UNIVERSITY OF CALIFORNIA, SAN DIEGO SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

CalCOFI Cruise 0804
25 March – 30 April 2008

CC Reference 09-03
6 October 2009

UNIVERSITY OF CALIFORNIA, SAN DIEGO

SCRIPPS INSTITUTION OF OCEANOGRAPHY

LA JOLLA, CALIFORNIA 92093-0227

PHYSICAL, CHEMICAL AND BIOLOGICAL DATA

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INTRODUCTION

The data presented in this report were collected during cruise 0804* of the California Cooperative Oceanic Fisheries Investigations (CalCOFI) program aboard the NOAA ship RV *David Starr Jordan*. The CalCOFI program was organized in the late 1940's to study the causes of variations in population size of fishes of importance to the State of California. It is carried out by NOAA's National Marine Fisheries Service Southwest Fisheries Science Center, the California Department of Fish and Game, and the Integrative Oceanography Division (IOD) at Scripps Institution of Oceanography (SIO). IOD contributes to this program by investigations of the physical, chemical and biological structure of the California Current. Data from the cruises were collected and processed by personnel of the Integrative Oceanography Division and the Southwest Fisheries Science Center. SIO staff members from the Ocean Data Facility participate in the chemical analysis of nutrient samples at sea. CalCOFI data presented in this report and collected on previous cruises can be accessed at http://www.calcofi.org.

STANDARD PROCEDURES

CTD/Rosette Cast Data

A Sea-Bird Electronics, Inc., Conductivity-Temperature-Depth (CTD) instrument (Seabird 911, Serial number 1049) with a rosette was deployed at each station on these cruises. The rosette was equipped with 24 ten-liter plastic (PVC) bottles equipped with epoxy-coated springs and Viton O-rings. Each CTD/rosette cast usually sampled 20 depths to a maximum sampling depth of 525 meters, bottom depth permitting. Occasional stations have multiple bottles tripped at the same depth to provide more water for ancillary programs. The sample spacing was designed to sample depth intervals as close as 10 meters around the sharp upper thermocline features such as the chlorophyll, oxygen, nitrite maxima and the shallow salinity minimum. Salinity, oxygen and nutrients were determined at sea for all depths sampled. Chlorophyll-*a* and phaeopigments were determined at sea on samples from the top 200 meters, bottom depth permitting.

Pressures and temperatures assigned to the water sample data were derived from the CTD signals recorded just prior to the bottle trip. Pressures have been converted to depths by the Saunders (1981) pressure-to-depth conversion technique. CTD temperatures reported with the bottle data have been rounded to the nearest hundredth of a degree Celsius.

Salinity samples were collected from all rosette bottles and analyzed at sea using a Guildline model 8410 Portasal salinometer. Salinity samples were drawn into 200 ml Kimax high-alumina borosilicate bottles that were rinsed three times with sample prior to filling. The results were compared with the CTD salinity to verify that the rosette bottle did not mis-trip or leak. The salinometer was standardized before and after each group of samples with standardized seawater. Periodic checks on the conductivity of the standardized seawater were made by comparison with IAPSO Standard Seawater batch P144. Salinity values were calculated using the algorithms for the Practical Salinity Scale, 1978 (UNESCO, 1981a) and are reported to three decimal places, provided that accepted standards were met.

Dissolved oxygen analyses were performed with an Ocean Data Facility of Scripps Institution of Oceanography designed automated oxygen titrator using photometric end-point detection based on the absorption of 365nm wavelength ultra-violet light. A computer using PC software controlled the titration of the samples and the data logging. The method used a modified-Winkler titration following the technique of Carpenter (1965) with modifications by Culberson (1991), but with higher concentrations of thiosulfate solution (50 g/l). Standard KIO3

* The first two digits represent the year and the last digits the month of the cruise.

solutions prepared ashore were run at the beginning of each run. Reagent and sea water blanks were determined to account for presence of oxidizing or reducing materials.

Nutrient samples were analyzed at sea by the Scripps Ocean Data Facility for dissolved silicate, phosphate, nitrate, nitrite, and ammonium using procedures similar to those described in Gordon et al. (1993) and Koroleff (1969, 1970). Samples were collected in 45 ml high-density polypropylene screw-capped tubes which were acid washed and rinsed with sample three times prior to filling. Daily standardizations and drift corrections were accomplished by running freshly prepared mid-range standards at the beginning and end of each group of samples. Samples not analyzed immediately after collection were refrigerated and run the following day. In addition to daily standardizations, periodic full calibrations were performed with sets of six different concentration standards.

Samples for chlorophyll-*a* and phaeopigments were collected in calibrated 138 ml polyethylene bottles and filtered onto Whatman GF/F filters. The pigments were extracted in cold 90% acetone (Venrick and Hayward, 1984) for a minimum of 24 hours. Chlorophyll a and phaeopigment concentrations were determined from fluorescence readings before and after acidification with a Turner Designs Fluorometer Model 10-AU-005-CE (Yentsch and Menzel, 1963; Holm-Hansen *et al*., 1965).

Evaluation of the water sample data involved comparisons with the CTD data, adjacent stations and consideration of the variation of a property as a function of density or depth and the relationships with other properties (Klein, 1973). Precision estimates for routine analyses were made on CalCOFI cruise 9003 and are reported in SIO Ref. 91-4.

Primary Productivity Sampling

Primary productivity samples were taken each day shortly before local apparent noon (LAN). Primary production was estimated from ^{14}C uptake using a simulated *in situ* technique. Light penetration was estimated from the Secchi depth (assuming that the 1% light level is three times the Secchi depth). The depths with ambient light intensities corresponding to light levels simulated by the on-deck incubators were identified and sampled on the rosette up-cast. Occasionally an extra bottle or two were tripped in addition to the usual 20 levels sampled in the combined rosette-productivity cast in order to maintain the normal sampling depth resolution. Triplicate samples (two light and one dark control) were drawn from each productivity sample depth into 250 ml polycarbonate incubation bottles. Samples were inoculated with 52.29 µCi of ^{14}C as $NaHCO_3$ (200 µl of 271 µCi/ml stock) prepared in a 0.3 g/liter solution of sodium carbonate (Fitzwater *et al*., 1982). Samples were incubated from LAN to civil twilight in seawater-cooled incubators with neutral-density screens which simulate *in situ* light levels. At the end of the incubation, the samples were filtered onto Millipore HA filters and placed in scintillation vials. One half ml of 10% HCl was added to each sample. The sample was then allowed to sit, without a cap, at room temperature for 12 hours (after Lean and Burnison, 1979). Following this, 10 ml of scintillation cocktail were added to each sample and the samples were returned to SIO where the radioactivity was determined with a scintillation counter. Salinity, oxygen, nutrients, chlorophyll-*a* and phaeopigments were determined from all rosette productivity bottles.

Macrozooplankton Net Tows

Macrozooplankton was sampled with a 71 cm mouth diameter paired net (bongo net) equipped with 0.505mm plankton mesh. Bottom depth permitting, the nets were towed obliquely from 210 meters to the surface. The tow time for a standard tow was 21.5 minutes. Volumes filtered were determined from flowmeter readings and the mouth area of the net. Only one sample of each pair was retained and preserved. The biomass, as wet displacement volume, after removal of large (>5 ml) organisms, was determined in the laboratory ashore. These procedures are summarized in greater detail in Kramer *et al*. (1972). An Optical Plankton Counter (OPC, Dave Checkley, SIO) was routinely used in one side of the paired bongo net frame. The purpose of the OPC is to obtain information on the vertical distributions of size categories of zooplankton, using data from the counter, without affecting the ongoing time series of data obtained from the catches of the integrative bongo net.

Ancillary Programs

Several ancillary programs produced data on these cruises that are not presented in this report. These programs include:

1) *Underway Data*. Continuous near surface measurements of temperature, salinity and *in vivo* chlorophyll fluorescence were recorded from seawater pumped through the ship's uncontaminated seawater system. Water was drawn from a depth of approximately 3 meters. The data were logged in one-minute averages using a Sea-Bird Electronics, Inc., SBE 45 MicroTSG Thermosalinograph and a Wetlabs Wetstar fluorometer.

2) *ADCP*. Continuous profiles of ocean currents and acoustic backscatter between 20 and 500 meters deep were measured along the shiptrack from a hull-mounted 150 kHz Acoustic Doppler Current Profiler (ADCP). The ADCP data were averaged over 3-minute intervals. Sixty 8-meter depth bins were recorded. (T. Chereskin, SIO)

3) *Underway Sea Surface xCO2*. Continuous measurements of the partial pressure of CO2 were made from the ship's uncontaminated seawater system. The seawater was equilibrated in a membrane contactor with a gas loop that was analyzed with a Licor 6262 infrared CO2/H2O analyzer. One-minute averages were recorded and the mole fraction of CO2 (xCO2) at sea surface temperature was calculated. The system was calibrated with standard gases traceable to CMDL every two hours; at that time absolute zero and atmospheric samples were also collected. (G. Friederich, MBARI)

4) *California Current Ecosystem Long Term Ecological Research Program*: The CCE-LTER program augments standard CalCOFI measurements to further characterize the lower trophic levels as well as the carbon system. These additional samples, taken at all CalCOFI stations, are for measurements of particulate organic carbon and nitrogen, dissolved organic carbon and nitrogen, taxon-specific phytoplankton pigments, flow-cytometric counts of bacteria and picoautotrophs, microscopic counts of nano- microplankton, determination of mesozooplankton size structure using a Laser Optical Plankton Counter, and mesozooplankton community structure. (M. Ohman, SIO)

5) *SCCOOS Nearshore and Bio-optical Observations*: The objective of these observations is to extend CalCOFI time series to the nearshore and make bio-optical observations for the development of empirical proxies for particle size load and structure and phytoplankton biomass and rates of primary production. The nearshore observations consist of 9 stations at the ends and interspersed with current CalCOFI lines on the 20 m isobath with a standard set of CalCOFI observations. Bio-optical measurements at all CalCOFI and SCCOOS stations consist of irradiance at 9 wavelengths, light transmission at three wavelengths, fluorescence of Chl a, CDOM and phycoerythrin and light scattering at three wavelengths.

6) *Marine mammal observations*. During daylight transits, visual line-transect surveys were conducted by marine mammal observers focusing on cetaceans. Acoustic line-transect surveys were performed using a towed hydrophone array which consists of multiple hydrophone elements that sample sounds up to 100 kHz allowing for localization of calling animals. Acoustic monitoring also takes place on individual stations using sonobuoys. (J. Hildebrand, SIO)

TABULATED DATA

CTD/Rosette Cast Data

The time reported is the Coordinated Universal Time (UTC) of the first rosette bottle trip on the up cast. The rosette bottles tripped on the up cast are reported as cast 2, where cast 1 is considered to be the down CTD profile. The sample number reported is the cast number followed by a two-digit rosette bottle number. Bottom depths, determined acoustically, have been corrected using British Admiralty Tables (Carter, 1980) and are reported in meters. Weather conditions have been coded using WMO code 4501. Secchi depths are reported for most daylight stations.

Data values from discreet sampled CTD rosette were interpolated and are reported for standard depths. Interpolated or extrapolated standard level data are noted by the footnote "ISL" printed after the depth. Multiple bottles tripped at the same depth to provide water for ancillary programs are not used in the calculation of standard depth data. Density-related parameters have been calculated from the International Equation of State of Seawater 1980 (UNESCO, 1981b). Computed values of potential temperature, sigma-theta, specific volume anomaly (SVA), and dynamic height or geopotential anomaly are included with both observed and interpolated standard depth levels.

On stations where primary productivity samples were drawn a footnote appears after each productivity depth sampled. The corresponding primary productivity data are reported in a separate section following the tabulated rosette cast data.

Primary Productivity Data

In addition to the normal hydrographic data that are reported in the rosette cast data section, the tabulated data include: the *in situ* light levels at which the samples were collected, the uptake from each of the replicate light bottles, uptake 1 and uptake 2 (which have been corrected for dark uptake by subtracting the dark value), the mean of the two uptake values and the dark uptake. The uptake values are totals for the incubation period. Also shown are the times of LAN, civil twilight, and the value of the mean uptake integrated from the surface to the deepest sample, assuming the shallowest value continues to the surface and that negative values (when dark uptake exceeds light uptake) are zero. The uptake data are reported to two significant digits (values <1.00) or one decimal (values >1.00). Incubation time, LAN, and civil twilight are given in local Pacific Standard Time (PST); to convert to UTC, add eight hours to the PST time. Incubation light intensities are listed in a footnote at the bottom of each page.

Macrozooplankton Data

Macrozooplankton biomass volumes are tabulated as total biomass volume ($cm^3/1000m^3$ strained) and as the total volume minus the volume of larger organisms under the heading "Small." Tow times are given in local PST (+8) time.

FOOTNOTES

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

D: CTD salinity value listed in place of normal shipboard salinity analysis.
ISL: After a depth value indicates that this is an interpolated or extrapolated standard level.
U: Uncertain value. Values which are not used in interpolation because they seem to be in error without apparent reason.

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FIGURES

Cruise 0804

1. CalCOFI Cruise 0804 track and station positions.

2. Horizontal distribution of dynamic height anomaly (0 over 500m). In areas shallower than 500 m, the dynamic heights were extrapolated on the basis of the offshore deeper steric height as described in Reid and Mantyla (1976).

3. Horizontal distributions at 10 meters: A) chlorophyll-*a*; B) potential density; C) temperature; and D) salinity.

4. Horizontal distributions at 200 meters: A) dynamic height anomaly (200 over 500 m); B) potential density; C) temperature; and D) salinity.

5. Sections along CalCOFI line 90 (vertical exaggeration, 1000): A) potential density; B) temperature; C) salinity; D) silicate; E) nitrate; F) phosphate; G) chlorophyll-*a*; H) oxygen saturation; I) oxygen; J) nitrite; and K) phaeopigments.

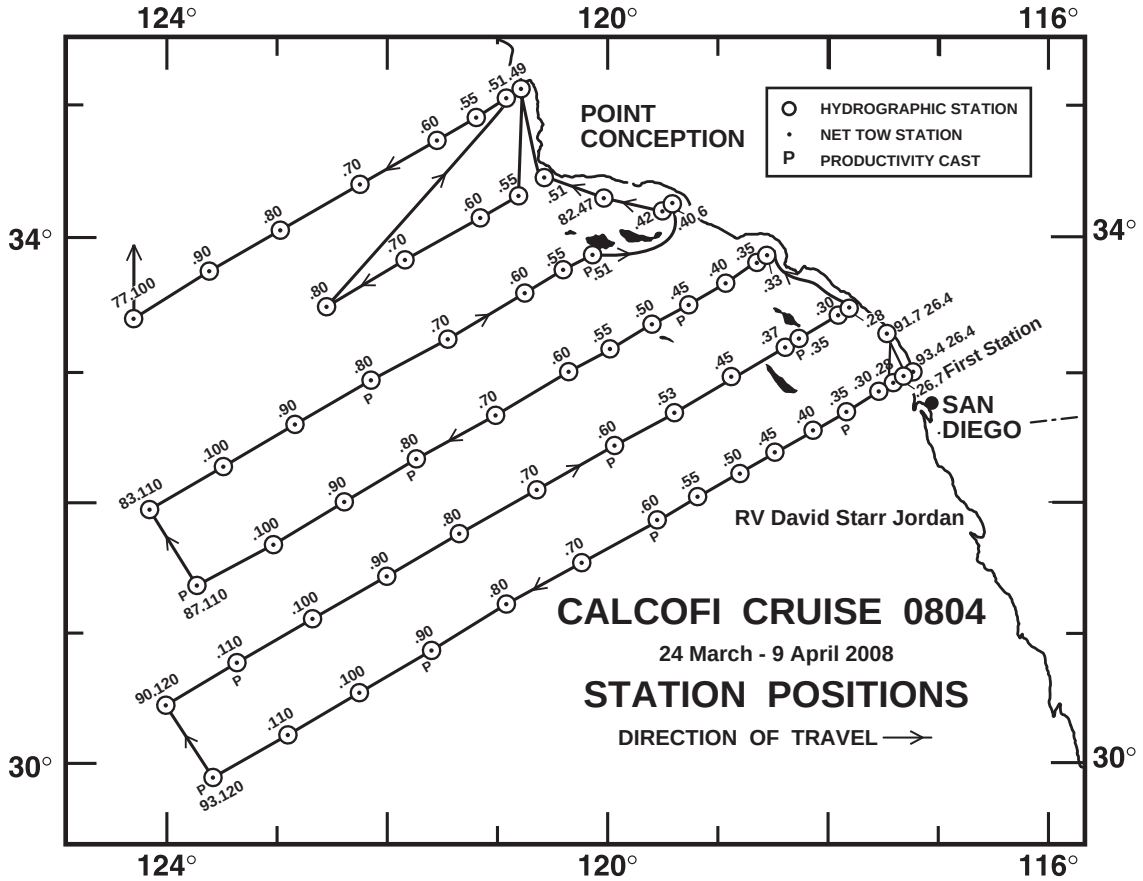

FIGURE 1

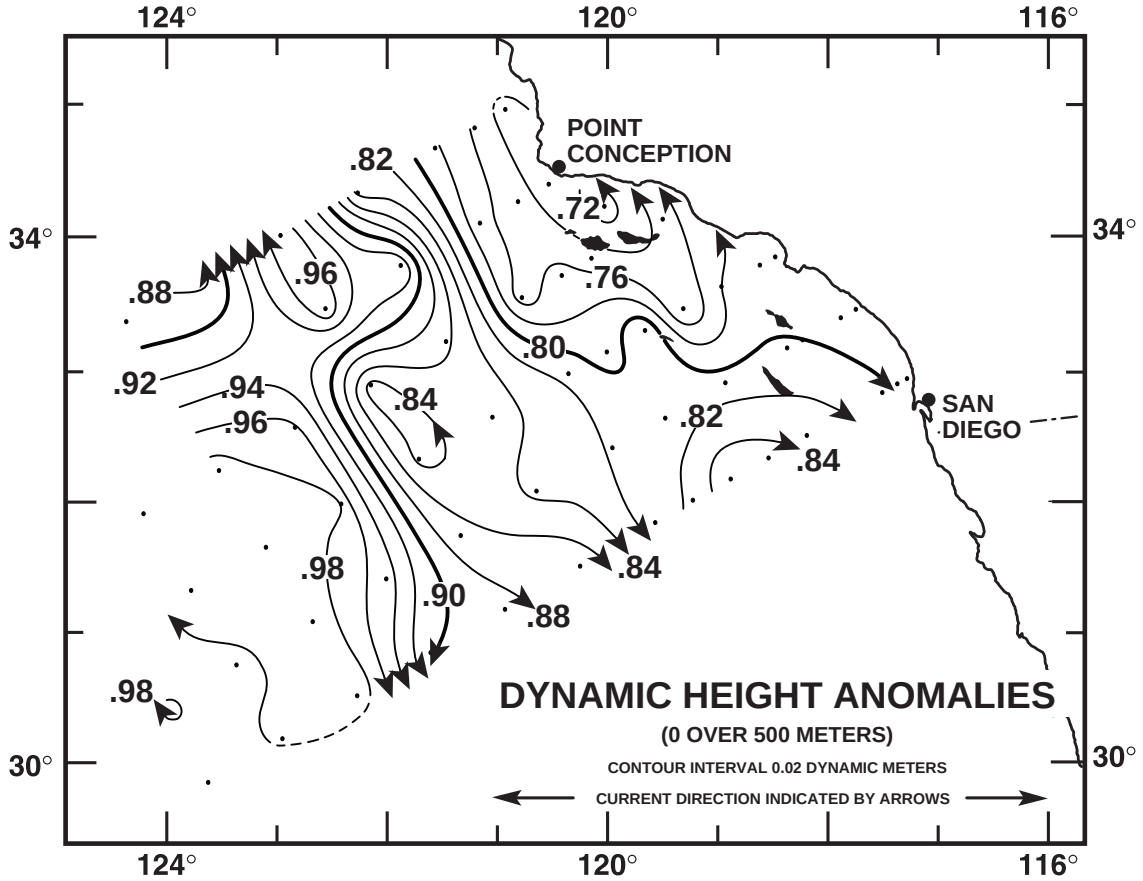

FIGURE 2

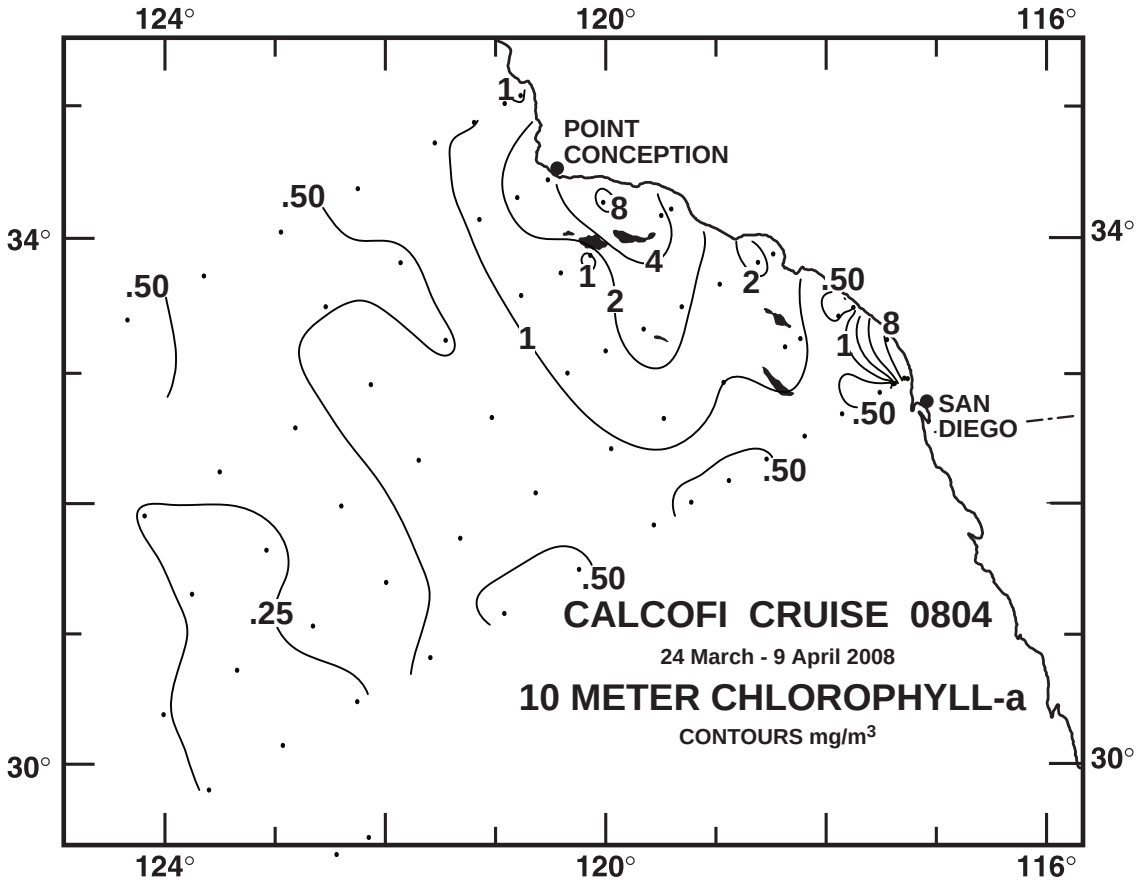

FIGURE 3A

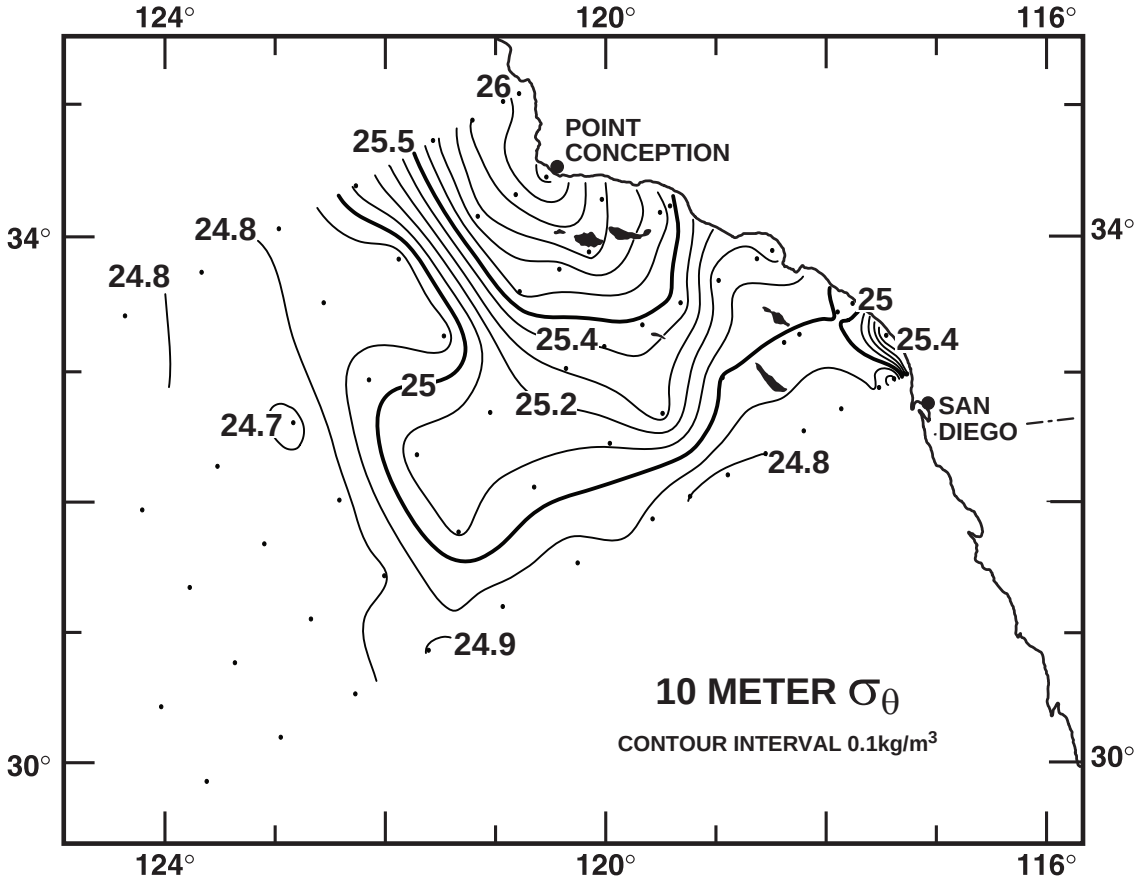

FIGURE 3B

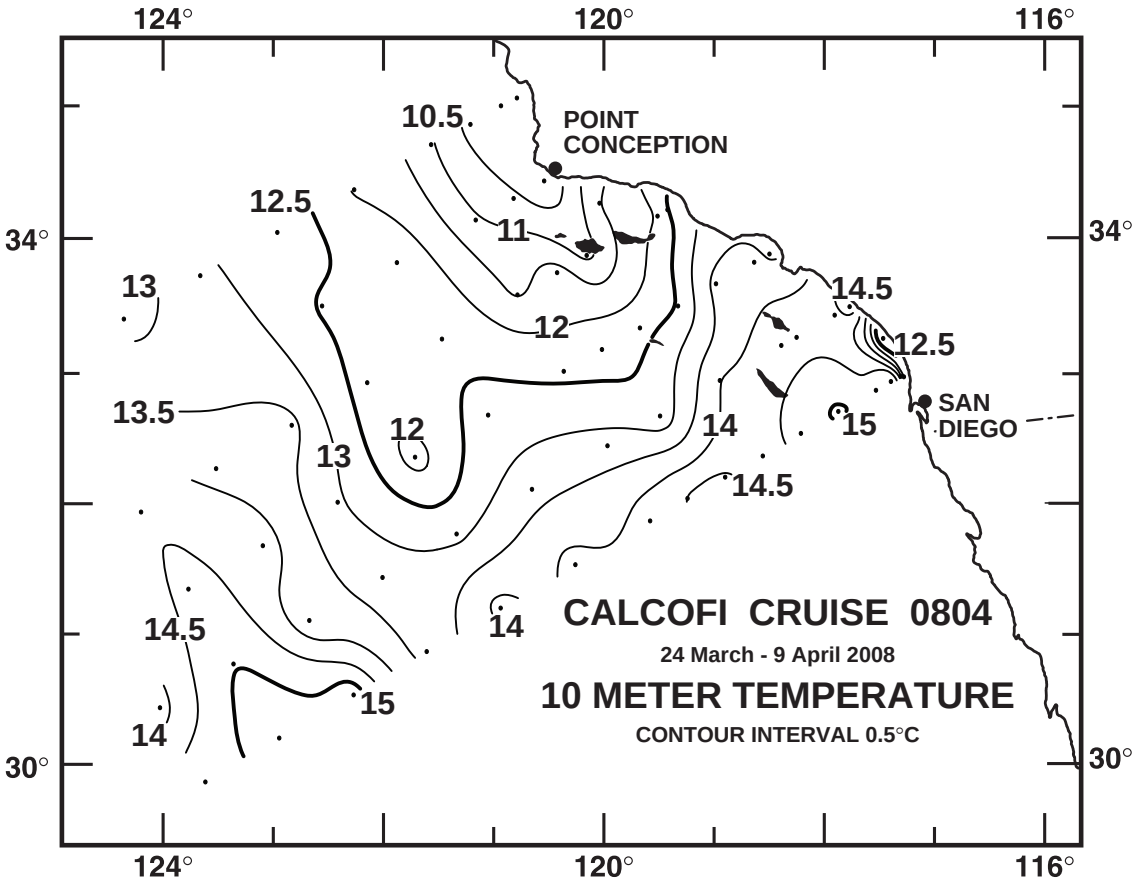

FIGURE 3C

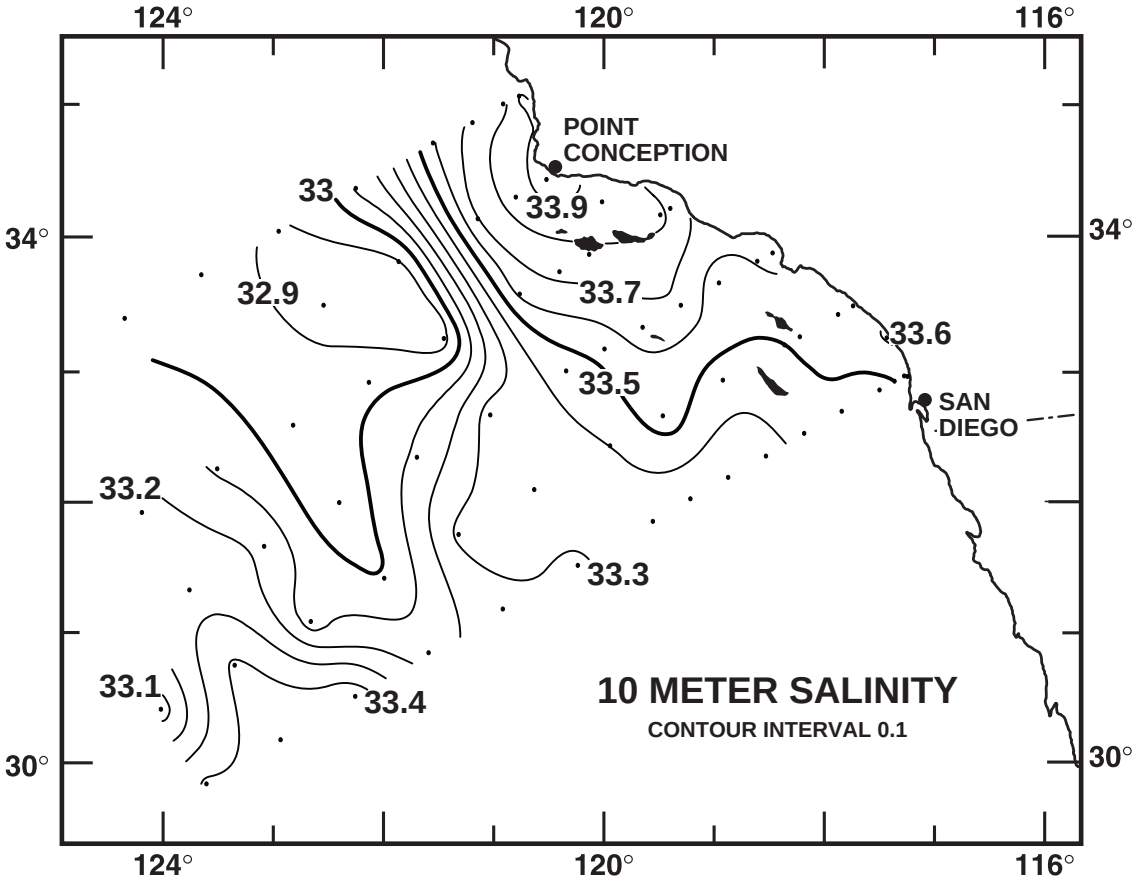

FIGURE 3D

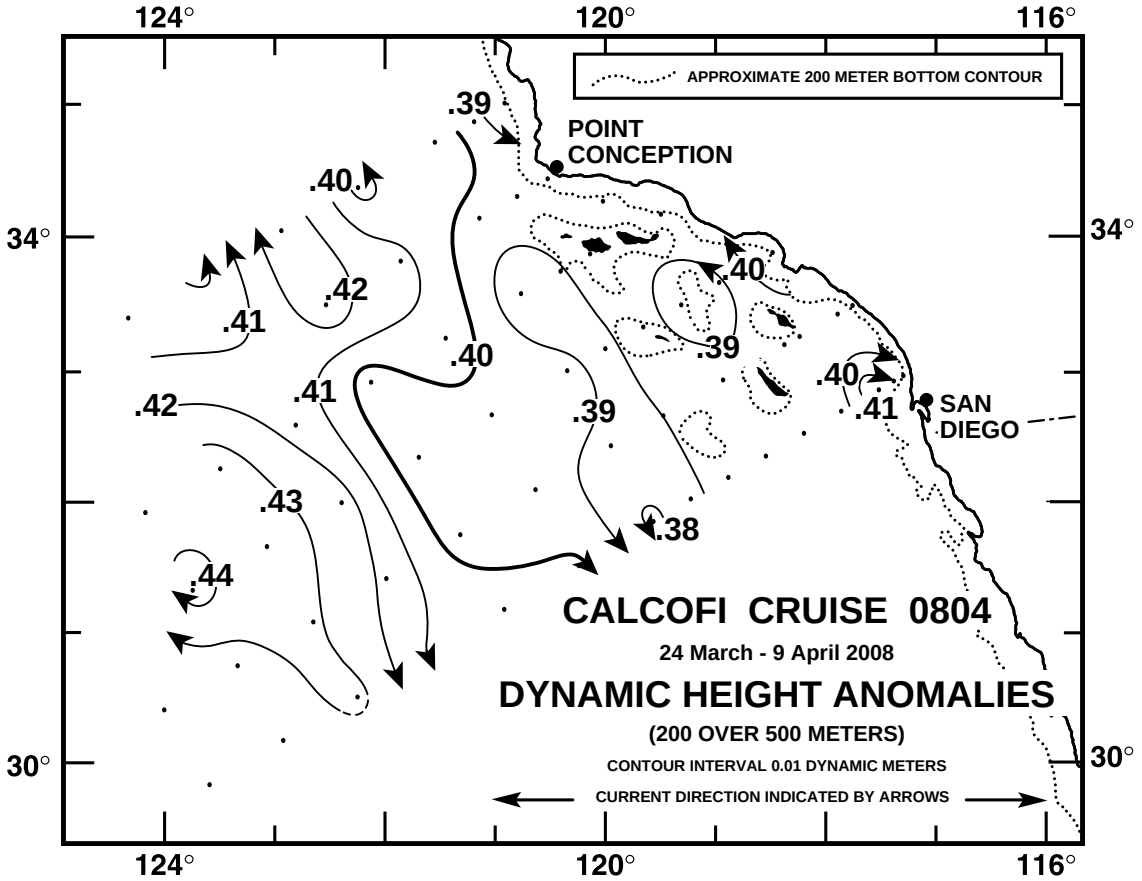

FIGURE 4A

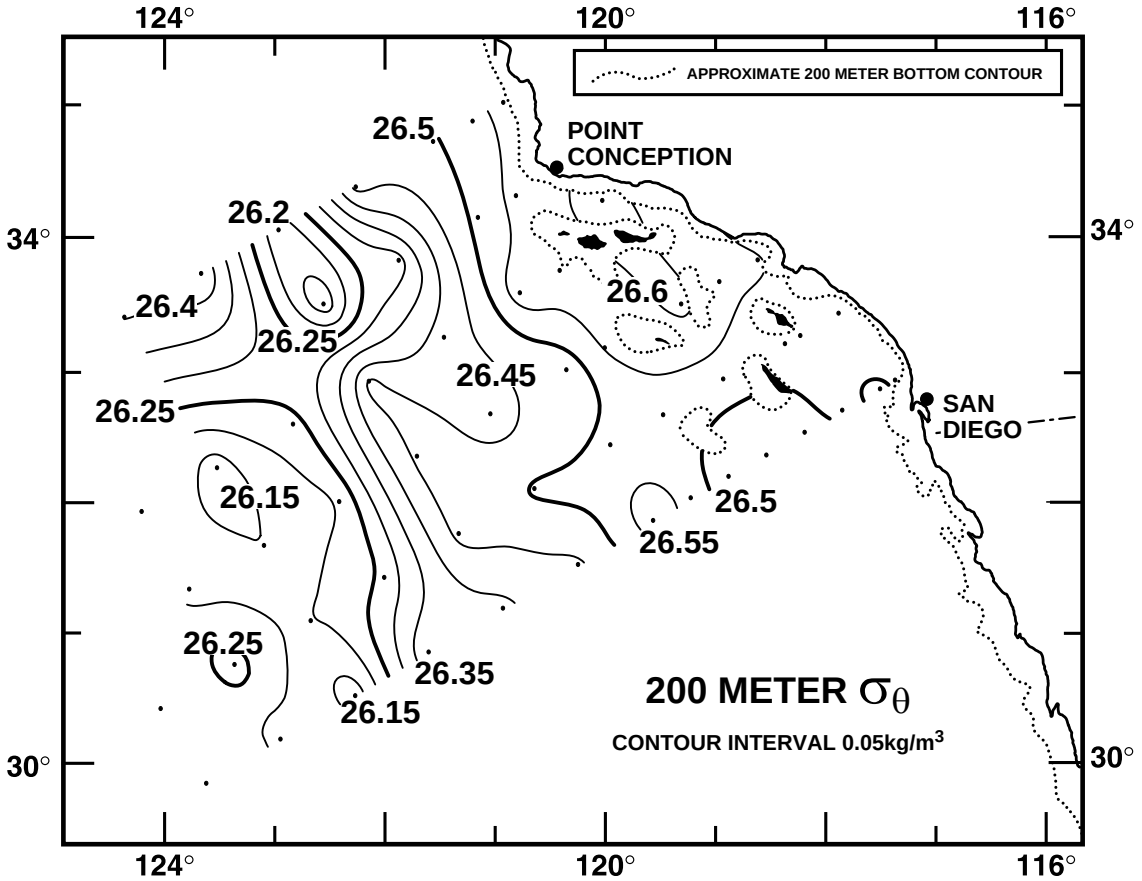

FIGURE 4B

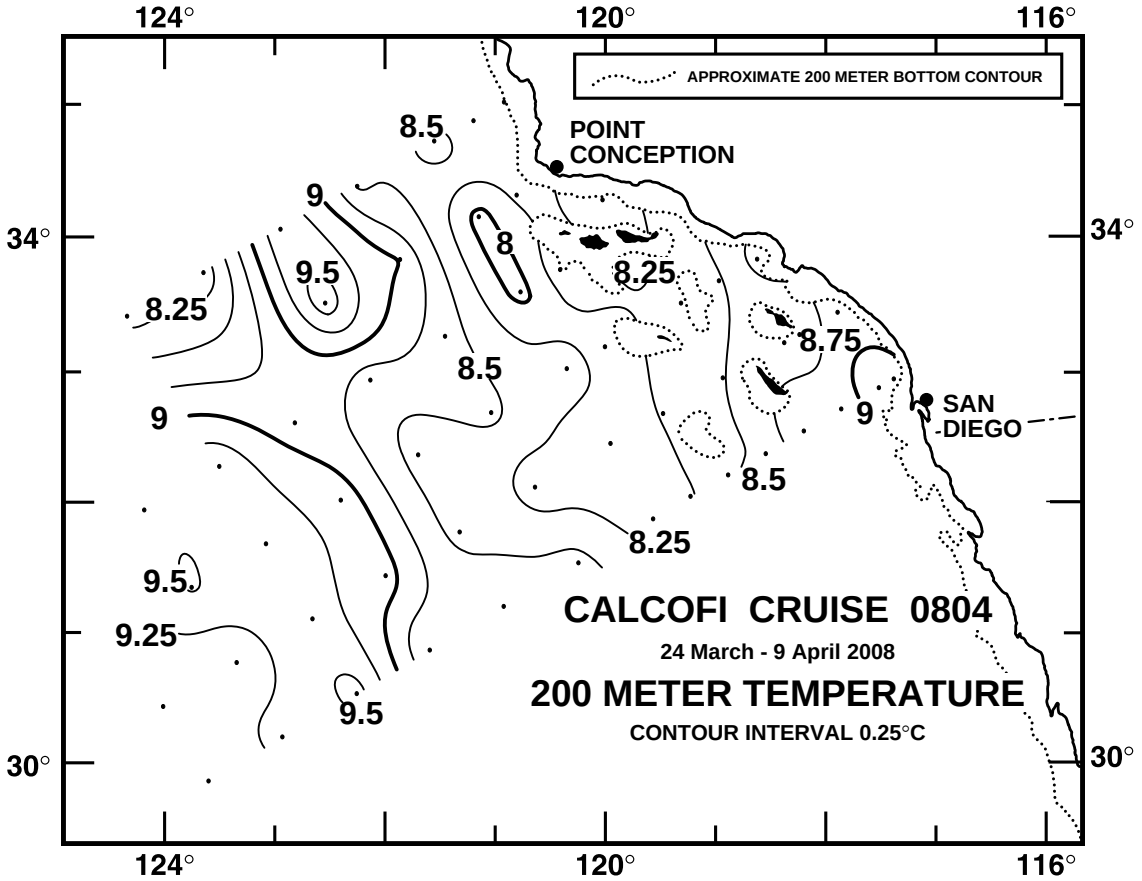

FIGURE 4C

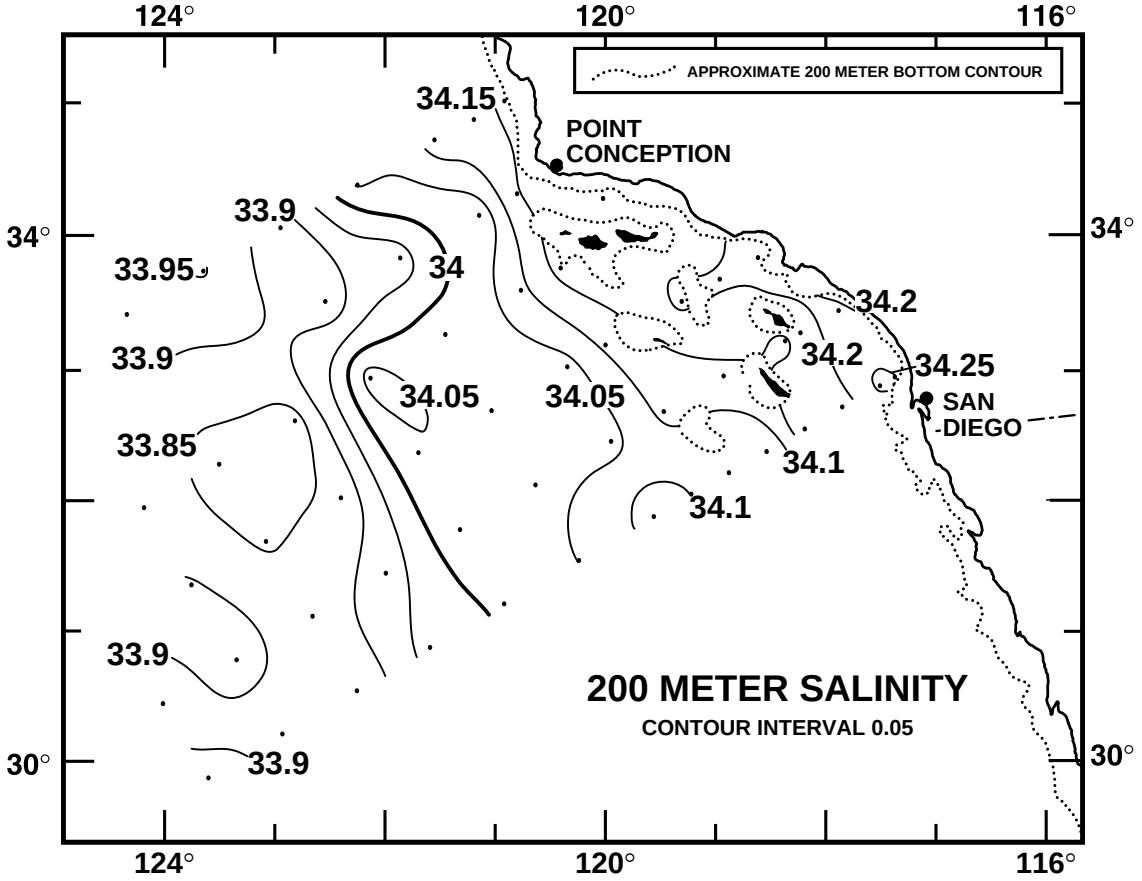

FIGURE 4D

CALCOFI CRUISE 0804

28 March - 1 April 2008

POTENTIAL DENSITY (σ_θ) ALONG CALCOFI LINE 90

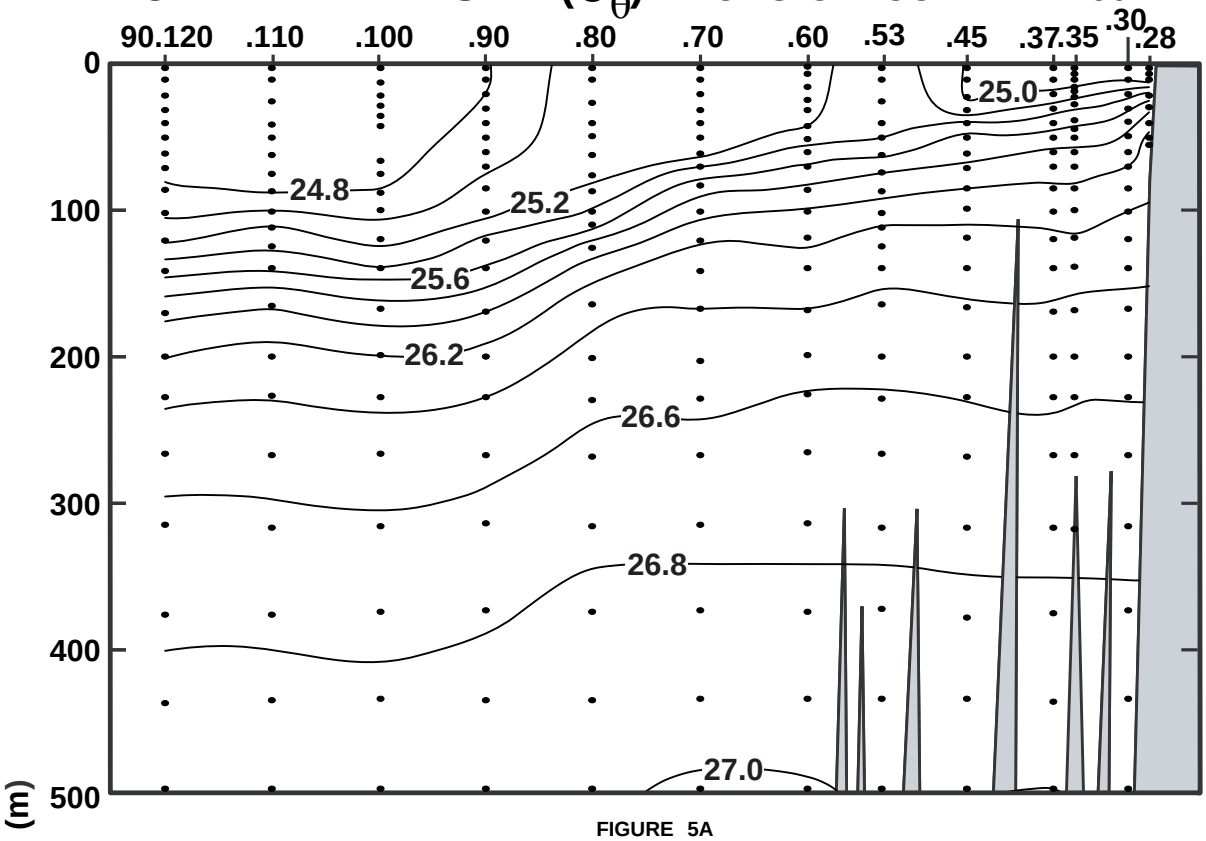

FIGURE 5A

TEMPERATURE (°C) ALONG CALCOFI LINE 90

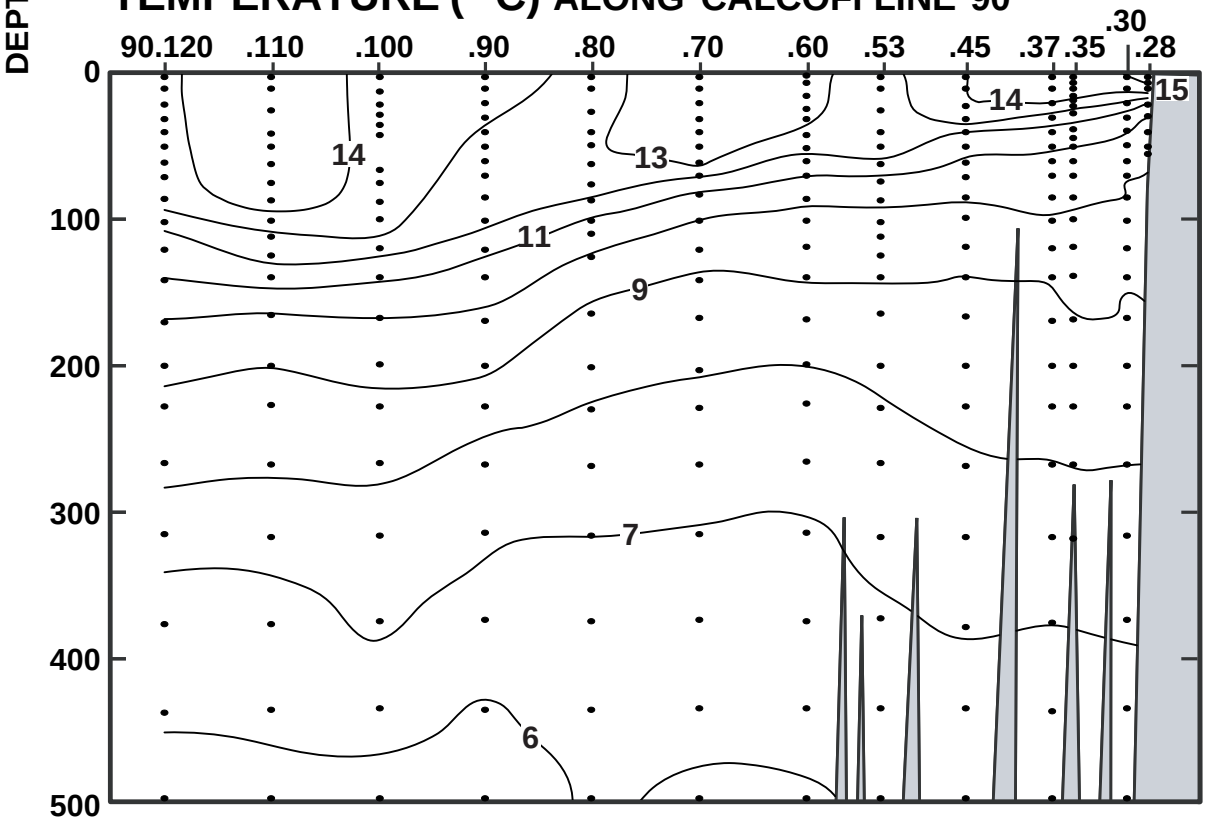

FIGURE 5B

CALCOFI CRUISE 2008

28 March - 1 April 2008

SALINITY ALONG CALCOFI LINE 90

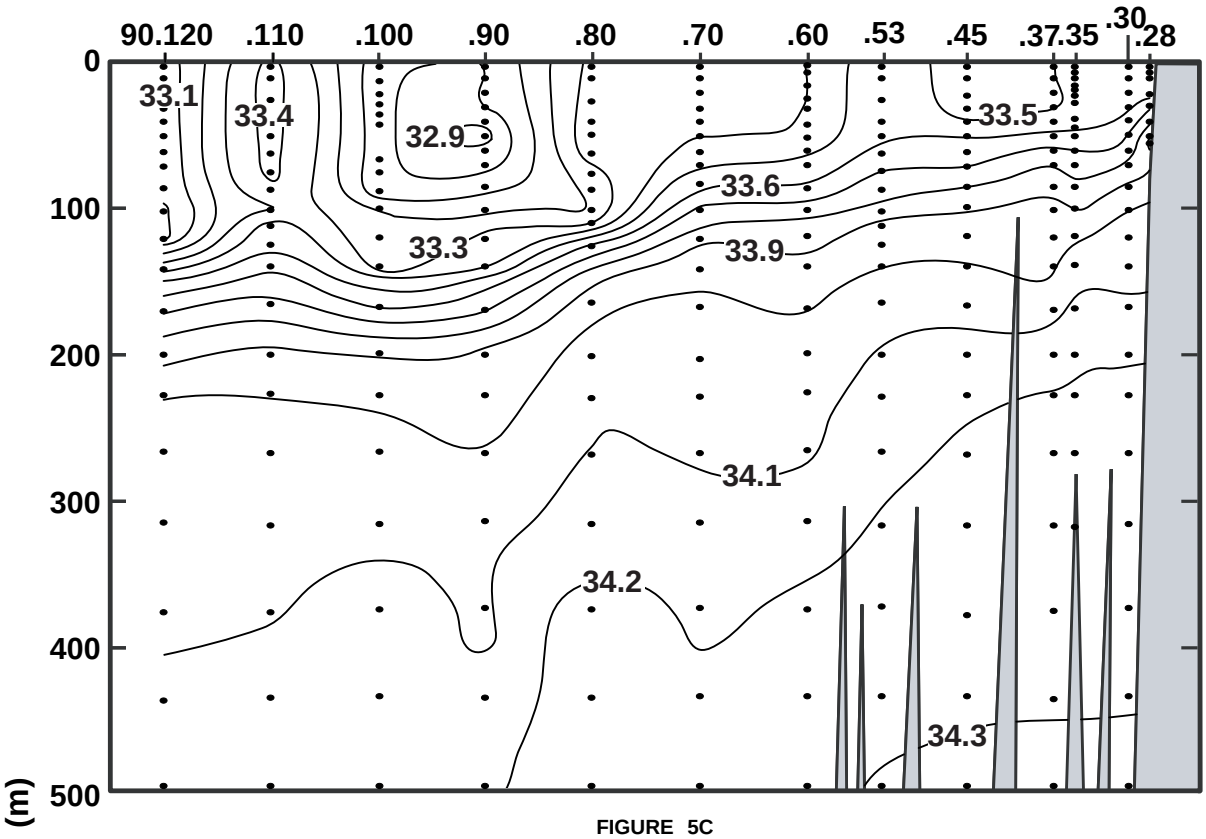

FIGURE 5C

SILICATE (μM/L) ALONG CALCOFI LINE 90

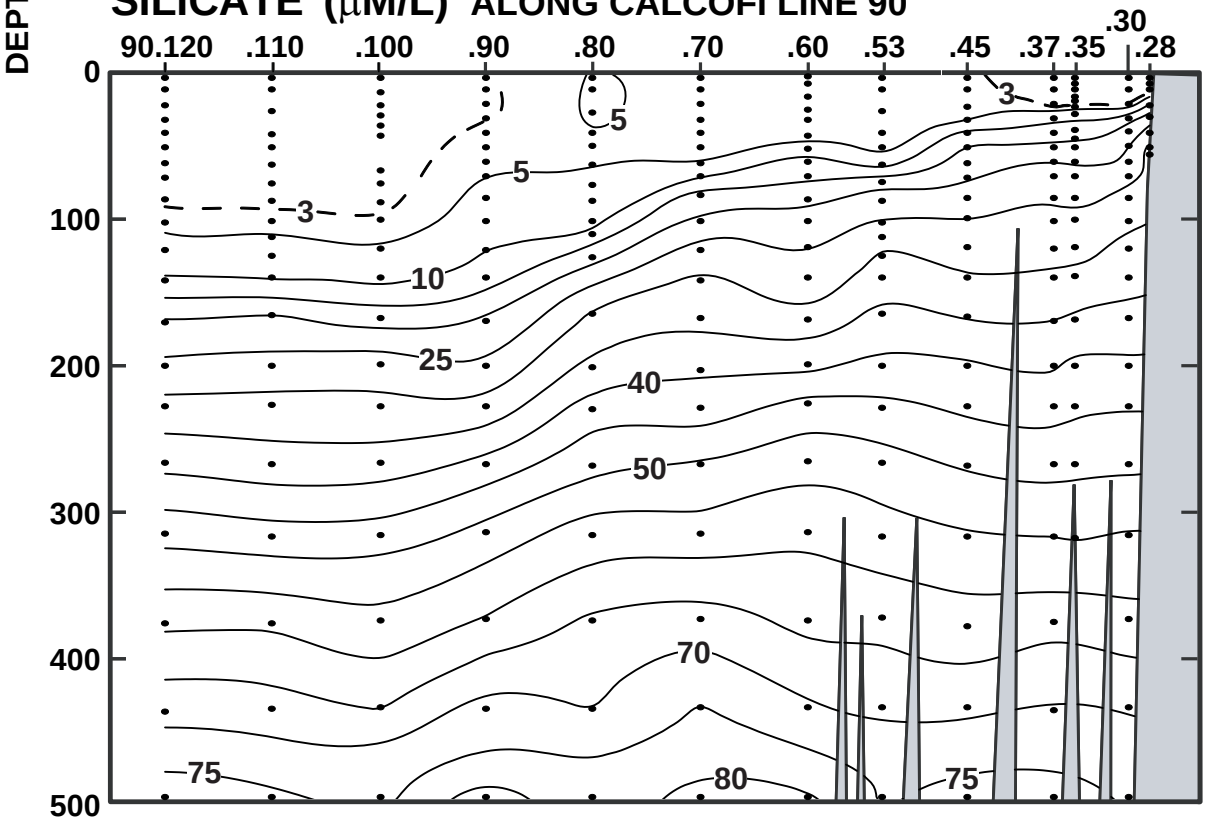

FIGURE 5D

CALCOFI CRUISE 2008

28 March - 1 April 2008

NITRATE (μM/L) ALONG CALCOFI LINE 90

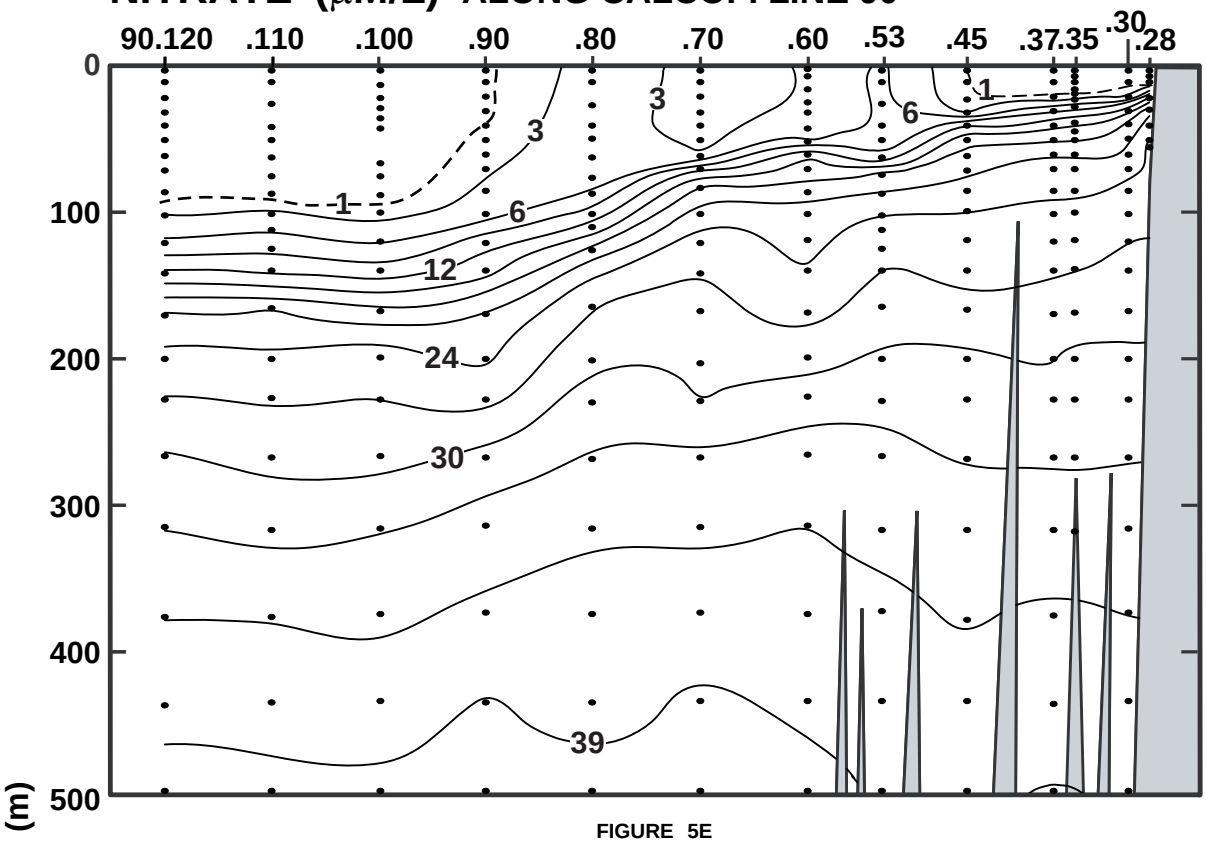

FIGURE 5E

PHOSPHATE (μM/L) ALONG CALCOFI LINE 90

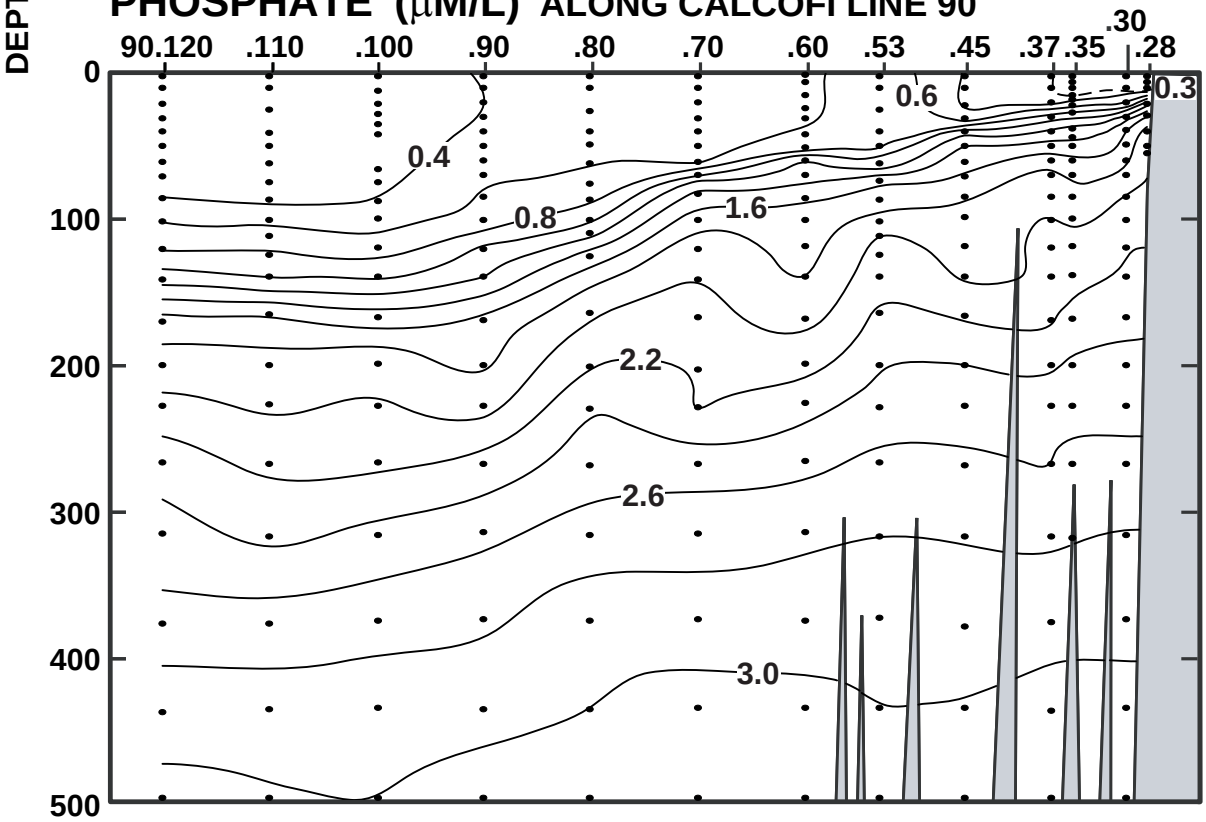

FIGURE 5F

CALCOFI CRUISE 0804

28 March - 1 April Month 2008

CHLOROPHYLL-a (μg/L) ALONG CALCOFI LINE 90

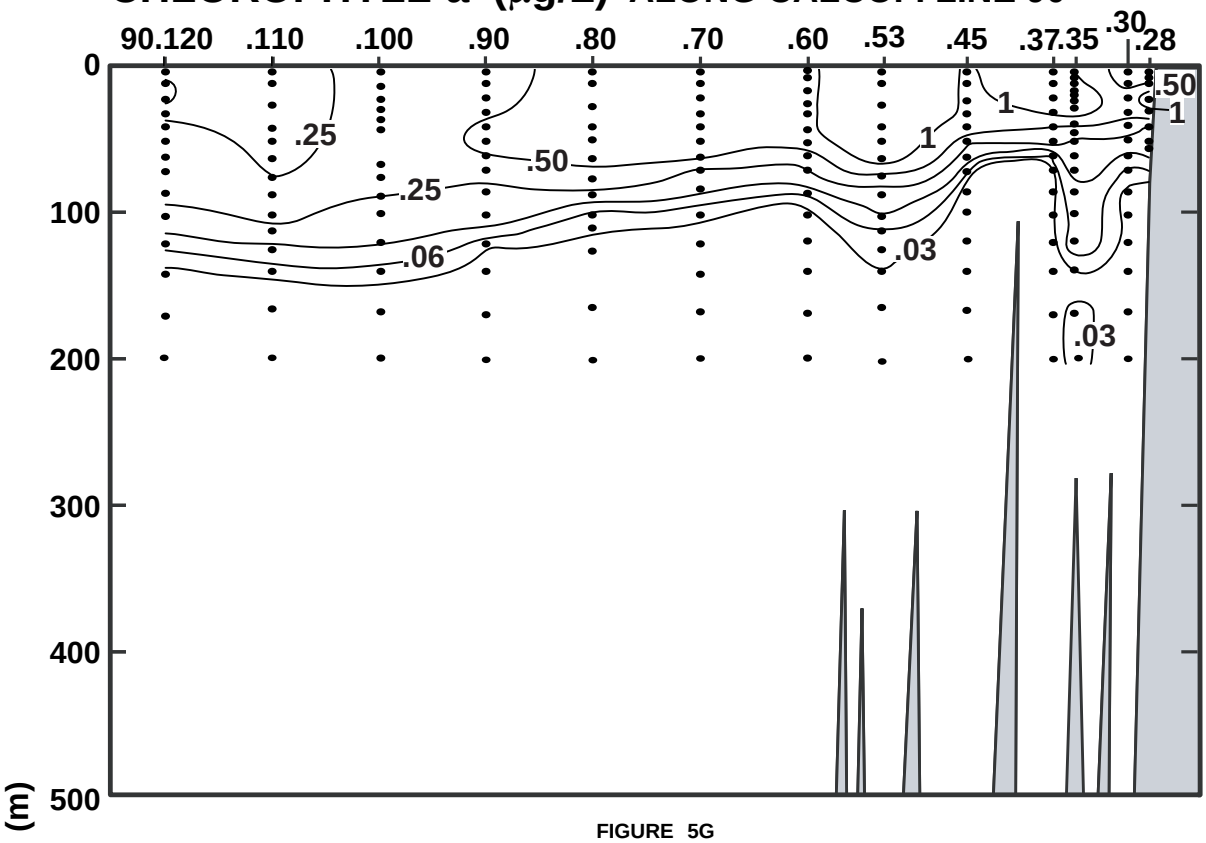

FIGURE 5G

OXYGEN SATURATION (%) ALONG CALCOFI LINE 90

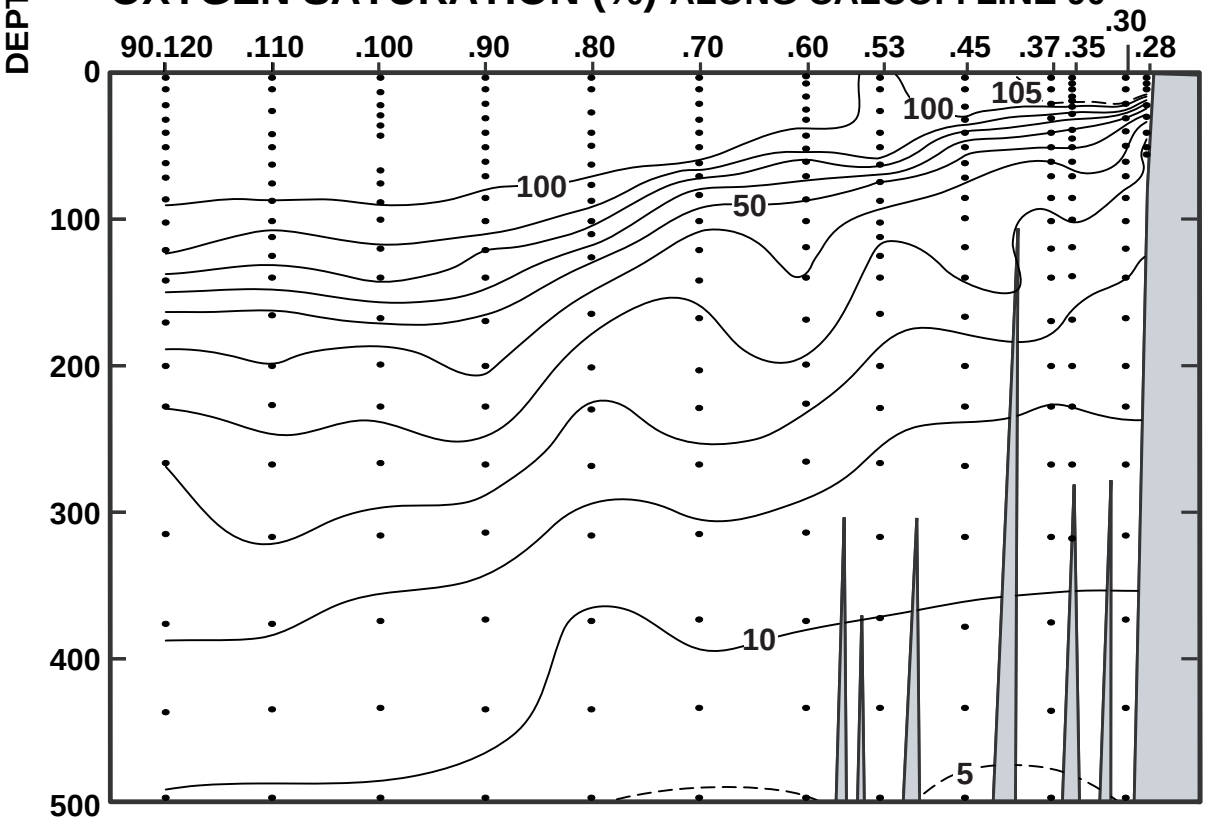

FIGURE 5H

CALCOFI CRUISE 0804

28 March - 1 April 2008

OXYGEN (mL/L) ALONG CALCOFI LINE 90

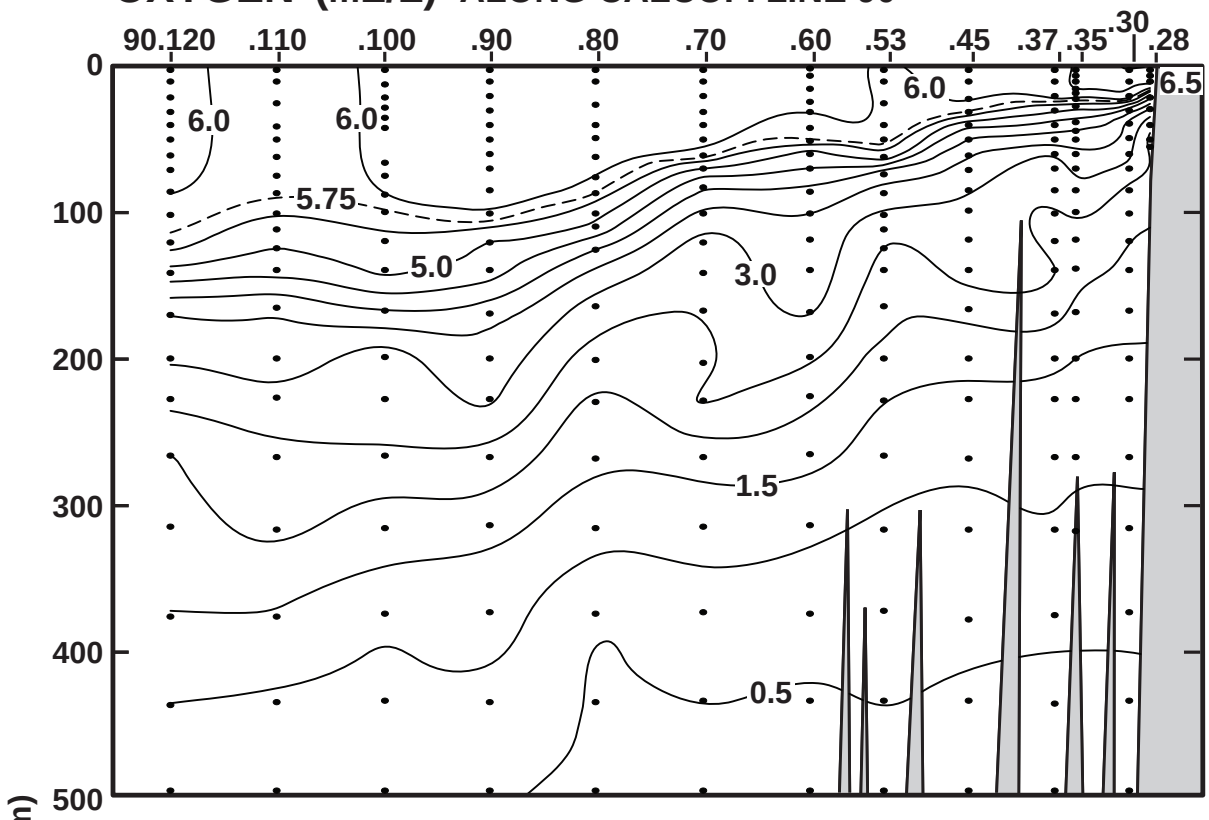

FIGURE 5I

NITRITE (μM/L) ALONG CALCOFI LINE 90

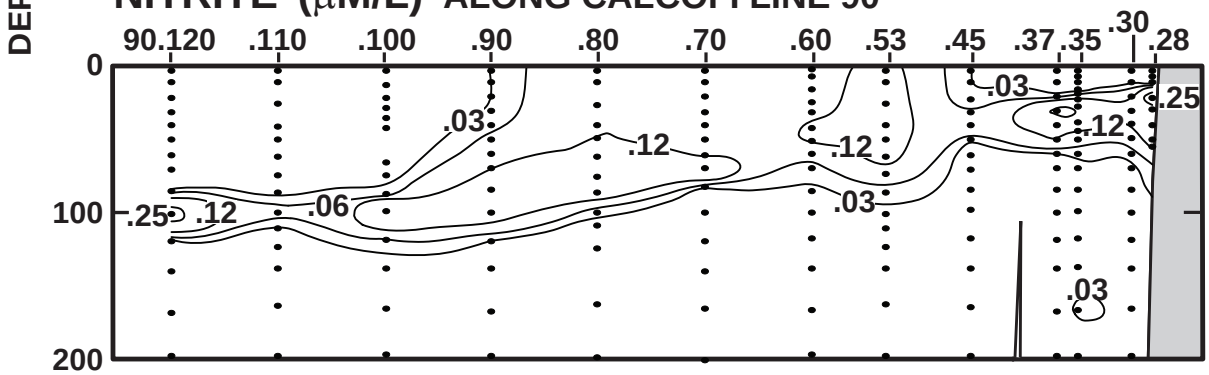

FIGURE 5J

PHAEOPIGMENTS (μg/L) ALONG CALCOFI LINE 90

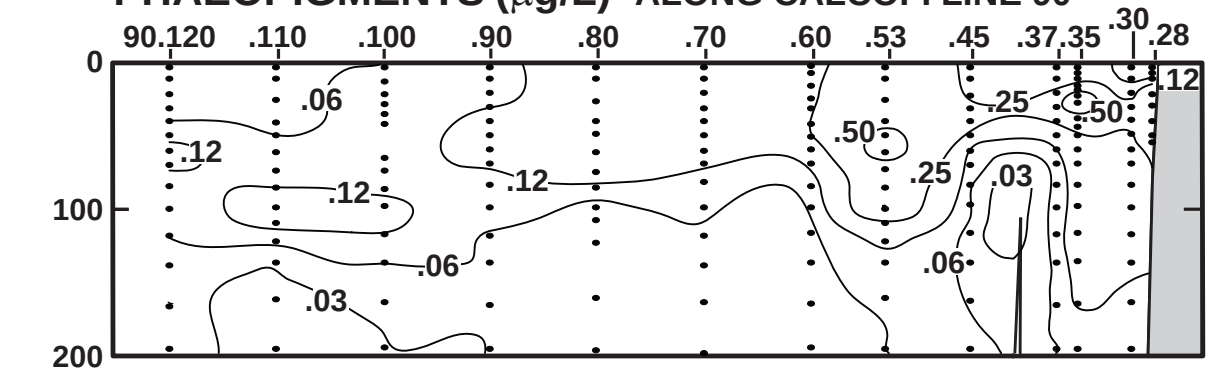

FIGURE 5K

PERSONNEL

CalCOFI Cruise 0804

SHIP'S CAPTAIN

Keith Roberts, RV *David Starr Jordan*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

		Participating (Legs)
Griffith, David A. (Chief Scientist)	Fishery Biologist, NMFS	1-3
Abramenkoff, Dimitry N.	Fishery Biologist, NMFS	1-3
Arthur-McGehee, Nancy	Volunteer, NMFS	2
Blum, Marguerite R.	Oceanographer, UCSD/MBARI	2,3
Camacho, Dominique L.	Marine Mammal Observer, Cascadia Research	1
Campbell, Gregory S	Staff Research Associate, MPL	1
Cha, Byunguyl	Researcher, S. Seas Fisheries Research Institute	2
Dovel, Shonna L.	Staff Research Associate, SIO	1
Faber, David N.	Staff Research Associate, SIO	1
Hays, Amy E.	Fishery Biologist, NMFS	1-3
Hill, Kevin	Fishery Biologist, NMFS	2
Lewis, Mandy	Marine Biologist, CDFG	3
Macewicz, Beverly	Fishery Biologist, NMFS	2,3
Overcash, Bryan J.	Staff Research Associate, SIO	1,3
Reynolds, Susan M.	Staff Research Associate, SIO	1
Rodgers-Wolgast, Jennifer L.	Staff Research Associate, SIO	1,3
Thombley, Robert L.	Staff Research Associate, SIO	1
Watson, William	Fishery Biologist, NMFS	2,3
Wilkinson, James R.	Programmer Analyst, SIO	1

Leg 1: San Diego to San Diego, California, 24 March - 9 April, 2008
Leg 2: San Diego to Avila, California, 12-23 April, 2008
Leg 3: Avila to San Francisco, California, 23 April - 1 May, 2008

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 66.7 50.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
36 45.0 N	122 7.6 W	28/04/08	1540 UTC	1282 m	310 26 kn	300 05 06	2	1018.9 mb	10.0 C	9.8 C		8/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	9.84	9.84	34.030	26.222	178.6	0.000	5.28	82.8						10.19	1.99	0	
3	9.84	9.84	34.030	26.222	178.7	0.005	5.28	82.8						10.19	1.99	3	212
10 CSL	9.82	9.82	34.025	26.222	178.9	0.018										10	200
11	9.82	9.82	34.030	26.225	178.5	0.020	5.22	81.8						10.68	1.90	11	211
20 CSL	9.83	9.83	34.025	26.220	179.2	0.036										20	200
21	9.80	9.80	34.029	26.228	178.5	0.038	5.27	82.5						11.04	1.78	21	210
30	9.44	9.44	34.010	26.273	174.4	0.053	4.28	66.5						3.48	0.77	30	209
40	9.27	9.27	34.004	26.296	172.4	0.071	3.95	61.1						2.39	0.79	40	208
50 CSL	8.91	8.90	34.012	26.360	166.5	0.088										50	200
60	8.81	8.80	34.020	26.382	164.6	0.104	2.55	39.1						0.32	0.25	60	207
75 CSL	8.77	8.76	34.032	26.398	163.4	0.129										75	200
81	8.67	8.66	34.053	26.430	160.4	0.139	2.19	33.4						0.24	0.30	82	206
100 CSL	8.49	8.48	34.065	26.468	157.2	0.169										101	200
101	8.48	8.47	34.074	26.476	156.4	0.170	1.79	27.2						0.21	0.32	102	205
125 CSL	8.33	8.32	34.092	26.513	153.3	0.208										126	200
150 CSL	8.18	8.16	34.106	26.547	150.5	0.245										151	200
151	8.19	8.17	34.109	26.548	150.5	0.247	1.57	23.7						0.07	0.23	152	204
200 CSL	7.76	7.74	34.126	26.626	143.8	0.319										201	200
201	7.76	7.74	34.128	26.627	143.7	0.321	1.39	20.8						0.03	0.19	202	203
250 CSL	7.72	7.70	34.172	26.669	140.7	0.390										252	200
300 CSL	7.34	7.31	34.193	26.740	134.5	0.459										302	200
400 CSL	6.88	6.84	34.229	26.833	127.0	0.590										403	200
500 CSL	6.07	6.03	34.252	26.958	115.8	0.711										504	200
514	6.04	5.99	34.257	26.966	115.3	0.727	0.46	6.6						0.01	0.07	518	202
600 CSL	5.73	5.68	34.299	27.039	109.2	0.824										605	200
700 CSL	5.09	5.03	34.339	27.148	99.3	0.928										706	200
800 CSL	4.69	4.63	34.367	27.216	93.3	1.024										807	200
900 CSL	4.35	4.28	34.405	27.284	87.3	1.115										908	200
1000 CSL	3.99	3.91	34.443	27.352	81.0	1.199										1009	200
1028	3.90	3.82	34.455	27.371	79.3	1.221	0.47	6.4						0.01	0.09	1037	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 66.7 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
36 37.2 N	122 25.0 W	29/04/08	0816 UTC	2664 m	330 28 kn			1017.8 mb	11.2 C	10.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	10.32	10.32	33.908	26.045	195.4	0.000	5.77	91.3						1.52	0.64	0	
3	10.32	10.32	33.908	26.045	195.5	0.006	5.77	91.3						1.52	0.64	3	212
10	10.32	10.32	33.911	26.048	195.4	0.020	5.76	91.2						1.47	0.64	10	211
20	10.32	10.32	33.927	26.060	194.4	0.039	5.72	90.5						1.53	0.66	20	210
29	10.01	10.01	33.953	26.134	187.6	0.056	5.20	81.8						1.11	0.65	29	209
30 CSL	9.96	9.96	33.942	26.134	187.7	0.058										30	200
39	9.89	9.89	33.979	26.174	184.0	0.075	5.10	80.0						0.74	0.49	39	208
50 CSL	9.68	9.67	33.990	26.218	180.0	0.095										50	200
60	9.56	9.55	33.989	26.237	178.4	0.113	4.50	70.1						0.39	0.35	60	207
75 CSL	9.16	9.15	33.989	26.303	172.5	0.139										75	200
79	9.16	9.15	34.000	26.311	171.7	0.146	3.67	56.6						0.34	0.29	79	206
100	8.79	8.78	34.020	26.386	165.0	0.181	2.75	42.1						0.26	0.25	101	205
125 CSL	8.43	8.42	34.020	26.442	160.1	0.222										126	200
150	8.04	8.02	34.033	26.511	153.9	0.261	2.19	33.0						0.02	0.14	151	204
200 CSL	7.40	7.38	34.055	26.622	144.1	0.336										201	200
201	7.41	7.39	34.060	26.624	143.9	0.337	1.80	26.7						0.00	0.08	202	203
250 CSL	6.98	6.96	34.077	26.698	137.5	0.406										252	200
300 CSL	6.60	6.57	34.100	26.768	131.4	0.473										302	200
400 CSL	6.29	6.25	34.209	26.895	120.6	0.599										403	200
500 CSL	5.94	5.90	34.275	26.993	112.4	0.716										504	200
513	5.89	5.85	34.283	27.006	111.4	0.730	0.35	5.0						0.01	0.06	517	202
600 CSL	5.54	5.49	34.313	27.073	105.7	0.825										605	200
700 CSL	5.08	5.02	34.347	27.155	98.5	0.927										706	200
800 CSL	4.68	4.62	34.398	27.241	90.9	1.022										807	200
900 CSL	4.26	4.19	34.415	27.301	85.5	1.110										908	200
1000 CSL	3.97	3.89	34.452	27.361	80.1	1.193										1009	200
1013	3.96	3.88	34.460	27.369	79.5	1.203	0.41	5.6						0.01	0.03	1022	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 66.7 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
36 27.2 N	122 45.9 W	29/04/08	1300 UTC	2913 m	330 20 kn	350 04 07		1018.2 mb	12.0 C	10.0 C	15m	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	10.05	10.05	33.542	25.806	218.2	0.000	5.42	85.1						0.77	0.40	0	
2	10.05	10.05	33.542	25.806	218.2	0.004	5.42	85.1						0.77	0.40	2	212
10	10.05	10.05	33.542	25.806	218.4	0.022	5.43	85.2						0.83	0.39	10	211
20 CSL	9.97	9.97	33.536	25.815	217.7	0.044										20	200
21	9.96	9.96	33.539	25.819	217.4	0.046	5.33	83.5						0.80	0.41	21	210
30	10.05	10.05	33.653	25.893	210.5	0.065	5.58	87.6						1.57	0.68	30	209
40	10.59	10.59	33.800	25.915	208.7	0.086	6.48	103.1						1.91	1.00	40	208
50 CSL	9.51	9.50	33.603	25.944	206.1	0.107										50	200
60	9.76	9.75	33.713	25.989	202.0	0.127	4.56	71.2						0.24	0.26	60	207
75 CSL	9.87	9.86	33.840	26.070	194.7	0.157										75	200
80	9.61	9.60	33.873	26.139	188.2	0.166	4.37	68.1						0.18	0.34	80	206
100 CSL	9.02	9.01	33.881	26.241	178.8	0.203										101	200
101	9.02	9.01	33.886	26.245	178.5	0.205	2.78	42.7						0.05	0.20	102	205
125 CSL	8.74	8.73	33.983	26.365	167.5	0.246										126	200
149	8.44	8.42	34.040	26.456	159.2	0.286	1.90	28.9						0.03	0.17	150	204
150 CSL	8.41	8.39	34.038	26.459	158.9	0.287										151	200
200 CSL	7.89	7.87	34.095	26.583	148.0	0.364										201	200
201	7.89	7.87	34.099	26.586	147.7	0.365	1.45	21.8						0.01	0.10	202	203
250 CSL	7.25	7.23	34.102	26.680	139.3	0.436										252	200
300 CSL	6.70	6.67	34.105	26.758	132.3	0.504										302	200
400 CSL	6.05	6.02	34.161	26.888	121.1	0.630										403	200
500 CSL	5.48	5.44	34.216	27.002	111.0	0.746										504	200
512	5.42	5.38	34.222	27.014	110.0	0.760	0.41	5.8						0.00	0.03	516	202
600 CSL	5.04	4.99	34.293	27.116	101.0	0.852										605	200
700 CSL	4.72	4.66	34.337	27.188	94.9	0.950										706	200
800 CSL	4.44	4.38	34.394	27.264	88.2	1.042										807	200
900 CSL	4.23	4.16	34.422	27.310	84.6	1.128										908	200
1000 CSL	3.95	3.87	34.453	27.364	79.8	1.211										1009	200
1006	3.94	3.86	34.458	27.369	79.4	1.215	0.43	5.9						0.00	0.02	1015	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 66.7 65.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
36 17.1 N	123 7.4 W	29/04/08	1753 UTC	3273 m	330 15 kn	340 03 05	1	1020.2 mb	13.0 C	14.4 C		3/8 CC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	11.85	11.85	33.004	25.068	288.3	0.000	6.48	105.4						1.03	0.20	0	
2	11.85	11.85	33.004	25.068	288.4	0.006	6.48	105.4						1.03	0.20	2	212
10 CSL	11.77	11.77	33.001	25.080	287.4	0.029										10	200
11	11.77	11.77	33.005	25.083	287.1	0.032	6.49	105.4						1.23	0.24	11	211
20 CSL	11.74	11.74	33.007	25.091	286.6	0.057										20	200
21	11.74	11.74	33.012	25.095	286.3	0.060	6.49	105.3						1.22	0.27	21	210
30	11.69	11.69	33.030	25.118	284.3	0.086	6.42	104.1						1.02	0.26	30	209
41	11.54	11.53	33.094	25.196	277.1	0.117	6.27	101.4						0.68	0.34	41	208
50 CSL	11.42	11.41	33.114	25.233	273.8	0.142										50	200
60	11.25	11.24	33.162	25.302	267.5	0.169	5.93	95.3						0.15	0.23	60	207
75 CSL	10.55	10.54	33.230	25.478	250.9	0.208										75	200
80	10.40	10.39	33.267	25.533	245.8	0.220	5.23	82.6						0.08	0.13	80	206
100 CSL	9.78	9.77	33.472	25.798	221.0	0.267										101	200
102	9.78	9.77	33.495	25.816	219.3	0.271	5.43	84.7						0.43	0.34	103	205
125 CSL	9.50	9.49	33.654	25.986	203.6	0.320										126	200
149	9.22	9.20	33.803	26.149	188.6	0.367	3.06	47.2						0.03	0.13	150	204
150 CSL	9.19	9.17	33.794	26.146	188.8	0.369										151	200
200 CSL	8.36	8.34	33.981	26.423	163.3	0.457										201	200
201	8.36	8.34	33.986	26.427	162.9	0.458	2.41	36.5						0.00	0.06	202	203
250 CSL	7.86	7.84	34.070	26.568	150.2	0.535										252	200
300 CSL	7.30	7.27	34.101	26.673	140.8	0.608										302	200
400 CSL	6.36	6.32	34.141	26.833	126.6	0.742										403	200
500 CSL	5.69	5.65	34.194	26.960	115.3	0.862										504	200
511	5.71	5.67	34.216	26.975	114.0	0.875	0.49	7.0						0.00	0.03	515	202
600 CSL	5.15	5.10	34.267	27.083	104.3	0.972										604	200
700 CSL	4.67	4.61	34.325	27.184	95.2	1.072										705	200
800 CSL	4.44	4.38	34.387	27.259	88.8	1.164										806	200
900 CSL	4.21	4.14	34.420	27.310	84.5	1.251										908	200
1000 CSL	3.90	3.82	34.452	27.368	79.3	1.332										1009	200
1024	3.85	3.77	34.465	27.384	78.0	1.351	0.45	6.1						0.00	0.01	1033	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 66.7 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
36 7.1 N	123 29.1 W	29/04/08	2129 UTC	3563 m	310 20 kn	320 03 04	1	1020.5 mb	15.1 C	12.5 C	11m	4/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.37	12.37	32.909	24.896	304.7	0.000	6.38	104.9						0.87	0.14	0	
2	12.37	12.37	32.909	24.896	304.7	0.006	6.38	104.9						0.87	0.14	2	212
10 CSL	12.37	12.37	32.904	24.892	305.3	0.030										10	200
11	12.37	12.37	32.909	24.896	304.9	0.034	6.38	104.9						0.83	0.18	11	211
19	12.26	12.26	32.915	24.922	302.7	0.058	6.39	104.8						0.90	0.21	19	210
20 CSL	12.19	12.19	32.916	24.936	301.3	0.061										20	200
30	11.85	11.85	32.945	25.023	293.4	0.091	6.43	104.6						1.02	0.27	30	209
40	11.85	11.84	32.972	25.044	291.6	0.120	6.38	103.8						0.89	0.26	40	208
50 CSL	11.52	11.51	33.097	25.202	276.8	0.148										50	200
60	11.23	11.22	33.124	25.276	269.9	0.176	5.98	96.1						0.33	0.23	60	207
75 CSL	10.96	10.95	33.112	25.315	266.5	0.216										75	200
80	10.91	10.90	33.131	25.338	264.4	0.229	5.81	92.7						0.19	0.14	80	206
100 CSL	10.02	10.01	33.328	25.645	235.5	0.279										101	200
101	10.00	9.99	33.332	25.652	234.9	0.281	4.69	73.4						0.05	0.06	102	205
125 CSL	9.47	9.46	33.641	25.981	204.1	0.334										126	200
149	8.82	8.80	33.783	26.196	184.0	0.381	3.68	56.3						0.01	0.04	150	204
150 CSL	8.81	8.79	33.783	26.198	183.8	0.383										151	200
200	8.28	8.26	33.968	26.425	163.1	0.469	3.76	56.9						0.00	0.02	201	203
250 CSL	7.38	7.36	33.976	26.563	150.4	0.548										252	200
300 CSL	6.76	6.73	34.009	26.675	140.3	0.620										302	200
400 CSL	5.80	5.77	34.071	26.848	124.6	0.753										403	200
500 CSL	5.47	5.43	34.175	26.971	113.9	0.872										504	200
512	5.43	5.39	34.182	26.982	113.0	0.886	0.53	7.5						0.00	0.01	516	202
600 CSL	5.01	4.96	34.252	27.087	103.7	0.981										604	200
700 CSL	4.69	4.63	34.315	27.173	96.1	1.081										705	200
800 CSL	4.27	4.21	34.354	27.251	89.2	1.174										806	200
900 CSL	3.99	3.92	34.411	27.326	82.5	1.259										908	200
1000 CSL	3.79	3.72	34.462	27.387	77.3	1.339										1009	200
1025	3.75	3.67	34.474	27.401	76.1	1.358	0.48	6.5						0.00	0.01	1034	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 66.7 75.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
35 57.2 N	123 50.2 W	30/04/08	0155 UTC	3868 m	330 33 kn	330 07 05	1	1020.1 mb	13.0 C	10.0 C	10m	6/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.73	12.73	32.870	24.797	314.1	0.000	6.32	104.7						0.56	0.06	0	
2	12.73	12.73	32.870	24.797	314.2	0.006	6.32	104.7						0.56	0.06	2	212
10 CSL	12.73	12.73	32.863	24.791	314.9	0.031										10	200
11	12.73	12.73	32.870	24.797	314.4	0.035	6.32	104.7						0.56	0.10	11	211
20 CSL	12.72	12.72	32.863	24.794	314.9	0.063										20	200
21	12.72	12.72	32.870	24.799	314.5	0.066	6.32	104.6						0.59	0.08	21	210
30	12.70	12.70	32.871	24.804	314.2	0.094	6.34	104.9						0.59	0.09	30	209
41	12.49	12.48	32.914	24.878	307.4	0.129	6.40	105.5						0.86	0.15	41	208
50 CSL	12.07	12.06	32.953	24.988	297.1	0.156										50	200
60	11.11	11.10	32.895	25.119	284.8	0.185	6.32	101.1						0.91	0.28	60	207
75 CSL	10.67	10.66	32.990	25.271	270.7	0.227										75	200
80	10.81	10.80	33.082	25.318	266.3	0.240	6.05	96.3						0.23	0.17	80	206
100 CSL	10.00	9.99	33.259	25.595	240.3	0.291										100	200
101	10.00	9.99	33.262	25.597	240.1	0.293	4.90	76.7						0.07	0.06	102	205
125 CSL	9.44	9.43	33.694	26.027	199.7	0.346										126	200
149	8.96	8.94	33.856	26.231	180.7	0.391	2.95	45.3						0.01	0.05	150	204
150 CSL	8.96	8.94	33.851	26.228	181.1	0.393										151	200
200 CSL	8.18	8.16	33.990	26.457	160.0	0.478										201	200
201	8.18	8.16	33.997	26.463	159.5	0.480	2.38	35.9						0.00	0.04	202	203
250 CSL	7.19	7.17	33.997	26.606	146.3	0.555										252	200
300 CSL	6.62	6.59	34.008	26.692	138.5	0.626										302	200
400 CSL	5.73	5.70	34.068	26.854	123.9	0.757										403	200
500 CSL	5.27	5.23	34.165	26.987	112.2	0.875										504	200
512	5.26	5.22	34.189	27.007	110.4	0.889	0.49	6.9						0.00	0.01	516	202
600 CSL	4.97	4.92	34.252	27.091	103.2	0.983										604	200
700 CSL	4.57	4.52	34.323	27.193	94.1	1.081										705	200
800 CSL	4.16	4.10	34.360	27.267	87.4	1.172										806	200
900 CSL	3.86	3.79	34.401	27.331	81.8	1.257										908	200
1000 CSL	3.68	3.61	34.456	27.393	76.4	1.336										1009	200
1026	3.63	3.55	34.464	27.405	75.4	1.356	0.42	5.7						0.00	0.00	1035	201

RV DAVID STARR JORDAN — CALCOFI CRUISE 0804 — STATION 66.7 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
35 47.2 N	124 10.8 W	30/04/08	0602 UTC	3947 m	330 31 kn			1022.1 mb	12.5 C	9.4 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.81	12.81	32.896	24.801	313.7	0.000	6.31	104.7						0.49	0.08	0	
3	12.81	12.81	32.896	24.801	313.8	0.009	6.31	104.7						0.49	0.08	3	212
10 CSL	12.81	12.81	32.890	24.797	314.4	0.031										10	200
11	12.81	12.81	32.895	24.801	314.0	0.035	6.33	105.0						0.47	0.10	11	211
20	12.78	12.78	32.898	24.809	313.5	0.063	6.32	104.8						0.52	0.08	20	210
30 CSL	12.62	12.62	32.905	24.846	310.2	0.094										30	200
31	12.53	12.53	32.914	24.870	307.9	0.097	6.38	105.2						0.61	0.11	31	209
40	11.90	11.89	32.911	24.987	297.0	0.124	6.41	104.3						0.76	0.25	40	208
50 CSL	11.31	11.30	33.044	25.199	277.0	0.153										50	200
75 CSL	10.28	10.27	33.051	25.385	259.7	0.220										75	200
79	10.48	10.47	33.171	25.444	254.2	0.230	5.67	89.6						0.08	0.08	79	206
100 CSL	9.53	9.52	33.382	25.769	223.7	0.281										101	200
101	9.65	9.64	33.424	25.782	222.5	0.283	4.20	65.3						0.03	0.06	102	205
125 CSL	9.37	9.36	33.769	26.098	193.0	0.333										126	200
149	8.86	8.84	33.875	26.262	177.7	0.377	2.79	42.7						0.01	0.07	150	204
150 CSL	8.84	8.82	33.875	26.265	177.5	0.379										151	200
200 CSL	8.04	8.02	33.949	26.446	161.0	0.464										201	200
201	8.05	8.03	33.953	26.447	160.9	0.465	2.78	41.8						0.00	0.03	202	203
250 CSL	7.40	7.38	33.977	26.561	150.7	0.541										252	200
300 CSL	6.87	6.84	34.032	26.678	140.1	0.614										302	200
400 CSL	5.82	5.79	34.056	26.834	126.0	0.747										403	200
500 CSL	5.18	5.14	34.125	26.966	114.1	0.867										504	200
509	5.10	5.06	34.131	26.980	112.7	0.877	0.69	9.7						0.00	0.01	513	202
600 CSL	4.95	4.90	34.252	27.094	102.9	0.975										604	200
700 CSL	4.62	4.56	34.318	27.184	95.1	1.074										705	200
800 CSL	4.34	4.28	34.379	27.263	88.2	1.166										806	200
900 CSL	3.93	3.86	34.401	27.324	82.6	1.251										908	200
1000 CSL	3.64	3.57	34.439	27.384	77.2	1.331										1009	200
1018	3.59	3.52	34.451	27.398	75.9	1.345	0.36	4.9						0.00	0.00	1027	201

RV DAVID STARR JORDAN — CALCOFI CRUISE 0804 — STATION 70.0 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
36 3.0 N	122 0.4 W	27/04/08	1856 UTC	1293 m	320 20 kn	310 05 06	1	1018.6 mb	13.0 C	11.8 C		6/8	CI

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	10.74	10.74	33.438	25.606	237.2	0.000	6.16	98.1						1.50	0.50	0	
3	10.74	10.74	33.438	25.606	237.2	0.007	6.16	98.1						1.50	0.50	3	212
5	10.76	10.76	33.438	25.602	237.6	0.012	6.13	97.7						1.66	0.45	5	211
10	10.77	10.77	33.438	25.601	237.9	0.024	6.13	97.7						1.67	0.56	10	210
20	10.23	10.23	33.497	25.740	224.8	0.047	5.62	88.5						0.81	0.48	20	209
30	10.06	10.06	33.654	25.892	210.6	0.069	5.33	83.7						0.83	0.48	30	208
40	9.69	9.69	33.616	25.924	207.7	0.090	4.85	75.6						0.34	0.37	40	207
50 CSL	9.31	9.30	33.697	26.050	196.0	0.110										50	200
60	9.32	9.31	33.844	26.163	185.4	0.129	3.52	54.5						0.07	0.22	60	206
75 CSL	9.08	9.07	33.910	26.254	177.1	0.156										75	200
80	9.06	9.05	33.927	26.270	175.7	0.165	2.49	38.3						0.02	0.13	80	205
100 CSL	8.94	8.93	33.978	26.329	170.4	0.199										101	200
101	8.94	8.93	33.982	26.333	170.1	0.201	2.22	34.1						0.01	0.16	102	204
125 CSL	8.63	8.62	34.047	26.432	161.1	0.241										126	200
149	8.14	8.12	34.024	26.489	156.0	0.279	2.30	34.7						0.02	0.14	150	203
150 CSL	8.16	8.14	34.027	26.488	156.1	0.281										151	200
200 CSL	7.59	7.57	34.035	26.579	148.2	0.357										201	200
201	7.58	7.56	34.036	26.581	148.0	0.358	2.02	30.1						0.01	0.12	202	202
250 CSL	6.95	6.93	34.054	26.684	138.8	0.428										252	200
300 CSL	6.38	6.35	34.073	26.775	130.5	0.496										302	200
400 CSL	5.85	5.82	34.133	26.891	120.6	0.621										403	200
500 CSL	5.64	5.60	34.255	27.014	110.1	0.737										504	200
510	5.64	5.60	34.259	27.017	109.9	0.748	0.37	5.3						0.00	0.04	514	201

RV DAVID STARR JORDAN — CALCOFI CRUISE 0804 — STATION 70.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
35 52.6 N	122 22.0 W	27/04/08	2311 UTC	3033 m	330 30 kn	330 05 06	1	1017.9 mb	14.9 C	12.7 C	08m	2/8	AS

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	11.04	11.04	33.303	25.448	252.2	0.000	6.45	103.3						2.24	0.75	0	
2	11.04	11.04	33.303	25.448	252.2	0.005	6.45	103.3						2.24	0.75	2	212
5	11.03	11.03	33.304	25.450	252.1	0.013	6.39	102.3						2.24	0.71	5	211
10 CSL	10.99	10.99	33.317	25.468	250.5	0.025										10	200
11	10.97	10.97	33.334	25.484	249.0	0.028	6.38	102.0						2.45	0.83	11	210
20	10.68	10.68	33.475	25.646	233.8	0.049	6.08	96.7						2.17	0.81	20	209
30	10.56	10.56	33.570	25.741	225.0	0.072	5.87	93.2						1.65	0.68	30	208
40	10.52	10.52	33.577	25.753	224.0	0.095	5.88	93.3						1.36	0.65	40	207
50 CSL	10.44	10.43	33.616	25.798	220.0	0.117										50	200
60	10.30	10.29	33.629	25.832	217.0	0.139	5.66	89.4						1.12	0.54	60	206
75 CSL	9.71	9.70	33.571	25.886	212.1	0.171										75	200
80	9.43	9.42	33.536	25.905	210.4	0.182	4.60	71.2						0.26	0.33	80	205
100	9.10	9.09	33.739	26.117	190.6	0.222	3.34	51.4						0.05	0.13	101	204
125 CSL	8.99	8.98	33.869	26.237	179.7	0.268										126	200
149	8.53	8.51	33.985	26.399	164.6	0.309	2.47	37.6						0.03	0.12	150	203
150 CSL	8.54	8.52	33.982	26.396	165.0	0.311										151	200
200 CSL	8.19	8.17	34.056	26.507	155.2	0.391										201	200
201	8.17	8.15	34.061	26.514	154.6	0.393	1.87	28.2						0.01	0.08	202	202
250 CSL	7.93	7.90	34.101	26.582	149.0	0.467										252	200
300 CSL	7.46	7.43	34.151	26.690	139.4	0.539										302	200
400 CSL	6.52	6.48	34.207	26.864	123.8	0.671										403	200
500 CSL	5.60	5.56	34.221	26.992	112.1	0.789										504	200
515	5.49	5.45	34.221	27.005	110.9	0.805	0.44	6.2						0.01	0.03	519	201

RV DAVID STARR JORDAN — CALCOFI CRUISE 0804 — STATION 73.3 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
35 28.5 N	121 36.5 W	27/04/08	0923 UTC	992 m	330 26 kn			1016.8 mb	13.0 C	11.2 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	11.78	11.78	33.151	25.195	276.2	0.000	6.43	104.5						1.33	0.43	0	
2	11.78	11.78	33.151	25.195	276.3	0.006	6.43	104.5						1.33	0.43	2	212
5	11.78	11.78	33.149	25.193	276.5	0.014	6.43	104.5						1.30	0.41	5	211
10	11.78	11.78	33.151	25.195	276.4	0.028	6.43	104.5						1.34	0.41	10	210
20	11.70	11.70	33.170	25.225	273.9	0.055	6.39	103.7						1.37	0.48	20	209
30	10.97	10.97	33.287	25.448	252.8	0.081	6.00	95.9						1.13	0.53	30	208
40	10.94	10.94	33.311	25.472	250.7	0.107	5.94	94.9						0.89	0.51	40	207
50 CSL	10.78	10.77	33.386	25.559	242.7	0.131										50	200
60	10.71	10.70	33.485	25.649	234.4	0.155	5.59	89.0						0.46	0.44	60	206
75 CSL	10.63	10.62	33.547	25.711	228.8	0.190										75	200
80	10.31	10.30	33.595	25.804	220.1	0.201	4.96	78.3						0.20	0.40	80	205
100	9.41	9.40	33.857	26.159	186.6	0.242	2.89	44.8						0.03	0.20	101	204
125 CSL	9.09	9.08	33.949	26.283	175.3	0.287										126	200
149	8.61	8.59	34.005	26.403	164.3	0.328	2.28	34.8						0.02	0.16	150	203
150 CSL	8.60	8.58	34.004	26.404	164.3	0.329										151	200
200	7.94	7.92	34.072	26.557	150.4	0.408	1.90	28.5						0.01	0.12	201	202
250 CSL	7.08	7.06	34.083	26.689	138.4	0.480										252	200
300 CSL	6.90	6.87	34.157	26.772	131.2	0.548										302	200
400 CSL	6.59	6.55	34.260	26.896	120.8	0.674										403	200
500 CSL	6.03	5.99	34.305	27.005	111.4	0.790										504	200
512	5.95	5.91	34.319	27.027	109.5	0.803	0.30	4.3						0.00	0.04	516	201

RV DAVID STARR JORDAN — CALCOFI CRUISE 0804 — STATION 73.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
35 18.6 N	121 57.5 W	27/04/08	0321 UTC	2357 m	330 30 kn			1017.0 mb	13.9 C	11.5 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	11.29	11.29	33.431	25.502	247.0	0.000	6.45	104.0						1.96	0.83	0	
2	11.29	11.29	33.431	25.502	247.0	0.005	6.45	103.9						1.96	0.83	2	212
5	11.28	11.28	33.430	25.503	247.0	0.012	6.42	103.4						1.89	0.80	5	211
10	11.28	11.28	33.431	25.504	247.0	0.025	6.42	103.4						1.95	0.86	10	210
20	11.23	11.23	33.427	25.510	246.7	0.049	6.38	102.7						1.91	0.87	20	209
30	10.45	10.45	33.462	25.676	231.2	0.073	5.72	90.5						1.09	0.62	30	208
40	9.90	9.90	33.568	25.852	214.6	0.096	4.85	75.9						0.24	0.32	40	207
50 CSL	10.08	10.07	33.698	25.923	208.1	0.117										50	200
60	10.04	10.03	33.728	25.954	205.4	0.137	5.12	80.4						0.30	0.51	60	206
75 CSL	9.90	9.89	33.790	26.026	198.9	0.168										75	200
79	9.85	9.84	33.816	26.054	196.2	0.176	4.30	67.3						0.22	0.46	79	205
100 CSL	9.43	9.42	33.836	26.140	188.5	0.216										101	200
101	9.43	9.42	33.840	26.143	188.2	0.218	3.00	46.5						0.06	0.31	102	204
125 CSL	9.05	9.04	33.975	26.310	172.8	0.261										126	200
149	8.69	8.67	34.021	26.403	164.3	0.302	2.21	33.7						0.03	0.19	150	203
150 CSL	8.68	8.66	34.020	26.404	164.3	0.303										151	200
200 CSL	7.62	7.60	33.973	26.526	153.2	0.383										201	200
201	7.65	7.63	33.977	26.525	153.4	0.384	2.63	39.2						0.01	0.11	202	202
250 CSL	7.04	7.02	34.010	26.637	143.3	0.457										252	200
300 CSL	7.33	7.30	34.194	26.742	134.3	0.526										302	200
400 CSL	6.26	6.22	34.186	26.881	121.9	0.654										403	200
500 CSL	5.34	5.30	34.202	27.008	110.3	0.771										504	200
514	5.27	5.23	34.220	27.031	108.3	0.786	0.41	5.8						0.00	0.02	518	201

RV DAVID STARR JORDAN — CALCOFI CRUISE 0804 — STATION 73.3 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
34 58.2 N	122 39.7 W	26/04/08	2024 UTC	4058 m	330 25 kn	330 04 04	0	1021.3 mb	15.6 C	13.0 C	15m	0/8

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.64	12.64	32.869	24.813	312.6	0.000	6.26	103.5						0.46	0.10	0	
2	12.64	12.64	32.869	24.813	312.6	0.006	6.26	103.5						0.46	0.10	2	212
5	12.64	12.64	32.869	24.813	312.7	0.016	6.25	103.3						0.47	0.08	5	211
10	12.63	12.63	32.870	24.816	312.5	0.031	6.27	103.6						0.46	0.10	10	210
20	12.54	12.54	32.869	24.833	311.2	0.062	6.26	103.2						0.50	0.09	20	209
30	12.46	12.46	32.873	24.852	309.6	0.093	6.26	103.1						0.55	0.12	30	208
40	11.56	11.56	33.062	25.167	279.8	0.123	6.09	98.5						0.43	0.21	40	207
50 CSL	11.94	11.93	33.249	25.242	273.0	0.151										50	200
60	11.77	11.76	33.264	25.286	269.0	0.178	6.15	100.0						0.30	0.24	60	206
75 CSL	11.43	11.42	33.325	25.396	258.9	0.217										75	200
80	11.26	11.25	33.356	25.451	253.8	0.230	5.90	95.0						0.13	0.26	80	205
100 CSL	10.49	10.48	33.585	25.766	224.2	0.278										101	200
101	10.47	10.46	33.592	25.775	223.4	0.280	4.67	74.0						0.07	0.25	102	204
125 CSL	9.81	9.80	33.869	26.104	192.6	0.330										126	200
150 CSL	9.44	9.42	33.992	26.261	178.1	0.376										151	200
151	9.44	9.42	33.997	26.265	177.7	0.378	2.13	33.1						0.01	0.17	152	203
200 CSL	8.95	8.93	34.090	26.417	164.1	0.462										201	200
201	8.95	8.93	34.092	26.419	164.0	0.464	1.61	24.7						0.01	0.14	202	202
250 CSL	8.55	8.52	34.164	26.538	153.4	0.541										251	200
300 CSL	8.11	8.08	34.198	26.632	145.2	0.616										302	200
400 CSL	7.13	7.09	34.227	26.797	130.6	0.754										403	200
500 CSL	6.36	6.31	34.246	26.917	120.1	0.879										503	200
512	6.32	6.27	34.256	26.930	119.0	0.894	0.48	6.9						0.00	0.04	516	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 73.3 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 38.5 N	123 21.7 W	26/04/08	1335 UTC	4154 m	340 19 kn	340 04 06	1	1021.6 mb	13.3 C	11.0 C	16m	3/8	CI

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.68	12.68	32.904	24.833	310.7	0.000	6.22	102.9						0.35	0.10	0	
2	12.68	12.68	32.904	24.833	310.8	0.006	6.22	102.9						0.35	0.10	2	212
5	12.68	12.68	32.904	24.833	310.8	0.016	6.23	103.1						0.35	0.09	5	211
10	12.68	12.68	32.904	24.833	310.9	0.031	6.24	103.2						0.36	0.10	10	210
20	12.68	12.68	32.905	24.834	311.1	0.062	6.24 D	103.2						0.37	0.09	20	209
30	12.68	12.68	32.904	24.833	311.4	0.093	6.22	102.9						0.37	0.10	30	208
40	12.68	12.67	32.905	24.834	311.6	0.124	6.22	102.9						0.38	0.08	40	207
50 CSL	12.50	12.49	32.919	24.880	307.4	0.155										50	200
60	12.49	12.48	32.926	24.888	307.0	0.186	6.21	102.3						0.38	0.15	60	206
75 CSL	12.03	12.02	33.047	25.069	290.0	0.231										75	200
80	11.82	11.81	33.063	25.121	285.2	0.245	5.96	96.9						0.22	0.18	80	205
100 CSL	11.28	11.27	33.301	25.405	258.6	0.300										100	200
101	11.27	11.26	33.314	25.417	257.5	0.302	5.58	89.8						0.14	0.17	101	204
125 CSL	11.08	11.06	33.584	25.662	234.8	0.361										126	200
149	10.84	10.82	33.647	25.754	226.5	0.417	5.09	81.3						0.06	0.17	150	203
150 CSL	10.90	10.88	33.642	25.740	228.0	0.419										151	200
199	9.19	9.17	33.962	26.279	177.3	0.518	2.45	37.8						0.03	0.17	200	202
200 CSL	9.19	9.17	33.958	26.276	177.6	0.520										201	200
250 CSL	8.09	8.06	33.982	26.465	160.1	0.604										251	200
300 CSL	7.51	7.48	34.043	26.598	148.1	0.681										302	200
400 CSL	5.98	5.95	34.043	26.803	128.9	0.820										403	200
500 CSL	5.31	5.27	34.133	26.957	115.0	0.942										503	200
512	5.27	5.23	34.139	26.966	114.3	0.956	0.68	9.6						0.00	0.01	516	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 73.3 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 18.2 N	124 3.8 W	26/04/08	0206 UTC	3168 m	340 24 kn	330 05 06	0	1023.4 mb	14.5 C	11.8 C		0/8	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.03	13.03	32.938	24.791	314.7	0.000	6.27	104.5						0.43	0.08	0	
2	13.03	13.03	32.938	24.791	314.8	0.006	6.27	104.5						0.43	0.08	2	212
5	13.03	13.03	32.937	24.790	314.9	0.016	6.30	105.0						0.44	0.06	5	211
10	13.02	13.02	32.938	24.793	314.8	0.031	6.27	104.5						0.44	0.08	10	210
20	12.74	12.74	32.950	24.857	308.9	0.063	6.30	104.4						0.50	0.12	20	209
30	12.28	12.28	33.014	24.995	296.0	0.093	6.31	103.6						0.58	0.17	30	208
40	11.95	11.94	33.027	25.068	289.3	0.122	6.16	100.4						0.53	0.26	40	207
50 CSL	11.42	11.41	33.027	25.166	280.2	0.151										50	200
70	11.39	11.38	33.266	25.357	262.4	0.205	5.73	92.4						0.36	0.25	70	206
75 CSL	11.56	11.55	33.418	25.445	254.3	0.218										75	200
79	11.52	11.51	33.442	25.471	251.9	0.228	5.40	87.4						0.28	0.21	79	205
100	10.99	10.98	33.545	25.647	235.6	0.279	5.16	82.7						0.11	0.14	100	204
125 CSL	9.27	9.26	33.576	25.963	205.8	0.334										126	200
149	8.74	8.72	33.788	26.213	182.4	0.381	3.29	50.2						0.01	0.09	150	203
150 CSL	8.75	8.73	33.810	26.228	180.9	0.383										151	200
199	7.97	7.95	33.936	26.446	160.9	0.466	3.08	46.2						0.00	0.05	200	202
200 CSL	7.97	7.95	33.947	26.454	160.1	0.468										201	200
250 CSL	7.34	7.32	33.999	26.587	148.2	0.545										251	200
300 CSL	7.05	7.02	34.078	26.690	139.1	0.617										302	200
400 CSL	5.86	5.83	34.077	26.845	124.9	0.749										403	200
500 CSL	5.39	5.35	34.171	26.977	113.2	0.868										503	200
511	5.32	5.28	34.176 D	26.990	112.1	0.880	0.55	7.8						0.00	0.02	515	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 76.7 49.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
35 4.9 N	120 46.4 W	07/04/08	0135 UTC	66 m	310 28 kn	280 03 03	0	1018.3 mb	12.1 C	10.3 C	11m		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	10.17	10.17	33.915	26.076	192.4	0.000	4.44	70.0	29.7	1.89	23.9	0.17	0.02	0.83	0.29	0	
2	10.17	10.17	33.915	26.076	192.5	0.004	4.44	70.0	29.7	1.89	23.9	0.17	0.02	0.83	0.29	2	208
6	10.08	10.08	33.914	26.091	191.2	0.012	4.37	68.8	29.9	1.90	24.0	0.18	0.04	0.82	0.33	6	207
10	10.01	10.01	33.923	26.110	189.5	0.019	4.14	65.1	30.0	1.93	24.4	0.18	0.02	0.73	0.29	10	206
20 ISL	9.73 D	9.73	33.957 D	26.184	182.7	0.038	3.74	58.4	31.8	2.02	25.5	0.17	0.04	0.63	0.24	20	
21	9.72	9.72	33.957	26.185	182.6	0.040	3.71	58.0	32.0	2.03	25.6	0.17	0.04	0.62	0.24	21	205
30 ISL	9.59 D	9.59	33.972 D	26.219	179.6	0.056	3.49	54.4	32.7	2.09	26.2	0.17	0.07	0.45	0.19	30	
31	9.58	9.58	33.974	26.222	179.3	0.058	3.47	54.1	32.8	2.09	26.2	0.17	0.07	0.43	0.19	31	204
42	9.39	9.39	33.980	26.258	176.1	0.077	3.17	49.2	33.3	2.10	26.6	0.16	0.05	0.39	0.21	42	203
50	9.14	9.13	33.999	26.313	171.0	0.091	2.66	41.0	34.4	2.16	27.5	0.16	0.00	0.33	0.23	50	202
60	8.97	8.96	34.022	26.358	166.9	0.108	2.31	35.5	36.1	2.22	28.2	0.16	0.02	0.17	0.23	60	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 76.7 51.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
35 1.3 N	120 55.0 W	23/04/08	2046 UTC	240 m	300 15 kn	310 02 03	0	1019.9 mb	14.5 C	12.0 C	11m	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	10.74	10.74	33.756	25.853	213.6	0.000	5.77	92.1	23.0	1.57	19.4	0.22	0.05	1.16	0.45	0	
2	10.74	10.74	33.756	25.854	213.7	0.004	5.77	92.1	23.0	1.57	19.4	0.22	0.05	1.16	0.45	2	215
10	10.52	10.52	33.767	25.901	209.3	0.021	5.67	90.1	23.5	1.60	19.8	0.22	0.12	1.20	0.57	10	214
20	10.44	10.44	33.777	25.923	207.5	0.042	5.61	88.9	23.8	1.62	20.1	0.22	0.07	1.03	0.59	20	213
30	10.33	10.33	33.787	25.950	205.1	0.063	5.40	85.4	24.4	1.66	20.7	0.22	0.15	0.80	0.63	30	212
40	9.95	9.95	33.822	26.042	196.6	0.083	4.65	73.0	26.4	1.82	22.8	0.25	0.24	0.45	0.36	40	211
50	9.61	9.60	33.881	26.145	187.0	0.102	3.97	61.8	29.2	1.98	25.1	0.29	0.14	0.24	0.42	50	210
60	9.33	9.32	33.913	26.215	180.5	0.120	3.41	52.8	30.0	2.06	26.4	0.18	0.04	0.14	0.33	60	209
70	9.24	9.23	33.931	26.244	177.9	0.138	3.26	50.4	30.9	2.12	26.9	0.17	0.00	0.10	0.23	70	208
75 ISL	9.10 D	9.09	33.934 D	26.269	175.7	0.147	3.07	47.3	31.3	2.14	27.2	0.13	0.00	0.09	0.21	75	
84	9.03	9.02	33.967	26.306	172.3	0.163	2.73	42.0	31.9	2.15	27.7	0.06	0.01	0.07	0.18	84	207
100	8.79	8.78	33.979	26.354	168.1	0.190	2.65	40.6	32.7	2.16	28.0	0.01	0.00	0.03	0.14	101	206
119	8.85	8.84	34.033	26.387	165.3	0.222	2.21	33.9	35.2	2.29	29.4	0.02	0.00	0.03	0.22	120	205
125 ISL	8.82 D	8.81	34.035 D	26.393	164.8	0.232	2.08	31.9	36.2	2.33	29.8	0.02	0.00	0.03	0.21	126	
139	8.71	8.70	34.091	26.455	159.3	0.254	1.83	28.0	38.5	2.41	30.6	0.02	0.00	0.02	0.16	140	204
150 ISL	8.63 D	8.61	34.109 D	26.481	156.9	0.272	1.69	25.8	39.6	2.46	31.1	0.02	0.00	0.02	0.16	151	
169	8.57	8.55	34.139	26.514	154.1	0.301	1.52	23.2	41.3	2.53	31.8	0.01	0.01	0.01	0.16	170	203
200 ISL	8.33 D	8.31	34.171 D	26.577	148.8	0.348	1.32	20.0	45.3	2.63	33.0	0.02	0.00	0.01	0.23	201	
201	8.32	8.30	34.173	26.580	148.5	0.350	1.31	19.9	45.4	2.63	33.0	0.02	0.00	0.01	0.23	202	202
226	8.18	8.16	34.183	26.609	146.1	0.386	1.14	17.2	48.3	2.73	33.5	0.04	0.08			227	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 76.7 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
34 52.8 N	121 11.6 W	24/04/08	0017 UTC	564 m	290 19 kn	290 03 05	0	1019.7 mb	13.5 C	11.7 C	13m	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	10.85	10.85	33.727	25.811	217.6	0.000	5.40	86.4	23.1	1.61	20.2	0.22	0.11	0.78	0.28	0	
2	10.85	10.85	33.727	25.811	217.6	0.004	5.40	86.4	23.1	1.61	20.2	0.22	0.11	0.78	0.28	2	220
10	10.28	10.28	33.740	25.921	207.4	0.021	5.29	83.6	23.7	1.63	20.5	0.19	0.13	0.93	0.38	10	219
20	10.14	10.14	33.757	25.958	204.1	0.042	5.14	81.0	24.5	1.68	21.1	0.18	0.17	0.93	0.43	20	218
30	10.10	10.10	33.764	25.971	203.1	0.062	5.09	80.1	24.7	1.71	21.4	0.19	0.14	0.97	0.43	30	217
40	10.03	10.03	33.777	25.993	201.2	0.083	4.86	76.4	25.0	1.73	21.8	0.22	0.11	0.72	0.41	40	216
50	10.02	10.01	33.813	26.023	198.6	0.102	4.63	72.7	25.7	1.80	22.6	0.24	0.24	0.46	0.33	50	215
60	9.95	9.94	33.823	26.043	196.9	0.122	4.61	72.3	26.2	1.82	23.0	0.23	0.24	0.58	0.33	60	214
70	9.78	9.77	33.830	26.077	193.9	0.142	4.56	71.3	27.0	1.83	23.6	0.20	0.05	0.72	0.31	70	213
75 ISL	9.73 D	9.72	33.837 D	26.091	192.7	0.151	4.34	67.8	27.2	1.85	23.8	0.21	0.13	0.56	0.28	75	
85	9.68	9.67	33.905	26.152	187.1	0.170	3.80	59.3	27.8	1.92	24.4	0.22	0.31	0.18	0.23	85	212
100 ISL	9.29 D	9.28	33.916 D	26.225	180.4	0.198	3.30	51.0	29.9	2.01	26.4	0.13	0.08	0.17	0.18	101	
101	9.29	9.28	33.921	26.229	180.0	0.200	3.27	50.6	30.0	2.02	26.5	0.12	0.06	0.17	0.18	102	211
120	8.94	8.93	33.969	26.323	171.4	0.233	2.66	40.8	31.9	2.09	27.7	0.06	0.06	0.04	0.14	121	210
125 ISL	8.93 D	8.92	33.980 D	26.333	170.6	0.242	2.56	39.3	32.9	2.12	28.1	0.06	0.06	0.04	0.15	126	
138	8.76	8.75	34.018	26.390	165.4	0.264	2.37	36.2	35.3	2.19	28.9	0.06	0.07	0.04	0.17	139	209
150 ISL	8.61 D	8.59	34.022 D	26.416	163.1	0.283	2.22	33.8	36.1	2.22	29.3	0.06	0.10	0.04	0.17	151	
169	8.67	8.65	34.066	26.442	161.1	0.314	2.03	31.0	37.0	2.27	29.8	0.05	0.12	0.04	0.15	170	208
200 ISL	8.38 D	8.36	34.107 D	26.519	154.2	0.363	1.77	26.9	40.8	2.41	31.3	0.02	0.00	0.02	0.15	201	
201	8.37	8.35	34.111	26.523	153.8	0.365	1.76	26.7	40.9	2.41	31.4	0.02	0.00	0.02	0.15	202	207
229	8.23	8.21	34.146	26.573	149.6	0.407	1.48	22.4	44.1	2.53	32.5	0.01	0.01			230	206
250 ISL	8.18 D	8.15	34.197 D	26.620	145.5	0.438	1.29	19.5	46.9	2.58	33.4	0.01	0.00			252	
268	7.89	7.86	34.192	26.660	141.9	0.464	1.15	17.3	49.4	2.62	34.1	0.01	0.00			270	205
300 ISL	7.69 D	7.66	34.210 D	26.703	138.2	0.509	0.98	14.6	52.9	2.70	35.0	0.01	0.01			302	
318	7.52	7.49	34.219	26.735	135.4	0.533	0.90	13.4	55.0	2.75	35.5	0.01	0.02			320	204
377	6.85	6.81	34.251	26.854	124.6	0.610	0.60	8.8	65.1	2.96	37.9	0.00	0.02			380	203
400 ISL	6.78 D	6.74	34.255 D	26.867	123.7	0.639	0.55	8.0	67.3	3.00	38.5	0.00	0.01			403	
438	6.51	6.47	34.265	26.911	119.9	0.685	0.50	7.3	70.5	3.04	39.2	0.00	0.00			441	202
500 ISL	6.06 D	6.02	34.285 D	26.986	113.3	0.757	0.37	5.3	77.9	3.10	40.4	0.00	0.00			504	
516	5.98	5.93	34.296	27.005	111.6	0.775	0.34	4.9	79.8	3.11	40.7	0.00	0.00			520	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 76.7 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
34 43.5 N	121 32.9 W	24/04/08	0438 UTC	912 m	300 24 kn			1021.3 mb	12.3 C	10.8 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	11.09	11.09	33.585	25.658	232.2	0.000	5.89	94.6	17.3	1.31	14.8	0.25	0.35	0.86	0.30	0	
2 A	11.09	11.09	33.585	25.658	232.2	0.005	5.89	94.6	17.3	1.31	14.8	0.25	0.35	0.86	0.30	2	220
10	11.06	11.06	33.595	25.671	231.1	0.023	5.84	93.7	17.5	1.33	15.1	0.25	0.34	0.86	0.33	10	219
20	10.66	10.66	33.670	25.801	219.1	0.046	5.48	87.2	20.3	1.51	17.5	0.27	0.45	0.77	0.38	20	218
30	10.54	10.54	33.687	25.835	216.0	0.067	5.43	86.2	21.3	1.56	18.5	0.26	0.40	0.69	0.36	30	217
40	10.42	10.42	33.725	25.886	211.4	0.089	5.43	86.0	22.5	1.62	19.2	0.25	0.33	0.81	0.48	40	216
50	10.26	10.25	33.773	25.951	205.5	0.110	4.95	78.2	24.2	1.72	21.0	0.30	0.48	0.44	0.40	50	215
60	10.08	10.07	33.838	26.033	197.9	0.130	4.55	71.6	26.1	1.83	22.4	0.33	0.49	0.30	0.31	60	214
70	9.84	9.83	33.909	26.129	189.0	0.149	4.04	63.3	28.7	1.97	24.4	0.38	0.44	0.17	0.23	70	213
75 ISL	9.77 D	9.76	33.919 D	26.148	187.2	0.159	3.95	61.8	29.1	1.98	24.8	0.39	0.42	0.16	0.23	75	
85	9.73	9.72	33.929	26.163	186.1	0.177	3.80	59.4	29.5	2.01	25.1	0.40	0.34	0.13	0.23	85	212
100 ISL	9.45 D	9.44	33.983 D	26.251	177.9	0.205	3.07	47.7	31.3	2.09	26.3	0.28	0.04	0.09	0.21	101	
101	9.44	9.43	33.990	26.259	177.3	0.206	3.02	46.9	31.4	2.10	26.4	0.27	0.02	0.09	0.21	102	211
119	9.39	9.38	34.001	26.276	176.0	0.238	2.85	44.2	33.2	2.19	27.5	0.22	0.01	0.09	0.22	120	210
125 ISL	9.36 D	9.35	34.004 D	26.283	175.4	0.249	2.76	42.8	33.6	2.20	27.8	0.19	0.02	0.09	0.23	126	
140	9.25	9.23	34.031	26.322	172.0	0.275	2.50	38.7	34.5	2.21	28.6	0.10	0.03	0.08	0.25	141	209
150 ISL	9.10 D	9.08	34.055 D	26.365	168.1	0.292	2.29	35.3	35.8	2.26	29.3			0.07	0.23	151	
200 ISL	8.66 D	8.64	34.132 D	26.495	156.6	0.373	1.44	22.0	41.4	2.50	31.7			0.03	0.15	201	
201	8.66	8.64	34.138	26.500	156.2	0.374	1.43	21.8	41.5	2.50	31.7			0.03	0.15	202	207
229	8.54	8.52	34.157	26.534	153.4	0.418	1.32	20.1	41.9	2.49	31.4					230	206
250 ISL	8.20 D	8.17	34.181 D	26.605	146.9	0.449	1.22	18.4	45.1	2.58	32.5					252	
268	8.12	8.09	34.192	26.626	145.3	0.476	1.14	17.2	48.1	2.67	33.6					270	205
300 ISL	8.02 D	7.99	34.218 D	26.661	142.4	0.522	1.01	15.2	50.0	2.72	33.9					302	
318	7.94	7.91	34.243	26.693	139.7	0.547	0.95	14.3	50.7	2.74	34.1					320	204
378	7.53	7.49	34.243	26.754	134.8	0.629	0.78	11.6	56.1	2.83	35.5					381	203
400 ISL	7.36 D	7.32	34.248 D	26.782	132.3	0.659	0.69	10.2	59.5	2.89	36.4					403	
438	6.93	6.89	34.270	26.859	125.2	0.708	0.53	7.8	65.5	2.98	37.8					441	202
500 ISL	6.46 D	6.41	34.292 D	26.940	118.1	0.783	0.42	6.1	71.1	3.04	38.6					504	
513	6.38	6.33	34.296	26.954	116.9	0.798	0.40	5.8	72.3	3.05	38.8					517	201

A) NUTRIENTS WERE FROZEN AND RUN DURING THE CRUISE. VALUES THAT WERE SUSPECT WERE OMITTED.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 76.7 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
34 22.8 N	122 14.6 W	24/04/08	1513 UTC	4021 m	340 30 kn			1023.1 mb	11.8 C	8.7 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	11.94	11.94	33.120	25.141	281.4	0.000	6.29	102.6	6.6	0.66	4.8	0.14	0.16	0.77	0.25	0	
2	11.94	11.94	33.120	25.141	281.4	0.006	6.29	102.6	6.6	0.66	4.8	0.14	0.16	0.77	0.25	2	220
10 ISL	11.93 D	11.93	33.118 D	25.141	281.5	0.028	6.28	102.4	6.5	0.66	4.8	0.14	0.15	0.73	0.26	10	
11	11.93	11.93	33.122	25.145	281.3	0.031	6.28	102.4	6.5	0.66	4.8	0.14	0.15	0.73	0.26	11	219
20	11.93	11.93	33.124	25.146	281.3	0.056	6.27	102.2	6.4	0.65	4.8	0.14	0.16	0.75	0.23	20	218
30	11.93	11.93	33.120	25.144	281.9	0.084	6.27	102.2	6.4	0.65	4.9	0.14	0.15	0.74	0.26	30	217
40	11.92	11.91	33.126	25.150	281.4	0.113	6.26	102.1	6.5	0.65	5.0	0.14	0.16	0.99	0.01	40	216
50	11.87	11.86	33.139	25.170	279.8	0.141	6.23	101.5	6.9	0.68	5.3	0.15	0.25	0.83	0.11	50	215
60	10.59	10.58	33.231	25.472	251.2	0.167	5.29	83.9	11.9	1.09	12.5	0.08	0.04	0.15	0.10	60	214
70	10.69	10.68	33.438	25.616	237.8	0.192	5.08	80.8	15.4	1.30	15.6	0.15	0.09	0.11	0.11	70	213
75 ISL	10.69 D	10.68	33.505 D	25.668	232.9	0.203	5.18	82.4	17.1	1.36	16.2	0.18	0.41	0.20	0.19	75	
84	10.60	10.59	33.609	25.765	223.9	0.224	5.34	84.9	19.8	1.45	16.9	0.22	0.95	0.34	0.33	84	212
100	9.97	9.96	33.640	25.897	211.6	0.259	4.64	72.7	21.8	1.61	20.0	0.22	0.44	0.11	0.23	101	211
120	9.15	9.14	33.748	26.116	191.1	0.299	3.47	53.4	25.8	1.81	24.0	0.07	0.03	0.04	0.10	121	210
125 ISL	9.06 D	9.05	33.772 D	26.150	188.0	0.309	3.25	50.0	26.9	1.86	24.8	0.05	0.03	0.03	0.09	126	
139	9.07	9.05	33.905	26.252	178.5	0.334	2.75	42.3	29.7	2.00	26.6	0.02	0.03	0.01	0.08	140	209
150 ISL	9.08 D	9.06	33.981 D	26.310	173.3	0.354	2.61	40.2	31.5	2.05	27.8	0.02	0.03	0.01	0.08	151	
200 ISL	8.46 D	8.44	34.057 D	26.467	159.1	0.437	1.95	29.6	37.7	2.27	30.6	0.02	0.03	0.00	0.08	201	
201	8.47	8.45	34.060	26.468	159.1	0.438	1.94	29.5	37.8	2.27	30.6	0.02	0.03	0.00	0.08	202	207
227	7.95	7.93	34.030	26.523	154.1	0.479	2.27	34.1	40.0	2.22	30.7	0.03	0.04			228	206
250 ISL	7.69 D	7.67	34.054 D	26.580	149.0	0.514	1.98	29.6	44.1	2.34	32.3	0.02	0.04			252	
269	7.59	7.56	34.099	26.630	144.5	0.542	1.59	23.7	48.0	2.48	33.8	0.01	0.04			271	205
300 ISL	7.30 D	7.27	34.130 D	26.696	138.7	0.586	1.23	18.2	53.0	2.63	35.2	0.00	0.04			302	
318	7.21	7.18	34.161	26.733	135.4	0.610	1.07	15.8	55.7	2.70	35.8	0.00	0.04			320	204
376	6.69	6.66	34.196	26.832	126.6	0.686	0.80	11.7	63.3	2.83	37.4	0.00	0.02			378	203
400 ISL	6.34 D	6.30	34.177 D	26.864	123.6	0.716	0.73	10.6	68.1	2.90	38.7	0.00	0.03			403	
436	5.91	5.87	34.188	26.927	117.7	0.760	0.64	9.2	74.9	2.99	40.4	0.00	0.05			439	202
500 ISL	5.73 D	5.69	34.242 D	26.993	112.2	0.833	0.38	5.4	78.8	3.08	40.6	0.00	0.01			504	
511	5.93	5.89	34.292	27.008	111.2	0.846	0.34	4.9	79.5	3.09	40.6	0.00	0.00			515	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 76.7 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
34 3.2 N	122 56.2 W	24/04/08	2258 UTC	4230 m	340 22 kn	340 07 06	4	1024.4 mb	14.5 C	11.4 C	15m	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.78	12.78	32.896	24.807	313.1	0.000	6.23	103.3	5.2	0.48	1.6	0.06	0.20	0.30	0.07	0	
2	12.78	12.78	32.896	24.807	313.2	0.006	6.23	103.3	5.2	0.48	1.6	0.06	0.20	0.30	0.07	2	221
10 ISL	12.77 D	12.77	32.892 D	24.806	313.5	0.031	6.22	103.1	5.1	0.48	1.6	0.06	0.21	0.31	0.07	10	
11	12.77	12.77	32.904	24.815	312.6	0.034	6.22	103.1	5.1	0.48	1.6	0.06	0.21	0.31	0.07	11	220
20	12.74	12.74	32.895	24.814	312.9	0.063	6.23	103.2	5.1	0.47	1.5	0.05	0.20	0.30	0.07	20	219
30 ISL	12.75 D	12.75	32.891 D	24.810	313.7	0.094	6.23	103.2	5.0	0.46	1.5	0.06	0.20	0.31	0.06	30	
31	12.75	12.75	32.894	24.812	313.5	0.097	6.23	103.2	5.0	0.46	1.5	0.06	0.20	0.31	0.06	31	218
41	12.67	12.66	32.894	24.828	312.2	0.128	6.24	103.2	5.0	0.48	1.6	0.06	0.22	0.31	0.09	41	217
50	12.57	12.56	32.893	24.847	310.6	0.156	6.21	102.5	4.8	0.47	1.5	0.02	0.21	0.34	0.12	50	216
60	12.56	12.55	32.897	24.852	310.4	0.187	6.21	102.5	5.0	0.50	1.7	0.01	0.33	0.34	0.14	60	215
70	11.88	11.87	32.969	25.036	293.0	0.218	6.02	98.0	7.3	0.70	4.3	0.13	0.77	0.21	0.12	70	214
75 ISL	11.83 D	11.82	32.983 D	25.057	291.2	0.232	6.01	97.7	7.5	0.71	4.5	0.18	0.74	0.18	0.11	75	
85	11.79	11.78	33.014	25.089	288.4	0.261	6.00	97.5	7.9	0.72	4.9	0.27	0.69	0.14	0.08	85	213
100	11.69	11.68	33.057	25.141	283.8	0.304	5.93	96.1	8.4	0.78	5.9	0.34	0.40	0.08	0.05	100	212
120	11.96	11.94	33.242	25.235	275.4	0.360	6.07	99.1	9.8	0.81	6.8	0.18	0.70	0.13	0.12	121	211
125 ISL	12.03 D	12.01	33.294 D	25.262	273.0	0.374	6.03	98.6	9.9	0.82	7.1	0.16	0.64	0.12	0.12	126	
139	11.38	11.36	33.240	25.340	265.7	0.411	5.73	92.4	10.3	0.91	8.8	0.13	0.39	0.09	0.10	140	210
150 ISL	10.59 D	10.57	33.334 D	25.554	245.4	0.440	5.20	82.5	13.0	1.12	12.4	0.14	0.25	0.08	0.10	151	
169	10.47	10.45	33.639	25.813	221.3	0.484	4.14	65.6	19.2	1.54	19.3	0.15	0.10	0.06	0.10	170	209
200 ISL	9.42 D	9.40	33.868 D	26.168	187.9	0.547	2.85	44.2	27.5	1.95	25.8	0.01	0.08	0.02	0.11	201	
201	9.42	9.40	33.871	26.171	187.7	0.549	2.82	43.7	27.7	1.96	25.9	0.01	0.08	0.02	0.11	202	207
228	9.03	9.01	33.979	26.318	174.1	0.598	2.44	37.5	31.9	2.10	27.9	0.01	0.09			229	206
250 ISL	8.53 D	8.50	34.035 D	26.440	162.7	0.635	2.22	33.8	36.1	2.22	29.7	0.01	0.09			251	
268	8.18	8.15	34.056	26.510	156.2	0.664	2.07	31.2	39.8	2.31	31.2	0.01	0.09			270	205
300 ISL	7.66 D	7.63	34.090 D	26.613	146.7	0.712	1.77	26.4	46.5	2.47	33.6	0.01	0.08			302	
318	7.34	7.31	34.080	26.651	143.2	0.738	1.61	23.8	50.0	2.56	34.8	0.01	0.07			320	204
377	6.89	6.85	34.138	26.760	133.6	0.820	1.08	15.8	58.7	2.80	37.2	0.00	0.07			379	203
400 ISL	6.77 D	6.73	34.183 D	26.812	128.9	0.850	0.92	13.5	61.9	2.88	37.9	0.00	0.07			403	
438	6.48	6.44	34.200	26.864	124.3	0.898	0.71	10.3	67.1	2.99	39.0	0.00	0.07			441	202
500 ISL	6.01 D	5.97	34.239 D	26.956	116.0	0.973	0.51	7.3	76.0	3.13	40.7	0.00	0.08			503	
511	5.92	5.88	34.244	26.971	114.6	0.985	0.47	6.7	77.6	3.15	41.0	0.00	0.08			514	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 76.7 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 43.3 N	123 38.0 W	25/04/08	0848 UTC	4191 m	340 30 kn			1024.8 mb	12.8 C	10.8 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.07	13.07	32.908	24.759	317.7	0.000	6.22	103.8	4.1	0.42	0.7	0.03	0.02	0.34	0.07	0	
2 A	13.07	13.07	32.908	24.760	317.7	0.006	6.22	103.8	4.1	0.42	0.7	0.03	0.02	0.34	0.07	2	221
10	13.07	13.07	32.903	24.756	318.3	0.032	6.21	103.6	4.0	0.42	0.7	0.03	0.02	0.34	0.07	10	220
20	13.00	13.00	32.901	24.768	317.4	0.064	6.24	103.9	4.2	0.45	0.8	0.03	0.04	0.34	0.08	20	219
30	12.58	12.58	32.878	24.833	311.5	0.095	6.27	103.5	4.6	0.46	1.2	0.06	0.10	0.36	0.12	30	218
41	12.56	12.55	32.893	24.848	310.2	0.129	6.24	103.0	4.9	0.49	1.5	0.06	0.16	0.34	0.11	41	217
50	12.06	12.05	33.006	25.031	293.0	0.156	6.15	100.5	6.5	0.63	4.0	0.14	0.21	0.45	0.19	50	216
60	11.48	11.47	33.189	25.281	269.5	0.184	5.96	96.3	9.6	0.84	7.2	0.33	0.42	0.22	0.12	60	215
70	11.65	11.64	33.279	25.320	266.0	0.211	5.97	96.9	10.1	0.85	7.5	0.44	0.55	0.15	0.08	70	214
75 ISL	11.34 D	11.33	33.237 D	25.344	263.8	0.225	5.86	94.4	10.5	0.90	8.6	0.32	0.39	0.11	0.07	75	
85	11.01	11.00	33.287	25.442	254.7	0.250	5.52	88.3	11.7	1.04	11.4	0.02	0.00	0.05	0.05	85	213
100 ISL	10.34 D	10.33	33.339 D	25.600	239.9	0.288	4.92	77.6	14.6	1.26	15.0	0.01	0.00	0.06	0.05	100	
101	10.34	10.33	33.343	25.603	239.6	0.290	4.87	76.8	14.9	1.28	15.3	0.01	0.00	0.06	0.05	101	212
119	9.57	9.56	33.549	25.893	212.3	0.331	3.99	62.0	20.9	1.63	20.9	0.01	0.00	0.01	0.05	120	211
125 ISL	9.36 D	9.35	33.641 D	25.999	202.3	0.343	3.77	58.3	22.6	1.71	22.2	0.01	0.00	0.01	0.05	126	
139	9.10	9.08	33.752	26.128	190.3	0.371	3.41	52.5	26.0	1.83	24.3	0.01	0.00	0.01	0.05	140	210
150 ISL	8.87 D	8.85	33.846 D	26.238	180.1	0.391	3.37	51.6	27.7	1.84	25.2	0.01	0.00	0.01	0.05	151	
170	8.56	8.54	33.908	26.335	171.2	0.426	3.29	50.1	29.9	1.87	25.9	0.01	0.01	0.00	0.05	171	209
200 ISL	8.08 D	8.06	33.955 D	26.445	161.1	0.476	3.26	49.1	33.6	1.93	26.8	0.01		0.00	0.05	201	
201	8.08	8.06	33.957	26.446	161.0	0.477	3.26	49.1	33.8	1.93	26.9	0.01		0.00	0.05	202	207
229	7.75	7.73	33.995	26.525	153.9	0.522	2.58	38.6	40.0	2.18	30.3	0.01				230	206
250 ISL	7.35 D	7.33	34.013 D	26.596	147.3	0.553	2.26	33.5	44.3	2.30	32.0	0.01				251	
268	7.20	7.17	34.022	26.625	144.8	0.579	2.04	30.1	47.8	2.39	33.2	0.01				270	205
300 ISL	7.05 D	7.02	34.059 D	26.675	140.5	0.625	1.56	22.9	53.7	2.59	35.3	0.00				302	
318	6.93	6.90	34.105	26.728	135.7	0.650	1.32	19.4	56.8	2.70	36.4	0.00				320	204
377	6.35	6.32	34.128	26.823	127.1	0.728	0.98	14.2	66.0	2.89	38.8	0.00				379	203
400 ISL	6.20 D	6.16	34.140 D	26.852	124.6	0.756	0.88	12.7	69.5	2.95	39.6	0.00				403	
439	5.79	5.75	34.147	26.910	119.3	0.804	0.73	10.4	75.4	3.02	40.8	0.00				442	202
500 ISL	5.27 D	5.23	34.176 D	26.995	111.4	0.874	0.52	7.3	84.4	3.08	41.5	0.00				503	
513	5.21	5.17	34.190	27.014	109.8	0.889	0.48	6.8	86.3	3.09	41.6	0.00				517	201

A) NUTRIENTS WERE FROZEN AND RUN DURING THE CRUISE. VALUES THAT WERE SUSPECT WERE OMITTED.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 76.7 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 23.4 N	124 19.4 W	25/04/08	1641 UTC	4548 m	360 18 kn	360 04 06	0	1025.3 mb	14.8 C	12.0 C	14m	0/8	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.82	12.82	32.931	24.826	311.3	0.000	6.27	104.1	4.4	0.48	1.5	0.06	0.03	0.56	0.13	0	
2	12.82	12.82	32.931	24.826	311.4	0.006	6.27	104.1	4.4	0.48	1.5	0.06	0.03	0.56	0.13	2	221
10	12.82	12.82	32.928	24.824	311.8	0.031	6.28	104.2	4.4	0.47	1.5	0.06	0.03	0.56	0.08	10	220
20	12.81	12.81	32.928	24.826	311.8	0.062	6.27	104.0	4.4	0.47	1.5	0.06	0.04	0.57	0.13	20	219
30	12.76	12.76	32.952	24.855	309.3	0.093	6.29	104.3	4.7	0.47	1.6	0.06	0.04	0.66	0.16	30	218
40	12.60	12.59	32.996	24.920	303.4	0.124	6.27	103.6	5.2	0.49	2.1	0.06	0.09	0.68	0.16	40	217
50	12.42	12.41	32.988	24.949	300.9	0.154	6.20	102.1	5.7	0.55	2.8	0.09	0.22	0.60	0.16	50	216
59	11.52	11.51	32.950	25.088	287.8	0.181	5.83	94.1	5.9	0.72	5.3	0.13	0.07	0.34	0.15	59	215
70	11.14	11.13	33.053	25.237	273.9	0.212	5.66	90.7	7.4	0.83	7.5	0.16	0.03	0.22	0.10	70	214
75 ISL	10.91 D	10.90	33.116 D	25.327	265.4	0.225	5.63	89.8	8.7	0.89	8.8	0.12	0.01	0.17	0.09	75	
84	10.90	10.89	33.219	25.409	257.8	0.249	5.58	89.0	11.2	1.00	11.1	0.06	0.00	0.10	0.08	84	213
100 ISL	10.90 D	10.89	33.477 D	25.610	239.1	0.288	5.39	86.1	14.3	1.19	14.3	0.14	0.06	0.08	0.11	100	
101	10.92	10.91	33.489	25.616	238.5	0.291	5.37	85.9	14.5	1.20	14.5	0.15	0.06	0.08	0.11	101	212
119	9.76	9.75	33.495	25.819	219.3	0.332	4.39	68.4	18.6	1.50	19.1	0.01	0.00	0.03	0.08	120	211
125 ISL	9.52 D	9.51	33.597 D	25.939	208.1	0.345	4.13	64.1	20.0	1.58	20.4	0.01	0.00	0.02	0.07	126	
139	9.35	9.33	33.666	26.021	200.6	0.373	3.67	56.8	22.9	1.72	22.8	0.01	0.01	0.01	0.05	140	210
150 ISL	9.04 D	9.02	33.748 D	26.134	189.9	0.395	3.64	55.9	24.7	1.75	23.8	0.01	0.01	0.00	0.05	151	
169	8.65	8.63	33.833	26.262	178.0	0.430	3.58	54.6	27.2	1.79	24.7	0.01	0.01	0.00	0.04	170	209
200 ISL	8.15 D	8.13	33.916 D	26.404	165.0	0.483	3.50	52.8	31.1	1.84	25.8	0.01	0.03	0.00	0.04	201	
201	8.15	8.13	33.918	26.405	164.9	0.485	3.50	52.8	31.3	1.84	25.9	0.01	0.03	0.00	0.04	202	207
229	7.77	7.75	33.966	26.499	156.3	0.530	2.63	39.3	38.5	2.15	30.3	0.00	0.01			230	206
250 ISL	7.51 D	7.49	33.984 D	26.551	151.7	0.562	2.32	34.5	42.3	2.27	32.1	0.00	0.00			251	
269	7.32	7.29	33.998	26.589	148.3	0.591	2.15	31.8	45.4	2.35	33.2	0.00	0.00			271	205
300 ISL	6.95 D	6.92	34.013 D	26.652	142.5	0.636	1.73	25.4	51.4	2.52	35.2	0.01	0.00			302	
318	6.88	6.85	34.075	26.711	137.2	0.661	1.50	22.0	54.8	2.62	36.2	0.01	0.00			320	204
378	6.42	6.39	34.123	26.810	128.4	0.740	0.97	14.1	64.7	2.87	38.8	0.00	0.00			380	203
400 ISL	6.17 D	6.13	34.142 D	26.858	124.0	0.768	0.83	12.0	68.9	2.94	39.6	0.00	0.00			403	
439	5.85	5.81	34.171	26.921	118.3	0.815	0.64	9.2	76.0	3.05	40.9	0.00	0.00			442	202
500 ISL	5.49 D	5.45	34.209 D	26.996	111.6	0.886	0.45	6.4	83.4	3.15	42.1	0.00	0.00			503	
513	5.43	5.39	34.219	27.011	110.3	0.900	0.41	5.8	85.0	3.17	42.4	0.00	0.00			517	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 80.0 51.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 26.8 N	120 31.6 W	06/04/08	1355 UTC	77 m	320 30 kn	300 03 03	2	1015.7 mb	10.5 C	8.9 C	11m	4/8	CC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	10.01	10.01	33.962	26.140	186.4	0.000	3.47	54.6	26.8	1.91	23.1	0.21	0.28	4.16	0.88	0	
1	10.01	10.01	33.962	26.140	186.4	0.002	3.47	54.6	26.8	1.91	23.1	0.21	0.28	4.16	0.88	1	209
5	10.01	10.01	33.959	26.138	186.7	0.009	3.48	54.7	26.8	1.91	23.1	0.21	0.27	3.67	0.57	5	208
10 ISL	10.00 D	10.00	33.958 D	26.139	186.7	0.019	3.43	53.9	26.6	1.91	23.2	0.20	0.27	3.45	0.49	10	
11	10.01	10.01	33.960	26.139	186.7	0.021	3.42	53.8	26.6	1.91	23.2	0.20	0.27	3.38	0.47	11	207
20	9.53	9.53	34.033	26.276	173.9	0.037	2.06	32.1	32.6	2.21	27.1	0.16	0.08	0.62	0.44	20	206
30	9.42	9.42	34.048	26.306	171.3	0.054	1.96	30.4	33.7	2.24	27.5	0.15	0.06	0.36	0.45	30	205
40	9.38	9.38	34.053	26.317	170.5	0.071	1.91	29.6	34.0	2.23	27.8	0.15	0.02	0.32	0.44	40	204
50	9.26	9.25	34.082	26.359	166.7	0.088	1.78	27.5	35.4	2.29	28.4	0.10	0.00	0.25	0.42	50	203
60	9.21	9.20	34.093	26.376	165.3	0.105	1.71	26.4	36.1	2.35	28.8	0.07	0.00	0.20	0.41	60	202
71	9.00	8.99	34.115	26.427	160.6	0.122	1.56	24.0	38.5	2.40	29.7	0.07	0.00	0.19	0.44	71	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 80.0 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 18.8 N	120 48.2 W	07/04/08	0957 UTC	772 m	320 30 kn			1019.9 mb	11.5 C	8.9 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	10.63	10.63	33.845	25.942	205.2	0.000	5.39	85.9	19.0	1.52	17.7	0.21	0.41	2.77	0.68	0	
2	10.63	10.63	33.845	25.942	205.2	0.004	5.39	85.9	19.0	1.52	17.7	0.21	0.41	2.77	0.68	2	220
10	10.63	10.63	33.843	25.941	205.5	0.021	5.38	85.7	18.9	1.51	18.0	0.21	0.40	2.52	0.55	10	219
20 ISL	10.63 D	10.63	33.842 D	25.940	205.8	0.041	5.36	85.4	18.9	1.52	17.9	0.21	0.41	2.76	0.57	20	
21	10.63	10.63	33.846	25.943	205.6	0.043	5.36	85.4	18.9	1.52	17.9	0.21	0.41	2.81	0.57	21	218
30	10.63	10.63	33.849	25.946	205.5	0.062	5.34	85.1	18.8	1.52	17.9	0.21	0.38	3.18	0.64	30	217
39	10.38	10.38	33.881	26.015	199.2	0.080	4.77	75.6	20.8	1.63	19.5	0.23	0.48	3.80	0.80	39	216
48	10.36	10.35	33.880	26.017	199.1	0.098	4.75	75.2	20.8	1.67	19.7	0.23	0.52	3.71	0.77	48	215
50 ISL	10.36 D	10.35	33.877 D	26.015	199.4	0.102	4.73	74.9	21.0	1.68	19.8	0.23	0.54	3.48	0.83	50	
61	10.28	10.27	33.885	26.035	197.7	0.124	4.57	72.2	22.2	1.73	20.7	0.23	0.62	1.90	1.05	61	214
71	10.20	10.19	33.899	26.060	195.6	0.143	4.42	69.8	23.5	1.80	21.5	0.23	0.64	0.87	0.59	71	213
75 ISL	10.07 D	10.06	33.888 D	26.074	194.4	0.151	4.24	66.7	23.8	1.81	21.9	0.20	0.58	0.89	0.58	75	
84	9.89	9.88	33.888	26.104	191.6	0.168	3.64	57.1	25.1	1.87	23.0	0.14	0.39	0.92	0.56	84	212
100	9.54	9.53	34.024	26.269	176.3	0.198	2.12	33.0	31.2	2.17	27.0	0.10	0.03	0.39	0.55	101	211
119	9.11	9.10	34.083	26.385	165.6	0.230	1.83	28.2	35.2	2.30	28.8	0.02	0.00	0.13	0.34	120	210
125 ISL	9.04 D	9.03	34.103 D	26.412	163.1	0.240	1.75	26.9	36.2	2.33	29.2	0.02	0.00	0.12	0.34	126	
141	8.89	8.87	34.134	26.460	158.8	0.266	1.59	24.4	38.3	2.38	30.0	0.02	0.01	0.08	0.35	142	209
150 ISL	8.80 D	8.78	34.141 D	26.480	157.1	0.280	1.57	24.1	39.1	2.40	30.3	0.02	0.01	0.07	0.33	151	
171	8.61	8.59	34.153	26.519	153.7	0.313	1.52	23.2	40.7	2.44	30.8	0.01	0.00	0.05	0.28	172	208
200 ISL	8.29 D	8.27	34.150 D	26.566	149.7	0.357	1.50	22.7	43.2	2.46	31.5	0.01	0.00	0.05	0.25	201	
202	8.29	8.27	34.152	26.568	149.6	0.360	1.50	22.7	43.4	2.46	31.6	0.01	0.00	0.05	0.25	203	207
224	7.99	7.97	34.145	26.607	146.1	0.392	1.47	22.1	45.6	2.50	32.4	0.01	0.01			225	206
250 ISL	7.84 D	7.82	34.154 D	26.637	143.7	0.430	1.29	19.3	48.1	2.58	33.1	0.01	0.02			252	
269	7.86	7.83	34.197	26.668	141.1	0.457	1.14	17.1	50.0	2.64	33.5	0.01	0.02			271	205
300 ISL	7.47 D	7.44	34.185 D	26.715	136.9	0.500	1.04	15.5	53.4	2.70	34.4	0.01	0.01			302	
319	7.40	7.37	34.201	26.738	135.1	0.526	0.99	14.7	55.4	2.73	35.0	0.01	0.01			321	204
378	7.11	7.07	34.241	26.811	129.0	0.604	0.72	10.6	60.6	2.87	36.2	0.01	0.01			381	203
400 ISL	6.92 D	6.88	34.256 D	26.849	125.6	0.632	0.65	9.5	63.4	2.92	36.8	0.01	0.01			403	
439	6.60	6.56	34.258	26.894	121.6	0.680	0.54	7.9	68.6	3.00	37.9	0.01	0.01			442	202
500 ISL	6.17 D	6.13	34.289 D	26.975	114.4	0.752	0.40	5.8	76.0	3.08	39.0	0.00	0.00			504	
515	6.12	6.07	34.295	26.986	113.5	0.769	0.36	5.2	77.8	3.10	39.3	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 80.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 8.9 N	121 8.7 W	07/04/08	1402 UTC	2165 m	330 35 kn	300 07 06	2	1020.4 mb	10.9 C	8.7 C		6/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	11.02	11.02	33.725	25.780	220.6	0.000	5.71	91.7	18.2	1.37	10.1	0.15	0.40	1.16	0.56	0	
3	11.02	11.02	33.725	25.780	220.7	0.007	5.71	91.7	18.2	1.37	10.1	0.15	0.40	1.16	0.56	3	220
10 ISL	11.02 D	11.02	33.722 D	25.777	221.1	0.022	5.72	91.8	18.1	1.37	10.4	0.16	0.39	1.15	0.51	10	
11	11.02	11.02	33.725	25.780	220.9	0.024	5.72	91.8	18.1	1.37	10.4	0.16	0.39	1.15	0.50	11	219
20 ISL	11.02 D	11.02	33.721 D	25.777	221.4	0.044	5.71	91.7	18.1	1.37	10.6	0.16	0.39	1.20	0.52	20	
21	11.02	11.02	33.724	25.779	221.2	0.046	5.71	91.7	18.1	1.37	10.6	0.16	0.39	1.21	0.52	21	218
30	11.01	11.01	33.725	25.782	221.1	0.066	5.69	91.3	18.1	1.38	11.2	0.16	0.38	1.16	0.52	30	217
41	10.95	10.95	33.733	25.799	219.7	0.091	5.60	89.8	18.4	1.40	11.7	0.16	0.38	1.14	0.57	41	216
49	9.81	9.80	33.840	26.079	193.2	0.107	3.64	56.9	26.3	1.88	19.8	0.18	0.06	0.45	0.43	49	215
50 ISL	9.81 D	9.80	33.856 D	26.092	192.0	0.109	3.68	57.6	26.4	1.88	19.8	0.18	0.07	0.45	0.43	50	
60	9.85	9.84	33.881	26.105	191.0	0.128	4.11	64.4	27.3	1.91	20.1	0.22	0.18	0.50	0.39	60	214
75 ISL	9.85 D	9.84	33.943 D	26.154	186.7	0.156	3.87	60.6	28.3	1.96	20.9	0.21	0.16	0.47	0.36	75	
86	9.58	9.57	33.914	26.176	184.8	0.177	3.69	57.5	28.8	1.98	21.6	0.21	0.14	0.44	0.33	86	212
100 ISL	9.20 D	9.19	33.914 D	26.238	179.2	0.202	3.14	48.5	29.0	1.97	22.4	0.09	0.02	0.19	0.27	101	
101	9.19	9.18	33.917	26.242	178.8	0.204	3.10	47.8	29.0	1.97	22.5	0.08	0.01	0.17	0.27	102	211
120	8.92	8.91	33.936	26.300	173.6	0.238	2.91	44.6	29.9	1.98	23.6	0.02	0.00	0.04	0.19	121	210
125 ISL	8.86 D	8.85	33.942 D	26.314	172.3	0.246	2.91	44.6	30.2	1.98	23.8	0.02	0.00	0.04	0.17	126	
140	8.69	8.68	33.963	26.357	168.5	0.272	2.92	44.6	31.3	2.00	24.4	0.02	0.01	0.02	0.14	141	209
150 ISL	8.60 D	8.58	33.969 D	26.376	166.9	0.289	2.89	44.0	32.3	2.02	24.8	0.02	0.01	0.01	0.12	151	
170	8.31	8.29	33.991	26.438	161.3	0.321	2.79	42.2	34.9	2.07	25.9	0.03	0.01	0.01	0.10	171	208
200	7.91	7.89	34.008	26.511	154.7	0.369	2.55	38.2	39.5	2.20	28.0	0.03	0.02	0.01	0.13	201	207
228	7.63	7.61	34.031	26.570	149.5	0.411	2.21	32.9	44.0	2.34	30.1	0.02	0.01			229	206
250 ISL	7.44 D	7.42	34.063 D	26.623	144.8	0.444	1.93	28.6	48.4	2.47	31.8	0.01	0.01			252	
268	7.16	7.13	34.068	26.666	140.9	0.470	1.73	25.5	51.9	2.57	33.0	0.01	0.01			270	205
300 ISL	6.85 D	6.82	34.068 D	26.709	137.1	0.514	1.54	22.5	55.9	2.67	34.3	0.01	0.00			302	
318	6.77	6.74	34.082	26.731	135.2	0.539	1.46	21.3	57.8	2.71	34.9	0.01	0.00			320	204
377	6.43	6.40	34.130	26.815	128.0	0.616	1.02	14.8	65.8	2.89	37.1	0.01	0.00			380	203
400 ISL	6.23 D	6.19	34.131 D	26.841	125.6	0.645	0.94	13.6	68.5	2.93	37.9	0.01	0.00			403	
437	5.96	5.92	34.137	26.881	122.2	0.691	0.84	12.0	73.1	2.99	39.0	0.01	0.00			440	202
500 ISL	5.47 D	5.43	34.181 D	26.976	113.5	0.765	0.58	8.2	83.7	3.14	40.8	0.01	0.00			504	
512	5.41	5.37	34.190	26.990	112.2	0.779	0.53	7.5	85.7	3.17	41.2	0.01	0.00			516	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 80.0 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 49.3 N	121 51.4 W	07/04/08	2101 UTC	3644 m	320 30 kn	320 08 05	1	1022.1 mb	13.0 C	10.0 C		3/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.51	12.51	32.853	24.826	311.4	0.000	6.26	103.2	4.3	0.49	1.4	0.05	0.07	0.39	0.11	0	
2	12.51	12.51	32.853	24.826	311.4	0.006	6.26	103.2	4.3	0.49	1.4	0.05	0.07	0.39	0.11	2	221
10	12.50	12.50	32.854	24.829	311.3	0.031	6.25	103.0	4.3	0.48	1.4	0.06	0.06	0.38	0.07	10	220
20	12.49	12.49	32.861	24.836	310.8	0.062	6.25	103.0	4.2	0.48	1.4	0.06	0.06	0.39	0.09	20	219
30	12.48	12.48	32.861	24.839	310.9	0.093	6.25	102.9	4.1	0.48	1.5	0.06	0.07	0.38	0.08	30	218
40	12.47	12.46	32.879	24.855	309.6	0.124	6.24	102.8	4.3	0.49	1.7	0.06	0.11	0.38	0.09	40	217
44	12.46	12.45	32.888	24.864	308.9	0.137	6.25	102.9	4.5	0.54	1.8	0.06	0.13	0.38	0.09	44	216
50	12.37	12.36	32.901	24.891	306.4	0.155	6.24	102.6	4.7	0.54	2.3	0.08	0.21	0.39	0.15	50	215
60	12.08	12.07	32.925	24.965	299.6	0.185	6.18	101.0	5.2	0.59	3.0	0.12	0.37	0.33	0.17	60	214
71	11.67	11.66	32.897	25.019	294.6	0.218	6.03	97.6	5.7	0.67	4.1	0.17	0.37	0.25	0.12	71	213
75 ISL	11.50 D	11.49	32.895 D	25.049	291.9	0.230	5.98	96.5	6.0	0.70	4.7	0.20	0.28	0.21	0.10	75	
84	11.20	11.19	32.907	25.113	286.0	0.256	5.87	94.1	6.7	0.78	6.2	0.23	0.05	0.12	0.07	84	212
100 ISL	10.86 D	10.85	32.990 D	25.238	274.4	0.301	5.80	92.3	8.1	0.88	8.3	0.05	0.00	0.06	0.05	100	
101	10.85	10.84	32.998	25.246	273.6	0.303	5.79	92.2	8.2	0.89	8.4	0.04	0.00	0.06	0.05	101	211
119	10.34	10.33	33.126	25.434	256.1	0.351	5.26	82.9	10.1	1.07	11.6	0.02	0.00	0.03	0.04	120	210
125 ISL	10.23 D	10.22	33.138 D	25.462	253.5	0.366	5.11	80.3	11.2	1.14	12.8	0.02	0.00	0.02	0.04	126	
138	9.82	9.80	33.267	25.632	237.5	0.398	4.78	74.5	13.9	1.30	15.5	0.02	0.00	0.01	0.04	139	209
150 ISL	9.81 D	9.79	33.536 D	25.844	217.7	0.426	4.32	67.4	17.0	1.48	18.3	0.02	0.00	0.01	0.04	151	
169	9.52	9.50	33.720	26.036	199.8	0.465	3.60	55.9	22.1	1.73	22.4	0.03	0.00	0.02	0.05	170	208
200 ISL	9.00 D	8.98	33.920 D	26.276	177.5	0.524	2.97	45.6	28.3	1.95	25.9	0.02	0.04	0.01	0.04	201	
201	8.99	8.97	33.925	26.282	177.0	0.526	2.96	45.5	28.5	1.95	26.0	0.02	0.04	0.01	0.04	202	207
229	8.50	8.48	34.006	26.422	164.0	0.573	2.73	41.5	33.5	2.06	27.8	0.01	0.04			230	206
250 ISL	8.01 D	7.98	34.008 D	26.497	157.0	0.607	2.55	38.3	38.3	2.18	29.6	0.01	0.06			251	
269	7.60	7.57	34.013	26.561	151.1	0.636	2.36	35.1	42.8	2.29	31.2	0.01	0.08			271	205
300 ISL	7.25 D	7.22	34.062 D	26.650	143.0	0.682	1.93	28.5	49.2	2.48	33.4	0.01	0.09			302	
318	7.07	7.04	34.069	26.680	140.3	0.707	1.68	24.7	52.6	2.58	34.5	0.01	0.09			320	204
377	6.45	6.42	34.080	26.772	132.0	0.788	1.28	18.6	61.8	2.79	37.1	0.01	0.08			379	203
400 ISL	6.11 D	6.07	34.097 D	26.830	126.6	0.817	1.09	15.7	66.4	2.88	38.1	0.01	0.08			403	
437	5.92	5.88	34.135	26.884	121.8	0.863	0.80	11.5	73.6	3.02	39.6	0.00	0.09			440	202
500 ISL	5.47 D	5.43	34.163 D	26.962	114.8	0.938	0.60	8.5	81.6	3.11	40.8	0.00	0.08			503	
514	5.43	5.39	34.178	26.978	113.4	0.954	0.55	7.8	83.4	3.13	41.1	0.00	0.08			518	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 80.0 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 29.4 N	122 32.0 W	08/04/08	0515 UTC	3973 m	320 30 kn			1022.3 mb	11.7 C	9.0 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.44	12.44	32.821	24.814	312.4	0.000	6.27	103.2	4.4	0.49	1.8	0.06	0.06	0.58	0.04	0	
2	12.44	12.44	32.821	24.815	312.5	0.006	6.27	103.2	4.4	0.49	1.8	0.06	0.06	0.58	0.04	2	220
10	12.44	12.44	32.824	24.817	312.4	0.031	6.26	103.0	4.3	0.48	1.7	0.06	0.05	0.46	0.01	10	219
20 ISL	12.44 D	12.44	32.819 D	24.813	313.0	0.063	6.26	103.0	4.3	0.48	1.7	0.06	0.05	0.42	0.08	20	
26	12.44	12.44	32.821	24.815	313.0	0.081	6.26	103.0	4.3	0.48	1.8	0.06	0.05	0.40	0.12	26	218
30 ISL	12.44 D	12.44	32.819 D	24.814	313.3	0.094	6.26	103.0	4.3	0.48	1.8	0.06	0.06	0.44	0.08	30	
40	12.44	12.43	32.822	24.816	313.3	0.125	6.27	103.2	4.3	0.48	1.8	0.06	0.07	0.52	0.01	40	217
50 ISL	12.11 D	12.10	32.877 D	24.922	303.5	0.156	6.21	101.5	4.9	0.56	2.6	0.10	0.24	0.48	0.19	50	
52	12.11	12.10	32.880	24.924	303.3	0.162	6.19	101.2	5.0	0.57	2.8	0.11	0.28	0.47	0.23	52	216
61	12.04	12.03	32.905	24.957	300.4	0.189	6.15	100.4	5.2	0.58	3.1	0.13	0.38	0.47	0.19	61	215
75 ISL	11.86 D	11.85	32.963 D	25.036	293.2	0.231	6.08	98.9	6.0	0.64	4.1	0.16	0.36	0.47	0.14	75	
76	11.87	11.86	32.966	25.036	293.2	0.234	6.08	98.9	6.1	0.65	4.2	0.16	0.36	0.47	0.14	76	214
100	11.80	11.79	33.021	25.093	288.4	0.303	6.07	98.6	6.8	0.69	5.0	0.16	0.40	0.29	0.22	100	212
113	11.75	11.74	33.053	25.127	285.4	0.341	6.06	98.4	7.1	0.72	5.4	0.17	0.40	0.30	0.17	114	211
125 ISL	11.47 D	11.45	33.120 D	25.230	275.8	0.374	5.92	95.6	8.0	0.79	6.8	0.18	0.27	0.29	0.14	126	
126	11.49	11.47	33.114	25.222	276.6	0.377	5.91	95.4	8.1	0.80	7.0	0.18	0.25	0.29	0.14	127	210
140	10.85	10.83	33.326	25.502	250.2	0.414	5.15	82.1	11.8	1.12	12.7	0.08	0.00	0.10	0.09	141	209
150 ISL	10.83 D	10.81	33.556 D	25.685	233.1	0.438	4.87	77.7	13.8	1.26	15.0	0.13	0.03	0.09	0.10	151	
165	10.47	10.45	33.580	25.767	225.6	0.473	4.53	71.8	16.7	1.43	17.5	0.22	0.07	0.07	0.13	166	208
200 ISL	9.68 D	9.66	33.845 D	26.108	193.7	0.546	2.96	46.2	25.4	1.91	24.5	0.03	0.00	0.05	0.14	201	
201	9.70	9.68	33.852	26.110	193.6	0.548	2.92	45.6	25.6	1.92	24.7	0.02	0.00	0.05	0.14	202	207
229	8.64	8.62	33.928	26.339	171.9	0.599	3.08	46.9	29.8	1.95	26.2	0.01	0.00			230	206
250 ISL	8.42 D	8.39	34.016 D	26.442	162.5	0.634	2.73	41.4	34.0	2.10	28.1	0.01	0.00			251	
267	8.19	8.16	34.034	26.491	158.0	0.662	2.36	35.6	37.6	2.23	29.7	0.01	0.00			268	205
300 ISL	7.56 D	7.53	34.033 D	26.583	149.5	0.712	1.98	29.5	44.2	2.32	32.0	0.01	0.00			302	
313	7.52	7.49	34.065	26.614	146.8	0.732	1.88	28.0	46.7	2.34	32.7	0.01	0.00			315	204
373	6.47	6.44	34.032	26.732	135.7	0.816	1.81	26.3	57.7	2.62	35.3	0.01	0.00			375	203
400 ISL	6.45 D	6.41	34.107 D	26.794	130.3	0.852	1.47	21.3	63.0	2.76	36.9	0.01	0.00			402	
437	6.03	5.99	34.116	26.855	124.6	0.899	0.96	13.8	69.9	2.94	38.9	0.01	0.00			440	202
500 ISL	5.96 D	5.92	34.213 D	26.942	117.3	0.976	0.64	9.2	78.7	3.09	40.1	0.01	0.00			503	
514	5.60	5.56	34.186	26.964	114.9	0.992	0.57	8.1	80.6	3.12	40.4	0.01	0.00			517	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 81.8 46.9

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
34 16.6 N	120 1.6 W	06/04/08	0813 UTC	577 m	320 09 kn			1014.5 mb	12.2 C	9.9 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	11.54	11.54	33.882	25.807	218.0	0.000	6.34	103.0	4.5	0.76	9.4	0.19	0.05	7.87	0.43	0	
2 A	11.54	11.54	33.882	25.807	218.1	0.004	6.34	103.0	4.5	0.76	9.4	0.19	0.05	7.87	0.43	2	224
10 ISL	11.51 D	11.51	33.880 D	25.811	217.8	0.022	5.84	94.8	8.6	0.96	11.9	0.19	0.07	9.20	0.52	10	
11	11.08	11.08	33.932	25.930	206.6	0.024	5.78	93.0	9.1	0.99	12.2	0.19	0.07	9.22	0.53	11	223
20 ISL	9.49 D	9.49	34.056 D	26.301	171.6	0.041	2.54	39.5	30.0	2.08	25.3	0.11	0.06	2.79	0.59	20	
21	9.41	9.41	34.064	26.320	169.8	0.043	2.18	33.9	32.3	2.20	26.8	0.10	0.06	1.99	0.60	21	222
30 ISL	9.15 D	9.15	34.101 D	26.391	163.2	0.058	1.69	26.1	35.6	2.34	28.9	0.03	0.01	0.70	0.33	30	
31	9.14	9.14	34.104	26.395	162.8	0.059	1.64	25.3	36.0	2.35	29.1	0.03	0.00	0.56	0.30	31	221
40	9.10	9.10	34.112	26.408	161.8	0.074	1.60	24.7	36.5	2.38	29.3	0.03	0.00	0.56	0.33	40	220
50 ISL	8.98 D	8.97	34.129 D	26.440	158.9	0.090	1.49	22.9	38.0	2.43	29.9	0.03	0.00	0.49	0.32	50	
51	8.98	8.97	34.130	26.441	158.8	0.091	1.48	22.8	38.1	2.43	30.0	0.03	0.00	0.48	0.32	51	219
60	8.95	8.94	34.131	26.447	158.5	0.106	1.45	22.3	38.5	2.44	30.2	0.02	0.00	0.47	0.33	60	218
70	8.89	8.88	34.139	26.463	157.2	0.122	1.41	21.6	39.4	2.47	30.3	0.02	0.00	0.43	0.31	70	217
75 ISL	8.86 D	8.85	34.142 D	26.470	156.6	0.129	1.37	21.0	39.9	2.49	30.5	0.02	0.00	0.42	0.30	75	
85	8.78	8.77	34.150	26.489	155.0	0.145	1.30	19.9	40.9	2.52	30.8	0.02	0.00	0.39	0.28	86	216
100 ISL	8.69 D	8.68	34.155 D	26.507	153.5	0.168	1.24	19.0	42.1	2.54	31.0	0.02	0.00	0.24	0.29	101	
101	8.69	8.68	34.155	26.507	153.5	0.170	1.24	19.0	42.2	2.54	31.0	0.02	0.00	0.23	0.29	102	215
119	8.63	8.62	34.163	26.523	152.4	0.197	1.18	18.0	43.1	2.58	31.4	0.02	0.00	0.15	0.26	120	214
125 ISL	8.58 D	8.57	34.168 D	26.535	151.4	0.206	1.14	17.4	43.8	2.59	31.6	0.02	0.00	0.15	0.23	126	
139	8.48	8.47	34.175	26.556	149.6	0.227	1.04	15.8	45.6	2.63	32.1	0.02	0.00	0.18	0.18	140	213
150 ISL	8.37 D	8.35	34.178 D	26.575	147.9	0.244	0.97	14.7	47.2	2.67	32.4	0.02	0.00	0.18	0.20	151	
169	8.23	8.21	34.184	26.601	145.8	0.272	0.88	13.3	49.7	2.73	32.8	0.01	0.00	0.17	0.25	170	212
200 ISL	8.05 D	8.03	34.191 D	26.634	143.2	0.316	0.79	11.9	52.3	2.78	33.4	0.02	0.00	0.14	0.22	201	
201	8.04	8.02	34.192	26.637	143.0	0.318	0.79	11.9	52.4	2.78	33.4	0.02	0.00	0.14	0.22	202	211
229	7.83	7.81	34.199	26.673	139.9	0.357	0.66	9.9	56.2	2.86	34.0	0.01	0.00			230	210
250 ISL	7.73 D	7.71	34.203 D	26.692	138.5	0.387	0.64	9.6	57.8	2.89	34.2	0.01	0.00			252	
269	7.66	7.63	34.204	26.703	137.8	0.413	0.63	9.4	59.0	2.91	34.3	0.01	0.00			271	209
300 ISL	7.51 D	7.48	34.211 D	26.730	135.6	0.455	0.60	8.9	61.6	2.96	34.5	0.01	0.00			302	
319	7.37	7.34	34.215	26.753	133.6	0.481	0.57	8.5	63.6	2.99	34.6	0.01	0.00			321	208
379	6.93	6.89	34.223	26.821	127.8	0.559	0.39	5.7	73.3	3.10	34.3	0.01	0.00			382	207
400 ISL	6.80 D	6.76	34.228 D	26.843	126.0	0.586	0.34	5.0	77.2	3.15	34.1	0.01	0.00			403	
437	6.58	6.54	34.236	26.879	123.0	0.632	0.27	3.9	83.8	3.24	33.7	0.01	0.00			440	206
479	6.44	6.40	34.249	26.908	120.7	0.683	0.22	3.2	89.2	3.31	33.0	0.01	0.00			482	205
500 ISL	6.41 D	6.36	34.249 D	26.913	120.6	0.708	0.20	2.9	91.6	3.35	32.5	0.00	0.00			504	
513	6.39	6.34	34.251	26.917	120.3	0.724	0.18	2.6	93.4	3.37	32.1	0.00	0.00			517	204
533	6.36	6.31	34.247	26.918	120.5	0.748	0.12	1.7	97.6	3.41	31.0	0.00	0.00			537	203
564	6.38	6.33	34.250	26.918	121.0	0.786	0.15	2.2	95.3	3.39	31.8	0.02	0.00			568	202
569	6.38	6.33	34.252	26.920	120.9	0.792	0.16	2.3	93.8	3.36	32.2	0.04	0.00			573	201

A) SANTA BARBARA BASIN STATION.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 83.3 40.6

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 13.6 N	119 24.8 W	06/04/08	0338 UTC	33 m	250 14 kn			1012.8 mb	13.1 C	11.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.65	12.65	33.763	25.504	246.8	0.000	6.14	102.1	8.7	0.92	8.8	0.17	0.73	1.62	0.17	0	
1	12.65	12.65	33.763	25.504	246.8	0.002	6.14	102.1	8.7	0.92	8.8	0.17	0.73	1.62	0.17	1	205
6	12.64	12.64	33.764	25.507	246.7	0.015	6.14	102.0	8.8	0.92	8.8	0.18	0.76	1.97	0.19	6	204
10 ISL	12.54 D	12.54	33.767 D	25.529	244.7	0.025	6.05	100.3	8.6	0.94	9.5	0.18	0.64	2.26	0.20	10	
11	12.52	12.52	33.775	25.539	243.8	0.027	6.03	100.0	8.6	0.95	9.8	0.18	0.62	2.32	0.20	11	203
11	12.62	12.62	33.766	25.513	246.3	0.027										11	206
20 ISL	11.43 D	11.43	33.810 D	25.772	221.8	0.048	4.49	72.7	14.4	1.43	15.6	0.20	1.10	2.35	0.43	20	
21	11.26	11.26	33.815	25.807	218.6	0.050	4.31	69.6	15.1	1.48	16.2	0.20	1.16	2.35	0.46	21	202
26	11.13	11.13	33.820	25.834	216.1	0.061	4.09	65.8	16.0	1.53	16.7	0.20	1.18	2.55	0.53	26	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 83.3 42.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 10.7 N	119 30.2 W	06/04/08	0112 UTC	119 m	250 15 kn	260 03 04	0	1012.9 mb	12.8 C	11.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.06	12.06	33.838	25.676	230.5	0.000	7.18	117.9	3.6	0.61	6.5	0.20	0.12	5.98	0.16	0	
1	12.06	12.06	33.838	25.676	230.5	0.002	7.18	117.9	3.6	0.61	6.5	0.20	0.12	5.98 A	0.16 A	1	212
5	12.05	12.05	33.838	25.678	230.4	0.012	7.15	117.4	3.6	0.63	6.5	0.20	0.15	4.98	0.13	5	211
10 ISL	11.99 D	11.99	33.833 D	25.685	229.8	0.023	7.09	116.3	3.7	0.65	6.7	0.20	0.14	5.53	0.11	10	
11	12.00	12.00	33.837	25.687	229.7	0.025	7.08	116.1	3.7	0.65	6.7	0.20	0.14	5.64 A	0.11 A	11	210
20	11.28	11.28	33.848	25.829	216.4	0.045	6.01	97.1	9.6	1.06	11.5	0.20	0.33	7.95	0.15	20	209
30	10.98	10.98	33.867	25.898	210.1	0.067	5.21	83.6	15.2	1.40	15.3	0.20	0.96	4.27	1.15	30	208
41	10.70	10.70	33.896	25.970	203.5	0.089	4.93	78.7	18.6	1.56	17.2	0.21	1.14	3.44	0.55	41	207
50 ISL	10.60 D	10.59	33.911 D	26.000	200.9	0.108	4.87	77.5	19.6	1.60	18.0	0.22	1.03	3.81	0.56	50	
51	10.60	10.59	33.916	26.004	200.5	0.110	4.86	77.4	19.8	1.60	18.1	0.22	1.02	3.85	0.56	51	206
60	10.07	10.06	33.962	26.131	188.6	0.127	3.29	51.8	26.5	1.98	23.3	0.22	0.58	3.05	0.91	60	205
70	9.51	9.50	34.022	26.272	175.4	0.145	2.21	34.4	32.0	2.22	27.1	0.16	0.09	1.22	0.95	70	204
75 ISL	9.50 D	9.49	34.037 D	26.285	174.2	0.154	2.11	32.8	32.3	2.23	27.3	0.13	0.06	0.99	0.86	75	
85	9.40	9.39	34.064	26.323	170.8	0.171	1.91	29.6	33.0	2.25	27.7	0.07	0.00	0.52	0.64	85	203
100	9.30	9.29	34.097	26.365	167.1	0.197	1.81	28.0	34.3	2.33	28.3	0.05	0.00	0.44	0.61	101	202
115	9.16	9.15	34.155	26.433	160.9	0.221	1.54	23.8	37.2	2.41	29.1	0.04	0.08	0.38	0.49	116	201

A) SECOND FLUOROMETER READING RECALCULATED BECAUSE ACID RATIO > TAU OF PURE CHL-A.
CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ACID RATIO FROM ADJACENT SAMPLES.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 83.3 51.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 52.6 N	120 8.6 W	05/04/08	1828 UTC	19 m	310 30 kn	320 06 05	1	1016.0 mb	12.9 C	10.9 C	16m	4/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	10.83	10.83	33.764	25.844	214.5	0.000	3.94	63.0	20.4	1.62	19.5	0.13	0.26	0.57	0.28	0	
2 A	10.83	10.83	33.764	25.844	214.6	0.004	3.94	63.0	20.4	1.62	19.5	0.13	0.26	0.57	0.28	2	213
9 A	10.85	10.85	33.763	25.840	215.1	0.019	3.92	62.7	20.1	1.61	18.9	0.13	0.25	0.57	0.27	9	212
10 ISL	10.84 D	10.84	33.761 D	25.840	215.1	0.021	3.94	63.0	20.2	1.61	19.3	0.13	0.25	0.54	0.23	10	
11	10.85	10.85	33.763	25.840	215.2	0.024	3.94	63.0	20.2	1.61	19.3	0.13	0.25	0.54	0.23	11	211
16	10.69	10.69	33.784	25.884	211.0	0.034	3.76	59.9	21.2	1.67	20.2	0.13	0.23	0.56	0.28	16	210
20 ISL	10.58 D	10.58	33.799 D	25.915	208.2	0.043	3.64	57.9	22.2	1.73	20.8	0.12	0.22	0.52	0.28	20	
22 A	10.55	10.55	33.809	25.928	207.0	0.047	3.59	57.1	22.6	1.75	21.1	0.12	0.21	0.50	0.28	22	209
28	10.49	10.49	33.816	25.945	205.6	0.059	3.53	56.0	23.1	1.76	21.3	0.12	0.21	0.47	0.27	28	208
30 ISL	10.17 D	10.17	33.865 D	26.038	196.8	0.063	3.39	53.5	24.0	1.80	21.8	0.11	0.19	0.43	0.28	30	
35 A	10.09	10.09	33.880	26.063	194.5	0.073	2.99	47.1	26.3	1.92	23.3	0.10	0.14	0.33	0.30	35	207
44 A	9.89	9.89	33.912	26.122	189.0	0.090	2.73	42.8	27.9	2.00	24.7	0.09	0.11	0.30	0.27	44	206
50 ISL	9.75 D	9.74	33.932 D	26.161	185.4	0.101	2.59	40.5	28.6	2.04	25.1	0.08	0.09	0.29	0.31	50	
52	9.76	9.75	33.931	26.159	185.7	0.105	2.55	39.9	28.9	2.05	25.2	0.08	0.09	0.28	0.32	52	205
61 A	9.64	9.63	33.965	26.205	181.5	0.122	2.36	36.8	30.6	2.11	26.3	0.07	0.06	0.21	0.30	61	204
70	9.37	9.36	34.034	26.304	172.3	0.138	2.04	31.6	33.5	2.24	27.9	0.06	0.00	0.15	0.33	70	203
75 ISL	9.34 D	9.33	34.039 D	26.313	171.6	0.146	1.99	30.8	34.0	2.26	28.2	0.06	0.00	0.14	0.31	75	
85	9.28	9.27	34.059	26.338	169.3	0.163	1.94	30.0	34.9	2.28	28.5	0.06	0.00	0.13	0.27	85	202
100 ISL	8.89 D	8.88	34.139 D	26.463	157.7	0.188	1.55	23.8	40.2	2.47	30.4	0.06	0.01	0.11	0.27	101	
101	8.89	8.88	34.139	26.463	157.7	0.189	1.52	23.3	40.5	2.48	30.5	0.06	0.01	0.11	0.27	102	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 83.3 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 44.7 N	120 24.6 W	05/04/08	1440 UTC	988 m	320 40 kn	340 10 06	1	1015.7 mb	11.1 C	9.0 C		6/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	11.74	11.74	33.735	25.656	232.4	0.000	5.97	97.3	7.8	1.05	10.1	0.16	0.64	1.78	0.51	0	
3	11.74	11.74	33.735	25.656	232.5	0.007	5.97	97.3	7.8	1.05	10.1	0.16	0.64	1.78	0.51	3	221
10 ISL	11.73 D	11.73	33.731 D	25.655	232.7	0.023	5.97	97.3	7.8	1.05	10.1	0.16	0.63	1.83	0.47	10	
11	11.73	11.73	33.734	25.657	232.5	0.026	5.97	97.3	7.8	1.05	10.1	0.16	0.63	1.84	0.46	11	219
12	11.74	11.74	33.733	25.655	232.8	0.028										12	220
20 ISL	11.73 D	11.73	33.731 D	25.655	233.0	0.047	5.97	97.3	7.7	1.05	10.1	0.16	0.63	1.87	0.46	20	
21	11.73	11.73	33.735	25.658	232.7	0.049	5.97	97.3	7.7	1.05	10.1	0.16	0.63	1.87	0.46	21	218
30 ISL	11.73 D	11.73	33.731 D	25.655	233.2	0.070	5.97	97.3	7.7	1.06	10.1	0.16	0.65	1.73	0.56	30	
31	11.73	11.73	33.734	25.658	233.0	0.072	5.97	97.3	7.7	1.06	10.1	0.16	0.65	1.72	0.57	31	217
40	11.69	11.68	33.739	25.669	232.1	0.093	5.90	96.1	8.5	1.08	10.6	0.16	0.67	1.92	1.05	40	216
50 ISL	11.62 D	11.61	33.740 D	25.683	231.0	0.116	5.81	94.5	9.0	1.11	11.1	0.17	0.70	2.33	0.27	50	
51	11.60	11.59	33.744	25.690	230.4	0.119	5.80	94.3	9.0	1.11	11.1	0.17	0.70	2.35	0.19	51	215
60	11.27	11.26	33.769	25.770	223.0	0.139	5.21	84.1	12.6	1.31	13.8	0.17	0.95	1.95	0.62	60	214
71	10.27	10.26	33.878	26.032	198.3	0.162	3.24	51.2	23.8	1.84	22.2	0.13	0.52	1.54	0.56	71	213
75 ISL	9.84 D	9.83	33.939 D	26.152	186.9	0.170	2.83	44.3	26.5	1.96	24.1	0.12	0.35	1.24	0.49	75	
83	9.64	9.63	33.986	26.222	180.4	0.185	2.33	36.3	30.3	2.12	26.7	0.09	0.07	0.65	0.36	83	212
100 ISL	9.34 D	9.33	34.045 D	26.318	171.6	0.214	2.05	31.8	33.6	2.23	28.2	0.05	0.01	0.34	0.42	101	
102	9.34	9.33	34.047	26.319	171.5	0.218	2.02	31.3	33.7	2.24	28.4	0.05	0.00	0.30	0.44	103	211
119	9.25	9.24	34.067	26.350	168.9	0.247	1.95	30.2	34.8	2.27	28.7	0.04	0.00	0.19	0.35	120	210
125 ISL	9.25 D	9.24	34.067 D	26.350	169.0	0.257	1.94	30.0	34.9	2.31	28.8	0.04	0.00	0.19	0.35	126	
141	9.20	9.18	34.076	26.365	167.9	0.284	1.91	29.5	35.1	2.41	29.2	0.03	0.00	0.18	0.37	142	209
150 ISL	9.01 D	8.99	34.091 D	26.408	164.0	0.299	1.86	28.6	36.5	2.41	29.8	0.03	0.00	0.14	0.32	151	
171	8.69	8.67	34.124	26.484	157.1	0.333	1.69	25.8	40.4	2.42	31.2	0.02	0.00	0.03	0.20	172	208
197	8.50	8.48	34.164	26.545	151.7	0.373	1.44	21.9	43.5	2.52	31.7	0.01	0.00	0.01	0.19	198	207
200 ISL	8.41 D	8.39	34.170 D	26.564	150.0	0.377	1.41	21.4	44.0	2.53	31.8	0.01	0.00			201	
228	8.10	8.08	34.189	26.626	144.5	0.418	1.21	18.2	48.5	2.65	33.4	0.01	0.00			229	206
250 ISL	7.68 D	7.66	34.183 D	26.683	139.3	0.450	1.14	17.0	51.9	2.71	34.4	0.01	0.00			252	
267	7.59	7.56	34.192	26.703	137.6	0.473	1.09	16.2	54.3	2.75	35.0	0.01	0.00			269	205
300 ISL	7.34 D	7.31	34.222 D	26.763	132.4	0.518	0.92	13.6	58.2	2.83	35.8	0.01	0.00			302	
320	7.32	7.29	34.231	26.773	131.8	0.544	0.81	12.0	60.3	2.88	36.2	0.01	0.00			322	204
379	6.95	6.91	34.261	26.849	125.3	0.620	0.62	9.1	65.9	2.99	37.7	0.01	0.00			382	203
400 ISL	6.86 D	6.82	34.266 D	26.865	124.0	0.646	0.56	8.2	67.9	3.02	38.1	0.01	0.00			403	
438	6.64	6.60	34.278	26.904	120.7	0.693	0.48	7.0	71.6	3.08	38.9	0.00	0.00			441	202
500 ISL	6.26 D	6.22	34.303 D	26.975	114.6	0.766	0.38	5.5	78.0	3.16	40.3	0.00	0.00			504	
515	6.15	6.10	34.310	26.994	112.8	0.783	0.36	5.2	79.6	3.18	40.6	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 83.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 34.5 N	120 46.1 W	05/04/08	1008 UTC	1529 m	340 30 kn			1017.2 mb	11.7 C	9.9 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	11.46	11.46	33.627	25.624	235.5	0.000	5.93	96.0	13.5	1.14	12.8	0.17	0.14	1.20	0.34	0	
2	11.46	11.46	33.627	25.624	235.5	0.005	5.93	96.0	13.5	1.14	12.8	0.17	0.14	1.20	0.34	2	222
10	11.45	11.45	33.624	25.623	235.7	0.024	5.92	95.9	13.5	1.17	12.8	0.17	0.17	1.18	0.33	10	220
10	11.46	11.46	33.626	25.623	235.7	0.024										10	221
20	11.47	11.47	33.630	25.625	235.8	0.047	5.94	96.2	13.6	1.17	12.8	0.17	0.16	1.16	0.33	20	219
30	11.45	11.45	33.666	25.656	233.0	0.071	5.92	95.9	13.8	1.20	13.1	0.17	0.21	1.27	0.36	30	218
40	11.05	11.05	33.771	25.811	218.6	0.093	5.52	88.7	15.4	1.38	15.3	0.18	0.58	1.19	0.48	40	217
50	10.89	10.88	33.817	25.875	212.7	0.115	5.14	82.3	17.1	1.51	16.8	0.21	0.75	0.80	0.42	50	216
60	10.70	10.69	33.845	25.931	207.6	0.136	4.76	75.9	19.5	1.62	18.4	0.21	0.70	0.85	0.47	60	215
70	10.13	10.12	33.925	26.092	192.5	0.156	3.51	55.3	25.8	1.90	22.6	0.19	0.48	0.52	0.47	70	214
70	10.12	10.11	33.921	26.091	192.6	0.156	3.55	55.9	25.4	1.89	22.5	0.20	0.50	0.50	0.44	70	213
75 ISL	10.00 D	9.99	33.937 D	26.124	189.6	0.165	3.06	48.1	27.7	1.99	24.2	0.17	0.30	0.45	0.46	75	
84	9.47	9.46	33.960	26.230	179.6	0.182	2.52	39.2	29.8	2.09	26.2	0.14	0.02	0.38	0.44	84	212
100 ISL	9.06 D	9.05	33.988 D	26.318	171.5	0.210	2.36	36.3	31.7	2.13	27.7	0.06	0.00	0.12	0.33	101	
101	9.07	9.06	33.990	26.318	171.5	0.212	2.35	36.2	31.8	2.13	27.7	0.06	0.00	0.10	0.32	102	211
119	8.87	8.86	34.032	26.383	165.7	0.242	2.18	33.4	34.2	2.20	28.6	0.03	0.00	0.05	0.35	120	210
125 ISL	8.82 D	8.81	34.044 D	26.400	164.2	0.252	2.11	32.3	35.1	2.23	28.9	0.03	0.00	0.05	0.33	126	
140	8.66	8.65	34.075	26.450	159.7	0.276	1.94	29.6	37.3	2.30	29.7	0.03	0.00	0.04	0.27	141	209
150 ISL	8.51 D	8.49	34.082 D	26.479	157.1	0.292	1.92	29.2	38.3	2.32	30.0	0.03	0.00	0.04	0.26	151	
172	8.31	8.29	34.089	26.515	154.1	0.326	1.86	28.2	40.4	2.36	30.7	0.03	0.00	0.03	0.25	173	208
200	7.90	7.88	34.093	26.579	148.3	0.369	1.79	26.9	44.4	2.43	31.9	0.02	0.00	0.02	0.18	201	207
228	7.62	7.60	34.100	26.626	144.2	0.410	1.67	24.9	47.6	2.50	33.1	0.02	0.00			229	206
250 ISL	7.44 D	7.42	34.107 D	26.657	141.5	0.441	1.56	23.2	50.3	2.57	33.9	0.01	0.01			252	
269	7.25	7.22	34.119	26.694	138.3	0.468	1.44	21.3	52.7	2.63	34.6	0.01	0.01			271	205
300 ISL	7.13 D	7.10	34.163 D	26.746	133.9	0.510	1.14	16.8	57.1	2.75	35.6	0.01	0.00			302	
319	6.96	6.93	34.177	26.780	130.8	0.535	0.95	14.0	59.8	2.82	36.2	0.01	0.00			321	204
377	6.63	6.60	34.231	26.868	123.1	0.609	0.62	9.0	67.3	2.98	37.9	0.01	0.00			380	203
400 ISL	6.39 D	6.35	34.263 D	26.925	117.9	0.636	0.52	7.5	70.6	3.04	38.6	0.01	0.00			403	
436	6.17	6.13	34.277	26.965	114.5	0.678	0.39	5.6	75.5	3.12	39.6	0.01	0.00			439	202
500 ISL	5.95 D	5.91	34.309 D	27.019	110.1	0.750	0.30	4.3	81.1	3.19	40.0	0.01	0.00			504	
512	5.86	5.82	34.311	27.031	108.9	0.763	0.28	4.0	82.1	3.20	40.1	0.01	0.00			516	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 83.3 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 14.2 N	121 27.0 W	05/04/08	0239 UTC	3800 m	310 25 kn	310 04 05	2	1019.1 mb	13.0 C	11.2 C		7/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.46	12.46	32.859	24.840	310.0	0.000	6.30	103.7	5.1	0.52	2.3	0.08	0.00	0.45	0.11	0	
2	12.46	12.46	32.859	24.840	310.0	0.006	6.30	103.7	5.1	0.52	2.3	0.08	0.00	0.45	0.11	2	221
10 ISL	12.47 D	12.47	32.854 D	24.835	310.8	0.031	6.30	103.7	5.0	0.52	2.2	0.08	0.01	0.44	0.10	10	
11	12.47	12.47	32.855	24.835	310.7	0.034	6.30	103.7	5.0	0.52	2.2	0.08	0.01	0.44	0.10	11	219
11	12.47	12.47	32.858	24.838	310.5	0.034										11	220
20 ISL	12.42 D	12.42	32.892 D	24.874	307.3	0.062	6.31	103.8	5.3	0.54	2.5	0.09	0.01	0.48	0.10	20	
21	12.43	12.43	32.888	24.869	307.8	0.065	6.31	103.8	5.4	0.54	2.5	0.09	0.01	0.49	0.10	21	218
30 ISL	11.82 D	11.82	32.919 D	25.008	294.7	0.092	6.26	101.7	6.1	0.61	3.4	0.14	0.16	0.48	0.14	30	
31	11.80	11.80	32.920	25.012	294.3	0.095	6.25	101.5	6.2	0.62	3.6	0.15	0.17	0.48	0.14	31	217
41	11.78	11.77	33.188	25.224	274.4	0.124	6.25	101.6	8.5	0.73	5.9	0.14	0.04	1.77	0.16	41	216
50	11.46	11.45	33.330	25.394	258.5	0.147	5.98	96.7	10.8	0.91	8.8	0.14	0.15	1.15	0.51	50	215
61	11.62	11.61	33.513	25.507	248.0	0.175	6.04	98.1	12.9	1.03	9.9	0.16	0.57	1.05	0.67	61	214
70	11.38	11.37	33.563	25.590	240.3	0.197	5.96	96.3	14.3	1.08	11.5	0.19	0.39	0.80	0.48	70	213
75 ISL	11.35 D	11.34	33.565 D	25.597	239.8	0.209	5.85	94.5	14.6	1.10	11.9	0.19	0.38	0.73	0.48	75	
85	11.25	11.24	33.588	25.634	236.6	0.233	5.64	90.9	15.2	1.15	12.6	0.20	0.37	0.64	0.48	85	212
100	11.23	11.22	33.653	25.688	231.7	0.268	5.61	90.4	17.3	1.30	14.4	0.23	0.62	0.38	0.34	100	211
119	9.74	9.73	33.625	25.924	209.4	0.310	3.84	59.9	20.2	1.62	20.5	0.03	0.00	0.02	0.12	120	210
125 ISL	9.73 D	9.72	33.681 D	25.970	205.2	0.323	3.51	54.7	21.9	1.71	21.8	0.03	0.00	0.03	0.13	126	
140	9.48	9.46	33.855	26.147	188.7	0.352	2.96	46.0	26.5	1.89	24.3	0.02	0.00	0.05	0.17	141	209
150 ISL	9.32 D	9.30	33.943 D	26.242	179.8	0.371	2.69	41.6	28.8	1.98	25.5	0.02	0.00	0.04	0.19	151	
170	9.00	8.98	34.003	26.341	170.8	0.406	2.37	36.4	32.3	2.09	27.3	0.02	0.00	0.03 A	0.21 A	171	208
200 ISL	8.60 D	8.58	34.041 D	26.433	162.4	0.456	2.25	34.3	35.3	2.17	28.6	0.03	0.00	0.00	0.18	201	
202	8.60	8.58	34.043	26.435	162.3	0.459	2.24	34.1	35.5	2.17	28.7	0.03	0.00	0.00	0.18	203	207
231	8.05	8.03	34.050	26.524	154.2	0.505	2.21	33.3	39.9	2.24	30.0	0.01	0.02			232	206
250 ISL	7.74 D	7.72	34.046 D	26.567	150.3	0.534	2.12	31.7	42.6	2.29	30.9	0.01	0.01			251	
269	7.60	7.57	34.055	26.594	147.9	0.562	1.98	29.5	45.3	2.36	31.8	0.01	0.00			271	205
300 ISL	7.29 D	7.26	34.090 D	26.666	141.5	0.607	1.57	23.2	50.2	2.53	33.5	0.01	0.00			302	
317	7.25	7.22	34.121	26.696	138.9	0.631	1.33	19.7	52.8	2.63	34.4	0.01	0.00			319	204
382	6.82	6.78	34.178	26.801	129.7	0.718	0.89	13.0	61.1	2.82	36.5	0.01	0.00			384	203
400 ISL	6.76 D	6.72	34.191 D	26.819	128.2	0.741	0.79	11.5	63.1	2.87	37.0	0.01	0.00			403	
437	6.52	6.48	34.224	26.878	123.0	0.788	0.62	9.0	67.3	2.96	37.8	0.01	0.00			440	202
500 ISL	6.05 D	6.01	34.272 D	26.977	114.1	0.862	0.39	5.6	76.5	3.11	39.3	0.01	0.00			503	
506	6.01	5.97	34.273	26.983	113.6	0.869	0.37	5.3	77.4	3.12	39.4	0.01	0.00			509	201

A) SECOND FLUOROMETER READING NOT RECORDED, CHLOROPHYLL AND PHAEOPIGMENT
CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 83.3 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 54.2 N	122 7.5 W	04/04/08	1823 UTC	4161 m	330 19 kn	330 02 04	2	1024.4 mb	13.9 C	11.2 C	15m	3/8	AC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.31	12.31	32.973	24.957	298.9	0.000	6.29	103.3	6.7	0.62	4.0	0.08	0.09	0.64	0.20	0	
2 A	12.31	12.31	32.973	24.957	298.9	0.006	6.29	103.3	6.7	0.62	4.0	0.08	0.09	0.64	0.20	2	222
10 A	12.31	12.31	32.973	24.957	299.1	0.030	6.29	103.3	6.7	0.63	3.9	0.09	0.11	0.79	0.14	10	221
10	12.26	12.26	32.971	24.965	298.3	0.030	6.27	102.9	6.7	0.62	3.8	0.09	0.11	0.72	0.16	10	220
20 ISL	12.13 D	12.13	33.007 D	25.018	293.6	0.059	6.28	102.8	6.9	0.63	4.1	0.09	0.11	0.71	0.22	20	
21 A	12.14	12.14	33.003	25.013	294.0	0.062	6.28	102.8	6.9	0.63	4.1	0.09	0.11	0.71	0.23	21	219
30 ISL	11.93 D	11.93	33.132 D	25.153	281.0	0.088	6.20	101.1	8.1	0.72	5.6	0.11	0.21	0.82	0.36	30	
32 A	11.90	11.90	33.166	25.185	278.0	0.094	6.17	100.6	8.4	0.74	6.0	0.12	0.23	0.84	0.38	32	218
41 A	11.45	11.44	33.205	25.298	267.4	0.118	5.98	96.6	9.7	0.85	7.8	0.14	0.20	0.85	0.37	41	217
49	11.46	11.45	33.266	25.344	263.2	0.140	5.93	95.8	10.2	0.88	8.4	0.16	0.22	0.61	0.36	49	216
50 ISL	11.46 D	11.45	33.276 D	25.352	262.5	0.142	5.85	94.5	10.2	0.90	8.8	0.14	0.19	0.53	0.33	50	
57 A	10.57	10.56	33.182	25.437	254.5	0.160	5.25	83.2	10.8	1.07	11.7	0.03	0.00	0.06	0.09	57	215
64	10.36	10.35	33.296	25.562	242.7	0.178	4.91	77.5	12.6	1.20	13.7	0.03	0.00	0.04	0.06	64	214
70	10.12	10.11	33.317	25.620	237.3	0.192	4.75	74.6	13.8	1.28	14.9	0.02	0.00	0.04	0.06	70	213
75 ISL	9.98 D	9.97	33.371 D	25.685	231.2	0.204	4.52	70.8	15.4	1.37	16.4	0.03	0.00	0.04	0.06	75	
86	10.05	10.04	33.582	25.838	216.9	0.229	4.10	64.4	19.0	1.56	19.4	0.06	0.00	0.05	0.09	86	212
100 ISL	10.28 D	10.27	33.748 D	25.929	208.7	0.258	4.19	66.2	21.7	1.67	20.5	0.34	0.06	0.13	0.17	101	
101	10.31	10.30	33.749	25.925	209.1	0.260	4.20	66.4	21.9	1.68	20.6	0.36	0.06	0.13	0.18	102	211
118	9.69	9.68	33.836	26.098	192.9	0.295	2.96	46.2	25.8	1.91	24.3	0.02	0.00	0.09	0.29	119	210
125 ISL	9.56 D	9.55	33.902 D	26.171	186.1	0.308	2.72	42.3	27.3	1.97	25.3	0.02	0.00	0.08	0.28	126	
139	9.33	9.31	33.953	26.248	179.0	0.333	2.47	38.2	29.8	2.06	26.6	0.03	0.00	0.05	0.24	140	209
150 ISL	9.18 D	9.16	33.976 D	26.291	175.2	0.353	2.36	36.4	31.2	2.10	27.3	0.03	0.00	0.04	0.22	151	
169	8.95	8.93	34.018	26.360	168.9	0.386	2.26	34.7	33.2	2.16	28.2	0.02	0.00	0.02	0.18	170	208
200 ISL	8.59 D	8.57	34.077 D	26.463	159.6	0.436	1.93	29.4	37.2	2.30	30.0	0.01	0.00	0.01	0.11	201	
202	8.59	8.57	34.083	26.468	159.2	0.440	1.93	29.4	37.5	2.31	30.1	0.01	0.00	0.01	0.11	203	207
228	7.81	7.79	34.019	26.535	153.0	0.480	2.49	37.3	40.1	2.20	29.9	0.01	0.00			229	206
250 ISL	7.67 D	7.65	34.064 D	26.591	148.0	0.513	2.21	33.0	43.9	2.32	31.4	0.02	0.00			251	
268	7.49	7.46	34.076	26.626	144.8	0.540	1.80	26.7	47.5	2.47	33.0	0.02	0.00			270	205
300 ISL	6.97 D	6.94	34.076 D	26.699	138.1	0.585	1.49	21.9	54.2	2.63	35.1	0.01	0.00			302	
316	6.75	6.72	34.087	26.738	134.6	0.607	1.38	20.2	57.5	2.70	36.0	0.01	0.00			318	204
379	6.32	6.29	34.154	26.848	124.8	0.689	0.87	12.6	67.3	2.92	38.2	0.01	0.00			381	203
400 ISL	5.95 D	5.92	34.141 D	26.885	121.3	0.714	0.74	10.6	70.5	2.99	38.8	0.01	0.00			403	
439	5.96	5.92	34.220	26.946	116.0	0.761	0.54	7.7	76.1	3.09	39.8	0.01	0.00			442	202
500 ISL	5.46 D	5.42	34.230 D	27.016	109.7	0.829	0.39	5.5	83.6	3.18	40.9	0.00	0.00			503	
519	5.51	5.47	34.265	27.038	107.9	0.850	0.34	4.8	85.9	3.21	41.2	0.00	0.00			523	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 83.3 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 34.6 N	122 48.4 W	04/04/08	1133 UTC	4162 m	320 16 kn			1023.5 mb	13.0 C	11.2 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.76	13.76	32.917	24.628	330.2	0.000	6.15	104.1	2.8	0.37	0.0	0.00	0.00	0.33	0.02	0	
2	13.76	13.76	32.917	24.628	330.3	0.007	6.15	104.1	2.8	0.37	0.0	0.00	0.00	0.33	0.02	2	221
10 ISL	13.66 D	13.66	32.933 D	24.661	327.3	0.033	6.17	104.2	2.7	0.34	0.0	0.00	0.00	0.29	0.03	10	
11	13.51	13.51	32.967	24.718	322.0	0.036	6.17	103.9	2.7	0.34	0.0	0.00	0.00	0.29	0.03	11	219
11	13.55	13.55	32.952	24.698	323.8	0.036										11	220
20 ISL	13.36 D	13.36	32.970 D	24.750	319.1	0.065	6.18	103.8	2.6	0.35	0.0	0.00	0.00	0.32	0.04	20	
21	13.36	13.36	32.972	24.752	319.0	0.068	6.18	103.8	2.6	0.35	0.0	0.00	0.00	0.33	0.04	21	218
30 ISL	13.28 D	13.28	32.964 D	24.762	318.3	0.097	6.19	103.7	2.5	0.36	0.0	0.00	0.01	0.35	0.06	30	
31	13.27	13.27	32.964	24.764	318.1	0.100	6.19	103.7	2.5	0.36	0.0	0.00	0.01	0.35	0.06	31	217
41	13.27	13.26	32.968	24.767	318.0	0.132	6.15	103.0	2.5	0.36	0.1	0.01	0.01	0.32	0.12	41	216
50 ISL	13.62 D	13.61	33.081 D	24.784	316.7	0.161	6.02	101.7	2.3	0.37	0.1	0.01	0.16	0.33	0.06	50	
51	13.64	13.63	33.091	24.788	316.3	0.164	6.00	101.4	2.3	0.37	0.1	0.01	0.18	0.33	0.06	51	215
60	13.80	13.79	33.140	24.794	316.1	0.192	5.95	100.9	2.2	0.36	0.0	0.02	0.23	0.29	0.15	60	214
71	13.95	13.94	33.197	24.807	315.1	0.227	5.91	100.6	2.3	0.37	0.2	0.03	0.25	0.24	0.16	71	213
75 ISL	14.12 D	14.11	33.242 D	24.807	315.3	0.239	5.87	100.3	2.5	0.41	0.7	0.08	0.22	0.24	0.14	75	
85	13.00	12.99	33.061	24.894	307.1	0.271	5.82	97.0	3.4	0.52	2.1	0.21	0.16	0.22	0.08	85	212
100 ISL	11.36 D	11.35	32.776 D	24.982	298.8	0.316	6.05	97.2	5.3	0.66	3.9	0.20	0.30	0.13	0.05	100	
101	11.41	11.40	32.795	24.988	298.2	0.319	6.06	97.5	5.4	0.67	4.0	0.20	0.31	0.12	0.05	101	211
120	11.31	11.30	32.933	25.114	286.7	0.375	5.71	91.7	6.2	0.79	6.5	0.12	0.00	0.06	0.05	121	210
125 ISL	11.42 D	11.40	33.099 D	25.223	276.5	0.389	5.58	90.0	6.5	0.83	7.4	0.09	0.00	0.05	0.05	126	
140	10.76	10.74	33.237	25.449	255.3	0.429	5.07	80.6	9.1	1.02	11.1	0.02	0.00	0.03	0.05	141	209
150 ISL	10.28 D	10.26	33.446 D	25.695	232.0	0.453	4.54	71.6	14.2	1.28	15.5	0.02	0.00	0.02	0.05	151	
170	9.09	9.07	33.718	26.103	193.3	0.495	3.60	55.4	24.5	1.78	23.6	0.01	0.00	0.01	0.04	171	208
200 ISL	8.85 D	8.83	33.831 D	26.230	181.8	0.552	3.43	52.5	26.7	1.84	24.6	0.01	0.00	0.00	0.04	201	
201	8.85	8.83	33.837	26.235	181.3	0.554	3.42	52.3	26.8	1.84	24.6	0.01	0.00	0.00	0.04	202	207
225	8.43	8.41	33.931	26.374	168.5	0.595	3.36	51.0	29.8	1.86	25.4	0.01	0.00			226	206
250 ISL	7.93 D	7.90	33.983 D	26.489	157.7	0.636	3.01	45.2	35.5	2.01	27.7	0.01	0.00			251	
270	7.61	7.58	33.997	26.547	152.4	0.667	2.65	39.5	40.8	2.16	29.9	0.01	0.00			271	205
300 ISL	7.07 D	7.04	34.012 D	26.635	144.3	0.712	2.25	33.1	47.5	2.34	32.3	0.01	0.00			302	
320	6.91	6.88	34.023	26.666	141.6	0.740	2.00	29.3	51.7	2.46	33.7	0.01	0.00			322	204
378	6.37	6.34	34.075	26.779	131.3	0.819	1.27	18.4	62.6	2.76	37.3	0.01	0.00			380	203
400 ISL	6.10 D	6.06	34.083 D	26.820	127.5	0.848	1.11	16.0	66.4	2.84	38.2	0.01	0.00			402	
437	5.82	5.78	34.112	26.878	122.2	0.894	0.92	13.1	72.5	2.95	39.4	0.01	0.00			440	202
500 ISL	5.36 D	5.32	34.161 D	26.973	113.6	0.968	0.63	8.9	82.9	3.08	40.9	0.01	0.00			503	
511	5.32	5.28	34.173	26.987	112.3	0.981	0.58	8.2	84.7	3.10	41.2	0.01	0.00			514	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 83.3 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 14.7 N	123 29.4 W	04/04/08	0540 UTC	4140 m	060 02 kn			1024.3 mb	13.2 C	12.0 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.94	13.94	33.010	24.663	326.9	0.000	6.12	104.0	3.3	0.37	0.2	0.01	0.03	0.28	0.04	0	
2	13.94	13.94	33.010	24.663	326.9	0.007	6.12	104.0	3.3	0.37	0.2	0.01	0.03	0.28	0.04	2	221
10	13.83	13.83	33.084	24.743	319.5	0.032	6.11	103.7	3.1	0.35	0.0	0.01	0.00	0.28	0.05	10	219
11	13.87	13.87	33.097	24.745	319.4	0.036			3.1	0.35	0.1	0.00	0.02			11	220
20	13.63	13.63	33.050	24.758	318.4	0.064	6.13	103.5	3.0	0.36	0.2	0.01	0.00	0.29	0.09	20	218
30	13.23	13.23	32.961	24.770	317.5	0.096	6.19	103.6	3.0	0.38	0.3	0.01	0.00	0.33	0.09	30	217
40	13.04	13.03	32.919	24.775	317.3	0.128	6.20	103.4	3.0	0.39	0.4	0.02	0.00	0.31	0.09	40	216
50	12.71	12.70	32.870	24.802	314.9	0.159	6.21	102.8	3.2	0.43	0.8	0.03	0.14	0.35	0.13	50	215
60	12.41	12.40	32.839	24.836	311.9	0.191	6.23	102.4	3.8	0.48	1.4	0.06	0.22	0.37	0.12	60	214
70	12.65	12.64	32.974	24.894	306.6	0.222	6.02	99.6	3.9	0.52	2.0	0.13	0.35	0.30	0.12	70	213
75 ISL	11.88 D	11.87	32.821 D	24.922	304.0	0.237	6.04	98.2	4.3	0.55	2.4	0.13	0.40	0.30	0.11	75	
85	11.86	11.85	32.845	24.944	302.1	0.267	6.11	99.3	5.2	0.61	3.2	0.12	0.44	0.29	0.08	85	212
100 ISL	11.64 D	11.63	32.939 D	25.058	291.6	0.312	5.86	94.8	5.3	0.68	4.6	0.13	0.29	0.15	0.08	100	
101	11.63	11.62	32.932	25.055	292.0	0.315	5.83	94.3	5.3	0.69	4.7	0.13	0.28	0.14	0.08	101	211
120	12.23	12.21	33.343	25.262	272.9	0.368	5.17	84.9	6.7	0.84	8.1	0.03	0.09	0.14	0.11	121	210
125 ISL	11.83 D	11.81	33.326 D	25.324	267.0	0.382	5.06	82.4	7.3	0.89	8.9	0.02	0.08	0.13	0.11	126	
139	11.52	11.50	33.445	25.474	253.0	0.418	4.78	77.4	9.3	1.03	11.4	0.01	0.06	0.08	0.08	140	209
150 ISL	11.32 D	11.30	33.504 D	25.557	245.4	0.446	4.53	73.1	11.5	1.17	13.7	0.01	0.06	0.05	0.06	151	
169	10.45	10.43	33.605	25.790	223.5	0.490	4.08	64.6	15.8	1.41	17.7	0.01	0.06	0.02	0.03	170	208
200 ISL	9.48 D	9.46	33.818 D	26.119	192.5	0.555	3.33	51.7	23.4	1.77	23.3	0.00	0.05	0.01	0.04	201	
201	9.47	9.45	33.821	26.123	192.2	0.557	3.31	51.4	23.6	1.78	23.4	0.00	0.05	0.01	0.04	202	207
229	8.91	8.89	33.951	26.315	174.3	0.608	3.00	46.0	28.9	1.93	25.9	0.00	0.04			230	206
250 ISL	8.62 D	8.59	33.992 D	26.393	167.3	0.644	3.06	46.6	31.2	1.94	26.2	0.00	0.03			251	
269	8.35	8.32	34.009	26.448	162.3	0.675	3.08	46.7	33.3	1.95	26.5	0.00	0.03			270	205
300 ISL	8.00 D	7.97	34.048 D	26.531	154.7	0.724	2.39	35.9	40.4	2.22	29.9	0.00	0.02			302	
318	7.71	7.68	34.075	26.595	148.8	0.752	1.94	29.0	44.9	2.40	32.1	0.00	0.02			320	204
377	6.79	6.76	34.078	26.726	136.7	0.836	1.59	23.2	56.2	2.63	35.2	0.00	0.04			379	203
400 ISL	6.54 D	6.50	34.082 D	26.763	133.3	0.867	1.38	20.1	60.5	2.73	36.3	0.00	0.04			402	
437	6.22	6.18	34.124	26.838	126.5	0.915	1.04	15.0	66.9	2.87	37.9	0.00	0.04			440	202
500 ISL	5.76 D	5.72	34.170 D	26.932	117.9	0.992	0.67	9.6	75.9	3.04	39.7	0.00	0.01			503	
513	5.77	5.73	34.194	26.950	116.4	1.007	0.59	8.4	77.7	3.07	40.1	0.00	0.00			516	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 83.3 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 54.8 N	124 10.1 W	03/04/08	2314 UTC	4225 m	040 04 kn	290 02 05	2	1022.6 mb	18.0 C	15.5 C	26m	2/8	CU

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.66	14.66	33.225	24.678	325.5	0.000	5.94	102.6	2.6	0.35	0.0	0.00	0.10	0.16	0.04	0	
2	14.66	14.66	33.225	24.678	325.5	0.007	5.94	102.6	2.6	0.35	0.0	0.00	0.10	0.16	0.04	2	221
10	14.52	14.52	33.230	24.712	322.5	0.032	5.94	102.3	2.3	0.33	0.0	0.00	0.00	0.17	0.04	10	219
10	14.52	14.52	33.229	24.711	322.6	0.032			2.5	0.34	0.0	0.00	0.00			10	220
20 ISL	14.40 D	14.40	33.230 D	24.737	320.4	0.065	5.95	102.2	2.3	0.33	0.0	0.00	0.00	0.19	0.05	20	
25	14.40	14.40	33.238	24.744	319.9	0.081	5.95	102.2	2.3	0.33	0.0	0.00	0.00	0.21	0.06	25	218
30 ISL	14.41 D	14.41	33.243 D	24.745	319.9	0.097	5.94	102.1	2.3	0.33	0.0	0.00	0.00	0.23	0.07	30	
40	14.42	14.41	33.251	24.750	319.8	0.129	5.93	101.9	2.3	0.33	0.0	0.00	0.00	0.28	0.09	40	217
50	14.43	14.42	33.263	24.757	319.3	0.161	5.92	101.8	2.1	0.36	0.0	0.00	0.00	0.34	0.12	50	216
62	14.44	14.43	33.261	24.754	320.0	0.199	5.91	101.6	2.1	0.33	0.0	0.00	0.00	0.37	0.13	62	215
75	14.44	14.43	33.266	24.758	320.0	0.240	5.90	101.4	2.0	0.32	0.1	0.00	0.00	0.33	0.12	75	214
87	14.15	14.14	33.246	24.804	315.9	0.279	5.83	99.6	2.1	0.37	0.4	0.06	0.09	0.27	0.15	87	213
100 ISL	14.08 D	14.07	33.544 D	25.049	293.0	0.318	5.47	93.5	3.1	0.47	2.5	0.10	0.02	0.19	0.18	100	
101	14.05	14.04	33.542	25.054	292.6	0.321	5.44	92.9	3.2	0.48	2.7	0.10	0.01	0.18	0.18	101	212
111	13.69	13.67	33.618	25.187	280.1	0.350	5.29	89.8	4.0	0.54	4.3	0.04	0.00	0.14	0.15	111	211
124	13.21	13.19	33.654	25.312	268.5	0.385	5.20	87.4	4.6	0.59	5.3	0.03	0.00	0.09	0.09	125	210
125 ISL	13.20 D	13.18	33.688 D	25.341	265.8	0.388	5.19	87.2	4.7	0.60	5.4	0.03	0.00	0.09	0.09	126	
139	12.20	12.18	33.560	25.437	256.8	0.425	5.04	82.9	6.5	0.77	7.9	0.02	0.00	0.06	0.06	140	209
150 ISL	11.36 D	11.34	33.566 D	25.598	241.5	0.452	4.80	77.5	8.8	0.93	10.5	0.01	0.00	0.04	0.04	151	
164	10.84	10.82	33.644	25.752	227.1	0.485	4.44	70.9	12.4	1.15	14.1	0.01	0.00	0.01	0.02	165	208
200 ISL	9.48 D	9.46	33.861 D	26.153	189.4	0.560	3.49	54.2	22.4	1.67	22.2	0.01	0.00	0.00	0.03	201	
201	9.51	9.49	33.866	26.152	189.5	0.562	3.46	53.8	22.7	1.68	22.4	0.01	0.00	0.00	0.03	202	207
229	8.93	8.91	33.975	26.331	172.9	0.612	2.80	43.0	29.8	1.97	26.5	0.01	0.00			230	206
250 ISL	8.69 D	8.66	34.024 D	26.407	165.9	0.648	2.41	36.8	33.5	2.12	28.4	0.01	0.00			251	
268	8.45	8.42	34.053	26.467	160.5	0.677	2.15	32.7	36.4	2.23	29.7	0.01	0.00			269	205
300 ISL	8.03 D	8.00	34.088 D	26.558	152.2	0.727	1.85	27.8	42.8	2.38	31.8	0.01	0.00			302	
318	7.67	7.64	34.100	26.620	146.4	0.754	1.72	25.7	46.5	2.46	32.8	0.01	0.00			320	204
378	7.07	7.03	34.148	26.743	135.3	0.839	1.11	16.3	56.7	2.75	35.9	0.01	0.00			380	203
400 ISL	6.85 D	6.81	34.149 D	26.774	132.5	0.868	0.97	14.2	59.5	2.82	36.6	0.01	0.00			402	
437	6.74	6.70	34.204	26.833	127.5	0.916	0.79	11.5	63.8	2.92	37.5	0.01	0.00			440	202
500 ISL	6.29 D	6.25	34.223 D	26.908	120.9	0.995	0.56	8.1	70.9	3.04	38.9	0.01	0.00			503	
515	6.22	6.17	34.240	26.930	118.9	1.013	0.51	7.4	72.6	3.07	39.2	0.01	0.00			518	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 86.7 33.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 53.3 N	118 29.5 W	01/04/08	0815 UTC	55 m	250 06 kn			1018.3 mb	12.9 C	10.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.90	13.90	33.607	25.132	282.2	0.000	6.61	112.7	0.9	0.25	0.4	0.03	0.25	2.62	0.43	0	
2	13.90	13.90	33.607	25.132	282.3	0.006	6.61	112.7	0.9	0.25	0.4	0.03	0.25	2.62	0.43	2	208
5	13.90	13.90	33.608	25.133	282.3	0.014	6.61	112.7	0.8	0.23	0.4	0.03	0.19	2.63	0.46	5	207
10	13.36	13.36	33.645	25.272	269.2	0.028	4.88	82.3	8.1	1.05	10.4	0.20	2.04	1.51	0.23	10	205
10	13.36	13.36	33.634	25.264	270.0	0.028										10	206
20	11.40	11.40	33.665	25.665	232.0	0.053	4.20	67.9	12.1	1.38	15.0	0.25	2.19	1.54	0.38	20	204
30	11.11	11.11	33.686	25.734	225.7	0.076	3.69	59.3	15.3	1.55	17.7	0.24	1.89	1.58	0.37	30	203
40	10.63	10.63	33.773	25.887	211.4	0.098	2.83	45.1	22.1	1.92	20.9	0.28	4.39	1.14	0.63	40	202
50	10.25	10.24	33.817	25.987	202.0	0.118	2.62	41.4	23.8	1.98	22.1	0.28	2.88	1.07	0.76	50	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 86.7 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 49.5 N	118 37.8 W	01/04/08	1022 UTC	642 m	280 08 kn			1017.5 mb	12.0 C	9.9 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.82	13.82	33.606	25.148	280.7	0.000	6.62	112.7	0.5	0.22	0.5	0.04	0.12	2.35	0.54	0	
2	13.82	13.82	33.606	25.148	280.7	0.006	6.62	112.7	0.5	0.22	0.5	0.04	0.12	2.35	0.54	2	221
10 ISL	13.80 D	13.80	33.605 D	25.151	280.6	0.028	6.55	111.4	0.6	0.26	0.9	0.05	0.25	2.46	0.53	10	
11	13.80	13.80	33.611	25.156	280.2	0.031	6.55	111.4	0.6	0.27	1.0	0.05	0.27	2.47	0.53	11	219
11	13.79	13.79	33.611	25.158	280.0	0.031										11	220
20	13.22	13.22	33.651	25.305	266.3	0.055	6.81	114.5	1.1	0.36	1.7	0.06	0.44	0.90	0.40	20	218
30	11.13	11.13	33.692	25.735	225.6	0.080	3.78	60.8	14.1	1.51	17.5	0.24	0.34	1.81	0.71	30	217
40	10.35	10.35	33.749	25.917	208.5	0.102	3.15	49.8	20.8	1.72	21.7	0.03	0.00	0.57	0.69	40	216
49	10.30	10.29	33.820	25.981	202.6	0.120	2.76	43.6	23.0	1.86	23.0	0.02	0.00	0.46	0.43	49	215
50 ISL	10.28 D	10.27	33.821 D	25.985	202.2	0.122	2.76	43.6	23.1	1.86	23.1	0.02	0.00	0.44	0.43	50	
60	10.08	10.07	33.850	26.042	197.0	0.142	2.72	42.8	24.0	1.86	23.5	0.02	0.03	0.28	0.47	60	214
70	9.97	9.96	33.893	26.094	192.3	0.162	2.57	40.4	25.3	1.94	24.3	0.02	0.00	0.30	0.44	70	213
75 ISL	9.86 D	9.85	33.902 D	26.120	189.9	0.171	2.47	38.7	26.3	1.99	24.8	0.04	0.00	0.33	0.45	75	
85	9.73	9.72	33.970	26.195	183.0	0.190	2.28	35.6	28.1	2.07	25.8	0.08	0.00	0.38	0.50	85	212
100 ISL	9.62 D	9.61	34.011 D	26.245	178.5	0.217	2.16	33.7	29.4	2.12	26.3	0.02	0.01	0.32	0.55	101	
101	9.63	9.62	34.015	26.247	178.4	0.219	2.16	33.7	29.5	2.12	26.3	0.02	0.01	0.32	0.55	102	211
119	9.40	9.39	34.079	26.335	170.4	0.250	2.03	31.5	31.5	2.18	27.2	0.01	0.00	0.14	0.28	120	210
125 ISL	9.45 D	9.44	34.109 D	26.350	169.1	0.260	1.94	30.2	32.3	2.21	27.5	0.01	0.00	0.14	0.29	126	
139	9.30	9.28	34.148	26.406	164.1	0.284	1.70	26.3	34.3	2.30	28.2	0.01	0.01	0.14	0.30	140	209
150 ISL	9.26 D	9.24	34.169 D	26.429	162.1	0.302	1.54	23.8	35.6	2.36	28.8	0.01	0.01	0.16	0.41	151	
169	9.12	9.10	34.209	26.483	157.3	0.332	1.31	20.2	37.8	2.44	29.7	0.00	0.00	0.17	0.54	170	208
200 ISL	8.83 D	8.81	34.241 D	26.554	151.1	0.380	1.17	17.9	41.2	2.53	30.7	0.01	0.00	0.06	0.13	201	
201	8.83	8.81	34.242	26.555	151.0	0.381	1.17	17.9	41.3	2.53	30.7	0.01	0.00	0.06	0.12	202	207
228	8.48	8.46	34.255	26.620	145.3	0.421	1.06	16.1	45.1	2.62	31.6	0.01	0.00			229	206
250 ISL	8.44 D	8.41	34.253 D	26.625	145.2	0.453	1.04	15.8	46.4	2.63	32.0	0.01	0.00			252	
269	8.25	8.22	34.250	26.652	142.9	0.481	1.03	15.6	47.2	2.64	32.2	0.01	0.00			271	205
300 ISL	8.05 D	8.02	34.254 D	26.685	140.2	0.525	0.96	14.5	49.4	2.69	32.8	0.01	0.00			302	
318	7.95	7.92	34.255	26.701	139.0	0.550	0.91	13.7	50.9	2.72	33.2	0.01	0.00			320	204
379	7.44	7.40	34.264	26.783	131.9	0.632	0.72	10.7	57.1	2.84	34.7	0.01	0.00			382	203
400 ISL	7.21 D	7.17	34.269 D	26.819	128.6	0.660	0.66	9.8	59.2	2.88	35.3	0.01	0.00			403	
438	7.01	6.97	34.273	26.851	126.1	0.708	0.57	8.4	62.9	2.94	36.3	0.00	0.00			441	202
500 ISL	6.64 D	6.59	34.290 D	26.915	120.7	0.785	0.44	6.4	68.8	3.01	37.4	0.00	0.00			504	
513	6.59	6.54	34.292	26.923	120.0	0.800	0.41	6.0	70.0	3.03	37.6	0.00	0.00			517	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 86.7 40.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 39.6 N	118 58.5 W	01/04/08	1447 UTC	792 m	350 04 kn	270 02 04	2	1017.9 mb	12.7 C	10.2 C	11m	7/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.81	13.81	33.531	25.092	286.0	0.000	6.15	104.6	1.2	0.42	1.9	0.08	0.34	0.96	0.13	0	
2	13.81	13.81	33.531	25.092	286.1	0.006	6.15	104.6	1.2	0.42	1.9	0.08	0.34	0.96	0.13	2	224
10	13.68	13.68	33.541	25.127	283.0	0.028	6.14	104.1	1.4	0.46	2.6	0.09	0.45	0.94	0.19	10	223
20	13.38	13.38	33.551	25.196	276.7	0.056	6.05	102.0	1.9	0.51	3.3	0.11	0.51	1.14	0.12	20	222
30	12.10	12.10	33.516	25.419	255.7	0.083	4.69	76.9	10.4	1.08	11.7	0.17	0.11	0.88	0.31	30	221
40	11.16	11.16	33.577	25.640	234.8	0.108	3.95	63.5	15.2	1.40	16.9	0.08	0.00	0.34	0.18	40	220
50	10.86	10.85	33.608	25.718	227.6	0.131	3.83	61.2	16.8	1.48	18.1	0.05	0.00	0.16	0.17	50	219
60	10.37	10.36	33.720	25.891	211.4	0.153	3.38	53.5	20.6	1.66	20.7	0.03	0.04	0.08	0.13	60	218
70	10.08	10.07	33.776	25.984	202.7	0.173	3.17	49.9	22.8	1.75	22.3	0.02	0.00	0.06	0.11	70	217
75 ISL	9.93 D	9.92	33.800 D	26.029	198.6	0.183	3.08	48.3	23.7	1.79	22.9	0.02	0.00	0.05	0.12	75	
85	9.70	9.69	33.860	26.114	190.7	0.203	2.88	44.9	25.5	1.87	24.0	0.01	0.00	0.04	0.14	85	216
100 ISL	9.62 D	9.61	33.991 D	26.230	180.0	0.231	2.37	36.9	28.7	2.04	25.6	0.01	0.00	0.01	0.10	101	
101	9.62	9.61	33.996	26.234	179.7	0.232	2.34	36.5	28.9	2.05	25.7	0.01	0.00	0.01	0.10	102	215
120	9.26	9.25	34.016	26.308	172.9	0.266	2.31	35.7	31.1	2.09	26.8	0.01	0.01	0.02	0.09	121	214
125 ISL	9.08 D	9.07	34.005 D	26.329	171.0	0.275	2.31	35.6	31.7	2.10	27.1	0.01	0.01	0.02	0.09	126	
140	8.86	8.85	34.037	26.389	165.6	0.300	2.31	35.4	33.5	2.13	27.9	0.01	0.00	0.01	0.10	141	213
150 ISL	8.78 D	8.76	34.072 D	26.429	161.9	0.316	2.11	32.3	35.2	2.21	28.4	0.01	0.00	0.01	0.10	151	
170	8.82	8.80	34.158	26.490	156.5	0.348	1.65	25.3	38.6	2.37	29.5	0.01	0.00	0.01	0.08	171	212
200 ISL	8.47 D	8.45	34.185 D	26.566	149.8	0.394	1.40	21.3	42.6	2.47	31.1	0.03	0.01	0.01	0.06	201	
201	8.45	8.43	34.184	26.569	149.6	0.395	1.40	21.3	42.7	2.47	31.1	0.03	0.01	0.01	0.06	202	211
229	8.30	8.28	34.217	26.618	145.4	0.437	1.14	17.3	45.6	2.59	32.2	0.01	0.02			230	210
250 ISL	8.09 D	8.06	34.223 D	26.654	142.2	0.467	1.02	15.4	48.3	2.65	33.1	0.00	0.01			252	
269	7.87	7.84	34.228	26.691	139.0	0.494	0.94	14.1	50.9	2.70	33.8	0.00	0.00			271	209
300 ISL	7.58 D	7.55	34.241 D	26.744	134.4	0.536	0.81	12.1	54.4	2.78	34.7	0.00	0.00			302	
319	7.44	7.41	34.252	26.773	131.9	0.561	0.74	11.0	56.6	2.82	35.2	0.00	0.00			321	208
378	6.96	6.92	34.275	26.858	124.4	0.637	0.53	7.8	64.4	2.95	36.6	0.00	0.01			381	207
400 ISL	6.84 D	6.80	34.281 D	26.880	122.6	0.664	0.47	6.9	67.0	2.99	36.9	0.00	0.01			403	
438	6.60	6.56	34.300	26.927	118.5	0.710	0.39	5.7	71.1	3.05	37.2	0.00	0.00			441	206
500 ISL	6.30 D	6.25	34.321 D	26.984	113.8	0.782	0.30	4.3	77.0	3.12	38.2	0.00	0.00			504	
515	6.22	6.17	34.329	27.000	112.3	0.799	0.28	4.0	78.5	3.13	38.4	0.00	0.00			519	205
599	5.75	5.70	34.366	27.090	104.5	0.890	0.18	2.6	89.6	3.23	39.0	0.00	0.00			603	204
600 ISL	5.74 D	5.69	34.362 D	27.088	104.7	0.891	0.18	2.6	89.7	3.23	39.0	0.00	0.00			604	
680	5.38	5.32	34.386	27.151	99.2	0.973	0.17	2.4	97.7	3.28	39.5	0.00	0.00			685	203
700 ISL	5.35 D	5.29	34.389 D	27.157	98.8	0.992	0.17	2.4	98.8	3.29	39.4	0.01	0.00			705	
776	5.22	5.15	34.398	27.180	97.4	1.067	0.16	2.3	102.8	3.32	39.1	0.03	0.00			782	202
781	5.19	5.12	34.400	27.185	96.9	1.072	0.13	1.8	104.8	3.35	38.4	0.03	0.00			787	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 86.7 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 29.4 N	119 19.1 W	01/04/08	1937 UTC	1640 m	280 14 kn	270 01 05	1	1019.6 mb	13.0 C	10.1 C	10m	6/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.61	12.61	33.687	25.453	251.7	0.000	6.01	99.8	3.2	0.67	6.0	0.12	0.82	2.07	0.57	0	
1 A	12.61	12.61	33.687	25.453	251.7	0.003	6.01	99.8	3.2	0.67	6.0	0.12	0.82	2.07	0.57	1	223
6 A	12.53	12.53	33.686	25.468	250.4	0.015	6.00	99.4	3.1	0.64	6.1	0.12	1.01	1.97	0.58	6	222
10 ISL	12.52 D	12.52	33.681 D	25.466	250.7	0.025	5.99	99.3	3.1	0.65	6.2	0.12	0.84	2.21	0.66	10	
11	12.50	12.50	33.686	25.474	250.0	0.028	5.98	99.0	3.1	0.65	6.3	0.12	0.78	2.28	0.67	11	221
14 A	12.41	12.41	33.684	25.490	248.5	0.035	5.94	98.2	3.0	0.64	6.5	0.12	0.65	2.35	0.57	14	220
20 ISL	12.32 D	12.32	33.689 D	25.511	246.7	0.050	5.17	85.3	7.6	0.94	10.1	0.14	0.93	2.28	0.66	20	
22 A	11.88	11.88	33.728	25.625	235.9	0.055	4.74	77.5	10.5	1.12	12.3	0.15	1.02	2.26	0.69	22	219
27 A	10.59	10.59	33.797	25.912	208.6	0.066	3.43	54.6	20.4	1.67	20.0	0.17	0.68	0.74	0.73	27	218
30 ISL	10.22 D	10.22	33.817 D	25.992	201.1	0.072	3.25	51.3	21.8	1.74	21.1	0.16	0.51	0.64	0.65	30	
38 A	9.99	9.99	33.869	26.072	193.7	0.088	2.77	43.5	25.6	1.93	24.0	0.15	0.19	0.36	0.43	38	217
44	9.82	9.82	33.900	26.125	188.8	0.099	2.58	40.4	27.2	1.99	25.1	0.11	0.06	0.28	0.44	44	216
50	9.77	9.76	33.909	26.140	187.5	0.111	2.52	39.4	27.5	2.02	25.3	0.09	0.12	0.21	0.30	50	215
60	9.59	9.58	33.945	26.198	182.2	0.129	2.40	37.4	29.2	2.07	26.3	0.06	0.00	0.17	0.28	60	214
70	9.43	9.42	33.979	26.251	177.3	0.147	2.28	35.4	30.7	2.12	26.9	0.04	0.00	0.09	0.30	70	213
75 ISL	9.34 D	9.33	33.997 D	26.280	174.7	0.156	2.27	35.2	31.1	2.13	27.1	0.03	0.00	0.07	0.29	75	
84	9.27	9.26	34.010	26.302	172.8	0.171	2.25	34.8	31.7	2.14	27.4	0.02	0.00	0.05	0.27	84	212
100	9.15	9.14	34.054	26.355	168.0	0.199	2.08	32.1	33.5	2.22	28.2	0.02	0.00	0.03	0.21	101	211
119	8.96	8.95	34.106	26.427	161.6	0.230	1.74	26.7	37.0	2.35	29.6	0.02	0.00	0.01	0.21	120	210
125 ISL	8.94 D	8.93	34.110 D	26.433	161.1	0.240	1.68	25.8	37.6	2.37	29.8	0.02	0.00	0.01	0.20	126	
139	8.85	8.84	34.132	26.465	158.4	0.262	1.59	24.4	38.6	2.41	30.3	0.02	0.00	0.02	0.17	140	209
150 ISL	8.76 D	8.74	34.154 D	26.496	155.6	0.279	1.49	22.8	39.8	2.45	30.8	0.02	0.00	0.02	0.16	151	
168	8.58	8.56	34.180	26.545	151.2	0.307	1.34	20.4	42.1	2.52	31.6	0.03	0.00	0.02	0.16	169	208
200 ISL	8.28 D	8.26	34.211 D	26.616	145.1	0.354	1.14	17.3	46.0	2.63	32.5	0.02	0.01	0.01	0.12	201	
202	8.27	8.25	34.211	26.617	144.9	0.357	1.13	17.1	46.2	2.64	32.5	0.02	0.01	0.01	0.12	203	207
229	8.06	8.04	34.220	26.656	141.7	0.396	1.02	15.4	48.9	2.70	33.4	0.01	0.01			230	206
250 ISL	7.94 D	7.91	34.230 D	26.682	139.5	0.425	0.91	13.7	51.8	2.76	34.1	0.01	0.01			252	
270	7.68	7.65	34.245	26.732	135.0	0.453	0.81	12.1	54.7	2.81	34.8	0.01	0.00			272	205
300 ISL	7.47 D	7.44	34.255 D	26.770	131.8	0.493	0.71	10.6	58.0	2.88	35.7	0.00	0.00			302	
318	7.32	7.29	34.263	26.798	129.3	0.516	0.66	9.8	59.7	2.92	36.1	0.00	0.00			320	204
378	6.98	6.94	34.282	26.861	124.1	0.592	0.51	7.5	65.3	3.00	37.0	0.00	0.00			381	203
400 ISL	6.81 D	6.77	34.291 D	26.891	121.5	0.619	0.45	6.6	67.7	3.04	37.4	0.00	0.00			403	
436	6.63	6.59	34.306	26.928	118.4	0.663	0.37	5.4	71.9	3.10	38.1	0.00	0.00			439	202
500 ISL	6.18 D	6.14	34.333 D	27.009	111.3	0.736	0.25	3.6	80.0	3.18	39.2	0.00	0.00			504	
513	6.12	6.07	34.338	27.020	110.3	0.751	0.23	3.3	81.7	3.20	39.4	0.00	0.00			517	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN — CALCOFI CRUISE 0804 — STATION 86.7 50.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 19.3 N	119 39.7 W	01/04/08	2323 UTC	78 m	300 14 kn	290 01 06	1	1017.8 mb	13.9 C	10.7 C	10m	3/8	AC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.57	12.57	33.659	25.439	253.0	0.000	6.01	99.7	4.9	0.82	7.8	0.13	0.41	1.94	0.44	0	
2	12.57	12.57	33.659	25.439	253.1	0.005	6.01	99.7	4.9	0.82	7.8	0.13	0.41	1.94	0.44	2	210
6	12.35	12.35	33.657	25.480	249.3	0.015	6.04	99.7	4.4	0.79	7.5	0.13	0.21	3.03	0.75	6	209
10	12.33	12.33	33.657	25.484	249.0	0.025	6.05	99.8	4.4	0.76	7.4	0.13	0.16	2.81	0.76	10	207
10	12.33	12.33	33.658	25.485	248.9	0.025	6.06	100.0	4.3	0.78	7.4	0.13	0.21	3.00	0.65	10	208
20 ISL	12.20 D	12.20	33.652 D	25.505	247.2	0.050	5.97	98.2	4.6	0.80	7.8	0.13	0.20	3.25	0.85	20	
21	12.20	12.20	33.658	25.510	246.8	0.052	5.96	98.1	4.6	0.80	7.8	0.13	0.20	3.26	0.86	21	206
30	12.04	12.04	33.675	25.554	242.9	0.074	5.49	90.0	7.0	0.97	9.6	0.13	0.66	1.45	0.72	30	205
40	11.21	11.21	33.759	25.773	222.2	0.098	4.36	70.3	15.0	1.38	15.2	0.10	0.73	0.79	0.70	40	204
50	10.59	10.58	33.835	25.942	206.3	0.119	3.52	56.0	21.2	1.66	19.6	0.08	0.46	0.65	0.92	50	203
60	9.66	9.65	33.925	26.171	184.7	0.139	2.59	40.4	28.8	2.01	25.0	0.10	0.08	0.26	0.75	60	202
70	9.50	9.49	33.951	26.218	180.5	0.157	2.43	37.8	30.3	2.06	26.0	0.11	0.07	0.20	0.52	70	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN — CALCOFI CRUISE 0804 — STATION 86.7 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 9.4 N	120 0.3 W	02/04/08	0306 UTC	1200 m	280 10 kn			1017.7 mb	12.0 C	9.3 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.31	12.31	33.524	25.385	258.2	0.000	6.22	102.5	7.8	0.78	7.4	0.13	0.13	1.62	0.40	0	
1	12.31	12.31	33.524	25.385	258.2	0.003	6.22	102.5	7.8	0.78	7.4	0.13	0.13	1.62	0.40	1	221
10	12.28	12.28	33.523	25.390	258.0	0.026	6.24	102.8	7.8	0.79	7.4	0.13	0.06	1.60	0.40	10	219
10	12.28	12.28	33.524	25.391	257.9	0.026			7.8	0.78	7.4	0.13	0.11			10	220
20	12.14	12.14	33.518	25.413	256.0	0.052	6.12	100.5	7.3	0.79	7.4	0.14	0.08	1.72	0.48	20	218
29	12.13	12.13	33.518	25.415	256.0	0.075	6.06	99.5	7.5	0.81	7.5	0.14	0.13	1.46	0.50	29	217
30 ISL	12.12 D	12.12	33.515 D	25.414	256.1	0.077	6.04	99.1	7.6	0.82	7.6	0.14	0.15	1.41	0.49	30	
40	11.97	11.96	33.538	25.461	251.9	0.103	5.88	96.2	9.1	0.91	8.9	0.16	0.32	1.06	0.44	40	216
49	11.72	11.71	33.556	25.522	246.4	0.125	5.91	96.2	10.7	1.00	10.4	0.17	0.25	1.30	0.52	49	215
50 ISL	11.70 D	11.69	33.553 D	25.523	246.3	0.127	5.90	96.0	10.8	1.01	10.5	0.17	0.26	1.28	0.51	50	
60	11.52	11.51	33.587	25.583	240.8	0.152	5.75	93.2	11.8	1.11	11.9	0.19	0.30	1.09	0.46	60	214
70	10.83	10.82	33.587	25.707	229.1	0.175	4.44	70.9	15.6	1.39	16.4	0.15	0.11	0.20	0.21	70	213
75 ISL	10.38 D	10.37	33.643 D	25.830	217.6	0.186	4.03	63.8	17.6	1.50	18.2	0.10	0.05	0.15	0.19	75	
84	10.15	10.14	33.691	25.906	210.4	0.206	3.54	55.7	20.9	1.66	20.9	0.02	0.00	0.05	0.14	84	212
100 ISL	9.77 D	9.76	33.837 D	26.085	193.8	0.238	2.97	46.4	25.1	1.87	23.7	0.01	0.00	0.02	0.15	101	
101	9.79	9.78	33.833	26.078	194.4	0.240	2.94	46.0	25.3	1.88	23.8	0.01	0.00	0.02	0.15	102	211
119	9.40	9.39	33.965	26.246	178.8	0.274	2.43	37.7	29.9	2.07	26.1	0.01	0.00	0.02	0.13	120	210
125 ISL	9.38 D	9.37	33.988 D	26.267	176.9	0.284	2.34	36.3	30.9	2.10	26.6	0.01	0.00	0.02	0.13	126	
138	9.16	9.14	34.031	26.337	170.6	0.307	2.18	33.6	32.9	2.16	27.5	0.00	0.00	0.02	0.14	139	209
150 ISL	8.94 D	8.92	34.066 D	26.399	164.8	0.327	1.97	30.3	35.2	2.25	28.4	0.00	0.00	0.02	0.15	151	
168	8.78	8.76	34.122	26.468	158.6	0.356	1.73	26.5	38.6	2.36	29.6	0.01	0.00	0.02	0.15	169	208
200	8.15	8.13	34.111	26.557	150.6	0.405	1.79	27.0	42.6	2.40	30.9	0.00	0.00	0.01	0.13	201	207
228	7.89	7.87	34.139	26.618	145.2	0.447	1.52	22.8	47.0	2.52	32.3	0.00	0.00			229	206
250 ISL	7.68 D	7.66	34.161 D	26.666	140.9	0.478	1.35	20.2	50.2	2.60	33.2	0.00	0.00			252	
268	7.52	7.49	34.167	26.694	138.5	0.504	1.23	18.3	52.7	2.66	33.8	0.00	0.00			270	205
300 ISL	7.27 D	7.24	34.180 D	26.740	134.5	0.547	1.02	15.1	57.3	2.77	35.1	0.00	0.03			302	
318	7.05	7.02	34.205	26.790	129.9	0.571	0.91	13.4	59.7	2.83	35.8	0.00	0.05			320	204
377	6.71	6.68	34.232	26.858	124.2	0.646	0.67	9.8	66.1	2.96	37.1	0.00	0.00			379	203
400 ISL	6.60 D	6.56	34.248 D	26.886	121.8	0.674	0.60	8.7	68.3	3.00	37.5	0.00	0.00			403	
437	6.41	6.37	34.266	26.925	118.5	0.719	0.49	7.1	71.9	3.06	38.1	0.00	0.00			440	202
500 ISL	6.04 D	6.00	34.305 D	27.004	111.5	0.791	0.33	4.7	78.9	3.16	39.4	0.00	0.00			504	
514	5.97	5.92	34.312	27.019	110.3	0.807	0.29	4.2	80.5	3.18	39.7	0.00	0.00			518	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN — CALCOFI CRUISE 0804 — STATION 86.7 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 59.4 N	120 21.0 W	02/04/08	0717 UTC	763 m	270 06 kn			1018.5 mb	12.1 C	9.2 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.39	12.39	33.442	25.306	265.7	0.000	6.19	102.1	7.8	0.74	6.9	0.15	0.14	1.13	0.27	0	
1	12.39	12.39	33.442	25.306	265.7	0.003	6.19	102.1	7.8	0.74	6.9	0.15	0.14	1.13	0.27	1	221
10	12.38	12.38	33.444	25.309	265.6	0.027	6.19	102.1	7.8	0.74	6.9	0.15	0.15	1.09	0.28	10	219
10	12.35	12.35	33.445	25.316	265.0	0.027										10	220
20	12.11	12.11	33.445	25.362	260.9	0.053	6.14	100.7	8.1	0.76	7.1	0.16	0.25	1.52	0.50	20	218
30	12.10	12.10	33.456	25.372	260.1	0.079	6.07	99.5	8.2	0.78	7.2	0.17	0.33	1.29	0.42	30	217
39	12.15	12.14	33.486	25.386	259.0	0.102	6.09	100.0	7.9	0.78	7.3	0.15	0.38	1.16	0.38	39	216
49	11.96	11.95	33.479	25.417	256.3	0.128	5.80	94.8	9.1	0.87	8.5	0.18	0.42	0.69	0.31	49	215
50 ISL	11.94 D	11.93	33.477 D	25.419	256.1	0.131	5.78	94.5	9.2	0.88	8.6	0.18	0.41	0.66	0.30	50	
59	11.73	11.72	33.470	25.453	253.1	0.154	5.50	89.5	10.1	0.97	10.4	0.20	0.31	0.40	0.23	59	214
70	11.31	11.30	33.563	25.603	239.1	0.181	4.50	72.6	13.8	1.25	15.1	0.16	0.10	0.17	0.18	70	213
75 ISL	10.65 D	10.64	33.611 D	25.758	224.4	0.192	4.12	65.5	15.9	1.38	17.2	0.11	0.08	0.10	0.15	75	
84	10.38	10.37	33.666	25.848	216.0	0.212	3.61	57.1	19.2	1.58	20.3	0.02	0.05	0.03	0.11	84	212
100	10.21	10.20	33.709	25.911	210.4	0.246	3.45	54.4	20.6	1.64	21.4	0.02	0.00	0.03	0.10	101	211
119	9.75	9.74	33.791	26.052	197.3	0.285	3.12	48.7	23.8	1.81	23.6	0.02	0.00	0.01	0.09	120	210
125 ISL	9.58 D	9.57	33.826 D	26.108	192.1	0.297	3.03	47.1	24.9	1.85	24.2	0.02	0.00	0.01	0.09	126	
139	9.27	9.25	33.904	26.219	181.7	0.323	2.86	44.2	27.4	1.92	25.4	0.01	0.00	0.00	0.10	140	209
150 ISL	8.96 D	8.94	33.960 D	26.313	173.0	0.342	2.74	42.1	29.7	1.98	26.3	0.01	0.00	0.00	0.09	151	
168	8.64	8.62	34.005	26.399	165.1	0.373	2.59	39.5	33.2	2.06	27.6	0.01	0.00	0.00	0.08	169	208
200	8.37	8.35	34.031	26.461	159.7	0.425	2.43	36.8	36.4	2.13	28.8	0.01	0.00	0.00	0.07	201	207
228	8.12	8.10	34.076	26.534	153.2	0.468	2.01	30.3	40.9	2.30	30.7	0.01	0.00			229	206
250 ISL	8.11 D	8.08	34.142 D	26.588	148.5	0.502	1.69	25.5	44.3	2.43	31.8	0.01	0.00			251	
268	7.87	7.84	34.148	26.628	144.9	0.528	1.45	21.7	47.2	2.53	32.7	0.01	0.00			270	205
300 ISL	7.34 D	7.31	34.163 D	26.716	136.8	0.573	1.18	17.5	53.5	2.67	34.4	0.00	0.00			302	
318	7.14	7.11	34.174	26.753	133.4	0.597	1.06	15.6	57.0	2.74	35.3	0.00	0.00			320	204
377	6.80	6.76	34.240	26.852	124.8	0.674	0.64	9.4	65.0	2.93	36.9	0.00	0.00			379	203
400 ISL	6.57 D	6.53	34.249 D	26.890	121.3	0.702	0.55	8.0	68.2	2.98	37.6	0.00	0.00			403	
438	6.29	6.25	34.261	26.937	117.2	0.747	0.46	6.7	73.2	3.05	38.7	0.00	0.00			441	202
500 ISL	5.88 D	5.84	34.296 D	27.017	110.1	0.818	0.33	4.7	80.3	3.15	39.7	0.00	0.00			503	
515	5.82	5.78	34.301	27.029	109.2	0.834	0.30	4.3	82.0	3.17	40.0	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 86.7 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 39.3 N	121 2.0 W	02/04/08	1334 UTC	3796 m	180 13 kn			1016.9 mb	13.0 C	12.1 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.77	12.77	33.371	25.177	277.9	0.000	6.15	102.2	5.8	0.64	4.5	0.12	0.22	0.64	0.20	0	
2	12.77	12.77	33.371	25.177	278.0	0.006	6.15	102.2	5.8	0.64	4.5	0.12	0.22	0.64	0.20	2	221
10 CSL	12.65	12.65	33.365	25.196	276.4	0.028										10	200
10	12.66	12.66	33.368	25.196	276.4	0.028										10	220
11	12.68	12.68	33.368	25.193	276.8	0.030	6.17	102.4	5.7	0.63	4.4	0.12	0.19	0.68	0.24	11	219
20	12.63	12.63	33.369	25.203	276.0	0.055	6.17	102.3	5.8	0.62	4.3	0.12	0.20	0.71	0.28	20	218
30	12.61	12.61	33.368	25.207	275.9	0.083	6.17	102.2	5.8	0.63	4.4	0.12	0.22	0.81	0.30	30	217
40	12.61	12.60	33.372	25.210	275.9	0.111	6.15	101.9	5.8	0.63	4.5	0.12	0.24	0.79	0.34	40	216
50	12.61	12.60	33.371	25.209	276.2	0.138	6.13	101.6	5.7	0.64	4.6	0.12	0.31	0.77	0.32	50	215
60	12.43	12.42	33.391	25.260	271.6	0.166	5.91	97.6	6.8	0.74	5.8	0.17	0.54	0.56	0.26	60	214
70	12.14	12.13	33.500	25.400	258.5	0.192	5.39	88.5	9.0	0.96	9.0	0.29	0.85	0.24	0.16	70	213
75 ISL	11.99 D	11.98	33.530 D	25.452	253.7	0.205	5.18	84.8	10.0	1.05	10.4	0.29	0.77	0.22	0.15	75	
85	11.62	11.61	33.566	25.549	244.7	0.230	4.81	78.1	12.0	1.19	13.0	0.30	0.43	0.17	0.14	85	212
100 ISL	11.19 D	11.18	33.592 D	25.648	235.6	0.266	4.24	68.2	14.8	1.36	16.5	0.15	0.04	0.11	0.12	100	
101	11.15	11.14	33.598	25.660	234.4	0.268	4.20	67.5	15.0	1.37	16.7	0.14	0.02	0.11	0.12	102	211
120	10.37	10.36	33.707	25.882	213.6	0.311	3.46	54.7	20.2	1.65	21.0	0.02	0.01	0.05	0.11	121	210
125 ISL	10.35 D	10.34	33.712 D	25.890	213.0	0.321	3.34	52.8	21.2	1.70	21.8	0.02	0.01	0.04	0.12	126	
140	9.85	9.83	33.807	26.049	198.1	0.352	3.07	48.0	24.0	1.82	23.6	0.01	0.02	0.02	0.16	141	209
150 ISL	9.32 D	9.30	33.909 D	26.216	182.3	0.371	2.95	45.7	25.7	1.88	24.6	0.01	0.03	0.02	0.15	151	
170	9.07	9.05	33.931	26.273	177.2	0.407	2.77	42.6	29.1	1.97	26.2	0.01	0.03	0.01	0.10	171	208
200 ISL	8.58 D	8.56	34.016 D	26.417	164.0	0.458	2.58	39.3	34.0	2.08	27.9	0.01	0.01	0.00	0.09	201	
201	8.58	8.56	34.022	26.422	163.5	0.460	2.57	39.1	34.2	2.08	28.0	0.01	0.01	0.00	0.09	202	207
228	8.13	8.11	34.045	26.508	155.6	0.503	2.41	36.3	38.9	2.18	29.5	0.01	0.00			229	206
250 ISL	7.86 D	7.84	34.066 D	26.565	150.5	0.537	2.14	32.1	42.6	2.29	30.9	0.01	0.00			251	
268	7.72	7.69	34.084	26.600	147.5	0.564	1.88	28.1	45.8	2.40	32.1	0.01	0.00			270	205
300 ISL	7.41 D	7.38	34.134 D	26.684	139.9	0.610	1.42	21.1	52.8	2.62	34.4	0.00	0.00			302	
319	6.99	6.96	34.138	26.745	134.1	0.636	1.18	17.3	57.0	2.74	35.6	0.00	0.00			321	204
377	6.49	6.46	34.190	26.854	124.3	0.711	0.78	11.3	66.7	2.93	37.9	0.00	0.00			379	203
400 ISL	6.33 D	6.29	34.194 D	26.878	122.2	0.739	0.67	9.7	69.7	2.99	38.5	0.00	0.00			403	
438	6.12	6.08	34.236	26.939	116.9	0.784	0.53	7.6	74.2	3.06	39.2	0.00	0.00			441	202
500 ISL	5.80 D	5.76	34.289 D	27.021	109.6	0.855	0.34	4.9	81.6	3.16	40.4	0.00	0.00			503	
515	5.74	5.70	34.290	27.030	108.9	0.871	0.30	4.3	83.4	3.18	40.7	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 86.7 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 20.0 N	121 41.6 W	02/04/08	1945 UTC	4125 m	160 22 kn	180 02 05	6	1016.9 mb	13.3 C	12.7 C	12m	8/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.18	12.18	33.154	25.122	283.1	0.000	6.21	101.8	6.7	0.68	4.9	0.10	0.76	0.68	0.22	0	
1 A	12.18	12.18	33.154	25.122	283.2	0.003	6.21	101.8	6.7	0.68	4.9	0.10	0.76	0.68	0.22	1	222
7 A	12.07	12.07	33.141	25.133	282.3	0.020	6.16	100.8	6.8	0.71	5.2	0.11	0.71	0.61	0.21	7	221
10	11.77	11.77	33.118	25.171	278.7	0.028	6.04	98.2	7.1	0.73	5.7	0.12	0.53	0.52	0.19	10	220
17 A	11.75	11.75	33.146	25.197	276.4	0.048	6.01	97.6	7.7	0.75	6.0	0.12	0.63	0.45	0.19	17	219
20 ISL	11.80 D	11.80	33.169 D	25.206	275.7	0.056	6.03	98.1	7.9	0.75	6.0	0.13	0.74	0.45	0.19	20	
27 A	11.91	11.91	33.226	25.229	273.6	0.075	6.08	99.2	8.2	0.76	6.1	0.15	0.95	0.45	0.20	27	218
30 ISL	11.92 D	11.92	33.230 D	25.231	273.6	0.083	6.07	99.0	8.3	0.76	6.1	0.15	0.91	0.42	0.20	30	
34 A	11.89	11.89	33.229	25.236	273.2	0.094	6.04	98.5	8.3	0.77	6.2	0.15	0.86	0.38	0.20	34	217
44 A	11.66	11.65	33.214	25.267	270.4	0.121	5.90	95.7	8.4	0.81	7.0	0.15	0.47	0.24	0.21	44	216
50 ISL	11.70 D	11.69	33.227 D	25.270	270.3	0.138	5.90	95.8	8.5	0.82	7.1	0.16	0.49	0.22	0.20	50	
52	11.70	11.69	33.233	25.275	269.9	0.143	5.90	95.8	8.6	0.82	7.1	0.16	0.50	0.22	0.20	52	215
60	11.56	11.55	33.287	25.342	263.6	0.164	5.69	92.1	9.4	0.90	8.5	0.21	0.34	0.15	0.18	60	214
69	11.24	11.23	33.325	25.430	255.5	0.188	5.40	86.9	10.4	1.01	10.8	0.16	0.01	0.10	0.12	69	213
75 ISL	11.24 D	11.23	33.396 D	25.486	250.4	0.203	5.11	82.2	11.4	1.11	12.6	0.11	0.01	0.08	0.15	75	
84	10.37	10.36	33.408	25.648	235.0	0.225	4.58	72.3	13.8	1.29	15.6	0.04	0.00	0.05	0.21	84	212
100	10.15	10.14	33.720	25.929	208.6	0.260	3.40	53.5	21.2	1.72	22.1	0.02	0.00	0.04	0.13	100	211
119	9.74	9.73	33.789	26.052	197.2	0.299	3.06	47.8	24.5	1.86	24.3	0.02	0.00	0.02	0.12	120	210
125 ISL	9.72 D	9.71	33.792 D	26.058	196.8	0.311	3.00	46.8	25.1	1.88	24.7	0.02	0.00	0.02	0.12	126	
139	9.50	9.48	33.845	26.136	189.7	0.338	2.88	44.7	26.5	1.93	25.5	0.02	0.01	0.03	0.11	140	209
150 ISL	9.10 D	9.08	33.925 D	26.263	177.7	0.358	2.77	42.7	28.4	1.98	26.2	0.02	0.01	0.02	0.11	151	
170	8.84	8.82	33.988	26.354	169.4	0.393	2.55	39.1	32.4	2.07	27.7	0.01	0.00	0.01	0.11	171	208
200 ISL	8.40 D	8.38	34.044 D	26.466	159.2	0.442	2.16	32.8	37.5	2.24	30.0	0.01	0.00	0.01	0.09	201	
201	8.42	8.40	34.047	26.466	159.3	0.444	2.15	32.6	37.7	2.25	30.1	0.01	0.00	0.01	0.09	202	207
229	8.08	8.06	34.089	26.550	151.7	0.487	1.83	27.6	42.6	2.39	31.8	0.01	0.00			230	206
250 ISL	7.71 D	7.69	34.098 D	26.612	146.0	0.518	1.55	23.2	46.8	2.53	33.1	0.01	0.00			251	
268	7.68	7.65	34.139	26.649	142.8	0.544	1.33	19.9	50.1	2.63	34.0	0.01	0.00			270	205
300 ISL	7.29 D	7.26	34.169 D	26.728	135.6	0.589	1.07	15.8	52.3	2.63	33.8	0.01	0.01			302	
319	7.21	7.18	34.186	26.753	133.5	0.614	0.95	14.0	53.6	2.63	33.7	0.01	0.01			321	204
378	6.75	6.72	34.220	26.843	125.6	0.691	0.69	10.1	65.6	2.95	37.7	0.00	0.00			380	203
400 ISL	6.58 D	6.54	34.234 D	26.877	122.6	0.718	0.61	8.9	68.6	3.01	38.4	0.00	0.00			403	
436	6.32	6.28	34.245	26.920	118.8	0.762	0.50	7.2	73.0	3.08	39.2	0.00	0.01			439	202
500 ISL	5.83 D	5.79	34.273 D	27.005	111.2	0.835	0.36	5.2	81.9	3.18	40.7	0.00	0.00			503	
514	5.74	5.70	34.277	27.019	109.9	0.851	0.33	4.7	83.8	3.20	41.0	0.00	0.00			518	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 86.7 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 59.3 N	122 23.5 W	03/04/08	0252 UTC	4089 m	250 10 kn	180 03 06	2	1016.3 mb	14.5 C	13.5 C		2/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.23	13.23	32.896	24.718	321.6	0.000	6.16	103.1	3.0	0.41	0.7	0.03	0.04	0.29	0.05	0	
2	13.23	13.23	32.896	24.719	321.6	0.006	6.16	103.1	3.0	0.41	0.7	0.03	0.04	0.29	0.05	2	221
9	13.17	13.17	32.898	24.732	320.5	0.029										9	220
10	13.05	13.05	32.901	24.758	318.1	0.032	6.18	103.0	3.1	0.41	0.8	0.03	0.04	0.33	0.01	10	219
20	12.92	12.92	32.908	24.789	315.3	0.064	6.18	102.8	3.0	0.42	0.8	0.03	0.07	0.27	0.06	20	218
30	12.75	12.75	32.918	24.831	311.7	0.095	6.20	102.7	3.2	0.43	0.9	0.03	0.10	0.31	0.08	30	217
40	12.72	12.71	32.913	24.833	311.7	0.126	6.20	102.7	3.1	0.43	0.7	0.04	0.11	0.33	0.36	40	216
50	12.71	12.70	32.910	24.833	312.0	0.157	6.18	102.3	3.1	0.43	0.7	0.04	0.16	0.41	0.06	50	215
60	12.41	12.40	32.930	24.906	305.2	0.188	6.15	101.2	4.1	0.51	1.7	0.08	0.34	0.38	0.15	60	214
69	12.22	12.21	32.982	24.983	298.1	0.215	6.13	100.5	5.1	0.58	3.1	0.12	0.42	0.33	0.16	69	213
75 ISL	12.18 D	12.17	33.017 D	25.018	295.0	0.233	6.12	100.2	5.4	0.60	3.3	0.13	0.45	0.34	0.13	75	
85	12.17	12.16	33.048	25.044	292.7	0.263	6.09	99.7	5.6	0.62	3.5	0.15	0.48	0.34	0.07	85	212
100	12.12	12.11	33.096	25.091	288.6	0.306	6.05	99.0	6.2	0.65	4.0	0.17	0.56	0.20	0.11	100	211
119	12.15	12.13	33.193	25.161	282.4	0.361	5.98	98.0	6.6	0.70	5.0	0.18	0.50	0.14	0.10	120	210
125 ISL	12.24 D	12.22	33.216 D	25.162	282.5	0.377	5.88	96.5	6.9	0.73	5.6	0.16	0.39	0.12	0.09	126	
138	11.52	11.50	33.177	25.266	272.8	0.414	5.54	89.6	7.4	0.85	7.8	0.12	0.13	0.09	0.08	139	209
150 ISL	10.97 D	10.95	33.228 D	25.405	259.7	0.446	4.92	78.6	10.8	1.10	12.0	0.08	0.08	0.06	0.08	151	
169	10.58	10.56	33.618	25.777	224.7	0.492	3.88	61.6	17.6	1.52	19.0	0.02	0.00	0.03	0.09	170	208
200 ISL	9.18 D	9.16	33.859 D	26.200	184.8	0.555	3.07	47.3	26.6	1.87	25.0	0.01	0.02	0.00	0.07	201	
201	9.18	9.16	33.863	26.203	184.5	0.557	3.06	47.2	26.8	1.88	25.1	0.01	0.02	0.00	0.07	202	207
228	8.69	8.67	33.964	26.360	170.0	0.605	2.85	43.5	31.1	1.98	26.6	0.01	0.03			229	206
250 ISL	8.29 D	8.26	33.982 D	26.435	163.1	0.641	2.69	40.7	34.9	2.08	28.2	0.01	0.03			251	
268	7.91	7.88	33.985	26.494	157.6	0.670	2.56	38.4	38.2	2.16	29.5	0.01	0.02			269	205
300 ISL	7.43 D	7.40	34.023 D	26.594	148.4	0.719	2.26	33.5	44.2	2.30	31.4	0.01	0.02			302	
317	7.29	7.26	34.030	26.619	146.2	0.744	2.10	31.0	47.5	2.38	32.3	0.01	0.02			319	204
377	6.42	6.39	34.047	26.750	134.0	0.828	1.65	23.9	59.8	2.63	35.7	0.00	0.03			379	203
400 ISL	6.20 D	6.16	34.070 D	26.797	129.8	0.859	1.37	19.7	64.1	2.75	36.9	0.00	0.02			402	
437	6.01	5.97	34.128	26.867	123.5	0.905	0.93	13.4	70.5	2.92	38.6	0.00	0.00			440	202
500 ISL	5.60 D	5.56	34.169 D	26.951	116.0	0.981	0.64	9.1	80.2	3.05	40.2	0.00	0.00			503	
514	5.47	5.43	34.175	26.971	114.1	0.997	0.58	8.2	82.4	3.08	40.6	0.00	0.00			517	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 86.7 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 39.3 N	123 4.1 W	03/04/08	0918 UTC	4132 m	250 07 kn			1019.6 mb	15.2 C	13.8 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.35	14.35	33.201	24.725	321.0	0.000	5.95	102.1	2.4	0.34	0.0	0.00	0.00	0.18	0.04	0	
1	14.35	14.35	33.201	24.725	321.0	0.003	5.95	102.1	2.4	0.34	0.0	0.00	0.00	0.18	0.04	1	222
10	14.33	14.33	33.196	24.725	321.2	0.032	5.97	102.4	2.3	0.34	0.0	0.00	0.00	0.18	0.04	10	220
10	14.31	14.31	33.196	24.730	320.8	0.032										10	221
20 ISL	14.21 D	14.21	33.211 D	24.762	318.0	0.064	5.99	102.5	2.2	0.34	0.0	0.00	0.00	0.17	0.04	20	
24	14.14	14.14	33.205	24.773	317.1	0.077	5.99	102.3	2.1	0.34	0.0	0.00	0.00	0.17	0.04	24	219
30 ISL	14.07 D	14.07	33.191 D	24.776	316.9	0.096	6.00	102.4	2.1	0.34	0.0	0.00	0.00	0.18	0.04	30	
39	13.98	13.97	33.187	24.792	315.7	0.124	6.01	102.3	2.1	0.34	0.0	0.00	0.00	0.20	0.05	39	218
50	13.87	13.86	33.170	24.802	315.0	0.159	6.03	102.4	2.0	0.35	0.0	0.00	0.00	0.25	0.08	50	217
62	13.89	13.88	33.182	24.808	314.8	0.197	6.02	102.3	2.0	0.35	0.0	0.00	0.00	0.28	0.09	62	216
71	13.91	13.90	33.188	24.808	315.0	0.225	6.00	102.0	1.9	0.35	0.0	0.00	0.02	0.36	0.14	71	215
75	13.90	13.89	33.188	24.811	314.9	0.238	5.97	101.5	2.0	0.35	0.0	0.00	0.03	0.34	0.12	75	214
87	13.95	13.94	33.204	24.813	315.1	0.275	5.97	101.6	1.9	0.35	0.0	0.00	0.07	0.29	0.10	87	213
100	13.27	13.26	33.171	24.926	304.5	0.316	5.74	96.3	2.9	0.48	1.6	0.20	0.06	0.28	0.14	100	212
111	12.52	12.51	33.197	25.094	288.7	0.348	5.48	90.5	4.4	0.65	4.7	0.05	0.00	0.23	0.17	111	211
124	12.21	12.19	33.240	25.186	280.2	0.385	5.37	88.1	5.2	0.73	6.1	0.03	0.00	0.16	0.13	125	210
125 ISL	12.15 D	12.13	33.270 D	25.221	276.9	0.388	5.35	87.7	5.4	0.74	6.3	0.03	0.00	0.15	0.13	126	
139	11.53	11.51	33.383	25.424	257.8	0.426	4.98	80.6	8.1	0.93	9.9	0.02	0.00	0.09	0.08	140	209
150 ISL	11.16 D	11.14	33.483 D	25.569	244.2	0.453	4.72	75.9	10.2	1.05	12.1	0.01	0.00	0.05	0.06	151	
164	10.74	10.72	33.624	25.754	226.8	0.486	4.38	69.8	13.3	1.21	14.9	0.01	0.00	0.02	0.04	165	208
200	9.40	9.38	33.840	26.150	189.6	0.561	3.18	49.3	25.1	1.82	24.1	0.01	0.00	0.00	0.02	201	207
229	8.99	8.97	33.949	26.301	175.7	0.614	2.85	43.8	29.4	1.96	26.2	0.01	0.00			230	206
250 ISL	8.60 D	8.57	34.011 D	26.411	165.5	0.650	2.57	39.2	33.5	2.09	28.0	0.01	0.00			251	
268	8.37	8.34	34.045	26.473	159.9	0.679	2.30	34.9	37.2	2.20	29.6	0.01	0.00			269	205
300 ISL	8.08 D	8.05	34.094 D	26.555	152.5	0.729	1.76	26.5	43.3	2.41	31.8	0.01	0.00			302	
318	7.93	7.90	34.135	26.610	147.6	0.756	1.49	22.4	46.5	2.52	32.8	0.01	0.00			320	204
378	7.44	7.40	34.182	26.718	138.0	0.842	1.06	15.7	54.2	2.75	35.1	0.01	0.05			380	203
400 ISL	7.15 D	7.11	34.171 D	26.750	135.1	0.872	0.95	14.0	57.7	2.81	36.0	0.01	0.03			402	
438	6.76	6.72	34.197	26.825	128.3	0.922	0.78	11.4	64.0	2.91	37.5	0.01	0.00			441	202
500 ISL	6.25 D	6.21	34.232 D	26.920	119.7	0.999	0.55	7.9	72.5	3.05	39.2	0.00	0.00			503	
515	6.16	6.11	34.235	26.934	118.5	1.017	0.49	7.1	74.6	3.09	39.6	0.00	0.00			518	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 86.7 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 19.4 N	123 44.4 W	03/04/08	1700 UTC	4029 m	220 04 kn	340 03 10	2	1022.4 mb	16.0 C	14.2 C	30m	5/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.75	14.75	33.258	24.684	324.9	0.000	5.92	102.5	2.4	0.34	0.0	0.00	0.00	0.20	0.02	0	
1 A	14.75	14.75	33.258	24.684	324.9	0.003	5.92	102.5	2.4	0.34	0.0	0.00	0.00	0.20	0.02	1	222
10	14.67	14.67	33.262	24.704	323.2	0.032	5.93	102.5	2.3	0.34	0.0	0.00	0.00	0.17	0.04	10	221
17 A	14.56	14.56	33.269	24.733	320.7	0.055	5.92	102.1	2.3	0.33	0.0	0.00	0.00	0.19	0.05	17	220
20 ISL	14.45 D	14.45	33.273 D	24.760	318.2	0.065	5.92	101.8	2.3	0.33	0.0	0.00	0.00	0.19	0.05	20	
29	14.43	14.43	33.283	24.772	317.3	0.093	5.93	102.0	2.2	0.33	0.0	0.00	0.00	0.20	0.05	29	219
30 ISL	14.43 D	14.43	33.283 D	24.772	317.3	0.096	5.93	102.0	2.2	0.33	0.0	0.00	0.00	0.20	0.05	30	
40 A	14.39	14.38	33.280	24.779	317.0	0.128	5.93	101.9	2.1	0.33	0.0	0.00	0.00	0.25	0.06	40	218
50 ISL	14.40 D	14.39	33.279 D	24.776	317.6	0.160	5.93	101.9	2.1	0.33	0.0	0.00	0.00	0.26	0.07	50	
53	14.40	14.39	33.282	24.778	317.4	0.169	5.93	101.9	2.1	0.33	0.0	0.00	0.00	0.26 B	0.07 B	53	217
64 A	14.32	14.31	33.265	24.782	317.3	0.204	5.92	101.5	2.0	0.34	0.0	0.00	0.02	0.32	0.09	64	216
73	14.15	14.14	33.220	24.783	317.5	0.233	5.95	101.7	1.9	0.34	0.0	0.00	0.00	0.43	0.06	73	215
75 ISL	14.08 D	14.07	33.206 D	24.787	317.2	0.239	5.95	101.5	1.9	0.35	0.0	0.00	0.03	0.42	0.08	75	
81 A	13.90	13.89	33.174	24.800	316.1	0.258	5.94	101.0	1.8	0.37	0.0	0.01	0.11	0.35	0.15	81	214
92	14.24	14.23	33.292	24.821	314.5	0.293	5.88	100.7	2.2	0.36	0.1	0.04	0.06	0.29	0.09	92	213
100 ISL	13.35 D	13.34	33.190 D	24.925	304.7	0.318	5.72	96.1	3.1	0.49	2.2	0.13	0.01	0.19	0.10	100	
101	13.35	13.34	33.195	24.928	304.3	0.321	5.70	95.8	3.2	0.51	2.5	0.14	0.00	0.18	0.10	101	212
113 A	12.08	12.07	33.170	25.156	282.7	0.356	5.37	87.8	5.8	0.79	6.8	0.02	0.00	0.09	0.07	113	211
125 ISL	11.46 D	11.44	33.234 D	25.321	267.2	0.389	5.25	84.8	7.2	0.91	8.9	0.01	0.00	0.06	0.05	126	
129	11.46	11.44	33.236	25.323	267.2	0.400	5.20	84.0	7.7	0.94	9.4	0.01	0.00	0.05	0.05	130	210
144	11.15	11.13	33.451	25.546	246.2	0.438	4.71	75.7	10.8	1.10	12.8	0.01	0.00	0.02	0.03	145	209
150 ISL	10.70 D	10.68	33.498 D	25.663	235.2	0.452	4.44	70.7	12.9	1.23	14.8	0.01	0.00	0.02	0.03	151	
171	10.08	10.06	33.674	25.907	212.3	0.499	3.47	54.5	20.7	1.70	21.7	0.01	0.00	0.01	0.03	172	208
200 ISL	9.54 D	9.52	33.904 D	26.177	187.1	0.557	2.46	38.3	28.3	2.06	26.6	0.01	0.00	0.00	0.03	201	
203	9.52	9.50	33.910	26.185	186.4	0.563	2.38	37.0	28.9	2.08	26.9	0.01	0.00	0.00	0.03	204	207
230	9.17	9.14	34.022	26.330	173.1	0.611	2.03	31.3	33.1	2.22	28.7	0.01	0.00			231	206
250 ISL	8.95 D	8.92	34.094 D	26.421	164.7	0.645	1.76	27.0	36.2	2.33	29.8	0.01	0.00			251	
269	8.83	8.80	34.145	26.480	159.5	0.676	1.53	23.4	39.0	2.42	30.7	0.01	0.00			270	205
300 ISL	8.64 D	8.61	34.191 D	26.547	153.7	0.725	1.26	19.2	42.3	2.54	31.8	0.01	0.00			302	
318	8.50	8.47	34.205	26.579	150.9	0.752	1.14	17.3	44.1	2.59	32.4	0.01	0.00			320	204
377	7.98	7.94	34.234	26.681	142.0	0.838	0.92	13.8	51.1	2.74	34.1	0.01	0.00			379	203
400 ISL	7.70 D	7.66	34.228 D	26.718	138.7	0.871	0.84	12.6	53.9	2.80	34.8	0.01	0.00			402	
437	7.40	7.36	34.247	26.776	133.5	0.921	0.71	10.5	58.6	2.88	35.9	0.01	0.00			440	202
500 ISL	6.53 D	6.48	34.212 D	26.868	124.9	1.002	0.56	8.1	67.2	2.99	37.7	0.01	0.00			503	
513	6.62	6.57	34.249	26.885	123.6	1.019	0.53	7.7	69.0	3.01	38.1	0.01	0.00			516	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
B) FIRST FLUOROMETER READING NOT RECORDED, CHLOROPHYLL AND PHAEOPIGMENT
CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 90.0 28.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 29.1 N	117 46.1 W	01/04/08	0107 UTC	63 m	300 04 kn	240 01 05	0	1017.8 mb	15.5 C	11.9 C	15m	0/8	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.26	15.26	33.566	24.811	312.8	0.000	6.51	114.0	1.4	0.21	0.0	0.00	0.00	0.45	0.12	0	
2	15.26	15.26	33.566	24.811	312.9	0.006	6.51	114.0	1.4	0.21	0.0	0.00	0.00	0.45	0.12	2	208
6	15.02	15.02	33.561	24.859	308.3	0.019	6.69	116.6	1.3	0.19	0.0	0.00	0.01	0.44	0.10	6	207
10	14.95	14.95	33.561	24.875	307.0	0.031	6.75	117.5	1.3	0.18	0.0	0.00	0.00	0.47	0.11	10	206
20 ISL	11.86 D	11.86	33.567 D	25.503	247.4	0.059	4.84	79.0	9.6	1.02	11.2	0.37	0.03	1.53	0.53	20	
21	11.91	11.91	33.567	25.494	248.3	0.061	4.59	75.0	10.8	1.13	12.7	0.40	0.03	1.61	0.57	21	205
29	11.01	11.01	33.665	25.735	225.5	0.080	3.39	54.4	17.7	1.59	19.7	0.16	0.12	0.81	0.46	29	204
30 ISL	10.93 D	10.93	33.689 D	25.768	222.4	0.082	3.29	52.7	18.2	1.63	20.2	0.16	0.17	0.73	0.43	30	
40	10.45	10.45	33.786	25.928	207.4	0.104	2.62	41.6	22.2	1.89	22.8	0.24	0.58	0.22	0.23	40	203
50	10.12	10.11	33.895	26.070	194.1	0.124	2.32	36.6	26.2	2.04	24.2	0.16	0.29	0.22	0.38	50	202
55	10.02	10.01	33.932	26.116	189.9	0.134	2.24	35.2	27.2	2.06	24.8	0.13	0.09	0.18	0.38	55	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 90.0 30.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 25.2 N	117 54.2 W	31/03/08	2137 UTC	615 m	210 13 kn	230 01 06	0	1019.4 mb	15.1 C	12.0 C	23m	0/8	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.00	15.00	33.543	24.850	309.1	0.000	6.45	112.4	0.5	0.27	0.0	0.00	0.10	0.27	0.06	0	
2	15.00	15.00	33.543	24.850	309.2	0.006	6.45	112.4	0.5	0.27	0.0	0.00	0.10	0.27	0.06	2	220
10	14.22	14.22	33.530	25.006	294.5	0.030	6.52	111.8	1.1	0.35	0.7	0.03	0.20	0.40	0.09	10	219
20	12.86	12.86	33.569	25.313	265.5	0.058	6.53	108.9	1.5	0.48	1.9	0.06	0.40	0.43	0.13	20	218
30	11.56	11.56	33.577	25.567	241.6	0.084	4.21	68.3	13.0	1.29	14.5	0.22	0.16	0.55	0.26	30	217
39	11.19	11.19	33.635	25.680	231.0	0.105	3.40	54.7	16.6	1.56	18.5	0.10	0.08	0.41	0.28	39	216
49	10.67	10.66	33.686	25.812	218.7	0.127	3.36	53.5	19.1	1.63	20.1	0.08	0.00	0.20	0.23	49	215
50 ISL	10.63 D	10.62	33.694 D	25.825	217.4	0.130	3.35	53.3	19.3	1.64	20.2	0.08	0.00	0.18	0.22	50	
60	10.41	10.40	33.736	25.897	210.9	0.151	3.17	50.2	20.9	1.72	21.4	0.04	0.00	0.08	0.17	60	214
70	10.12	10.11	33.827	26.017	199.6	0.172	2.83	44.6	23.9	1.86	23.2	0.02	0.00	0.05	0.20	70	213
75 ISL	9.92 D	9.91	33.832 D	26.055	196.1	0.181	2.65	41.5	25.0	1.92	23.8	0.02	0.00	0.04	0.22	75	
85	10.03	10.02	33.928	26.112	190.9	0.201	2.36	37.1	26.8	2.02	24.8	0.02	0.00	0.02	0.24	85	212
100 ISL	9.81 D	9.80	33.993 D	26.200	182.9	0.229	2.20	34.4	29.0	2.10	25.7	0.02	0.00	0.02	0.17	101	
101	9.80	9.79	34.002	26.209	182.1	0.231	2.19	34.3	29.1	2.10	25.8	0.02	0.00	0.02	0.16	102	211
120	9.60	9.59	34.074	26.298	173.9	0.264	1.97	30.7	31.6	2.19	27.0	0.01	0.00	0.01	0.14	121	210
125 ISL	9.54 D	9.53	34.078 D	26.311	172.8	0.273	1.97	30.7	32.0	2.20	27.2	0.01	0.00	0.01	0.14	126	
140	9.36	9.34	34.088	26.349	169.5	0.299	1.95	30.2	33.2	2.22	27.7	0.01	0.00	0.01	0.14	141	209
150 ISL	8.96 D	8.94	34.053 D	26.386	166.1	0.316	1.90	29.2	34.4	2.25	28.1	0.01	0.00	0.01	0.12	151	
168	8.99	8.97	34.141	26.450	160.4	0.345	1.76	27.1	36.7	2.32	29.0	0.02	0.00	0.01	0.09	169	208
200 ISL	8.82 D	8.80	34.206 D	26.529	153.5	0.395	1.41	21.6	40.7	2.47	30.4	0.01	0.00	0.01	0.08	201	
201	8.78	8.76	34.206	26.535	152.9	0.397	1.40	21.4	40.8	2.47	30.4	0.01	0.00	0.01	0.08	202	207
229	8.31	8.29	34.189	26.594	147.6	0.439	1.38	20.9	44.6	2.53	31.6	0.01	0.00			230	206
250 ISL	8.18 D	8.15	34.215 D	26.635	144.2	0.469	1.26	19.0	47.0	2.60	32.3	0.00	0.00			252	
269	7.99	7.96	34.218	26.665	141.5	0.497	1.13	17.0	49.1	2.66	32.9	0.00	0.00			271	205
300 ISL	7.74 D	7.71	34.247 D	26.725	136.2	0.540	0.95	14.2	53.1	2.76	33.9	0.00	0.00			302	
318	7.56	7.53	34.244	26.749	134.1	0.564	0.85	12.7	55.4	2.81	34.5	0.00	0.00			320	204
376	7.20	7.16	34.281	26.830	127.2	0.640	0.58	8.6	61.5	2.94	35.9	0.00	0.00			378	203
400 ISL	6.92 D	6.88	34.286 D	26.873	123.4	0.670	0.51	7.5	64.7	2.99	36.6	0.00	0.00			403	
437	6.68	6.64	34.297	26.914	119.8	0.715	0.43	6.3	69.5	3.06	37.5	0.00	0.00			440	202
500 ISL	6.32 D	6.27	34.308 D	26.971	115.0	0.789	0.35	5.1	74.3	3.12	38.5	0.00	0.00			504	
515	6.29	6.24	34.309	26.976	114.7	0.806	0.33	4.8	75.5	3.13	38.8	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 90.0 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 15.0 N	118 14.8 W	31/03/08	1820 UTC	339 m	130 02 kn	280 04 08	2	1020.8 mb	15.2 C	12.5 C	10m	3/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.61	14.61	33.529	24.923	302.1	0.000	6.59	113.9	0.0	0.24	0.1	0.00	0.17	0.98	0.25	0	
2 A	14.61	14.61	33.529	24.923	302.2	0.006	6.59	113.9	0.0	0.24	0.1	0.00	0.17	0.98	0.25	2	221
6 A	14.48	14.48	33.523	24.946	300.1	0.018	6.59	113.6	0.0	0.24	0.0	0.00	0.10	1.09	0.17	6	220
10	14.31	14.31	33.523	24.982	296.8	0.030	6.61	113.6	0.0	0.24	0.1	0.00	0.13	1.15	0.22	10	219
15 A	14.26	14.26	33.523	24.993	295.9	0.045	6.57	112.8	0.0	0.24	0.2	0.00	0.15	1.25	0.27	15	218
18	13.77	13.77	33.506	25.081	287.5	0.054	6.31	107.2	1.3	0.40	1.6	0.06	0.21	1.72	0.46	18	217
20 ISL	13.42 D	13.42	33.501 D	25.149	281.2	0.059	6.12	103.2	2.4	0.48	2.5	0.09	0.25	1.93	0.59	20	
22 A	13.29	13.29	33.505	25.178	278.4	0.065	5.90	99.2	3.6	0.56	3.5	0.12	0.30	2.01	0.69	22	216
27 A	12.63	12.63	33.512	25.314	265.6	0.078	5.21	86.4	7.6	0.84	7.5	0.27	0.40	1.54	0.67	27	215
30 ISL	12.28 D	12.28	33.522 D	25.389	258.5	0.086	4.89	80.5	9.4	0.98	9.7	0.25	0.37	1.21	0.62	30	
38 A	11.57	11.57	33.560	25.552	243.2	0.106	4.26	69.1	12.9	1.25	14.4	0.21	0.18	0.50	0.43	38	214
44	11.28	11.27	33.591	25.630	236.0	0.121	3.96	63.9	14.8	1.38	16.2	0.11	0.09	0.29	0.28	44	213
50	11.04	11.03	33.625	25.699	229.5	0.135	3.80	61.0	15.9	1.44	17.5	0.07	0.06	0.23	0.24	50	212
60	10.53	10.52	33.699	25.847	215.6	0.157	3.35	53.2	19.0	1.64	20.5	0.05	0.05	0.29	0.26	60	211
70	10.20	10.19	33.774	25.963	204.8	0.178	3.11	49.0	22.2	1.76	22.3	0.02	0.02	0.17	0.21	70	210
75 ISL	10.19 D	10.18	33.778 D	25.967	204.5	0.188	3.03	47.8	22.7	1.79	22.6	0.02	0.01	0.14	0.19	75	
85	10.13	10.12	33.816	26.007	200.9	0.209	2.89	45.5	23.3	1.83	23.0	0.02	0.00	0.10	0.17	85	209
100	9.84	9.83	33.886	26.111	191.3	0.238	2.65	41.5	26.0	1.94	24.5	0.01	0.01	0.09	0.17	101	208
119	9.72	9.71	33.977	26.203	183.0	0.273	2.33	36.4	28.2	2.05	25.6	0.02	0.11	0.10	0.21	120	207
125 ISL	9.60 D	9.59	34.006 D	26.245	179.1	0.284	2.28	35.5	29.0	2.07	26.0	0.02	0.10	0.08	0.20	126	
139	9.35	9.33	34.045	26.317	172.5	0.309	2.19	33.9	31.1	2.12	26.9	0.02	0.05	0.03	0.16	140	206
150 ISL	9.23 D	9.21	34.087 D	26.369	167.7	0.328	2.04	31.5	33.0	2.19	27.7	0.03	0.03	0.03	0.15	151	
169	9.01	8.99	34.146	26.451	160.3	0.359	1.77	27.2	36.4	2.31	28.9	0.04	0.00	0.04	0.14	170	205
200 ISL	8.58 D	8.56	34.185 D	26.549	151.4	0.407	1.47	22.4	41.3	2.45	30.6	0.03	0.02	0.04	0.11	201	
201	8.59	8.57	34.186	26.549	151.5	0.409	1.46	22.3	41.4	2.45	30.6	0.03	0.02	0.04	0.11	202	204
229	8.35	8.33	34.201	26.598	147.3	0.451	1.33	20.2	44.2	2.53	31.5	0.02	0.00			230	203
250 ISL	8.25 D	8.22	34.214 D	26.623	145.3	0.481	1.18	17.9	46.6	2.60	32.1	0.02	0.09			252	
269	8.06	8.03	34.229	26.664	141.7	0.508	1.05	15.8	48.8	2.67	32.6	0.02	0.16			271	202
300 ISL	7.77 D	7.74	34.239 D	26.715	137.2	0.552	0.91	13.6	52.4	2.74	33.6	0.02	0.06			302	
320	7.59	7.56	34.246	26.746	134.5	0.579	0.82	12.2	54.7	2.79	34.3	0.02	0.00			322	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 90.0 37.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 11.3 N	118 23.1 W	31/03/08	1305 UTC	1175 m	030 07 kn			1019.1 mb	12.0 C	9.0 C	11m	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.15	14.15	33.497	24.995	295.2	0.000	6.21	106.3	1.4	0.31	0.6	0.02	0.03	1.30	0.20	0	
2	14.15	14.15	33.497	24.995	295.3	0.006	6.21	106.3	1.4	0.31	0.6	0.02	0.03	1.30	0.20	2	220
10	14.18	14.18	33.497	24.989	296.1	0.030	6.22	106.6	1.4	0.31	0.6	0.02	0.02	1.47	0.08	10	219
20	14.11	14.11	33.493	25.001	295.3	0.059	6.22	106.4	1.5	0.32	0.8	0.02	0.03	1.41	0.25	20	218
30	12.49	12.49	33.496	25.329	264.3	0.087	5.09	84.2	8.4	0.90	8.7	0.31	0.18	1.11	0.46	30	217
40	11.66	11.65	33.534	25.516	246.7	0.113	4.29	69.7	12.4	1.24	14.2	0.13	0.01	0.49	0.25	40	216
50	11.16	11.15	33.633	25.684	230.9	0.137	3.73	60.0	16.3	1.48	17.7	0.14	0.00	0.32	0.17	50	215
60	10.68	10.67	33.727	25.843	216.0	0.159	3.12	49.7	20.3	1.71	20.8	0.01	0.00	0.05	0.10	60	214
70	10.51	10.50	33.810	25.937	207.2	0.180	2.72	43.2	23.1	1.85	22.6	0.01	0.00	0.02	0.08	70	213
75 ISL	10.31 D	10.30	33.805 D	25.968	204.4	0.190	2.69	42.5	23.7	1.88	23.1	0.01	0.00	0.02	0.07	75	
85	10.22	10.21	33.859	26.026	199.1	0.211	2.63	41.5	24.5	1.91	23.7	0.01	0.00	0.02	0.07	85	212
100 ISL	9.96 D	9.95	33.958 D	26.147	187.9	0.240	2.40	37.7	26.6	2.01	24.7	0.00	0.00	0.01	0.07	101	
101	9.99	9.98	33.939	26.128	189.8	0.241	2.39	37.6	26.7	2.02	24.8	0.00	0.00	0.01	0.07	102	211
120	9.49	9.48	33.985	26.247	178.8	0.276	2.40	37.3	29.1	2.05	26.2	0.00	0.00	0.01	0.07	121	210
125 ISL	9.50 D	9.49	33.990 D	26.249	178.7	0.285	2.44	37.9	29.5	2.04	26.3	0.00	0.00	0.01	0.07	126	
140	9.08	9.06	33.985	26.313	172.8	0.312	2.54	39.1	30.6	2.03	26.7	0.01	0.00	0.01	0.07	141	209
150 ISL	8.94 D	8.92	34.003 D	26.350	169.5	0.329	2.48	38.1	31.9	2.06	27.3	0.01	0.00	0.01	0.06	151	
170	8.74	8.72	34.051	26.419	163.3	0.362	2.23	34.1	35.0	2.16	28.5	0.01	0.00	0.02	0.05	171	208
200 ISL	8.66 D	8.64	34.141 D	26.503	155.9	0.410	1.74	26.6	39.1	2.34	29.8	0.01	0.00	0.02	0.05	201	
201	8.66	8.64	34.139	26.501	156.1	0.412	1.72	26.3	39.2	2.35	29.8	0.01	0.00	0.02	0.05	202	207
229	8.57	8.55	34.208	26.569	150.1	0.454	1.28	19.5	43.0	2.52	31.1	0.01	0.00			230	206
250 ISL	8.30 D	8.27	34.218 D	26.619	145.7	0.485	1.27	19.2	45.7	2.57	32.0	0.00	0.00			252	
269	7.93	7.90	34.189	26.651	142.7	0.513	1.26	18.9	48.1	2.59	32.8	0.00	0.00			271	205
300 ISL	7.64 D	7.61	34.214 D	26.714	137.2	0.556	1.08	16.1	52.3	2.68	34.0	0.00	0.00			302	
319	7.47	7.44	34.217	26.741	134.9	0.582	0.94	14.0	55.0	2.75	34.7	0.00	0.00			321	204
378	7.00	6.96	34.262	26.843	125.9	0.659	0.59	8.7	63.3	2.94	36.5	0.00	0.00			380	203
400 ISL	6.81 D	6.77	34.272 D	26.876	122.9	0.686	0.51	7.5	66.2	2.99	37.2	0.00	0.00			403	
439	6.55	6.51	34.291	26.927	118.5	0.734	0.41	6.0	70.9	3.06	38.2	0.00	0.00			442	202
500 ISL	6.16 D	6.12	34.322 D	27.002	111.8	0.804	0.31	4.5	77.4	3.14	39.2	0.00	0.00			503	
511	6.12	6.07	34.323	27.008	111.4	0.816	0.29	4.2	78.6	3.15	39.4	0.00	0.00			515	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 90.0 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 55.2 N	118 56.4 W	31/03/08	0709 UTC	1690 m	300 25 kn			1020.2 mb	11.2 C	8.6 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.99	13.99	33.442	24.986	296.1	0.000	6.01	102.5	3.5	0.39	0.9	0.03	0.04	0.97	0.22	0	
2	13.99	13.99	33.442	24.986	296.2	0.006	6.01	102.5	3.5	0.39	0.9	0.03	0.04	0.97	0.22	2	220
10	14.00	14.00	33.443	24.985	296.5	0.030	6.01	102.5	3.6	0.38	1.1	0.03	0.03	0.96	0.22	10	219
20 ISL	14.00 D	14.00	33.439 D	24.982	297.0	0.059	6.02	102.7	3.6	0.38	1.0	0.03	0.03	0.94	0.23	20	
22	14.00	14.00	33.442	24.985	296.9	0.065	6.02	102.7	3.6	0.38	1.0	0.03	0.03	0.94	0.23	22	218
30 ISL	13.83 D	13.83	33.447 D	25.024	293.4	0.089	5.90	100.3	4.1	0.45	2.2	0.06	0.05	0.95	0.27	30	
31	13.79	13.79	33.450	25.034	292.4	0.092	5.88	99.9	4.2	0.46	2.3	0.07	0.05	0.95	0.28	31	217
40	11.76	11.75	33.513	25.481	250.0	0.116	4.61	75.1	11.3	1.12	12.4	0.13	0.00	0.75	0.34	40	216
50	11.14	11.13	33.592	25.656	233.6	0.140	3.96	63.7	15.4	1.41	17.0	0.03	0.00	0.28	0.17	50	215
61	10.92	10.91	33.652	25.742	225.6	0.166	3.52	56.3	17.5	1.55	19.0	0.01	0.00	0.14	0.10	61	214
71	10.60	10.59	33.694	25.831	217.4	0.188	3.39	53.9	19.1	1.62	20.2	0.01	0.00	0.06	0.11	71	213
75 ISL	10.40 D	10.39	33.723 D	25.889	212.0	0.196	3.29	52.1	20.1	1.67	20.9	0.01	0.00	0.04	0.10	75	
85	10.07	10.06	33.798	26.004	201.2	0.217	3.04	47.8	22.5	1.78	22.6	0.01	0.00	0.01	0.06	85	212
99	9.73	9.72	33.875	26.121	190.3	0.244	2.89	45.1	24.9	1.85	23.9	0.01	0.00	0.01	0.06	100	211
100 ISL	9.62 D	9.61	33.895 D	26.155	187.1	0.246	2.88	44.9	25.0	1.86	24.0	0.01	0.00	0.01	0.06	101	
119	9.44	9.43	33.956	26.232	180.1	0.281	2.70	41.9	27.6	1.94	25.1	0.00	0.00	0.01	0.04	120	210
125 ISL	9.20 D	9.19	33.957 D	26.272	176.4	0.292	2.70	41.7	28.4	1.95	25.3	0.00	0.00	0.01	0.04	126	
140	8.97	8.95	34.003	26.345	169.8	0.318	2.69	41.3	30.4	1.98	25.9	0.00	0.00	0.00	0.05	141	209
150 ISL	9.01 D	8.99	34.045 D	26.372	167.5	0.335	2.52	38.8	31.8	2.04	26.6	0.00	0.00	0.00	0.05	151	
167	8.87	8.85	34.069	26.413	163.8	0.363	2.16	33.1	34.4	2.17	28.0	0.00	0.00	0.00	0.06	168	208
200 ISL	8.49 D	8.47	34.138 D	26.526	153.6	0.415	1.62	24.6	40.5	2.40	30.4	0.01	0.00	0.00	0.07	201	
201	8.49	8.47	34.140	26.528	153.5	0.417	1.61	24.5	40.7	2.41	30.5	0.01	0.00	0.00	0.07	202	207
229	8.27	8.25	34.180	26.593	147.7	0.459	1.43	21.6	44.0	2.49	31.3	0.01	0.00			230	206
250 ISL	8.06 D	8.03	34.203 D	26.643	143.3	0.490	1.25	18.8	46.8	2.57	32.0	0.01	0.00			252	
270	7.90	7.87	34.212	26.674	140.6	0.518	1.09	16.4	49.5	2.65	32.8	0.00	0.00			272	205
300 ISL	7.65 D	7.62	34.231 D	26.726	136.1	0.559	0.92	13.7	53.3	2.74	33.9	0.00	0.00			302	
319	7.49	7.46	34.240	26.756	133.5	0.585	0.83	12.3	55.5	2.79	34.5	0.00	0.00			321	204
381	7.08	7.04	34.260	26.830	127.2	0.666	0.62	9.1	61.5	2.90	35.8	0.00	0.00			383	203
400 ISL	6.93 D	6.89	34.280 D	26.867	123.9	0.690	0.55	8.1	63.9	2.94	36.2	0.00	0.00			403	
437	6.71	6.67	34.292	26.906	120.6	0.735	0.43	6.3	68.9	3.01	37.1	0.00	0.00			440	202
500 ISL	6.25 D	6.21	34.325 D	26.993	112.8	0.808	0.29	4.2	77.2	3.13	38.3	0.00	0.00			503	
511	6.18	6.13	34.330	27.006	111.7	0.821	0.26	3.8	78.7	3.15	38.5	0.00	0.00			515	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 90.0 53.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 38.9 N	119 28.8 W	31/03/08	0104 UTC	1315 m	310 26 kn	300 05 05	1	1019.6 mb	12.5 C	9.5 C		4/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.63	12.63	33.571	25.359	260.6	0.000	5.97	99.1	3.3	0.76	6.4	0.14	0.53	1.48	0.43	0	
2	12.63	12.63	33.571	25.359	260.6	0.005	5.97	99.1	3.3	0.76	6.4	0.14	0.53	1.48	0.43	2	220
10	12.63	12.63	33.570	25.359	260.9	0.026	5.97	99.1	3.2	0.75	6.3	0.14	0.51	1.53	0.43	10	219
20 ISL	12.64 D	12.64	33.567 D	25.355	261.6	0.052	5.97	99.1	3.3	0.76	6.3	0.14	0.48	1.52	0.43	20	
25	12.63	12.63	33.572	25.361	261.1	0.065	5.97	99.1	3.3	0.76	6.4	0.14	0.47	1.52	0.44	25	218
30 ISL	12.62 D	12.62	33.571 D	25.362	261.1	0.078	5.96	98.9	3.4	0.76	6.4	0.14	0.48	1.52	0.44	30	
40	12.60	12.59	33.577	25.371	260.5	0.104	5.93	98.4	3.5	0.76	6.5	0.14	0.49	1.55	0.47	40	217
50	12.58	12.57	33.588	25.383	259.6	0.130	5.94	98.5	3.6	0.76	6.7	0.14	0.54	1.61	0.54	50	216
62	11.77	11.76	33.624	25.566	242.5	0.161	5.24	85.4	8.3	1.02	10.2	0.15	0.95	1.30	0.63	62	215
74	10.62	10.61	33.703	25.835	217.1	0.188	3.69	58.7	18.9	1.57	19.1	0.08	0.10	0.38	0.38	74	214
75 ISL	10.61 D	10.60	33.704 D	25.837	216.9	0.190	3.64	57.9	19.3	1.59	19.4	0.08	0.09	0.36	0.37	75	
87	10.19	10.18	33.752	25.947	206.6	0.216	3.33	52.5	21.7	1.71	21.5	0.05	0.00	0.18	0.28	87	213
100 ISL	9.75 D	9.74	33.841 D	26.091	193.2	0.242	3.01	47.0	24.8	1.84	23.5	0.02	0.00	0.12	0.51	101	
102	9.73	9.72	33.848	26.100	192.4	0.246	2.96	46.2	25.4	1.86	23.8	0.02	0.00	0.12	0.53	103	212
112	9.39	9.38	33.931	26.221	181.1	0.264	2.61	40.5	28.8	2.01	25.6	0.01	0.00	0.05	0.13	113	211
125	9.23	9.22	33.968	26.276	176.1	0.287	2.48	38.3	30.4	2.06	26.4	0.02	0.00	0.04	0.13	126	210
140	9.13	9.11	33.993	26.312	173.0	0.314	2.38	36.7	31.8	2.10	27.0	0.02	0.00	0.03	0.12	141	209
150 ISL	8.85 D	8.83	34.036 D	26.390	165.7	0.331	2.26	34.6	33.5	2.15	27.6	0.02	0.00	0.02	0.10	151	
165	8.72	8.70	34.062	26.431	162.1	0.355	2.06	31.5	36.4	2.24	28.7	0.02	0.00	0.01	0.07	166	208
200 ISL	8.27 D	8.25	34.110 D	26.538	152.4	0.410	1.78	26.9	41.5	2.39	30.6	0.01	0.00	0.01	0.06	201	
201	8.27	8.25	34.113	26.540	152.2	0.412	1.77	26.8	41.6	2.39	30.6	0.01	0.00	0.01	0.06	202	207
230	7.93	7.91	34.144	26.616	145.4	0.455	1.50	22.5	46.2	2.49	32.2	0.01	0.00			231	206
250 ISL	7.71 D	7.69	34.160 D	26.661	141.4	0.484	1.37	20.5	49.3	2.57	33.1	0.01	0.00			252	
268	7.51	7.48	34.161	26.690	138.8	0.509	1.26	18.7	51.8	2.65	33.8	0.01	0.00			270	205
300 ISL	7.26 D	7.23	34.198 D	26.755	133.1	0.552	1.03	15.2	55.3	2.75	34.8	0.00	0.00			302	
319	7.21	7.18	34.210	26.772	131.8	0.577	0.91	13.4	57.2	2.80	35.3	0.00	0.00			321	204
375	6.89	6.85	34.243	26.843	125.8	0.649	0.68	10.0	63.5	2.94	36.6	0.00	0.04			377	203
400 ISL	6.77 D	6.73	34.253 D	26.867	123.7	0.681	0.61	8.9	65.6	2.97	37.0	0.00	0.03			403	
437	6.58	6.54	34.263	26.901	120.9	0.726	0.52	7.6	68.6	3.00	37.6	0.00	0.00			440	202
500 ISL	6.24 D	6.20	34.308 D	26.981	113.9	0.800	0.39	5.6	74.6	3.10	38.6	0.00	0.01			503	
514	6.23	6.18	34.308	26.983	114.0	0.816	0.36	5.2	75.9	3.12	38.8	0.00	0.01			518	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 90.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 25.2 N	119 57.3 W	30/03/08	1921 UTC	933 m	310 25 kn	330 05 06	2	1020.8 mb	13.1 C	10.2 C	11m	4/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.21	13.21	33.400	25.112	284.1	0.000	6.06	101.7	4.6	0.54	3.3	0.09	0.08	0.91	0.18	0	
1 A	13.21	13.21	33.400	25.112	284.1	0.003	6.06	101.7	4.6	0.54	3.3	0.09	0.08	0.91	0.18	1	221
6 A	13.21	13.21	33.400	25.113	284.2	0.017	6.07	101.9	4.6	0.55	3.3	0.09	0.12	0.89	0.25	6	220
10 ISL	13.21 D	13.21	33.397 D	25.110	284.5	0.028	6.07	101.9	4.6	0.54	3.3	0.09	0.10	0.89	0.23	10	
15 A	13.21	13.21	33.406	25.117	284.0	0.043	6.07	101.9	4.6	0.53	3.3	0.09	0.06	0.88	0.18	15	219
20 ISL	13.18 D	13.18	33.398 D	25.117	284.1	0.057	6.06	101.6	4.6	0.54	3.4	0.09	0.05	0.92	0.19	20	
24 A	13.18	13.18	33.402	25.121	284.0	0.068	6.06	101.6	4.6	0.54	3.4	0.09	0.04	0.94	0.20	24	218
30 ISL	13.06 D	13.06	33.395 D	25.139	282.3	0.085	6.00	100.4	4.7	0.56	3.7	0.10	0.11	0.89	0.20	30	
31 A	13.05	13.05	33.412	25.154	280.9	0.088	5.99	100.2	4.7	0.57	3.8	0.10	0.13	0.88	0.20	31	217
42 A	12.89	12.88	33.417	25.190	277.8	0.119	5.90	98.4	4.9	0.64	4.8	0.13	0.26	0.91	0.25	42	216
50 ISL	12.43 D	12.42	33.407 D	25.272	270.2	0.141	5.84	96.4	5.1	0.67	5.4	0.13	0.30	0.81	0.25	50	
51	12.62	12.61	33.417	25.243	273.0	0.143	5.83	96.6	5.1	0.67	5.5	0.13	0.30	0.80	0.25	51	215
60	11.23	11.22	33.498	25.567	242.3	0.167	4.66	75.0	13.1	1.24	14.9	0.07	0.01	0.29	0.16	60	214
70	11.14	11.13	33.521	25.601	239.3	0.191	4.53	72.8	13.9	1.30	15.7	0.05	0.01	0.26	0.14	70	213
75 ISL	10.69 D	10.68	33.563 D	25.714	228.6	0.202	4.32	68.8	15.4	1.38	17.0	0.04	0.01	0.20	0.12	75	
86	10.15	10.14	33.616	25.848	216.0	0.227	3.82	60.1	19.0	1.57	20.1	0.02	0.00	0.06	0.08	86	212
100 ISL	9.75 D	9.74	33.746 D	26.017	200.2	0.256	3.54	55.3	21.4	1.66	21.6	0.01	0.03	0.02	0.07	101	
101	9.76	9.75	33.746	26.015	200.4	0.258	3.53	55.1	21.5	1.66	21.7	0.01	0.03	0.02	0.07	102	211
119	9.35	9.34	33.872	26.181	184.9	0.293	3.39	52.5	24.5	1.73	23.2	0.01	0.00	0.01	0.04	120	210
125 ISL	9.32 D	9.31	33.875 D	26.189	184.4	0.304	3.35	51.8	25.2	1.75	23.5	0.01	0.00	0.01	0.04	126	
140	9.07	9.05	33.927	26.270	176.9	0.331	3.26	50.2	27.0	1.79	24.0	0.01	0.00	0.01	0.04	141	209
150 ISL	8.90 D	8.88	33.964 D	26.326	171.8	0.348	3.21	49.2	28.4	1.83	24.5	0.01	0.00	0.01	0.04	151	
169	8.56	8.54	33.994	26.402	164.7	0.380	3.07	46.7	31.7	1.92	25.8	0.01	0.00	0.01	0.04	170	208
200	8.02	8.00	34.030	26.512	154.7	0.430	2.63	39.6	38.5	2.11	28.6	0.01	0.00	0.00	0.04	201	207
227	7.50	7.48	34.059	26.611	145.6	0.470	2.09	31.1	46.2	2.32	31.6	0.00	0.00			228	206
250 ISL	7.35 D	7.33	34.085 D	26.653	141.9	0.503	1.83	27.1	50.5	2.45	33.2	0.00	0.00			251	
267	7.05	7.02	34.081	26.692	138.4	0.527	1.69	24.9	53.0	2.53	34.0	0.01	0.00			269	205
300 ISL	7.05 D	7.02	34.133 D	26.733	135.0	0.572	1.29	19.0	57.4	2.69	35.5	0.00	0.00			302	
316	6.88	6.85	34.145	26.766	132.0	0.594	1.11	16.3	59.1	2.76	36.0	0.00	0.00			318	204
377	6.82	6.78	34.227	26.839	126.0	0.672	0.71	10.4	63.6	2.91	36.9	0.00	0.00			379	203
400 ISL	6.70 D	6.66	34.256 D	26.879	122.6	0.701	0.59	8.6	66.0	2.97	37.4	0.00	0.00			403	
437	6.50	6.46	34.277	26.922	118.8	0.746	0.44	6.4	70.5	3.05	38.3	0.00	0.00			440	202
500 ISL	5.81 D	5.77	34.281 D	27.014	110.3	0.818	0.34	4.9	80.7	3.14	40.1	0.00	0.00			503	
512	5.75	5.71	34.287	27.026	109.3	0.831	0.32	4.6	82.6	3.16	40.5	0.00	0.00			516	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 90.0 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 5.2 N	120 38.2 W	30/03/08	1210 UTC	3813 m	310 29 kn			1017.9 mb	11.9 C	9.0 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.31	13.31	33.348	25.052	289.8	0.000	6.08	102.2	4.3	0.48	2.5	0.07	0.07	0.62	0.24	0	
2	13.31	13.31	33.348	25.052	289.9	0.006	6.08	102.2	4.3	0.48	2.5	0.07	0.07	0.62	0.24	2	220
10	13.31	13.31	33.348	25.052	290.1	0.029	6.11	102.7	4.3	0.48	2.5	0.07	0.08	0.66	0.20	10	219
20	13.32	13.32	33.348	25.051	290.5	0.058	6.08	102.2	4.2	0.48	2.5	0.07	0.08	0.64	0.19	20	218
30 ISL	13.33 D	13.33	33.347 D	25.048	291.0	0.087	6.08	102.2	4.2	0.47	2.5	0.07	0.07	0.65	0.17	30	
31	13.33	13.33	33.351	25.051	290.7	0.090	6.08	102.2	4.2	0.47	2.5	0.07	0.07	0.65	0.17	31	217
40	13.35	13.34	33.358	25.053	290.8	0.116	6.07	102.1	4.2	0.48	2.4	0.07	0.10	0.67	0.17	40	216
50	13.37	13.36	33.405	25.086	288.0	0.145	6.07	102.2	4.1	0.51	2.9	0.09	0.21	0.67	0.18	50	215
61	13.33	13.32	33.411	25.099	287.1	0.177	6.01	101.1	4.2	0.52	3.0	0.09	0.25	0.56	0.18	61	214
70	11.96	11.95	33.480	25.418	256.7	0.201	4.92	80.4	10.1	1.05	11.5	0.26	0.05	0.21	0.13	70	213
75 ISL	11.56 D	11.55	33.521 D	25.525	246.7	0.214	4.52	73.3	12.9	1.24	14.7	0.19	0.03	0.18	0.11	75	
83	10.71	10.70	33.566	25.712	228.9	0.233	4.07	64.8	16.6	1.45	18.3	0.02	0.00	0.13	0.09	83	212
100 ISL	9.98 D	9.97	33.716 D	25.955	206.1	0.270	3.41	53.5	21.4	1.70	22.3	0.01	0.00	0.05	0.07	100	
101	10.07	10.06	33.708	25.934	208.2	0.272	3.38	53.1	21.6	1.71	22.4	0.01	0.00	0.05	0.07	101	211
121	9.32	9.31	33.881	26.193	183.8	0.311	2.80	43.3	27.7	1.95	25.7	0.01	0.00	0.01	0.06	122	210
125 ISL	9.18 D	9.17	33.908 D	26.237	179.8	0.318	2.78	42.9	28.4	1.97	26.0	0.01	0.00	0.01	0.06	126	
142	8.91	8.89	33.965	26.325	171.7	0.348	2.72	41.7	30.8	2.00	26.8	0.00	0.00	0.00	0.06	143	209
150 ISL	8.81 D	8.79	33.991 D	26.361	168.4	0.362	2.66	40.7	31.7	2.02	27.2	0.00	0.00	0.00	0.06	151	
168	8.69	8.67	34.009	26.394	165.6	0.392	2.52	38.5	33.7	2.08	28.1	0.00	0.01	0.01	0.05	169	208
200 ISL	8.09 D	8.07	34.038 D	26.508	155.1	0.443	2.42	36.5	38.7	2.18	29.4	0.00	0.00	0.00	0.04	201	
204	8.09	8.07	34.043	26.512	154.8	0.449	2.41	36.3	39.3	2.19	29.5	0.00	0.00	0.00	0.04	205	207
230	7.66	7.64	34.027	26.563	150.3	0.489	2.55	38.0	42.3	2.19	30.0	0.01	0.00			231	206
250 ISL	7.55 D	7.53	34.066 D	26.610	146.1	0.519	2.15	32.0	46.4	2.35	31.8	0.01	0.00			251	
269	7.35	7.32	34.088	26.656	142.0	0.546	1.67	24.7	50.5	2.52	33.7	0.00	0.00			271	205
300 ISL	7.15 D	7.12	34.115 D	26.705	137.7	0.589	1.41	20.8	54.8	2.63	34.9	0.00	0.00			302	
317	6.91	6.88	34.115	26.738	134.7	0.613	1.33	19.5	56.9	2.67	35.3	0.00	0.00			319	204
376	6.44	6.41	34.177	26.850	124.6	0.689	0.83	12.0	67.0	2.90	37.8	0.00	0.00			378	203
400 ISL	6.24 D	6.20	34.191 D	26.888	121.3	0.719	0.69	10.0	70.4	2.97	38.5	0.00	0.00			403	
437	6.10	6.06	34.228	26.935	117.2	0.763	0.52	7.5	75.2	3.05	39.4	0.00	0.00			440	202
500 ISL	5.83 D	5.79	34.292 D	27.020	109.8	0.834	0.34	4.9	82.2	3.15	40.4	0.00	0.00			503	
512	5.77	5.73	34.294	27.029	109.0	0.847	0.30	4.3	83.5	3.17	40.6	0.00	0.00			516	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 90.0 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
31 44.7 N	121 19.1 W	30/03/08	0502 UTC	3652 m	320 17 kn			1017.9 mb	12.2 C	9.6 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.86	12.86	33.323	25.122	283.2	0.000	6.10	101.6	5.1	0.59	3.9	0.12	0.18	0.61	0.20	0	
2	12.86	12.86	33.323	25.122	283.2	0.006	6.10	101.6	5.1	0.59	3.9	0.12	0.18	0.61	0.20	2	220
10	12.86	12.86	33.326	25.125	283.2	0.028	6.10	101.6	5.2	0.60	3.9	0.12	0.16	0.61	0.17	10	219
20 ISL	12.86 D	12.86	33.320 D	25.120	283.9	0.057	6.10	101.6	5.2	0.59	3.9	0.12	0.15	0.62	0.18	20	
26	12.87	12.87	33.326	25.123	283.7	0.074	6.09	101.4	5.2	0.59	3.9	0.12	0.14	0.63	0.19	26	218
30 ISL	12.87 D	12.87	33.324 D	25.122	284.0	0.085	6.08	101.3	5.1	0.59	3.9	0.12	0.15	0.64	0.20	30	
40	12.91	12.90	33.357	25.140	282.6	0.113	6.06	101.0	5.0	0.58	3.9	0.12	0.17	0.65	0.22	40	217
49	12.94	12.93	33.366	25.141	282.7	0.139	6.05	100.9	4.9	0.58	3.9	0.12	0.16	0.64	0.20	49	216
50 ISL	12.94 D	12.93	33.364 D	25.139	282.8	0.142	6.05	100.9	4.9	0.58	3.9	0.12	0.16	0.64	0.20	50	
62	12.96	12.95	33.371	25.141	283.0	0.176	6.05	101.0	4.8	0.59	3.9	0.12	0.17	0.64	0.24	62	215
75 ISL	12.39 D	12.38	33.250 D	25.159	281.6	0.212	6.00	98.9	6.1	0.67	4.6	0.16	0.51	0.37	0.17	75	
76	12.39	12.38	33.254	25.162	281.3	0.215	6.00	98.9	6.2	0.68	4.7	0.16	0.53	0.35	0.16	76	214
87	11.92	11.91	33.229	25.231	274.9	0.246	5.78	94.3	7.0	0.74	6.1	0.17	0.47	0.16	0.10	87	213
100 ISL	10.78 D	10.77	33.203 D	25.418	257.3	0.280	5.18	82.4	8.6	0.96	10.2	0.04	0.09	0.05	0.04	100	
101	10.78	10.77	33.205	25.419	257.2	0.283	5.13	81.6	8.8	0.98	10.6	0.03	0.06	0.05	0.04	101	212
110	10.60	10.59	33.295	25.521	247.7	0.306	4.90	77.7	10.7	1.12	12.8	0.02	0.00	0.04	0.04	111	211
125 ISL	9.85 D	9.84	33.628 D	25.909	211.0	0.340	4.04	63.2	17.9	1.48	19.0	0.01	0.00	0.01	0.03	126	
126	9.96	9.95	33.627	25.889	212.9	0.342	3.98	62.4	18.4	1.50	19.4	0.01	0.00	0.01	0.03	127	209
126	9.89	9.88	33.625	25.900	211.9	0.342	3.98	62.3	18.4	1.51	19.5	0.01	0.00	0.01	0.04	127	210
150 ISL	9.15 D	9.13	33.900 D	26.236	180.4	0.389	3.11	47.9	26.7	1.84	25.0	0.00	0.00	0.00	0.04	151	
165	8.82	8.80	33.961	26.336	171.0	0.416	2.77	42.4	30.5	1.97	26.8	0.00	0.00	0.00	0.05	166	208
200 ISL	8.40 D	8.38	34.042 D	26.465	159.4	0.473	2.27	34.4	36.4	2.19	29.3	0.00	0.00	0.01	0.05	201	
202	8.40	8.38	34.043	26.466	159.3	0.477	2.25	34.1	36.7	2.20	29.4	0.00	0.00	0.01	0.05	203	207
231	7.91	7.89	34.084	26.571	149.6	0.521	1.86	27.9	42.6	2.39	31.8	0.00	0.03			232	206
250 ISL	7.72 D	7.70	34.099 D	26.611	146.1	0.549	1.72	25.7	45.6	2.45	32.6	0.00	0.02			251	
270	7.55	7.52	34.105	26.641	143.6	0.578	1.60	23.8	48.6	2.50	33.2	0.00	0.00			272	205
300 ISL	7.21 D	7.18	34.146 D	26.721	136.2	0.620	1.26	18.6	54.3	2.62	34.7	0.00	0.00			302	
318	7.01	6.98	34.159	26.759	132.8	0.645	1.05	15.4	57.7	2.70	35.6	0.00	0.00			320	204
377	6.80	6.76	34.260	26.868	123.3	0.720	0.53	7.8	65.8	2.96	37.0	0.00	0.02			379	203
400 ISL	6.79 D	6.75	34.275 D	26.882	122.4	0.748	0.49	7.2	67.5	2.98	37.4	0.00	0.02			403	
438	6.55	6.51	34.278	26.916	119.5	0.794	0.43	6.3	69.8	3.00	37.9	0.00	0.03			441	202
500 ISL	6.09 D	6.05	34.284 D	26.981	113.7	0.867	0.36	5.2	75.7	3.08	39.1	0.00	0.00			503	
512	6.07	6.02	34.285	26.985	113.6	0.880	0.35	5.0	76.9	3.10	39.3	0.00	0.00			515	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 90.0 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 24.7 N	121 59.2 W	29/03/08	2156 UTC	3928 m	320 22 kn	320 03 05	1	1018.3 mb	14.7 C	12.2 C	15m	6/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.29	13.29	32.999	24.786	315.1	0.000	6.13	102.8	2.8	0.41	0.5	0.03	0.01	0.40	0.09	0	
2	13.29	13.29	32.999	24.786	315.2	0.006	6.13	102.8	2.8	0.41	0.5	0.03	0.01	0.40	0.09	2	220
10	13.28	13.28	32.996	24.786	315.4	0.032	6.13	102.8	2.7	0.40	0.5	0.03	0.00	0.38	0.09	10	219
20	13.27	13.27	33.011	24.800	314.4	0.063	6.13	102.7	2.6	0.39	0.4	0.03	0.00	0.44	0.06	20	218
30	13.18	13.18	33.006	24.814	313.3	0.094	6.14	102.7	2.7	0.40	0.5	0.03	0.04	0.44	0.12	30	217
40	12.71	12.70	32.923	24.843	310.8	0.126	6.21	102.8	3.5	0.45	1.2	0.05	0.03	0.54	0.16	40	216
50	12.36	12.35	32.860	24.861	309.2	0.157	6.23	102.3	3.9	0.48	1.7	0.07	0.08	0.59	0.14	50	215
60	12.35	12.34	32.934	24.921	303.8	0.187	6.17	101.4	4.4	0.52	2.3	0.09	0.19	0.48	0.19	60	214
70	12.18	12.17	32.954	24.969	299.5	0.217	6.15	100.7	5.0	0.57	2.9	0.12	0.35	0.38	0.13	70	213
75 ISL	12.18 D	12.17	33.009 D	25.012	295.5	0.232	6.12	100.2	5.3	0.59	3.1	0.13	0.45	0.30	0.11	75	
85	12.21	12.20	33.073	25.056	291.6	0.262	6.06	99.4	5.9	0.62	3.5	0.14	0.61	0.16	0.10	85	212
100 ISL	12.33 D	12.32	33.176 D	25.113	286.5	0.305	6.01	98.8	6.1	0.65	4.2	0.17	0.57	0.19	0.11	100	
101	12.34	12.33	33.192	25.124	285.6	0.308	6.01	98.9	6.1	0.65	4.2	0.17	0.57	0.19	0.11	101	211
121	11.11	11.10	33.338	25.465	253.4	0.362	4.95	79.4	10.0	1.05	11.5	0.02	0.00	0.03	0.05	122	210
125 ISL	11.02 D	11.00	33.334 D	25.478	252.2	0.372	4.89	78.3	10.4	1.08	12.1	0.02	0.00	0.03	0.05	126	
140	10.37	10.35	33.333	25.591	241.7	0.409	4.75	75.0	12.3	1.19	13.8	0.02	0.00	0.02	0.06	141	209
150 ISL	10.49 D	10.47	33.568 D	25.754	226.5	0.432	4.41	69.9	15.1	1.35	16.4	0.02	0.00	0.01	0.05	151	
170	9.62	9.60	33.684	25.991	204.1	0.475	3.70	57.6	21.0	1.66	21.4	0.01	0.00	0.00	0.03	171	208
200 ISL	9.13 D	9.11	33.922 D	26.257	179.3	0.533	3.37	51.9	25.5	1.76	23.5	0.01	0.00	0.00	0.03	201	
201	9.19	9.17	33.921	26.247	180.4	0.535	3.37	52.0	25.6	1.76	23.5	0.01	0.00	0.00	0.03	202	207
229	8.52	8.50	33.978	26.397	166.4	0.583	3.09	47.0	31.5	1.92	26.1	0.01	0.00			230	206
250 ISL	7.95 D	7.92	33.973 D	26.479	158.7	0.617	2.70	40.5	36.8	2.10	28.7	0.00	0.00			251	
269	7.70	7.67	34.005	26.540	153.1	0.647	2.32	34.6	41.7	2.26	31.0	0.00	0.00			270	205
300 ISL	7.27 D	7.24	34.027 D	26.619	145.9	0.693	1.94	28.7	48.5	2.45	33.3	0.00	0.00			302	
316	7.05	7.02	34.040	26.660	142.1	0.716	1.78	26.2	51.6	2.53	34.2	0.00	0.00			318	204
376	6.62	6.59	34.094	26.761	133.2	0.799	1.26	18.3	60.3	2.75	36.6	0.00	0.00			378	203
400 ISL	6.11 D	6.07	34.084 D	26.819	127.5	0.830	1.12	16.1	64.9	2.83	37.7	0.00	0.00			402	
438	5.88	5.84	34.119	26.876	122.5	0.878	0.92	13.2	72.3	2.94	39.2	0.00	0.00			441	202
500 ISL	5.47 D	5.43	34.179 D	26.974	113.6	0.951	0.59	8.4	82.3	3.10	40.6	0.00	0.00			503	
516	5.41	5.37	34.199	26.997	111.6	0.969	0.50	7.1	84.9	3.14	41.0	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 90.0 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 5.0 N	122 38.9 W	29/03/08	1633 UTC	4069 m	280 20 kn	270 04 06	2	1018.7 mb	14.8 C	13.9 C	20m	8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.54	13.54	33.044	24.771	316.6	0.000	6.06	102.2	2.4	0.37	0.1	0.01	0.00	0.32	0.06	0	
2 A	13.54	13.54	33.044	24.771	316.7	0.006	6.06	102.2	2.4	0.37	0.1	0.01	0.00	0.32	0.06	2	221
10 ISL	13.52 D	13.52	33.041 D	24.773	316.7	0.032	6.06	102.1	2.4	0.37	0.1	0.01	0.00	0.31	0.07	10	
12 A	13.52	13.52	33.043	24.774	316.6	0.038	6.06	102.1	2.4	0.37	0.1	0.01	0.00	0.31	0.07	12	220
20 ISL	13.50 D	13.50	33.041 D	24.777	316.6	0.063	6.06	102.1	2.4	0.36	0.1	0.01	0.00	0.34	0.11	20	
21	13.50	13.50	33.044	24.779	316.4	0.066	6.06	102.1	2.4	0.36	0.1	0.01	0.00	0.34	0.11	21	219
28 A	13.51	13.51	33.043	24.777	316.8	0.089	6.06	102.1	2.5	0.36	0.1	0.01	0.02	0.32	0.05	28	218
30 ISL	13.50 D	13.50	33.041 D	24.777	316.8	0.095	6.06	102.1	2.5	0.36	0.1	0.01	0.01	0.31	0.06	30	
35	13.50	13.50	33.044	24.780	316.7	0.111	6.06	102.1	2.4	0.36	0.1	0.01	0.00	0.30	0.08	35	217
42 A	13.50	13.49	33.046	24.781	316.7	0.133	6.06	102.1	2.4	0.37	0.1	0.01	0.01	0.33	0.08	42	216
50 ISL	13.50 D	13.49	33.042 D	24.779	317.2	0.158	6.05	101.9	2.3	0.37	0.1	0.01	0.01	0.33	0.08	50	
55 A	13.49	13.48	33.045	24.783	316.9	0.174			2.3	0.37	0.1	0.01	0.01	0.33	0.08	55	215
66	13.47	13.46	33.046	24.788	316.7	0.209	6.04	101.7	2.3	0.37	0.1	0.01	0.04	0.35	0.09	66	214
75 A	13.44	13.43	33.044	24.793	316.5	0.238	6.04	101.6	2.3	0.38	0.2	0.02	0.09	0.31	0.10	75	213
88	13.36	13.35	33.031	24.799	316.3	0.279	6.01	100.9	2.5	0.39	0.3	0.03	0.21	0.25	0.10	88	212
100	13.40	13.39	33.202	24.924	304.8	0.316	5.70	95.9	3.3	0.51	1.9	0.24	0.23	0.21	0.14	100	211
120	12.49	12.47	33.264	25.151	283.5	0.375	5.39	89.0	5.3	0.70	5.8	0.05	0.00	0.13	0.12	121	210
125 ISL	12.00 D	11.98	33.200 D	25.195	279.3	0.389	5.34	87.2	5.9	0.76	6.8	0.04	0.00	0.11	0.11	126	
140	11.23	11.21	33.275	25.395	260.5	0.429	5.13	82.5	8.6	0.97	10.2	0.01	0.00	0.04	0.06	141	209
150 ISL	10.47 D	10.45	33.453 D	25.667	234.6	0.454	4.77	75.5	11.6	1.16	13.3	0.01	0.00	0.03	0.05	151	
168	10.02	10.00	33.586	25.848	217.7	0.495	3.98	62.4	17.8	1.50	19.0	0.01	0.00	0.01	0.04	169	208
200	9.34	9.32	33.892	26.200	184.8	0.559	2.73	42.3	27.6	1.96	25.6	0.00	0.00	0.00	0.03	201	207
229	8.79	8.77	33.979	26.356	170.4	0.611	2.67	40.8	31.4	2.02	27.0	0.00	0.00			230	206
250 ISL	8.46 D	8.43	34.014 D	26.435	163.2	0.646	2.55	38.7	34.4	2.09	28.0	0.00	0.00			251	
268	8.23	8.20	34.039	26.489	158.2	0.675	2.40	36.3	37.3	2.16	29.0	0.00	0.00			269	205
300 ISL	7.84 D	7.81	34.082 D	26.581	149.9	0.724	1.95	29.2	43.7	2.35	31.4	0.00	0.00			302	
318	7.60	7.57	34.094	26.625	145.8	0.751	1.67	24.9	47.4	2.47	32.8	0.00	0.00			320	204
377	7.14	7.10	34.156	26.740	135.7	0.834	1.09	16.1	56.1	2.73	35.3	0.00	0.00			379	203
400 ISL	6.96 D	6.92	34.175 D	26.780	132.1	0.864	0.98	14.4	59.4	2.80	36.2	0.00	0.00			402	
437	6.50	6.46	34.162	26.831	127.4	0.912	0.87	12.6	64.7	2.88	37.4	0.00	0.00			440	202
500 ISL	5.79 D	5.75	34.153 D	26.915	119.6	0.990	0.66	9.4	73.7	3.00	39.2	0.00	0.00			503	
516	5.86	5.82	34.187	26.933	118.1	1.009	0.61	8.7	76.0	3.03	39.6	0.00	0.00			519	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 90.0 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 45.0 N	123 20.0 W	29/03/08	0722 UTC	4014 m	300 17 kn			1019.5 mb	14.9 C	12.8 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.00	15.00	33.421	24.756	318.0	0.000	5.84	101.7	2.4	0.33	0.0	0.00	0.01	0.18	0.05	0	
2	15.00	15.00	33.421	24.756	318.1	0.006	5.84	101.7	2.4	0.33	0.0	0.00	0.01	0.18	0.05	2	220
10	15.00	15.00	33.420	24.755	318.4	0.032	5.84	101.7	2.4	0.32	0.0	0.00	0.00	0.18	0.05	10	219
20 ISL	15.00 D	15.00	33.419 D	24.755	318.7	0.064	5.83	101.5	2.3	0.32	0.0	0.00	0.00	0.18	0.05	20	
25	15.00	15.00	33.421	24.756	318.7	0.080	5.83	101.5	2.3	0.32	0.0	0.00	0.00	0.18	0.05	25	218
30 ISL	15.01 D	15.01	33.419 D	24.753	319.2	0.096	5.83	101.5	2.3	0.32	0.0	0.00	0.00	0.18	0.05	30	
41	15.01	15.00	33.421	24.755	319.4	0.131	5.84	101.7	2.3	0.32	0.0	0.00	0.00	0.19	0.05	41	217
50	14.98	14.97	33.422	24.762	318.9	0.159	5.84	101.6	2.3	0.32	0.0	0.00	0.00	0.22	0.06	50	216
62	14.95	14.94	33.417	24.765	319.0	0.198	5.83	101.4	2.3	0.32	0.0	0.00	0.00	0.23	0.07	62	215
75	14.95	14.94	33.415	24.764	319.5	0.239	5.81	101.0	2.3	0.32	0.0	0.00	0.00	0.25	0.08	75	214
87	14.85	14.84	33.405	24.778	318.5	0.277	5.82	101.0	2.3	0.33	0.1	0.02	0.00	0.27	0.10	87	213
100 ISL	13.37 D	13.36	33.279 D	24.990	298.5	0.318	5.57	93.7	4.0	0.57	3.4	0.07	0.00	0.33	0.22	100	
101	13.24	13.23	33.286	25.021	295.5	0.321	5.54	92.9	4.2	0.59	3.7	0.07	0.00	0.33	0.23	101	212
112	12.84	12.82	33.450	25.227	276.1	0.352	5.26	87.6	5.2	0.67	5.6	0.02	0.00	0.18	0.15	112	211
125	12.20	12.18	33.474	25.370	262.8	0.387	4.99	82.0	7.3	0.85	8.6	0.01	0.00	0.09	0.06	126	210
140	11.68	11.66	33.590	25.558	245.2	0.425	4.71	76.6	9.4	0.96	10.8	0.00	0.00	0.04	0.03	141	209
150 ISL	10.75 D	10.73	33.626 D	25.754	226.6	0.449	4.29	68.4	13.4	1.20	14.6	0.00	0.00	0.02	0.03	151	
166	9.93	9.91	33.739	25.983	204.9	0.483	3.60	56.4	20.4	1.61	21.0	0.00	0.00	0.00	0.02	167	208
200 ISL	9.02 D	9.00	33.924 D	26.276	177.5	0.548	3.27	50.3	26.7	1.85	24.3	0.00	0.00	0.00	0.01	201	
201	9.02	9.00	33.927	26.279	177.3	0.550	3.27	50.3	26.8	1.85	24.3	0.00	0.00	0.00	0.01	202	207
228	8.62	8.60	33.994	26.394	166.7	0.596	2.89	44.0	31.5	1.96	26.6	0.00	0.00			229	206
250 ISL	8.45 D	8.42	34.020 D	26.441	162.6	0.633	2.62	39.8	34.6	2.06	28.0	0.00	0.00			251	
269	8.22	8.19	34.039	26.491	158.1	0.663	2.43	36.7	37.3	2.15	29.1	0.00	0.00			270	205
300 ISL	7.41 D	7.38	34.037 D	26.607	147.1	0.710	2.25	33.4	43.3	2.27	31.0	0.00	0.00			302	
319	7.28	7.25	34.045	26.632	145.0	0.738	2.14	31.6	47.3	2.35	32.1	0.00	0.00			321	204
379	6.51	6.48	34.084	26.768	132.5	0.821	1.47	21.3	59.2	2.67	35.8	0.00	0.00			381	203
400 ISL	6.50 D	6.46	34.117 D	26.795	130.2	0.849	1.26	18.3	62.3	2.76	36.7	0.00	0.00			402	
438	6.18	6.14	34.140	26.855	124.8	0.897	0.93	13.4	67.4	2.89	38.1	0.00	0.00			441	202
500 ISL	5.73 D	5.69	34.178 D	26.942	117.0	0.972	0.66	9.4	76.1	3.02	39.7	0.00	0.00			503	
516	5.66	5.62	34.189	26.960	115.4	0.991	0.59	8.4	78.4	3.05	40.1	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 90.0 120.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 24.9 N	123 59.8 W	29/03/08	0001 UTC	4221 m	340 20 kn	350 04 06	1	1020.5 mb	15.0 C	12.2 C		6/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.78	13.78	33.042	24.720	321.4	0.000	6.09	103.2	2.5	0.36	0.0	0.00	0.00	0.23	0.06	0	
2	13.78	13.78	33.042	24.720	321.5	0.006	6.09	103.2	2.5	0.36	0.0	0.00	0.00	0.23	0.06	2	220
10	13.78	13.78	33.041	24.720	321.7	0.032	6.09	103.2	2.4	0.35	0.0	0.00	0.00	0.26	0.04	10	219
20 ISL	13.74 D	13.74	33.041 D	24.728	321.2	0.064	6.10	103.3	2.3	0.35	0.0	0.00	0.04	0.26	0.05	20	
21	13.74	13.74	33.043	24.730	321.1	0.068	6.10	103.3	2.3	0.35	0.0	0.00	0.04	0.26	0.05	21	218
30 ISL	13.68 D	13.68	33.041 D	24.741	320.3	0.096	6.10	103.1	2.3	0.34	0.0	0.00	0.00	0.23	0.05	30	
31	13.68	13.68	33.044	24.743	320.1	0.100	6.10	103.1	2.3	0.34	0.0	0.00	0.00	0.23	0.05	31	217
40	13.65	13.64	33.044	24.750	319.7	0.128	6.09	102.9	2.2	0.35	0.0	0.00	0.00	0.27	0.06	40	216
50	13.60	13.59	33.047	24.762	318.8	0.160	6.11	103.1	2.3	0.35	0.0	0.00	0.02	0.33	0.08	50	215
61	13.50	13.49	33.054	24.788	316.6	0.195	6.08	102.4	2.4	0.37	0.1	0.01	0.02	0.39	0.17	61	214
71	13.46	13.45	33.051	24.794	316.3	0.227	6.05	101.8	2.4	0.38	0.1	0.01	0.09	0.39	0.13	71	213
75 ISL	13.43 D	13.42	33.047 D	24.797	316.1	0.240	6.05	101.8	2.4	0.38	0.1	0.01	0.14	0.38	0.12	75	
86	13.41	13.40	33.052	24.805	315.6	0.274	6.02	101.2	2.4	0.39	0.2	0.02	0.23	0.31	0.09	86	212
100 ISL	12.62 D	12.61	32.980 D	24.906	306.3	0.318	5.87	97.0	4.1	0.57	2.7	0.31	0.12	0.20	0.07	100	
102	12.31	12.30	32.985	24.969	300.3	0.324	5.85	96.1	4.4	0.60	3.2	0.34	0.10	0.18	0.07	102	211
121	11.30	11.29	32.965	25.141	284.2	0.379	5.70	91.6	6.1	0.78	6.6	0.01	0.00	0.08	0.06	122	210
125 ISL	11.17 D	11.15	33.099 D	25.268	272.1	0.391	5.56	89.2	6.8	0.84	7.7	0.01	0.00	0.06	0.06	126	
142	10.98	10.96	33.371	25.514	249.2	0.435	4.80	76.8	10.8	1.12	12.7	0.01	0.00	0.02	0.04	143	209
150 ISL	10.69 D	10.67	33.505 D	25.670	234.5	0.454	4.40	70.0	13.6	1.29	15.4	0.01	0.00	0.02	0.04	151	
171	9.92	9.90	33.689	25.945	208.6	0.501	3.51	55.0	20.8	1.69	21.6	0.00	0.00	0.01 A	0.04 A	172	208
200 ISL	9.26 D	9.24	33.865 D	26.192	185.6	0.558	3.07	47.4	25.8	1.88	24.7	0.00	0.00	0.00	0.05	201	
201	9.27	9.25	33.863	26.189	185.9	0.560	3.06	47.3	25.9	1.88	24.7	0.00	0.00	0.00	0.05	202	207
229	8.77	8.75	33.991	26.368	169.2	0.609	2.64	40.4	31.6	2.06	27.2	0.00	0.00			230	206
250 ISL	8.55 D	8.52	34.050 D	26.449	161.9	0.644	2.26	34.4	35.4	2.20	28.9	0.00	0.00			251	
268	8.38	8.35	34.080	26.499	157.4	0.673	1.98	30.0	38.6	2.31	30.2	0.00	0.00			269	205
300 ISL	7.68 D	7.65	34.088 D	26.609	147.1	0.722	1.88	28.1	44.9	2.43	32.0	0.00	0.00			302	
317	7.38	7.35	34.079	26.645	143.8	0.746	1.82	27.0	48.3	2.48	32.9	0.00	0.00			319	204
379	6.53	6.50	34.081	26.763	133.0	0.832	1.47	21.4	59.1	2.69	35.9	0.00	0.00			381	203
400 ISL	6.36 D	6.32	34.092 D	26.794	130.2	0.860	1.30	18.8	62.3	2.77	36.8	0.00	0.00			402	
440	6.10	6.06	34.129	26.857	124.6	0.911	0.99	14.2	68.3	2.92	38.2	0.00	0.00			443	202
500 ISL	5.65 D	5.61	34.174 D	26.949	116.2	0.983	0.67	9.5	78.2	3.06	40.0	0.00	0.00			503	
514	5.54	5.50	34.180	26.967	114.6	0.999	0.60	8.5	80.5	3.09	40.4	0.00	0.00			517	201

A) SECOND FLUOROMETER READING NOT RECORDED, CHLOROPHYLL AND PHAEOPIGMENT
CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 91.7 26.4

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 14.5 N	117 27.9 W	25/03/08	0822 UTC	23 m	090 02 kn			1015.9 mb	13.0 C	11.9 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.01	14.01	33.572	25.082	286.9	0.000	7.33	125.2	10.2	0.26	2.5			10.64	0.88	0	
1 A	14.01	14.01	33.572	25.082	287.0	0.003	7.33	125.2	10.2	0.26	2.5			10.64	0.88	1	204
6	12.22	12.22	33.599	25.460	251.2	0.016	5.68	93.5	12.8	0.70	8.0			8.94	1.64	6	203
10 ISL	11.72 D	11.72	33.615 D	25.567	241.1	0.026	4.65	75.7	13.5	1.01	12.3			8.88	1.78	10	
11	11.72	11.72	33.614	25.566	241.2	0.029	4.44	72.3	13.7	1.08	13.2			8.85	1.81	11	202
16	11.49	11.49	33.639	25.628	235.4	0.040	3.78	61.3	17.9	1.32	16.3			6.80	1.56	16	201

A) NUTRIENTS WERE FROZEN AND RUN DURING THE CRUISE. VALUES THAT WERE SUSPECT WERE OMITTED.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 93.3 26.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 57.1 N	117 18.5 W	25/03/08	0258 UTC	70 m	230 03 kn			1015.3 mb	16.1 C	14.9 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.77	15.77	33.534	24.673	325.9	0.000	8.45	149.5	8.5	0.09	1.8			3.49	0.01	0	
2 A	15.77	15.77	33.534	24.673	326.0	0.007	8.45	149.5	8.5	0.09	1.8			3.49	0.01	2	208
10	13.88	13.88	33.540	25.085	287.0	0.031	7.54	128.4	3.1	0.21	0.3			11.57	2.60	10	207
15	13.11	13.11	33.554	25.252	271.2	0.045	6.17	103.4	11.6	0.46	4.4			13.19	2.96	15	206
20 ISL	12.17 D	12.17	33.574 D	25.451	252.4	0.058	4.80	78.9	15.2	0.91	10.0			7.58	1.59	20	
21	12.08	12.08	33.582	25.474	250.2	0.061	4.56	74.8	15.6	1.00	11.1			6.18	1.26	21	205
30 ISL	11.36 D	11.36	33.661 D	25.669	231.9	0.082	3.56	57.5	20.9	1.38	15.6			1.55	0.65	30	
31	11.35	11.35	33.662	25.672	231.6	0.085	3.51	56.7	21.2	1.40	15.8			1.35	0.58	31	204
40	10.81	10.81	33.784	25.864	213.6	0.105	2.80	44.8	19.0	1.69	18.1			0.57	0.47	40	203
50	10.11	10.10	33.971	26.131	188.3	0.125	2.04	32.1	28.6	1.96	23.1			0.04	0.34	50	202
61	10.00	9.99	34.004	26.176	184.3	0.145	1.99	31.3	31.3	1.91	23.3			0.07	0.21	61	201

A) NUTRIENTS WERE FROZEN AND RUN DURING THE CRUISE. VALUES THAT WERE SUSPECT WERE OMITTED.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 93.3 28.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 54.7 N	117 23.7 W	25/03/08	1130 UTC	621 m	270 02 kn			1015.0 mb	15.0 C	14.8 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.05	16.05	33.507	24.589	333.9	0.000	6.12	108.9	4.2	0.30	0.0	0.01		0.28	0.04	0	
1 A	16.05	16.05	33.507	24.589	333.9	0.003	6.12	108.9	4.2	0.30	0.0	0.01		0.28	0.04	1	220
10 ISL	15.50 D	15.50	33.494 D	24.703	323.4	0.033	6.24	109.8	4.1	0.29	0.0	0.01		0.28	0.08	10	
11	15.30	15.30	33.496	24.748	319.1	0.036	6.25	109.5	4.1	0.29	0.0	0.01		0.28	0.08	11	219
20 ISL	12.51 D	12.51	33.516 D	25.340	262.9	0.062	5.39	89.2	8.7	0.80	6.6	0.20		1.38	0.44	20	
21	12.44	12.44	33.521	25.358	261.3	0.065	5.25	86.8	9.4	0.87	7.6	0.22		1.48	0.47	21	218
30	11.25	11.25	33.630	25.665	232.2	0.087	3.67	59.2	16.6	1.52	18.4	0.07		0.66	0.29	30	217
40	10.32	10.32	33.707	25.889	211.1	0.109	3.39	53.6	20.1	1.70	21.3	0.02		0.08	0.14	40	216
50	10.30	10.29	33.812	25.975	203.2	0.130	2.76	43.6	23.3	1.91	23.3	0.02		0.03	0.10	50	215
60	10.13	10.12	33.893	26.067	194.7	0.150	2.47	38.9	25.6	2.03	24.7	0.01		0.01	0.10	60	214
69	9.99	9.98	33.953	26.138	188.1	0.167	2.30	36.1	27.3	2.15	25.5	0.01		0.01	0.10	69	213
75 ISL	9.83 D	9.82	33.959 D	26.169	185.2	0.178	2.30	36.0	27.7	2.14	25.8	0.01		0.01	0.10	75	
85	9.77	9.76	33.989	26.203	182.2	0.197	2.31	36.1	28.3	2.11	26.1	0.01		0.01	0.10	85	212
100	9.77	9.76	34.082	26.276	175.7	0.224	1.94	30.4	30.7	2.26	27.2	0.01		0.00	0.09	101	211
119	9.70	9.69	34.163	26.351	168.9	0.256	1.63	25.5	33.3	2.37	28.2	0.01		0.00	0.08	120	210
125 ISL	9.67 D	9.66	34.179 D	26.369	167.4	0.266	1.56	24.4	33.9	2.39	28.5	0.01		0.00	0.08	126	
139	9.58	9.56	34.204	26.404	164.4	0.290	1.45	22.6	35.2	2.43	29.0	0.01		0.00	0.08	140	209
150 ISL	9.49 D	9.47	34.208 D	26.422	162.9	0.308	1.39	21.6	36.1	2.46	29.4	0.01		0.00	0.08	151	
169	9.29	9.27	34.229	26.471	158.5	0.338	1.32	20.5	37.6	2.50	29.9	0.01		0.00	0.07	170	208
200 ISL	9.10 D	9.08	34.253 D	26.521	154.4	0.387	1.21	18.7	40.3	2.53	30.4			0.01	0.08	201	
201	9.09	9.07	34.253	26.523	154.2	0.388	1.21	18.7	40.4	2.53	30.4			0.01	0.08	202	207
229	8.50	8.48	34.200	26.574	149.6	0.431	1.38	21.0	43.3	2.55	31.5					230	206
250 ISL	8.29 D	8.26	34.206 D	26.611	146.4	0.462	1.26	19.1	45.2	2.62	32.1					252	
269	8.30	8.27	34.244	26.640	144.1	0.489	1.08	16.4	47.0	2.69	32.6					271	205
300 ISL	8.10 D	8.07	34.275 D	26.694	139.4	0.533	0.87	13.1	51.1	2.78	33.7					302	
319	7.82	7.79	34.278	26.738	135.4	0.559	0.77	11.5	53.7	2.83	34.3					321	204
377	7.43	7.39	34.289	26.804	129.9	0.636	0.61	9.1	59.0	2.92	35.7					379	203
400 ISL	7.14 D	7.10	34.284 D	26.841	126.5	0.666	0.57	8.4	61.8	2.96	36.3					403	
438	6.87	6.83	34.286	26.880	123.2	0.713			66.5	3.03	37.4					441	202
500 ISL	6.51 D	6.46	34.301 D	26.941	118.1	0.788	0.38	5.5	72.3	3.14	38.8					503	
514	6.39	6.34	34.309	26.963	116.1	0.805	0.35	5.1	73.6	3.16	39.1					518	201

A) NUTRIENTS WERE FROZEN AND RUN DURING THE CRUISE. VALUES THAT WERE SUSPECT WERE OMITTED.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 93.3 30.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 50.7 N	117 31.8 W	25/03/08	1437 UTC	847 m	220 01 kn	140 03 06	2	1015.0 mb	14.8 C	13.1 C	17m	8/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.53	15.53	33.486	24.689	324.4	0.000	6.15	108.3	4.0	0.27	0.0	0.00	0.00	0.32	0.05	0	
2	15.53	15.53	33.486	24.689	324.4	0.006	6.15	108.3	4.0	0.27	0.0	0.00	0.00	0.32	0.05	2	220
10	14.46	14.46	33.473	24.912	303.5	0.032	6.76	116.5	2.3	0.24	0.0	0.00	0.01	0.39	0.09	10	219
20	13.09	13.09	33.517	25.227	273.7	0.060	6.59	110.4	1.4	0.37	1.2	0.09	0.19	2.44	0.66	20	218
30	11.70	11.70	33.540	25.512	246.8	0.086	4.29	69.8	12.7	1.22	13.7	0.13	0.01	0.80	0.19	30	217
40	11.38	11.38	33.571	25.596	239.1	0.111	4.09	66.1	14.2	1.33	15.4	0.11	0.01	0.42	0.20	40	216
50	10.98	10.97	33.645	25.725	227.0	0.134	3.54	56.7	17.6	1.56	18.8	0.04	0.00	0.24	0.15	50	215
60	10.54	10.53	33.733	25.872	213.2	0.156	3.12	49.6	20.7	1.74	21.4	0.02	0.00	0.12	0.13	60	214
70	10.38	10.37	33.809	25.959	205.2	0.177	2.75	43.5	23.2	1.88	22.8	0.02	0.00	0.04	0.12	70	213
75 ISL	10.38 D	10.37	33.884 D	26.018	199.7	0.187	2.60	41.2	24.5	1.94	23.5	0.02	0.01	0.03	0.11	75	
85	10.07	10.06	33.951	26.123	189.9	0.207	2.33	36.7	27.0	2.05	24.9	0.01	0.04	0.02	0.09	85	212
100 ISL	10.03 D	10.02	34.051 D	26.208	182.2	0.235	1.93	30.4	29.7	2.20	26.1	0.01	0.03	0.01	0.09	101	
101	10.03	10.02	34.052	26.209	182.1	0.236	1.91	30.1	29.8	2.21	26.2	0.01		0.01	0.09	102	211
119	9.86	9.85	34.117	26.289	174.9	0.268	1.75	27.4	31.7	2.27	27.1	0.01	0.02	0.01	0.08	120	210
125 ISL	9.78 D	9.77	34.128 D	26.311	172.9	0.279	1.68	26.3	32.6	2.30	27.5	0.01	0.02	0.01	0.08	126	
140	9.61	9.59	34.185	26.384	166.3	0.304	1.50	23.4	34.8	2.39	28.4	0.01	0.01	0.00	0.08	141	209
150 ISL	9.65 D	9.63	34.227 D	26.410	164.0	0.321	1.37	21.4	35.8	2.43	28.8	0.01	0.01	0.00	0.08	151	
169	9.51	9.49	34.244	26.447	160.9	0.352	1.18	18.4	37.4	2.48	29.4	0.00	0.00	0.00	0.07	170	208
200 ISL	9.29 D	9.27	34.261 D	26.497	156.7	0.401	1.10	17.0	39.4	2.54	30.1	0.01	0.01	0.01	0.07	201	
201	9.27	9.25	34.262	26.501	156.4	0.403	1.10	17.0	39.5	2.54	30.1	0.01	0.01	0.01	0.07	202	207
229	9.07	9.04	34.274	26.543	152.9	0.446	1.06	16.3	41.5	2.59	30.5	0.00	0.00			230	206
250 ISL	8.91 D	8.88	34.276 D	26.570	150.7	0.478	1.03	15.8	43.1	2.63	31.0	0.00	0.00			252	
269	8.68	8.65	34.286	26.614	146.7	0.506	0.99	15.1	44.7	2.66	31.5	0.00	0.00			271	205
300 ISL	8.39 D	8.36	34.281 D	26.655	143.3	0.551	0.90	13.7	47.6	2.72	32.3	0.00	0.04			302	
319	8.22	8.19	34.285	26.685	140.8	0.578	0.85	12.9	49.6	2.76	32.8	0.00	0.06			321	204
378	7.43	7.39	34.261	26.782	132.0	0.658	0.75	11.1	56.9	2.87	35.0	0.00	0.00			380	203
400 ISL	7.31 D	7.27	34.255 D	26.794	131.1	0.687	0.69	10.2	58.6	2.90	35.5	0.00	0.00			403	
438	7.17	7.13	34.279	26.833	127.9	0.736	0.58	8.6	61.5	2.96	36.2	0.00	0.00			441	202
500 ISL	6.55 D	6.50	34.302 D	26.936	118.5	0.813	0.42	6.1	70.1	3.08	38.1	0.00	0.00			503	
515	6.46	6.41	34.299	26.946	117.7	0.831	0.38	5.5	72.2	3.11	38.5	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 93.3 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 41.0 N	117 52.2 W	25/03/08	1912 UTC	636 m	230 04 kn	180 03 06	1	1018.3 mb	15.9 C	13.9 C	12m	4/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.73	15.73	33.505	24.659	327.2	0.000	6.18	109.2	5.2	0.27	0.0	0.00	0.08	0.43	0.08	0	
2 A	15.73	15.73	33.505	24.660	327.3	0.007	6.18	109.2	5.2	0.27	0.0	0.00	0.08	0.43	0.08	2	221
7 A	15.37	15.37	33.502	24.737	320.0	0.023	6.22	109.2	5.1	0.26	0.0	0.00	0.03	0.54	0.09	7	220
10 ISL	15.11 D	15.11	33.496 D	24.790	315.1	0.032	6.25	109.1	5.1	0.26	0.0	0.00	0.04	0.59	0.10	10	
17 A	14.91	14.91	33.495	24.833	311.2	0.054	6.31	109.7	5.1	0.27	0.0	0.00	0.06	0.82	0.18	17	219
20 ISL	14.30 D	14.30	33.504 D	24.970	298.2	0.063	6.14	105.4	5.6	0.36	1.1	0.05	0.09	1.14	0.29	20	
26 A	13.33	13.33	33.495	25.163	280.0	0.081	5.67	95.4	6.9	0.59	4.1	0.19	0.16	1.56	0.46	26	218
30 ISL	12.83 D	12.83	33.500 D	25.266	270.3	0.092	5.37	89.5	7.7	0.76	6.4	0.31	0.23	1.26	0.39	30	
33 A	12.57	12.57	33.504	25.320	265.2	0.100	5.15	85.3	8.3	0.88	8.1	0.38	0.26	0.95	0.32	33	217
45 A	12.05	12.04	33.501	25.417	256.2	0.131	4.49	73.6	10.6	1.12	12.2	0.09	0.04	0.59	0.30	45	216
50 ISL	11.60 D	11.59	33.511 D	25.509	247.6	0.144	4.25	69.0	11.2	1.25	14.1	0.06	0.11	0.44	0.24	50	
52	11.58	11.57	33.518	25.518	246.7	0.149	4.13	67.0	11.7	1.31	14.9	0.05	0.14	0.38	0.22	52	215
60	11.09	11.08	33.642	25.704	229.3	0.168	3.35	53.8	16.5	1.60	19.0	0.02	0.00	0.24	0.19	60	214
70	10.79	10.78	33.690	25.795	220.8	0.190	3.23	51.6	17.9	1.68	20.2	0.01	0.01	0.08	0.13	70	213
75 ISL	10.81 D	10.80	33.723 D	25.817	218.8	0.201	3.04	48.6	19.1	1.75	21.0	0.01	0.03	0.07	0.13	75	
85	10.57	10.56	33.800	25.919	209.3	0.222	2.64	42.0	21.7	1.89	22.6	0.01	0.06	0.06	0.13	85	212
100 ISL	10.08 D	10.07	33.925 D	26.101	192.3	0.253	2.46	38.7	24.8	1.99	24.2	0.01	0.02	0.01	0.09	101	
101	10.10	10.09	33.926	26.099	192.6	0.255	2.46	38.7	25.0	1.99	24.3	0.01	0.02	0.01	0.09	102	211
120	9.85	9.84	34.016	26.212	182.2	0.290	2.23	34.9	27.3	2.09	25.5	0.00	0.03	0.01	0.07	121	210
125 ISL	9.77 D	9.76	34.059 D	26.259	177.9	0.299	2.20	34.4	27.9	2.11	25.8	0.00	0.02	0.01	0.07	126	
140	9.58	9.56	34.082	26.308	173.4	0.325	2.09	32.6	29.7	2.16	26.6	0.01	0.00	0.00	0.07	141	209
150 ISL	9.52 D	9.50	34.123 D	26.350	169.6	0.343	1.91	29.7	31.3	2.23	27.2	0.01	0.00	0.00	0.07	151	
169	9.37	9.35	34.194	26.431	162.4	0.374	1.59	24.7	34.4	2.36	28.4	0.01	0.01	0.01	0.06	170	208
200	8.80	8.78	34.180	26.511	155.1	0.423	1.59	24.4	37.9	2.43	29.8	0.04	0.01	0.00	0.05	201	207
228	8.52	8.50	34.201	26.572	149.9	0.466	1.42	21.6	41.1	2.51	30.8	0.01	0.04			229	206
250 ISL	8.38 D	8.35	34.234 D	26.619	145.7	0.499	1.30	19.7	44.0	2.57	31.7	0.00	0.02			251	
268	8.06	8.03	34.213	26.651	142.8	0.525	1.21	18.2	46.5	2.62	32.4	0.00	0.00			270	205
300 ISL	7.67 D	7.64	34.215 D	26.710	137.6	0.569	1.07	16.0	50.6	2.72	33.6	0.00	0.01			302	
318	7.50	7.47	34.214	26.734	135.5	0.594	0.99	14.7	52.9	2.77	34.3	0.00	0.02			320	204
378	7.00	6.96	34.255	26.837	126.4	0.673	0.64	9.4	61.3	2.95	36.3	0.00	0.01			380	203
400 ISL	6.92 D	6.88	34.262 D	26.854	125.1	0.700	0.58	8.5	63.3	2.98	36.7	0.00	0.07			403	
437	6.75	6.71	34.279	26.891	122.1	0.746	0.50	7.3	66.3	3.02	37.3	0.00	0.16			440	202
500 ISL	6.31 D	6.26	34.314 D	26.977	114.4	0.820	0.35	5.1	73.5	3.13	38.7	0.00	0.03			503	
515	6.24	6.19	34.318	26.989	113.4	0.838	0.31	4.5	75.2	3.15	39.0	0.00	0.00			519	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 93.3 40.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 30.9 N	118 12.5 W	25/03/08	2336 UTC	1680 m	260 10 kn	240 03 06	1	1016.9 mb	16.0 C	14.9 C		6/8	AC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.24	15.24	33.478	24.747	318.8	0.000	6.41	112.2	1.6	0.23	0.0	0.00	0.13	0.85	0.19	0	
1	15.24	15.24	33.478	24.747	318.9	0.003	6.41	112.2	1.6	0.23	0.0	0.00	0.13	0.85	0.19	1	220
10	14.63	14.63	33.474	24.876	306.8	0.031	6.48	112.0	1.6	0.23	0.0	0.00	0.10	0.96	0.23	10	219
20	13.83	13.83	33.454	25.029	292.6	0.061	6.13	104.2	4.4	0.41	1.3	0.07	0.07	1.25	0.38	20	218
30 ISL	13.62 D	13.62	33.452 D	25.071	288.9	0.090	5.91	100.1	5.3	0.51	2.4	0.12	0.08	1.04	0.44	30	
31	13.61	13.61	33.455	25.075	288.5	0.093	5.90	99.9	5.3	0.51	2.5	0.12	0.08	1.01	0.44	31	217
40	13.52	13.51	33.453	25.092	287.1	0.119	5.88	99.3	5.5	0.51	2.7	0.12	0.06	1.07	0.42	40	216
49	12.93	12.92	33.458	25.214	275.7	0.145	5.41	90.3	7.2	0.73	5.9	0.22	0.06	0.71	0.33	49	215
50 ISL	12.57 D	12.56	33.484 D	25.305	267.1	0.147	5.33	88.3	7.5	0.77	6.5	0.22	0.06	0.67	0.31	50	
59	12.13	12.12	33.518	25.416	256.7	0.171	4.56	74.9	10.9	1.11	11.8	0.16	0.04	0.34	0.20	59	214
70	11.60	11.59	33.583	25.565	242.7	0.198	3.94	64.0	14.1	1.36	15.6	0.07	0.00	0.21	0.23	70	213
75 ISL	11.23 D	11.22	33.661 D	25.694	230.6	0.210	3.62	58.3	16.0	1.48	17.4	0.05	0.00	0.16	0.19	75	
84	11.02	11.01	33.705	25.766	223.9	0.231	3.05	48.9	19.5	1.70	20.3	0.02	0.00	0.08	0.11	84	212
100	10.43	10.42	33.892	26.016	200.5	0.265	2.31	36.6	25.4	2.04	24.1	0.01	0.00	0.01	0.07	100	211
120	9.99	9.98	34.031	26.200	183.4	0.303	1.96	30.8	29.6	2.20	26.3	0.00	0.00	0.01	0.09	121	210
125 ISL	9.97 D	9.96	34.060 D	26.226	181.0	0.312	1.90	29.9	30.2	2.22	26.6	0.00	0.00	0.01	0.09	126	
141	9.85	9.83	34.090	26.270	177.2	0.341	1.79	28.1	31.4	2.27	27.1	0.00	0.00	0.01	0.07	142	209
150 ISL	9.58 D	9.56	34.106 D	26.327	171.8	0.356	1.84	28.7	31.9	2.27	27.4	0.00	0.00	0.01	0.06	151	
169	9.33	9.31	34.101	26.365	168.6	0.389	1.92	29.8	33.3	2.26	28.1	0.01	0.00	0.02	0.06	170	208
200	9.02	9.00	34.191	26.485	157.7	0.439	1.48	22.8	38.3	2.45	30.0	0.01	0.04	0.00	0.07	201	207
227	8.58	8.56	34.183	26.548	152.1	0.481	1.46	22.3	41.5	2.52	31.1	0.01	0.05			228	206
250 ISL	8.44 D	8.41	34.208 D	26.590	148.5	0.516	1.31	19.9	44.0	2.59	31.7	0.00	0.02			251	
269	8.32	8.29	34.228	26.624	145.6	0.544	1.16	17.6	46.0	2.64	32.2	0.00	0.00			271	205
300 ISL	8.03 D	8.00	34.239 D	26.677	141.0	0.588	0.99	14.9	48.6	2.72	32.9	0.00	0.01			302	
319	7.97	7.94	34.258	26.701	139.1	0.615	0.90	13.5	50.6	2.77	33.5	0.00	0.01			321	204
378	7.05	7.01	34.262	26.836	126.6	0.693	0.62	9.1	62.5	2.98	36.6	0.00	0.01			380	203
400 ISL	6.71 D	6.67	34.278 D	26.895	121.1	0.720	0.54	7.9	66.0	3.04	37.5	0.00	0.04			403	
440	6.45	6.41	34.294	26.942	116.9	0.768	0.41	6.0	71.6	3.13	38.7	0.00	0.10			443	202
500 ISL	6.06 D	6.02	34.324 D	27.017	110.4	0.836	0.29	4.2	78.4	3.20	39.9	0.00	0.13			503	
512	6.03	5.98	34.325	27.021	110.1	0.849	0.27	3.9	79.8	3.22	40.1	0.00	0.13			516	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 93.3 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 20.5 N	118 33.1 W	26/03/08	0514 UTC	1409 m	310 16 kn			1018.5 mb	14.6 C	13.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.43	14.43	33.320	24.800	313.8	0.000	6.06	104.2	2.8	0.37	0.1	0.00	0.04	0.42	0.10	0	
2	14.43	14.43	33.320	24.800	313.9	0.006	6.06	104.2	2.8	0.37	0.1	0.00	0.04	0.42	0.10	2	220
10	14.43	14.43	33.319	24.799	314.2	0.031	6.05	104.1	2.8	0.35	0.1	0.00	0.01	0.42	0.10	10	219
20 ISL	14.41 D	14.41	33.315 D	24.801	314.3	0.063	6.05	104.0	2.7	0.35	0.2	0.00	0.05	0.44	0.11	20	
21	14.40	14.40	33.319	24.806	313.8	0.066	6.05	104.0	2.7	0.35	0.2	0.00	0.05	0.44	0.11	21	218
30	14.15	14.15	33.319	24.859	309.1	0.094	6.05	103.5	2.8	0.36	0.3	0.01	0.03	0.58	0.16	30	217
40	13.82	13.81	33.314	24.923	303.2	0.125	5.96	101.2	3.2	0.43	1.2	0.06	0.09	0.55	0.17	40	216
50	13.22	13.21	33.316	25.047	291.7	0.154	5.76	96.6	4.3	0.58	3.3	0.15	0.12	0.55	0.21	50	215
60	11.63	11.62	33.420	25.433	255.1	0.182	4.84	78.6	10.0	1.07	11.7	0.04	0.01	0.27	0.14	60	214
70	11.23	11.22	33.438	25.520	247.0	0.207	4.80	77.2	11.4	1.18	13.0	0.02	0.02	0.19	0.10	70	213
75 ISL	10.99 D	10.98	33.489 D	25.603	239.2	0.219	4.51	72.2	13.3	1.29	14.9	0.02	0.02	0.15	0.09	75	
85	10.46	10.45	33.626	25.803	220.4	0.242	3.84	60.8	17.4	1.52	19.1	0.01	0.01	0.07	0.07	85	212
100 ISL	10.00 D	9.99	33.749 D	25.977	204.0	0.274	3.37	52.9	21.0	1.71	21.8	0.00	0.02	0.03	0.06	100	
101	10.02	10.01	33.746	25.972	204.6	0.276	3.35	52.6	21.2	1.72	21.9	0.00	0.02	0.03	0.06	101	211
117	9.86	9.85	33.790	26.033	199.0	0.308	3.18	49.8	22.6	1.78	22.8	0.00	0.00	0.02	0.06	118	210
125 ISL	9.45 D	9.44	33.876 D	26.168	186.3	0.324	3.01	46.7	24.8	1.85	24.0	0.00	0.00	0.01	0.06	126	
139	9.10	9.08	33.952	26.284	175.5	0.349	2.70	41.6	29.1	1.99	26.1	0.00	0.00	0.00	0.05	140	209
150 ISL	8.93 D	8.91	33.978 D	26.332	171.2	0.368	2.60	39.9	30.8	2.04	26.9	0.00	0.00	0.00	0.05	151	
169	8.72	8.70	34.010	26.390	166.0	0.400	2.51	38.4	32.8	2.09	27.7	0.00	0.00	0.00	0.05	170	208
200 ISL	8.52 D	8.50	34.046 D	26.450	160.8	0.451	2.30	35.0	35.8	2.17	28.8	0.00	0.00	0.00	0.04	201	
202	8.47	8.45	34.048	26.459	160.0	0.454	2.29	34.8	36.0	2.18	28.9	0.00	0.00	0.00	0.04	203	207
229	7.98	7.96	34.058	26.541	152.5	0.496	2.15	32.3	40.6	2.27	30.4	0.01	0.01			230	206
250 ISL	7.75 D	7.73	34.073 D	26.586	148.4	0.528	1.75	26.2	43.8	2.42	31.6	0.01	0.01			251	
267	7.94	7.91	34.163	26.630	144.8	0.553	1.40	21.0	46.3	2.55	32.6	0.00	0.00			269	205
300 ISL	7.60 D	7.57	34.189 D	26.700	138.5	0.599	1.11	16.5	50.9	2.68	34.0	0.00	0.01			302	
317	7.47	7.44	34.205	26.731	135.7	0.623	1.03	15.3	53.2	2.72	34.6	0.00	0.01			319	204
382	6.89	6.85	34.223	26.827	127.3	0.708	0.73	10.7	61.8	2.89	36.6	0.00	0.02			384	203
400 ISL	6.64 D	6.60	34.236 D	26.871	123.2	0.731	0.65	9.5	64.4	2.95	37.2	0.00	0.02			403	
435	6.43	6.39	34.254	26.913	119.6	0.773	0.51	7.4	69.2	3.05	38.3	0.00	0.01			438	202
500 ISL	6.08 D	6.04	34.303 D	26.998	112.2	0.848	0.33	4.7	76.2	3.13	39.4	0.00	0.00			503	
511	6.05	6.00	34.311	27.008	111.3	0.861	0.30	4.3	77.4	3.14	39.6	0.00	0.00			515	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 93.3 50.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 10.8 N	118 53.5 W	26/03/08	0944 UTC	1463 m	320 25 kn			1018.6 mb	14.1 C	12.8 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.57	14.57	33.310	24.762	317.4	0.000	5.96	102.8	2.4	0.35	0.0	0.00	0.00	0.25	0.06	0	
2	14.57	14.57	33.310	24.762	317.4	0.006	5.96	102.8	2.4	0.35	0.0	0.00	0.00	0.25	0.06	2	220
10 ISL	14.56 D	14.56	33.307 D	24.762	317.7	0.032	5.96	102.8	2.4	0.34	0.0	0.00	0.01	0.25	0.07	10	
11	14.56	14.56	33.312	24.766	317.3	0.035	5.96	102.8	2.4	0.34	0.0	0.00	0.01	0.25	0.07	11	219
20	14.53	14.53	33.305	24.768	317.5	0.063	5.98	103.1	2.4	0.34	0.0	0.00	0.01	0.28	0.08	20	218
30	14.30	14.30	33.291	24.806	314.2	0.095	5.98	102.6	2.4	0.35	0.1	0.00	0.03	0.52	0.18	30	217
40	12.99	12.98	33.309	25.087	287.6	0.125	5.71	95.3	4.5	0.61	3.7	0.27	0.06	0.69	0.27	40	216
50 ISL	12.48 D	12.47	33.347 D	25.216	275.5	0.153	5.51	91.0	6.0	0.75	6.3	0.22	0.04	0.50	0.23	50	
51	12.52	12.51	33.340	25.203	276.8	0.156	5.49	90.8	6.1	0.76	6.5	0.21	0.04	0.47	0.22	51	215
60	12.18	12.17	33.373	25.294	268.4	0.181	5.19	85.2	7.8	0.91	9.0	0.12	0.00	0.41	0.23	60	214
70	11.92	11.91	33.458	25.409	257.6	0.207	4.60	75.1	10.1	1.10	12.2	0.06	0.00	0.25	0.14	70	213
75 ISL	11.53 D	11.52	33.483 D	25.501	249.0	0.220	4.24	68.7	12.2	1.24	14.2	0.04	0.00	0.18	0.11	75	
85	11.25	11.24	33.629	25.665	233.5	0.244	3.58	57.7	16.4	1.51	17.8	0.02	0.00	0.08	0.09	85	212
100 ISL	10.83 D	10.82	33.737 D	25.825	218.7	0.278	3.05	48.7	20.1	1.71	20.6	0.01	0.01	0.03	0.09	100	
101	10.86	10.85	33.735	25.818	219.4	0.280	3.04	48.6	20.2	1.72	20.7	0.01	0.01	0.03	0.09	101	211
119	10.01	10.00	33.731	25.962	205.9	0.318	3.53	55.4	20.3	1.64	21.3	0.01	0.00	0.01	0.05	120	210
125 ISL	9.75 D	9.74	33.783 D	26.046	198.0	0.330	3.47	54.2	21.2	1.67	22.0	0.01	0.00	0.01	0.05	126	
140	9.59	9.57	33.832	26.111	192.1	0.359	3.12	48.6	24.2	1.81	23.9	0.01	0.00	0.01	0.04	141	209
150 ISL	9.39 D	9.37	33.916 D	26.210	182.9	0.378	2.92	45.3	26.3	1.90	25.0	0.01	0.00	0.01	0.04	151	
170	9.03	9.01	33.983	26.320	172.7	0.414	2.55	39.2	30.6	2.06	27.0	0.00	0.00	0.00	0.05	171	208
200 ISL	8.49 D	8.47	34.054 D	26.460	159.8	0.464	2.23	33.9	36.2	2.21	29.3	0.00	0.00	0.00	0.04	201	
203	8.48	8.46	34.057	26.464	159.5	0.468	2.21	33.6	36.7	2.22	29.5	0.00	0.00	0.00	0.04	204	207
229	8.05	8.03	34.080	26.548	151.9	0.509	1.99	30.0	41.3	2.35	31.1	0.00	0.00			230	206
250 ISL	7.60 D	7.58	34.090 D	26.621	145.1	0.540	1.84	27.4	45.0	2.44	32.4	0.00	0.00			251	
269	7.48	7.45	34.091	26.640	143.6	0.568	1.71	25.4	48.4	2.51	33.5	0.00	0.00			271	205
300 ISL	7.07 D	7.04	34.096 D	26.701	138.0	0.611	1.50	22.1	54.1	2.64	35.1	0.00	0.01			302	
314	6.89	6.86	34.099	26.728	135.6	0.630	1.41	20.7	56.5	2.69	35.7	0.00	0.01			316	204
375	6.44	6.41	34.145	26.825	127.0	0.710	0.99	14.4	64.8	2.88	37.9	0.00	0.00			377	203
400 ISL	6.27 D	6.23	34.156 D	26.856	124.3	0.742	0.81	11.7	68.1	2.96	38.6	0.00	0.00			403	
437	6.16	6.12	34.215	26.917	118.9	0.787	0.57	8.2	72.7	3.06	39.4	0.00	0.00			440	202
500 ISL	5.96 D	5.92	34.290 D	27.002	111.6	0.859	0.37	5.3	78.8	3.16	40.3	0.00	0.00			503	
515	5.92	5.88	34.295	27.011	110.9	0.876	0.32	4.6	80.2	3.18	40.5	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 93.3 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 1.0 N	119 13.9 W	26/03/08	1420 UTC	1578 m	310 20 kn	310 05 06	1	1019.9 mb	14.8 C	12.6 C	15m	2/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.55	14.55	33.334	24.785	315.2	0.000	5.97	102.9	2.6	0.34	0.0	0.00	0.03	0.29	0.06	0	
2	14.55	14.55	33.334	24.785	315.3	0.006	5.97	102.9	2.6	0.34	0.0	0.00	0.03	0.29	0.06	2	220
10	14.55	14.55	33.334	24.785	315.5	0.032	5.96	102.8	2.6	0.44	0.0	0.00	0.03	0.28	0.07	10	219
20 ISL	14.53 D	14.53	33.331 D	24.788	315.6	0.063	5.96	102.7	2.6	0.35	0.0	0.00	0.00	0.30	0.07	20	
21	14.54	14.54	33.334	24.788	315.6	0.066	5.96	102.7	2.6	0.34	0.0	0.00	0.00	0.30	0.07	21	218
30 ISL	14.00 D	14.00	33.368 D	24.928	302.5	0.094	6.05	103.2	3.2	0.37	0.4	0.02	0.32	0.79	0.21	30	
31	14.00	14.00	33.368	24.928	302.5	0.097	6.05	103.2	3.3	0.37	0.4	0.02	0.35	0.84	0.22	31	217
40	13.62	13.61	33.447	25.067	289.5	0.124	5.84	98.9	4.4	0.47	2.0	0.08	0.28	0.67	0.23	40	216
50	13.13	13.12	33.460	25.176	279.4	0.152	5.54	92.8	6.0	0.65	4.5	0.15	0.51	0.51	0.21	50	215
61	11.66	11.65	33.563	25.539	245.1	0.181	4.42	71.8	12.3	1.20	13.8	0.16	0.02	0.33	0.14	61	214
70	10.98	10.97	33.627	25.712	228.7	0.202	3.83	61.4	16.3	1.47	18.2	0.05	0.06	0.19	0.09	70	213
75 ISL	10.64 D	10.63	33.684 D	25.816	218.9	0.214	3.63	57.8	17.7	1.55	19.5	0.04	0.05	0.16	0.09	75	
85	10.46	10.45	33.715	25.872	213.8	0.235	3.37	53.4	19.7	1.65	21.0	0.01	0.00	0.12	0.09	85	212
100 ISL	9.99 D	9.98	33.784 D	26.006	201.3	0.266	3.10	48.7	22.7	1.78	23.0	0.00	0.00	0.05	0.07	100	
101	9.99	9.98	33.789	26.010	200.9	0.268	3.09	48.5	22.9	1.79	23.1	0.00	0.00	0.05	0.07	101	211
119	9.53	9.52	33.892	26.168	186.3	0.303	2.78	43.2	26.7	1.93	25.2	0.00	0.11	0.01	0.06	120	210
125 ISL	9.31 D	9.30	33.927 D	26.231	180.4	0.314	2.72	42.1	27.8	1.96	25.7	0.00	0.09	0.01	0.06	126	
140	9.04	9.02	33.970	26.308	173.3	0.341	2.61	40.2	30.4	2.03	26.9	0.00	0.00	0.00	0.06	141	209
150 ISL	8.84 D	8.82	34.028 D	26.385	166.1	0.358	2.51	38.5	32.3	2.08	27.6	0.00	0.02	0.00	0.05	151	
175	8.52	8.50	34.062	26.462	159.2	0.398	2.22	33.8	36.9	2.21	29.3	0.00	0.08	0.00	0.04	176	208
200 ISL	8.22 D	8.20	34.100 D	26.537	152.4	0.437	1.90	28.7	41.2	2.35	30.8	0.00	0.02	0.00	0.04	201	
202	8.22	8.20	34.102	26.539	152.3	0.440	1.88	28.4	41.5	2.36	30.9	0.00	0.01	0.00	0.04	203	207
230	8.06	8.04	34.127	26.583	148.6	0.482	1.65	24.9	44.3	2.47	32.1	0.00	0.00			231	206
250 ISL	7.91 D	7.88	34.143 D	26.618	145.5	0.512	1.45	21.8	47.5	2.57	33.1	0.00	0.00			251	
270	7.64	7.61	34.168	26.677	140.2	0.540	1.26	18.8	50.9	2.66	34.0	0.00	0.00			272	205
300 ISL	7.31 D	7.28	34.204 D	26.753	133.3	0.581	1.02	15.1	55.2	2.77	35.2	0.00	0.00			302	
316	7.28	7.25	34.212	26.764	132.6	0.603	0.91	13.5	57.4	2.82	35.7	0.00	0.00			318	204
377	6.81	6.77	34.245	26.855	124.5	0.681	0.63	9.2	65.0	2.99	37.5	0.00	0.00			379	203
400 ISL	6.71 D	6.67	34.253 D	26.875	122.9	0.710	0.53	7.7	68.3	3.04	38.2	0.00	0.00			403	
439	6.34	6.30	34.293	26.956	115.5	0.756	0.39	5.6	73.8	3.12	39.2	0.00	0.00			442	202
500 ISL	5.95 D	5.91	34.326 D	27.032	108.8	0.824	0.28	4.0	81.4	3.20	40.3	0.00	0.00			503	
512	5.88	5.84	34.335	27.048	107.4	0.837	0.26	3.7	82.9	3.21	40.5	0.00	0.00			516	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 93.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 50.7 N	119 34.2 W	26/03/08	1919 UTC	1795 m	330 27 kn	320 05 05	1	1022.0 mb	17.2 C	13.9 C	11m	2/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.26	14.26	33.370	24.874	306.8	0.000	6.06	103.9	3.1	0.34	0.2	0.01	0.12	0.65	0.13	0	
2 A	14.26	14.26	33.370	24.874	306.8	0.006	6.06	103.9	3.1	0.34	0.2	0.01	0.12	0.65	0.13	2	221
6 A	14.26	14.26	33.369	24.874	307.0	0.018	6.06	103.9	3.1	0.34	0.2	0.01	0.06	0.64	0.13	6	220
10 ISL	14.25 D	14.25	33.369 D	24.876	306.9	0.031	6.06	103.9	3.1	0.34	0.2	0.01	0.03	0.65	0.14	10	
15 A	14.24	14.24	33.375	24.883	306.4	0.046	6.07	104.0	3.1	0.33	0.2	0.01	0.01	0.66	0.15	15	219
20 ISL	14.22 D	14.22	33.376 D	24.888	306.0	0.061	6.07	104.0	3.1	0.33	0.2	0.01	0.01	0.69	0.14	20	
25 A	14.21	14.21	33.382	24.895	305.5	0.077	6.07	104.0	3.2	0.34	0.2	0.01	0.02	0.73	0.14	25	218
30 A	14.14	14.14	33.411	24.932	302.1	0.092	6.04	103.3	3.3	0.35	0.3	0.02	0.03	0.79	0.15	30	217
42 A	13.26	13.25	33.408	25.110	285.5	0.127	5.58	93.7	5.5	0.60	4.0	0.11	0.20	0.79	0.35	42	216
50 ISL	11.89 D	11.88	33.482 D	25.433	254.9	0.149	4.90	80.0	9.9	1.02	10.6	0.21	0.09	0.62	0.21	50	
51	11.89	11.88	33.485	25.435	254.7	0.151	4.81	78.5	10.5	1.07	11.4	0.22	0.07	0.59	0.19	51	215
60	11.23	11.22	33.569	25.622	237.1	0.173	4.21	67.8	14.2	1.33	15.7	0.11	0.00	0.38	0.17	60	214
69	10.94	10.93	33.614	25.709	229.0	0.194	3.94	63.1	16.0	1.46	17.6	0.06	0.00	0.29	0.12	69	213
75 ISL	10.57 D	10.56	33.663 D	25.812	219.2	0.208	3.74	59.4	17.4	1.54	18.8	0.04	0.00	0.20	0.15	75	
84	10.40	10.39	33.691	25.864	214.5	0.227	3.48	55.1	19.5	1.64	20.5	0.03	0.00	0.07	0.21	84	212
100	9.97	9.96	33.751	25.984	203.4	0.261	3.26	51.1	22.0	1.76	22.5	0.02	0.00	0.04	0.09	100	211
120	9.43	9.42	33.884	26.178	185.3	0.300	2.98	46.2	25.9	1.88	24.4	0.01	0.00	0.00	0.06	121	210
125 ISL	9.28 D	9.27	33.934 D	26.241	179.4	0.309	2.87	44.4	27.1	1.92	25.0	0.01	0.00	0.00	0.06	126	
139	9.08	9.06	33.989	26.316	172.5	0.333	2.56	39.4	30.5	2.05	26.6	0.01	0.00	0.00	0.05	140	209
150 ISL	8.86 D	8.84	34.027 D	26.381	166.5	0.352	2.39	36.6	32.9	2.12	27.6	0.01	0.00	0.00	0.05	151	
169	8.54	8.52	34.070	26.465	158.8	0.383	2.14	32.6	36.8	2.23	29.1	0.00	0.00	0.00	0.06	170	208
200 ISL	8.11 D	8.09	34.137 D	26.583	148.0	0.430	1.62	24.4	43.6	2.46	31.5	0.01	0.00	0.00	0.05	201	
202	8.10	8.08	34.140	26.587	147.7	0.433	1.59	24.0	44.0	2.47	31.6	0.01	0.00	0.00	0.05	203	207
230	7.91	7.89	34.193	26.657	141.5	0.474	1.18	17.7	48.7	2.64	33.2	0.01	0.00			231	206
250 ISL	7.72 D	7.70	34.194 D	26.686	139.0	0.502	1.07	16.0	51.5	2.70	34.0	0.01	0.00			251	
269	7.49	7.46	34.201	26.725	135.6	0.528	1.02	15.2	53.9	2.74	34.7	0.01	0.00			271	205
300 ISL	7.25 D	7.22	34.222 D	26.775	131.1	0.569	0.84	12.4	58.0	2.84	35.7	0.00	0.00			302	
319	7.09	7.06	34.239	26.811	128.0	0.594	0.72	10.6	60.6	2.90	36.3	0.00	0.00			321	204
377	6.64	6.61	34.280	26.905	119.6	0.666	0.47	6.9	68.6	3.05	37.9	0.00	0.00			379	203
400 ISL	6.49 D	6.45	34.296 D	26.938	116.8	0.693	0.42	6.1	70.9	3.09	38.3	0.00	0.00			403	
438	6.38	6.34	34.305	26.960	115.2	0.737	0.36	5.2	74.1	3.14	38.8	0.00	0.00			441	202
500 ISL	6.15 D	6.11	34.327 D	27.008	111.3	0.807	0.29	4.2	78.3	3.17	39.5	0.00	0.00			503	
514	6.10	6.05	34.331	27.017	110.6	0.823	0.27	3.9	79.3	3.18	39.6	0.00	0.00			518	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 93.3 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 30.6 N	120 14.7 W	27/03/08	0222 UTC	3930 m	330 30 kn	330 06 05	1	1021.7 mb	14.5 C	12.5 C		1/8	CI

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.18	14.18	33.285	24.825	311.4	0.000	5.99	102.5	1.4	0.42	0.2	0.01		0.39	0.10	0	
2	14.18	14.18	33.285	24.825	311.5	0.006	5.99	102.5	1.4	0.42	0.2	0.01		0.39	0.10	2	220
10	14.18	14.18	33.284	24.825	311.7	0.031	5.99	102.5	1.4	0.37	0.2	0.01	0.00	0.41	0.10	10	219
20 ISL	14.18 D	14.18	33.285 D	24.826	311.9	0.062	5.97	102.1	1.3	0.40	0.2	0.02	0.01	0.42	0.11	20	
21	14.17	14.17	33.294	24.835	311.1	0.065	5.97	102.1	1.3	0.40	0.2	0.02	0.01	0.42	0.11	21	218
30	14.19	14.19	33.285	24.824	312.4	0.094	5.98	102.3	1.4	0.36	0.2	0.01	0.00	0.39	0.11	30	217
40	14.16	14.15	33.292	24.836	311.5	0.125	5.98	102.3	1.4	0.36	0.2	0.02	0.00	0.46	0.13	40	216
50	14.07	14.06	33.292	24.855	310.0	0.156	5.93	101.2						0.45	0.14	50	215
61	12.56	12.55	33.232	25.112	285.7	0.189	5.52	91.3	3.8	0.71	5.4	0.15	0.01	0.31	0.23	61	214
70	11.99	11.98	33.237	25.224	275.2	0.214	5.42	88.5	5.1	0.83	7.5	0.05	0.00	0.25	0.16	70	213
75 ISL	11.84 D	11.83	33.272 D	25.279	270.0	0.227	5.34	87.0	6.0	0.88	8.4	0.04	0.00	0.21	0.14	75	
85	11.60	11.59	33.349	25.384	260.3	0.254	5.09	82.5	8.3	0.98	10.4	0.02	0.00	0.14	0.10	85	212
100 ISL	10.82 D	10.81	33.551 D	25.682	232.3	0.291	4.39	70.1	13.0	1.28	15.3	0.01	0.00	0.04	0.04	100	
101	10.84	10.83	33.552	25.679	232.5	0.293	4.34	69.3	13.3	1.30	15.7	0.01	0.00	0.03	0.04	101	211
121	9.95	9.94	33.753	25.989	203.3	0.337	3.48	54.6	20.3	1.67	21.6	0.00	0.00	0.01	0.03	122	210
125 ISL	9.69 D	9.68	33.825 D	26.089	193.9	0.345	3.39	52.9	21.4	1.72	22.3	0.00	0.01	0.01	0.03	126	
140	9.41	9.39	33.889	26.185	185.0	0.373	3.15	48.8	24.6	1.84	24.0	0.00	0.04	0.01	0.02	141	209
150 ISL	9.32 D	9.30	33.923 D	26.227	181.3	0.391	3.04	47.1	25.9	1.88	24.6	0.00	0.03	0.01	0.02	151	
167	9.18	9.16	33.970	26.286	175.9	0.422	2.87	44.3	27.9	1.93	25.5	0.00	0.00	0.00	0.03	168	208
200	8.60	8.58	34.051	26.441	161.7	0.478	2.46	37.5	34.3	2.13	28.2	0.00	0.00	0.01	0.03	201	207
227	8.22	8.20	34.105	26.542	152.5	0.520	2.02	30.5	40.3	2.32	30.5	0.00	0.00			228	206
250 ISL	8.15 D	8.12	34.133 D	26.575	149.8	0.555	1.67	25.2	44.0	2.46	32.0	0.00	0.00			251	
272	7.86	7.83	34.157	26.637	144.2	0.587	1.39	20.8	46.9	2.57	33.2	0.00	0.00			274	205
300 ISL	7.63 D	7.60	34.191 D	26.697	138.8	0.627	1.14	17.0	50.7	2.68	34.3	0.00	0.00			302	
317	7.54	7.51	34.202	26.719	137.0	0.650	1.02	15.2	52.9	2.74	34.9	0.00	0.00			319	204
376	7.21	7.17	34.257	26.810	129.2	0.729	0.64	9.5	60.2	2.91	36.4	0.00	0.00			378	203
400 ISL	7.04 D	7.00	34.269 D	26.843	126.3	0.759	0.54	7.9	63.1	2.97	37.0	0.00	0.00			403	
439	6.79	6.75	34.289	26.893	121.9	0.808	0.43	6.3	67.6	3.06	37.9	0.00	0.01			442	202
500 ISL	6.43 D	6.38	34.315 D	26.962	116.0	0.880	0.32	4.6	73.9	3.14	39.0	0.00	0.00			503	
513	6.37	6.32	34.319	26.973	115.0	0.895	0.30	4.3	75.2	3.16	39.2	0.00	0.00			516	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 93.3 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 10.7 N	120 55.2 W	27/03/08	0928 UTC	3822 m	330 30 kn			1022.8 mb	13.2 C	11.1 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.18	14.18	33.270	24.814	312.5	0.000	6.02	103.0	2.8	0.35	0.1	0.00	0.00	0.43	0.10	0	
2	14.18	14.18	33.270	24.814	312.6	0.006	6.02	103.0	2.8	0.35	0.1	0.00	0.00	0.43	0.10	2	220
10 ISL	14.19 D	14.19	33.271 D	24.813	312.9	0.031	6.01	102.8	2.7	0.34	0.1	0.00	0.00	0.41	0.10	10	
11	14.19	14.19	33.274	24.815	312.7	0.034	6.01	102.8	2.7	0.34	0.1	0.00	0.00	0.41	0.10	11	219
20	14.20	14.20	33.271	24.811	313.4	0.063	6.02	103.0	2.7	0.35	0.1	0.00	0.03	0.41	0.10	20	218
30	14.17	14.17	33.265	24.813	313.5	0.094	6.02	103.0	2.7	0.34	0.1	0.01	0.08	0.43	0.10	30	217
40	13.08	13.07	33.127	24.928	302.7	0.125	6.09	101.7	3.9	0.46	1.6	0.07	0.35	0.51	0.17	40	216
50	12.82	12.81	33.113	24.969	299.1	0.155	6.08	101.0	4.3	0.49	2.1	0.09	0.32	0.49	0.18	50	215
60	12.66	12.65	33.160	25.036	292.9	0.184	5.99	99.2	5.0	0.55	2.8	0.15	0.39	0.43	0.17	60	214
69	11.67	11.66	33.123	25.195	277.9	0.210	5.73	92.9	6.9	0.76	6.4	0.24	0.04	0.24	0.11	69	213
75 ISL	11.07 D	11.06	33.186 D	25.353	262.9	0.226	5.55	88.9	8.2	0.88	8.5	0.16	0.02	0.15	0.08	75	
84	10.79	10.78	33.264	25.463	252.6	0.250	5.21	83.0	10.5	1.05	11.6	0.01	0.00	0.07	0.05	84	212
100 ISL	10.20 D	10.19	33.561 D	25.797	221.2	0.287	4.30	67.7	15.9	1.42	17.4	0.01	0.00	0.03	0.04	100	
101	10.31	10.30	33.518	25.745	226.2	0.290	4.24	66.9	16.3	1.44	17.7	0.01	0.00	0.03	0.04	101	211
119	10.05	10.04	33.705	25.935	208.5	0.329	3.32	52.2	21.5	1.74	22.4	0.01	0.02	0.02	0.06	120	210
125 ISL	10.01 D	10.00	33.719 D	25.953	206.9	0.341	3.28	51.5	22.0	1.75	22.6	0.01	0.08	0.02	0.06	126	
139	9.82	9.80	33.745	26.005	202.2	0.370	3.20	50.0	22.7	1.79	23.2	0.00	0.21	0.01	0.06	140	209
150 ISL	9.38 D	9.36	33.757 D	26.087	194.5	0.392	3.03	46.9	24.6	1.85	24.2	0.00	0.16	0.01	0.06	151	
169	9.19	9.17	33.913	26.240	180.4	0.427	2.72	42.0	28.3	1.97	26.1	0.00	0.01	0.00	0.07	170	208
200 ISL	8.73 D	8.71	34.004 D	26.384	167.1	0.481	2.59	39.6	32.1	2.05	27.4	0.00	0.01	0.00	0.05	201	
202	8.78	8.76	33.998	26.372	168.4	0.485	2.58	39.5	32.3	2.05	27.5	0.00	0.01	0.00	0.05	203	207
229	8.41	8.39	34.051	26.471	159.4	0.529	2.19	33.2	36.8	2.21	29.4	0.01	0.02			230	206
250 ISL	8.04 D	8.01	34.077 D	26.547	152.3	0.561	1.97	29.6	40.4	2.31	30.8	0.01	0.02			251	
268	7.90	7.87	34.088	26.577	149.8	0.589	1.84	27.6	43.6	2.38	31.8	0.00	0.01			270	205
300 ISL	7.17 D	7.14	34.063 D	26.661	141.8	0.635	1.80	26.5	49.2	2.46	33.1	0.00	0.01			302	
318	7.00	6.97	34.065	26.687	139.6	0.661	1.78	26.1	52.4	2.51	33.8	0.00	0.01			320	204
379	6.40	6.37	34.116	26.807	128.7	0.742	1.14	16.5	63.8	2.79	37.1	0.00	0.00			381	203
400 ISL	6.25 D	6.21	34.141 D	26.847	125.1	0.769	0.96	13.9	67.5	2.87	37.9	0.00	0.00			403	
436	5.94	5.90	34.172	26.911	119.3	0.813	0.72	10.3	73.4	2.98	39.0	0.00	0.01			439	202
500 ISL	5.51 D	5.47	34.209 D	26.993	111.9	0.887	0.50	7.1	81.6	3.10	40.4	0.00	0.00			503	
516	5.49	5.45	34.220	27.005	111.0	0.905	0.45	6.4	83.6	3.13	40.8	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 93.3 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 50.7 N	121 35.3 W	27/03/08	1731 UTC	4109 m	330 28 kn	350 07 06	1	1024.1 mb	13.2 C	11.0 C	11m	1/8	CU

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.30	13.30	33.156	24.906	303.8	0.000	6.13	102.9	3.7	0.45	1.4	0.06	0.04	0.49	0.04	0	
2 A	13.30	13.30	33.156	24.906	303.8	0.006	6.13	102.9	3.7	0.45	1.4	0.06	0.04	0.49	0.04	2	221
7 A	13.29	13.29	33.156	24.908	303.7	0.021	6.13	102.9	3.7	0.45	1.4	0.06	0.03	0.54	0.03	7	220
10 ISL	13.29 D	13.29	33.154 D	24.906	304.0	0.030	6.13	102.9	3.7	0.45	1.4	0.06	0.02	0.54	0.04	10	
16 A	13.29	13.29	33.156	24.908	304.0	0.049	6.13	102.9	3.7	0.45	1.4	0.06	0.02	0.55	0.05	16	219
20 ISL	13.28 D	13.28	33.153 D	24.908	304.1	0.061	6.13	102.9	3.6	0.45	1.4	0.06	0.02	0.56	0.05	20	
24 A	13.29	13.29	33.156	24.908	304.2	0.073	6.13	102.9	3.6	0.45	1.4	0.06	0.03	0.56 B	0.04 B	24	218
30 A	13.26	13.26	33.154	24.913	303.9	0.091	6.14	103.0	3.7	0.45	1.4	0.06	0.03	0.54	0.04	30	217
43 A	12.84	12.83	33.166	25.005	295.4	0.130	6.19	102.9	4.7	0.53	2.6	0.10	0.04	0.65	0.11	43	216
50 ISL	12.81 D	12.80	33.203 D	25.040	292.3	0.151	6.15	102.2	4.8	0.56	2.9	0.12	0.06	0.69	0.15	50	
52	12.80	12.79	33.211	25.048	291.5	0.157	6.14	102.0	4.8	0.56	3.0	0.12	0.07	0.70	0.16	52	215
60	12.83	12.82	33.268	25.087	288.1	0.180	6.08	101.1	4.8	0.57	3.3	0.14	0.16	0.67	0.15	60	214
70	12.92	12.91	33.345	25.129	284.3	0.208	6.02	100.4	4.8	0.59	3.3	0.14	0.38	0.44	0.12	70	213
75 ISL	12.88 D	12.87	33.352 D	25.143	283.2	0.223	5.98	99.6	5.1	0.62	3.8	0.19	0.35	0.36	0.11	75	
85	12.19	12.18	33.258	25.203	277.6	0.251	5.79	95.0	6.1	0.73	5.5	0.26	0.20	0.24	0.10	85	212
100 ISL	11.24 D	11.23	33.320 D	25.427	256.5	0.291	5.08	81.7	8.5	0.98	10.1	0.05	0.01	0.07	0.07	100	
101	11.25	11.24	33.316	25.422	257.0	0.293	5.03	80.9	8.7	1.00	10.4	0.03	0.00	0.06	0.07	101	211
121	10.24	10.23	33.450	25.704	230.5	0.342	4.45	70.1	14.9	1.36	16.3	0.01	0.00	0.02	0.04	122	210
125 ISL	10.16 D	10.15	33.499 D	25.756	225.6	0.351	4.28	67.3	16.3	1.43	17.5	0.01	0.00	0.02	0.04	126	
140	9.51	9.49	33.678	26.004	202.2	0.383	3.68	57.1	21.3	1.67	21.5	0.01	0.00	0.01	0.03	141	209
150 ISL	9.39 D	9.37	33.791 D	26.112	192.2	0.403	3.46	53.6	23.6	1.75	23.0	0.01	0.00	0.01	0.03	151	
169	8.97	8.95	33.880	26.249	179.4	0.438	3.25	49.9	27.0	1.84	24.5	0.00	0.00	0.01	0.04	170	208
200 ISL	8.48 D	8.46	33.971 D	26.397	165.8	0.492	3.15	47.9	31.0	1.92	25.8	0.00	0.00	0.01	0.03	201	
201	8.48	8.46	33.973	26.399	165.7	0.493	3.15	47.9	31.1	1.92	25.8	0.00	0.00	0.01	0.03	202	207
227	8.20	8.18	34.017	26.476	158.7	0.536	2.38	35.9	37.0	2.20	29.3	0.00	0.00			228	206
250 ISL	8.06 D	8.03	34.060 D	26.531	153.9	0.571	1.87	28.2	41.3	2.38	31.4	0.00	0.00			251	
269	7.89	7.86	34.089	26.579	149.6	0.600	1.57	23.5	44.7	2.49	32.7	0.00	0.00			271	205
300 ISL	7.17 D	7.14	34.065 D	26.663	141.7	0.645	1.34	19.8	50.8	2.63	34.2	0.00	0.00			302	
320	7.15	7.12	34.127	26.715	137.1	0.673	1.27	18.7	54.3	2.69	34.8	0.00	0.00			322	204
378	6.82	6.78	34.156	26.783	131.3	0.751	0.99	14.5	60.3	2.82	36.3	0.00	0.01			380	203
400 ISL	6.64 D	6.60	34.181 D	26.828	127.3	0.780	0.86	12.5	63.1	2.89	36.9	0.00	0.01			402	
438	6.45	6.41	34.212	26.877	123.0	0.827	0.64	9.3	68.3	3.01	38.0	0.00	0.00			441	202
500 ISL	6.13 D	6.09	34.270 D	26.965	115.3	0.901	0.46	6.6	76.3	3.12	39.3	0.00	0.00			503	
512	5.89	5.85	34.244	26.975	114.2	0.915	0.43	6.2	77.8	3.14	39.6	0.00	0.00			515	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
B) SECOND FLUOROMETER READING RECALCULATED BECAUSE ACID RATIO > TAU OF PURE CHL-A.
CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ACID RATIO FROM ADJACENT SAMPLES.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 93.3 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 30.8 N	122 14.9 W	28/03/08	0010 UTC	4195 m	340 32 kn	330 07 05	1	1020.9 mb	14.0 C	11.6 C		4/8	AC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.36	15.36	33.497	24.735	320.0	0.000	5.80	101.8	2.4	0.34	0.0	0.00	0.00	0.15	0.04	0	
3	15.36	15.36	33.497	24.736	320.0	0.010	5.80	101.8	2.4	0.34	0.0	0.00	0.00	0.15	0.04	3	220
10	15.36	15.36	33.500	24.738	320.0	0.032	5.79	101.6	2.4	0.33	0.0	0.00	0.00	0.15	0.04	10	219
20 ISL	15.36 D	15.36	33.495 D	24.734	320.7	0.064	5.78	101.4	2.4	0.33	0.0	0.00	0.00	0.15	0.04	20	
26	15.37	15.37	33.498	24.735	320.8	0.083	5.78	101.4	2.4	0.33	0.0	0.00	0.00	0.15	0.04	26	218
30 ISL	15.37 D	15.37	33.494 D	24.732	321.2	0.096	5.78	101.4	2.3	0.33	0.0	0.00	0.00	0.15	0.04	30	
42	15.36	15.35	33.498	24.738	321.0	0.135	5.79	101.6	2.2	0.33	0.0	0.00	0.01	0.15	0.05	42	217
50 ISL	15.37 D	15.36	33.495 D	24.733	321.7	0.160	5.80	101.8	2.2	0.31	0.0	0.00	0.00	0.15	0.04	50	
51	15.37	15.36	33.498	24.736	321.5	0.164	5.80	101.8	2.2	0.31	0.0	0.00	0.00	0.15	0.04	51	216
62	15.36	15.35	33.497	24.737	321.7	0.199	5.79	101.6	2.2	0.31	0.0	0.00	0.00	0.16	0.04	62	215
75 ISL	15.36 D	15.35	33.495 D	24.736	322.2	0.241	5.79	101.6	2.0	0.31	0.0	0.00	0.00	0.16	0.04	75	
77	15.35	15.34	33.497	24.740	321.9	0.247	5.79	101.5	2.0	0.31	0.0	0.00	0.00	0.16	0.04	77	214
86	15.32	15.31	33.499	24.749	321.4	0.276	5.79	101.5	2.0	0.31	0.0	0.00	0.00	0.19	0.06	86	213
100 ISL	14.05 D	14.04	33.332 D	24.892	308.0	0.320	5.77	98.5	2.5	0.39	0.5	0.15	0.01	0.44	0.26	100	
101	14.11	14.10	33.333	24.880	309.1	0.323	5.77	98.6	2.5	0.40	0.5	0.16	0.01	0.45	0.27	101	212
111	13.51	13.49	33.448	25.092	289.1	0.353	5.47	92.4	3.6	0.52	3.3	0.03	0.00	0.22	0.26	111	211
125	12.84	12.82	33.499	25.266	272.8	0.393	5.25	87.4	5.0	0.65	5.6	0.02	0.00	0.14	0.13	126	210
142	12.08	12.06	33.481	25.398	260.5	0.438	4.99	81.8	7.3	0.85	8.8	0.01	0.00	0.08	0.07	143	209
150 ISL	11.52 D	11.50	33.497 D	25.515	249.4	0.458	4.77	77.3	9.3	0.98	11.0	0.01	0.00	0.05	0.05	151	
164	10.90	10.88	33.585	25.696	232.4	0.492	4.36	69.7	13.2	1.22	15.0	0.00	0.01	0.02	0.03	165	208
200 ISL	9.62 D	9.60	33.843 D	26.116	192.9	0.569	3.79	59.0	20.6	1.54	20.5	0.00	0.00	0.00	0.02	201	
201	9.63	9.61	33.839	26.111	193.4	0.571	3.78	58.9	20.8	1.55	20.6	0.00	0.00	0.00	0.02	202	207
227	9.09	9.07	33.943	26.280	177.7	0.619	3.38	52.0	26.1	1.74	23.6	0.00	0.01			228	206
250 ISL	8.74 D	8.71	33.985 D	26.369	169.6	0.659	2.94	44.9	30.7	1.94	26.1	0.00	0.01			251	
272	8.44	8.41	34.025	26.447	162.5	0.695	2.55	38.7	35.1	2.13	28.2	0.00	0.00			273	205
300 ISL	7.86 D	7.83	34.061 D	26.562	151.7	0.739	2.25	33.7	40.5	2.28	30.2	0.00	0.01			302	
318	7.70	7.67	34.061	26.585	149.7	0.766	2.09	31.2	44.2	2.36	31.3	0.00	0.01			320	204
377	6.56	6.53	34.078	26.756	133.6	0.850	1.49	21.7	59.3	2.69	35.7	0.00	0.00			379	203
400 ISL	6.35 D	6.31	34.100 D	26.802	129.5	0.880	1.27	18.4	63.8	2.79	37.0	0.00	0.00			402	
439	6.00	5.96	34.132	26.872	123.1	0.929	0.93	13.3	70.5	2.94	38.7	0.00	0.00			442	202
500 ISL	5.54 D	5.50	34.191 D	26.975	113.6	1.002	0.59	8.4	80.7	3.09	40.6	0.00	0.00			503	
508	5.51	5.47	34.194	26.982	113.1	1.011	0.55	7.8	82.0	3.11	40.8	0.00	0.00			511	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 93.3 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 11.0 N	122 55.2 W	28/03/08	0718 UTC	3961 m	320 28 kn			1021.8 mb	13.0 C	10.9 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.53	15.53	33.500	24.700	323.3	0.000	5.76	101.4	3.0	0.32	0.0	0.00	0.00	0.12	0.03	0	
3	15.53	15.53	33.500	24.700	323.4	0.010	5.76	101.4	3.0	0.32	0.0	0.00	0.00	0.12	0.03	3	221
10	15.53	15.53	33.498	24.699	323.7	0.032	5.77	101.6	2.5	0.32	0.0	0.00	0.00	0.12	0.03	10	220
20 ISL	15.53 D	15.53	33.496 D	24.698	324.2	0.065	5.77	101.6	2.4	0.32	0.0	0.00	0.00	0.12	0.03	20	
25	15.53	15.53	33.499	24.700	324.1	0.081	5.77	101.6	2.4	0.32	0.0	0.00	0.00	0.12	0.03	25	219
30 ISL	15.53 D	15.53	33.496 D	24.698	324.5	0.097	5.77	101.6	2.4	0.32	0.0	0.00	0.00	0.12	0.03	30	
40	15.53	15.52	33.502	24.703	324.3	0.130	5.76	101.4	2.4	0.32	0.0	0.00	0.00	0.12	0.03	40	218
50 ISL	15.53 D	15.52	33.496 D	24.699	325.0	0.162	5.77	101.6	2.3	0.32	0.0	0.00	0.00	0.12	0.03	50	
51	15.53	15.52	33.499	24.701	324.8	0.165	5.77	101.6	2.3	0.32	0.0	0.00	0.00	0.12	0.03	51	217
63	15.47	15.46	33.507	24.721	323.3	0.204	5.77	101.4	2.3	0.32	0.0	0.00	0.00	0.17	0.05	63	216
74	15.19	15.18	33.507	24.783	317.7	0.239	5.72	100.0	2.3	0.35	0.1	0.04	0.00	0.47	0.21	74	215
75 ISL	15.17 D	15.16	33.502 D	24.783	317.7	0.243	5.72	100.0	2.3	0.35	0.1	0.05	0.00	0.47	0.21	75	
79	15.04	15.03	33.486	24.800	316.3	0.255	5.70	99.3	2.3	0.35	0.3	0.10	0.01	0.46	0.22	79	214
86	14.51	14.50	33.413	24.857	310.9	0.277	5.64	97.2	2.7	0.42	1.1	0.14	0.00	0.31	0.19	86	213
100	13.72	13.71	33.476	25.071	290.9	0.319	5.39	91.4	4.1	0.55	3.8	0.03	0.00	0.16	0.13	100	212
112	13.21	13.19	33.505	25.197	279.1	0.354	5.25	88.1	4.8	0.63	5.2	0.02	0.00	0.10	0.09	112	211
125	12.31	12.29	33.488	25.360	263.8	0.389			7.0	0.82	8.2	0.01	0.00	0.05	0.05	126	210
139	12.13	12.11	33.615	25.493	251.5	0.425	4.86	79.8	7.9	0.85	9.2	0.00	0.00	0.04	0.04	140	209
150 ISL	11.21 D	11.19	33.559 D	25.620	239.4	0.452	4.55	73.2	10.7	1.04	12.2	0.00	0.03	0.03	0.03	151	
164	10.53	10.51	33.664	25.822	220.3	0.484	4.13	65.5	15.2	1.33	16.7	0.00	0.07	0.01	0.02	165	208
200 ISL	9.37 D	9.35	33.863 D	26.172	187.5	0.558	3.42	53.0	23.7	1.69	22.8	0.00	0.00	0.00	0.02	201	
201	9.33	9.31	33.869	26.184	186.4	0.559	3.40	52.6	23.9	1.70	22.9	0.00	0.00	0.00	0.02	202	207
229	8.78	8.76	33.977	26.356	170.4	0.609	2.88	44.0	30.0	1.94	26.0	0.00	0.00			230	206
250 ISL	8.58 D	8.55	34.008 D	26.411	165.5	0.645	2.69	41.0	32.8	2.03	27.3	0.00	0.00			251	
269	8.35	8.32	34.028	26.463	160.9	0.676	2.55	38.6	35.3	2.10	28.2	0.00	0.00			270	205
300 ISL	7.77 D	7.74	34.061 D	26.575	150.4	0.724	2.11	31.6	42.0	2.30	30.7	0.00	0.00			302	
318	7.57	7.54	34.076	26.616	146.8	0.751	1.84	27.4	46.1	2.42	32.2	0.00	0.00			320	204
380	6.75	6.71	34.099	26.748	134.6	0.838	1.32	19.3	57.2	2.67	35.6	0.00	0.00			382	203
400 ISL	6.37 D	6.33	34.093 D	26.793	130.3	0.864	1.15	16.6	61.0	2.75	36.5	0.00	0.00			402	
444	6.14	6.10	34.152	26.870	123.5	0.920	0.83	12.0	68.9	2.91	38.2	0.00	0.01			447	202
500 ISL	5.79 D	5.75	34.190 D	26.944	116.8	0.987	0.61	8.7	76.5	3.02	39.5	0.00	0.00			503	
516	5.65	5.61	34.194	26.965	114.9	1.006	0.55	7.8	78.7	3.05	39.9	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 93.3 120.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
29 50.8 N	123 35.2 W	28/03/08	1644 UTC	4125 m	340 24 kn	320 08 07	1	1021.4 mb	15.0 C	12.5 C	23m	4/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.02	15.02	33.426	24.755	318.1	0.000	5.83	101.6	2.5	0.32	0.0	0.00	0.00	0.16	0.05	0	
2 A	15.02	15.02	33.426	24.755	318.1	0.006	5.83	101.6	2.5	0.32	0.0	0.00	0.00	0.16	0.05	2	222
10 ISL	15.02 D	15.02	33.423 D	24.753	318.6	0.032	5.82	101.4	2.5	0.32	0.0	0.00	0.00	0.16	0.05	10	
13 A	15.02	15.02	33.425	24.755	318.5	0.041	5.82	101.4	2.5	0.32	0.0	0.00	0.00	0.16	0.05	13	221
20	15.02	15.02	33.429	24.758	318.4	0.064	5.84	101.7	2.4	0.32	0.0	0.00	0.00	0.15	0.04	20	220
30 ISL	15.02 D	15.02	33.423 D	24.754	319.1	0.096	5.84	101.7	2.4	0.33	0.0	0.00	0.03	0.15	0.05	30	
32 A	15.02	15.02	33.426	24.756	319.0	0.102	5.84	101.7	2.4	0.33	0.0	0.00	0.03	0.15	0.05	32	219
41	15.01	15.00	33.424	24.757	319.1	0.131	5.83	101.5	2.4	0.30	0.0	0.00	0.00	0.15	0.06	41	218
50 A	15.01	15.00	33.423	24.757	319.5	0.159	5.83	101.5	2.2	0.31	0.0	0.00	0.00	0.17	0.05	50	217
56	15.01	15.00	33.422	24.756	319.7	0.179	5.84	101.7	2.2	0.31	0.0	0.00	0.00	0.17	0.05	56	216
63 A	14.94	14.93	33.410	24.762	319.3	0.201	5.85	101.7	2.2	0.32	0.0	0.00	0.01	0.20	0.06	63	215
75	14.39	14.38	33.288	24.786	317.4	0.239	5.90	101.4	2.2	0.36	0.0	0.00	0.07	0.36	0.13	75	214
87 A	13.35	13.34	33.141	24.886	308.0	0.277	5.89	98.9	2.9	0.45	1.1	0.18	0.11	0.36	0.20	87	213
98	13.46	13.45	33.365	25.038	293.9	0.310	5.54	93.4	3.3	0.51	2.8	0.09	0.00	0.28	0.31	98	212
100 ISL	13.53 D	13.52	33.404 D	25.054	292.4	0.316	5.50	92.9	3.4	0.52	3.0	0.08	0.00	0.27	0.30	100	
109	13.36	13.34	33.488	25.153	283.2	0.342	5.35	90.1	3.9	0.59	4.2	0.03	0.01	0.21	0.28	109	211
123	12.51	12.49	33.480	25.315	268.0	0.380	5.13	84.9	6.0	0.77	7.1	0.01	0.02	0.13	0.12	124	210
125 ISL	12.17 D	12.15	33.467 D	25.370	262.8	0.385	5.06	83.1	6.6	0.82	7.9	0.01	0.02	0.12	0.11	126	
141	11.02	11.00	33.486	25.597	241.3	0.426	4.44	71.1	12.4	1.23	14.7	0.00	0.00	0.03	0.03	142	209
150 ISL	10.37 D	10.35	33.587 D	25.789	223.1	0.447	4.11	65.0	15.4	1.39	17.5	0.00	0.00	0.02	0.03	151	
164	9.93	9.91	33.727	25.973	205.8	0.477	3.67	57.5	19.6	1.58	20.7	0.00	0.00	0.01 B	0.02 B	165	208
200 ISL	9.15 D	9.13	33.915 D	26.248	180.2	0.546	3.08	47.5	26.4	1.85	24.6	0.00	0.00	0.00	0.02	201	
203	9.14	9.12	33.919	26.253	179.8	0.552	3.05	47.0	26.8	1.86	24.8	0.00	0.00	0.00	0.02	204	207
229	8.73	8.71	33.999	26.381	168.0	0.597	2.63	40.2	31.6	2.06	27.2	0.00	0.05			230	206
250 ISL	8.44 D	8.41	34.038 D	26.456	161.1	0.631	2.36	35.8	35.5	2.17	28.8	0.00	0.03			251	
268	8.19	8.16	34.056	26.509	156.4	0.660	2.17	32.8	38.7	2.24	30.0	0.00	0.00			269	205
300 ISL	7.78 D	7.75	34.074 D	26.583	149.6	0.709	1.89	28.3	43.8	2.38	31.8	0.00	0.00			302	
319	7.56	7.53	34.088	26.626	145.7	0.737	1.74	25.9	46.7	2.46	32.8	0.00	0.00			321	204
378	6.91	6.87	34.122	26.745	135.1	0.820	1.25	18.3	56.8	2.72	35.6	0.00	0.01			380	203
400 ISL	6.52 D	6.48	34.109 D	26.786	131.1	0.849	1.12	16.3	60.4	2.81	36.5	0.00	0.04			402	
446	6.15	6.11	34.137	26.857	124.7	0.908	0.90	13.0	67.9	2.95	38.3	0.00	0.08			449	202
500 ISL	5.72 D	5.68	34.185 D	26.949	116.3	0.973	0.63	9.0	77.1	3.03	39.8	0.00	0.02			503	
513	5.64	5.60	34.191	26.964	115.0	0.988	0.57	8.1	79.3	3.05	40.2	0.00	0.00			516	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
B) SECOND FLUOROMETER READING NOT RECORDED, CHLOROPHYLL AND PHAEOPIGMENT
CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0804 STATION 93.4 26.4

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 56.9 N	117 16.7 W	25/03/08	0515 UTC	18 m	130 05 kn			1016.1 mb	15.5 C	14.2 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.56	15.56	33.422	24.633	329.7	0.000	6.87	121.0	9.1	0.21	0.7			3.78	0.50	0	
1 A	15.56	15.56	33.422	24.634	329.7	0.003	6.87	121.0	9.1	0.21	0.7			3.78	0.50	1	204
5	14.54	14.54	33.517	24.929	301.7	0.016	6.26	108.0	7.5	0.28	0.0			6.42	0.42	5	203
10	12.59	12.59	33.585	25.378	259.1	0.030	4.60	76.3	12.1	0.86	4.5			14.19 B	2.50 B	10	202
16	12.06	12.06	33.635	25.519	245.8	0.045	3.85	63.2	14.7	1.15	9.8			3.80	1.19	16	201

A) NUTRIENTS WERE FROZEN AND RUN DURING THE CRUISE. VALUES THAT WERE SUSPECT WERE OMITTED.
B) SECOND FLUOROMETER READING RECALCULATED BECAUSE ACID RATIO > TAU OF PURE CHL-A.
CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ACID RATIO FROM ADJACENT SAMPLES.

RV DAVID STARR JORDAN — CALCOFI CRUISE 0804 — STATION 83.3 51.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 52.6 N	120 8.6 W	05/04/08	1828 UTC	16 m	1220 - 1845 PST	1204 PST	1843 PST	247.7 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	10.83	33.764	25.844	3.94	63.0	20.4	1.62	19.5	0.13	0.57	0.28	83. A	8.8	8.3	8.6	0.07
11	10.85	33.763	25.840	3.94	63.0	20.2	1.61	19.3	0.13	0.54	0.23					
16	10.69	33.784	25.884	3.76	59.9	21.2	1.67	20.2	0.13	0.56	0.28					
22	10.55	33.809	25.928	3.59	57.1	22.6	1.75	21.1	0.12	0.50	0.28	12.	6.2	6.7	6.4	0.07
28	10.49	33.816	25.945	3.53	56.0	23.1	1.76	21.3	0.12	0.47	0.27					
35	10.09	33.880	26.063	2.99	47.1	26.3	1.92	23.3	0.10	0.33	0.30	3.5	2.5	2.6	2.5	0.05
44	9.89	33.912	26.122	2.73	42.8	27.9	2.00	24.7	0.09	0.30	0.27	1.5	0.90	0.81	0.85	0.04
52	9.76	33.931	26.159	2.55	39.9	28.9	2.05	25.2	0.08	0.28	0.32					
61	9.64	33.965	26.205	2.36	36.8	30.6	2.11	26.3	0.07	0.21	0.30	0.29	0.03	0.04	0.04	0.03

RV DAVID STARR JORDAN — CALCOFI CRUISE 0804 — STATION 83.3 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 54.2 N	122 7.5 W	04/04/08	1823 UTC	15 m	1212 - 1855 PST	1212 PST	1853 PST	545.6 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	12.31	32.973	24.957	6.29	103.3	6.7	0.62	4.0	0.08	0.64	0.20	81. A	13.2	11.7	12.4	0.11
10	12.31	32.973	24.957	6.29	103.3	6.7	0.63	3.9	0.09	0.79	0.14	36.	18.3	16.4	17.4	0.11
21	12.14	33.003	25.013	6.28	102.8	6.9	0.63	4.1	0.09	0.71	0.23	12.	14.4	13.9	14.1	0.14
32	11.90	33.166	25.185	6.17	100.6	8.4	0.74	6.0	0.12	0.84	0.38	3.8	9.3	9.4	9.3	0.12
41	11.45	33.205	25.298	5.98	96.6	9.7	0.85	7.8	0.14	0.85	0.37	1.5	4.8	4.3	4.6	0.07
49	11.46	33.266	25.344	5.93	95.8	10.2	0.88	8.4	0.16	0.61	0.36					
57	10.57	33.182	25.437	5.25	83.2	10.8	1.07	11.7	0.03	0.06	0.09	0.29	0.03	0.04	0.04	0.02

RV DAVID STARR JORDAN — CALCOFI CRUISE 0804 — STATION 86.7 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 29.4 N	119 19.1 W	01/04/08	1937 UTC	10 m	1235 - 1845 PST	1201 PST	1843 PST	657.1 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	12.61	33.687	25.453	6.01	99.8	3.2	0.67	6.0	0.12	2.07	0.57	86. A	22.1	22.4	22.3	0.25
6	12.53	33.686	25.468	6.00	99.4	3.1	0.64	6.1	0.12	1.97	0.58	40.	34.8	37.4	36.1	0.31
11	12.50	33.686	25.474	5.98	99.0	3.1	0.65	6.3	0.12	2.28	0.67					
14	12.41	33.684	25.490	5.94	98.2	3.0	0.64	6.5	0.12	2.35	0.57	12.	28.0	30.3	29.1	0.25
22	11.88	33.728	25.625	4.74	77.5	10.5	1.12	12.3	0.15	2.26	0.69	3.4	14.0	15.3	14.6	0.13
27	10.59	33.797	25.912	3.43	54.6	20.4	1.67	20.0	0.17	0.74	0.73	1.6	2.1	2.0	2.0	0.06
38	9.99	33.869	26.072	2.77	43.5	25.6	1.93	24.0	0.15	0.36	0.43	0.29	0.10	0.15	0.12	0.05

RV DAVID STARR JORDAN — CALCOFI CRUISE 0804 — STATION 86.7 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 20.0 N	121 41.6 W	02/04/08	1945 UTC	12 m	1240 - 1856 PST	1210 PST	1856 PST	266.6 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	12.18	33.154	25.122	6.21	101.8	6.7	0.68	4.9	0.10	0.68	0.22	88. A	12.4	12.4	12.4	0.11
7	12.07	33.141	25.133	6.16	100.8	6.8	0.71	5.2	0.11	0.61	0.21	41.	13.8	13.2	13.5	0.10
10	11.77	33.118	25.171	6.04	98.2	7.1	0.73	5.7	0.12	0.52	0.19					
17	11.75	33.146	25.197	6.01	97.6	7.7	0.75	6.0	0.12	0.45	0.19	11.	6.4	6.7	6.6	0.07
27	11.91	33.226	25.229	6.08	99.2	8.2	0.76	6.1	0.15	0.45	0.20	3.2	3.6	3.6	3.6	0.06
34	11.89	33.229	25.236	6.04	98.5	8.3	0.77	6.2	0.15	0.38	0.20	1.3	1.5	1.3	1.4	0.03
44	11.66	33.214	25.267	5.90	95.7	8.4	0.81	7.0	0.15	0.24	0.21	0.36	0.11	0.09	0.10	0.03

A) INCUBATION LIGHT INTENSITIES WERE 96, 41, 12, 3.6, 1.5, 0.30 PERCENT RESPECTIVELY.

RV DAVID STARR JORDAN — CALCOFI CRUISE 0804 — STATION 86.7 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 19.4 N	123 44.4 W	03/04/08	1700 UTC	30 m	1220 - 1705 PST	1218 PST	1901 PST	248.6 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	14.75	33.258	24.684	5.92	102.5	2.4	0.34	0.0	0.00	0.20	0.02	95. A	2.4	2.4	2.4	0.05
10	14.67	33.262	24.704	5.93	102.5	2.3	0.34	0.0	0.00	0.17	0.04					
17	14.56	33.269	24.733	5.92	102.1	2.3	0.33	0.0	0.00	0.19	0.05	42.	3.7	4.4	4.1 R	0.05
29	14.43	33.283	24.772	5.93	102.0	2.2	0.33	0.0	0.00	0.20	0.05					
40	14.39	33.280	24.779	5.93	101.9	2.1	0.33	0.0	0.00	0.25	0.06	13.	3.4	3.3	3.4 R	0.04
53	14.40	33.282	24.778	5.93	101.9	2.1	0.33	0.0	0.00	0.26 B	0.07 B					
64	14.32	33.265	24.782	5.92	101.5	2.0	0.34	0.0	0.00	0.32	0.09	3.8	2.2	1.3	1.7 R	0.04
73	14.15	33.220	24.783	5.95	101.7	1.9	0.34	0.0	0.00	0.43	0.06					
81	13.90	33.174	24.800	5.94	101.0	1.8	0.37	0.0	0.01	0.35	0.15	1.6	1.4	1.1	1.3	0.03
92	14.24	33.292	24.821	5.88	100.7	2.2	0.36	0.1	0.04	0.29	0.09					
101	13.35	33.195	24.928	5.70	95.8	3.2	0.51	2.5	0.14	0.18	0.10					
113	12.08	33.170	25.156	5.37	87.8	5.8	0.79	6.8	0.02	0.09	0.07	0.31	0.02	0.04	0.03	0.01

B) FIRST FLUOROMETER READING NOT RECORDED, CHLOROPHYLL AND PHAEOPIGMENT
CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.
R) VALUES WERE CORRECTED TO ACCOUNT FOR SAMPLES FILTERED WITH PREVIOUS SEQUENTIAL SAMPLE.

RV DAVID STARR JORDAN — CALCOFI CRUISE 0804 — STATION 90.0 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 15.0 N	118 14.8 W	31/03/08	1820 UTC	10 m	1202 - 1839 PST	1157 PST	1838 PST	507.1 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	14.61	33.529	24.923	6.59	113.9	0.0	0.24	0.1	0.00	0.98	0.25	74. A	15.5	16.0	15.7	0.21
6	14.48	33.523	24.946	6.59	113.6	0.0	0.24	0.0	0.00	1.09	0.17	40.	22.7	22.6	22.7	0.25
10	14.31	33.523	24.982	6.61	113.6	0.0	0.24	0.1	0.00	1.15	0.22					
15	14.26	33.523	24.993	6.57	112.8	0.0	0.24	0.2	0.00	1.25	0.27	10.	20.9	20.6	20.7	0.33
18	13.77	33.506	25.081	6.31	107.2	1.3	0.40	1.6	0.06	1.72	0.46					
22	13.29	33.505	25.178	5.90	99.2	3.6	0.56	3.5	0.12	2.01	0.69	3.4	16.1	16.2	16.1	0.16
27	12.63	33.512	25.314	5.21	86.4	7.6	0.84	7.5	0.27	1.54	0.67	1.6	3.8	4.5	4.2	0.09
38	11.57	33.560	25.552	4.26	69.1	12.9	1.25	14.4	0.21	0.50	0.43	0.29	0.21	0.13	0.17	0.06

RV DAVID STARR JORDAN — CALCOFI CRUISE 0804 — STATION 90.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 25.2 N	119 57.3 W	30/03/08	1921 UTC	11 m	1235 - 1845 PST	1204 PST	1843 PST	265.4 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	13.21	33.400	25.112	6.06	101.7	4.6	0.54	3.3	0.09	0.91	0.18	87. A	7.5	7.0	7.3	0.09
6	13.21	33.400	25.113	6.07	101.9	4.6	0.55	3.3	0.09	0.89	0.25	43.	13.8	13.7	13.7	0.09
15	13.21	33.406	25.117	6.07	101.9	4.6	0.53	3.3	0.09	0.88	0.18	12.	9.0	9.8	9.4	0.09
24	13.18	33.402	25.121	6.06	101.6	4.6	0.54	3.4	0.09	0.94	0.20	3.5	5.5	5.4	5.4	0.09
31	13.05	33.412	25.154	5.99	100.2	4.7	0.57	3.8	0.10	0.88	0.20	1.3	1.7	1.8	1.7	0.05
42	12.89	33.417	25.190	5.90	98.4	4.9	0.64	4.8	0.13	0.91	0.25	0.28	0.11	0.19	0.15	0.04

RV DAVID STARR JORDAN — CALCOFI CRUISE 0804 — STATION 90.0 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 5.0 N	122 38.9 W	29/03/08	1633 UTC	20 m	1215 - 1855 PST	1215 PST	1853 PST	171.7 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	13.54	33.044	24.771	6.06	102.2	2.4	0.37	0.1	0.01	0.32	0.06	86. A	4.0	4.5	4.2	0.05
12	13.52	33.043	24.774	6.06	102.1	2.4	0.37	0.1	0.01	0.31	0.07	40.	4.7	5.1	4.9	0.04
21	13.50	33.044	24.779	6.06	102.1	2.4	0.36	0.1	0.01	0.34	0.11					
28	13.51	33.043	24.777	6.06	102.1	2.5	0.36	0.1	0.01	0.32	0.05	12.	3.4	3.3	3.3	0.04
35	13.50	33.044	24.780	6.06	102.1	2.4	0.36	0.1	0.01	0.30	0.08					
42	13.50	33.046	24.781	6.06	102.1	2.4	0.37	0.1	0.01	0.33	0.08	4.0	1.5	1.4	1.5	0.03
55	13.49	33.045	24.783			2.3	0.37	0.1	0.01	0.33	0.08	1.5	0.48	0.57	0.52	0.03
66	13.47	33.046	24.788	6.04	101.7	2.3	0.37	0.1	0.01	0.35	0.09					
75	13.44	33.044	24.793	6.04	101.6	2.3	0.38	0.2	0.02	0.31	0.10	0.32	0.04	0.02	0.03	0.02

A) INCUBATION LIGHT INTENSITIES WERE 96, 41, 12, 3.6, 1.5, 0.30 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV DAVID STARR JORDAN — CALCOFI CRUISE 0804 — STATION 93.3 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 41.0 N	117 52.2 W	25/03/08	1912 UTC	12 m	1225 - 1835 PST	1157 PST	1832 PST	452.4 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	15.73	33.505	24.660	6.18	109.2	5.2	0.27	0.0	0.00	0.43	0.08	77. A	9.7	9.5	9.6	0.20
7	15.37	33.502	24.737	6.22	109.2	5.1	0.26	0.0	0.00	0.54	0.09	41.	13.4	13.3	13.4	0.28
17	14.91	33.495	24.833	6.31	109.7	5.1	0.27	0.0	0.00	0.82	0.18	11.	15.4	14.3	14.9	0.28
26	13.33	33.495	25.163	5.67	95.4	6.9	0.59	4.1	0.19	1.56	0.46	3.6	14.4	15.2	14.8	0.12
33	12.57	33.504	25.320	5.15	85.3	8.3	0.88	8.1	0.38	0.95	0.32	1.5	4.7	5.1	4.9	0.07
45	12.05	33.501	25.417	4.49	73.6	10.6	1.12	12.2	0.09	0.59	0.30	0.32	0.41	0.33	0.37	0.05

RV DAVID STARR JORDAN — CALCOFI CRUISE 0804 — STATION 93.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 50.7 N	119 34.2 W	26/03/08	1919 UTC	11 m	1242 - 1642 PST	1204 PST	1839 PST	251.5 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	14.26	33.370	24.874	6.06	103.9	3.1	0.34	0.2	0.01	0.65	0.13	76. A	7.2	6.3	6.7	0.13
6	14.26	33.369	24.874	6.06	103.9	3.1	0.34	0.2	0.01	0.64	0.13	43.	11.9	12.1	12.0	0.14
15	14.24	33.375	24.883	6.07	104.0	3.1	0.33	0.2	0.01	0.66	0.15	12.	9.6	8.7	9.1	0.18
25	14.21	33.382	24.895	6.07	104.0	3.2	0.34	0.2	0.01	0.73	0.14	3.1	5.4	5.4	5.4	0.13
30	14.14	33.411	24.932	6.04	103.3	3.3	0.35	0.3	0.02	0.79	0.15	1.5	2.2	2.0	2.1	0.11
42	13.26	33.408	25.110	5.58	93.7	5.5	0.60	4.0	0.11	0.79	0.35	0.28	0.38	0.27	0.32	0.06

RV DAVID STARR JORDAN — CALCOFI CRUISE 0804 — STATION 93.3 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 50.7 N	121 35.3 W	27/03/08	1731 UTC	11 m	1217 - 1855 PST	1211 PST	1848 PST	151.7 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	13.30	33.156	24.906	6.13	102.9	3.7	0.45	1.4	0.06	0.49	0.04	76. A	3.8	4.0	3.9	0.08
7	13.29	33.156	24.908	6.13	102.9	3.7	0.45	1.4	0.06	0.54	0.03	38.	8.4	7.5	7.9	0.08
16	13.29	33.156	24.908	6.13	102.9	3.7	0.45	1.4	0.06	0.55	0.05	11.	5.7	5.7	5.7	0.07
24	13.29	33.156	24.908	6.13	102.9	3.6	0.45	1.4	0.06	0.56 B	0.04 B	3.5	2.9	2.9	2.9	0.07
30	13.26	33.154	24.913	6.14	103.0	3.7	0.45	1.4	0.06	0.54	0.04	1.5	0.96	1.0	0.98	0.07
43	12.84	33.166	25.005	6.19	102.9	4.7	0.53	2.6	0.10	0.65	0.11	0.25	0.13	0.11	0.12	0.06

B) SECOND FLUOROMETER READING RECALCULATED BECAUSE ACID RATIO > TAU OF PURE CHL-A.
CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ACID RATIO FROM ADJACENT SAMPLES.

RV DAVID STARR JORDAN — CALCOFI CRUISE 0804 — STATION 93.3 120.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
29 50.8 N	123 35.2 W	28/03/08	1644 UTC	23 m	1226 - 1658 PST	1221 PST	1857 PST	91.5 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	15.02	33.426	24.755	5.83	101.6	2.5	0.32	0.0	0.00	0.16	0.05	88. A	0.40	0.59	0.50	0.05
13	15.02	33.425	24.755	5.82	101.4	2.5	0.32	0.0	0.00	0.16	0.05	42.	2.4	2.3	2.3	0.05
20	15.02	33.429	24.758	5.84	101.7	2.4	0.32	0.0	0.00	0.15	0.04					
32	15.02	33.426	24.756	5.84	101.7	2.4	0.33	0.0	0.00	0.15	0.05	12.	1.8	1.7	1.7	0.04
41	15.01	33.424	24.757	5.83	101.5	2.4	0.30	0.0	0.00	0.15	0.06					
50	15.01	33.423	24.757	5.83	101.5	2.2	0.31	0.0	0.00	0.17	0.05	3.6	0.92	0.86	0.89	0.04
56	15.01	33.422	24.756	5.84	101.7	2.2	0.31	0.0	0.00	0.17	0.05					
63	14.94	33.410	24.762	5.85	101.7	2.2	0.32	0.0	0.00	0.20	0.06	1.5	0.37	0.41	0.39	0.03
75	14.39	33.288	24.786	5.90	101.4	2.2	0.36	0.0	0.00	0.36	0.13					
87	13.35	33.141	24.886	5.89	98.9	2.9	0.45	1.1	0.18	0.36	0.20	0.30	0.05	0.08	0.07	0.02

A) INCUBATION LIGHT INTENSITIES WERE 96, 41, 12, 3.6, 1.5, 0.30 PERCENT RESPECTIVELY.

MACROZOOPLANKTON BIOMASS
Net Mesh Size: 0.505mm

Line	Sta.	Latitude N	Longitude W	Date Mo/Day	Time (PST) Start	Time (PST) End	Water Volume Strained (m^3)	Max. Tow Depth (m)	Volume per 1000 m^3 Strained Total (cm^3)	Volume per 1000 m^3 Strained Small (cm^3)
66.7	50.0	36 45.0	122 07.9	04/28	2123	2144	420	205	238	238
66.7	55.0	36 37.0	122 25.3	04/29	0132	0153	417	214	486	486
66.7	60.0	36 27.3	122 46.2	04/29	0621	0642	382	217	65	65
66.7	70.0	36 07.2	123 29.1	04/29	1438	1459	413	223	31	31
70.0	55.0	36 02.9	122 00.6	04/27	1157	1218	399	216	43	43
70.0	60.0	35 53.0	122 21.9	04/27	1609	1630	498	162	30	30
73.3	55.0	35 28.6	121 36.6	04/27	0230	0251	410	206	161	161
73.3	60.0	35 18.5	121 57.9	04/26	2015	2036	399	215	95	95
73.3	70.0	34 58.6	122 39.9	04/26	1322	1343	401	213	17	17
73.3	80.0	34 38.5	123 22.0	04/26	0648	0709	385	211	55	55
73.3	90.0	34 18.4	124 03.7	04/25	1907	1928	399	218	38	38
76.7	49.0	35 05.3	120 46.6	04/06	1823	1830	169	70	71	71
76.7	51.0	35 01.3	120 55.1	04/23	1339	1400	406	212	39	39
76.7	55.0	34 53.1	121 11.6	04/23	1721	1742	393	212	69	69
76.7	60.0	34 43.3	121 32.8	04/23	2143	2205	451	204	231	231
76.7	70.0	34 23.3	122 14.6	04/24	0829	0850	461	202	37	37
76.7	80.0	34 03.3	122 56.4	04/24	1615	1636	397	214	50	50
76.7	90.0	33 43.4	123 38.0	04/25	0210	0231	420	211	60	60
76.7	100.0	33 23.4	124 19.3	04/25	0951	1012	425	204	12	12
80.0	51.0	34 26.8	120 31.6	04/06	0641	0647	135	62	1190	1190
81.8	46.9	34 16.5	120 01.5	04/06	0152	0213	437	213	170	170
83.3	40.6	34 13.5	119 24.8	04/05	2013	2016	67	26	225	225
83.3	42.0	34 10.7	119 30.4	04/05	1810	1828	405	168	215	215
83.3	51.0	33 52.5	120 08.5	04/05	1120	1141	433	219	83	83
83.3	70.0	33 14.6	121 26.7	04/04	1947	2008	509	180	126	126
83.3	80.0	32 54.6	122 07.9	04/04	1139	1200	409	212	46	46
83.3	90.0	32 34.6	122 48.4	04/04	0446	0507	405	208	44	44
83.3	100.0	32 14.6	123 29.7	04/03	2245	2306	422	211	64	64
83.3	110.0	31 54.5	124 10.1	04/03	1626	1647	428	213	47	47
86.7	33.0	33 53.3	118 29.5	04/01	0102	0107	95	34	169	169
86.7	35.0	33 49.5	118 37.8	04/01	0339	0400	374	209	232	232
86.7	40.0	33 39.5	118 58.5	04/01	0814	0835	430	208	46	46
86.7	45.0	33 29.3	119 19.1	04/01	1233	1254	400	215	68	68
86.7	50.0	33 19.4	119 39.7	04/01	1614	1620	113	64	566	566
86.7	55.0	33 09.4	120 00.4	04/01	2014	2035	416	217	101	101
86.7	60.0	32 59.4	120 20.9	04/02	0029	0050	370	217	157	157
86.7	70.0	32 39.3	121 02.0	04/02	0634	0655	407	209	54	54
86.7	80.0	32 19.9	121 41.6	04/02	1245	1306	427	211	45	45
86.7	90.0	31 59.4	122 23.5	04/02	1957	2018	407	212	106	106
86.7	100.0	31 39.4	123 04.2	04/03	0228	0249	390	215	69	69
86.7	110.0	31 19.4	123 44.5	04/03	0747	0808	430	210	46	46
90.0	28.0	33 29.0	117 46.1	03/31	1812	1825	258	129	198	198
90.0	30.0	33 25.0	117 54.4	03/31	1505	1526	405	210	138	138
90.0	35.0	33 15.1	118 14.9	03/31	0905	0926	417	215	72	72
90.0	37.0	33 11.2	118 23.3	03/31	0637	0658	414	213	68	68
90.0	53.0	32 39.0	119 29.0	03/30	1821	1842	478	206	100	100
90.0	60.0	32 25.1	119 57.7	03/30	1256	1317	408	216	39	39
90.0	70.0	32 05.1	120 38.5	03/30	0541	0602	438	216	46	46
90.0	80.0	31 44.9	121 19.1	03/29	2237	2258	415	215	91	91
90.0	90.0	31 25.0	121 59.5	03/29	1525	1546	397	214	43	43
90.0	100.0	31 05.0	122 39.3	03/29	0636	0657	438	197	78	78
90.0	110.0	30 44.9	123 20.1	03/29	0047	0108	441	213	45	45
90.0	120.0	30 25.0	123 59.9	03/28	1736	1757	437	211	46	46
91.7	26.4	33 14.5	117 27.9	03/25	0037	0039	55	10	90	90
93.3	26.7	32 57.3	117 18.3	03/24	1953	2002	215	81	121	121
93.3	28.0	32 54.7	117 23.7	03/25	0450	0511	441	205	138	68
93.3	30.0	32 50.8	117 31.9	03/25	0752	0813	412	208	44	44
93.3	35.0	32 40.9	117 52.3	03/25	1222	1243	420	209	29	29
93.3	40.0	32 30.8	118 12.7	03/25	1649	1710	391	223	51	51
93.3	45.0	32 20.7	118 33.2	03/25	2230	2251	415	208	70	70
93.3	50.0	32 10.8	118 53.6	03/26	0300	0321	403	215	70	70
93.3	55.0	32 00.9	119 13.9	03/26	0741	0802	451	202	22	22
93.3	60.0	31 50.8	119 34.4	03/26	1231	1252	434	218	18	18
93.3	90.0	30 50.7	121 35.5	03/27	0817	0838	471	200	19	19
93.3	120.0	29 50.9	123 35.7	03/28	0625	0646	473	206	27	27
93.4	26.4	32 56.9	117 16.6	03/24	2130	2132	68	15	89	89