35.001	4.21						50	20.19	35.09	24.81	317.4	.212
64	16.96	35.181	2.47						75	16.17	35.16	25.96	218.7	.279
89	15.88	35.108	2.49						100	15.53	35.08	25.94	210.7	.332
137	14.69	35.026	2.20						150	14.54	35.01	26.11	196.4	.434
187	14.16	34.987							200	13.89	34.97	26.21	187.5	.530
287	11.61	34.[illegible]							250	12.67	34.91	26.41	169.6	.619
387	9.03	34.695							300	11.25	34.83	26.62	150.3	.699
586	6.66	34.591	1.07						400	8.80	34.68	26.93	122.3	.835
765	5.36	34.578	1.36						500	7.40	34.61	27.08	107.3	.950
874		34.575	1.48						600	6.53	34.59	27.14	98.7	1.053
									700	5.74	34.58	27.28	89.4	1.147
									800	5.60	34.58	27.29	89.1	1.236

YPT 57 01 07.0 S 087 43.0 W DATE 05 FEB 69 2355 GCT WIRE 04 DRY 79.8 WET 75.5 CRUISE YALOCAG
WIND DIRECTION 18 VEL 08 KTS BAR 08 SWELL DIRECTION 18 H 02 T 06 CLOUD 8 AMT 3 WEATHER 02

0	26.84	32.388	4.80		8.271	2.212			0	26.84	32.39	20.83	695.6	0
10	24.82	33.814	4.91						10	24.92	33.82	22.53	533.6	.061
20	23.40	34.694	4.67						20	23.40	34.70	23.61	430.3	.110
30	22.62	34.903	4.43						30	22.63	34.91	24.00	394.[illegible]	.151
40	19.12	35.135	2.87						50	17.53	35.22	25.58	243.4	.215
49	17.63	35.227	2.19						75	16.15	35.16	25.84	218.2	.272
74	16.19	35.160	2.38						100	15.36	35.09	25.98	206.5	.325
98	15.40	35.089	2.38						150	14.53	35.04	26.13	194.[illegible]	.426
197	14.00	34.978	1.41						200	13.94	34.96	26.19	189.3	.522
297	11.78	34.354	0.20						250	12.49	34.62	26.14	195.[illegible]	.618
396	9.31	34.709	0.30						300	11.70	34.36	26.17	192.5	.715
595	6.76	34.598	0.89						400	9.23	34.71	26.98	127.3	.875
794	5.84	34.574	1.26						500	7.67	34.65	27.07	108.6	.993
992	4.63	34.572	1.61						600	6.73	34.60	27.16	100.5	1.097
1191	3.87	34.584	1.75						700	6.19	34.58	27.22	95.6	1.195
									800	5.80	34.57	27.27	92.[illegible]	1.289
									1000	4.59	34.57	27.41	78.5	1.460
									1200	3.84	34.58	27.50	69.7	1.608

YPT 58 01 07.0 S 087 02.6 W DATE 06 FEB 69 0648 GCT WIRE 05 DRY 79.5 WET 76.0 CRUISE YALOCAG
WIND DIRECTION 16 VEL 10 KTS BAR 10 SWELL DIRECTION 18 H 02 T 08 CLOUD 6 AMT 6 WEATHER 02

0	26.95	32.411	4.89		8.274	2.212			0	26.98	32.42	20.82	697.3	0
10	26.89	32.445	4.88						10	26.90	32.45	20.86	693.6	.070
20	24.17	33.926	4.74						20	24.17	33.93	22.81	507.7	.130
30	22.97	34.720	4.52						30	22.98	34.72	23.74	416.5	.176
34	19.78	35.054	3.33						50	17.94	34.97	25.29	271.5	.245
49	18.02	34.968	4.09						75	16.32	34.98	25.68	234.7	.308
147	14.80	35.023	2.22						100	15.27	35.00	25.93	211.5	.364
198	14.28	34.999	1.80						150	14.76	35.02	26.04	200.6	.447
298	12.57	34.897	0.30						200	14.26	35.00	26.15	193.3	.565
398	9.33	34.708	0.26						250	13.54	34.96	26.27	183.3	.659
598	6.94	34.602	0.79						300	12.51	34.99	26.43	168.5	.747
798	5.71	34.570	1.26						400	9.29	34.71	26.87	128.3	.896
997	4.68	34.572	1.50						500	7.70	34.63	27.05	110.6	1.015
1197	3.71	34.597	1.73						600	6.92	34.60	27.14	103.3	1.122
1497	3.19	34.613	1.91						700	6.23	34.58	27.22	96.3	1.222
1597	2.89	34.623	2.01						800	5.70	34.57	27.28	90.5	1.315
									1000	4.66	34.57	27.40	79.5	1.485
									1200	3.70	34.60	27.52	67.3	1.632
									1500	3.18	34.61	27.59	61.3	1.825

YPT 59 01 07.8 S 086 24.0 W DATE 06 FEB 69 1825 GCT WIRE 02 DRY 81.0 WET 77.0 CRUISE YALOCAG
WIND DIRECTION 17 VEL 10 KTS BAR 12 SWELL DIRECTION 18 H 02 T 05 CLOUD 8 AMT 3 WEATHER 02

0	27.01	32.776	4.79		8.247	2.230			0	27.01	32.78	21.07	472.5	0
10	25.82	33.229	4.80						10	25.82	33.23	21.78	404.5	.064
20	22.79	34.528	4.43						20	22.79	34.53	23.46	425.5	.115
30	21.32	34.994	3.91						30	21.32	35.00	24.43	352.3	.154
40	19.14	35.163	2.85						50	16.72	35.14	25.71	231.7	.213
49	16.85	35.146	2.66						75	15.51	35.10	25.94	208.6	.268
75	15.51	35.097	2.29						100	14.85	35.02	26.04	200.3	.319
98	14.89	35.026	2.10						150	14.35	34.99	26.13	194.2	.418
147	14.36	34.990	1.86						200	14.14	34.99	26.17	191.5	.514
198	14.15	34.[illegible]7	1.86						250	13.58	34.96	26.26	183.5	.608
298	12.69	34.905	0.38						300	12.63	34.90	26.41	170.7	.696
398	9.60	34.729	0.19						400	9.56	34.73	26.84	131.7	.847
599		34.643	0.51						500	7.84	34.66	27.08	110.5	.968
799	5.66	34.565	1.28						600	6.62	34.64	27.22	95.3	1.071
998	4.62	34.572	1.54						700	5.89	34.60	27.28	90.1	1.164
1198	3.81	34.588	1.75						800	5.65	34.57	27.28	90.5	1.254
1499	3.01	34.614	2.01						1000	4.61	34.57	27.41	79.[illegible]	1.424
1998	2.36	34.644	2.29						1200	3.80	34.59	27.51	69.[illegible]	1.571
									1500	3.01	34.61	27.60	59.7	1.764

YPT 60 01 07.5 S 085 56.1 W DATE 07 FEB 69 0005 GCT WIRE 02 DRY WET CRUISE YALOCAG
WIND DIRECTION 17 VEL 10 KTS BAR 09 SWELL DIRECTION 18 H 04 T 06 CLOUD 8 AMT 4 WEATHER 02

OBSERVED									INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	26.49	32.960	4.90		8.265	2.251			0	26.69	32.96	21.31	449.9	0
10	26.19	33.092	4.85						10	26.19	33.10	21.57	425.7	.064
20	22.37	34.529	4.34						20	22.38	34.53	23.78	414.0	.116
30	22.02	34.863	4.31						30	22.02	34.87	24.14	390.9	.156
40	19.49	34.10	2.98						50	18.14	34.28	24.71	326.5	.224
49	18.25	34.242	2.65						75	16.15	35.15	25.85	219.5	.294
75	16.15	35.149	2.29						100	14.98	35.03	26.03	202.7	.347
99	15.00	35.035	2.29						150	14.48	35.00	26.11	196.4	.447
147	14.50	34.999	1.86						200	14.16	34.98	26.17	192.1	.544
198	14.18	34.986	1.84						250	13.42	34.95	26.26	181.3	.637
298	12.32	34.887	0.19						300	12.25	34.88	26.47	164.8	.724
398	8.85	34.687	0.30						400	8.82	34.69	26.93	122.2	.867
598	7.28	34.612	0.78						500	7.62	34.62	27.04	109.9	.983
798	5.49	34.567	1.47						600	7.26	34.61	27.17	107.6	1.092
995	4.74	34.573	1.50						700	6.32	34.58	27.21	97.1	1.194
1197	3.88	34.588	1.75						800	5.48	34.57	27.39	89.2	1.286
1497	3.00	34.618	2.10						1000	4.72	34.57	27.43	83.1	1.455
1994	2.34	34.650	2.43						1200	3.87	34.59	27.53	69.9	1.605
									1500	2.99	34.42	27.61	59.2	1.798
									2000	2.33	34.65	27.68	51.4	2.075

YPT 61 01 09.0 S 085 20.9 W DATE 07 FEB 69 0628 GCT WIRE 05 DRY 78.0 WET 76.0 CRUISE YALOCAG
WIND DIRECTION 15 VEL 10 KTS BAR 12 SWELL DIRECTION 18 H 03 T 06 CLOUD 3 AMT 5 WEATHER 02

0	26.37	32.935	4.99		8.243	2.237			0	26.38	32.94	21.33	442.1	0
10	26.06	33.041	4.90		8.257	2.286			10	26.06	33.05	21.57	425.4	.063
20	21.98	34.590	4.10		8.093				20	21.98	34.59	23.94	399.2	.115
30	22.02	34.788	4.11		8.083	2.394			30	22.02	34.79	24.03	386.3	.154
40	19.43	35.114	2.99		7.996	2.382			50	18.13	35.21	25.43	258.3	.218
49	18.25	35.214	2.57		7.921	2.383			75	15.76	35.22	25.93	205.1	.276
75	15.76	35.216	2.47		7.919	2.394			100	14.96	35.03	26.03	202.3	.327
98	14.99	35.039	2.15		7.876	2.385			150	14.55	35.02	26.11	196.3	.427
147	14.58	35.021	1.91		7.830	2.417			200	14.03	34.99	26.23	189.2	.523
197	14.04	34.988	1.47		7.774	2.373			250	13.60	34.96	26.27	183.7	.616
298	12.85	34.923	0.43		7.663	2.373			300	12.79	34.92	26.40	172.4	.705
398	8.96	34.697	0.32		7.525	2.405			400	8.92	34.69	26.93	123.3	.853
598	7.36	34.622	0.78		7.556	2.443			500	7.66	34.63	27.04	110.1	.970
798	5.28	34.572	1.47		7.539	2.454			600	7.34	34.62	27.13	107.3	1.078
997	4.73	34.578	1.48		7.566	2.467			700	6.23	34.59	27.23	95.4	1.180
1147*	4.07	34.590	1.63		7.581				800	5.27	34.57	27.33	85.1	1.270
1197	3.92	34.593	1.73		7.569	2.462			1000	4.72	34.58	27.40	79.7	1.435
1445*	3.20	34.618	1.91		7.603				1200	3.91	34.59	27.50	70.3	1.585
1499	3.00	34.625	2.01		7.598				1500	3.00	34.63	27.61	58.3	1.778
1694*	2.69	34.638	2.10		7.615				2000	2.28	34.66	27.70	50.5	2.051
1941*	2.37	34.655	2.29	2.95	7.636		144							
2190*	2.07	34.667	2.58	2.77	7.656		147							
2240*	2.05	34.668	2.62	2.73	7.655		148							
2265*	2.01	34.670	2.64	2.76	7.658		148							
2283*		34.672		2.93	7.666		14[illegible]							
2[illegible]*		34.673		2.[illegible]0	7.661		149							
[illegible]		34.674		2.72	7.666		148							

YPT 62 01 06.6 S 084 41.0 W DATE 07 FEB 69 1744 GCT WIRE 09 DRY 82.1 WET 76.0 CRUISE YALOCAG
WIND DIRECTION 17 VEL 14 KTS BAR 12 SWELL DIRECTION 18 H 03 T 06 CLOUD 3 AMT 5 WEATHER 02

0	26.30	33.715	4.86		8.241	2.230			0	26.30	33.72	22.30	583.4	0
10	22.48	34.311	4.36						10	22.48	34.32	23.59	432.6	.051
20	21.96	34.859	4.22						20	21.96	34.86	24.15	379.2	.091
30	20.02	35.148	3.05						30	20.02	35.15	24.90	308.4	.126
40	18.28	35.219	2.40						50	16.44	35.15	25.78	224.4	.179
49	16.52	35.153	2.38						75	15.99	35.11	25.46	218.1	.234
75	15.99	35.106	2.40						100	15.09	35.04	26.00	204.8	.287
99	15.10	35.037	2.21						150	14.44	35.01	26.08	199.1	.388
147	14.70	35.014	2.01						200	13.92	34.99	26.21	187.7	.485
198	13.96	34.981	1.45						250	12.93	34.93	26.37	173.4	.575
299	11.76	34.857	0.13						300	11.73	34.85	26.55	157.1	.658
398	8.94	34.687	0.40						400	8.91	34.69	26.91	123.7	.798
599	7.34	34.616	0.79						500	7.83	34.63	27.04	112.2	.918
800	5.42	34.575	1.35						600	7.33	34.62	27.10	105.1	1.026
1000	4.67	34.578	1.49						700	6.32	34.59	27.21	95.7	1.128
1200	3.75	34.596	1.80						800	5.43	34.58	27.32	86.5	1.220
1501	3.02	34.621	2.01						1000	4.68	34.58	27.41	75.9	1.345
1800	2.47	34.644	2.19						1200	3.76	34.60	27.52	67.5	1.532
									1500	3.02	34.62	27.61	59.4	1.722

OBSERVED									INTERPOLATED				DERIVED	
D (m)	T (°C)	S (‰)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
YPT 63 01 01.0 S 083 58.8 W DATE 08 FEB 69 0230 GCT WIRE 00 DRY 77.8 WET 75.2 CRUISE YALOCAG														
WIND DIRECTION 14 VEL 04 KTS BAR 12 SWELL DIRECTION 18 H 02 T 06 CLOUD AMT 0 WEATHER 02														
0	25.23	33.370	4.78		8.228	2.283			0	25.23	33.38	22.07	577.1	0
10	22.38	34.604	4.31						10	22.38	34.61	23.84	408.6	.049
20	21.25	34.999	3.78						20	21.25	35.00	24.45	350.4	.087
30	19.97	35.173	2.94						30	19.98	35.18	24.93	305.1	.120
40	17.09	35.143	2.57						50	16.46	35.11	25.75	227.8	.173
49	16.50	35.110	2.29						75	15.84	35.09	25.88	216.2	.229
75	15.84	35.088	2.18						100	15.14	35.03	25.99	206.4	.282
98	15.17	35.030	2.18						150	14.77	35.03	26.07	200.2	.383
147	14.80	35.[illegible]	1.93						200	14.06	34.99	26.19	190.0	.481
198	14.11	34.989	1.61						250	12.82	34.91	26.38	172.2	.571
298	11.50	34.833	0.19						300	11.46	34.83	26.58	153.9	.653
398	9.54	34.724	0.28						400	9.51	34.72	26.84	130.4	.795
598	7.19		0.79						500	8.17	34.67	27.01	114.6	.918
798	5.53	34.610	1.35						600	7.17	34.63	27.13	104.4	1.027
997	4.56	34.570	1.54						700	6.26	34.61	27.24	94.3	1.126
1197	3.65	34.578	1.74						800	5.52	34.61	27.33	85.4	1.216
1498	3.06	34.599	1.99						1000	4.52	34.57	27.41	77.9	1.380
									1200	3.64	34.58	27.51	67.8	1.525
									1500	3.06	34.60	27.59	61.4	1.719
YPT 64 01 06.0 S 083 18.7 W DATE 08 FEB 69 1029 GCT WIRE 06 DRY 76.5 WET 74.0 CRUISE YALOCAG														
WIND DIRECTION 11 VEL 05 KTS BAR 10 SWELL DIRECTION 18 H 01 T 06 CLOUD 6 AMT 6 WEATHER 02														
0	25.09	33.804	5.00		8.225	2.326			0	25.09	33.81	22.44	541.7	0
10	22.33	34.430	4.41						10	22.33	34.43	23.72	[illegible]	.048
20	22.31	34.640	4.34						20	22.31	34.64	23.89	[illegible]	.049
30	19.29	35.127	2.96						30	19.29	35.13	25.07	291.8	.124
40	18.16	35.106	2.79						50	16.83	35.11	25.67	235.6	.177
49	16.91	35.115	2.57						75	15.83	35.08	25.87	216.7	.233
75	15.83	35.078	2.19						100	15.38	35.03	25.94	211.3	.287
99	15.39	35.033	2.19						150	15.01	35.03	26.02	204.8	.391
147	15.04	35.035	2.01						200	14.28	34.99	26.14	194.4	.491
198	14.33	34.990	1.45						250	12.98	34.92	26.36	175.0	.583
298	11.58	34.842	0.19						300	11.53	34.84	26.58	154.6	.665
398	9.31	34.710	0.30						400	9.28	34.71	26.87	127.9	.806
599	7.05	34.603	0.73						500	7.92	34.64	27.03	113.1	.927
800	5.59	34.572	1.26						600	7.04	34.60	27.13	104.9	1.036
999	4.39	34.580	1.52						700	6.25	34.58	27.22	96.5	1.137
1199	3.76	34.595	1.73						800	5.59	34.58	27.30	89.0	1.229
1348	3.39	34.610	1.85						1000	4.39	34.58	27.44	75.4	1.394
									1200	3.76	34.60	27.52	63.0	1.537
YPT 65 01 07.0 S 082 40.0 W DATE 08 FEB 69 1728 GCT WIRE 07 DRY 81.0 WET 75.0 CRUISE YALOCAG														
WIND DIRECTION 12 VEL 08 KTS BAR 12 SWELL DIRECTION 18 H 03 T 05 CLOUD 6 AMT 6 WEATHER 02														
0	25.29	34.047	4.97						0	25.29	34.05	22.56	530.0	0
10	24.30	34.131	4.86						10	24.30	34.19	22.94	492.2	.051
20	20.03	35.032	3.38						20	20.03	35.04	24.80	315.7	.092
30	19.24	35.086	2.94						30	19.25	35.09	25.05	293.5	.122
40	17.78	35.132	2.57						50	16.97	35.13	25.64	238.0	.175
49	17.03	35.129	2.38						75	16.04	35.03	25.78	225.2	.233
75	16.04	35.024	2.11						100	15.92	35.03	25.81	223.2	.289
99	15.93	35.028	2.29						150	15.05	35.01	25.94	207.4	.397
147	15.11	35.012	1.64						200	13.99	34.98	26.19	189.4	.496
198	14.05	34.978	1.25						250	12.58	34.90	26.42	168.3	.585
299	11.18	34.822	0.19						300	11.16	34.82	26.63	149.3	.665
398	9.24	34.708	0.37						400	9.22	34.71	26.88	127.0	.803
599	7.45	34.623	0.61						500	8.16	34.65	27.00	115.7	.924
799	5.60	34.574	1.26						600	7.44	34.62	27.09	109.2	1.037
998	4.59	34.579	1.51						700	6.47	34.59	27.20	98.6	1.140
1198	3.85	34.593	1.75						800	5.59	34.57	27.29	89.2	1.234
1298	3.62	34.601	1.80						1000	4.58	34.58	27.42	78.0	1.401
									1200	3.84	34.59	27.51	69.2	1.548
YPT 66 01 07.5 S 082 00.0 W DATE 08 FEB 69 2352 GCT WIRE 07 DRY 76.9 WET 74.8 CRUISE YALOCAG														
WIND DIRECTION 20 VEL 05 KTS BAR 08 SWELL DIRECTION 18 H 03 T 08 CLOUD AMT 0 WEATHER 02														
0	24.72	34.616	5.16		8.176	2.379			0	24.73	34.62	23.16	472.5	0
10	22.62	34.644	4.72						10	22.63	34.65	23.80	412.2	.044
20	19.24	34.939	2.97						20	19.25	34.94	24.94	303.9	.080
30	18.51	35.005	2.67						30	18.51	35.01	25.18	281.8	.109
40	18.45	35.037	2.66						50	17.40	35.06	25.49	252.3	.163
49	17.47	35.062	2.57						75	16.33	35.09	25.74	227.1	.223
75	16.33	35.086	2.29						100	15.48	35.02	25.90	214.8	.278
99	15.51	35.016	2.19						150	14.50	35.00	26.10	196.5	.381
147	14.55	35.004	1.76						200	13.63	34.95	26.25	183.9	.476
199	13.66	34.951	1.33						250	11.93	34.85	26.51	159.9	.562
298	10.31	34.754	0.19						300	10.28	34.75	26.73	139.0	.636
398	9.28	34.696	0.14						400	9.26	34.69	26.86	128.6	.770
599	7.08	34.599	0.69						500	8.14	34.64	27.00	116.1	.882
800	5.50	34.562	1.26						600	7.07	34.60	27.12	105.6	1.003
999	4.86	34.564	1.45						700	6.19	34.57	27.22	[illegible]	1.104
1199	3.90	34.580	1.69						800	5.91	34.57	27.30	88.5	1.196
1399	3.39	34.597	1.88						1000	4.86	34.56	27.37	82.6	1.367
									1200	3.90	34.58	27.49	70.8	1.521

OBSERVED | INTERPOLATED | DERIVED

YPT 67 01 08.1 S 081 06.6 W DATE 09 FEB 69 0701 GCT WIRE 04 DRY 74.8 WET 73.8 CRUISE YALOCAG
WIND DIRECTION 16 VEL 05 KTS BAR 11 SWELL DIRECTION 19 H 02 T 10 CLOUD 6 AMT 8 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	23.90	34.616	5.16						
10	20.73	34.802	3.65						
20	19.75	34.892	3.12						
30	17.73	35.011	2.75						
40	16.95	35.055	2.47						
49	16.50	35.039	2.30						
75	15.75	35.008	2.19						
99	15.28	35.005	2.08						
148	14.66	34.985	1.77						
173	14.62	34.987	1.63						
199	13.05	34.910	0.76						

Z (m)	T (°C)	S (‰)	σ_t	R ($\times 10^6$)	ΔD (dyn.m)
0	23.90	34.62	23.41	449.2	0
10	20.73	34.81	24.44	350.8	.040
20	19.75	34.90	24.77	319.9	.074
30	17.73	35.02	25.37	262.9	.133
50	16.46	35.04	25.69	233.0	.152
75	15.75	35.01	25.84	220.1	.209
100	15.26	35.00	25.94	210.8	.243
150	14.66	34.99	26.04	200.8	.366
200	12.99	34.91	26.35	174.5	.459

YPT 68 01 07.0 S 081 21.8 W DATE 09 FEB 69 1240 GCT WIRE DRY 75.4 WET 72.9 CRUISE YALOCAG
WIND DIRECTION 18 VEL 12 KTS BAR 12 SWELL DIRECTION 19 H 03 T 06 CLOUD 6 AMT 8 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	23.30	34.733	5.12						
10	20.83	34.764	4.07						
20	19.56	34.799	3.05						
30	18.05	34.941	2.47						
40	17.16	35.029	2.47						
49	16.47	35.035	2.30						
75	15.68	35.019	2.19						
99	15.14	35.007	1.79						
148	14.57	34.591	1.75						
199	13.88	34.952	1.27						
300	11.65	34.829	0.19						
399	9.10	34.687	0.28						
600	6.96	34.595	0.70						
801	5.57	34.562	1.25						
1002	4.45	34.570							
1201	3.73	34.549	1.78						
1503	3.04	34.611	1.99						
1897*	2.36	34.642	2.29						
2002	2.28	34.642							
2195*	2.09	34.657	2.57						
2393*	2.01	34.659	2.69						
2592*	1.80	34.670	3.01						
2740*	1.80	34.672	3.04		2.73				
2891*	1.77	34.672	3.07		2.47				
2939*	1.80	34.673	3.07	3.03	2.72				
2963*	1.77	34.677	3.05	3.01	3.06				
2974*				3.02	2.83				
2983*				3.02	2.86				
2988*				3.03	2.92				
2989*				3.06	2.71				

Z (m)	T (°C)	S (‰)	σ_t	R ($\times 10^6$)	ΔD (dyn.m)
0	23.30	34.74	23.67	424.0	0
10	20.83	34.77	24.39	356.2	.039
20	19.56	34.80	24.75	321.9	.073
30	18.05	34.95	25.24	275.5	.103
50	16.42	35.03	25.70	232.3	.154
75	15.68	35.02	25.8[illegible]	217.7	.210
100	15.13	35.00	25.97	208.4	.243
150	14.55	34.60	25.79	226.7	.372
200	13.86	34.95	26.20	188.5	.476
250	12.85	34.49	26.36	174.4	.566
300	11.45	34.83	26.55	157.3	.649
400	9.08	34.69	26.88	126.4	.791
500	7.72	34.62	27.04	111.4	.910
600	[illegible]	34.60	27.13	104.0	1.017
700	[illegible]	34.57	27.21	96.5	1.118
[illegible]	[illegible]	34.56	27.29	89.8	1.211
1000	[illegible]	[illegible]	27.42	77.1	1.378
1200	[illegible]	[illegible]	27.48	71.1	1.526
1500	3.05	[illegible]	27.60	60.5	1.723
2000	2.28	[illegible]	27.69	51.8	2.003
2500	[illegible]	34.66	27.74	47.8	2.252

YPT 69 01 56.8 S 081 32.1 W DATE 10 FEB 69 0148 GCT WIRE [illegible] DRY 74.8 WET 72.0 CRUISE YALOCAG
WIND DIRECTION 22 VEL 06 KTS BAR 11 SWELL DIRECTION 19 H 0[illegible] T [illegible] CLOUD 3 AMT 3 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	23.73	34.782	5.46						
10	23.23	34.782	5.36						
20	20.49	34.807	3.85						
30	18.42	34.984	2.73						
40	17.17	34.971	2.55						
49	16.81	34.989	2.19						
75	15.78	35.017	2.19						
99	15.54	35.009	2.02						
147	14.43	34.993	1.66						
198	13.62	34.950	1.09						
29[illegible]	10.82	34.792	0.14						
398	9.23	34.700	0.25						
599	7.14	34.606	0.66						
800	5.47	34.569	1.26						
990*	4.58	34.574	1.45						
999	4.53	34.574	1.48						
1189*	3.92	34.586	1.66						
1199	3.86	34.585	1.73						
1489*	2.99	34.618	1.95						
1986*	2.29	34.649	2.36						
2485*		34.668	2.46						
2683*	1.83	34.670	3.03		2.89				
2882*	1.77	34.672	3.12		2.75				
2932*	1.79	34.675	3.12	3.07	2.68				
2957*	1.77	34.672	3.12	3.06	2.74				
2967*				3.11	2.69				
2976*				3.11	2.56				
2981*				3.11	2.67				
2982*				3.08	2.65				

Z (m)	T (°C)	S (‰)	σ_t	R ($\times 10^6$)	ΔD (dyn.m)
0	23.73	34.79	23.58	432.5	0
10	23.23	34.79	23.73	418.9	.043
20	20.50	34.81	24.57	344.7	.081
30	18.42	34.99	25.18	261.1	.112
50	16.76	34.99	25.59	243.2	.154
75	15.78	35.02	25.83	220.3	.222
100	15.52	35.01	25.89	216.0	.277
150	14.38	34.99	26.12	194.8	.380
200	13.57	34.95	26.26	182.9	.474
250	12.19	34.87	26.48	163.3	.561
300	10.78	34.79	26.68	144.9	.638
400	9.20	34.70	26.87	127.6	.774
500	8.05	34.64	27.01	114.8	.895
600	7.13	34.61	27.12	105.9	1.005
700	6.23	34.58	27.22	96.1	1.106
800	5.47	34.57	27.31	87.6	1.198
1000	4.53	34.57	27.42	77.8	1.363
1200	3.86	34.59	27.50	69.9	1.510
1500	2.97	34.62	27.61	58.9	1.704
2000	2.28	34.65	27.70	51.1	1.978
2500	1.90	34.67	27.76	47.7	2.225

OBSERVED										INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)

YTT 70 04 00.0 S 092 00.0 W DATE 14 FEB 69 1004 GCT WIRE 02 DRY 70.8 WET 69.8 CRUISE YALOC49
WIND DIRECTION 17 VEL 14 KTS BAR 10 SWELL DIRECTION 17 H 02 T 06 CLOUD 8 AMT 4 WEATHER 02

D	T	S	O_2	O_2	PO_4	pH	Alk.	NO_3	SiO_2	Z	T	S	σ_t	δ	ΔD
0	21.07	34.925	5.33			8.161	2.372			0	21.07	34.93	24.44	350.4	0
10	21.02	34.922	5.30			8.154	2.370			10	21.02	34.93	24.46	349.6	.035
20	20.10	34.912	3.42			8.020	2.361			20	20.10	34.92	24.69	327.2	.069
30	19.12	35.097	2.89			7.982	2.375			30	19.13	35.10	25.09	289.8	.100
40	18.02	35.048	2.66			7.936	2.370			50	17.40	35.03	25.46	254.9	.154
49	17.45	35.027	2.46			7.915	2.370			75	16.25	35.09	25.78	225.1	.214
75	16.25	35.088	2.12			7.871	2.367			100	14.98	35.08	26.06	199.6	.267
98	15.04	35.079	1.92			7.859	2.375			150	14.07	34.99	26.19	188.7	.344
147	14.11	34.989	1.31			7.777	2.330			200	13.42	34.95	26.29	179.8	.456
197	13.45	34.953	0.97			7.716	2.367			250	12.88	34.92	26.38	172.9	.544
298	12.17	34.876	0.28			7.629	2.363			300	12.11	34.87	26.49	162.9	.628
398	9.20	34.703	0.20			7.527	2.377			400	9.17	34.70	26.88	126.6	.773
599	7.31	34.614	0.51			7.523	2.389			500	7.49	34.63	27.03	112.9	.993
799	5.58	34.546	1.18			7.550	2.403			600	7.30	34.61	27.10	107.8	1.303
998	4.70	34.573	1.40			7.569	2.424			700	6.37	34.58	27.20	98.0	1.106
1199	3.74	34.583	1.72			7.585	2.443			800	5.57	34.57	27.29	89.5	1.200
1446*	3.23	34.616	1.90			7.610	2.465			1000	4.69	34.57	27.40	79.8	1.369
1499	3.14	34.613	1.91			7.603	2.465			1200	3.74	34.58	27.51	68.6	1.517
1943*	2.35	34.649	2.36			7.634	2.485			1500	3.14	34.61	27.59	61.4	1.712
1998	2.29	34.646	2.38			7.648	2.487			2000	2.29	34.65	27.69	51.5	1.994
2190*	2.16	34.660	2.54			7.651	2.491			2500	1.89	34.67	27.75	47.0	2.240
2439*	1.92	34.672	2.83			7.684	2.499			3000	1.82	34.68	27.76	47.2	2.475
2687*	1.83	34.682	3.00			7.690	2.500								
2936*	1.82	34.684	3.08			7.692	2.500								
3183*	1.83	34.682	3.07			7.684	2.505								
3432*	1.86	34.683	3.09		2.56	7.702	2.497		151						
3706*	1.84	34.684	3.12		2.78	7.699	2.505		150						
3730*	1.86	34.683	3.12		2.67	7.692	2.499		149						
3754*	1.86	34.684	3.10	3.07	2.68	7.701	2.500		150						
3769*		34.684		3.08	2.70	7.694			150						
3778*		34.684		3.07	2.63	7.707			150						
3783*		34.684		3.07	2.65	7.702			149						
3784*		34.685		3.06	2.67	7.706			149						

YTT 71 00 04.2 N 086 29.0 W DATE 16 FEB 69 0606 GCT WIRE 03 DRY 76.6 WET 74.5 CRUISE YALOC49
WIND DIRECTION 12 VEL 06 KTS BAR 10 SWELL DIRECTION 18 H 02 T 10 CLOUD 8 AMT 1 WEATHER 02

D	T	S	O_2	O_2	PO_4	pH	Alk.	NO_3	SiO_2	Z	T	S	σ_t	δ	ΔD
0	24.71	34.062	4.78			8.202	2.321			0	24.71	34.07	22.75	512.2	0
10	23.07	34.261	4.50			8.158	2.332			10	23.07	34.27	23.38	452.1	.048
20	21.37	34.835	3.92			8.093	2.370			20	21.38	34.84	24.29	365.4	.089
30	20.56	34.956	3.68			8.095	2.379			30	20.56	34.96	24.61	336.0	.124
40	18.01	35.157	3.02			8.013	2.375			50	17.38	35.14	25.55	246.3	.182
49	17.45	35.145	2.67			7.960	2.379			75	15.82	35.02	25.83	220.9	.241
75	15.92	35.017	2.51			7.926	2.370			100	15.04	35.03	26.01	204.6	.294
99	15.06	35.027	2.32			7.907	2.372			150	14.47	34.99	26.10	196.7	.394
147	14.52	34.993	2.02			7.866	2.372			200	13.82	34.95	26.25	183.7	.489
198	13.64	34.951	1.45			7.788	2.373			250	12.95	34.91	26.36	174.9	.579
298	12.23	34.867	0.40			7.655	2.370			300	12.18	34.86	26.47	164.8	.664
398	9.66	34.728	0.28			7.578	2.382			400	9.62	34.73	26.83	132.3	.812
599	7.05	34.606	0.79			7.562	2.387			500	8.05	34.65	27.02	114.3	.936
799	5.64	34.573	1.31			7.585	2.409			600	7.04	34.61	27.13	104.6	1.045
999	4.62	34.575	1.49			7.588	2.432			700	6.24	34.58	27.22	96.3	1.145
1169*	4.03	34.586	1.68			7.594	2.452			800	5.63	34.57	27.29	89.8	1.238
1199	3.77	34.591	1.83			7.605	2.447			1000	4.62	34.58	27.41	78.7	1.407
1467*	3.14	34.614	1.95			7.605	2.471			1200	3.76	34.59	27.51	68.4	1.554
1500	3.09	34.617	1.97			7.620	2.468			1500	3.10	34.62	27.60	60.2	1.746
1966*	2.39	34.650	2.29			7.641	2.500			2000	2.34	34.65	27.69	51.7	2.026
2164*	2.13	34.660	2.42			7.660	2.502			2500	2.09	34.67	27.72	50.2	2.281
2364*	2.09	34.664	2.51			7.663	2.507								
2564*	2.08	34.667	2.55			7.661	2.516		152						
2663*	2.05	34.664	2.69			7.661	2.519		154						
2713*	2.07	34.666	2.61	2.52		7.668	2.514		154						
2737*	2.03	34.666	2.61	2.53		7.668	2.514		153						
2748*		34.668		2.55		7.663			154						
2757*		34.668		2.53		7.670			154						
2762*		34.668		2.54		7.661			154						
2763*		34.668		2.50		7.672			152						

YTT 72 01 00.0 N 087 25.0 W DATE 14 FEB 69 2059 GCT WIRE 04 DRY 78.9 WET 75.0 CRUISE YALOCAG
WIND DIRECTION 13 VEL 08 KTS BAR 08 SWELL DIRECTION 18 H 02 T 10 CLOUD 8 AMT 2 WEATHER 02

OBSERVED

D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	26.11	33.419	5.11						
10	25.58	33.489	5.17						
20	22.93	33.854	4.33						
30	19.40	34.744	3.35						
40	18.05	34.828	2.83						
49	16.01	34.924	2.54						
75	14.98	35.024	2.34						
99	14.86	35.02[illegible]	2.30						
148	14.67	35.003	2.25						
198	14.27	34.988	1.95						
299	13.84	34.962	1.91						
398	9.99	34.738	0.28						
599	7.21	34.610	0.82						
800	5.58	34.568	1.37						
991*	4.75	34.571	1.54						
999	4.75	34.570	1.55						
1191*	3.75	34.591	1.75						
1199	3.78	34.590	1.77						
1491*	3.01	34.617	2.04						
1788*	2.54	34.640	2.26						
1988*	2.34	34.649	2.36						
2087*	2.17	34.658	2.46						
2185*	2.11	34.661	2.52						
2285*	2.11	34.662	2.51						
2384*	2.06	34.662	2.51						

INTERPOLATED / DERIVED

$\bar{z}$ (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	26.11	33.42	21.84	699.5	0
10	25.58	33.49	22.05	679.1	.049
20	22.94	33.86	23.11	478.0	.112
30	19.40	34.75	24.75	322.3	.152
50	15.89	34.93	25.74	229.3	.207
75	14.98	35.03	26.02	202.5	.261
100	14.86	35.02	26.06	200.9	.311
150	14.65	35.00	26.07	199.6	.411
200	14.26	34.99	26.15	194.0	.510
250	14.24	34.99	26.16	195.0	.607
300	13.81	34.96	26.22	189.5	.703
400	9.94	34.74	26.78	136.9	.866
500	8.09	34.64	27.00	115.4	.992
600	7.20	34.61	27.11	106.6	1.103
700	6.27	34.58	27.21	96.8	1.205
800	5.58	34.57	27.29	89.1	1.298
1000	4.74	34.57	27.39	80.7	1.467
1200	3.78	34.59	27.51	68.6	1.617
1500	2.99	34.62	27.61	59.3	1.808
2000	2.32	34.65	27.69	51.6	2.045

YTT 73 01 28.2 N 087 54.2 W DATE 17 FEB 69 0658 GCT WIRE 06 DRY 77.0 WET 74.3 CRUISE YALOCAG
WIND DIRECTION 16 VEL 08 KTS BAR 08 SWELL DIRECTION 18 H 02 T 10 CLOUD 8 AMT 2 WEATHER 02

OBSERVED

D (m)	T (°C)	S (‰)	O_2 (ml/l)
0	26.54	32.957	4.95
10	26.54	32.951	4.95
20	26.40	32.934	4.97
30	19.82	34.548	3.65
40	17.01	34.946	2.42
49	16.34	34.974	2.27
74	15.13	34.978	2.13
98	14.80	34.997	2.32
147	14.61	35.011	2.31
197	14.24	34.990	2.23
298	12.50	34.477	0.71
398	9.93	34.723	0.42
597	7.49	34.620	0.66
797	5.77	34.574	1.21
996	4.58	34.575	1.55
1196	3.74	34.594	1.75
1200*	3.71	34.595	1.72
1501*	3.04	34.621	1.91
1800*	2.55	34.643	2.19
1999*	2.32	34.654	2.28
2199*	2.10	34.667	2.38
2299*	2.09	34.666	2.48
2400*	2.06	34.666	2.47
2499*	2.09	34.666	2.47
2599*	2.07	34.665	2.47

INTERPOLATED / DERIVED

$\bar{z}$ (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	26.54	32.96	21.36	645.6	0
10	26.54	32.96	21.35	646.4	.065
20	26.40	32.94	21.38	643.8	.129
30	19.82	34.55	24.49	345.9	.175
50	16.27	34.98	25.69	233.4	.237
75	15.11	34.98	25.94	208.7	.292
100	14.79	35.00	26.04	201.3	.343
150	14.59	35.01	26.09	197.4	.443
200	14.20	34.99	26.16	192.8	.540
250	13.46	34.94	26.28	182.9	.634
300	12.45	34.87	26.43	169.2	.722
400	9.89	34.72	26.78	137.1	.875
500	8.41	34.65	26.96	119.7	1.004
600	7.46	34.62	27.08	109.8	1.119
700	6.53	34.59	27.19	99.6	1.223
800	5.75	34.57	27.27	91.3	1.319
1000	4.57	34.58	27.41	78.1	1.488
1200	3.72	34.60	27.52	67.1	1.633
1500	3.04	34.62	27.61	59.6	1.823
2000	2.32	34.65	27.70	51.3	2.100
2500	2.09	34.67	27.72	50.3	2.354

YTT 74 02 02.5 N 088 18.0 W DATE 17 FEB 69 1715 GCT WIRE 04 DRY 81.0 WET 75.4 CRUISE YALOCAG
WIND DIRECTION 16 VEL 12 KTS BAR 10 SWELL DIRECTION 18 H 02 T 12 CLOUD 8 AMT 3 WEATHER 02

OBSERVED

D (m)	T (°C)	S (‰)	O_2 (ml/l)
0	28.19	31.594	4.82
10	28.08	31.586	4.80
20	28.02	31.760	4.82
30	21.17	34.455	3.40
40	18.35	34.795	2.75
49	17.04	34.935	2.26
75	16.13	35.006	2.02
99	15.26	34.988	1.82
147	14.56	34.974	2.13
198	13.72	34.944	2.34
298	12.07	34.839	0.53
398	9.70	34.706	0.39
496*	8.64	34.667	0.28
596*	7.27	34.612	0.37
795*	5.75	34.572	0.91
993*	4.61	34.570	1.35
1192*	3.79	34.592	1.61
1487*	2.93	34.620	2.00
1788*	2.48	34.643	2.21
1986*	2.35	34.650	2.28
2085*	2.21	34.656	2.31
2184*	2.17	34.658	2.36
2282*	2.14	34.661	2.40
2382*	2.08	34.664	2.41
2480*	2.10	34.665	2.45

INTERPOLATED / DERIVED

$\bar{z}$ (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	28.19	31.60	19.81	794.4	0
10	28.08	31.59	19.84	791.8	.079
20	28.02	31.76	19.99	777.9	.158
30	21.17	34.46	24.04	388.0	.215
50	16.97	34.94	25.54	251.2	.280
75	16.13	35.01	25.75	228.5	.340
100	15.24	34.99	25.93	211.4	.395
150	14.51	34.97	26.08	198.8	.497
200	13.49	34.94	26.23	185.7	.594
250	12.91	34.89	26.35	175.1	.684
300	12.02	34.84	26.48	163.9	.769
400	9.67	34.70	26.80	134.7	.918
500	8.58	34.66	26.95	121.3	1.046
600	7.23	34.61	27.11	107.0	1.143
700	6.35	34.58	27.24	97.7	1.262
800	5.72	34.57	27.24	91.0	1.354
1000	4.58	34.57	27.41	78.5	1.526
1200	3.76	34.59	27.51	68.2	1.673
1500	2.90	34.62	27.62	57.9	1.862
2000	2.33	34.65	27.69	51.7	2.135
2500	2.10	34.66	27.72	50.4	2.391

YTT 75 03 28.0 N 089 43.0 W DATE 18 FEB 69 1159 GCT WIRE 03 DRY 79.3 WET 75.9 CRUISE YALOGAN
WIND DIRECTION 21 VEL 04 KTS BAR 08 SWELL DIRECTION 27 H 01 T 08 CLOUD 8 AMT 6 WEATHER 02

OBSERVED										INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	27.82	31.427	4.74			8.282	2.129			0	27.82	31.43	19.80	794.9	0
10	27.93	31.713	4.80			8.282	2.144			10	27.94	31.72	19.94	779.[illegible]	.079
20	27.78	31.935	4.78			8.272	2.159			20	27.78	31.94	20.10	757.7	.155
30	27.47	32.156	4.79			8.279	2.177			30	27.45	32.16	20.64	732.6	.230
40	27.40	32.5[illegible]	4.79			8.269	2.199			50	27.17	33.78	21.74	607.7	.364
49	27.50	33.693	4.79			8.229	2.264			75	17.00	34.93	25.44	253.5	.471
75	17.00	34.929	2.39			7.919	2.354			100	14.74	34.91	25.93	206.4	.529
99	14.79	34.914	2.08			7.866	2.359			150	13.52	34.93	26.24	181.7	.626
148	13.53	34.932	2.21			7.857	2.362			200	13.46	34.95	26.29	180.5	.716
198	13.47	34.952	2.22			7.663	2.362			250	12.94	34.91	26.34	174.7	.805
299	12.06	34.840	0.61			7.552	2.359			300	12.03	34.84	26.44	[illegible]	.890
399	9.28	34.691	0.37			7.525	2.373			400	9.26	34.63	26.86	129.[illegible]	1.036
599	6.86	34.597	0.63				2.386			500	7.72	34.62	27.04	111.3	1.156
800	5.58	34.568	1.37				2.397			600	6.85	34.63	27.15	102.[illegible]	1.263
992*	4.91	34.569	1.35			7.576	2.413			700	6.11	34.55	27.23	94.4	1.362
1000	4.84	34.574	1.46			7.581	2.413			800	5.58	34.57	27.23	89.[illegible]	1.454
1192*	4.05	34.588	1.52			7.576	2.436			1000	4.84	34.55	27.33	81.3	1.624
1200	3.99	34.589	1.54			7.593	2.433			1200	3.99	34.53	27.49	71.[illegible]	1.776
1489*	3.16	34.620	1.82			7.603	2.466			1500	3.13	34.62	27.63	60.[illegible]	1.974
1788*	2.54	34.641				7.641	2.480			2000	2.23	34.65	27.70	50.4	2.252
1987*	2.26	34.652	2.37		2.74	7.644	2.493								
2086*	2.10	34.655	2.48		2.85	7.658	2.484		148						
2136*	2.08	34.659	2.55	2.51	2.79	7.658	2.490		150						
2161*	2.01	34.658	2.56	2.53	2.76	7.663	2.494		151						
2171*		34.658		2.63	2.81	7.661	2.500		149						
2186*		34.663		2.54	2.85	7.656	2.493		149						
2185*		34.661		2.58	2.69	7.651	2.500		149						
2180*		34.662		2.59	2.72	7.653	2.498		150						

YTT 76 01 00.1 N 092 00.0 W DATE 19 FEB 69 1730 GCT WIRE 10 DRY 78.9 WET 75.0 CRUISE YALOGAN
WIND DIRECTION 16 VEL 10 KTS BAR 10 SWELL DIRECTION 18 H 02 T 10 CLOUD 8 AMT 2 WEATHER 02

0	26.54	33.713	4.80			8.226	2.278			0	26.54	33.72	21.92	591.2	0
10	26.04	33.732	4.80			8.219	2.281			10	26.04	33.74	22.09	575.2	.058
20	23.98	34.208	4.80			8.193	2.312			20	23.98	34.21	23.09	481.6	.111
30	22.96	34.418	4.39			8.158	2.316			30	22.96	34.42	23.53	438.4	.157
40	22.70	34.739	4.41			8.129	2.334			50	21.76	34.80	24.16	379.7	.239
49		34.796	3.97			8.091	2.342			75	18.48	34.82	25.04	295.3	.323
75	18.47	34.818	2.75			7.955	2.342			100	15.46	34.83	25.83	223.3	.388
98	15.59	34.879	2.01			7.866	2.342			150	14.22	34.99	26.15	191.7	.492
147	14.26	34.989	2.57			7.904	2.354			200	13.93	34.98	26.23	185.7	.586
198	13.84	34.981	2.38			7.868	2.354			250	13.58	[illegible]	26.27	182.3	.679
298	13.30	34.944	1.94			7.820	2.357			300	13.26	[illegible]	26.32	180.3	.769
398		34.799	0.28			7.597	2.367			400	11.31	[illegible]	26.59	156.4	.937
599	7.14	34.593	0.92			7.579	2.372			500	9.26	34.63	26.85	131.3	1.081
799	5.85	34.560	1.45			7.581	2.389			600	7.13	34.59	27.11	106.9	1.200
805*	5.86	34.561	1.45				2.382			700	6.15	34.53	27.22	95.3	1.301
998	4.88	34.561	1.57			7.585	2.411			800	5.85	34.55	27.25	93.7	1.396
1004*	4.92	34.562	1.63			7.588	2.403			1000	4.89	34.56	27.37	83.3	1.573
1204*	4.00	34.575	1.78			7.593	2.425			1200	4.04	34.57	27.47	73.3	1.729
1505*	3.20	34.600	1.99			7.607	2.452			1500	3.21	34.62	27.57	63.2	1.933
2004*	2.33	34.637	2.45		2.90	7.649	2.473		142	2000	2.34	34.64	27.68	52.3	2.223
2253*	2.02	34.653	2.75		2.90	7.663	2.484		149						
2302*	2.01	34.655	2.75	2.72	2.77	7.655	2.485		149						
2327*	1.97	34.657	2.75	2.73	2.87	7.653	2.485		149						
2338*		34.662		2.77	2.71	7.666	2.491		148						
2347*		34.661		2.74	2.78	7.665	2.483		149						
2352*		34.661		2.74	3.07	7.656	2.491		149						
2353*		34.659		2.74	2.92	7.661	2.491		149						

YTT 77 00 27.5 N 091 58.8 W DATE 20 FEB 69 0219 GCT WIRE 01 DRY 75.6 WET 74.2 CRUISE YALOGAN
WIND DIRECTION 22 VEL 05 KTS BAR 08 SWELL DIRECTION 18 H 02 T 08 CLOUD 8 AMT 3 WEATHER 02

0	22.91	34.874	4.36			8.124	2.389			0	22.92	34.88	23.89	403.1	0
10	22.43	34.858	4.34							10	22.44	34.86	24.02	391.6	.040
20	22.33	34.853	4.29							20	22.33	34.86	24.04	389.6	.079
30	22.20	34.840	4.24							30	22.21	34.84	24.07	387.4	.116
40	21.95	34.833	4.15							50	21.36	34.83	24.29	366.9	.193
49		34.829	4.02							75	18.80	34.83	24.97	303.1	.277
75	18.80	34.827	3.04							100	15.06	34.86	25.88	216.9	.342
99	15.13	34.861	2.66							150	14.27	34.96	26.12	194.6	.445
148	14.28	34.961	2.56							200	14.13	34.98	26.17	191.7	.541
199	14.14	34.983	2.57							250	13.66	34.96	26.26	184.6	.635
300	12.87	34.916	1.34							300	12.88	34.92	26.38	173.9	.725
400	10.67	34.786	0.28							400	10.67	34.79	26.70	145.4	.884
601	6.99	34.600	1.00							500	8.44	34.68	26.95	121.2	1.018
802	5.54	34.564	1.54							600	7.00	34.60	27.13	104.5	1.131
1002	4.78	34.566	1.73							700	6.09	34.57	27.23	95.1	1.230
										800	5.55	34.56	27.29	89.3	1.322
										1000	4.78	34.57	27.39	81.5	1.493

OBSERVED										INTERPOLATED				DERIVED	
D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)

YTT 78 00 00.0 N 092 00.0 W DATE 20 FEB 69 0612 GCT WIRE 07 DRY 73.8 WET 72.8 CRUISE YALOGAO
WIND DIRECTION 22 VEL 08 KTS BAR 09 SWELL DIRECTION 18 H 02 T 11 CLOUD 6 AMT 3 WEATHER 02

D	T	S	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	22.81	34.943	4.19			8.106	2.385			0	22.81	34.95	23.97	395.4	0
10	22.03	34.917	4.07							10	22.03	34.92	24.17	376.6	.039
20	22.00	34.911	4.04							20	22.00	34.92	24.18	376.5	.076
30	21.93	34.899	3.96							30	21.94	34.90	24.19	375.9	.114
40	21.84	34.899	3.96							50	21.75	34.89	24.23	372.3	.189
49	21.78	34.896	3.95							75	20.15	34.82	24.61	337.0	.277
75	20.14	34.816	3.50							100	17.74	34.86	25.26	276.3	.354
99	17.81	34.859	2.80							150	15.35	35.03	25.94	212.5	.476
148	15.39	35.023	2.93							200	14.83	35.07	26.09	199.7	.579
199	14.83	35.070	2.85							250	14.76	35.05	26.08	201.3	.679
300	14.39	35.025	2.75							300	14.39	35.03	26.15	196.5	.779
400	10.74	34.787	0.28							400	10.74	34.79	26.68	146.6	.950
601	7.04	34.594	1.02							500	8.44	34.66	26.96	119.6	1.083
802	5.85	34.565	1.63							600	7.05	34.59	27.12	105.6	1.196
1002	4.94	34.564	1.78							700	6.28	34.57	27.20	97.8	1.298
										800	5.85	34.57	27.25	93.3	1.393
										1000	4.95	34.56	27.36	83.8	1.570

YTT 79 00 30.0 S 092 00.0 W DATE 20 FEB 69 1010 GCT WIRE 06 DRY 72.6 WET 71.7 CRUISE YALOGAO
WIND DIRECTION VEL 00 KTS BAR 08 SWELL DIRECTION 18 H 02 T 09 CLOUD AMT 0 WEATHER 02

D	T	S	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	22.00	34.963	4.06			8.100	2.405			0	22.00	34.97	24.22	372.1	0
10	21.88	34.958	4.00							10	21.88	34.96	24.25	369.6	.037
20	21.73	34.955	3.95							20	21.73	34.96	24.29	366.2	.074
30	21.63	34.955	3.87							30	21.63	34.96	24.31	363.9	.110
39	21.43	34.945	3.79							50	21.37	34.93	24.36	363.0	.183
48		34.932	3.72							75	20.70	34.92	24.54	344.2	.271
73	20.85	34.909	3.57							100	18.66	35.04	25.16	285.4	.349
97	18.87	35.023	2.99							150	16.08	35.18	25.89	217.3	.475
146	16.21	35.181	2.92							200	15.08	35.10	26.05	203.0	.580
195	15.10	35.101	2.77							250	14.86	35.07	26.08	201.7	.681
294	14.57	35.044	2.66							300	14.37	35.03	26.15	196.0	.781
393	10.81	34.786	0.34							400	10.62	34.77	26.69	145.7	.952
590	7.32	34.603	0.95							500	8.44	34.65	26.94	120.1	1.084
789	6.20	34.565	1.33							600	7.24	34.60	27.10	105.0	1.198
984	4.96	34.556	1.67							700	6.56	34.57	27.17	101.5	1.303
										800	6.13	34.56	27.22	97.2	1.402
										1000	4.86	34.56	27.37	83.2	1.583

YTT 80 01 00.0 S 092 00.5 W DATE 20 FEB 69 1547 GCT WIRE 02 DRY 77.0 WET 74.0 CRUISE YALOGAO
WIND DIRECTION 14 VEL 13 KTS BAR 10 SWELL DIRECTION 18 H 02 T 07 CLOUD 8 AMT 1 WEATHER 02

D	T	S	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	22.08	34.988	4.00			8.107	2.372			0	22.08	34.99	24.21	372.4	0
10	22.01	34.989	3.95			8.105	2.382			10	22.01	34.99	24.23	370.8	.037
20	21.96	35.001	3.88			8.096	2.387			20	21.96	35.01	24.24	369.0	.074
29	21.93		3.84			8.095				30	21.93	35.00	24.26	368.9	.111
39	21.92		3.78			8.083				50	21.87	34.99	24.27	368.5	.185
48	21.91		3.77			8.083				75	20.76	34.99	24.57	340.7	.273
73	20.90		3.54			8.060				100	18.80	34.98	25.08	293.0	.353
97	19.07		2.38			7.936				150	15.10	34.97	25.90	215.9	.640
146	15.41		2.38			7.902				200	14.73	34.95	26.02	205.1	.585
195	14.79		2.66			7.912				250	13.99	34.94	26.17	193.3	.685
294	13.14		1.37			7.767				300	12.96	34.93	26.37	175.2	.777
394	10.10		0.34			7.586				400	9.97	34.90	26.90	125.3	.927
591	7.33		0.97			7.568				500	8.26	34.87	27.16	100.9	1.040
788	5.84		1.70			7.593				600	7.24	34.85	27.29	89.6	1.136
985			1.76			7.590				700	6.39	34.82	27.39	80.6	1.221
1055*	4.65		1.73			7.594				800	5.77	34.80	27.45	75.2	1.299
1183	4.14		1.89			7.597				1000	4.85	34.95	27.68	54.3	1.428
1255*	3.80		1.94			7.598				1200	4.06	34.84	27.68	53.7	1.536
1513*	3.03	34.609	2.10			7.607	2.462			1500	3.06	34.62	27.60	59.9	1.706
2050*	2.26	34.648	2.47			7.649	2.493			2000	2.30	34.64	27.69	51.9	1.985
2548*	1.90	34.667	2.88			7.670	2.502			2500	1.92	34.67	27.74	48.1	2.235
3046*	1.79	34.676	3.08		2.72	7.692	2.507		152	3000	1.79	34.68	27.75	47.3	2.474
3393*	1.80	34.675	3.11		2.69	7.689	2.507		152						
3444*	1.83	34.676	3.11	3.06	2.66	7.692	2.502		153						
3468*	1.83	34.675	3.11	3.06	2.79	7.694			151						
3477*				3.00	2.73	7.687			152						
3488*				3.02	2.73	7.687			152						
3491*				2.99	2.72	7.692			151						
3492*				3.00	2.61	7.697			152						

OBSERVED										INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)

YTT 81 02 00.8 S 091 59.5 W DATE 21 FEB 69 0215 GCT WIRE 07 DRY 76.0 WET 74.8 CRUISE YALOGO
WIND DIRECTION 08 VEL 04 KTS BAR 10 SWELL DIRECTION 17 H 04 T 07 CLOUD 8 AMT 1 WEATHER 02

D	T	S	O_2	O_2	PO_4	pH	Alk.	NO_3	SiO_2	Z	T	S	σ_t	δ	ΔD
0	24.08	34.883	4.50			8.110	2.377			0	24.08	34.89	23.56	435.0	0
10	23.31	34.871	4.43							10	23.31	34.88	23.77	414.7	.042
20	23.30	34.867	4.43							20	23.30	34.87	23.77	415.1	.084
30	23.27	34.869	4.41							30	23.27	34.87	23.78	414.4	.125
40		34.875	4.41							50	23.21	34.89	23.82	412.1	.208
49	23.28	34.885	4.34							75	20.13	35.05	24.79	319.5	.300
75	20.12	35.050	3.11							100	15.87	35.18	25.92	212.9	.346
98	16.14	35.184	1.71							150	14.32	35.06	26.18	189.9	.456
147	14.37	35.061	2.30							200	13.65	35.01	26.22	186.4	.550
197	13.97	35.007	2.49							250	13.35	34.98	26.23	187.4	.654
298	13.45	34.951	1.42							300	13.39	34.95	26.30	182.2	.746
397	10.21	34.763	0.19							400	10.14	34.76	26.74	138.4	.936
596	7.36	34.613	0.70							500	8.36	34.66	26.98	118.1	1.035
796	5.66	34.560	1.54							600	7.32	34.61	27.09	109.2	1.148
994	4.89	34.556	1.86							700	6.35	34.58	27.20	98.1	1.251
										800	5.44	34.56	27.28	90.8	1.345
										1000	4.87	34.56	27.37	83.3	1.519

YTT 82 03 00.0 S 092 00.0 W DATE 21 FEB 69 0938 GCT WIRE 08 DRY 78.0 WET 75.3 CRUISE YALOGO
WIND DIRECTION 09 VEL 10 KTS BAR 09 SWELL DIRECTION 18 H 04 T 10 CLOUD AMT 1 WEATHER 02

D	T	S	O_2	O_2	PO_4	pH	Alk.	NO_3	SiO_2	Z	T	S	σ_t	δ	ΔD
0	25.55	34.181	4.90			8.204	2.340			0	25.55	34.19	22.58	528.0	0
10	25.34	34.243	4.90							10	25.34	34.25	22.70	517.7	.052
20	24.57	34.509	4.90							20	24.57	34.51	23.13	476.7	.102
30	24.29	34.681	4.78							30	24.29	34.69	23.34	456.6	.149
40	23.00	34.872	4.41							50	21.11	35.16	24.61	336.3	.228
49	21.36	35.160	2.38							75	15.89	35.16	25.91	212.7	.297
75	15.89	35.151	2.57							100	15.81	35.14	25.92	212.4	.350
98	15.83	35.145	2.57							150	15.03	35.10	26.06	200.6	.453
147	15.08	35.100	2.49							200	14.12	35.03	26.21	188.1	.550
197	14.17	35.030	2.19							250	13.24	34.98	26.35	175.4	.641
298		34.935	0.35							300	12.37	34.93	26.49	163.5	.726
397	10.75	34.797	0.15							400	10.70	34.79	26.69	145.4	.880
597	7.56	34.624	0.37							500	9.01	34.69	26.90	126.1	1.016
796	5.76	34.574	1.17							600	7.52	34.62	27.07	110.5	1.134
996	4.73	34.570	1.47							700	6.49	34.59	27.19	99.3	1.239
										800	5.73	34.57	27.28	91.1	1.334
										1000	4.71	34.57	27.39	80.2	1.505

YTT 83 04 00.0 S 092 00.6 W DATE 21 FEB 69 1853 GCT WIRE 05 DRY 80.3 WET 75.0 CRUISE YALOGO
WIND DIRECTION 13 VEL 12 KTS BAR 11 SWELL DIRECTION 16 H 04 T 09 CLOUD 8 AMT 1 WEATHER 02

D	T	S	O_2	O_2	PO_4	pH	Alk.	NO_3	SiO_2	Z	T	S	σ_t	δ	ΔD
0	26.23	33.968	4.96			8.233	2.315			0	26.23	33.97	22.21	563.5	0
10	26.11	33.972	4.97			8.228	2.307			10	26.11	33.98	22.25	560.0	.056
20	25.84	34.070	4.98			8.219	2.318			20	25.84	34.08	22.41	545.3	.111
30	25.60	34.549	4.90			8.200	2.351			30	25.40	34.55	22.85	504.1	.164
40	23.81	34.557	4.83			8.144	2.376			50	21.24	35.15	24.57	340.1	.248
49	21.52	35.155	4.51			8.088	2.400			75	15.69	35.15	25.95	208.9	.317
75	15.69	35.143	1.89			7.859	2.390			100	14.76	35.10	26.12	193.6	.367
99	14.78	35.098	2.38			7.897	2.373			150	14.22	35.03	26.18	188.9	.463
148	14.25	35.030	2.45			7.888	2.379			200	13.51	34.97	26.29	180.3	.555
198	13.53	34.970	1.61			7.798	2.379			250	13.12	34.94	26.35	175.9	.644
299	12.68	34.916	0.28			7.655	2.370			300	12.66	34.91	26.42	170.3	.731
399	10.68	34.802	0.14			7.571	2.376			400	10.67	34.80	26.70	144.5	.888
599	8.47	34.675	0.3[illegible]			7.539	2.383			500	9.44	34.73	26.86	130.5	1.025
800	5.79	34.571	1.11			7.542	2.407			600	8.46	34.67	26.97	120.9	1.151
1000	4.61	34.575	1.52			7.5[illegible]1	2.423			700	7.06	34.61	27.13	105.4	1.264
1200	3.81	34.584	1.86			7.591	2.445			800	5.80	34.59	27.27	91.7	1.363
1467*	3.11	34.609	2.10			7.604	2.467			1000	4.41	34.58	27.41	78.3	1.533
1501	3.04	34.615	2.17			7.620	2.463			1200	3.82	34.59	27.51	69.2	1.680
1967*	2.31	34.654	2.38			7.631	2.494			1500	3.04	34.61	27.60	60.1	1.874
1999	2.30	34.654	2.40			7.644	2.496			2000	2.30	34.65	27.70	51.1	2.151
2367*	1.99	34.670	2.75			7.660	2.498			2500	1.91	34.67	27.74	47.4	2.398
2766*	1.81	34.680	3.09			7.685	2.504			3000	1.80	34.68	27.76	46.9	2.633
3164*	1.79	34.685	3.20			7.690	2.504								
3464*	1.81	34.684	3.22			7.690	2.504								
3665*	1.83	34.684	3.22		2.70	7.692	2.504		146						
3714*	1.84	34.686	3.22		2.91	7.695	2.501		146						
3735*	1.84	34.685	3.22	3.16	2.70	7.701	2.501		147						
3750*		34.685	3.22	3.16	2.77	7.695	2.506		146						
3759*		34.686		3.13	2.74	7.694			146						
3762*		34.686		3.12	2.78	7.694			145						
3764*		34.686		3.12	2.71	7.699			146						
3765*		34.685		3.13	2.75	7.695			146						

OBSERVED | INTERPOLATED | DERIVED

YTT 84 04 00.0 S 091 40.0 W DATE 22 FEB 69 1008 GCT WIRE DRY 75.9 WET 75.3 CRUISE YALOCAO
WIND DIRECTION 14 VEL 14 KTS BAR 11 SWELL DIRECTION 16 H 04 T 10 CLOUD 8 AMT 2 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	26.36	33.882	4.90						
10	26.36	33.885	4.90						
20	26.34	33.889	4.90						
30	26.05	34.298	5.01						
40	25.43	34.907	4.97						
49	23.98	34.989	4.99						
75	17.01	35.183	1.91						
98	15.12	35.127	2.05						
123		35.08[illegible]	2.38						
147	14.27	35.07[illegible]	2.38						
172		34.967	0.68						
197	13.32	34.952	0.51						
247		34.925	0.34						
297	12.51	34.909	0.26						
347		34.881	0.41						
397	10.91	34.812	0.21						
554*	7.80	34.638	0.37						
851*	5.38	34.565	1.45						
1147*	4.06	34.575	1.80						
1439*	3.10	34.607	2.16						
1937*	2.37	34.650	2.34						
2335*	1.48	34.667	2.75						
2734*	1.83	34.675	3.03						
3132*	1.79	34.680	3.20						
3431*	1.81	34.682	3.22						
3630*	1.81	34.683	3.22						
3679*	1.83	34.684	3.22						
3699*	1.80	34.683	3.22						
3714*		34.685	3.22						
3724*		34.688							
3727*		34.688							
3729*		34.686							
3730*		34.686							

					8.200	2.321			
					8.202	2.312			
					8.207	2.321			
					8.200	2.367			
					8.164	2.405			
					8.130	2.392			
					7.854	2.403			
					7.849	2.394			
					7.864	2.389			
					7.851	2.405			
					7.677	2.394			
					7.656	2.392			
					7.631	2.387			
					7.608	2.386			
					7.617	2.385			
					7.552	2.401			
					7.520				
					7.564				
					7.579				
					7.607				
					7.631				
					7.656				
					7.677				
					7.695				
					7.695				
				2.56	7.695				146
				2.67	7.695				145
			3.15	2.59	7.690				146
			3.13	2.62	7.699				145
			3.18	2.62	7.695				145
			3.16	2.61	7.702				144
			3.17	2.63	7.704				145
			3.24		7.706				148

Z (m)	T (°C)	S (‰)	σ_t	δ (×10⁶)	ΔD (dyn.m)
0	26.36	33.89	22.11	573.8	0
10	26.36	33.89	22.11	573.7	.057
20	26.34	33.89	22.12	573.2	.115
30	26.05	34.30	22.57	535.5	.170
50	23.70	35.00	23.74	419.0	.265
75	17.01	35.19	25.63	235.3	.347
100	15.04	35.12	26.04	197.6	.401
150	14.21	35.06	26.21	185.2	.497
200	13.29	34.95	26.32	177.2	.588
250	12.85	34.92	26.36	171.9	.675
300	12.47	34.91	26.45	167.1	.760
400	10.85	34.81	26.63	147.2	.917
500	8.84	34.69	26.97	123.6	1.052
600	7.24	34.61	27.11	107.0	1.168
700	6.26	34.58	27.21	96.9	1.270
800	5.60	34.58	27.33	89.0	1.362
1000	4.63	34.57	27.40	79.2	1.531
1200	3.86	34.58	27.43	70.3	1.680
1500	2.97	34.61	27.61	59.4	1.874
2000	2.29	34.65	27.73	51.1	2.150
2500	1.90	34.67	27.76	47.6	2.396
3000	1.79	34.68	27.76	47.1	2.632

YTT 85 02 59.9 S 091 40.1 W DATE 22 FEB 69 1910 GCT WIRE 10 DRY 80.0 WET 76.9 CRUISE YALOCAO
WIND DIRECTION 16 VEL 08 KTS BAR 10 SWELL DIRECTION 16 H 04 T 08 CLOUD 8 AMT 3 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	25.27	34.537	4.90						
10	24.70	34.677	4.85						
20	24.31	34.864	4.62						
30	24.07	34.856	4.62						
40	23.99	34.849	4.56						
49	23.90	34.842	4.55						
75	15.94	35.176	2.54						
99	15.72	35.142	2.58						
125		35.133	2.57						
147	15.38	35.117	2.57						
172		35.070	2.31						
198	14.29	35.027	2.10						
248		34.975	1.78						
298	12.76	34.915	0.36						
348		34.877	0.43						
398	10.81	34.802	0.11						

					8.173				

Z (m)	T (°C)	S (‰)	σ_t	δ (×10⁶)	ΔD (dyn.m)
0	25.27	34.54	22.94	494.2	0
10	24.71	34.68	23.22	467.9	.048
20	24.31	34.87	23.47	443.6	.094
30	24.07	34.86	23.54	437.2	.138
50	23.63	34.85	23.67	426.4	.224
75	15.94	35.18	25.92	211.6	.304
100	15.72	35.14	25.94	210.4	.357
150	15.32	35.11	26.01	205.7	.461
200	14.26	35.02	26.17	191.2	.560
250	13.47	34.97	26.30	180.6	.653
300	12.73	34.91	26.40	171.6	.741
400	10.77	34.80	26.64	146.5	.900

YTT 86 02 00.5 S 091 40.0 W DATE 23 FEB 69 0340 GCT WIRE 05 DRY 77.0 WET 75.4 CRUISE YALOCAO
WIND DIRECTION 16 VEL 05 KTS BAR 11 SWELL DIRECTION 16 H 04 T 07 CLOUD 6 AMT 3 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	24.22	34.930	4.43						
10	23.50	34.931	4.36						
20	23.49	34.934	4.36						
30	23.47	34.935	4.34						
40	23.46	34.935	4.28						
49	23.44	34.932	4.24						
75	17.95	35.116	2.00						
99	15.46	35.157	2.10						
124		35.142	2.53						
148	14.48	35.068	2.57						
173		35.040	2.57						
199	13.99	35.015	2.48						
249		34.965	1.52						
300	13.32	34.947	1.44						
350		34.876	0.19						
608*	7.09	34.600	1.02						
906*	5.19	34.600	1.71						
1204*	3.91	34.582	1.82						
1502*	3.14	34.611	2.03						
1998*	2.33	34.647	2.47						
2493*	1.91	34.668	2.85						
2990*	1.77	34.677	3.07						
3139*	1.80	34.678	3.12						
3208*	1.81	34.678	3.07						
3223*		34.679	3.12						
3236*		34.682							
3239*		34.682							
3241*		34.684							
3242*		34.686							

					8.130	2.374			
					8.120	2.373			
					8.115	2.370			
					8.117	2.366			
					8.112	2.370			
					8.113	2.366			
					7.861	2.370			
					7.871	2.379			
					7.907	2.384			
					7.888	2.383			
					7.883	2.380			
					7.875	2.374			
					7.786	2.369			
					7.762	2.373			
					7.605	2.362			
					7.568	2.394			
					7.583	2.409			
					7.588	2.442			
					7.603	2.461			
					7.624	2.499			
					7.655	2.494			
				2.76	7.680	2.501			152
				2.71	7.687	2.506			152
				2.67	7.689	2.509			152
			3.07	2.71	7.690	2.509			151
			3.09	2.79	7.685				150
			3.10	2.72	7.687				149
			3.10	2.71	7.690				151
			3.10	2.74	7.685				150

Z (m)	T (°C)	S (‰)	σ_t	δ (×10⁶)	ΔD (dyn.m)
0	24.23	34.93	23.55	435.4	0
10	23.50	34.94	23.74	415.4	.043
20	23.50	34.94	23.77	415.5	.084
30	23.48	34.94	23.79	415.2	.126
50	23.28	34.94	23.53	410.6	.208
75	17.96	35.12	25.40	261.4	.292
100	15.41	35.16	25.82	202.9	.350
150	14.45	35.06	26.14	190.9	.449
200	13.98	35.01	26.22	186.4	.543
250	13.67	34.96	26.25	185.2	.636
300	13.32	34.95	26.31	180.6	.727
400	11.61	34.81	26.57	157.3	.896
500	9.39	34.69	26.84	132.3	1.041
600	7.28	34.61	27.10	107.3	1.161
700	6.25	34.60	27.23	95.1	1.262
800	5.60	34.60	27.31	87.3	1.354
1000	4.73	34.59	27.41	78.8	1.520
1200	3.92	34.58	27.49	71.0	1.669
1500	3.14	34.61	27.59	61.5	1.868
2000	2.37	34.65	27.69	52.2	2.152
2500	1.91	34.67	27.74	47.4	2.401
3000	1.77	34.68	27.74	47.0	2.637

OBSERVED										INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)

YTT 87 01 30.0 S 091 40.0 W DATE 23 FEB 69 1250 GCT WIRE 08 DRY 75.1 WET 74.0 CRUISE YALOC69
WIND DIRECTION VEL 00 KTS BAR 11 SWELL DIRECTION 16 H 05 T 09 CLOUD AMT 0 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	23.41	34.947	4.26			8.113	2.382			0	23.42	34.95	23.83	411.6	0
10	23.19	34.956	4.15							10	23.19	34.96	23.87	405.2	.041
20	23.17	34.960	4.15							20	23.17	34.96	23.84	404.7	.081
30	23.06	34.963	4.14							30	23.06	34.97	23.92	401.9	.122
40	23.10	34.970	4.14							50	22.89	34.99	23.94	396.4	.201
49	23.05	34.978	4.14							75	18.14	35.22	25.43	259.0	.283
74	18.23	35.216	2.27							100	16.91	35.26	25.74	229.4	.344
98	16.98	35.262	2.51							150	15.62	35.18	26.02	206.7	.453
123		35.236	2.27							200	14.04	35.02	26.22	187.3	.552
147	15.72	35.197	2.36							250	13.55	34.97	26.28	182.3	.644
172		35.089	2.64							300	13.20	34.93	26.39	179.5	.733
197	14.08	35.024	2.55							400	10.52	34.78	26.71	143.7	.896
247		34.972	2.40												
298	13.24	34.935	1.09												
348		34.884	0.43												
398	10.57	34.781	0.39												

YTT 88 01 15.6 S 091 40.0 W DATE 23 FEB 69 1545 GCT WIRE 05 DRY 78.0 WET 75.0 CRUISE YALOC69
WIND DIRECTION VEL 00 KTS BAR 12 SWELL DIRECTION 18 H 02 T 06 CLOUD AMT 9 WEATHER 10

D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	22.96	34.962	4.15			8.109	2.396			0	22.96	34.97	23.94	398.1	0
10		34.962	4.06							10	22.72	34.97	24.01	391.8	.039
20	22.73	34.961	4.06							20	22.73	34.97	24.01	392.4	.079
30		34.992	4.02							30	22.74	35.00	24.03	390.9	.118
40	22.75	35.003	4.00							50	20.04	35.15	24.89	309.6	.188
48	20.31	35.153	3.03							75	19.28	35.12	25.07	293.4	.263
74	19.30	35.120	3.05							100	18.40	35.19	25.34	268.0	.333
98	18.57	35.191	3.03							150	15.87	35.20	25.65	211.3	.453
122	16.60	35.205	2.92							200	13.94	35.01	26.23	185.6	.552
146	15.92	35.202	2.53							250	13.31	34.96	26.32	178.3	.643
171	15.48	35.150	2.77							300	12.80	34.91	26.39	173.0	.731
197	14.02	35.020	2.38							400	10.07	34.75	26.77	137.7	.887
246	13.36	34.964	1.93												
296	12.83	34.915	1.06												
346	12.47	34.894	0.68												
395	10.29	34.766	0.39												

YTT 89 01 00.0 S 091 40.0 W DATE 23 FEB 69 1833 GCT WIRE 07 DRY 77.5 WET 75.0 CRUISE YALOC69
WIND DIRECTION 18 VEL 04 KTS BAR 11 SWELL DIRECTION 18 H 04 T 07 CLOUD 6 AMT 6 WEATHER 42

D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	23.09	34.988	4.01			8.107	2.385			0	23.09	34.99	23.93	399.8	0
10		34.976	4.02							10	22.68	34.98	24.04	389.7	.039
20	22.68	34.980	4.00							20	22.69	34.99	24.04	389.9	.078
30		34.984	3.98							30	22.68	34.99	24.04	389.8	.117
40	22.68	34.994	3.98							50	21.20	35.16	24.59	338.7	.190
49	21.30	35.151	3.42							75	19.94	35.25	24.99	300.9	.270
75	19.94	35.244	3.10							100	19.62	35.19	25.03	298.1	.345
99	19.64	35.192	3.08							150	16.90	35.22	25.73	233.0	.478
124	18.81	35.134	3.06							200	15.55	35.15	25.99	209.3	.588
148	16.96	35.216	2.90							250	12.94	34.93	26.37	173.3	.684
173	16.49	35.207	2.88							300	12.34	34.89	26.44	166.2	.769
199	15.61	35.156	2.76							400	10.22	34.76	26.75	139.6	.922
248	12.99	34.932	1.45												
299	12.34	34.886	0.68												
349	12.21	34.877	0.64												
399	10.26	34.765	0.37												

YTT 90 00 45.1 S 091 40.4 W DATE 23 FEB 69 2100 GCT WIRE 06 DRY 77.0 WET 75.0 CRUISE YALOC69
WIND DIRECTION 20 VEL 10 KTS BAR 08 SWELL DIRECTION 18 H 04 T 10 CLOUD 6 AMT 6 WEATHER 03

D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁸)	ΔD (dyn.m)
0	22.94	35.009	3.97			8.109	2.375			0	22.94	35.01	23.99	394.2	0
10		35.030	3.95							10	22.49	35.04	24.13	380.6	.039
20	22.48	35.035	3.87							20	22.48	35.04	24.14	380.5	.077
30		35.052	3.87							30	22.47	35.06	24.15	379.2	.115
40	22.46	35.100	3.79							50	20.94	35.26	24.73	324.4	.185
49	21.03	35.259	3.24							75	19.94	35.26	25.00	300.0	.263
74	19.97	35.262	3.12							100	19.31	35.18	25.10	290.4	.337
98	19.34	35.187	3.04							150	18.85	35.15	25.20	283.2	.481
123	19.12	35.154	3.12							200	16.42	35.20	25.43	224.7	.608
147	19.05	35.143	3.09							250	14.67	35.07	26.12	198.0	.713
171	17.27	35.218	2.88							300	11.41	34.83	26.59	153.2	.801
197	16.50	35.205	2.85							400	10.85	34.80	26.67	148.1	.952
247	14.83	35.081	2.64												
298	12.13	34.872	0.51												
247	11.70	34.845	0.42												
397	10.87	34.798	0.37												

YTT 91 00 30.0 S 091 40.0 W DATE 23 FEB 69 2340 GCT WIRE DRY 76.9 WET 75.0 CRUISE YALOCAN
WIND DIRECTION VEL 02 KTS BAR 08 SWELL DIRECTION 18 H 04 T 10 CLOUD 6 AMT 6 WEATHER 02

OBSERVED									INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	23.28	34.943	4.04			8.106	2.367			0	23.28	34.95	23.84	408.3	0
10		34.953	3.85							10	21.97	34.96	24.22	372.3	.039
20	21.98	34.956	3.80							20	21.98	34.96	24.22	372.7	.076
30		34.962	3.78							30	21.99	34.97	24.22	372.7	.114
40	21.99	34.971	3.78							50	21.15	35.01	24.49	347.9	.195
49	21.21	35.015	3.54							75	20.21	35.00	24.73	325.6	.270
75	20.20	34.994	3.22							100	19.59	35.04	24.92	308.2	.349
99	19.60	35.035	3.18							150	18.72	35.16	25.24	279.9	.446
124	19.34	35.112	3.20							200	16.89	35.20	25.72	235.1	.625
148	18.78	35.153	3.14							250	15.49	35.13	25.98	211.2	.736
173	17.93	35.196	2.99							300	12.30	34.88	26.46	165.7	.830
199	16.91	35.204	2.94							400	10.20	34.76	26.76	139.3	.953
249	15.56	35.133	2.85												
300	12.30	34.880	0.61												
350	11.19	34.820	0.52												
400	10.20	34.762	0.34												

YTT 92 00 14.4 S 091 40.0 W DATE 24 FEB 69 0232 GCT WIRE DRY 75.0 WET 74.0 CRUISE YALOCAN
WIND DIRECTION 21 VEL 08 KTS BAR 10 SWELL DIRECTION 18 H 04 T 07 CLOUD AMT 0 WEATHER 02

OBSERVED									INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	22.80	34.883	3.96			8.096	2.394			0	22.80	34.89	23.93	399.4	0
10		34.914	3.78							10	21.52	34.92	24.31	363.1	.038
20	21.35	34.922	3.61							20	21.35	34.93	24.37	358.6	.074
30		34.916	3.61							30	21.23	34.92	24.40	356.0	.110
40	21.01	34.924	3.57							50	20.19	35.00	24.74	324.3	.179
49	20.24	34.995	3.31							75	19.50	35.06	24.96	303.6	.256
75	19.50	35.056	3.31							100	19.22	35.09	25.06	295.4	.331
98	19.26	35.088	3.26							150	17.23	35.17	25.61	243.9	.466
123	18.57	35.113	3.11							200	16.33	35.18	25.83	226.4	.583
147	17.37	35.148	2.96							250	15.44	35.13	26.00	210.0	.692
172	16.45	35.169	2.96							300	12.29	34.88	26.47	165.6	.786
197	16.37	35.179	2.94							400	10.43	34.78	26.73	142.2	.939
247	15.63	35.144	2.92												
298	12.36	34.887	0.78												
348	11.21	34.822	0.39												
398	10.46	34.779	0.37												

YTT 93 00 00.5 N 091 39.6 W DATE 23 FEB 69 0442 GCT WIRE 08 DRY 74.8 WET 73.8 CRUISE YALOCAN
WIND DIRECTION 20 VEL 05 KTS BAR 11 SWELL DIRECTION 18 H 04 T 06 CLOUD 6 AMT 8 WEATHER 02

OBSERVED									INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	22.97	34.873	4.04			8.101	2.377			0	22.98	34.88	23.87	404.8	0
10		34.901	3.59							10	20.76	34.91	24.51	344.4	.037
20	20.67	34.945	3.48							20	20.67	34.95	24.57	339.3	.072
29		34.968	3.40							30	20.49	34.97	24.63	333.6	.105
39	20.49	34.977	3.39							50	20.14	35.03	24.77	320.8	.171
48	20.20	35.023	3.22							75	19.43	35.08	24.99	300.7	.244
73	19.48	35.075	3.22							100	19.03	35.11	25.12	288.8	.322
97	19.03	35.101	3.22							150	17.40	35.22	25.57	248.3	.456
122	18.87	35.206	2.96							200	16.44	35.18	25.81	226.6	.575
145	17.92	35.236	2.89							250	15.58	35.13	25.97	212.7	.685
170	16.49	35.175	2.99							300	12.70	34.90	26.40	171.9	.781
195	16.44	35.184	2.94												
244	15.80	35.149	2.95												
294	13.03	34.929	1.17												

YTT 94 00 00.0 N 091 49.8 W DATE 24 FEB 69 0748 GCT WIRE 08 DRY 72.8 WET 71.9 CRUISE YALOCAN
WIND DIRECTION 18 VEL 08 KTS BAR 10 SWELL DIRECTION 18 H 03 T 09 CLOUD AMT 9 WEATHER 45

OBSERVED									INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	22.79	34.872	3.99			8.103				0	22.79	34.88	23.92	400.0	0
9		34.873	3.85							10	22.16	34.87	24.10	383.4	.039
19	21.83	34.869	3.80							20	21.79	34.87	24.20	374.3	.077
28		34.876	3.72							30	21.43	34.88	24.31	364.3	.114
38	21.14	34.895	3.50							50	20.70	34.94	24.56	341.4	.185
47	20.73	34.936	3.31							75	20.30	35.10	24.79	320.4	.267
72	20.48	35.059	3.22							100	18.90	35.36	25.35	267.9	.341
95	19.05	35.371	2.83							150	17.44	35.29	25.61	244.3	.469
118	18.51	35.323	2.85							200	16.43	35.20	25.83	225.0	.584
142	17.79	35.285	2.85							250	14.60	35.05	26.12	197.8	.692
166	17.34	35.301	2.85							300	11.92	34.85	26.51	160.9	.781
191	16.62	35.219	2.88												
239	15.29	35.105	2.90												
288	12.32	34.879	0.70												
337	11.49	34.831	0.30												

YTT 95 00 15.0 N 091 50.0 W DATE 24 FEB 69 1025 GCT WIRE 10 DRY 72.1 WET 72.0 CRUISE YALOGAG
WIND DIRECTION 18 VEL 04 KTS BAR 08 SWELL DIRECTION 18 H 03 T 08 CLOUD 6 AMT 9 WEATHER 44

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED S ($\times 10^3$)	ΔD (dyn.m)
0	22.32	34.855	3.49			8.096	2.375			0	22.32	34.86	24.05	348.4	0
10		34.841	3.74							10	21.35	34.87	24.15	354.9	.037
20	21.08	34.897	3.69							20	21.08	34.90	24.42	353.3	.073
30		34.930	3.39							30	20.83	34.93	24.52	344.6	.108
39		34.931	3.35							50	20.58	34.93	24.59	338.4	.176
48	20.60	34.931	3.34							75	20.11	34.98	24.74	324.5	.259
73	20.13	34.970	3.13							100	19.44	35.14	24.99	301.8	.337
97	19.95	35.128	3.03							150	15.38	35.01	25.92	214.1	.466
122	17.04	35.174	3.10							200	14.93	35.04	26.04	203.8	.571
145	15.50	35.011	2.86							250	14.63	35.04	26.11	199.0	.671
170	15.21	35.029	2.94							300	12.25	34.88	26.47	165.4	.763
195	14.94	35.038	2.85							400	10.35	34.79	26.74	140.0	.915
244	14.87	35.060	2.86												
294	12.51	34.891	0.79												
343	10.82	34.799	0.28												
392	10.32	34.784	0.26												

YTT 96 00 15.6 N 091 40.0 W DATE 24 FEB 69 0318 GCT WIRE DRY 72.9 WET 72.0 CRUISE YALOGAG
WIND DIRECTION 28 VEL 04 KTS BAR 10 SWELL DIRECTION 19 H 02 T 08 CLOUD 8 AMT 3 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED S ($\times 10^3$)	ΔD (dyn.m)
0	23.64	34.915	4.15			8.104	2.375			0	23.65	34.92	23.71	420.3	0
10		34.904	3.68							10	21.66	34.91	24.33	361.7	.039
20	21.27	34.961	3.56							20	21.27	34.97	24.42	353.6	.075
30		35.039	3.44							30	21.03	35.04	24.54	347.0	.110
39	23.45	35.099	3.30							50	20.66	35.25	24.85	313.0	.175
48	20.53	35.224	3.12							75	19.58	35.44	25.23	278.2	.249
76	19.63	35.439	2.93							100	18.47	35.33	25.43	259.6	.314
97	18.52	35.335	2.97							150	17.80	35.22	25.51	253.3	.444
122	18.27	35.319	2.98							200	15.93	35.07	25.86	223.3	.563
146	17.95	35.227	3.01							250	14.31	35.02	26.16	194.2	.668
171	14.90	35.186	3.11							300	12.50	34.89	26.43	168.8	.759
196	14.05	35.077	2.96							400	10.14	34.75	26.76	139.0	.912
245	14.51	35.029	2.40												
295	12.41	34.499	0.98												
344	11.65	34.842	0.42												
394	10.71	34.764	0.31												

YTT 97 00 30.0 N 091 39.8 W DATE 25 FEB 69 0805 GCT WIRE 03 DRY 74.8 WET 73.8 CRUISE YALOGAG
WIND DIRECTION 20 VEL 04 KTS BAR 10 SWELL DIRECTION 19 H 02 T 07 CLOUD AMT WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED S ($\times 10^3$)	ΔD (dyn.m)
0	22.39	34.887	3.95			8.088	2.367			0	22.43	34.89	24.05	388.0	0
10		34.882	3.76			8.078				10	21.88	34.89	24.19	375.0	.038
20	21.63	34.882	3.68			8.069				20	21.63	34.89	24.24	368.8	.075
30		34.874	3.64			8.067				30	21.46	34.88	24.30	365.2	.112
39	21.15	34.882	3.50			8.049				50	20.35	34.94	24.64	333.0	.182
48	20.35	34.916	3.22			8.020				75	19.87	35.13	24.92	307.5	.262
76	20.03	35.134	3.02			8.011				100	15.94	35.01	25.79	225.3	.324
97	18.18	35.020	2.67			7.944				150	14.99	35.00	26.00	206.9	.436
122	15.11	34.945	2.57			7.909				200	14.94	35.07	26.06	202.3	.539
146	14.99	34.992	2.75			7.909				250	13.43	34.96	26.30	180.5	.634
171	15.03	35.037	2.85			7.922				300	12.76	34.91	26.39	172.8	.723
196	15.04	35.071	2.91			7.927				400	10.85	34.80	26.67	147.9	.883
245	13.51	34.968	2.15			7.830				500	8.47	34.76	27.01	115.9	1.015
295	12.84	34.913	1.00			7.707				600	7.19	34.76	27.23	95.4	1.120
344	11.95	34.861	0.45			7.644				700	6.28	34.76	27.35	83.9	1.210
394	11.01	34.809	0.28			7.607				800	5.46	34.71	27.39	80.4	1.292
425*	10.16	34.757	0.23			7.574				1000	4.82	34.58	27.39	80.9	1.453
721*	6.16	34.756	1.33			7.574				1200	3.98	34.58	27.48	72.2	1.606
1020*	4.77	34.569	1.65			7.579				1500	3.10	34.62	27.60	60.8	1.806
1316*	3.54	34.600	1.86			7.588				2000	2.25	34.65	27.70	50.6	2.084
1616*	2.89	34.624	2.10			7.602				2500	1.88	34.67	27.74	47.4	2.329
1922*	2.32	34.648	2.47			7.627									
2210*	2.11	34.660	2.69			7.646									
2508*	1.88	34.470	2.95		2.73	7.665			151						
2657*	1.87	34.673	2.95		2.75	7.666			151						
2726*	1.82	34.674	2.95	2.95	2.68	7.672			150						
2741*	1.85	34.674	2.99		2.74	7.666			151						
2756*				2.93	2.79	7.677			152						
2759*				2.92	2.72	7.673			151						
2761*				2.92	2.67	7.673			152						
2762*				2.92	2.82	7.672			152						

YTT 98 00 45.0 N 091 40.0 W DATE 25 FEB 69 1240 GCT WIRE 09 DRY 74.0 WET 73.2 CRUISE YALOGAG
WIND DIRECTION 21 VEL 05 KTS BAR 10 SWELL DIRECTION 19 H 02 T 09 CLOUD 6 AMT 8 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	σ_t	DERIVED S ($\times 10^3$)	ΔD (dyn.m)
0	22.71	34.846	4.12			8.098	2.367			0	22.71	34.85	23.93	399.7	0
10		34.831	4.06							10	22.48	34.84	23.98	394.6	.040
20	22.44	34.827	4.00							20	22.44	34.83	23.99	394.6	.079
30		34.820	3.96							30	22.39	34.83	24.00	393.9	.119
40	22.37	34.810	3.96							50	22.22	34.81	24.04	391.1	.197
48	22.34	34.800	3.96							75	19.78	34.94	24.80	319.0	.286
76	19.89	34.942	3.12							100	16.91	34.89	25.48	255.7	.358
97	17.28	34.893	2.58							150	14.72	34.99	26.05	201.6	.472
122	14.84	34.893	2.29							200	14.60	35.04	26.11	197.3	.571
146	14.72	34.981	2.66							250	13.60	34.96	26.27	183.7	.667
171	14.71	35.037	2.85							300	12.21	34.87	26.47	164.7	.754
197	14.64	35.042	2.80							400	9.72	34.73	26.81	133.5	.903
246	13.70	34.970	2.34												
296	12.32	34.881	0.70												
345	11.01	34.802	0.30												
394	9.86	34.738	0.30												

OBSERVED | INTERPOLATED | DERIVED

FCZ 1 00 54.6 N 091 37.4 W DATE 25 FEB 69 1525 GCT WIRE 05 DRY 76.4 WET 75.0 CRUISE YALOCAN
WIND DIRECTION 23 VEL 04 KTS BAR 11 SWELL DIRECTION H T CLOUD 3 AMT R WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	28.12	35.354	4.59						
25	27.91	34.834	4.08						
49	22.54	34.810	4.06						
74	20.88	34.823	3.42						
99	16.23	34.877	2.34						

8.193

Z (m)	T (°C)	S (‰)	σ_t	S ($\times 10^4$)	ΔD (dyn.m)
0	26.13	33.36	21.79	404.4	0
10	23.14	34.85	23.80	411.8	.051
20	22.99	34.84	23.84	408.7	.092
30	22.78	34.83	23.89	404.1	.132
50	22.50	34.81	23.98	398.6	.213
75	20.95	34.82	24.51	367.0	.306

ECZ 2 00 54.6 N 091 37.8 W DATE 25 FEB 69 1622 GCT WIRE 02 DRY 77.6 WET 75.3 CRUISE YALOCAN
WIND DIRECTION 23 VEL 04 KTS BAR 11 SWELL DIRECTION H T CLOUD 3 AMT R WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	27.90	34.814	4.16						
25	27.54	34.802	4.07						
49	22.47	34.874	4.04						
74	21.23	34.784	3.59						
98	14.41	34.878	2.38						

8.108

Z (m)	T (°C)	S (‰)	σ_t	S ($\times 10^4$)	ΔD (dyn.m)
0	22.90	34.82	23.85	407.2	0
10	22.58	34.76	23.89	403.2	.041
20	22.55	34.79	23.92	400.6	.081
30	22.53	34.82	23.96	397.8	.121
50	22.42	34.87	24.03	392.1	.200
75	21.23	34.79	24.29	367.3	.295

YTT 98 01 00.0 N 091 39.0 W DATE 25 FEB 69 1751 GCT WIRE 06 DRY 78.9 WET 76.8 CRUISE YALOCAN
WIND DIRECTION 20 VEL 19 KTS BAR 10 SWELL DIRECTION 19 H 02 T 07 CLOUD 3 AMT R WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	27.26	32.643	4.77						
10		33.104	4.88						
20	24.55	33.897	4.50						
30		34.574	4.25						
40	22.70	34.801	4.21						
49	22.62	34.794	4.12						
75	19.60	34.842	3.15						
98	16.40	34.866	2.19						
124	15.03	34.862	1.91						
148	14.12	34.860	2.54						
173	14.08	34.967	2.54						
198	14.01	34.976	2.57						
248	13.74	34.973	2.36						
299	12.77	34.912	1.09						
348	10.67	34.782	0.27						
398	10.13	34.753	0.28						

8.248

Z (m)	T (°C)	S (‰)	σ_t	S ($\times 10^4$)	ΔD (dyn.m)
0	27.26	32.65	20.89	490.1	0
10	25.47	33.11	21.80	603.6	.065
20	24.55	33.90	22.67	520.2	.121
30	23.43	34.58	23.52	439.9	.169
50	22.55	34.80	23.93	400.9	.253
75	19.60	34.85	24.77	321.6	.343
100	16.32	34.86	25.58	244.0	.414
150	14.10	34.87	26.09	198.1	.524
200	14.01	34.98	26.19	189.7	.621
250	13.72	34.97	26.25	185.5	.715
300	12.73	34.91	26.40	171.9	.804
400	10.14	34.75	26.76	138.9	.960

YTT100 01 30.0 N 091 40.0 W DATE 25 FEB 69 2216 GCT WIRE 03 DRY 80.0 WET 77.0 CRUISE YALOCAN
WIND DIRECTION 23 VEL 10 KTS BAR 07 SWELL DIRECTION 19 H 02 T 08 CLOUD 6 AMT R WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	27.95	32.315	4.71						
10		32.315	4.75						
20	25.18	33.237	4.79						
30		34.269	4.72						
40	24.03	34.456	4.52						
49	23.40	34.748	4.41						
75	19.75	34.786	3.18						
99	15.56	34.894	1.95						
124	14.33	34.929	2.27						
148	13.92	34.972	2.40						
173	13.90	34.974	2.45						
199	13.91	34.977	2.44						
249	13.49	34.948	1.27						
300	12.53	34.900	0.53						
350	11.25	34.814	0.24						
400	9.84	34.740	0.34						

8.274 2.237

Z (m)	T (°C)	S (‰)	σ_t	S ($\times 10^4$)	ΔD (dyn.m)
0	27.96	32.32	20.42	735.0	0
10	25.76	32.32	21.12	668.7	.070
20	25.19	33.44	22.44	542.7	.131
30	24.53	34.27	22.96	492.9	.183
50	23.29	34.74	23.69	423.9	.274
75	19.75	34.79	24.69	329.3	.368
100	15.47	34.90	25.81	223.2	.437
150	13.91	34.97	26.21	186.5	.560
200	13.91	34.98	26.21	187.6	.633
250	13.48	34.95	26.28	182.5	.726
300	12.43	34.91	26.42	170.5	.814
400	9.84	34.74	26.80	134.8	.967

YTT103 00 04.2 S 092 25.3 W DATE 02 MAR 69 1557 GCT WIRE 04 DRY 78.5 WET 75.7 CRUISE YALOCAN
WIND DIRECTION 18 VEL 10 KTS BAR 11 SWELL DIRECTION 19 H 02 T 07 CLOUD 6 AMT R WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	25.35	34.550	5.01						
10	25.24	34.533	4.99						
20	23.39	34.698	4.74						
30	22.04	34.773	4.12						
40	20.27	35.052	3.31						
49	18.27	34.994	3.03						
75	16.96	35.097	2.64						
99	15.74	35.071	2.45						
148	15.50	35.076	2.35						
198	15.03	35.023	2.08						
299	12.88	34.909	0.70						
399	10.23	34.759	0.19						
599	7.16	34.613	0.59						
800	5.85	34.580	1.09						
1000	5.01	34.574	1.41						
1014*	5.00	34.575	1.38						
1213*	4.05	34.590	1.63						
1512*	3.10	34.620	1.95						
1611*	2.85	34.630	2.06						
1712*	2.57	34.642	2.17						
1783*	2.50	34.646	2.19	2.18					
1799*	2.41	34.648	2.21	2.22					
1807*		34.650		2.30					
1810*		34.650		2.31					
1812*		34.651		2.30					
1813*		34.650		2.28					

2.351

Z (m)	T (°C)	S (‰)	σ_t	S ($\times 10^4$)	ΔD (dyn.m)
0	25.35	34.55	22.92	495.8	0
10	25.25	34.54	22.94	493.9	.069
20	23.40	34.70	23.42	429.7	.096
30	22.04	34.78	24.04	387.9	.137
50	18.16	35.00	25.24	275.0	.203
75	16.94	35.10	25.62	240.4	.267
100	15.72	35.07	25.89	215.8	.324
150	15.49	35.07	25.94	212.0	.431
200	15.00	35.02	26.01	206.9	.536
250	14.06	34.97	26.17	192.7	.636
300	12.85	34.91	26.37	174.5	.727
400	10.21	34.76	26.75	139.8	.885
500	8.38	34.67	26.98	118.1	1.013
600	7.15	34.61	27.12	105.7	1.125
700	6.36	34.59	27.21	97.5	1.227
800	5.83	34.58	27.27	91.9	1.322
1000	5.02	34.58	27.37	83.6	1.497
1200	4.13	34.59	27.47	73.1	1.653
1500	3.13	34.62	27.60	60.9	1.854

YTT104 02 11.0 S 081 29.0 W DATE 04 MAR 69 0145 GCT WIRE 01 DRY 79.2 WET 75.6 CRUISE YALOGAN
WIND DIRECTION 24 VEL 02 KTS BAR 18 SWELL DIRECTION 18 H 02 T 08 CLOUD 3 AMT 6 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	28.92	34.553	5.06			8.216	2.353		
10	24.67	34.567	5.06			8.200	2.347		
20	22.91	34.765	4.60			8.139	2.357		
30	22.07	34.897	4.29			8.105	2.365		
40	21.06	34.888	3.98			8.069	2.367		
49	20.28	34.956	3.66			8.038	2.372		
75	16.37	35.062	2.34			7.888	2.372		
99	16.06	35.062	2.26			7.890	2.372		
148	15.64	35.031	1.89			7.849	2.377		
199	14.65	35.014	1.63			7.796	2.367		
300	13.05	34.934	0.78			7.678	2.372		
399	10.13	34.761	0.22			7.596	2.372		
600	7.56	34.631	0.51			7.516	2.389		
801	5.87	34.584	1.07			7.525	2.408		
1001	4.75	34.579	1.45			7.547	2.424		
1062*	4.52	34.583	1.51			7.584	2.432		
1202	3.87	34.596	1.71			7.569	2.443		
1364*	3.39	34.608	1.84			7.503	2.459		
1503	3.04	34.624	2.01			7.608	2.473		
1613*	2.82	34.630	2.08			7.620	2.477		
1851*	2.48	34.644	2.29			7.636	2.483		
2164*	2.17	34.661	2.47			7.655	2.497		
2463*	1.91	34.673	2.65			7.674	2.497		
2754*	1.80	34.683	3.12			7.694	2.504		
3064*	1.81	34.684	3.19			7.697	2.501		
3364*	1.92	34.684	3.19			7.697	2.494		
3663*	1.81	34.685	3.22		2.59	7.690	2.490		148
3762*	1.82	34.686	3.22		2.76	7.695	2.497		149
3833*	1.83	34.685	3.24	3.19	2.60	7.692	2.497		148
3848*	1.82	34.686	3.24	3.20	2.76	7.687	2.497		148
3859*		34.688		3.20	2.70	7.699	2.494		147
3856*		34.689		3.21	2.76	7.701	2.497		146
3860*		34.687		3.21	2.77	7.702	2.493		148
3861*		34.686		3.19	2.66	7.719	2.491		146

INTERPOLATED

Z (m)	T (°C)	S (‰)
0	25.92	34.56
10	24.67	34.57
20	22.92	34.77
30	22.07	34.90
50	20.12	34.96
75	16.38	35.07
100	16.05	35.06
150	15.61	35.03
200	14.34	35.01
250	13.90	34.98
300	13.05	34.94
400	10.11	34.76
500	8.50	34.67
600	7.57	34.64
700	6.63	34.60
800	5.88	34.58
1000	4.75	34.58
1200	3.88	34.60
1500	3.05	34.62
2000	2.32	34.65
2500	1.89	34.67
3000	1.80	34.68

DERIVED

σ_t	δ (x10⁻⁸)	ΔD (dyn.m)
22.75	512.1	0
23.14	475.0	.049
23.81	411.7	.094
24.15	379.8	.133
24.73	325.2	.204
25.74	229.7	.273
25.81	223.7	.330
25.88	217.7	.440
26.08	199.8	.544
26.22	188.3	.641
26.36	176.1	.733
26.77	138.0	.840
26.94	119.5	1.018
27.08	110.1	1.133
27.18	100.3	1.238
27.27	92.2	1.334
27.40	80.2	1.507
27.50	69.4	1.656
27.61	59.5	1.849
27.69	51.5	2.127
27.75	47.1	2.273
27.76	46.9	2.807

YTP105 00 06.0 N 084 03.7 W DATE 09 MAR 69 0644 GCT WIRE 04 DRY 77.0 WET 77.9 CRUISE YALOGAN
WIND DIRECTION 14 VEL 03 KTS BAR 08 SWELL DIRECTION 20 H 02 T 08 CLOUD 8 AMT 2 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	26.03	34.647	4.97			8.190	2.344		
10	25.39	34.687	4.90			8.178	2.351		
20	24.57	34.766	4.74			8.151	2.349		
30	24.05	34.830	4.60			8.139	2.351		
1314*	3.52	34.604	1.81				2.449		
1614*	2.83	34.637	2.08				2.476		
1914*	2.49	34.647	2.21				2.494		
2213*	2.17	34.662	2.39				2.496		
2513*	2.10	34.666	2.51				2.502		
2812*	2.07	34.672	2.56				2.511		
3111*	2.06	34.671	2.37		2.75		2.511		155
3210*	2.10	34.671	2.57		2.74		2.511		156
3380*	2.09	34.671	2.57	2.56	2.70		2.502		155
3395*	2.09	34.672	2.59	2.56	2.71		2.507		155
3602*		34.673		2.47	2.86		2.500		155
3605*		34.671		2.47	2.89		2.500		155
3607*		34.671		2.50	2.75		2.504		155
3608*		34.672		2.49	2.75		2.500		155

YTP106 02 58.5 N 086 32.8 W DATE 10 MAR 69 1712 GCT WIRE 04 DRY 85.8 WET 79.0 CRUISE YALOGAN
WIND DIRECTION 18 VEL 06 KTS BAR 09 SWELL DIRECTION 20 H 02 T 14 CLOUD 8 AMT 2 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	28.96	32.734	4.62			8.269	2.218		
10	28.45	32.777	4.71						
20	26.95	33.180	4.90						
30	25.87	33.415	4.91						
49	18.11	34.739	2.56						
75	15.82	34.990	1.99						
98	15.25	35.003	2.02						
147	14.70	35.015	2.19						
197	13.53	34.938	1.82						
298	12.29	34.854	0.55						
398	9.83	34.724	0.22						
598	7.15	34.612	0.59						
798	5.69	34.576	0.92						
997	4.71	34.577	1.38						
1144*	4.22	34.585	1.54						
1197	3.95	34.590	1.54						
1454*	3.36	34.611	1.76						
1497	3.15	34.619	1.82						
1705*	2.71	34.636	2.02						
1954*	2.39	34.650	2.19						
2153*	2.21	34.659	2.37						
2253*	2.18	34.661	2.39						
2354*	2.14	34.664	2.45						
2454*	2.07	34.667	2.47						
2554*	2.05	34.668	2.47						
2653*	2.07	34.667	2.47						
2753*	2.05	34.665	2.47						
2802*	2.08	34.667	2.47						

INTERPOLATED

Z (m)	T (°C)	S (‰)
0	28.96	32.74
10	28.48	32.78
20	26.96	33.18
30	25.88	33.42
50	17.91	34.77
75	15.83	35.00
100	15.23	35.00
150	14.63	35.01
200	13.49	34.93
250	12.86	34.89
300	12.24	34.85
400	9.79	34.72
500	8.21	34.65
600	7.14	34.61
700	6.30	34.59
800	5.68	34.58
1000	4.70	34.58
1200	3.94	34.59
1500	3.14	34.62
2000	2.34	34.65
2500	2.08	34.67

DERIVED

σ_t	δ (x10⁻⁸)	ΔD (dyn.m)
20.41	736.7	0
20.61	717.7	.073
21.39	642.6	.141
21.91	593.7	.203
25.14	285.6	.290
25.85	218.6	.353
25.95	210.1	.407
26.08	198.5	.509
26.36	182.5	.604
26.36	174.7	.694
26.45	167.0	.779
26.79	135.4	.930
26.99	116.5	1.056
27.12	105.7	1.167
27.21	96.8	1.268
27.28	90.2	1.362
27.40	79.6	1.531
27.49	70.7	1.682
27.60	60.9	1.879
27.69	51.7	2.160
27.73	49.8	2.414

OBSERVED										INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^3$)	ΔD (dyn.m)

YTP107 04 47.1 N 088 26.5 W DATE 11 MAR 69 1723 GCT WIRE DRY 83.2 WET 80.9 CRUISE YALOCAG
WIND DIRECTION 27 VEL 04 KTS BAR 11 SWELL DIRECTION 19 H 04 T 07 CLOUD 3 AMT 8 WEATHER 02

D	T	S	O_2	O_2	PO_4	pH	Alk.	NO_3	SiO_2	Z	T	S	σ_t	δ	ΔD
0	29.48	32.022	4.64			8.296	2.169			0	29.48	32.03	19.70	806.[illegible]	0
10	29.07	32.023	4.69			8.291	2.165			10	29.07	32.03	19.66	791.[illegible]	.080
20	28.14	32.541	4.82			8.279	2.203			20	28.15	32.55	20.53	725.[illegible]	.156
30	26.75	32.963	4.73			8.255	2.233			30	26.75	32.97	21.24	652.[illegible]	.225
49	25.15	33.238	4.30			8.188	2.245			50	24.32	33.31	22.15	571.[illegible]	.347
74	16.95	34.959	2.27			7.904	2.356			75	16.86	34.96	25.55	247.[illegible]	.440
98	15.83	34.965	2.10			7.881	2.354			100	15.75	34.96	25.89	224.[illegible]	.508
146	14.25	34.947	2.03			7.861	2.354			150	14.17	34.95	26.13	193.[illegible]	.613
197	13.47	34.925	1.33			7.776	2.354			200	13.43	34.92	26.27	181.[illegible]	.707
297	12.00	34.833	0.30			7.641	2.354			250	12.49	34.88	26.38	172.[illegible]	.795
396	10.42	34.746	0.22			7.585	2.361			300	11.95	34.83	26.49	163.[illegible]	.879
595	7.18	34.601	0.35			7.523	2.376			400	10.35	34.74	26.72	143.[illegible]	1.032
794	5.77	34.572	0.70			7.521	2.393			500	8.62	34.66	26.94	122.[illegible]	1.165
992	4.60	34.575	1.20			7.552	2.420			600	7.13	34.60	27.11	106.[illegible]	1.279
1114*	4.16	34.574	1.26			7.560	2.427			700	6.31	34.58	27.23	97.[illegible]	1.381
1190	3.82	34.591	1.45			7.[illegible]4	2.434			800	5.73	34.57	27.28	91.[illegible]	1.475
1413*	3.33	34.609	1.67			7.538	2.451			1000	4.57	34.57	27.41	78.[illegible]	1.644
1489	3.12	34.617	1.89			7.600	2.455			1200	3.79	34.59	27.51	68.[illegible]	1.791
1663*	2.69	34.633	2.04			7.620	2.469			1500	3.09	34.62	27.63	60.[illegible]	1.965
1913*	2.34	34.646	2.37			7.639	2.476			2000	2.23	34.63	27.70	50.[illegible]	2.262
2164*	2.06	34.657	2.57			7.656	2.484			2500	1.87	34.67	27.74	47.[illegible]	2.506
2414*	1.92	34.667	2.58		2.74	7.666	2.496		158						
2614*	1.83	34.671	2.66		2.77	7.665	2.495		159						
2682*	1.82	34.672	2.68	2.63	2.74	7.666	2.500		159						
2697*	1.84	34.671	2.66	2.63	2.79	7.668	2.498		158						
2705*		34.670		2.63	2.85	7.668	2.492		159						
2708*		34.669		2.61	2.96	7.663	2.494		158						
2711*		34.669		2.60	2.86	7.663	2.506		158						

YTP108 04 06.3 N 085 00.1 W DATE 13 MAR 69 1349 GCT WIRE 02 DRY 85.1 WET 79.3 CRUISE YALOCAG
WIND DIRECTION 15 VEL 10 KTS BAR 13 SWELL DIRECTION 18 H 03 T 12 CLOUD 8 AMT 7 WEATHER 02

D	T	S	O_2	O_2	PO_4	pH	Alk.	NO_3	SiO_2	Z	T	S	σ_t	δ	ΔD
0	29.09	31.805	4.65			8.294	2.152			0	29.09	31.81	19.57	807.[illegible]	0
10	29.27	32.120	4.67			8.298	2.168			10	29.27	32.13	19.84	791.[illegible]	.080
20	29.33	33.262	4.82			8.296	2.245			20	29.33	33.27	20.63	711.[illegible]	.155
30	26.68	34.099	4.97			8.258	2.302			30	26.69	34.10	22.17	568.[illegible]	.219
49	18.89	34.576	1.83			7.875	2.331			50	18.67	34.60	24.52	316.[illegible]	.308
75	15.71	34.943	1.72			7.829	2.361			75	15.71	34.95	25.80	223.[illegible]	.375
98	14.82	34.957	1.55			7.808	2.359			100	14.76	34.96	26.01	203.[illegible]	.428
148	13.82	34.939	1.43			7.776	2.361			150	13.80	34.94	26.21	186.[illegible]	.526
198	13.35	34.928	1.17			7.738	2.359			200	13.33	34.93	26.29	179.[illegible]	.618
298	11.78	34.826	0.24			7.610	2.364			250	12.62	34.88	26.40	170.[illegible]	.705
398	9.59	34.712	0.09			7.532	2.3[illegible]			300	11.74	34.80	26.53	159.[illegible]	.788
599	6.96	34.602	0.31			7.501	2.383			400	9.55	34.71	26.83	132.[illegible]	.934
799	5.57	34.572	1.08			7.535	2.40[illegible]			500	8.02	34.64	27.01	114.[illegible]	1.057
998	4.64	34.578	1.31			7.545	2.418			600	6.95	34.60	27.14	103.[illegible]	1.156
1195*	3.99	34.591	1.49			7.567	2.445			700	6.15	34.58	27.23	95.[illegible]	1.245
1198	3.94	34.595	1.46			7.554	2.447			800	5.56	34.57	27.30	88.[illegible]	1.357
1493*	3.09	34.623	1.78			7.595	2.480			1000	4.63	34.58	27.41	78.[illegible]	1.525
1499	3.06	34.625	1.82			7.583	2.470			1200	3.92	34.60	27.50	70.[illegible]	1.673
1791*	2.54	34.641	2.11			7.619	2.484			1500	3.06	34.63	27.61	59.[illegible]	1.867
2089*	2.28	34.656	2.29			7.634	2.496			2000	2.34	34.65	27.69	51.[illegible]	2.145
2387*	2.10	34.664	2.47			7.646	2.506			2500	2.10	34.67	27.72	50.[illegible]	2.400
2487*	2.10	34.667	2.47			7.649	2.511			3000	2.10	34.67	27.72	52.[illegible]	2.657
2585*	2.09	34.667	2.47			7.651	2.509								
2784*	2.10	34.669	2.47		2.84	7.653	2.508		153						
3232*	2.11	34.669	2.49		2.90	7.651	2.504		153						
3352*	2.10	34.668	2.49	2.45	2.87	7.653	2.504		153						
3365*	2.13	34.669	2.51	2.45	2.92	7.651	2.504		154						
3375*		34.668		2.55	2.91	7.656	2.502		153						
3378*		34.668		2.53	2.83	7.656	2.506		153						
3380*		34.667		2.51	2.85	7.656	2.509		153						
3381*				2.51	2.89	7.661			152						

YTP109 02 05.7 N 082 57.8 W DATE 14 MAR 69 1815 GCT WIRE 01 DRY 80.1 WET 76.3 CRUISE YALOCAG
WIND DIRECTION 20 VEL 04 KTS BAR 13 SWELL DIRECTION 18 H 03 T 14 CLOUD 6 AMT 7 WEATHER 02

OBSERVED										INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	27.45	32.947	4.89			8.250	2.231			0	27.46	32.95	21.04	474.0	0
10	27.42	33.318	4.88			8.246	2.257			10	27.42	33.32	21.35	446.7	.066
20	24.90	34.101	4.88			8.190	2.310			20	24.90	34.11	22.72	515.5	.124
30	24.18	34.276	4.61			8.158	2.318			30	24.19	34.28	23.07	482.7	.174
49	20.62	34.786	3.64			8.057	2.346			50	20.39	34.80	24.53	343.9	.257
75	15.45	35.002	2.32			7.898	2.364			75	15.85	35.01	25.81	222.7	.327
98	15.31	35.026	2.40			7.898	2.364			100	15.29	35.03	25.95	204.8	.392
147	15.03	35.031	2.31			7.888	2.364			150	14.99	35.03	26.02	204.8	.445
198	14.28	34.978	1.57			7.805	2.361			200	14.25	34.98	26.14	194.6	.545
298	12.42	34.883	0.28			7.648	2.361			250	13.44	34.93	26.27	182.9	.679
398	9.00	34.698	0.23			7.537	2.374			300	12.35	34.88	26.45	167.0	.767
598	6.87	34.610	0.61			7.520	2.383			400	8.94	34.70	26.91	123.7	.912
800	5.45	34.577	1.20			7.550	2.402			500	7.49	34.63	27.09	107.3	1.024
999	4.59	34.586	1.41			7.556	2.423			600	6.85	34.61	27.16	101.7	1.132
1177*	3.90	34.600	1.48			7.568	2.442			700	6.07	34.59	27.24	93.6	1.230
1199	3.76	34.608	1.57			7.568	2.447			800	5.45	34.58	27.32	86.8	1.320
1474*	3.09	34.626	1.85			7.598	2.466			1000	4.59	34.59	27.42	77.5	1.494
1500	3.00	34.629	1.95			7.588	2.470			1200	3.76	34.61	27.53	67.[illegible]	1.628
1774*	2.60	34.646	2.15			7.620	2.482			1500	3.01	34.63	27.62	58.2	1.816
2072*	2.18	34.665	2.40			7.643	2.494			2000	2.26	34.66	27.71	50.2	2.047
2371*	2.11	34.672	2.49			7.655	2.500			2500	2.06	34.67	27.73	49.6	2.336
2470*	2.07	34.672	2.53			7.656	2.502			3000	2.08	34.68	27.73	51.4	2.588
2570*	2.06	34.673	2.53			7.656	2.500								
2868*	2.08	34.675	2.59			7.661	2.504								
3167*	2.07	34.676	2.70			7.665	2.502								
3464*	2.07	34.676	2.74		2.69	7.668	2.500		149						
3613*	2.06	34.677	2.74		2.71	7.668	2.506		150						
3682*	2.09	34.675	2.74		2.72	7.668	2.500		150						
3697*	2.06	34.675	2.74	2.66	2.73	7.666	2.500		149						
3704*		34.689		2.71	2.79	7.670	2.500		147						
3707*		34.675		2.68	2.71	7.673	2.496		148						
3709*		37.674		2.68	2.66	7.670	2.500		149						
3710*		34.675		2.65	2.72	7.677	2.496		149						

YTP110 00 12.0 S 081 05.2 W DATE 16 MAR 69 0431 GCT WIRE 02 DRY 79.9 WET 75.6 CRUISE YALOCAG
WIND DIRECTION VEL 00 KTS BAR 12 SWELL DIRECTION 18 H 02 T 12 CLOUD AMT 0 WEATHER 02

OBSERVED										INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	27.37	34.106	5.02			8.246	2.315			0	27.38	34.11	21.94	588.1	0
10	25.40	34.678	5.62			8.245	2.359			10	25.40	34.68	23.00	488.2	.064
20	24.01	34.787	4.69			8.154	2.354			20	24.01	34.79	23.51	440.7	.100
30	23.81	34.789	4.60			8.151	2.356			30	23.81	34.79	23.57	435.3	.144
49	22.24	34.942	3.94			8.089	2.361			50	22.16	34.95	24.14	379.0	.225
75	19.70	35.148	2.98			7.994	2.386			75	19.71	35.15	24.98	301.9	.311
99	16.42	35.073	2.17			7.898	2.369			100	16.34	35.07	25.75	229.4	.377
148	14.38	34.987	1.64			7.813	2.359			150	14.34	34.99	26.13	194.4	.443
198	13.72	34.966	1.28			7.765	2.364			200	13.68	34.96	26.25	184.0	.577
299	11.47	34.840	0.25			7.605	2.364			250	12.65	34.91	26.42	169.1	.656
399	9.07	34.705	0.28			7.540	2.371			300	11.44	34.84	26.59	153.1	.746
599	6.84	34.613	0.75			7.530	2.395			400	9.05	34.70	26.90	124.6	.885
800	5.62	34.586	1.24			7.522	2.407			500	7.67	34.64	27.07	109.1	1.002
1000	4.81	34.587	1.48			7.559	2.420			600	6.83	34.61	27.16	101.1	1.107
1201	3.87	34.601	1.76			7.581	2.447			700	6.14	34.59	27.24	94.0	1.204
1265*	3.67	34.607	1.79			7.588	2.451			800	5.43	34.59	27.30	88.4	1.296
1502	2.97	34.632	2.06			7.602	2.472			1000	4.82	34.59	27.40	80.0	1.464
1562*	2.89	34.635	2.06			7.612	2.480			1200	3.87	34.60	27.51	69.0	1.613
1861*	2.41	34.654	2.35			7.634	2.488			1500	2.97	34.63	27.62	58.0	1.803
2158*	2.19	34.666	2.44			7.644	2.500			2000	2.28	34.66	27.70	50.4	2.074
2456*	2.11	34.670	2.56			7.655	2.502			2500	2.11	34.67	27.73	50.2	2.325
2556*	2.10	34.672	2.54			7.651	2.500			3000	1.81	34.68	27.76	47.2	2.559
2655*	1.98	34.677	2.82			7.666	2.498								
2754*	1.98	34.679	2.87			7.678	2.498								
2852*	1.93	34.681	2.97			7.678	2.502								
2951*	1.81	34.681	3.08		2.66	7.690	2.500		146						
3080*	1.82	34.682	3.16		2.66	7.690	2.498		145						
3151*	1.80	34.683	3.16	3.03	2.59	7.690	2.498		145						
3165*	1.82	34.683	3.16	3.05	2.70	7.692	2.498		145						
3175*		34.685		3.03	2.77	7.690	2.498		145						
3178*		34.686		3.05	2.73	7.694	2.494		145						
3180*		34.687		3.01	2.69	7.690	2.494		145						
3181*		34.687		3.01	2.69	7.690	2.502		145						

YTP111 05 29.7 N 081 13.3 W DATE 22 MAR 69 0520 GCT WIRE 02 DRY 83.0 WET 80.0 CRUISE YALOCAG
WIND DIRECTION 05 VEL 03 KTS BAR 12 SWELL DIRECTION 18 H 02 T 12 CLOUD 6 AMT 1 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	28.43	32.890	4.88						
10	28.12	32.938	4.90						
20	27.77	32.975	4.91						
30	22.00	32.596	4.50						
49	15.26	34.906	1.04						
75	14.68	34.933	0.90						
99	14.46	34.935	0.83						
148	13.42	34.913	0.42						
199	12.86	34.893	0.60						
299	11.53	34.818	0.19						
399	9.99	34.740	0.19						
600	7.38	34.621	0.23						
801	5.66	34.584	0.81						
1001	4.57	34.589	1.51						
1173*	3.87	34.600	1.45						
1201	3.72	34.607	1.19						
1469*	3.10	34.624	1.77						
1503	2.98	34.629	1.91						
1768*	2.49	34.647	2.15						
2065*	2.21	34.660	2.31						
2363*	2.11	34.666	2.38						
2562*	2.09	34.668	2.44						
2809*	2.05	34.672	2.56						
3057*	2.04	34.673	2.61						
3306*	2.03	34.674	2.63						
3553*	2.08	34.672	2.61						
3652*	2.06	34.675	2.61						
3702*	2.09	34.671	2.61						
3717*		34.671	2.61						
3726*									
3729*		34.671							
3731*		34.670							
3732*		34.671							

D (m)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
	8.268	2.226				
	8.267	2.229				
	8.267	2.232				
	8.164	2.278				
	7.760	2.350				
	7.731	2.353				
	7.716	2.344				
	7.678	2.353				
	7.661	2.355				
	7.585	2.358				
	7.542	2.365				
	7.498	2.382				
	7.508	2.403				
	7.525	2.421				
	7.576	2.439				
	7.544	2.444				
	7.607	2.465				
	7.576	2.467				
	7.636	2.483				
	7.651	2.493				
	7.661	3.495				
	7.665	2.493				
	7.670	2.495				
	7.673	2.505				
	7.673	2.503				
2.90	7.672	2.505	34.7	150		
2.97	7.670	2.501	39.1	150		
2.54 2.47	7.670	2.503	39.2	150		
2.49	7.668	2.501	38.8	150		
2.51 2.99	7.666		38.5	152		
2.50 2.93	7.668	2.503	38.6	151		
2.51 2.94	7.668	2.508	38.3	150		
2.50 2.96	7.675	2.507	38.2	150		

INTERPOLATED

Z (m)	T (°C)	S (‰)
0	28.44	32.89
10	28.13	32.94
20	27.77	32.98
30	22.00	32.60
50	15.14	34.91
75	14.68	34.94
100	14.44	34.93
150	13.39	34.91
200	12.85	34.89
250	12.21	34.86
300	11.51	34.82
400	9.98	34.74
500	8.58	34.67
600	7.39	34.63
700	6.43	34.59
800	5.67	34.58
1000	4.57	34.59
1200	3.73	34.61
1500	2.99	34.63
2000	2.25	34.66
2500	2.09	34.67
3000	2.04	34.67

DERIVED

σ_t	S ($\times 10^8$)	ΔD (dyn.m)
20.70	708.6	0
20.84	695.6	.070
20.98	682.6	.139
22.42	544.2	.200
25.88	214.0	.276
26.02	202.9	.326
26.07	198.9	.379
26.27	180.7	.473
26.36	172.9	.562
26.44	164.6	.646
26.54	155.0	.724
26.74	137.2	.873
26.94	120.8	1.002
27.10	108.1	1.116
27.20	97.9	1.219
27.29	89.4	1.313
27.42	77.2	1.479
27.53	68.8	1.623
27.62	58.5	1.911
27.70	50.2	2.082
27.72	50.3	2.333
27.73	51.1	2.586

YTP112 03 24.0 N 079 00.0 W DATE 23 MAR 69 1115 GCT WIRE 04 DRY 79.5 WET 77.9 CRUISE YALOCAG
WIND DIRECTION 20 VEL 14 KTS BAR 08 SWELL DIRECTION 18 H 02 T 10 CLOUD 6 AMT 8 WEATHER 02

D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
0	27.47	33.076	4.82						
10	25.76	33.454	5.12						
20	22.27	34.560	4.20						
30	21.83	34.775	4.11						
49	19.35	34.914	3.21						
75	17.41	34.993	2.48						
98	16.84	35.023	2.30						
147	14.70	34.977	1.46						
198	14.22	34.957	1.03						
298	12.02	34.844	0.21						
398	9.11	34.703	0.19						
599	7.00	34.616	0.38						
799	5.81	34.588	0.92						
998	4.70	34.587	1.29						
1184*	3.98	34.599	1.45						
1198	3.91	34.599	1.56						
1481*	3.12	34.625	1.82						
1499	3.06	34.626	1.87						
1778*	2.70	34.642	2.04						
2076*	2.23	34.664	2.29						
2373*	2.11	34.668	2.47						
2669*	2.08	34.672	2.51						
2967*	2.04	34.676	2.66						
3264*	1.99	34.674	2.84						
3562*	2.00	34.674	2.85						
3760*	2.03	34.676	2.85						
3800*	2.00	34.676	2.85						
3815*	2.04	34.676	2.85						
3827*		34.676							
3825*		34.678							
3827*		34.676							

D (m)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)
	8.273	2.239				
	8.238	2.283				
	8.117	2.331				
	8.103	2.349				
	8.021	2.351				
	7.934	2.359				
	7.919	2.359				
	7.806	2.359				
	7.760	2.354				
	7.622	2.361				
	7.542	2.369				
	7.511	2.381				
	7.535	2.397				
	7.549	2.423				
	7.584	2.436				
	7.566	2.442				
	7.608	2.462				
	7.593	2.465				
	7.629	2.480				
	7.649	2.500				
	7.663	2.498				
	7.666	2.498				
	7.680	2.499				
	7.689	2.499				
2.72	7.689	2.502	39.9	148		
2.65	7.684	2.494	39.6	149		
2.78 2.70	7.685	2.492	38.1	148		
2.79 2.74	7.680	2.496	38.8	147		
2.75 2.77	7.684	2.490	38.8	148		
2.78 2.77	7.682	2.492	38.6	149		
2.74 2.72	7.682	2.498	38.1	147		

INTERPOLATED

Z (m)	T (°C)	S (‰)
0	27.48	33.08
10	25.76	33.46
20	22.27	34.56
30	21.83	34.78
50	19.25	34.92
75	17.42	35.00
100	16.75	35.02
150	14.65	34.98
200	14.19	34.96
250	13.22	34.91
300	11.96	34.84
400	9.07	34.70
500	7.67	34.64
600	6.99	34.62
700	6.34	34.60
800	5.80	34.59
1000	4.69	34.59
1200	3.90	34.60
1500	3.06	34.63
2000	2.34	34.66
2500	2.09	34.67
3000	2.03	34.68

DERIVED

σ_t	S ($\times 10^8$)	ΔD (dyn.m)
21.15	665.3	0
21.97	584.9	.043
23.84	409.1	.112
24.12	382.2	.152
24.92	306.7	.221
25.44	258.2	.291
25.61	242.0	.354
26.05	201.5	.445
26.14	194.8	.554
26.30	180.5	.658
26.50	162.4	.743
26.98	125.1	.887
27.04	109.3	1.004
27.14	103.2	1.110
27.22	95.5	1.210
27.29	91.0	1.304
27.41	79.8	1.474
27.50	69.5	1.622
27.61	59.5	1.815
27.70	51.2	2.091
27.73	50.1	2.345
27.74	50.7	2.596

YTP113 05 00.0 N 078 00.5 W DATE 24 MAR 69 1155 GCT WIRE 07 DRY 80.0 WET 77.0 CRUISE YALOCAG
WIND DIRECTION 14 VEL 05 KTS BAR 09 SWELL DIRECTION M 02 T CLOUD 6 AMT 2 WEATHER 02

OBSERVED										INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
0	27.71	33.032	4.78				8.278	2.242		0	27.71	33.04	21.04	475.9	0
10	27.60	33.139	4.80				8.275	2.245		10	27.60	33.14	21.16	665.2	.047
20	27.67	33.432	4.90				8.265	2.265		20	27.67	33.44	21.35	446.6	.133
30	23.17	34.150	4.24				8.151	2.323		30	23.17	34.16	23.27	463.6	.194
40	20.19	34.833	3.35				8.045	2.356		50	18.79	34.87	25.00	299.2	.244
74	17.84	34.951	2.55				7.956	2.356		75	17.81	34.95	25.31	270.5	.335
98	17.20	34.991	2.38				7.933	2.361		100	17.13	34.99	25.50	253.0	.401
146	15.44	34.982	1.62				7.840	2.366		150	15.31	34.98	25.91	215.1	.519
197	14.02	34.945	0.98				7.760	2.366		200	13.97	34.94	26.17	191.4	.620
297	12.48	34.875	0.30				7.661	2.366		250	13.21	34.91	26.31	179.7	.712
397	9.14	34.700	0.13				7.549	2.378		300	12.38	34.87	26.44	168.2	.799
595	6.88	34.611	0.35				7.521	2.389		400	9.08	34.70	26.89	125.5	.945
796	5.58	34.587	0.94				7.544	2.409		500	7.54	34.63	27.07	104.2	1.063
995	4.82	34.586	1.20				7.557	2.429		600	6.84	34.61	27.16	101.4	1.148
1193	3.96	34.602	1.48				7.572	2.447		700	6.11	34.59	27.24	93.6	1.245
1207*	3.98	34.598	1.40				7.577	2.445		800	5.56	34.59	27.31	87.8	1.336
1492	3.11	34.630	1.80				7.590	2.464		1000	4.79	34.59	27.40	80.0	1.524
1507*	3.14	34.626	1.73				7.598	2.470		1200	3.97	34.60	27.50	70.3	1.674
1806*	2.57	34.648	2.06				7.629	2.484		1500	3.13	34.63	27.60	60.1	1.869
3824*		34.683		2.80	2.80		7.678	2.504	37.9	2000	2.34	34.65	27.69	51.8	2.149
3827*		34.676		2.76	2.84		7.682	2.502	37.9	2500	2.09	34.66	27.72	50.8	2.405
3829*		34.678		2.77	2.81		7.680	2.500	37.8	3000	2.03	34.67	27.73	51.2	2.660
3830*		34.676		2.79	2.84		7.680	2.501	38.0						

YTP114 04 43.0 N 079 45.5 W DATE 25 MAR 69 0945 GCT WIRE 04 DRY 80.5 WET 78.5 CRUISE YALOCAG
WIND DIRECTION 26 VEL 05 KTS BAR 08 SWELL DIRECTION 33 M 01 T 10 CLOUD 6 AMT 8 WEATHER 02

0	27.40	32.798	4.83				8.262	2.232		0	27.40	32.80	20.96	683.2	0
10	26.67	33.001	4.82				8.250	2.250		10	26.67	33.01	21.35	446.7	.046
20	19.10	34.494	1.99				7.910	2.343		20	19.10	34.50	24.84	332.8	.115
30	17.90	34.655	1.51				7.857	2.353		30	17.90	34.66	25.06	292.8	.167
49	16.48	34.910	1.50				7.837	2.368		50	16.41	34.92	25.61	240.9	.230
75	15.17	34.951	1.24				7.801	2.377		75	15.17	34.96	25.92	211.8	.257
98	14.88	34.961	1.26				7.803	2.377		100	14.85	34.96	26.00	205.4	.309
147	14.18	34.960	1.17				7.784	2.372		150	14.14	34.96	26.15	192.2	.408
197	13.52	34.928	0.70				7.730	2.355		200	13.48	34.93	26.26	182.8	.502
298	12.00	34.848	0.17				7.637	2.370		250	12.79	34.89	26.37	173.2	.591
398	9.85	34.712	0.11				7.561	2.377		300	11.95	34.85	26.50	162.0	.675
597	6.9[illegible]	34.612	0.28				7.521	2.392		400	9.61	34.71	26.82	133.3	.822
796	5.70	34.590	0.74				7.530	2.406		500	8.03	34.64	27.01	114.5	.946
996	4.75	34.593	1.08				7.550	2.437		600	6.96	34.61	27.14	103.1	1.055
1158*	4.17	34.597	1.26				7.557	2.441		700	6.22	34.59	27.23	95.0	1.154
1195	4.04	34.602	1.40				7.570	2.450		800	5.68	34.59	27.30	89.1	1.246
1457*	3.17	34.624	1.73				7.593	2.477		1000	4.73	34.59	27.41	78.9	1.414
1495	3.14	34.629	1.75				7.598	2.473		1200	4.02	34.60	27.50	70.7	1.563
1755*	2.75	34.641	1.99				7.615	2.497		1500	3.13	34.63	27.60	60.2	1.759
2053*	2.32	34.656	2.20				7.634	2.507		2000	2.39	34.65	27.69	52.2	2.040
2352*	2.13	34.671	2.36				7.651	2.505		2500	2.11	34.67	27.73	50.3	2.296
2551*	2.11	34.671	2.46				7.658	2.509		3000	2.00	34.67	27.74	50.3	2.548
2749*	2.06	34.671	2.52				7.660	2.510							
2947*	1.99	34.674	2.58		2.77		7.672	2.504	151						
3197*	2.02	34.675	2.64		2.73		7.672	2.522							
3291*	1.99	34.676	2.63	2.60	2.72		7.668	2.512	152						
3304*	2.02	34.675	2.62	2.58	2.89		7.663	2.504	151						
3315*		34.676		2.61	2.77		7.661	2.512	152						
3318*		34.674		2.60	2.73		7.661	2.514	152						
3320*		34.680		2.60	2.79		7.661	2.514	153						
3321*		34.676		2.62	2.95		7.665	2.516	153						

OBSERVED										INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^5$)	ΔD (dyn.m)
YPS115 10 27.5 N 049 56.5 W DATE 03 APR 69 0740 GCT WIRE 00 DRY 80.0 WET 79.2 CRUISE YALOC49															
WIND DIRECTION 08 VEL 05 KTS BAR 09 SWELL DIRECTION 07 H 04 T 07 CLOUD 0 AMT 3 WEATHER 02															
0	26.47	34.371	4.62			8.200	2.324			0	26.48	34.38	22.44	541.7	0
10	26.48	34.369	4.49			8.195	2.335			10	26.48	34.37	22.44	542.5	.054
20	26.29	34.358	4.53			8.199	2.324			20	26.29	34.36	22.49	537.9	.108
30	26.04	34.313	4.23			8.190	2.321			30	26.04	34.32	22.53	534.1	.162
49	17.09	34.744	1.72			7.810	2.354			50	16.85	34.75	25.38	262.6	.241
74	14.09	34.781	0.75			7.684	2.354			75	14.04	34.79	26.04	200.9	.299
98	13.57	34.895	0.64			7.672	2.363			100	13.54	34.89	26.22	183.6	.347
147	13.07	34.890	0.53			7.651	2.363			150	13.04	34.89	26.32	175.5	.437
197	12.51	34.851	0.60			7.634	2.357			200	12.48	34.85	26.40	169.0	.527
298	11.45	34.791	0.30			7.585	2.367			250	11.98	34.82	26.48	163.0	.606
398	9.95	34.708	0.13			7.513	2.375			300	11.42	34.79	26.56	155.3	.684
598	7.13	34.596	0.11			7.463	2.396			400	9.92	34.71	26.76	138.6	.834
798	5.65	34.576	0.21			7.452	2.405			500	8.41	34.64	26.95	120.4	.963
997	4.67	34.575	0.56			7.457	2.431			600	7.11	34.60	27.11	106.4	1.076
1162*	4.03	34.584	0.70			7.509	2.443			700	6.26	34.58	27.21	96.7	1.178
1197	3.94	34.589	0.78			7.472	2.443			800	5.64	34.58	27.29	89.6	1.271
1460*	3.15	34.613	1.32			7.554	2.471			1000	4.66	34.58	27.40	79.2	1.440
1498	3.09	34.617	1.45			7.525	2.469			1200	3.93	34.59	27.49	70.5	1.589
1759*	2.56	34.637	1.75			7.590	2.485			1500	3.09	34.62	27.60	60.4	1.786
2057*	2.27	34.652	2.26			7.631	2.497			2000	2.31	34.65	27.69	51.6	2.066
2356*	1.97	34.667	2.40			7.648	2.497			2500	1.89	34.67	27.74	47.5	2.313
2653*	1.85	34.672	2.68			7.661	2.507			3000	1.86	34.67	27.75	48.3	2.552
2953*	1.85	34.675	2.72			7.672	2.502								
3251*	1.90	34.676	2.74			7.672	2.505								
3549*	1.89	34.679	2.77		2.84	7.677	2.505	38.7	152						
3748*	1.92	34.677	2.77		2.80	7.675	2.507	38.8	151						
3818*	1.93	34.677	2.77	2.72	2.78	7.675	2.502	38.6	152						
3832*	1.91	34.678	2.81	2.73	2.74	7.677	2.507	38.4	153						
3941*		34.673		2.79	2.85	7.672	2.501	38.3	154						
3844*		34.675		2.80	2.86	7.673	2.501	38.6	151						
3846*		34.676		2.83	2.86	7.672	2.501	38.6	153						
3847*		34.676		2.79	2.87	7.672	2.507	38.3	153						
YPS116 12 32.2 N 094 17.7 W DATE 05 APR 69 0322 GCT WIRE DRY 81.9 WET 80.6 CRUISE YALOC69															
WIND DIRECTION 29 VEL 04 KTS BAR 12 SWELL DIRECTION 08 H 02 T 06 CLOUD 3 AMT 2 WEATHER 02															
0	27.39	34.222	5.58			8.270	2.348			0	27.40	34.23	22.04	550.4	0
10	26.06	34.208	5.24			8.245	2.351			10	26.06	34.21	22.45	541.5	.056
20	25.90	34.204	4.72			8.212	2.333			20	25.90	34.21	22.49	537.4	.110
30	24.93	34.226	3.97			8.156	2.324			30	24.94	34.23	22.81	507.8	.162
49	14.77	34.794	0.10			7.653	2.376			50	14.56	34.80	25.94	209.5	.234
74	13.17	34.832	0.10			7.631	2.366			75	13.15	34.83	26.26	179.9	.283
98	12.93	34.808	0.10			7.617	2.363			100	12.89	34.81	26.29	177.4	.327
147	11.93	34.790	0.19			7.617	2.365			150	11.89	34.79	26.47	161.2	.412
197	11.36	34.770	0.19			7.591	2.370			200	11.33	34.77	26.56	153.8	.491
298	10.41	34.718	0.10			7.554	2.383			250	10.86	34.74	26.63	148.5	.566
397	9.19	34.648	0.11			7.516	2.387			300	10.39	34.72	26.69	143.5	.639
596	6.99	34.583	0.09			7.482	2.409			400	9.15	34.45	26.84	130.4	.776
796	5.58	34.561	0.10			7.462	2.420			500	7.98	34.61	26.99	116.4	.899
994	4.61	34.569	0.29			7.463	2.436			600	6.96	34.58	27.12	105.1	1.010
1184*	3.68	34.587	0.80			7.510	2.455			700	6.18	34.57	27.21	96.5	1.111
1193	3.73	34.591	0.81			7.498	2.461			800	5.56	34.56	27.29	89.7	1.204
1483*	2.97	34.614	1.36			7.552	2.467			1000	4.55	34.57	27.41	78.3	1.372
1493	2.97	34.614	1.38			7.537	2.466			1200	3.71	34.59	27.52	67.6	1.518
1782*	2.48	34.635	1.91			7.597	2.487			1500	2.96	34.61	27.61	59.2	1.708
2080*	2.15	34.652	2.24			7.629	2.500			2000	2.22	34.65	27.70	50.6	1.982
2379*	1.93	34.666	2.56			7.655	2.507			2500	1.88	34.67	27.74	47.5	2.227
2676*	1.85	34.649	2.72			7.668	2.504			3000	1.86	34.67	27.74	48.8	2.467
2975*	1.86	34.670	2.76			7.673	2.501			4000	1.89	34.67	27.75	51.5	2.968
3272*	1.91	34.670	2.79			7.677	2.500								
3571*	1.89	34.671	2.82		2.72	7.680	2.501	38.9	149						
3869*	1.94	34.670	2.89		2.72	7.682	2.503	37.8	152						
3969*	1.95	34.672	2.91	2.80	2.44	7.684	2.511	38.8	149						
3984*	1.92	34.671	2.91	2.80	2.88	7.684	2.500	38.8	150						
3992*		34.671		2.83	2.80	7.682	2.494	38.5	150						
3995*		34.669		2.87	2.72	7.684	2.494	38.5	151						
3997*		34.670		2.83	2.80	7.682	2.494	38.4	150						
3998*		34.671		2.85	2.69	7.682	2.504	38.3	150						

YPS117 14 26.1 N 094 25.0 W DATE 05 APR 69 1933 GCT WIRE DRY 84.3 WET 82.0 CRUISE YALOC69
WIND DIRECTION 30 VEL 02 KTS BAR 11 SWELL DIRECTION 14 H 01 T 12 CLOUD 8 AMT 2 WEATHER 02

OBSERVED										INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
0	28.35	34.025	5.00			8.282	2.313			0	28.35	34.03	21.58	424.5	0
10	27.82	34.023	5.00			8.289	2.313			10	27.82	34.03	21.75	608.4	.062
20	27.53	34.026	5.00			8.282	2.309			20	27.53	34.03	21.84	899.6	.122
30	20.18	34.384	1.69			7.883	2.339			30	20.19	34.39	24.27	367.8	.173
49	14.63	34.813	0.17			7.661	2.363			50	14.51	34.82	25.96	207.2	.228
75	13.44	34.853	0.11			7.641	2.363			75	13.44	34.86	26.22	183.8	.277
99	12.93	34.854	0.10			7.634	2.363			100	12.91	34.85	26.32	174.4	.321
147	12.36	34.833	0.10			7.624	2.357			150	12.33	34.83	26.42	166.2	.407
198	11.88	34.813	0.12			7.612	2.363			200	11.86	34.81	26.49	160.2	.484
298	10.70	34.746	0.10			7.568	2.370			250	11.30	34.78	26.57	153.5	.567
398	9.30	34.661	0.10			7.528	2.382			300	10.67	34.74	26.66	146.4	.642
598	6.92	34.583	0.10			7.492	2.403			400	9.27	34.66	26.83	131.4	.783
798	5.54	34.569	0.16			7.472	2.415			500	7.99	34.61	26.99	116.2	.904
997	4.63	34.575	0.23			7.470	2.432			600	6.90	34.58	27.13	104.4	1.014
1197	3.87	34.590	0.64			7.494	2.446			700	6.12	34.57	27.22	95.5	1.114
1312*	3.48	34.602	0.90			7.511	2.454			800	5.53	34.57	27.30	88.7	1.205
1498	3.07	34.620	1.29			7.540	2.467			1000	4.62	34.58	27.41	78.7	1.374
1608*	2.82	34.628	1.48			7.557	2.479			1200	3.86	34.59	27.50	69.6	1.522
2105*	2.09	34.661	2.32			7.615	2.491			1500	3.07	34.62	27.60	60.0	1.715
2601*	1.85	34.677	2.64			7.648	2.502			2000	2.20	34.65	27.71	49.8	1.993
3099*	1.91	34.677	2.72			7.660	2.501			2500	1.87	34.68	27.75	46.8	2.231
3596*	1.94	34.678	2.72			7.665	2.501			3000	1.89	34.68	27.75	48.6	2.469
4092*	1.96	34.680	2.76			7.665	2.502			4000	1.95	34.68	27.75	52.1	2.972
4589*	2.03	34.678	2.79			7.670	2.499			5000	2.11	34.68	27.73	58.6	3.525
5085*	2.13	34.678	2.79			7.665	2.505			6000	2.22	34.68	27.72	64.6	4.141
5582*	2.15	34.679	2.79		2.76	7.666	2.502	39.1	158						
6044*	2.23	34.677	2.79		2.75	7.666	2.502	39.1	160						
6113*	2.25	34.677	2.79	2.66	2.79	7.665	2.505	32.1	159						
6128*	2.23	34.677	2.79	2.67	2.80	7.661	2.507	38.7	159						
6138*		34.677		2.63	2.92	7.663	2.505	38.7	157						
6141*		34.677		2.65	2.91	7.663	2.499	38.4	159						
6143*		34.677		2.61	2.94	7.665	2.507	38.3	158						
6144*		34.675		2.56	2.87	7.660	2.501	38.3	156						

YPS118 12 45.0 N 101 12.6 W DATE 09 APR 69 0927 GCT WIRE 06 DRY 82.2 WET 80.3 CRUISE YALOC69
WIND DIRECTION 08 VEL 08 KTS BAR 12 SWELL DIRECTION 18 H 02 T 14 CLOUD 8 AMT 1 WEATHER 02

OBSERVED										INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ ($\times 10^8$)	ΔD (dyn.m)
0	29.36	33.403	4.73			8.284	2.266			0	29.36	33.41	20.77	701.4	0
10	29.37	33.402	4.69			8.284	2.271			10	29.38	33.41	20.77	702.2	.070
20	29.37	33.400	4.69			8.282	2.271			20	29.38	33.41	20.77	702.7	.140
30	29.37	33.433	4.69			8.282	2.271			30	29.38	33.44	20.79	700.7	.211
48	28.56	34.003	4.88			8.267	2.299			50	28.30	34.02	21.59	425.4	.343
74		34.092	4.50			8.222	2.312			75	24.57	34.10	22.82	508.1	.485
98	20.25	34.403	1.67			7.859	2.330			100	19.88	34.43	24.38	359.7	.593
146	13.12	34.824	0.09			7.619	2.351			150	12.93	34.82	26.29	178.1	.728
197	12.27	34.817	0.19			7.615	2.356			200	12.23	34.82	26.43	166.8	.814
296	11.07	34.766	0.09			7.559	2.369			250	11.61	34.80	26.53	158.1	.885
395	9.53	34.671	0.11			7.518	2.366			300	11.01	34.76	26.61	151.0	.972
593	6.99	34.585	0.09			7.479	2.387			400	9.45	34.67	26.81	133.8	1.115
792	5.67	34.574	0.10			7.455	2.407			500	8.06	34.61	26.99	117.1	1.240
989	4.62	34.572	0.27			7.457	2.416			600	6.93	34.58	27.13	104.7	1.351
1178*	3.39	34.586	0.72			7.496	2.444			700	6.19	34.58	27.22	95.7	1.451
1188	3.91	34.585	0.69			7.481	2.438			800	5.62	34.57	27.29	89.4	1.544
1476*	3.09	34.617	1.28			7.540	2.466			1000	4.54	34.57	27.42	77.9	1.711
1486	3.08	34.615	1.28			7.520	2.457			1200	3.89	34.59	27.50	70.3	1.859
1773*	2.52	34.640	1.76			7.583	2.480			1500	3.06	34.62	27.60	60.2	2.055
1972*	2.04	34.666	2.32			7.627	2.484			2000	2.01	34.67	27.73	46.5	2.321
2369*	1.86	34.675	2.61			7.648	2.496			2500	1.86	34.68	27.75	46.7	2.554
2668*	1.88	34.676	2.61			7.656	2.496			3000	1.86	34.68	27.75	48.2	2.741
2967*	1.96	34.677	2.67			7.656	2.500								
3178*	1.90	34.677	2.66			7.656	2.500								
3248*	1.94	34.678	2.66			7.656	2.500								
3262*	1.90	34.676	2.65			7.655	2.504								

YPS119 12 50.4 N 107 55.8 W DATE 11 APR 69 0758 GCT WIRE 02 DRY 81.0 WET 79.5 CRUISE YALOC69
WIND DIRECTION 01 VEL 14 KTS BAR 12 SWELL DIRECTION 31 H 04 T 14 CLOUD 8 AMT 1 WEATHER 02

OBSERVED										INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁵)	ΔD (dynam)
0	28.76	34.112	4.69			8.288	2.313			0	28.76	34.12	21.51	431.2	0
10	28.76	34.111	4.68			8.291	2.312			10	28.76	34.12	21.51	431.7	.043
20	28.76	34.110	4.67			8.291	2.305			20	28.76	34.12	21.50	432.1	.126
30	28.64	34.074	4.67			8.289	2.302			30	28.65	34.08	21.52	431.3	.189
49	26.23	33.984	4.50			8.229	2.302			50	25.87	34.00	22.35	552.2	.304
75	16.84	34.581	0.81			7.745	2.339			75	16.84	34.59	25.26	275.2	.411
98	14.40	34.754	0.09			7.643	2.347			100	14.26	34.76	25.97	207.8	.472
147	12.38	34.810	0.23			7.632	2.357			150	12.32	34.81	26.40	167.8	.585
197	11.82	34.794	0.23			7.610	2.361			200	11.79	34.79	26.49	160.3	.687
298	10.73	34.740	0.15			7.566	2.365			250	11.24	34.77	26.57	153.5	.726
397	9.69		0.09			7.530	2.377			300	10.71	34.74	26.65	147.4	.801
597	7.20	34.580	0.10			7.491	2.392			400	9.65	34.68	26.78	136.4	.943
796	5.66	34.568	0.09			7.475	2.415			500	8.78	34.62	26.95	121.2	1.072
995	4.60	34.573	0.34			7.475	2.431			600	7.17	34.58	27.09	108.5	1.187
1195	4.04	34.588	0.67			7.491	2.452			700	6.31	34.57	27.20	98.3	1.290
1201*	3.92	34.587	0.73			7.504	2.440			800	5.63	34.57	27.28	90.2	1.384
1495	3.13	34.617	1.21			7.530	2.465			1000	4.59	34.57	27.41	78.4	1.562
1504*	3.15	34.616	1.20			7.537	2.465			1200	3.94	34.59	27.49	70.8	1.722
1799*	2.56	34.641	1.83			7.585	2.485			1500	3.14	34.62	27.59	61.2	1.899
2098*	2.16	34.662	2.26			7.620	2.483			2000	2.27	34.66	27.70	50.6	2.179
2396*	1.94	34.675	2.53			7.644	2.489			2500	1.91	34.68	27.75	47.3	2.423
2695*	1.88		2.70			7.654	2.493			3000	1.75	34.68	27.76	46.4	2.657
2993*	1.75		2.90			7.670	2.497								
3292*	1.70		3.10			7.684	2.497								
2590*	1.63		3.17		2.65	7.690	2.493	32.9	159						
3705*	1.65		3.19		2.70	7.689	2.494	36.6	159						
3775*	1.67		3.17	3.12	2.66	7.690	2.494	38.4	160						
3792*	1.65		3.19	3.11	2.77	7.689	2.497	32.0	156						
3805*		34.689		3.08	2.86	7.687	2.489	38.4	153						
3808*		34.687		3.12	2.78	7.690	2.487	38.3	154						
3811*		34.687		3.15	2.66	7.692	2.491	38.3	156						

YPS120 21 08.8 N 112 27.6 W DATE 15 APR 69 2151 GCT WIRE 05 DRY 68.0 WET 61.9 CRUISE YALOC69
WIND DIRECTION 33 VEL 12 KTS BAR 15 SWELL DIRECTION 32 H 05 T 10 CLOUD 6 AMT 6 WEATHER 02

OBSERVED										INTERPOLATED			DERIVED		
D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	δ (x10⁵)	ΔD (dynam)
0	21.18	34.526	5.25			8.200	2.344			0	21.19	34.53	24.11	382.1	0
10	21.12	34.532	5.26			8.200	2.344			10	21.13	34.54	24.13	380.4	.038
20	20.20	34.409	5.41			8.183	2.348			20	20.21	34.41	24.29	366.2	.075
30	19.65	34.363	5.36			8.170	2.338			30	19.65	34.37	24.39	356.1	.112
49	18.50	34.204	5.13			8.129	2.326			50	18.42	34.20	24.58	339.3	.181
74	16.31	34.090	3.47			7.934	2.312			75	16.21	34.10	25.03	296.9	.261
98	14.21	34.286	1.81			7.742	2.315			100	14.09	34.30	25.65	238.0	.327
146	12.37	34.559	0.68			7.614	2.336			150	12.30	34.57	26.22	184.6	.433
197	11.71	34.668	0.25			7.574	2.348			200	11.66	34.67	26.42	167.0	.521
297	9.93	34.575	0.23			7.527	2.351			250	10.76	34.64	26.56	154.3	.601
396	8.95	34.534	0.19			7.499	2.359			300	9.90	34.57	26.66	145.7	.676
595	6.51	34.482	0.15			7.467	2.386			400	8.90	34.53	26.79	134.8	.816
795	5.42	34.510	0.19			7.455	2.409			500	7.43	34.50	26.96	118.9	.943
992	4.35	34.533	0.42			7.460	2.424			600	6.47	34.48	27.11	105.8	1.055
1127*	3.93	34.553	0.63			7.492	2.433			700	5.85	34.49	27.20	97.6	1.157
1192	3.80	34.569	0.71			7.475	2.438			800	5.39	34.51	27.27	91.2	1.252
1444*	3.14	34.598	1.13			7.528	2.455			1000	4.32	34.53	27.41	78.0	1.421
1491	3.05	34.603	1.20			7.513	2.460			1200	3.78	34.57	27.49	70.1	1.569
1742*	2.54	34.624	1.64			7.566	2.467			1500	3.03	34.60	27.59	60.7	1.765
2040*	2.17	34.645	2.13			7.607	2.474			2000	2.21	34.64	27.70	50.8	2.043
2338*	1.95	34.659	2.38			7.627	2.487			2500	1.87	34.67	27.76	47.5	2.289
2636*	1.81	34.670	2.62			7.651	2.487			3000	1.67	34.68	27.77	45.6	2.521
2934*	1.68	34.676	2.86			7.665	2.492								
3231*	1.67	34.681	2.93		2.86	7.677	2.494	38.9	169						
3578*	1.62	34.681	3.02		2.74	7.677	2.494	38.6	169						
3588*	1.63		3.02	2.96											
3648*	1.67	34.682	3.02	2.95	2.80	7.677	2.494	38.3	169						
3663*	1.60	34.682	3.02	2.95	2.74	7.675	2.494	38.6	171						
3674*		34.682		2.93	2.87	7.675	2.492	38.5	169						
3677*		34.681		2.87	2.79	7.677	2.494	38.5	169						
3679*		34.682		2.83	2.80	7.678	2.494	38.3	169						
3680*		34.681		2.89	2.80	7.680	2.504	38.1	169						

	OBSERVED									INTERPOLATED			DERIVED		
Z (m)	T (°C)	S (‰)	σ_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	Z (m)	T (°C)	S (‰)	σ_t	S ($\times 10^5$)	ΔD (dyn.m)
YPS121 27 14.9 N 117 29.8 W DATE 18 APR 69 0600 GCT WIRE 04 DRY 61.5 WET 61.0 CRUISE YALOCAN															
WIND DIRECTION 33 VEL 14 KTS BAR 17 SWELL DIRECTION 33 H 05 T 07 CLOUD AMT 0 WEATHER 02															
0	16.52	33.650	5.74			8.126	2.307			0	16.52	33.66	24.62	333.8	0
10	16.52	33.651	5.74			8.127	2.310			10	16.52	33.66	24.62	334.0	.033
20	16.52	33.655	5.74			8.126	2.310			20	16.52	33.66	24.62	334.0	.067
30	16.47	33.667	5.74			8.118	2.310			30	16.48	33.67	24.64	332.3	.100
49	16.43	33.754	5.75			8.130	2.314			50	16.41	33.75	24.72	325.5	.166
75	15.25	33.627	5.84			8.113	2.307			75	15.25	33.63	24.89	310.2	.245
98	13.04	33.548	4.08			8.006	2.298			100	12.90	33.55	25.32	269.5	.318
147	10.79	33.838	3.39			7.810	2.317			150	10.73	33.86	25.98	209.1	.437
198	10.22	34.165	2.27			7.701	2.333			200	10.20	34.17	26.30	178.1	.534
298	9.22	34.362	1.09			7.579	2.354			250	9.74	34.32	26.49	160.7	.619
398	7.50	34.325	0.67			7.506	2.364			300	9.19	34.36	26.61	149.8	.696
598	5.90	34.373	0.24			7.463	2.390			400	7.48	34.33	26.85	128.6	.836
798	5.01	34.476	0.28			7.463	2.417			500	6.49	34.34	26.99	114.8	.957
998	4.21	34.512	0.52			7.474	2.436			600	5.89	34.37	27.10	105.9	1.068
1177*	3.67	34.543	0.74			7.497	2.454			700	5.40	34.43	27.20	96.5	1.169
1198	3.68	34.543	0.78			7.486	2.449			800	5.00	34.48	27.29	88.7	1.261
1474*	3.00	34.589	1.17			7.525	2.472			1000	4.20	34.51	27.40	74.1	1.428
1498	2.98	34.589	1.17			7.518	2.467			1200	3.48	34.54	27.48	70.8	1.577
1772*	2.50	34.818	1.61			7.566	2.481			1500	2.98	34.59	27.59	61.2	1.775
2069*	2.14	34.643	2.03			7.598	2.487			2000	2.21	34.64	27.69	51.2	2.055
2368*	1.92	34.660	2.38			7.620	2.494			2500	1.84	34.66	27.74	47.1	2.301
2664*	1.76	34.669	2.64			7.643	2.494			3000	1.68	34.68	27.76	45.7	2.533
2963*	1.69	34.676	2.83			7.661	2.501								
3259*	1.60	34.679	2.94		2.70	7.673	2.501	35.3	149						
3408*	1.59	34.685	3.08		2.42	7.680	2.501	36.6	167						
3476*	1.58	34.684	3.05	3.08	2.58	7.677	2.501	38.6	169						
3691*	1.57	34.684	3.10	3.07	2.65	7.682	2.501	37.9	169						
3702*		34.684		3.05	2.76	7.680	2.498	38.2	167						
3705*		34.684		3.02	2.75	7.680	2.500	38.5	168						
3707*		34.684		3.02	2.88	7.680	2.498	38.3	169						
3708*		34.685		3.07	2.77	7.684	2.500	38.5	169						
YSN122 34 45.0 N 118 46.0 W DATE 22 APR 69 0748 GCT WIRE 05 DRY 59.0 WET 56.0 CRUISE YALOCAN															
WIND DIRECTION 27 VEL 02 KTS BAR 16 SWELL DIRECTION H T CLOUD AMT 8 WEATHER 02															
0	15.58	33.514	6.22			8.120	2.304			0	15.58	33.52	24.73	323.4	0
10	15.04	33.519	6.39			8.113	2.307			10	15.04	33.52	24.88	312.0	.032
20	14.08	33.526	6.28			8.089	2.307			20	14.08	33.53	25.06	292.3	.062
30	12.74	33.538	5.32			7.991	2.302			30	12.74	33.54	25.34	265.8	.090
49	11.00	33.714	3.50			7.806	2.302			50	10.95	33.72	25.81	221.1	.139
75	10.16	33.814	3.21			7.762	2.304			75	10.16	33.82	26.03	201.1	.191
98	9.85	33.917	2.96			7.731	2.321			100	9.83	33.93	26.17	188.2	.240
147	9.55	34.165	2.10			7.663	2.333			150	9.53	34.17	26.41	166.2	.329
197	9.17	34.233	1.73			7.620	2.344			200	9.[illegible]	34.24	26.52	156.4	.409
298	8.03	34.267	1.16			7.545	2.351			250	8.[illegible]	34.26	26.63	147.1	.485
397	6.96	34.267	0.79			7.492	2.366			300	6.01	34.27	26.72	138.7	.556
596	5.81	34.355	0.28			7.455	2.390			400	6.93	34.27	26.88	125.1	.688
606*	5.78	34.353	0.26		3.25	7.465	2.393	39.8	87	500	6.22	34.32	27.01	112.3	.807
796	5.25	34.404	0.13			7.436	2.414			600	5.80	34.35	27.09	106.2	.916
804*	5.18	34.408	0.09		3.60	7.445	2.427	31.7	110	700	5.65	34.36	27.17	104.5	1.021
853*	5.16	34.411	0.08		3.76	7.445	2.436	26.7	118	800	5.21	34.41	27.21	96.6	1.122
873*	5.18	34.411	0.06	0.13	3.88	7.441	2.436	32.5	122						
888*	5.15	34.412	0.07	0.13	3.93	7.441	2.439	32.5	121						
892*		34.411		0.12	4.09	7.446	2.433	32.4	121						
894*		34.412		0.12	3.85	7.441	2.439	32.4	121						
895*		34.411		0.13	3.85	7.441	2.438	32.3	121						
YSN123 33 44.4 N 119 11.4 W DATE 22 APR 69 1238 GCT WIRE 01 DRY 60.5 WET 59.0 CRUISE YALOCAN															
WIND DIRECTION 28 VEL 04 KTS BAR 15 SWELL DIRECTION 27 H 02 T 10 CLOUD AMT 8 WEATHER 02															
0	15.02	33.533	6.07		0.56	8.114	2.307			0	15.02	33.54	24.87	310.3	0
10	14.32	33.527	5.88		0.56	8.086	2.304			10	14.32	33.53	25.01	296.7	.030
30	13.41	33.535	5.48		0.74	8.038	2.302			20	13.89	33.53	25.10	288.4	.060
55	10.74	33.683	3.66		1.58	7.839	2.299			30	13.41	33.54	25.20	278.7	.088
80	9.94	33.879	3.01		1.98	7.757	2.312			50	11.27	33.65	25.70	232.0	.139
104	9.67	33.976	2.72		2.06	7.730	2.318			75	10.00	33.84	26.07	196.8	.193
130		34.078	2.38		2.24	7.690	2.330			100	9.48	33.96	26.22	183.1	.240
YSN124 33 43.0 N 119 30.0 W DATE 22 APR 69 1456 GCT WIRE DRY 61.8 WET 56.8 CRUISE YALOCAN															
WIND DIRECTION VEL 00 KTS BAR 16 SWELL DIRECTION 27 H 02 T 08 CLOUD 4 AMT 8 WEATHER 02															
0	15.42	33.522	6.02			8.119	2.305			0	15.42	33.53	24.77	319.9	0
10	14.46	33.524	6.01			8.095	2.304			10	14.46	33.53	24.98	299.8	.031
20	12.82	33.559	5.36			8.002	2.305			20	12.82	33.56	25.34	265.5	.059
30	11.63	33.593	4.37			7.915	2.297			30	11.63	33.60	25.59	241.6	.085
49	10.42	33.785	3.43			7.794	2.305			50	10.39	33.79	25.97	206.6	.129
74	10.07	33.882	3.03			7.759	2.312			75	10.05	33.89	26.10	194.1	.179
98	9.57	34.043	2.38			7.701	2.324			100	9.55	34.05	26.31	174.7	.226
147	9.22	34.108	2.29			7.689	2.332			150	9.19	34.11	26.42	165.1	.310
197	8.65	34.217	1.66			7.619	2.353			200	8.63	34.22	26.59	149.6	.389
297	7.96	34.244	1.20			7.564	2.351			250	8.26	34.23	26.66	144.2	.463
396	7.06	34.285	0.78			7.510	2.375			300	7.93	34.25	26.72	139.3	.533
595	5.37	34.389	0.22			7.465	2.411			400	7.02	34.29	26.88	125.0	.665
794	4.59	34.455	0.22			7.465	2.432			500	6.11	34.34	27.04	109.5	.783
967*	4.31	34.474	0.28			7.470	2.440			600	5.34	34.39	27.18	97.6	.886
992	4.26	34.479	0.29			7.465	2.443			700	4.87	34.43	27.26	89.7	.980
1167*	4.20	34.482	0.26			7.469	2.452			800	4.58	34.46	27.32	85.0	1.067
1192	4.25	34.485	0.30			7.466	2.446			1000	4.24	34.48	27.37	81.1	1.233
1366*	4.20	34.485	0.24			7.469	2.452			1200	4.25	34.49	27.38	82.2	1.396
1566*	4.20	34.486	0.23			7.467	2.447			1500	4.20	34.49	27.38	84.2	1.646
1763*	4.23	34.487	0.21			7.467	2.446								
1862*	4.23	34.487	0.19			7.467	2.447								
1877*	4.24	34.487	0.21			7.467	2.447								
1891*	4.23	34.489				7.465	2.447								

YSN125 33 43.0 N 119 50.0 W DATE 22 APR 69 2019 GCT WIRE 08 DRY 63.2 WET 57.0 CRUISE YALOCAN
WIND DIRECTION VEL 00 KTS BAR 17 SWELL DIRECTION 29 H 02 T 12 CLOUD 4 AMT 5 WEATHER 01

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	DERIVED σ_t	δ (x10⁵)	ΔD (dyn.m)
0	13.63	33.569	5.79		0.73	8.024	2.304			0	13.63	33.57	25.19	279.8	0
10	13.13	33.568	5.75		0.75	8.031	2.307			10	13.13	33.57	25.29	270.5	.024
20	12.63	33.573	5.61		0.87	8.004	2.304			20	12.63	33.58	25.39	260.9	.054
30	12.17	33.591	5.66		0.98	7.972	2.302			30	12.17	33.60	25.49	251.4	.083
49	10.35	33.797	3.42		1.62	7.794	2.294			50	10.31	33.80	25.99	204.1	.125
75	9.84	33.958	2.76		1.86	7.733	2.315			75	9.84	33.96	26.19	185.3	.174
99	9.61	34.081	2.44		2.02	7.704	2.323			100	9.60	34.08	26.33	172.9	.214
124	9.31	34.144	2.18		2.21	7.677	2.330			150	8.88	34.19	26.53	154.7	.301
148	8.90	34.189	1.84		2.32	7.639	2.341			200	8.35	34.24	26.65	144.3	.375
173	8.72	34.218	1.67	1.62	2.32	7.614	2.339								
199	8.36	34.235	1.46	1.40	2.47	7.588	2.345								
205		34.235		1.45	2.49	7.598	2.348								
206		34.236		1.46	2.46	7.597	2.345								

YSN126 33 42.9 N 119 52.6 W DATE 22 APR 69 2213 GCT WIRE 08 DRY 62.5 WET 54.8 CRUISE YALOCAN
WIND DIRECTION VEL 00 KTS BAR SWELL DIRECTION 27 H 02 T 12 CLOUD 3 AMT 3 WEATHER 01

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	DERIVED σ_t	δ (x10⁵)	ΔD (dyn.m)
0	13.36	33.573	5.86		0.84	8.028	2.307			0	13.36	33.58	25.24	274.3	0
9	13.01	33.573	5.85		0.98	8.028	2.299			10	12.97	33.57	25.32	267.4	.027
19	12.59	33.583	5.83		0.98	7.997	2.304			20	12.54	33.59	25.41	258.6	.053
29	12.01	33.613	5.66		1.13	7.950	2.307			30	11.94	33.62	25.55	245.5	.079
49	10.70	33.738	3.84		1.66	7.832	2.307			50	10.66	33.74	25.88	214.5	.125
74	10.11	33.875	3.10		1.94	7.765	2.315			75	10.09	33.88	26.09	195.3	.175
108	9.49	34.109	2.27	2.24	2.22	7.689	2.329			100	9.64	34.06	26.30	175.4	.222
129	9.00	34.175	1.92	1.89	2.43	7.648	2.341								
133		34.183		1.85	2.49	7.644	2.335								
135		34.179		1.86	2.38	7.651	2.334								
136		34.179			2.46	7.646	2.338								

YSN127 38 00.2 N 124 45.0 W DATE 24 APR 69 1046 GCT WIRE 02 DRY 49.8 WET 46.5 CRUISE YALOCAN
WIND DIRECTION 30 VEL 16 KTS BAR 20 SWELL DIRECTION 27 H 06 T 07 CLOUD 8 AMT 2 WEATHER 02

OBSERVED D (m)	T (°C)	S (‰)	O_2 (ml/l)	O_2 (ml/l)	PO_4 (µM)	pH	Alk. (meq/l)	NO_3 (µM)	SiO_2 (µM)	INTERPOLATED Z (m)	T (°C)	S (‰)	DERIVED σ_t	δ (x10⁵)	ΔD (dyn.m)
0	11.91	32.910	6.40			8.087	2.269			0	11.91	32.92	25.01	296.2	0
10	11.89	32.910	6.38			8.089	2.269			10	11.89	32.92	25.02	296.1	.030
20	11.92	32.911	6.39			8.088	2.264			20	11.92	32.92	25.01	295.7	.059
30	11.91	32.918	6.38			8.081	2.266			30	11.91	32.92	25.02	294.2	.089
49	10.03	33.262	4.61			7.854	2.278			50	9.99	33.28	25.64	237.7	.142
75	9.65	33.677	3.61			7.757	2.297			75	9.65	33.68	26.01	203.1	.197
98	9.22	33.823	3.12			7.719	2.309			100	9.18	33.83	26.20	185.0	.246
147	8.35	33.977	2.84			7.692	2.321			150	8.30	33.98	26.44	161.5	.332
197	7.60	34.018	2.55			7.649	2.327			200	7.47	34.02	26.59	149.0	.413
298	6.80	34.085	1.72			7.557	2.350			250	7.12	34.05	26.68	141.0	.483
398	5.97	34.145	1.01			7.486	2.360			300	6.78	34.09	26.76	134.9	.551
597	4.93	34.275	0.36			7.436	2.399			400	5.96	34.15	26.91	121.2	.679
797	4.41	34.393	0.29			7.443	2.422			500	5.35	34.21	27.04	109.4	.795
956*	3.88	34.455	0.45			7.468	2.437			600	4.92	34.28	27.14	100.8	.900
996	3.81	34.459	0.51			7.457	2.441			700	4.64	34.34	27.22	93.5	.997
1155*	3.34	34.503	0.67			7.477	2.452			800	4.40	34.39	27.29	87.3	1.087
1196	3.35	34.509	0.74			7.474	2.454			1000	3.80	34.46	27.40	77.2	1.252
1453*	2.78	34.544	0.96			7.498	2.471			1200	3.34	34.51	27.49	69.4	1.398
1752*	2.27	34.589	1.36			7.528	2.485			1500	2.69	34.55	27.58	60.4	1.593
2051*	2.04	34.624	1.74			7.566	2.494			2000	2.07	34.62	27.69	50.8	1.870
2350*	1.82	34.646	2.11			7.600	2.499			2500	1.79	34.65	27.74	47.0	2.115
2648*	1.75	34.662	2.43			7.627	2.508			3000	1.65	34.67	27.76	45.6	2.346
2947*	1.65	34.670	2.65			7.644	2.505								
3246*	1.63	34.678	2.82			7.653	2.507								
3545*	1.53	34.685	3.01		2.66	7.670	2.505	38.8	177						
3843*	1.51	34.692	3.21		2.63	7.687	2.514	35.9	176						
3913*	1.51	34.693	3.22	3.20	2.65	7.690	2.505	36.6	174						
3928*	1.49	34.692	3.21	3.19	2.66	7.680	2.507	37.7	173						
3938*		34.692		3.19	2.78	7.687	2.502	37.8	173						
3941*		34.692		3.17	2.72	7.690	2.502	38.0	173						
3943*		34.692			2.66	7.687	2.513	37.5	173						
3944*		34.692		3.19	2.80	7.699	2.505	37.8	173						

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13. ABSTRACT

Salinity, temperature, oxygen, phosphate, and nitrate observations were taken by Oregon State University on 16 hydrographic cruises in the Northeastern Pacific Ocean during 1969. Alkalinity, pH and silicate were taken on special occasions. Nine cruises were taken along the Newport line. The rest were special cruises made off Depoe Bay, Oregon, in the Columbia River plume, and off Peru.

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Oregon waters						
Peru waters						

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Security Classification