UNIVERSITY OF CALIFORNIA, SAN DIEGO SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

CalCOFI Cruise 0801
4 January – 30 January 2008

CC Reference 09-02
17 September 2009

UNIVERSITY OF CALIFORNIA, SAN DIEGO

SCRIPPS INSTITUTION OF OCEANOGRAPHY

LA JOLLA, CALIFORNIA 92093-0227

PHYSICAL, CHEMICAL AND BIOLOGICAL DATA

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CONTENTS

Introduction 3

Literature Cited 7

CalCOFI Cruise 0801

List of Figures 9

Personnel 20

Tabulated Rosette Cast Data 21

Tabulated Primary Productivity Data 54

Tabulated Macrozooplankton Data 58

INTRODUCTION

The data presented in this report were collected during cruise 0801* 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 rinsed three times prior to filling. Standardizations were done at the beginning and end of each group of samples with a set of mid-concentration range standards prepared fresh for each run. Samples not analyzed immediately after collection were refrigerated and run the following day. Sets of six different concentration standards were analyzed periodically to determine the deviation from linearity as a function of concentration, for the silicate, nitrate and phosphate analyses. Final sample concentrations were corrected for deviations from linearity using a second order polynomial.

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.

Avifauna Observations (Point Reys Bird Observatory)

Sea birds were counted within a 300-meter wide strip off to one side of the ship. Counts were made while underway between stations during periods of daylight. These counts were summed over 20 nautical mile (nm) intervals, or the distance between consecutive stations, whichever was less. Included at the end of this report are individual maps of the most numerous bird species (individuals/nm).

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 and salinity 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 21 TSG Thermosalinograph.

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 0801

1. CalCOFI Cruise 0801 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.

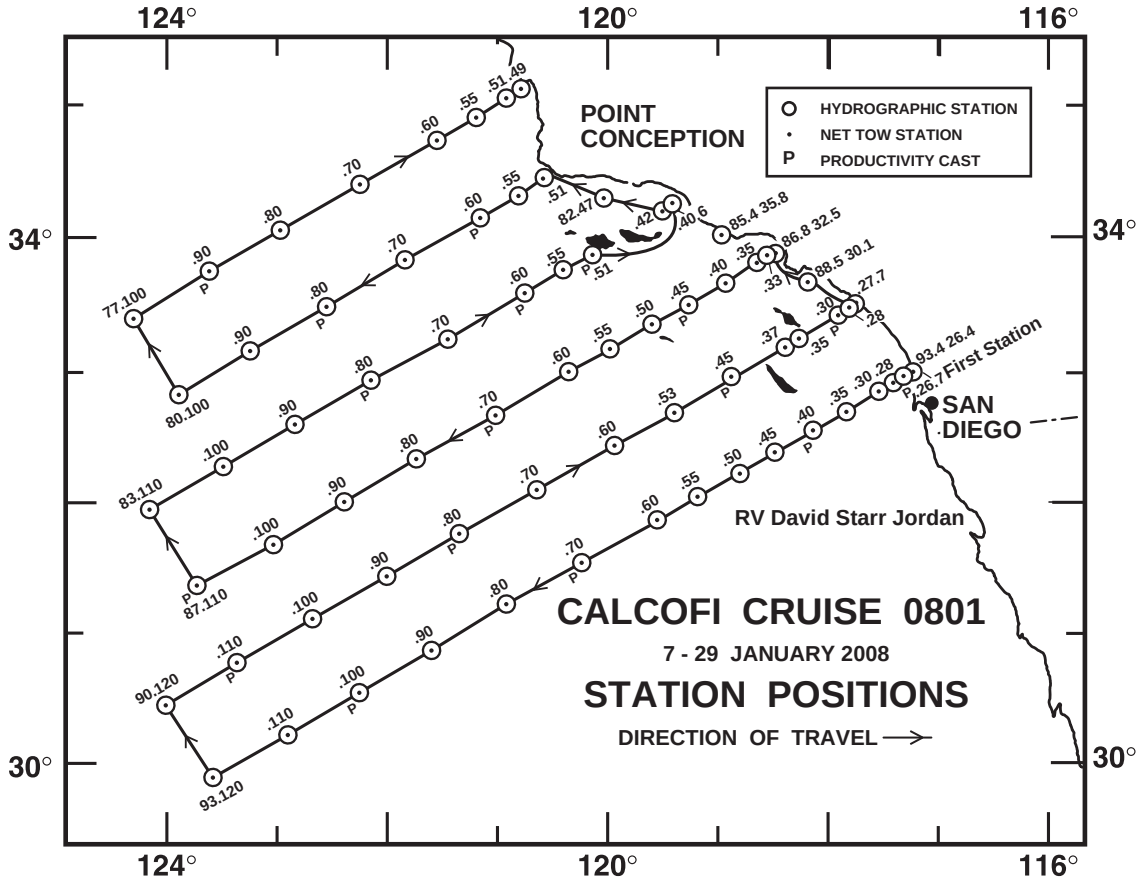


FIGURE 1

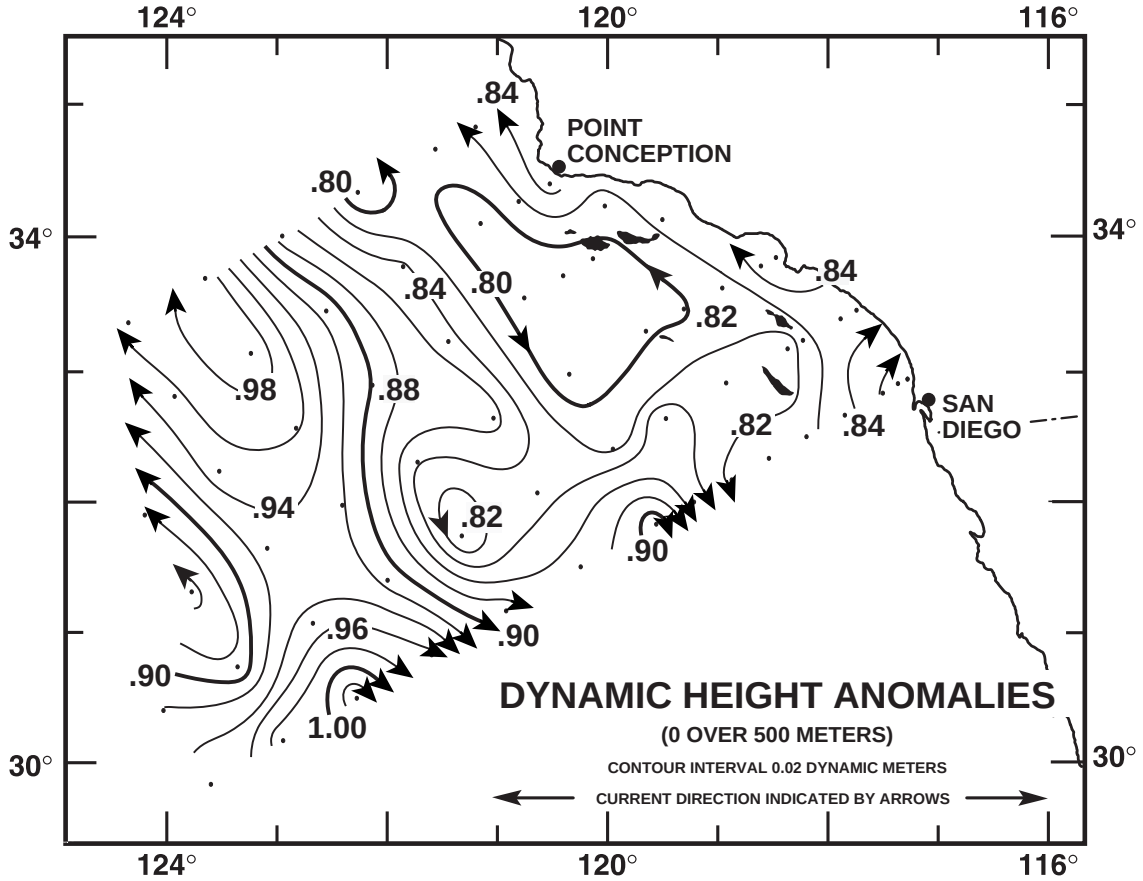


FIGURE 2

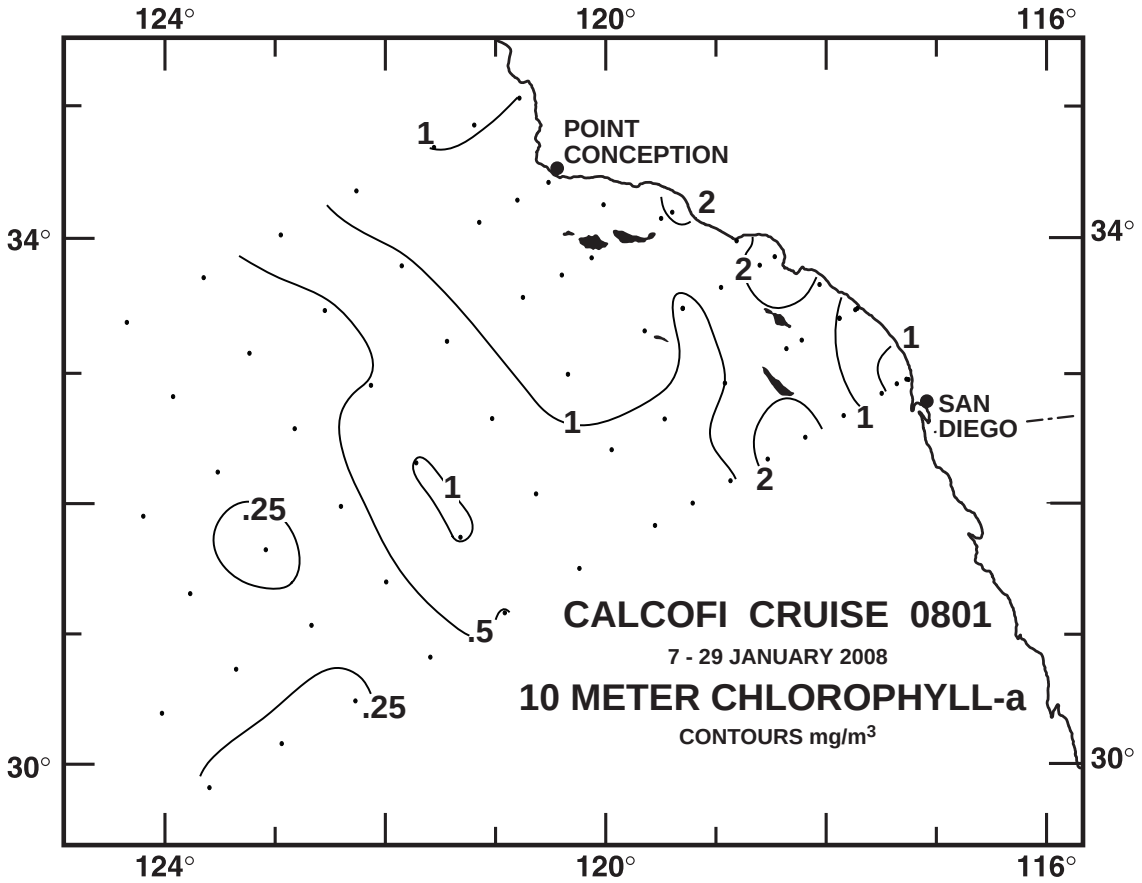
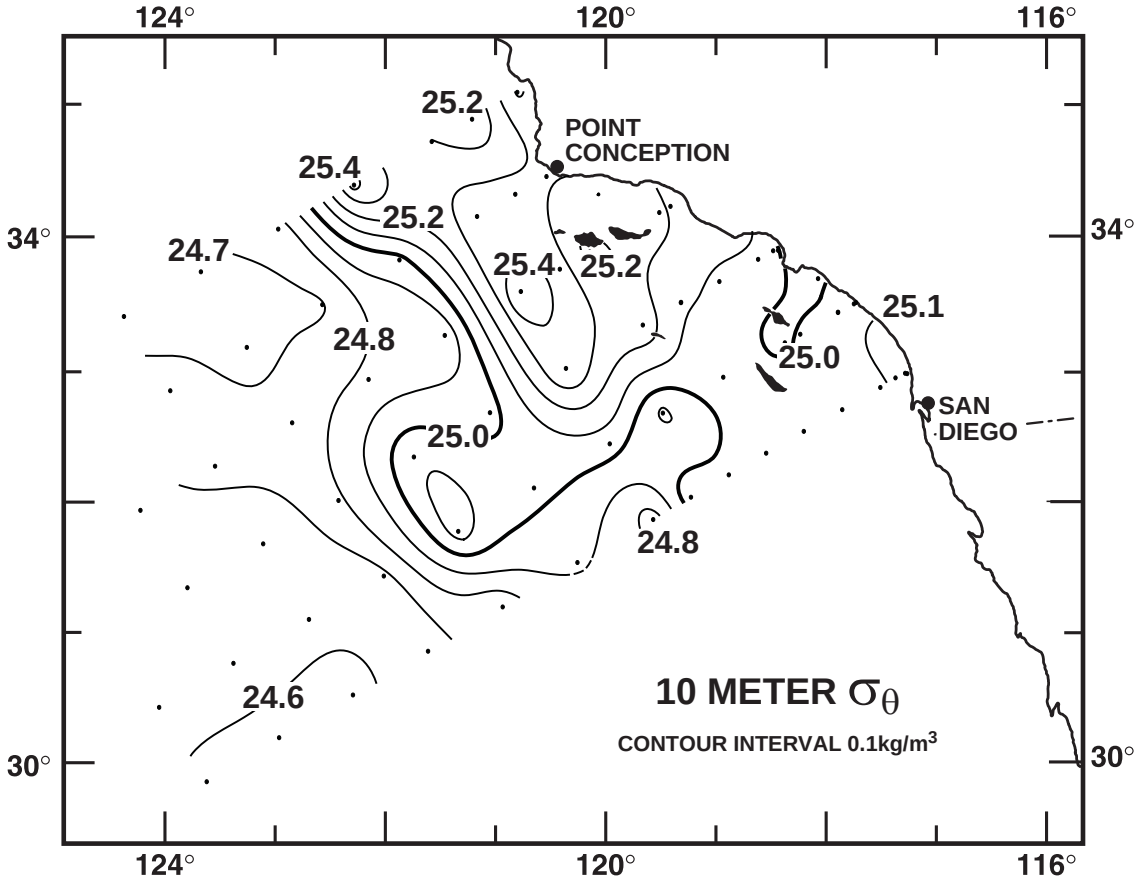


FIGURE 3A



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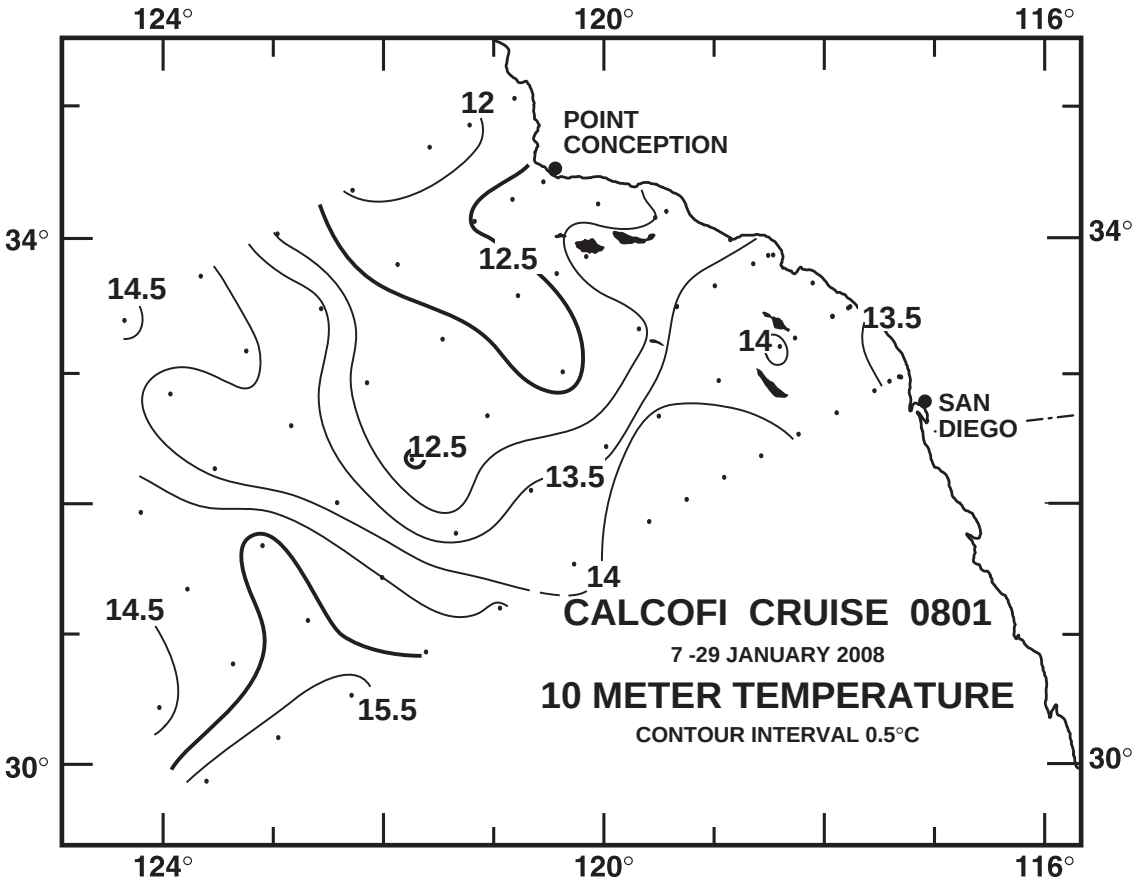

FIGURE 3C

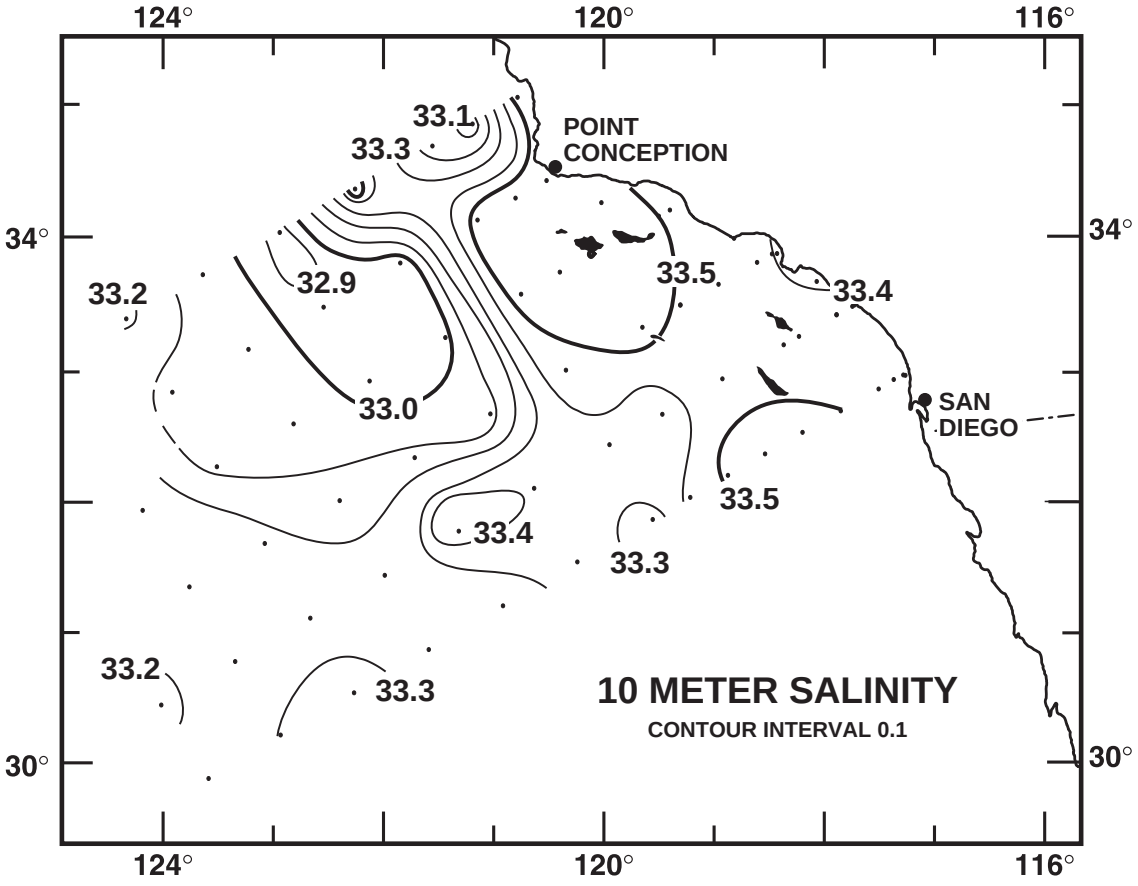

FIGURE 3D

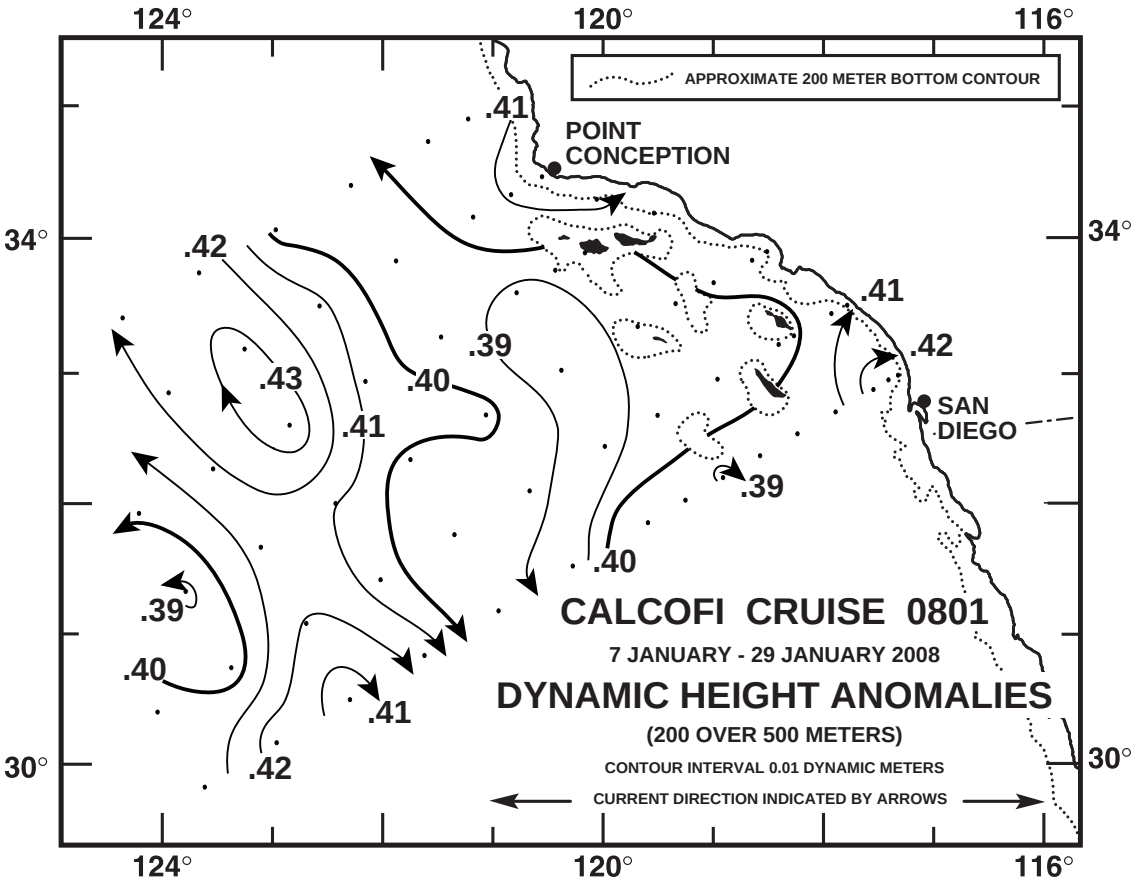

FIGURE 4A

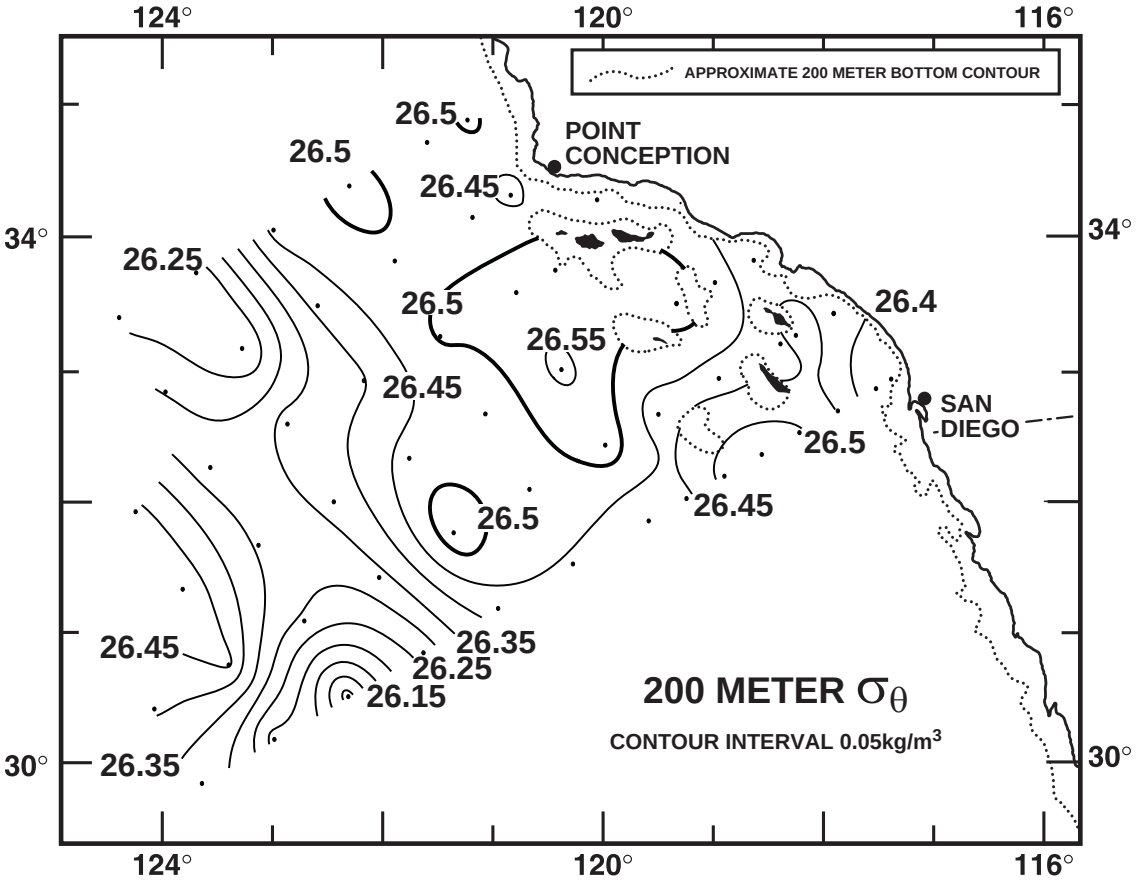

FIGURE 4B

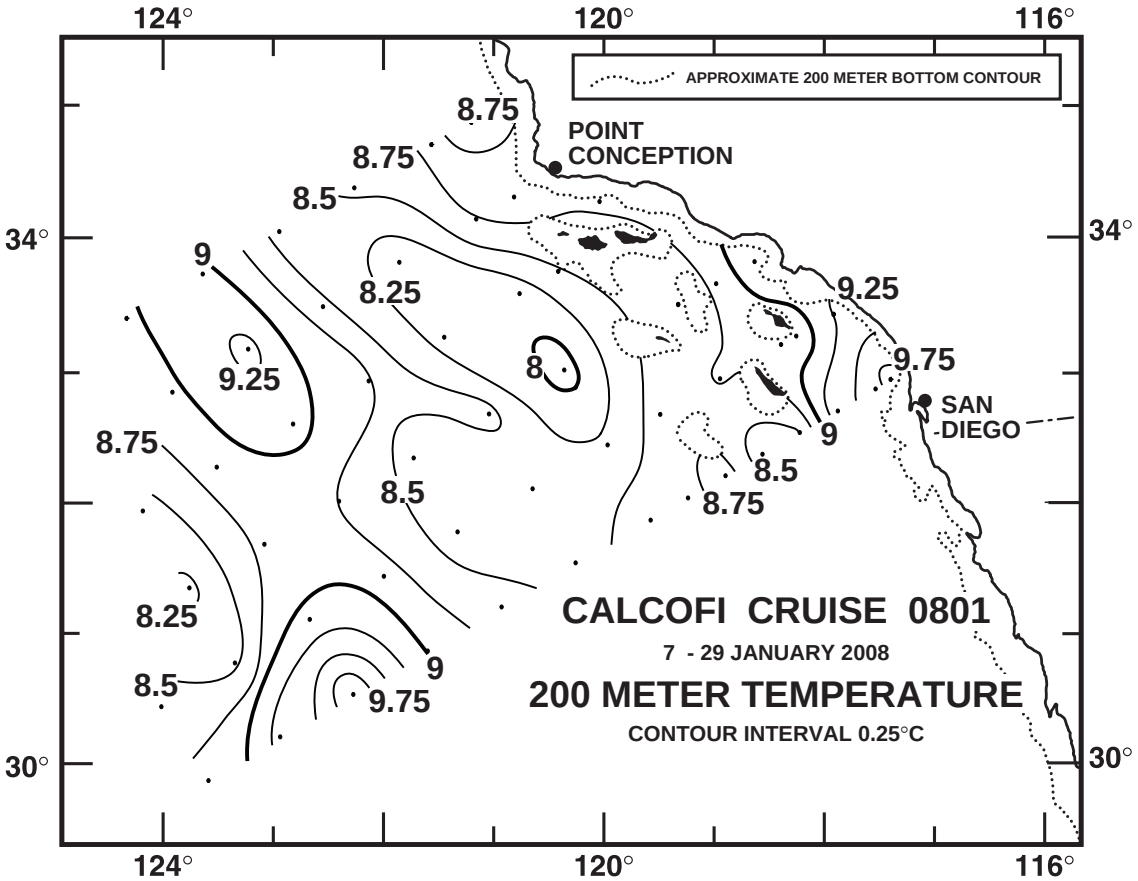

FIGURE 4C

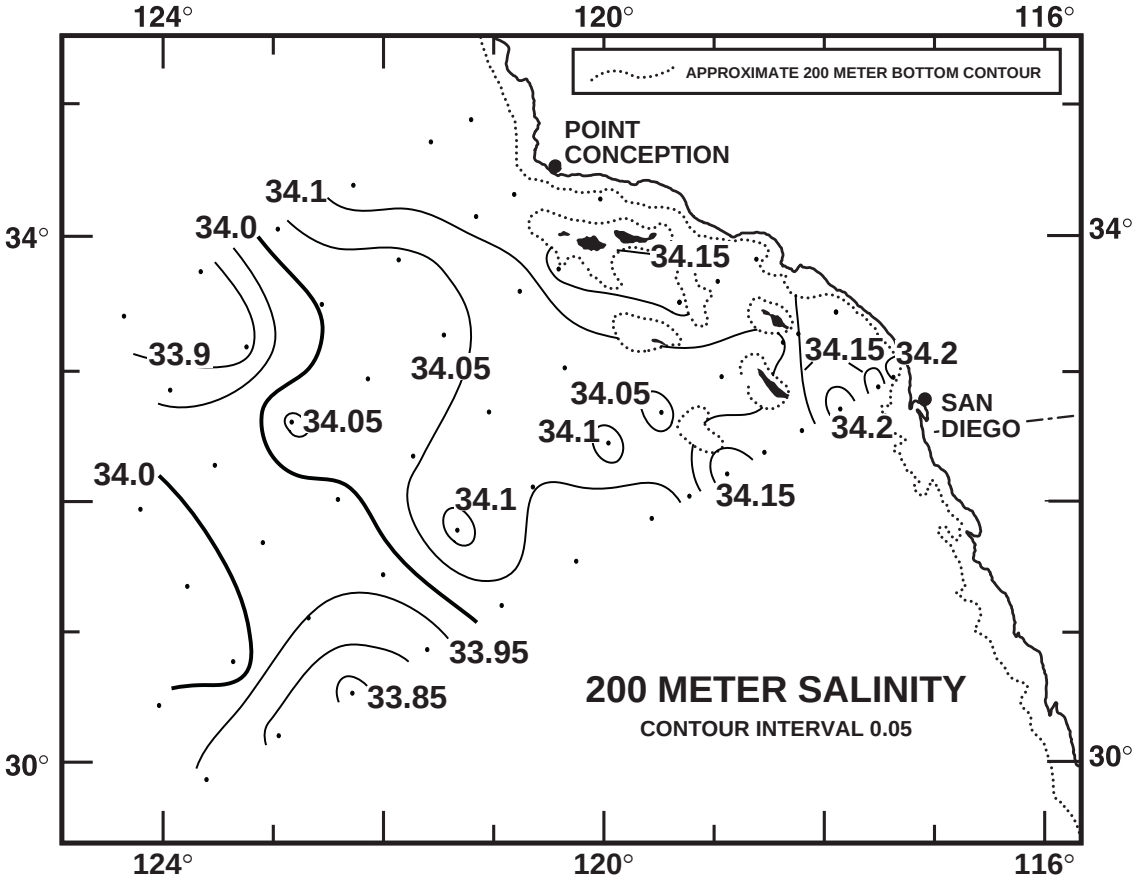

FIGURE 4D

CALCOFI CRUISE 0801

11 - 14 January 2008

POTENTIAL DENSITY (σ_θ) ALONG CALCOFI LINE 90

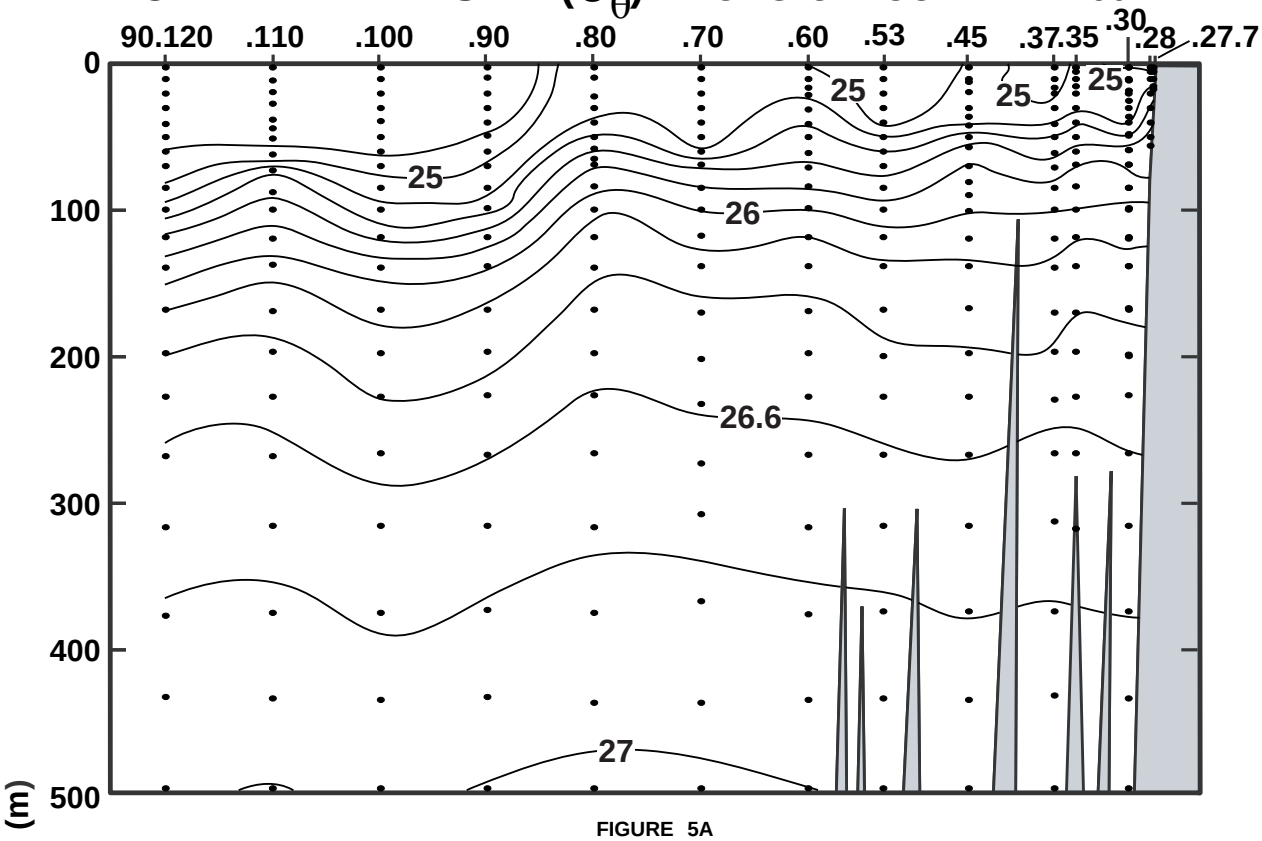

FIGURE 5A

TEMPERATURE (°C) ALONG CALCOFI LINE 90

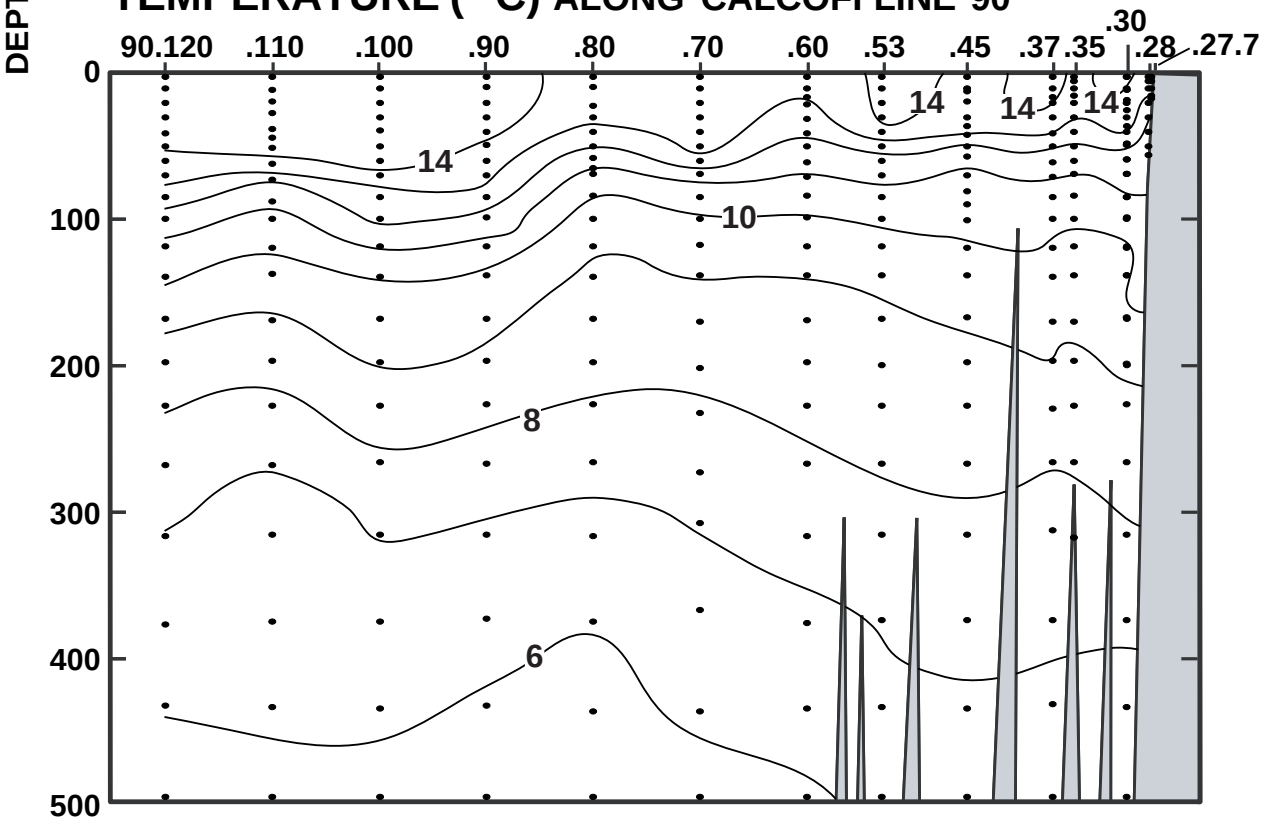

FIGURE 5B

CALCOFI CRUISE 0801

11- 14 January 2008

SALINITY ALONG CALCOFI LINE 90

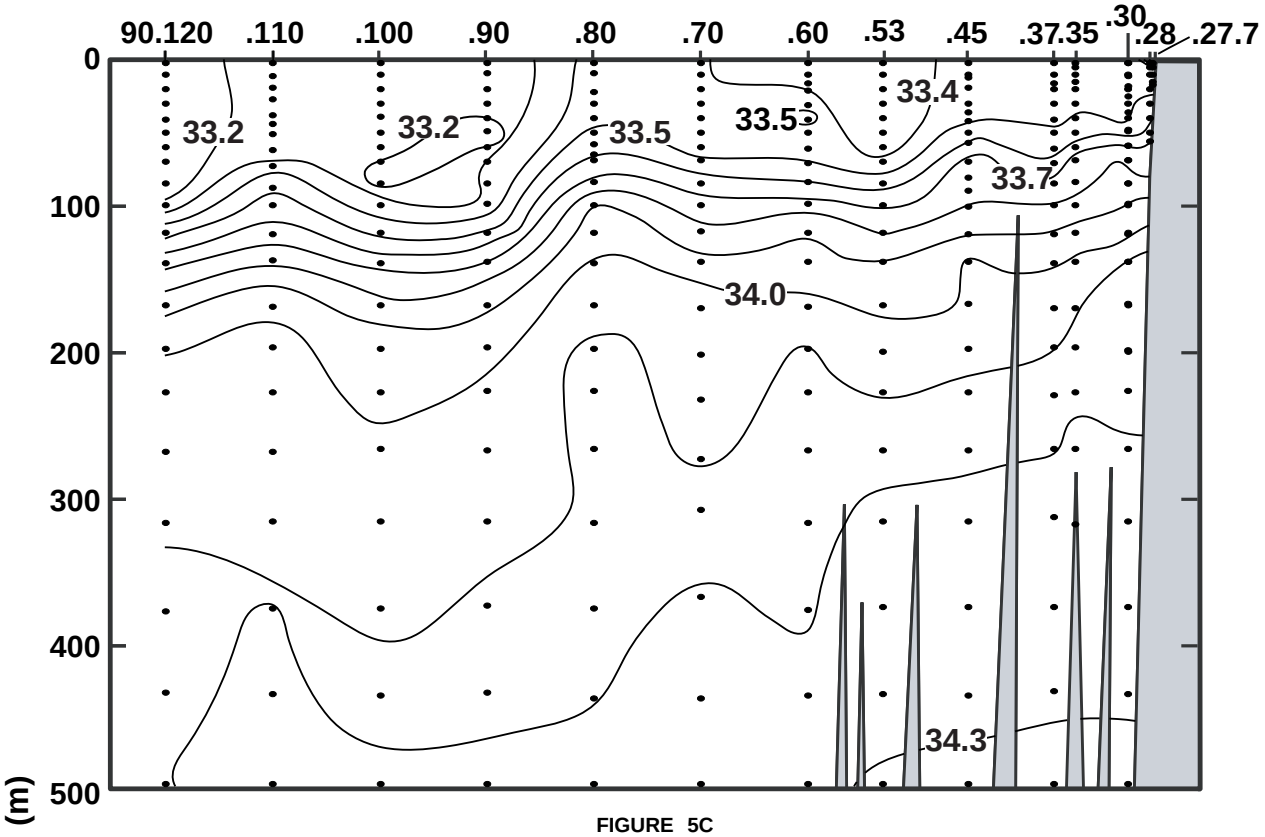

FIGURE 5C

SILICATE (μM/L) ALONG CALCOFI LINE 90

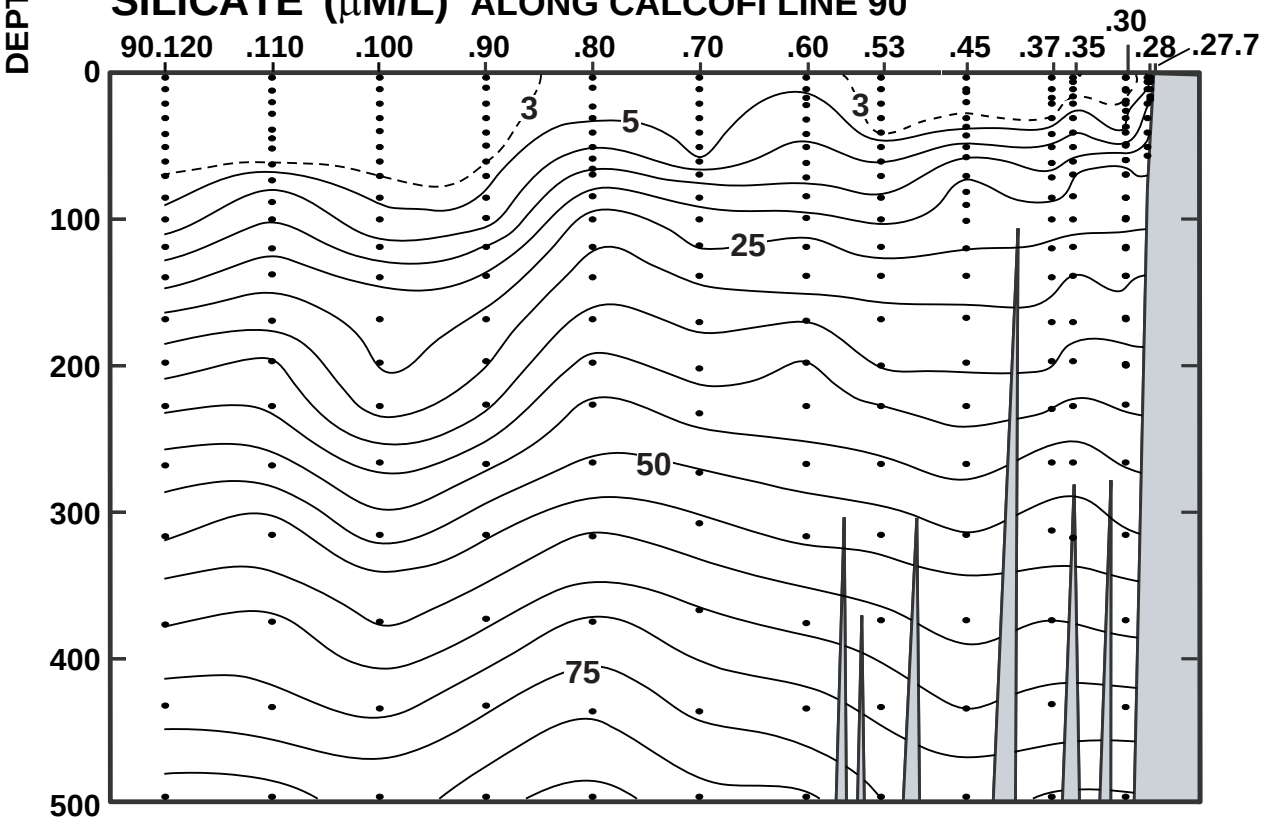

FIGURE 5D

CALCOFI CRUISE 2008

11 - 14 January 2008

NITRATE (μM/L) ALONG CALCOFI LINE 90

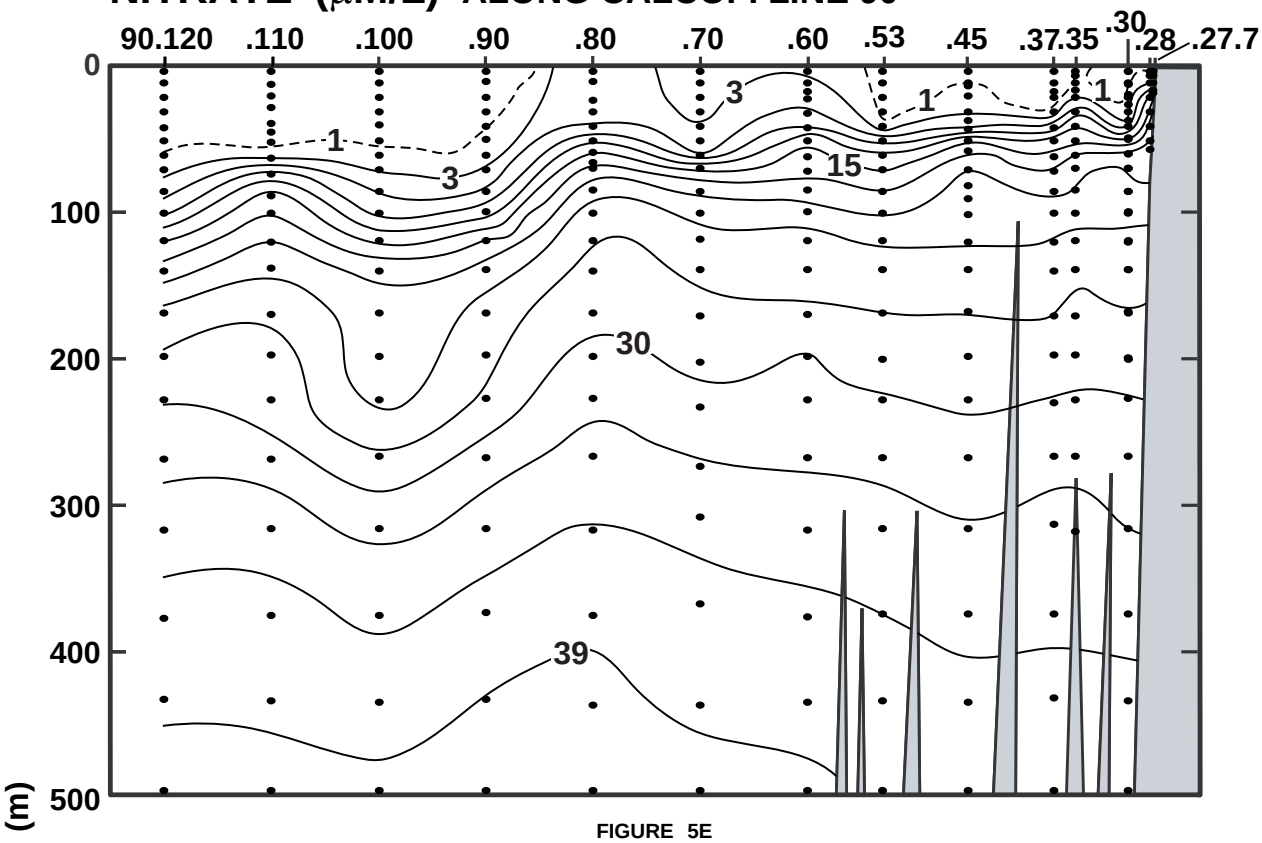

FIGURE 5E

PHOSPHATE (μM/L) ALONG CALCOFI LINE 90

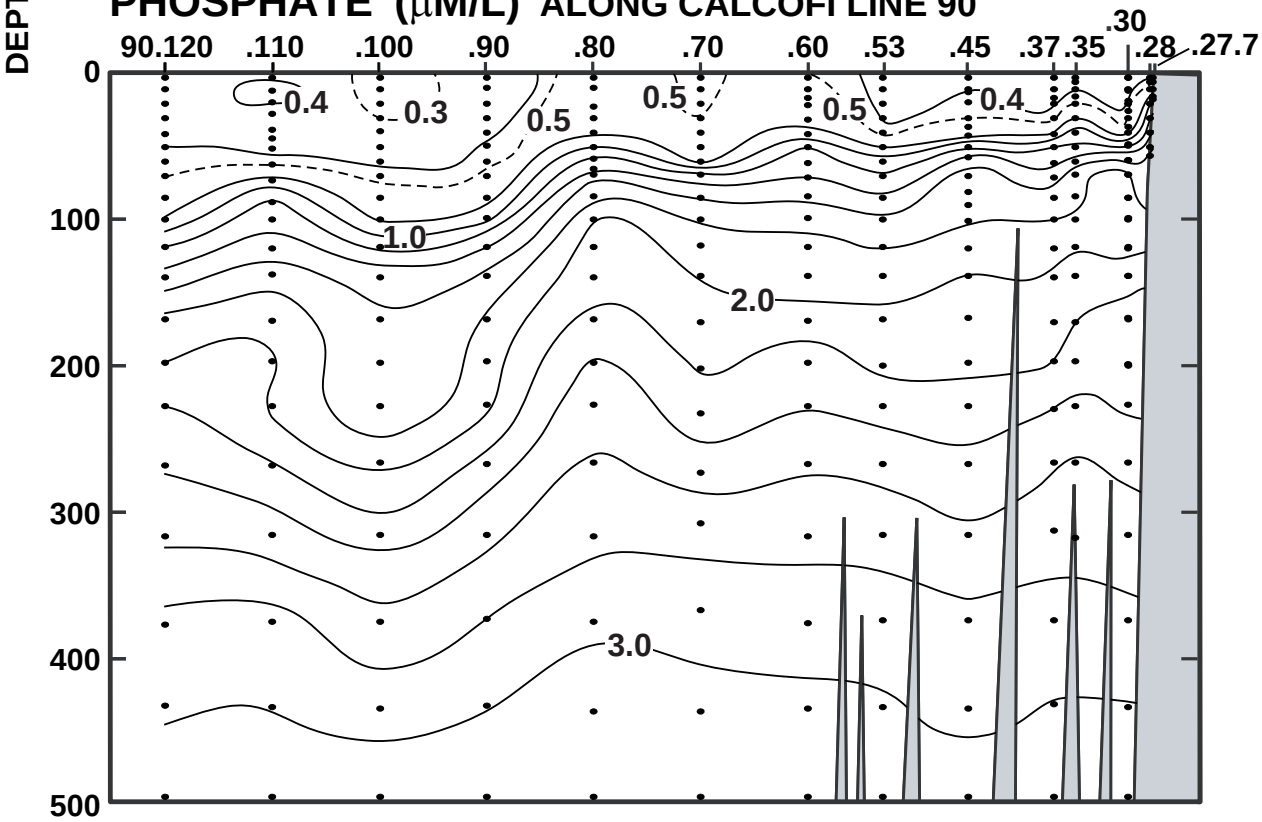

FIGURE 5F

CALCOFI CRUISE 0801

11- 14 January 2008

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

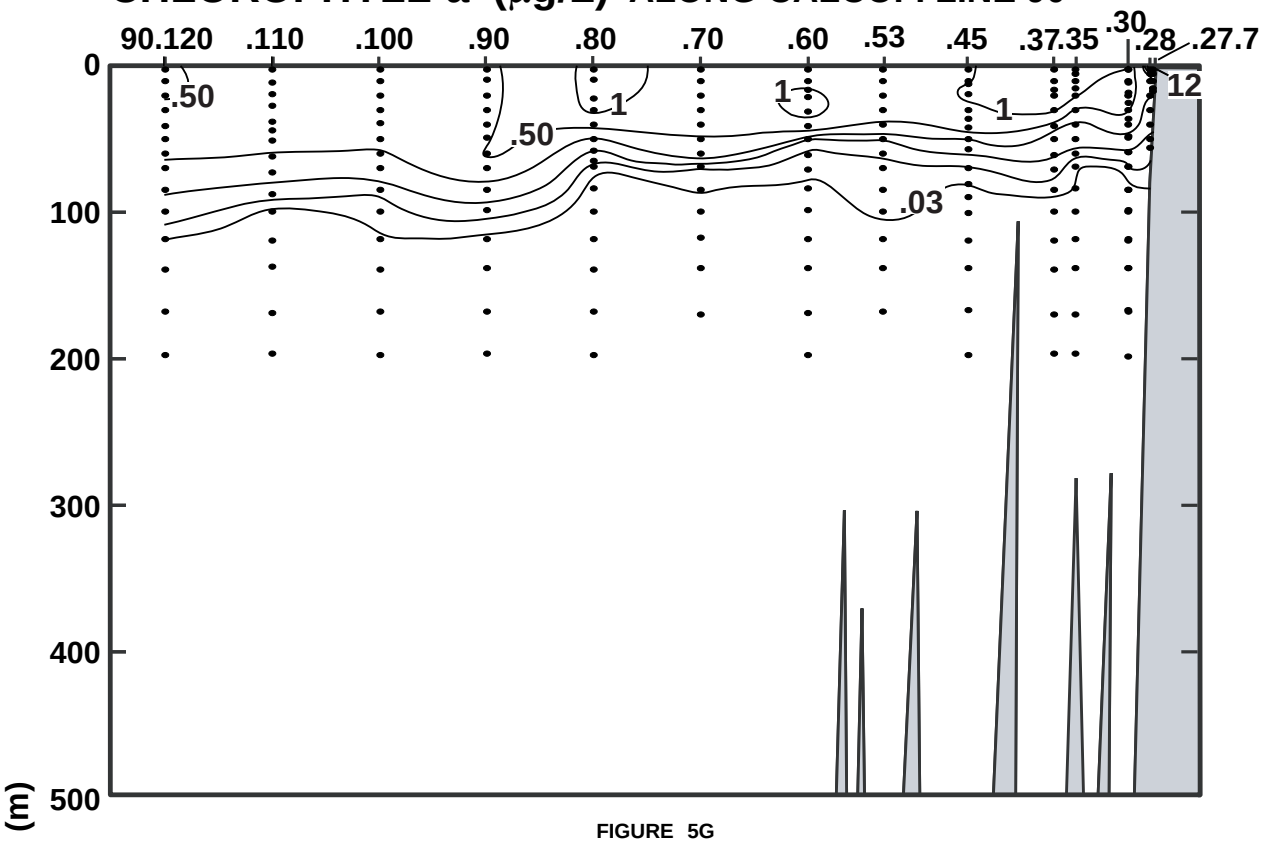

FIGURE 5G

OXYGEN SATURATION (%) ALONG CALCOFI LINE 90

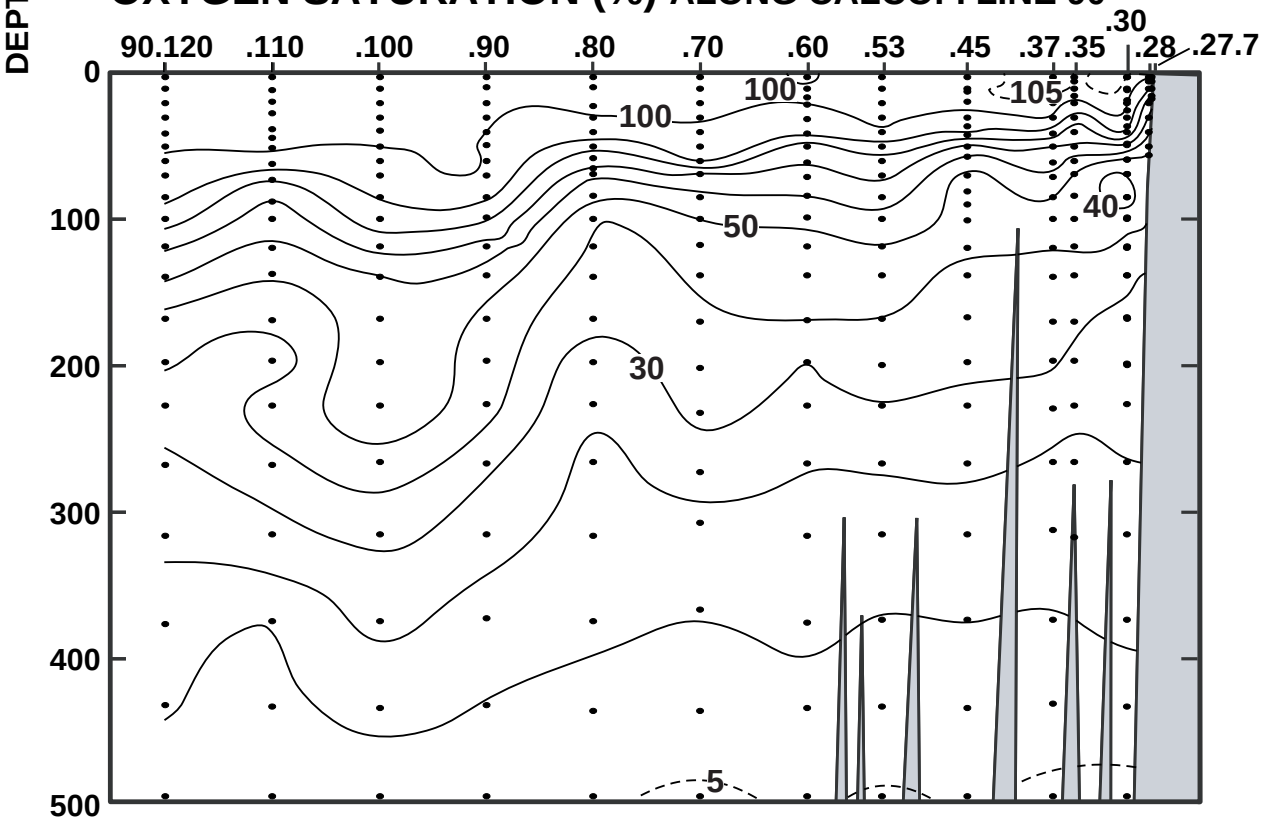

FIGURE 5H

CALCOFI CRUISE 0801

11 - 14 January 2008

OXYGEN (mL/L) ALONG CALCOFI LINE 90

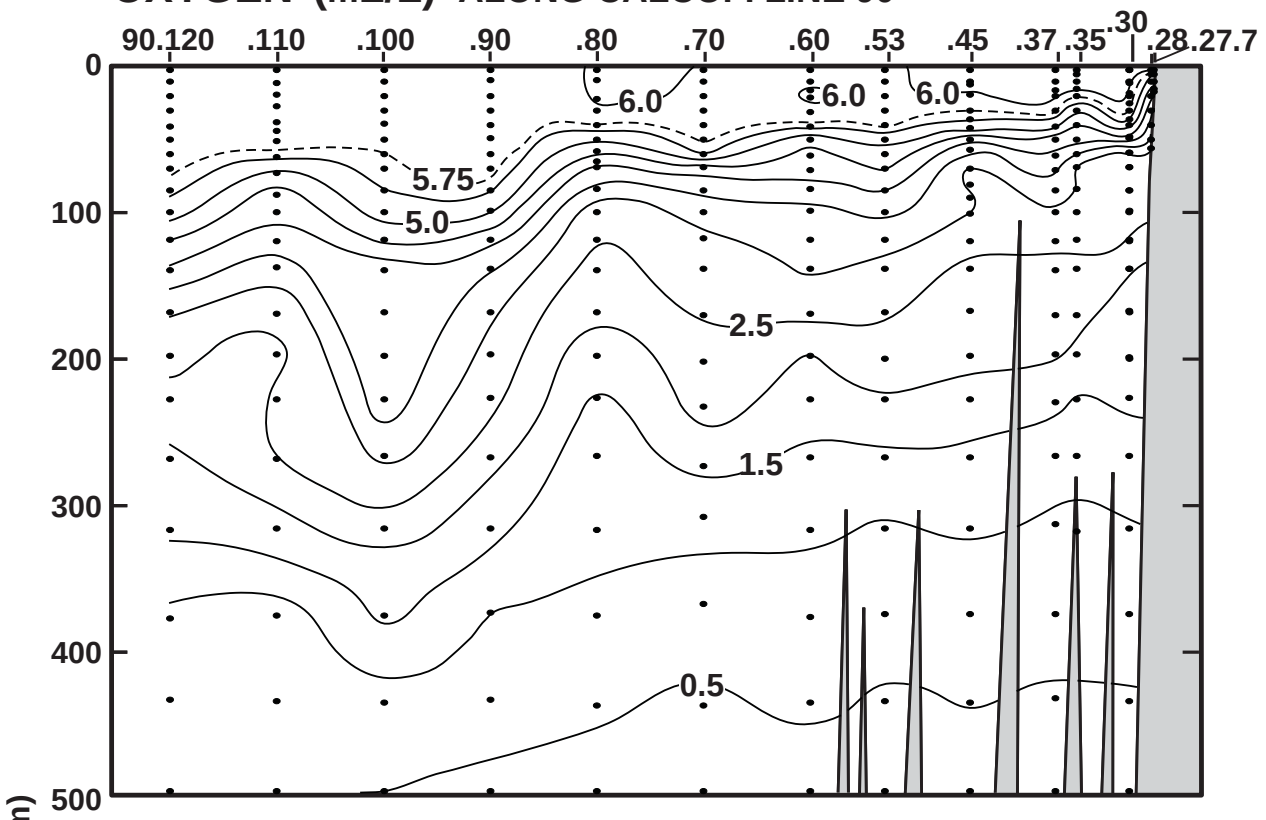

FIGURE 5I

NITRITE (μM/L) ALONG CALCOFI LINE 90

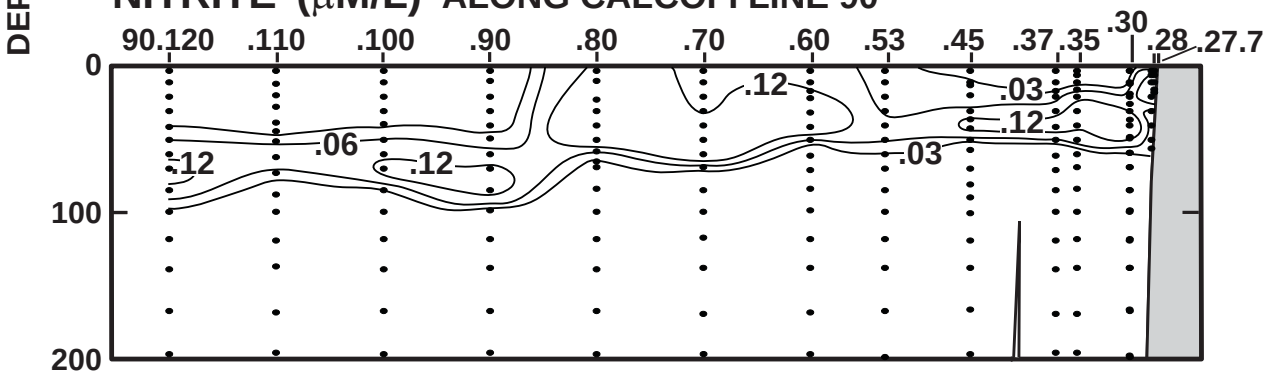

FIGURE 5J

PHAEOPIGMENTS (μg/L) ALONG CALCOFI LINE 90

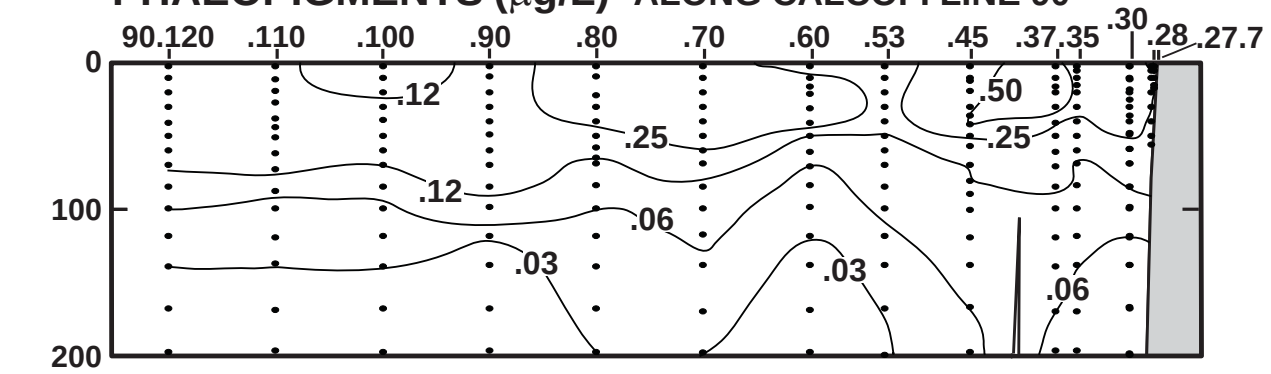

FIGURE 5K

PERSONNEL

CalCOFI Cruise 0801

SHIP'S CAPTAIN

Craig Bailey (Leg 1-2), Keith Roberts (Legs 3-4) , RV *David Starr Jordan*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

		Participating (Legs)
Griffith, David A. (Chief Scientist)	Fishery Biologist, NMFS	1-4
Abramenkoff, Dimitry N.	Fishery Biologist, NMFS	4
Blum, Marguerite R.	Staff Research Associate, MBARI	4
Bowlin, Noelle M.	Fishery Biologist, NMFS	1-3
Bently, Michael D.	Seabird Biologist, Pt. Reyes Bird Observatory	1-3
Camacho, Dominique L.	Marine Mammal Observer, Cascadia Research	1-3
Campbell, Gregory S.	Staff Research Associate, SIO	1-3
Dovel, Shonna L.	Staff Research Associate, SIO	1-3
Hays, Amy E.	Fishery Biologist, NMFS	1-4
Hembrough, Brett M.	Volunteer	1-3
Manion, Sue M.	Fishery Biologist, NMFS	1-3
Overcash, Bryan J.	Scientific Aid, Cal. Department of Fish and Game	1-4
Reynolds, Susan M.	Staff Research Associate, SIO	1-3
Rodgers-Wolgast, Jennifer L.	Staff Research Associate, SIO	1-3
Thombley, Robert L.	Staff Research Associate, SIO	1-4
Wilkinson, James R.	Programmer Analyst, SIO	1-3
Wolgast, David M.	Staff Research Associate, SIO	1-3

Leg 1: San Diego to Dana Point, California 7 January -14 January, 2008
Leg 2: Dana Point to Port Hueneme, California 14 January -17 January, 2008
Leg 3: Port Hueneme to Monterey, California 17 January - 26 January, 2008
Leg 4: Monterey to San Diego 26 January- 30 January, 2008

RV DAVID STARR JORDAN CALCOFI CRUISE 0801 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 44.8 N	122 1.5 W	26/01/08	2309 UTC	1123 m	060 09 kn	180 02 04	1	1011.2 mb	15.0 C	12.1 C		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	11.51	11.51	33.240	25.314	264.9	0.000	6.02	97.4	9.6	0.57	7.5	0.22		0.95	0.41	0	
2 A	11.51	11.51	33.240	25.314	265.0	0.005	6.02	97.4	9.6	0.57	7.5	0.22		0.95	0.41	2	212
10	11.45	11.45	33.237 D	25.323	264.3	0.026	5.96	96.3	9.7		7.5	0.23		1.00	0.47	10	211
20	11.44	11.44	33.237 D	25.325	264.4	0.053	5.95	96.1	9.4		7.4	0.25		1.02	0.52	20	210
30	11.44	11.44	33.237 D	25.325	264.6	0.079	5.94	95.9	9.6	0.58	7.6	0.24		0.97	0.50	30	209
40	11.44	11.44	33.239 D	25.327	264.7	0.106	5.93	95.8	9.6		7.5	0.25		0.88	0.45	40	208
50 ISL	11.42 D	11.41	33.240 D	25.331	264.5	0.132	5.92	95.5	9.5	0.61	7.5	0.25		0.88	0.46	50	
60	11.42	11.41	33.241 D	25.332	264.6	0.159	5.92	95.5	9.3	0.63	7.5	0.25		0.88	0.48	60	207
75 ISL	11.42 D	11.41	33.243 D	25.334	264.8	0.198	5.92	95.5	9.4	0.63	7.6	0.23		0.87	0.50	75	
80	11.41	11.40	33.244 D	25.337	264.6	0.212	5.92	95.5	9.4	0.63	7.6	0.23		0.87	0.51	80	206
100	11.37	11.36	33.273	25.367	262.2	0.264	5.82	93.8	9.9		8.0	0.26		0.82	0.54	101	205
125 ISL	11.37 D	11.35	33.282 D	25.375	262.1	0.330	5.54	89.3	11.4	0.70	9.6	0.25		0.78	0.49	126	
150	11.19	11.17	33.379 D	25.483	252.4	0.394	5.26	84.5	13.0	0.74	11.3	0.25		0.67	0.38	151	204
200	9.17	9.15	33.896 D	26.230	181.9	0.503	2.52	38.9	31.8	1.77	27.1	0.10		0.04	0.10	201	203
250 CSL	8.37	8.34	34.045	26.473	159.6	0.588										251	200
300 CSL	7.46	7.43	34.109	26.657	142.5	0.664										302	200
400 CSL	6.76	6.72	34.145	26.783	131.6	0.801										403	200
500 CSL	6.14	6.10	34.210	26.916	119.9	0.926										504	200
513	6.07	6.02	34.214 D	26.929	118.8	0.942	0.58	8.3	75.2	2.66	39.3	0.06		0.01	0.05	517	202
600 CSL	5.63	5.58	34.264	27.023	110.5	1.042										604	200
700 CSL	5.08	5.02	34.322	27.135	100.4	1.147										705	200
800 CSL	4.77	4.71	34.357	27.199	95.0	1.245										806	200
900 CSL	4.40	4.33	34.394	27.270	88.7	1.337										908	200
1000 CSL	3.94	3.86	34.441	27.355	80.6	1.421										1009	200
1018	3.89	3.81	34.451	27.369	79.4	1.436	0.55	7.5	120.7	2.88	43.2	0.08		0.03	0.25	1027	201

A) NUTRIENTS WERE FROZEN AND RUN AFTER 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 0801 STATION 66.7 52.5

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
36 42.6 N	122 14.4 W	27/01/08	0241 UTC	1129 m	160 17 kn			1009.5 mb	14.0 C	11.8 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	11.38	11.38	33.225	25.326	263.8	0.000	6.01	96.9	9.6	0.46	8.1	0.20				0	
2	11.38	11.38	33.225	25.326	263.8	0.005	6.01	96.9	9.6	0.46	8.1	0.20				2	212
10 ISL	11.37 D	11.37	33.221 D	25.325	264.1	0.026	6.00	96.7	9.6	0.48	8.1	0.20				10	
20 ISL	11.37 D	11.37	33.221 D	25.325	264.3	0.053	5.99	96.6	9.5	0.50	8.1	0.20				20	
30 ISL	11.38 D	11.38	33.222 D	25.324	264.7	0.079	5.98	96.4	9.4	0.53	8.2	0.20				30	
50 ISL	11.40 D	11.39	33.227 D	25.325	265.1	0.132	5.96	96.1	9.3	0.58	8.2	0.20				50	
52	11.39	11.38	33.224 D	25.324	265.2	0.138	5.96	96.1	9.3	0.58	8.2	0.20				52	211
75 ISL	10.55 D	10.54	33.561 D	25.736	226.4	0.194	4.80	76.2	15.0	1.02	14.7	0.14				75	
100 ISL	9.97 D	9.96	33.742 D	25.977	204.1	0.248	3.38	53.0	22.2	1.53	22.6	0.06				101	
101	9.93	9.92	33.755	25.994	202.5	0.250	3.32	52.0	22.5	1.55	22.9	0.06				102	210
125 ISL	9.48 D	9.47	33.853 D	26.145	188.5	0.297	3.00	46.6	26.4	1.64	24.6	0.06				126	
150 ISL	9.02 D	9.00	33.937 D	26.285	175.6	0.342	2.68	41.2	29.9	1.74	26.4	0.06				151	
200	8.71	8.69	34.023 D	26.402	165.4	0.428	2.02	30.9	34.9	1.93	29.9	0.07				201	209
250 ISL	8.26 D	8.23	34.077 D	26.514	155.6	0.508	1.66	25.1	40.7	2.07	31.6	0.06				252	
298	7.63	7.60	34.106 D	26.630	145.0	0.580	1.43	21.3	46.7	2.19	33.0	0.06				300	208
300 ISL	7.60 D	7.57	34.106 D	26.635	144.7	0.583	1.42	21.2	47.0	2.20	33.1	0.06				302	
396	6.51	6.47	34.127 D	26.802	129.5	0.715	1.04	15.1	62.4	2.46	37.4	0.07				399	207
400 CSL	6.43	6.39	34.131	26.816	128.2	0.720										403	200
500 CSL	5.89	5.85	34.191	26.933	118.0	0.843										504	200
511	5.78	5.74	34.198 D	26.952	116.2	0.856	0.56	8.0	70.0	2.57	36.8	0.05				515	206
598	5.47	5.42	34.286 D	27.060	106.8	0.953	0.30	4.3	87.9	2.86	41.6	0.05				603	205
600 ISL	5.46 D	5.41	34.287 D	27.062	106.6	0.955	0.30	4.3	88.2	2.86	41.7	0.05				605	
698	4.85	4.79	34.321 D	27.161	97.6	1.055	0.22	3.1	98.2	2.98	43.4	0.05				703	204
700 ISL	4.84 D	4.78	34.321 D	27.162	97.5	1.057	0.22	3.1	98.4	2.98	43.4	0.05				705	
797	4.61	4.55	34.363 D	27.221	92.6	1.149	0.23	3.2	105.1	2.93	44.1	0.04				803	203
800 ISL	4.59 D	4.53	34.367 D	27.227	92.1	1.152	0.23	3.2	105.3	2.93	44.1	0.04				807	
893	4.34	4.27	34.406 D	27.285	87.0	1.235	0.26	3.6	110.2	2.93	44.2	0.05				901	202
900 CSL	4.29	4.22	34.407	27.292	86.4	1.241										908	200
1000 CSL	4.08	4.00	34.433	27.335	82.9	1.326										1009	200
1011	4.05	3.97	34.438	27.342	82.2	1.335	0.38	5.2	118.4	2.97	44.5	0.04				1020	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0801 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 37.5 N	122 25.1 W	27/01/08	0515 UTC	2477 m	070 07 kn			1005.5 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	11.41	11.41	33.176	25.282	267.9	0.000	6.09	98.2	9.7		8.2	0.31		1.01	0.39	0	
2 A	11.41	11.41	33.176	25.282	268.0	0.005	6.09	98.2	9.7		8.2	0.31		1.01	0.39	2	212
10	11.41	11.41	33.194 D	25.296	266.8	0.027	6.08	98.1	9.5		8.3	0.33		1.00	0.38	10	211
20	11.40	11.40	33.203 D	25.305	266.2	0.053	6.06	97.8	9.2	0.49	8.2	0.33		1.04	0.34	20	210
30 ISL	11.35 D	11.35	33.213 D	25.323	264.8	0.080	6.04	97.3	9.6	0.53	8.7	0.34		1.00	0.38	30	
31	11.35	11.35	33.212 D	25.322	264.9	0.083	6.04	97.3	9.7	0.53	8.8	0.34		0.99	0.38	31	209
40	11.30	11.30	33.228 D	25.343	263.0	0.106	6.00	96.6	10.1	0.60	9.4	0.35		0.89	0.36	40	208
50 ISL	11.28 D	11.27	33.246 D	25.361	261.6	0.133	5.87	94.5	10.4	0.69	10.0	0.35		0.79	0.34	50	
61	11.22	11.21	33.281 D	25.400	258.2	0.161	5.73	92.1	10.8	0.82	10.7	0.34		0.63	0.30	61	207
75 ISL	10.69 D	10.68	33.477 D	25.646	235.0	0.196	4.30	68.4	17.3	1.08	18.0	0.16		0.24	0.22	75	
80	10.28	10.27	33.630 D	25.837	217.0	0.207	3.76	59.3	19.9	1.19	20.8	0.09		0.11	0.19	80	206
100 ISL	9.56 D	9.55	33.786 D	26.079	194.2	0.248	2.97	46.2	25.7	1.58	25.8			0.01	0.11	101	
101	9.55	9.54	33.789	26.083	193.9	0.250	2.95	45.9	25.9	1.60	25.9			0.01	0.11	102	205
125 ISL	9.17 D	9.16	33.906 D	26.237	179.8	0.295	2.54	39.2	30.0	1.68	27.2			0.01	0.09	126	
150	8.90	8.88	33.974 D	26.333	171.0	0.339	2.36	36.2	32.7	1.76	28.5			0.01	0.07	151	204
200	8.48	8.46	34.050 D	26.459	160.0	0.422	1.91	29.0	37.8	2.13	31.0			0.01	0.07	201	203
250 CSL	7.90	7.87	34.074	26.565	150.5	0.499										252	200
300 CSL	7.34	7.31	34.104	26.670	141.2	0.572										302	200
400 CSL	6.62	6.58	34.118	26.780	131.7	0.708										403	200
500 CSL	5.89	5.85	34.215	26.952	116.3	0.832										504	200
512	5.77	5.73	34.212 D	26.964	115.1	0.846	0.53	7.6	78.0	2.75	40.5			0.00	0.03	516	202
600 CSL	5.32	5.27	34.255	27.053	107.3	0.944										605	200
700 CSL	4.80	4.74	34.353	27.192	94.6	1.045										706	200
800 CSL	4.49	4.43	34.386	27.253	89.5	1.137										807	200
900 CSL	4.16	4.09	34.423	27.318	83.7	1.224										908	200
1000 CSL	3.92	3.84	34.457	27.370	79.2	1.305										1009	200
1009	3.91	3.83	34.460	27.374	78.9	1.312	0.41	5.6	119.7	3.05	44.3			0.00	0.02	1018	201

A) NUTRIENTS WERE FROZEN AND RUN AFTER 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 0801 STATION 66.8 48.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
36 50.2 N	121 54.4 W	26/01/08	2104 UTC	76 m	260 18 kn	190 04 07	2	1013.4 mb	14.5 C	11.9 C	15m	7/8	CS

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	11.56	11.56	33.225	25.293	266.9	0.000	6.14	99.4	8.4	0.47	6.2	0.19		1.13	0.41	0	
2	11.56	11.56	33.225	25.293	267.0	0.005	6.14	99.4	8.4	0.47	6.2	0.19		1.13	0.41	2	208
5	11.57	11.57	33.220 D	25.287	267.6	0.013	6.13	99.3	8.3	0.53	6.2	0.19		1.13	0.41	5	207
10	11.56	11.56	33.225	25.293	267.1	0.027	6.12	99.1	8.2	0.56	6.2	0.19		1.11	0.43	10	206
20	11.57	11.57	33.219 D	25.287	268.0	0.053	6.12	99.1	8.3	0.47	6.2	0.19		1.20	0.47	20	205
30	11.55	11.55	33.220 D	25.292	267.8	0.080	6.12	99.0	8.4	0.48	6.2	0.19		1.12	0.46	30	204
40	11.49	11.49	33.228 D	25.309	266.3	0.107	6.00	97.0	8.9	0.61	6.9	0.22		0.99	0.43	40	203
50 ISL	11.41 D	11.40	33.250 D	25.341	263.5	0.133	5.83	94.1	9.8	0.65	8.1	0.22		0.81	0.42	50	
62	11.32	11.31	33.315 D	25.408	257.4	0.165	5.62	90.6	11.1	0.71	9.7	0.23		0.65	0.41	62	202
67	11.28	11.27	33.330	25.427	255.8	0.178	5.55	89.4	11.6	0.77	10.2	0.26		0.65	0.43	67	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0801 STATION 67.1 47.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
36 47.9 N	121 50.7 W	26/01/08	1940 UTC	197 m	120 25 kn	160 07 03	1	1015.5 mb	14.5 C	10.7 C	13m	7/8	CS

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	11.51	11.51	33.227	25.304	265.9	0.000	6.09	98.5	8.7	0.53	6.5	0.17		1.30	0.46	0	
1	11.51	11.51	33.227	25.304	265.9	0.003	6.09	98.5	8.7	0.53	6.5	0.17		1.30	0.46	1	212
2	11.49	11.49	33.223 D	25.304	265.9	0.005	6.09	98.4	8.5	0.53	6.5	0.18		1.17	0.49	2	211
5	11.50	11.50	33.223 D	25.302	266.1	0.013	6.08	98.3	8.4	0.53	6.4	0.19		1.23	0.50	5	210
10	11.49	11.49	33.224 D	25.305	266.0	0.027	6.09	98.4	8.4	0.51	6.3	0.18		1.21	0.47	10	209
20	11.49	11.49	33.222 D	25.304	266.3	0.053	6.08	98.3	8.5	0.51	6.3	0.18		1.10	0.46	20	208
30	11.49	11.49	33.222 D	25.304	266.6	0.080	6.08	98.3	8.4	0.51	6.4	0.17		1.20	0.52	30	207
40	11.49	11.49	33.223 D	25.305	266.7	0.107	6.09	98.4	8.4	0.55	6.5	0.18		1.17	0.54	40	206
50 ISL	11.47 D	11.46	33.230 D	25.314	266.1	0.133	5.89	95.2	9.1	0.61	7.5	0.19		1.00	0.50	50	
59	11.39	11.38	33.278 D	25.366	261.3	0.157	5.69	91.8	9.8	0.67	8.5	0.21		0.84	0.46	59	205
75 ISL	11.34 D	11.33	33.306 D	25.398	258.7	0.198	5.64	90.9	10.5	0.78	9.1	0.23		0.85	0.47	75	
79	11.35	11.34	33.306 D	25.396	259.0	0.209	5.63	90.8	10.6	0.80	9.2	0.24		0.85	0.47	79	204
99	11.29	11.28	33.326	25.423	256.9	0.260	5.54	89.2	11.0	0.81	9.8	0.25		0.81	0.41	100	203
100 ISL	11.27 D	11.26	33.324 D	25.425	256.7	0.263	5.53	89.0	11.1	0.81	9.8	0.25		0.81	0.41	101	
125 ISL	11.23 D	11.21	33.341 D	25.446	255.3	0.327	5.39	86.7	12.4	0.83	11.0	0.29		0.75	0.42	126	
149	11.10	11.08	33.381 D	25.501	250.6	0.388	5.26	84.4	13.6	0.84	12.1	0.31		0.62	0.46	150	202
150 ISL	11.02 D	11.00	33.386 D	25.519	248.9	0.390	5.19	83.1	14.2	0.86	12.4	0.31		0.61	0.46	151	
186	8.64	8.62	33.869	26.292	175.5	0.467	2.61	39.8	36.9	1.72	24.1	0.20		0.21	0.44	187	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0801 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 5.6 N	120 47.2 W	25/01/08	2103 UTC	77 m	150 32 kn	180 07 07	2	1013.3 mb	14.8 C	12.2 C		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	12.14	12.14	33.537	25.427	254.1	0.000	5.46	89.7	9.6	0.88	8.4	0.26	0.12	1.00	0.39	0	
2	12.14	12.14	33.537	25.427	254.2	0.005	5.46	89.7	9.6	0.88	8.4	0.26	0.12	1.00	0.39	2	209
6	12.14	12.14	33.538	25.428	254.2	0.015	5.45	89.5	9.5	0.87	8.4	0.26	0.11	1.06	0.33	6	208
10	12.15	12.15	33.537	25.425	254.6	0.025	5.46	89.7	9.5	0.87	8.4	0.26	0.13	1.00	0.40	10	207
20	12.15	12.15	33.538	25.426	254.7	0.051	5.46	89.7	9.5	0.88	8.3	0.26	0.16	0.96	0.29	20	206
29	12.13	12.13	33.539	25.431	254.5	0.074	5.43	89.2	9.6	0.88	8.5	0.25	0.14	1.10	0.38	29	205
30 ISL	12.14 D	12.14	33.533 D	25.425	255.1	0.076	5.43	89.2	9.6	0.88	8.5	0.25	0.15	1.10	0.38	30	
40	12.13	12.12	33.539	25.431	254.7	0.102	5.44	89.3	9.6	0.90	8.5	0.25	0.20	1.02	0.31	40	204
50	12.11	12.10	33.541	25.437	254.5	0.127	5.42	88.9	9.8	0.89	8.6	0.25	0.17	1.01	0.32	50	203
60	12.10	12.09	33.541	25.439	254.5	0.153	5.42	88.9	9.8	0.92	8.7	0.25	0.25	1.00	0.36	60	202
70	12.05	12.04	33.545	25.452	253.6	0.178	5.35	87.7	10.2	0.96	9.0	0.25	0.27	0.94	0.39	70	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0801 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 53.3 N	121 11.6 W	29/01/08	0822 UTC	562 m	350 15 kn			1023.1 mb	11.0 C	8.1 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	11.82	11.82	33.037	25.099	285.4	0.000	6.15	100.0	5.9	0.61	4.0	0.12		0.83	0.25	0	
2 A	11.82	11.82	33.037	25.099	285.4	0.006	6.15	100.0	5.9	0.61	4.0	0.12		0.83	0.25	2	220
10	11.82	11.82	33.037	25.099	285.6	0.029	6.17	100.3	5.8	0.61	3.9	0.11		0.83	0.24	10	219
20 ISL	11.83 D	11.83	33.033 D	25.094	286.3	0.057	6.16	100.2	4.9	0.56	3.3	0.09		0.91	0.26	20	
21	11.83	11.83	33.045	25.104	285.4	0.060	6.16	100.2	4.8	0.56	3.3	0.09		0.92	0.26	21	218
30	11.83	11.83	33.036	25.097	286.3	0.086	6.16	100.2	5.7	0.62	3.9	0.11		0.85	0.25	30	217
40	11.84	11.83	33.037	25.096	286.6	0.114	6.16	100.2	5.7	0.63	3.9	0.11		0.87	0.25	40	216
50	11.85	11.84	33.048	25.103	286.2	0.143	6.14	99.9	5.2	0.59	3.6	0.11		0.80	0.25	50	215
60	11.83	11.82	33.130	25.171	280.0	0.171	5.97	97.1	6.3	0.69	5.0	0.16		0.63	0.37	60	214
69	11.27	11.26	33.618	25.653	234.3	0.194	4.54	73.2	10.5	1.09	11.1	0.13		0.27	0.25	69	213
75 ISL	10.24 D	10.23	33.822 D	25.993	202.0	0.208	3.69	58.3	16.6	1.45	16.9	0.08		0.14	0.20	75	
85	9.75	9.74	33.898	26.135	188.7	0.227	2.70	42.2	26.3	1.95	25.1	0.00		0.03	0.14	85	212
100 ISL	9.33 D	9.32	33.934 D	26.233	179.7	0.255	2.65	41.0	27.5	2.00	25.5	0.00		0.00	0.12	101	
101	9.32	9.31	33.936	26.236	179.4	0.257	2.65	41.0	27.6	2.00	25.5	0.00		0.00	0.12	102	211
119	9.12	9.11	33.973	26.297	173.9	0.288	2.62	40.4	27.9	2.02	25.0	0.01		0.01	0.11	120	210
125 ISL	9.05 D	9.04	33.991 D	26.323	171.6	0.299	2.47	38.0	28.6	2.05	25.3	0.01		0.01	0.10	126	
138	9.00	8.99	34.045	26.373	167.1	0.321	2.10	32.3	30.5	2.13	26.1	0.01		0.01	0.09	139	209
150 ISL	8.99 D	8.97	34.062 D	26.388	165.9	0.341	1.91	29.4	31.6	2.19	26.7	0.02		0.01	0.10	151	
171	8.86	8.84	34.110	26.447	160.7	0.375	1.69	25.9	34.1	2.29	28.0	0.02		0.02	0.11	172	208
198	8.64	8.62	34.149	26.512	155.0	0.418	1.39	21.2	40.3	2.47	31.2	0.00		0.01	0.10	199	207
200 ISL	8.61 D	8.59	34.151 D	26.518	154.4	0.421	1.38	21.1	40.6	2.48	31.3	0.00				201	
231	8.38	8.36	34.174	26.572	149.8	0.468	1.25	19.0	43.7	2.58	32.6	0.00				232	206
250 ISL	8.31 D	8.28	34.179 D	26.587	148.7	0.496	1.21	18.3	44.8	2.60	32.9	0.00				252	
267	8.22	8.19	34.192	26.611	146.7	0.521	1.17	17.7	45.8	2.62	33.1	0.00				269	205
300 ISL	7.97 D	7.94	34.221 D	26.671	141.5	0.569	1.02	15.3	50.0	2.72	34.2	0.00				302	
320	7.69	7.66	34.220	26.712	137.8	0.597	0.92	13.7	53.0	2.79	35.0	0.00				322	204
377	7.17	7.13	34.244	26.805	129.6	0.673	0.69	10.2	60.3	2.93	36.4	0.00				380	203
400 ISL	6.33 D	6.29	34.149 D	26.843	125.6	0.702	0.65	9.4	63.7	2.97	37.0	0.00				403	
436	6.12	6.08	34.168	26.885	121.9	0.747										439	202
500 ISL	5.77 D	5.73	34.208 D	26.961	115.2	0.823	0.50	7.1	78.7	3.15	39.5	0.00				504	
507	5.72	5.68	34.209	26.968	114.6	0.831	0.49	7.0	79.7	3.16	39.7	0.00				511	201

A) NUTRIENTS WERE FROZEN AND RUN AFTER 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 0801 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 43.1 N	121 33.3 W	29/01/08	1242 UTC	953 m	330 16 kn			1023.3 mb	10.0 C	7.1 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	11.65	11.65	33.108	25.185	277.1	0.000	6.14	99.5	5.7	0.68	5.0	0.12	0.37	0.92	0.29	0	
2 A	11.65	11.65	33.108	25.185	277.2	0.006	6.14	99.5	5.7	0.68	5.0	0.12	0.37	0.92	0.29	2	220
10	11.65	11.65	33.136	25.207	275.3	0.028	6.13	99.4	4.5	0.60	4.2	0.12	0.52	0.97	0.26	10	219
20	11.65	11.65	33.166	25.231	273.3	0.055	6.10	98.9	5.9	0.71	5.4	0.13	0.44	1.01	0.26	20	218
30	11.88	11.88	33.520	25.464	251.4	0.081	5.76	94.1	9.2	0.94	9.3	0.20	0.58	0.88	0.41	30	217
40	11.85	11.84	33.604	25.535	244.9	0.106	5.39	88.0	10.6	1.01	10.9	0.22	0.62	0.37	0.46	40	216
50	10.58	10.57	33.747	25.875	212.7	0.129	3.32	52.8	19.5	1.66	21.3	0.03	0.51	0.14	0.17	50	215
60	10.37	10.36	33.780	25.938	206.9	0.150	3.07	48.6	20.2	1.75	21.7	0.03	0.59	0.09	0.13	60	214
70	10.26	10.25	33.803	25.975	203.6	0.171	2.99	47.2	21.3	1.79	22.7	0.01	0.33	0.07	0.14	70	213
75 ISL	10.09 D	10.08	33.828 D	26.023	199.1	0.181	2.92	46.0	22.2	1.83	23.4	0.00	0.18	0.05	0.13	75	
84	9.97	9.96	33.855	26.065	195.4	0.198	2.78	43.6	23.9	1.91	24.5	0.00	0.00	0.03	0.11	84	212
99	9.77	9.76	33.899	26.133	189.2	0.227	2.61	40.8	25.7	1.99	25.6	0.00	0.23	0.02	0.11	100	211
100 ISL	9.74 D	9.73	33.900 D	26.139	188.7	0.229	2.60	40.6	25.8	2.00	25.7	0.00	0.23	0.02	0.11	101	
122	9.41	9.40	33.978	26.254	178.1	0.269	2.30	35.7	29.1	2.13	27.4	0.00	0.24	0.00	0.09	123	210
125 ISL	9.36 D	9.35	33.990 D	26.272	176.5	0.275	2.27	35.2	29.5	2.14	27.6	0.00	0.22	0.00	0.09	126	
139	9.23	9.21	34.029	26.324	171.8	0.299	2.14	33.1	31.2	2.20	28.2	0.00	0.09	0.01	0.09	140	209
150 ISL	9.11 D	9.09	34.048 D	26.358	168.8	0.318	2.09	32.2	32.0	2.22	28.5	0.00	0.04	0.01	0.09	151	
169	9.05	9.03	34.074	26.388	166.3	0.350	2.01	31.0	33.2	2.24	29.0	0.01	0.01	0.01	0.08	170	208
199	8.82	8.80	34.110	26.453	160.6	0.399	1.75	26.8	36.6	2.37	30.2	0.00	0.00	0.01	0.08	200	207
200 ISL	8.80 D	8.78	34.110 D	26.456	160.3	0.400	1.74	26.6	36.7	2.37	30.2	0.00	0.00			201	
229	8.66	8.64	34.133	26.497	157.0	0.446	1.59	24.3	39.0	2.45	31.2	0.00	0.00			230	206
250 ISL	8.51 D	8.48	34.166 D	26.546	152.7	0.479	1.46	22.2	41.1	2.51	31.8	0.02	0.03			252	
269	8.37	8.34	34.176	26.576	150.2	0.508	1.33	20.2	43.0	2.56	32.4	0.03	0.06			271	205
300 ISL	7.99 D	7.96	34.208 D	26.658	142.7	0.553	1.14	17.1								302	
318	7.79	7.76	34.212	26.691	139.8	0.578	1.03	15.4								320	204
377	7.04	7.00	34.230	26.812	128.8	0.658	0.72	10.6								380	203
400 ISL	6.87 D	6.83	34.230 D	26.835	126.8	0.687	0.66	9.7								403	
437	6.41	6.37	34.228	26.895	121.3	0.733	0.60	8.7								440	202
500 ISL	6.19 D	6.15	34.276 D	26.962	115.6	0.808	0.42	6.1								504	
518	6.19	6.14	34.294	26.977	114.5	0.828	0.37	5.3								522	201

A) NUTRIENTS WERE FROZEN AND RUN AFTER 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 0801 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 23.2 N	122 15.2 W	25/01/08	0634 UTC	3988 m	170 21 kn			1007.0 mb	12.3 C	10.5 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	11.87	11.87	33.426	25.392	257.5	0.000	6.18	100.8	8.3	0.72	6.3	0.20	0.65	1.33	0.43	0	
2	11.87	11.87	33.426	25.392	257.6	0.005	6.18	100.8	8.3	0.72	6.3	0.20	0.65	1.33	0.43	2	221
10	11.96	11.96	33.516	25.445	252.7	0.026	6.15	100.6	9.0	0.77	7.1	0.22	0.71	1.30	0.45	10	220
20	12.00	12.00	33.613	25.513	246.5	0.051	6.02	98.6	9.7	0.85	8.4	0.26	0.80	1.12	0.52	20	219
24	11.99	11.99	33.613	25.515	246.4	0.060	5.99	98.1	10.5	0.86	8.6	0.29	0.98	1.03	0.46	24	218
30	11.94	11.94	33.619	25.529	245.2	0.075	5.95	97.3	10.4	0.88	9.0	0.28	0.97	0.94	0.50	30	217
40	11.66	11.65	33.655	25.609	237.8	0.099	5.43	88.3	13.0	1.08	12.0	0.35	1.00	0.49	0.45	40	216
50	10.55	10.54	33.770	25.899	210.5	0.122	3.48	55.3	21.2	1.65	21.2	0.12	0.92	0.17	0.28	50	215
59	10.26	10.25	33.812	25.982	202.8	0.140	3.18	50.2	23.1	1.75	22.8	0.10	0.89	0.10	0.22	59	214
70	9.98	9.97	33.853	26.061	195.4	0.162	2.93	46.0	25.4	1.85	24.2	0.11	0.90	0.05	0.18	70	213
75 ISL	9.83 D	9.82	33.882 D	26.109	190.9	0.172	2.79	43.7	26.3	1.91	24.9	0.10	0.90	0.05	0.15	75	
85	9.64	9.63	33.927	26.176	184.8	0.191	2.52	39.3	28.1	2.01	26.1	0.08	0.89	0.06	0.12	85	212
100	9.39	9.38	33.981	26.260	177.1	0.218	2.32	36.0	31.6	2.08	27.2	0.13	1.00	0.02	0.19	101	211
119	9.31	9.30	34.002	26.289	174.7	0.251	2.19	33.9	32.0	2.15	27.8	0.10	0.78	0.01	0.12	120	210
125 ISL	9.25 D	9.24	34.015 D	26.309	172.9	0.262	2.15	33.2	32.5	2.14	27.8	0.11	0.71	0.01	0.11	126	
140	9.11	9.09	34.042	26.353	169.0	0.287	2.05	31.6	34.0	2.12	28.0	0.13	0.51	0.00	0.10	141	209
150 ISL	9.06 D	9.04	34.050 D	26.368	167.8	0.304	2.00	30.8	34.9	2.18	28.6	0.12	0.32	0.00	0.09	151	
170	8.79	8.77	34.091	26.443	161.0	0.337	1.86	28.5	37.2	2.32	30.1	0.08	0.00	0.00	0.09	171	208
200	8.56	8.54	34.156	26.530	153.3	0.384	1.45	22.1	42.8	2.44	31.7	0.00	0.00	0.00	0.09	201	207
229	8.05	8.03	34.113	26.573	149.4	0.428	1.62	24.4	44.4	2.51	32.9	0.00	0.00			230	206
250 ISL	7.75 D	7.73	34.123 D	26.626	144.7	0.459	1.77	26.5	47.3	2.51	33.5	0.00	0.00			252	
268	7.25	7.22	34.070	26.655	141.9	0.485	1.85	27.3	50.4	2.51	34.0	0.00	0.00			270	205
300 ISL	6.91 D	6.88	34.078 D	26.709	137.2	0.529	1.62	23.8	55.5	2.60	35.2	0.00	0.00			302	
316	6.84	6.81	34.093	26.730	135.4	0.551	1.45	21.2	58.1	2.66	35.9	0.00	0.00			318	204
377	6.32	6.29	34.126	26.826	126.9	0.631	1.05	15.2	67.5	2.82	38.1	0.00	0.02			380	203
400 ISL	6.05 D	6.02	34.116 D	26.852	124.4	0.660	0.97	13.9	70.8	2.87	38.7	0.00	0.02			403	
436	5.78	5.74	34.133	26.900	120.2	0.704	0.86	12.3	75.9	2.96	39.5	0.00				439	202
500 ISL	5.48 D	5.44	34.195 D	26.986	112.6	0.779	0.53	7.5	85.1	3.19	41.4	0.00	0.00			504	
515	5.38	5.34	34.216	27.014	109.9	0.795	0.45	6.4	87.2	3.24	41.9	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 0801 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 3.1 N	122 56.0 W	25/01/08	0017 UTC	3988 m	240 18 kn	250 03 05	1	1007.0 mb	13.0 C	9.6 C	14m	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	12.96	12.96	32.852	24.738	319.7	0.000	6.11	101.7	2.7	0.39	0.4	0.02	0.00	0.64	0.16	0	
2	12.96	12.96	32.852	24.738	319.8	0.006	6.11	101.7	2.7	0.39	0.4	0.02	0.00	0.64	0.16	2	220
10	12.93	12.93	32.849	24.742	319.6	0.032	6.11	101.6	2.7	0.38	0.4	0.02	0.00	0.67	0.15	10	219
20	12.29	12.29	32.810	24.835	311.0	0.064	6.25	102.5	3.6	0.46	1.2	0.05	0.01	0.87	0.25	20	218
30	12.03	12.03	32.789	24.868	308.1	0.094	6.29	102.6	3.9	0.49	1.6	0.06	0.01	0.90	0.25	30	217
40	11.83	11.82	32.777	24.896	305.6	0.125	6.29	102.1	4.2	0.52	2.2	0.07	0.03	0.94	0.29	40	216
50	11.69	11.68	32.795	24.936	302.0	0.156	6.24	101.0	4.8	0.57	3.1	0.10	0.04	0.87	0.34	50	215
60	11.31	11.30	32.917	25.100	286.6	0.185	5.77	92.7	4.6	0.70	4.7	0.06	0.03	0.07	0.08	60	214
70	11.25	11.24	33.108	25.260	271.7	0.213	6.10	98.0	8.3	0.81	6.9	0.26	0.32	0.37	0.26	70	213
75 ISL	11.16 D	11.15	33.123 D	25.288	269.1	0.226	5.98	95.9	8.2	0.84	7.5	0.22	0.25	0.31	0.22	75	
85	10.22	10.21	33.085	25.422	256.5	0.253	5.48	86.1	8.1	0.95	9.5	0.07	0.02	0.08	0.08	85	212
100	9.67	9.66	33.341	25.714	229.0	0.289	4.56	70.9	16.7	1.46	18.1	0.00	0.01	0.04	0.08	100	211
120	9.07	9.06	33.593	26.008	201.3	0.332	4.18	64.2	21.3	1.63	21.3	0.00	0.00	0.01	0.04	121	210
125 ISL	9.01 D	9.00	33.634 D	26.049	197.5	0.342	4.06	62.3	22.4	1.67	22.1	0.00	0.00	0.01	0.04	126	
139	8.81	8.80	33.753	26.174	185.9	0.369	3.71	56.7	25.1	1.78	24.0	0.00	0.00	0.00	0.03	140	209
150 ISL	8.66 D	8.64	33.819 D	26.249	178.9	0.389	3.51	53.5	26.9	1.84	25.1	0.00	0.00	0.00	0.03	151	
169	8.45	8.43	33.926	26.366	168.2	0.422	3.15	47.8	30.1	1.94	26.8	0.00	0.00	0.01	0.03	170	208
199	8.43	8.41	34.045	26.463	159.6	0.471	2.23	33.9	36.5	2.25	30.1	0.00	0.00	0.00	0.04	200	207
200 ISL	8.39 D	8.37	34.040 D	26.465	159.4	0.473	2.23	33.8	36.6	2.25	30.1	0.00	0.00			201	
228	8.04	8.02	34.056	26.530	153.5	0.516	2.15	32.4	40.0	2.31	31.1	0.00	0.01			229	206
250 ISL	7.80 D	7.78	34.073 D	26.579	149.2	0.550	1.86	27.8	43.8	2.45	32.7	0.00	0.01			251	
268	7.61	7.58	34.091	26.621	145.4	0.576	1.58	23.5	47.2	2.57	34.1	0.00	0.00			270	205
300 ISL	7.18 D	7.15	34.100 D	26.689	139.2	0.622	1.28	18.9	52.7	2.71	35.6	0.00	0.00			302	
318	7.08	7.05	34.143	26.737	134.9	0.647	1.15	16.9	55.8	2.78	36.3	0.00	0.00			320	204
377	6.44	6.41	34.159	26.836	126.0	0.723	0.85	12.3	65.8	2.97	38.5	0.00	0.00			379	203
400 ISL	6.29 D	6.25	34.184 D	26.875	122.5	0.752	0.75	10.8	69.2	3.03	39.1	0.00	0.00			403	
438	5.97	5.93	34.190	26.921	118.4	0.798	0.61	8.8	74.7	3.10	40.1	0.00	0.00			441	202
500 ISL	5.41 D	5.37	34.191 D	26.991	112.0	0.869	0.48	6.8	84.0	3.18	41.7	0.00	0.00			503	
512	5.34	5.30	34.201	27.007	110.5	0.883	0.46	6.5	85.8	3.20	42.0	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 0801 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 43.6 N	123 37.6 W	24/01/08	1809 UTC	3886 m	260 25 kn	280 03 06	2	1009.3 mb	12.3 C	10.5 C	22m	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	14.21	14.21	33.080	24.661	327.1	0.000	5.90	100.9	2.4	0.34	0.0	0.00	0.00	0.34	0.13	0	
2 A	14.21	14.21	33.080	24.661	327.1	0.007	5.90	100.9	2.4	0.34	0.0	0.00	0.00	0.34	0.13	2	222
8	14.20	14.20	33.075	24.659	327.5	0.026	5.90	100.9	2.3	0.33	0.0	0.00	0.00	0.34	0.11	8	221
10 ISL	14.20 D	14.20	33.075 D	24.659	327.5	0.033	5.90	100.9	2.3	0.33	0.0	0.00	0.00	0.34	0.12	10	
14 A	14.22	14.22	33.079	24.658	327.7	0.046	5.90	100.9	2.2	0.33	0.0	0.00	0.00	0.34	0.13	14	220
20 ISL	14.20 D	14.20	33.073 D	24.658	327.9	0.066	5.90	100.8	2.2	0.32	0.1	0.00	0.00	0.35	0.11	20	
23	14.21	14.21	33.078	24.660	327.8	0.075	5.90	100.9	2.2	0.32	0.1	0.00	0.00	0.35	0.10	23	219
30 ISL	14.22 D	14.22	33.077 D	24.657	328.3	0.098	5.90	100.9	2.1	0.32	0.1	0.00	0.00	0.34	0.10	30	
32 A	14.23	14.23	33.084	24.661	328.0	0.105	5.90	100.9	2.1	0.32	0.1	0.00	0.00	0.34	0.10	32	218
38	14.29	14.28	33.099	24.660	328.3	0.125	5.88	100.7	2.1	0.32	0.0	0.00	0.00	0.33	0.11	38	217
47 A	14.24	14.23	33.091	24.664	328.1	0.154	5.89	100.8	2.0	0.32	0.0	0.00	0.00	0.35	0.13	47	216
50 ISL	14.25 D	14.24	33.086 D	24.658	328.7	0.164	5.89	100.8	2.0	0.31	0.0	0.00	0.00	0.36	0.10	50	
53	14.20	14.19	33.080	24.664	328.3	0.174	5.90	100.8	2.0	0.31	0.0	0.00	0.00	0.37	0.08	53	215
62 A	14.26	14.25	33.089	24.659	329.0	0.203	5.83	99.8	1.9	0.32	0.0	0.00	0.00	0.32	0.11	62	214
75 ISL	14.01 D	14.00	33.050 D	24.681	327.2	0.246	5.91	100.6	2.0	0.34	0.1	0.02	0.06	0.33	0.10	75	
77	13.92	13.91	33.037	24.690	326.5	0.253	5.92	100.6	2.0	0.35	0.1	0.02	0.07	0.33	0.10	77	213
91 A	13.54	13.53	33.115	24.828	313.6	0.297	5.80	97.8	2.2	0.41	0.9	0.14	0.00	0.17	0.11	91	212
100 ISL	13.55 D	13.54	33.310 D	24.977	299.7	0.325	5.76	97.3	2.4	0.45	1.5	0.06	0.00	0.13	0.10	100	
106	12.68	12.67	33.118	25.001	297.4	0.343	5.73	94.9	2.7	0.48	2.0	0.00	0.00	0.11	0.10	106	211
122	11.40	11.38	33.089	25.219	276.8	0.389	5.58	89.9	4.1	0.65	4.8	0.00	0.04	0.05	0.05	123	210
125 ISL	10.96 D	10.94	33.040 D	25.260	272.9	0.397	5.52	88.1	4.8	0.70	5.8	0.00	0.04	0.04	0.05	126	
142	10.10	10.08	33.245	25.568	243.8	0.441	5.07	79.5	9.7	1.03	11.6	0.00	0.04	0.01	0.03	143	209
150 ISL	9.84 D	9.82	33.319 D	25.669	234.2	0.460	4.78	74.6	11.6	1.14	13.7	0.00	0.03	0.01	0.03	151	
171	10.10	10.08	33.672	25.902	212.7	0.507	4.09	64.3	16.3	1.38	18.1	0.01	0.01	0.01	0.02	172	208
197	9.30	9.28	33.845	26.170	187.6	0.559	3.79	58.6	22.0	1.59	21.8	0.00	0.01	0.01	0.03	198	207
200 ISL	9.06 D	9.04	33.861 D	26.220	182.8	0.565	3.72	57.2	22.8	1.62	22.2	0.00	0.01			201	
219	8.83	8.81	33.951	26.328	172.9	0.598	3.28	50.2	27.5	1.82	24.9	0.00	0.00			220	206
250 ISL	8.30 D	8.27	34.002 D	26.449	161.7	0.650	2.78	42.1	33.7	2.04	28.1	0.00	0.00			251	
268	8.14	8.11	34.027	26.493	157.8	0.679	2.58	38.9	36.8	2.13	29.4	0.00	0.00			269	205
300 ISL	7.64 D	7.61	34.032 D	26.571	150.7	0.728	2.41	35.9	41.6	2.23	31.0	0.00	0.00			302	
318	7.43	7.40	34.031	26.600	148.1	0.755	2.33	34.6	44.3	2.29	31.8	0.00	0.00			320	204
382	6.59	6.56	34.066	26.743	134.9	0.846	1.52	22.1	58.0	2.68	36.4	0.00	0.00			384	203
400 ISL	6.33 D	6.29	34.077 D	26.786	130.9	0.870	1.33	19.2	61.8	2.77	37.4	0.00	0.00			402	
438	6.05	6.01	34.117	26.854	124.8	0.918	1.01	14.5	68.9	2.93	39.1	0.00	0.00			441	202
500 ISL	5.79 D	5.75	34.164 D	26.924	118.8	0.994	0.70	10.0	76.1	3.06	40.4	0.00	0.00			503	
507	5.74	5.70	34.168	26.933	117.9	1.002	0.67	9.6	76.9	3.08	40.6	0.00	0.00			510	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 0801 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 23.2 N	124 19.1 W	24/01/08	1151 UTC	3836 m	020 16 kn			1011.4 mb	12.3 C	8.8 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	14.73	14.73	33.204	24.646	328.4	0.000	5.82	100.6	2.3	0.33	0.0	0.00	0.00	0.26	0.09	0	
2	14.73	14.73	33.204	24.646	328.5	0.007	5.82	100.6	2.3	0.33	0.0	0.00	0.00	0.26	0.09	2	220
10 ISL	14.74 D	14.74	33.203 D	24.644	329.0	0.033	5.83	100.8	2.3	0.32	0.0	0.00	0.00	0.27	0.08	10	
16	14.73	14.73	33.204	24.647	328.9	0.053	5.83	100.8	2.2	0.32	0.0	0.00	0.00	0.28	0.07	16	219
20 ISL	14.73 D	14.73	33.201 D	24.645	329.2	0.066	5.83	100.8	2.2	0.32	0.0	0.00	0.00	0.28	0.07	20	
30	14.73	14.73	33.199	24.644	329.6	0.099	5.83	100.8	2.1	0.32	0.0	0.00	0.00	0.28	0.09	30	218
45	14.69	14.68	33.191	24.646	329.8	0.148	5.83	100.7	2.2	0.32	0.0	0.00	0.01	0.28	0.09	45	217
50 ISL	14.71 D	14.70	33.192 D	24.643	330.2	0.165	5.84	100.9	2.1	0.32	0.0	0.00	0.00	0.28	0.09	50	
55	14.67	14.66	33.184	24.646	330.1	0.181	5.84	100.8	2.1	0.32	0.0	0.00	0.00	0.28	0.09	55	216
65	13.91	13.90	33.059	24.709	324.3	0.214	5.91	100.4	2.4	0.39	0.4	0.04	0.11	0.27	0.11	65	215
75	12.53	12.52	32.901	24.861	309.9	0.246	5.87	96.8	3.4	0.55	2.1	0.16	0.05	0.14	0.09	75	214
85	12.03	12.02	32.887	24.945	302.1	0.276	5.81	94.8	4.0	0.63	3.5	0.08	0.05	0.06	0.14	85	213
94	12.23	12.22	33.136	25.101	287.5	0.303	5.60	91.9	3.6	0.59	3.3	0.04	0.05	0.09	0.10	94	212
100 ISL	11.90 D	11.89	33.104 D	25.138	284.1	0.320	5.57	90.7	4.2	0.66	4.4	0.04	0.05	0.07	0.09	100	
110	10.74	10.73	32.965	25.240	274.4	0.348	5.55	88.1	5.8	0.82	6.8	0.05	0.05	0.03	0.07	110	211
125	10.49	10.48	33.068	25.363	262.9	0.388	5.29	83.6	7.9	0.96	9.6	0.05	0.06	0.03	0.05	126	210
145	9.94	9.92	33.355	25.681	233.1	0.438	4.60	71.9	13.9	1.30	15.9	0.06	0.04	0.01	0.03	146	209
150 ISL	9.87 D	9.85	33.397 D	25.725	229.0	0.449	4.39	68.6	15.8	1.41	17.7	0.06	0.04	0.01	0.03	151	
168	9.33	9.31	33.649	26.011	202.1	0.488	3.71	57.3	22.4	1.75	23.2	0.05	0.03	0.01	0.03	169	208
198	8.89	8.87	33.812	26.209	183.7	0.546	3.14	48.1	27.6	1.95	26.4	0.00	0.03	0.00	0.04	199	207
200 ISL	8.87 D	8.85	33.844 D	26.237	181.1	0.550	3.11	47.6	28.0	1.96	26.6	0.00	0.03			201	
228	8.40	8.38	33.953	26.395	166.5	0.598	2.74	41.5	33.1	2.08	28.9	0.00	0.01			229	206
250 ISL	7.92 D	7.89	33.974 D	26.484	158.2	0.634	2.68	40.2	36.9	2.15	30.0	0.00	0.01			251	
268	7.71	7.68	33.987	26.525	154.5	0.662	2.65	39.6	40.1	2.22	30.9	0.00	0.01			269	205
300 ISL	7.30 D	7.27	34.004 D	26.597	148.0	0.711	2.24	33.1	46.6	2.40	33.3	0.00	0.00			302	
318	7.08	7.05	34.019	26.639	144.1	0.737	1.97	29.0	50.3	2.51	34.6	0.00	0.00			320	204
378	6.61	6.58	34.089	26.759	133.4	0.820	1.36	19.8	60.1	2.77	37.3	0.00	0.00			380	203
400 ISL	6.26 D	6.22	34.071 D	26.790	130.5	0.849	1.23	17.8	64.5	2.85	38.4	0.00	0.00			402	
437	5.87	5.83	34.095	26.859	124.1	0.896	1.05	15.0	71.9	2.97	40.0	0.00	0.00			440	202
500 ISL	5.53 D	5.49	34.171 D	26.961	115.0	0.972	0.68	9.7	81.9	3.13	41.6	0.01	0.00			503	
510	5.46	5.42	34.169	26.968	114.4	0.983	0.62	8.8	83.5	3.16	41.9	0.01	0.00			513	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0801 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 27.1 N	120 31.5 W	19/01/08	1206 UTC	76 m	090 04 kn			1023.3 mb	13.5 C	11.3 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	12.72	12.72	33.505	25.291	267.1	0.000	5.58	92.7	6.8	0.70	5.9	0.28	0.11	1.78	0.63	0	
2	12.72	12.72	33.505	25.291	267.2	0.005	5.58	92.7	6.8	0.70	5.9	0.28	0.11	1.78	0.63	2	209
5	12.71	12.71	33.505	25.293	267.1	0.013	5.59	92.9	6.8	0.70	5.9	0.28	0.10	2.02	0.45	5	208
10	12.68	12.68	33.512	25.304	266.1	0.027	5.50	91.3	7.0	0.72	6.5	0.30	0.10	1.74	0.53	10	207
20	12.66	12.66	33.513	25.309	265.9	0.053	5.47	90.8	7.2	0.74	6.6	0.30	0.11	1.64	0.51	20	206
30	12.58	12.58	33.532	25.339	263.3	0.080	5.52	91.5	7.8	0.76	7.1	0.25	0.14	1.68	0.57	30	205
40	12.36	12.35	33.547	25.394	258.4	0.106	5.23	86.3	9.1	0.89	8.9	0.28	0.11	1.05	0.45	40	204
50	12.18	12.17	33.564	25.442	254.0	0.131	4.97	81.7	10.3	1.00	10.7	0.27	0.09	0.72	0.38	50	203
59	12.04	12.03	33.586	25.485	250.1	0.154	4.84	79.3	11.3	1.08	11.7	0.25	0.09	0.80	0.33	59	202
69	11.61	11.60	33.602	25.578	241.5	0.179	4.15	67.4	13.9	1.31	15.1	0.23	0.01	0.40	0.30	69	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0801 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 19.0 N	120 48.3 W	19/01/08	1509 UTC	781 m	090 06 kn	340 02 04	0	1023.7 mb	13.7 C	11.5 C	09m	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	12.72	12.72	33.536	25.315	264.8	0.000	6.09	101.2	6.8	0.57	4.3	0.08	0.09	2.52	0.69	0	
2	12.72	12.72	33.536	25.315	264.9	0.005	6.09	101.2	6.8	0.57	4.3	0.08	0.09	2.52	0.69	2	220
10	12.62	12.62	33.546	25.342	262.5	0.026	5.92	98.2	7.4	0.66	5.6	0.12	0.18	1.77	0.60	10	219
19	11.94	11.94	33.585	25.502	247.4	0.049	4.90	80.1	11.4	1.10	12.3	0.31	0.08	0.63	0.35	19	218
20 ISL	11.88 D	11.88	33.587 D	25.515	246.3	0.052	4.85	79.2	11.6	1.12	12.6	0.31	0.07	0.61	0.35	20	
30	11.74	11.74	33.586	25.541	244.1	0.076	4.53	73.8	13.0	1.25	14.4	0.33	0.01	0.44	0.32	30	217
40	11.34	11.34	33.621	25.642	234.7	0.100	3.96	64.0	15.4	1.44	17.1	0.10	0.01	0.19	0.25	40	216
50	11.16	11.15	33.648	25.696	229.8	0.123	3.75	60.3	16.6	1.50	18.1	0.07	0.01	0.15	0.19	50	215
60	10.97	10.96	33.687	25.760	223.9	0.146	3.59	57.5	18.2	1.57	19.2	0.07	0.03	0.12	0.17	60	214
70	10.66	10.65	33.745	25.860	214.6	0.168	3.12	49.7	20.3	1.72	21.1	0.02	0.00	0.08	0.12	70	213
75 ISL	10.53 D	10.52	33.782 D	25.912	209.8	0.179	3.08	48.9	21.3	1.76	21.6	0.02	0.00	0.07	0.14	75	
84	10.37	10.36	33.791	25.947	206.6	0.197	3.02	47.8	22.8	1.81	22.2	0.02	0.01	0.06	0.17	84	212
99	10.21	10.20	33.808	25.988	203.0	0.228	2.94	46.4	23.2	1.85	22.9	0.01	0.00	0.04	0.11	100	211
100 ISL	10.11 D	10.10	33.827 D	26.020	200.0	0.230	2.92	46.0	23.4	1.86	23.0	0.01	0.00	0.04	0.11	101	
119	9.69	9.68	33.916	26.160	187.0	0.267	2.53	39.5	27.2	2.01	25.4	0.01	0.00	0.03	0.11	120	210
125 ISL	9.65 D	9.64	33.937 D	26.183	185.0	0.278	2.46	38.4	28.1	2.04	25.9	0.01	0.00	0.02	0.10	126	
138	9.44	9.42	33.986	26.256	178.3	0.302	2.33	36.2	29.8	2.10	26.7	0.01	0.00	0.01	0.09	139	209
150 ISL	9.18 D	9.16	34.031 D	26.333	171.1	0.323	2.16	33.4	31.7	2.17	27.6	0.01	0.00	0.01	0.08	151	
169	9.08	9.06	34.061	26.373	167.7	0.355	1.91	29.4	34.4	2.27	28.8	0.01	0.00	0.01	0.06	170	208
199	8.91	8.89	34.102	26.433	162.6	0.404	1.75	26.9	36.6	2.34	29.5	0.00	0.00	0.00	0.06	200	207
200 ISL	8.91 D	8.89	34.100 D	26.431	162.8	0.406	1.75	26.9	36.7	2.34	29.5	0.00	0.00			201	
228	8.77	8.75	34.125	26.473	159.3	0.451	1.64	25.1	38.5	2.40	30.3	0.00	0.00			229	206
250 ISL	8.56 D	8.53	34.147 D	26.523	154.9	0.486	1.51	23.0	41.1	2.47	31.2	0.00	0.01			252	
268	8.34	8.31	34.158	26.566	151.1	0.513	1.41	21.4	43.6	2.53	32.0	0.00	0.01			270	205
300 ISL	7.75 D	7.72	34.132 D	26.634	144.9	0.561	1.38	20.6	47.3	2.59	33.1	0.00	0.00			302	
317	7.66	7.63	34.136	26.650	143.6	0.585	1.36	20.3	49.5	2.62	33.6	0.00	0.00			319	204
377	6.97	6.93	34.197	26.795	130.3	0.667	0.82	12.0	62.1	2.91	36.0	0.00	0.00			380	203
400 ISL	6.87 D	6.83	34.198 D	26.810	129.2	0.697	0.70	10.3	66.5	2.99	36.3	0.00	0.00			403	
437	6.50	6.46	34.215	26.873	123.4	0.744	0.56	8.1	73.0	3.08	36.9	0.00	0.00			440	202
500 ISL	5.74 D	5.70	34.238 D	26.988	112.6	0.818	0.43	6.1	81.8	3.18	39.6	0.00	0.00			504	
512	5.69	5.65	34.243	26.999	111.8	0.832	0.41	5.8	83.5	3.20	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 0801 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 8.9 W	19/01/08	1951 UTC	2126 m	270 02 kn	320 02 06	0	1024.1 mb	16.1 C	13.3 C	11m	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	12.63	12.63	33.575	25.362	260.3	0.000	6.07	100.7	7.8	0.77	6.5	0.07	0.17	1.92	0.52	0	
2 A	12.63	12.63	33.575	25.362	260.4	0.005	6.07	100.7	7.8	0.77	6.5	0.07	0.17	1.92	0.52	2	222
7 A	12.65	12.65	33.574	25.358	260.9	0.018	6.07	100.8	7.8	0.74	6.4	0.06	0.05	1.98	0.50	7	221
10 ISL	12.55 D	12.55	33.571 D	25.375	259.4	0.026	6.05	100.2	7.8	0.75	6.6	0.06	0.05	1.98	0.57	10	
15 A	12.53	12.53	33.576	25.383	258.7	0.039	6.01	99.5	7.9	0.76	6.8	0.07	0.05	1.97	0.66	15	220
20 ISL	12.38 D	12.38	33.585 D	25.419	255.4	0.052	5.83	96.3	8.7	0.82	7.8	0.12	0.07	1.38	0.57	20	
23 A	12.27	12.27	33.592	25.445	253.0	0.059	5.62	92.6	9.2	0.89	9.1	0.15	0.08	0.97	0.49	23	219
30 ISL	11.37 D	11.37	33.684 D	25.685	230.3	0.076	4.65	75.2	14.1	1.27	15.3	0.22	0.03	0.37	0.32	30	
31 A	11.34	11.34	33.682	25.689	230.0	0.079	4.49	72.5	14.9	1.33	16.3	0.22	0.02	0.31	0.30	31	218
38	10.76	10.76	33.747	25.844	215.4	0.094	3.69	58.9	19.0	1.59	20.4	0.06	0.01	0.17	0.20	38	217
45 A	10.31	10.30	33.792	25.957	204.8	0.109	3.20	50.6	21.7	1.76	22.7	0.02	0.01	0.08	0.13	45	216
50 ISL	10.22 D	10.21	33.804 D	25.982	202.5	0.119	3.12	49.2	22.3	1.79	23.2	0.01	0.00	0.06	0.13	50	
52	10.22	10.21	33.807	25.984	202.3	0.123	3.10	48.9	22.5	1.80	23.3	0.01	0.00	0.06	0.13	52	215
60	9.89	9.88	33.878	26.096	191.9	0.139	2.77	43.4	25.5	1.93	24.9	0.01	0.00	0.03	0.12	60	214
69	9.68	9.67	33.923	26.166	185.4	0.156	2.60	40.6	27.4	2.01	25.9	0.00	0.00	0.02	0.08	69	213
75 ISL	9.58 D	9.57	33.950 D	26.204	181.9	0.167	2.54	39.6	28.0	2.04	26.2	0.00	0.00	0.02	0.08	75	
85	9.54	9.53	33.960	26.219	180.7	0.185	2.47	38.4	28.6	2.06	26.5	0.00	0.00	0.01	0.09	85	212
100	9.44	9.43	33.981	26.251	177.9	0.212	2.39	37.1	29.6	2.10	27.0	0.00	0.00	0.01	0.09	101	211
120	9.28	9.27	34.004	26.296	174.1	0.247	2.30	35.6	30.8	2.14	27.5	0.00	0.00	0.01	0.08	121	210
125 ISL	9.21 D	9.20	34.022 D	26.321	171.8	0.256	2.27	35.1	31.1	2.15	27.6	0.00	0.00	0.01	0.08	126	
140	9.16	9.14	34.035	26.340	170.3	0.282	2.18	33.6	32.3	2.19	28.1	0.00	0.00	0.00	0.08	141	209
150 ISL	9.11 D	9.09	34.044 D	26.355	169.1	0.298	2.12	32.7	33.1	2.22	28.4	0.00	0.00	0.00	0.08	151	
170	8.98	8.96	34.090	26.412	164.0	0.332	1.93	29.7	35.2	2.29	29.3	0.01	0.00	0.01	0.08	171	208
199	8.76	8.74	34.128	26.477	158.4	0.379	1.44	22.0	39.6	2.48	31.2	0.01	0.00	0.00	0.09	200	207
200 ISL	8.76 D	8.74	34.130 D	26.478	158.2	0.380	1.44	22.0	39.7	2.48	31.2	0.01	0.00			201	
229	8.48	8.46	34.145	26.534	153.4	0.425	1.51	23.0	41.6	2.50	31.7	0.00	0.00			230	206
250 ISL	8.45 D	8.42	34.181 D	26.567	150.7	0.457	1.37	20.8	43.6	2.55	32.3	0.00	0.00			252	
269	8.26	8.23	34.196	26.608	147.1	0.486	1.19	18.0	45.8	2.62	32.9	0.00	0.00			271	205
300 ISL	7.81 D	7.78	34.220 D	26.694	139.2	0.530	0.96	14.4	51.0	2.76	34.2	0.00	0.00			302	
318	7.68	7.65	34.232	26.723	136.8	0.555	0.85	12.7	54.1	2.83	34.9	0.00	0.00			320	204
378	7.26	7.22	34.236	26.786	131.4	0.635	0.74	10.9	59.6	2.91	36.0	0.00	0.00			381	203
400 ISL	6.84 D	6.80	34.215 D	26.828	127.5	0.664	0.70	10.3	63.6	2.96	36.9	0.00	0.00			403	
437	6.36	6.32	34.213	26.890	121.7	0.710	0.62	9.0	71.0	3.05	38.4	0.00	0.00			440	202
500 ISL	6.08 D	6.04	34.292 D	26.989	113.0	0.784	0.39	5.6	80.3	3.19	39.8	0.00	0.00			504	
515	5.87	5.83	34.285	27.010	111.0	0.801	0.33	4.7	82.5	3.22	40.1	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 0801 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 49.0 N	121 50.7 W	23/01/08	0740 UTC	3684 m	210 06 kn			1015.8 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	12.07	12.07	32.919	24.961	298.5	0.000	6.31	103.1	4.6	0.49	2.3	0.08	0.00	0.85	0.25	0	
2	12.07	12.07	32.919	24.961	298.6	0.006	6.31	103.1	4.6	0.49	2.3	0.08	0.00	0.85	0.25	2	220
10	12.05	12.05	32.918	24.964	298.5	0.030	6.32	103.2	4.5	0.50	2.2	0.08	0.00	0.88	0.22	10	219
20	12.03	12.03	32.913	24.964	298.7	0.060	6.31	103.0	4.6	0.50	2.2	0.08	0.00	0.89	0.23	20	218
30	11.71	11.71	32.915	25.025	293.1	0.089	6.17	100.0	5.4	0.61	3.9	0.15	0.04	0.78	0.30	30	217
39	11.35	11.35	33.008	25.163	280.2	0.115	5.89	94.8	6.8	0.80	7.0	0.22	0.01	0.46	0.26	39	216
50	11.17	11.16	33.017	25.203	276.6	0.146	5.82	93.3	7.2	0.84	7.5	0.19	0.01	0.38	0.19	50	215
60	11.23	11.22	33.190	25.327	265.1	0.173	5.93	95.3	8.8	0.89	8.6	0.47	0.01	0.24	0.40	60	214
68	11.23	11.22	33.228	25.357	262.4	0.194	5.87	94.3	9.2	0.93	9.4	0.36	0.00	0.18	0.18	68	213
75 ISL	10.96 D	10.95	33.270 D	25.438	254.9	0.212	5.45	87.1	10.9	1.08	11.9	0.23	0.00	0.12	0.14	75	
85	10.31	10.30	33.331	25.599	239.7	0.237	4.69	73.9	14.0	1.34	16.1	0.09	0.00	0.05	0.08	85	212
100	10.04	10.03	33.514	25.787	222.0	0.271	3.99	62.6	18.2	1.62	20.4	0.09	0.00	0.04	0.05	100	211
119	9.50	9.49	33.729	26.045	197.9	0.311	3.32	51.5	23.6	1.86	24.2	0.06	0.00	0.01	0.03	120	210
125 ISL	9.33 D	9.32	33.801 D	26.129	190.0	0.323	3.10	48.0	25.1	1.93	25.3	0.06	0.00	0.01	0.04	126	
140	9.15	9.13	33.873	26.214	182.2	0.351	2.64	40.7	28.5	2.09	27.4	0.06	0.00	0.00	0.05	141	209
150 ISL	8.92 D	8.90	33.938 D	26.302	174.0	0.369	2.57	39.4	30.2	2.12	27.8	0.06	0.00	0.00	0.04	151	
170	8.64	8.62	33.989	26.386	166.3	0.403	2.42	36.9	33.0	2.18	28.7	0.06	0.00	0.01	0.02	171	208
199	8.10	8.08	34.003	26.479	157.8	0.450	2.74	41.3	36.2	2.12	28.6	0.02	0.00	0.00	0.04	200	207
200 ISL	8.04 D	8.02	34.005 D	26.490	156.8	0.451	2.71	40.8	36.4	2.13	28.7	0.02	0.00			201	
229	7.94	7.92	34.085	26.568	149.9	0.496	1.74	26.1	43.5	2.50	32.5	0.01	0.00			230	206
250 ISL	7.76 D	7.74	34.120 D	26.622	145.1	0.527	1.42	21.2	47.4	2.64	33.9	0.01	0.00			251	
269	7.54	7.51	34.134	26.665	141.2	0.554	1.28	19.0	50.4	2.71	34.6	0.01	0.00			271	205
300 ISL	7.21 D	7.18	34.125 D	26.705	137.8	0.597	1.14	16.8	54.9	2.80	35.7	0.00	0.00			302	
317	7.03	7.00	34.141	26.742	134.4	0.620	1.10	16.2	57.2	2.84	36.2	0.00	0.00			319	204
378	6.43	6.40	34.159	26.837	125.8	0.700	0.82	11.9	66.4	3.01	38.2	0.00	0.00			380	203
400 ISL	5.95 D	5.92	34.116 D	26.865	123.1	0.727	0.81	11.6	70.1	3.04	38.9	0.00	0.00			403	
436	5.70	5.66	34.139	26.914	118.7	0.771	0.79	11.3	76.1	3.09	40.0	0.00	0.00			439	202
500 ISL	5.35 D	5.31	34.205 D	27.009	110.2	0.844	0.50	7.1	85.2	3.22	41.4	0.00	0.00			503	
514	5.28	5.24	34.210	27.021	109.1	0.859	0.44	6.2	87.2	3.25	41.7	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 0801 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 28.6 N	122 32.2 W	23/01/08	1658 UTC	3684 m	200 04 kn	310 01 04	2	1014.8 mb	13.2 C	9.6 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	13.52	13.52	32.937	24.692	324.1	0.000	6.01	101.2	2.1	0.36	0.0	0.01	0.00	0.45	0.15	0	
2 A	13.52	13.52	32.937	24.692	324.1	0.006	6.01	101.2	2.1	0.36	0.0	0.01	0.00	0.45	0.15	2	222
10 ISL	13.52 D	13.52	32.934 D	24.690	324.6	0.032	6.01	101.2	2.0	0.36	0.0	0.01	0.00	0.42	0.13	10	
12 A	13.52	13.52	32.940	24.695	324.2	0.039	6.01	101.2	2.0	0.36	0.0	0.01	0.00	0.41	0.13	12	221
20	13.48	13.48	32.941	24.704	323.5	0.065	6.01	101.1	2.0	0.37	0.1	0.02	0.02	0.39	0.14	20	220
29 A	12.56	12.56	32.873	24.833	311.5	0.093	6.05	99.8	3.1	0.49	1.6	0.11	0.12	0.45	0.17	29	219
30 ISL	12.23 D	12.23	32.808 D	24.845	310.3	0.097	6.07	99.4	3.2	0.50	1.7	0.11	0.12	0.48	0.18	30	
36	12.25	12.25	32.822	24.852	309.7	0.115	6.17	101.1	3.6	0.51	2.0	0.08	0.09	0.61	0.21	36	218
42 A	12.06	12.05	32.805	24.875	307.7	0.134	6.18	100.8	3.9	0.52	2.4	0.09	0.09	0.57	0.22	42	217
50	11.99	11.98	32.813	24.895	306.0	0.158	6.14	100.0	4.1	0.57	3.0	0.12	0.14	0.45	0.20	50	216
57 A	11.91	11.90	32.822	24.917	304.1	0.180	6.12	99.6	4.3	0.59	3.3	0.13	0.16	0.39	0.20	57	215
70	11.70	11.69	32.846	24.974	298.9	0.219	6.01	97.3	5.0	0.65	4.3	0.17	0.13	0.24	0.15	70	214
75 ISL	11.54 D	11.53	32.870 D	25.022	294.4	0.234	5.97	96.4	5.3	0.69	4.9	0.17	0.08	0.22	0.14	75	
81 A	11.33	11.32	32.893	25.078	289.2	0.251	5.93	95.3	5.9	0.73	5.6	0.17	0.06	0.19	0.13	81	213
90	11.36	11.35	33.066	25.208	277.1	0.277	6.16	99.2	7.7	0.75	6.2	0.23	0.21	0.43	0.23	90	212
100	10.70	10.69	33.092	25.345	264.2	0.304	5.82	92.4	8.8	0.89	8.6	0.24	0.06	0.20	0.17	100	211
120	10.13	10.12	33.472	25.740	227.0	0.353	4.13	64.9	17.3	1.54	19.3	0.09	0.01	0.03	0.05	121	210
125 ISL	10.08 D	10.07	33.566 D	25.822	219.4	0.364	3.90	61.3	18.9	1.62	20.7	0.09	0.01	0.02	0.04	126	
139	9.44	9.42	33.711	26.041	198.7	0.393	3.48	53.9	22.6	1.76	23.3	0.08	0.00	0.01	0.03	140	209
150 ISL	9.18 D	9.16	33.740 D	26.106	192.7	0.415	3.30	50.9	24.6	1.82	24.5	0.08	0.00	0.00	0.03	151	
169	8.93	8.91	33.887	26.261	178.3	0.450	3.04	46.6	27.8	1.92	25.9	0.08	0.00	0.00	0.02	170	208
199	8.55	8.53	33.999	26.408	164.8	0.501	2.25	34.2	34.5	2.21	29.6	0.02	0.00	0.00	0.04	200	207
200 ISL	8.52 D	8.50	34.002 D	26.415	164.1	0.503	2.24	34.1	34.6	2.21	29.7	0.02	0.00			201	
228	8.24	8.22	34.025	26.476	158.8	0.548	2.07	31.3	38.1	2.30	31.0	0.01	0.00			229	206
250 ISL	8.08 D	8.05	34.040 D	26.512	155.7	0.583	1.81	27.3	41.3	2.41	32.1	0.00	0.00			251	
267	8.00	7.97	34.091	26.564	151.0	0.609	1.60	24.1	43.9	2.50	32.9	0.00	0.00			269	205
300 ISL	7.49 D	7.46	34.094 D	26.641	144.0	0.658	1.43	21.3	48.6	2.61	34.2	0.00	0.00			302	
319	7.38	7.35	34.108	26.668	141.7	0.685	1.37	20.3	51.5	2.66	34.9	0.00	0.00			321	204
378	6.73	6.70	34.145	26.787	130.9	0.765	0.98	14.3	61.9	2.88	37.3	0.00	0.00			380	203
400 ISL	6.58 D	6.54	34.167 D	26.824	127.5	0.794	0.90	13.1	65.2	2.94	38.0	0.00	0.00			403	
437	6.18	6.14	34.157	26.869	123.5	0.840	0.78	11.2	70.3	3.02	39.0	0.00	0.00			440	202
500 ISL	5.91 D	5.87	34.213 D	26.948	116.7	0.916	0.53	7.6	78.3	3.15	40.2	0.00	0.00			503	
509	5.83	5.79	34.214	26.958	115.7	0.926	0.49	7.0	79.4	3.17	40.4	0.00	0.00			512	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 0801 STATION 80.0 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 9.1 N	123 12.9 W	23/01/08	2234 UTC	4191 m	300 15 kn	290 02 06	2	1012.8 mb	10.9 C	8.1 C	24m	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	14.14	14.14	33.077	24.673	325.9	0.000	5.93	101.2	2.0	0.34	0.2	0.00	0.01	0.32	0.11	0	
2	14.14	14.14	33.077	24.673	326.0	0.007	5.93	101.2	2.0	0.34	0.2	0.00	0.01	0.32	0.11	2	220
10	14.13	14.13	33.075	24.674	326.1	0.033	5.93	101.2	1.9	0.34	0.2	0.00	0.00	0.32	0.10	10	219
20	13.94	13.94	33.075	24.714	322.6	0.065	5.98	101.7	2.0	0.35	0.2	0.00	0.01	0.40	0.13	20	218
30	13.79	13.79	33.061	24.734	321.0	0.097	6.01	101.9	2.0	0.35	0.2	0.01	0.02	0.47	0.16	30	217
40	13.76	13.75	33.061	24.740	320.6	0.129	5.98	101.3	2.0	0.35	0.3	0.01	0.03	0.43	0.16	40	216
50	13.75	13.74	33.059	24.741	320.8	0.161	6.00	101.6	1.9	0.35	0.3	0.01	0.04	0.43	0.16	50	215
60	13.75	13.74	33.063	24.744	320.8	0.193	5.98	101.3	2.0	0.35	0.2	0.01	0.04	0.42	0.16	60	214
69	13.75	13.74	33.062	24.744	321.1	0.222	5.96	100.9	1.9	0.35	0.2	0.01	0.04	0.41	0.15	69	213
75 ISL	13.74 D	13.73	33.058 D	24.743	321.3	0.242	5.96	100.9	1.9	0.35	0.2	0.01	0.04	0.39	0.15	75	
84	13.73	13.72	33.062	24.748	321.1	0.271	5.96	100.9	1.9	0.36	0.2	0.02	0.05	0.33	0.14	84	212
99	13.31	13.30	33.153	24.904	306.6	0.318	5.83	97.9	2.8	0.47	1.6	0.16	0.12	0.14	0.11	99	211
100 ISL	13.24 D	13.23	33.162 D	24.925	304.6	0.321	5.83	97.7	2.9	0.48	1.7	0.16	0.12	0.14	0.11	100	
119	12.67	12.65	33.231	25.091	289.2	0.377	5.66	93.8	4.5	0.61	4.7	0.17	0.00	0.09	0.10	120	210
125 ISL	12.66 D	12.64	33.282 D	25.133	285.4	0.394	5.54	91.8	5.2	0.68	5.9	0.13	0.00	0.07	0.09	126	
140	11.65	11.63	33.339	25.368	263.2	0.435	5.13	83.2	7.6	0.90	9.5	0.04	0.00	0.04	0.07	141	209
150 ISL	11.13 D	11.11	33.499 D	25.587	242.5	0.461	4.80	77.1	10.1	1.07	12.3	0.04	0.00	0.03	0.06	151	
169	10.35	10.33	33.594	25.798	222.6	0.505	4.09	64.6	15.8	1.40	17.9	0.04	0.00	0.01	0.04	170	208
199	9.36	9.34	33.875	26.183	186.4	0.566	2.93	45.4	26.1	1.90	25.3	0.00	0.00	0.00	0.05	200	207
200 ISL	9.34 D	9.32	33.883 D	26.193	185.5	0.568	2.91	45.0	26.3	1.91	25.4	0.00	0.00			201	
229	8.96	8.94	33.985	26.334	172.6	0.620	2.49	38.2	31.2	2.09	27.5	0.00	0.00			230	206
250 ISL	8.68 D	8.65	34.041 D	26.422	164.5	0.655	2.17	33.1	34.9	2.22	29.2	0.00	0.00			251	
268	8.47	8.44	34.082	26.487	158.6	0.685	1.94	29.5	38.1	2.32	30.5	0.00	0.00			269	205
300 ISL	7.78 D	7.75	34.073 D	26.583	149.7	0.734	1.76	26.3	43.5	2.44	32.2	0.00	0.00			302	
317	7.72	7.69	34.101	26.614	147.0	0.759	1.68	25.1	46.3	2.50	33.0	0.00	0.00			319	204
377	7.14	7.10	34.159	26.742	135.5	0.844	1.07	15.8	56.3	2.79	35.8	0.00	0.00			379	203
400 ISL	6.93 D	6.89	34.173 D	26.782	131.9	0.875	0.92	13.5	59.6	2.86	36.6	0.00	0.00			402	
441	6.65	6.61	34.200	26.842	126.6	0.928	0.73	10.6	65.1	2.97	37.8	0.00	0.00			444	202
500 ISL	6.22 D	6.18	34.230 D	26.922	119.5	1.000	0.53	7.7	72.5	3.09	39.0	0.00	0.00			503	
508	6.20	6.15	34.233	26.927	119.1	1.010	0.50	7.2	73.5	3.11	39.2	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 0801 STATION 80.0 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 49.3 N	123 54.1 W	24/01/08	0513 UTC	3988 m	310 15 kn			1013.9 mb	11.9 C	8.0 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	13.69	13.69	33.045	24.741	319.4	0.000	5.98	101.1	2.5	0.36	0.1	0.01	0.11	0.25	0.06	0	
2	13.69	13.69	33.045	24.741	319.5	0.006	5.98	101.1	2.5	0.36	0.1	0.01	0.11	0.25	0.06	2	220
9	13.69	13.69	33.045	24.741	319.7	0.029	5.99	101.3	2.5	0.36	0.1	0.01	0.09	0.27	0.07	9	219
10 ISL	13.69 D	13.69	33.040 D	24.737	320.1	0.032	5.99	101.3	2.5	0.36	0.1	0.01	0.09	0.27	0.08	10	
20	13.69	13.69	33.045	24.741	319.9	0.064	5.99	101.3	2.4	0.36	0.1	0.01	0.09	0.31	0.12	20	218
30	13.69	13.69	33.046	24.743	320.1	0.096	5.99	101.3	2.3	0.36	0.1	0.01	0.09	0.31	0.05	30	217
40	13.70	13.69	33.047	24.742	320.5	0.128	6.00	101.5	2.3	0.36	0.1	0.01	0.09	0.30	0.09	40	216
50	13.70	13.69	33.051	24.745	320.4	0.160	5.98	101.1	2.1	0.36	0.1	0.01	0.09	0.32	0.07	50	215
60	13.69	13.68	33.052	24.748	320.4	0.192	5.98	101.1	2.1	0.34	0.1	0.01	0.09	0.35	0.12	60	214
70	13.65	13.64	33.096	24.791	316.7	0.224	5.90	99.7	2.2	0.40	0.5	0.06	0.19	0.32	0.14	70	213
75 ISL	13.61 D	13.60	33.137 D	24.830	313.0	0.240	5.90	99.7	2.5	0.41	0.9	0.08	0.21	0.32	0.15	75	
84	13.22	13.21	33.088	24.871	309.3	0.268	5.89	98.7	2.9	0.48	1.5	0.09	0.25	0.29	0.18	84	212
99	12.40	12.39	33.268	25.171	281.0	0.312	5.09	83.9	6.7	0.89	8.6	0.08	0.00	0.13	0.20	99	211
100 ISL	12.25 D	12.24	33.272 D	25.203	278.0	0.315	5.06	83.1	6.9	0.91	8.9	0.08	0.00	0.13	0.20	100	
119	11.41	11.40	33.418	25.473	252.6	0.365	4.57	73.8	10.8	1.19	13.8	0.05	0.00	0.08	0.11	120	210
125 ISL	11.13 D	11.11	33.496 D	25.584	242.1	0.380	4.39	70.5	12.5	1.29	15.5	0.05	0.00	0.06	0.09	126	
139	10.47	10.45	33.603	25.784	223.3	0.413	3.94	62.4	16.6	1.50	19.1	0.05	0.00	0.03	0.06	140	209
150 ISL	10.11 D	10.09	33.735 D	25.949	207.8	0.436	3.53	55.5	19.7	1.66	21.6	0.05	0.00	0.02	0.06	151	
169	9.68	9.66	33.825	26.091	194.6	0.475	2.97	46.3	24.2	1.87	24.7	0.05	0.00	0.01	0.07	170	208
199	8.98	8.96	33.932	26.289	176.3	0.530	2.96	45.5	27.9	1.92	26.2	0.00	0.00	0.00	0.05	200	207
200 ISL	8.95 D	8.93	33.938 D	26.298	175.4	0.532	2.95	45.3	28.0	1.92	26.3	0.00	0.00			201	
229	8.64	8.62	33.999	26.395	166.6	0.582	2.62	40.0	32.4	2.07	28.2	0.00	0.00			230	206
250 ISL	8.41 D	8.38	34.051 D	26.471	159.7	0.616	2.28	34.6	36.2	2.21	29.9	0.00	0.00			251	
269	8.25	8.22	34.080	26.518	155.5	0.646	1.97	29.8	39.6	2.34	31.4	0.00	0.00			271	205
300 ISL	7.87 D	7.84	34.112 D	26.600	148.1	0.693	1.62	24.3	44.1	2.49	32.9	0.00	0.00			302	
318	7.84	7.81	34.139	26.626	146.0	0.719	1.48	22.2	46.8	2.56	33.7	0.00	0.00			320	204
378	6.75	6.72	34.107	26.754	134.0	0.803	1.30	19.0	58.4	2.76	36.9	0.00	0.00			380	203
400 ISL	6.88 D	6.84	34.160 D	26.779	132.1	0.833	1.12	16.4	62.6	2.85	37.9	0.00	0.00			402	
438	6.29	6.25	34.172	26.867	123.8	0.881	0.78	11.3	69.2	3.00	39.2	0.00	0.00			441	202
500 ISL	6.05 D	6.01	34.252 D	26.961	115.6	0.955	0.46	6.6	76.1	3.14	40.4	0.00	0.00			503	
512	6.02	5.97	34.256	26.968	115.0	0.969	0.40	5.7	77.4	3.17	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 0801 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 16.9 N	120 1.8 W	19/01/08	0610 UTC	581 m	290 02 kn			1022.9 mb	14.9 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	12.93	12.93	33.521	25.262	269.9	0.000	5.86	97.8	6.6	0.63	5.0	0.13	0.08	1.51	0.48	0	
2 A	12.93	12.93	33.521	25.262	269.9	0.005	5.86	97.8	6.6	0.63	5.0	0.13	0.08	1.51	0.48	2	224
10	12.77	12.77	33.534	25.303	266.2	0.027	5.72	95.2	6.9	0.69	6.0	0.14	0.10	1.06	0.50	10	223
19	12.53	12.53	33.557	25.368	260.2	0.051	5.59	92.6	8.1	0.77	7.2	0.14	0.12	0.95	0.44	19	222
20 ISL	12.36 D	12.36	33.439 D	25.309	265.8	0.053	5.57	91.8	8.2	0.78	7.3	0.14	0.13	0.93	0.43	20	
30	12.32	12.32	33.579	25.426	255.0	0.079	5.21	85.9	9.6	0.91	9.1	0.16	0.19	0.78	0.38	30	221
40	11.62	11.61	33.627	25.595	239.1	0.104	4.65	75.6	13.0	1.17	13.3	0.17	0.06	0.77	0.38	40	220
50	11.15	11.14	33.670	25.714	228.0	0.127	4.09	65.8	15.8	1.38	16.4	0.15	0.06	0.39	0.28	50	219
60	10.74	10.73	33.691	25.804	219.7	0.150	3.48	55.5	18.2	1.58	19.8	0.02	0.00	0.14	0.17	60	218
70	10.12	10.11	33.818	26.010	200.3	0.171	2.88	45.4	23.4	1.83	23.0	0.01	0.00	0.04	0.11	70	217
75 ISL	9.80 D	9.79	33.880 D	26.113	190.6	0.180	2.72	42.5	24.9	1.90	24.0	0.01	0.00	0.03	0.11	75	
85	9.75	9.74	33.919	26.152	187.1	0.199	2.55	39.9	26.8	1.97	25.1	0.01	0.00	0.02	0.11	85	216
99	9.59	9.58	33.967	26.216	181.3	0.225	2.40	37.4	28.3	2.04	25.8	0.00	0.00	0.01	0.08	100	215
100 ISL	9.50 D	9.49	33.897 D	26.176	185.1	0.227	2.39	37.1	28.4	2.04	25.8	0.00	0.00	0.01	0.08	101	
119	9.42	9.41	34.012	26.279	175.7	0.261	2.25	34.9	30.2	2.10	26.7	0.00	0.00	0.01	0.08	120	214
125 ISL	9.14 D	9.13	33.987 D	26.305	173.3	0.272	2.13	32.9	31.4	2.15	27.3	0.00	0.00	0.01	0.11	126	
139	9.11	9.09	34.062	26.369	167.5	0.296	1.86	28.7	34.2	2.26	28.7	0.00	0.00	0.01	0.17	140	213
150 ISL	9.01 D	8.99	34.064 D	26.386	166.0	0.314	1.78	27.4	35.1	2.29	29.1	0.00	0.00	0.02	0.18	151	
169	8.95	8.93	34.092	26.418	163.4	0.345	1.71	26.3	36.0	2.32	29.5	0.01	0.00	0.03	0.19	170	212
200	8.78	8.76	34.133	26.478	158.3	0.395	1.52	23.3	39.0	2.41	30.4	0.01	0.00	0.01	0.07	201	211
230	8.47	8.45	34.168	26.553	151.6	0.442	1.08	16.4	44.7	2.59	32.0	0.00	0.00			231	210
250 ISL	8.22 D	8.19	34.099 D	26.537	153.3	0.472	0.82	12.4	48.5	2.71	33.0	0.00	0.00			252	
270	8.20	8.17	34.197	26.618	146.1	0.502	0.62	9.4	52.0	2.81	33.7	0.00	0.00			272	209
300 ISL	7.70 D	7.67	34.030 D	26.561	151.7	0.547	0.60	9.0	56.5	2.88	34.1	0.00	0.00			302	
319	7.66	7.63	34.208	26.707	138.3	0.574	0.59	8.8	59.2	2.91	34.2	0.00	0.00			321	208
377	7.11	7.07	34.219	26.794	130.6	0.652	0.48	7.1	68.2	3.05	34.6	0.00	0.00			380	207
400 ISL	6.76 D	6.72	34.169 D	26.802	129.8	0.682	0.40	5.8	73.1	3.12	34.4	0.00	0.00			403	
437	6.69	6.65	34.236	26.865	124.4	0.729	0.26	3.8	81.7	3.24	33.5	0.00	0.00			440	206
476	6.52	6.48	34.237	26.888	122.6	0.777	0.17	2.5	90.7	3.34	31.8	0.00	0.00			479	205
500 ISL	6.44 D	6.39	34.236 D	26.898	121.9	0.807	0.15	2.2	94.2	3.41	31.5	0.00	0.01			504	
510	6.41	6.36	34.240	26.906	121.4	0.819	0.14	2.0	95.7	3.44	31.3	0.00	0.02			514	204
533	6.35	6.30	34.243	26.916	120.7	0.847	0.10	1.4	100.9	3.53	29.9	0.01	0.02			537	203
564	6.35	6.30	34.241	26.915	121.2	0.884	0.09	1.3	101.7	3.55	29.6	0.01	0.00			568	202
571	6.34	6.29	34.242	26.917	121.1	0.893	0.10	1.4	102.1	3.54	29.4	0.04	0.00			575	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 0801 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 13.5 N	119 24.7 W	18/01/08	2351 UTC	35 m	040 02 kn	270 01 10	1	1019.8 mb	16.4 C	12.3 C	06m	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	13.57	13.57	33.473	25.096	285.6	0.000	6.20	104.9	5.3	0.53	2.3	0.13	0.17	3.43	0.61	0	
1	13.57	13.57	33.473	25.096	285.6	0.003	6.20	104.9	5.3	0.53	2.3	0.13	0.17	3.43	0.61	1	206
6	13.26	13.26	33.470	25.157	280.0	0.017	6.16	103.5	5.4	0.56	2.6	0.15	0.23	2.49	0.52	6	205
10 ISL	13.15 D	13.15	33.467 D	25.177	278.2	0.028	6.06	101.6	5.6	0.58	2.8	0.16	0.26	2.39	0.62	10	
11	13.15	13.15	33.472	25.180	277.9	0.031	6.03	101.1	5.6	0.58	2.9	0.16	0.27	2.37	0.65	11	203
11	13.15	13.15	33.470	25.179	278.0	0.031										11	204
20	13.05	13.05	33.463	25.194	276.9	0.056	5.75	96.2	6.0	0.66	4.1	0.17	0.63	1.59	0.50	20	202
30	12.89	12.89	33.490	25.246	272.1	0.083	5.44	90.7	7.1	0.78	5.6	0.17	0.64	0.76	0.35	30	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0801 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 30.7 W	19/01/08	0154 UTC	134 m	090 01 kn	300 01 09	1	1020.5 mb	14.6 C	11.2 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	13.24	13.24	33.511	25.192	276.5	0.000	5.82	97.8	6.0	0.64	4.8	0.10	0.07	1.52	0.48	0	
2	13.24	13.24	33.511	25.192	276.5	0.006	5.82	97.8	6.0	0.64	4.8	0.10	0.07	1.52	0.48	2	212
10	13.00	13.00	33.507	25.237	272.5	0.027	5.82	97.3	6.0	0.62	4.7	0.09	0.05	1.55	0.50	10	210
10	13.01	13.01	33.505	25.234	272.8	0.027										10	211
19	12.96	12.96	33.507	25.245	271.9	0.052	5.71	95.4	6.0	0.63	5.0	0.10	0.04	1.50	0.65	19	209
20 ISL	12.96 D	12.96	33.503 D	25.242	272.2	0.055	5.70	95.2	6.0	0.63	5.0	0.10	0.04	1.49	0.65	20	
30	12.93	12.93	33.503	25.249	271.9	0.082	5.63	94.0	6.3	0.66	5.4	0.11	0.08	1.31	0.54	30	208
40	12.89	12.88	33.500	25.254	271.6	0.109	5.53	92.2	6.5	0.69	5.6	0.12	0.15	0.89	0.44	40	207
50	12.46	12.45	33.529	25.361	261.7	0.136	4.92	81.3	9.1	0.94	9.5	0.12	0.19	0.40	0.27	50	206
60	11.41	11.40	33.623	25.631	236.2	0.161	3.75	60.7	15.2	1.44	17.0	0.11	0.06	0.16	0.17	60	205
70	11.13	11.12	33.677	25.724	227.6	0.184	3.39	54.5	17.4	1.58	19.0	0.04	0.02	0.09	0.13	70	204
75 ISL	10.99 D	10.98	33.725 D	25.787	221.8	0.195	3.15	50.5	19.2	1.67	20.2	0.03	0.02	0.06	0.11	75	
84	10.60	10.59	33.831	25.938	207.5	0.214	2.77	44.1	22.2	1.82	22.1	0.01	0.02	0.02	0.08	84	203
99	10.48	10.47	33.843	25.969	204.9	0.245	2.66	42.2	23.6	1.90	22.8	0.04	0.06	0.03	0.13	100	202
100 ISL	10.46 D	10.45	33.842 D	25.971	204.7	0.247	2.65	42.0	23.7	1.90	22.9	0.04	0.06	0.03	0.13	101	
121	10.15	10.14	33.936	26.099	193.1	0.289	2.40	37.8	26.2	2.01	24.4	0.02	0.06	0.01	0.10	122	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0801 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 52.7 N	120 8.2 W	16/01/08	1904 UTC	101 m	280 11 kn	260 04 04	0	1015.0 mb	14.9 C	12.1 C	22m	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	13.51	13.51	33.488	25.120	283.4	0.000	5.92	100.0	2.8	0.52	2.9	0.05	0.26	0.50	0.14	0	
1 A	13.51	13.51	33.488	25.120	283.4	0.003	5.92	100.0	2.8	0.52	2.9	0.05	0.26	0.50	0.14	1	213
8	13.48	13.48	33.487	25.126	283.1	0.023	5.93	100.1	2.8	0.51	2.9	0.05	0.24	0.50	0.16	8	212
10	13.36	13.36	33.496	25.157	280.1	0.028	5.87	98.9								10	211
14 A	13.34	13.34	33.496	25.161	279.8	0.039	5.88	99.0	3.3	0.55	3.5	0.06	0.28	0.54	0.17	14	210
18	12.86	12.86	33.529	25.282	268.4	0.050	5.57	92.9	6.6	0.72	6.4	0.09	0.14	1.16	0.42	18	209
20 ISL	12.53 D	12.53	33.561 D	25.371	260.0	0.056	5.39	89.3	7.8	0.80	7.7	0.09	0.15	1.07	0.43	20	
22	12.48	12.48	33.562	25.382	259.0	0.061	5.18	85.7	9.0	0.89	9.1	0.10	0.16	0.97	0.43	22	208
30 ISL	11.03 D	11.03	33.672 D	25.737	225.4	0.080	3.74	60.0	16.6	1.47	18.1	0.05	0.04	0.25	0.22	30	
31 A	10.96	10.96	33.682	25.758	223.5	0.083	3.57	57.2	17.5	1.54	19.1	0.04	0.02	0.17	0.19	31	207
38	10.66	10.66	33.746	25.860	213.8	0.098	3.28	52.2	20.0	1.67	20.8	0.04	0.02	0.13	0.16	38	206
46 A	10.65	10.64	33.748	25.864	213.7	0.115	3.28	52.2	20.2	1.67	20.8	0.03	0.01	0.13	0.18	46	205
50 ISL	10.60 D	10.59	33.762 D	25.884	211.9	0.123	3.26	51.9	20.5	1.68	21.0	0.03	0.02	0.13	0.17	50	
54	10.59	10.58	33.766	25.889	211.5	0.132	3.23	51.4	20.8	1.69	21.2	0.04	0.04	0.14	0.16	54	204
62 A	10.56	10.55	33.775	25.901	210.5	0.149	3.20	50.9	21.2	1.71	21.3	0.04	0.03	0.14	0.16	62	203
75 ISL	10.26 D	10.25	33.835 D	26.000	201.4	0.176	2.97	46.9	23.1	1.80	22.7	0.03	0.04	0.09	0.14	75	
76	10.31	10.30	33.826	25.984	202.9	0.178	2.95	46.6	23.3	1.81	22.8	0.03	0.04	0.09	0.14	76	202
91 A	10.13	10.12	33.862	26.043	197.6	0.208	2.80	44.1	24.7	1.88	23.6	0.02	0.02	0.07	0.13	91	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 0801 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 44.8 N	120 24.3 W	16/01/08	2149 UTC	983 m	320 17 kn	310 06 08	1	1013.0 mb	14.9 C	11.9 C	12m	3/8	CS

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	12.62	12.62	33.557	25.350	261.4	0.000	5.64	93.6	8.2	0.82	8.2	0.06	0.00	1.07	0.32	0	
2	12.62	12.62	33.557	25.350	261.5	0.005	5.64	93.6	8.2	0.82	8.2	0.06	0.00	1.07	0.32	2	222
10	12.62	12.62	33.557	25.351	261.7	0.026	5.60	92.9	8.2	0.82	8.2	0.07	0.00	1.06	0.28	10	220
11	12.62	12.62	33.557	25.351	261.7	0.029										11	221
20	12.55	12.55	33.558	25.365	260.6	0.052	5.55	91.9	8.3	0.83	8.4	0.07	0.00	1.18	0.33	20	219
25	12.49	12.49	33.560	25.378	259.4	0.065	5.68	94.0	8.5	0.86	8.7	0.07	0.00	1.24	0.35	25	218
30	12.46	12.46	33.561	25.385	258.9	0.078	5.54	91.6	8.6	0.87	8.9	0.08	0.00	1.09	0.35	30	217
40	11.76	11.75	33.616	25.561	242.4	0.103	4.69	76.4	12.6	1.18	14.0	0.12	0.03	0.48	0.24	40	216
50	11.02	11.01	33.673	25.740	225.6	0.127	3.84	61.6	16.5	1.47	18.4	0.06	0.00	0.18	0.16	50	215
59	10.71	10.70	33.708	25.823	217.9	0.147	3.52	56.1	18.5	1.58	20.2	0.01	0.00	0.11	0.13	59	214
70	10.34	10.33	33.754	25.923	208.6	0.170	3.31	52.4	20.5	1.69	21.8	0.00	0.00	0.07	0.13	70	213
75 ISL	10.09 D	10.08	33.805 D	26.005	200.8	0.180	3.19	50.2	22.2	1.76	22.8	0.00	0.00	0.05	0.12	75	
85	9.76	9.75	33.869	26.111	191.0	0.200	2.97	46.4	25.3	1.89	24.6	0.00	0.00	0.03	0.10	85	212
100	9.69	9.68	33.911	26.156	187.0	0.228	2.78	43.4	26.5	1.95	25.1	0.00	0.00	0.02	0.08	101	211
119	9.51	9.50	33.955	26.220	181.3	0.263	2.51	39.0	28.5	2.02	26.1	0.00	0.00	0.01	0.09	120	210
125 ISL	9.45 D	9.44	33.966 D	26.239	179.7	0.274	2.39	37.1	30.0	2.07	26.8	0.00	0.00	0.01	0.09	126	
139	9.02	9.00	34.066	26.386	165.8	0.298	2.11	32.5	33.9	2.21	28.4	0.00	0.00	0.01	0.07	140	209
150 ISL	8.77 D	8.75	34.105 D	26.456	159.3	0.316	1.99	30.5	36.1	2.28	29.3	0.00	0.00	0.01	0.06	151	
169	8.63	8.61	34.133	26.500	155.5	0.346	1.82	27.8	39.0	2.38	30.4	0.00	0.00	0.00	0.05	170	208
198	8.50	8.48	34.165	26.546	151.7	0.391	1.46	22.2	41.8	2.49	31.5	0.00	0.00	0.00	0.06	199	207
200 ISL	8.48 D	8.46	34.173 D	26.555	150.8	0.394	1.45	22.1	42.0	2.50	31.6	0.00	0.00			201	
228	8.26	8.24	34.191	26.603	146.7	0.435	1.35	20.4	45.5	2.59	32.5	0.00	0.00			229	206
250 ISL	7.99 D	7.96	34.216 D	26.664	141.3	0.467	1.15	17.3	49.4	2.68	33.5	0.00	0.00			252	
268	7.73	7.70	34.225	26.709	137.2	0.492	0.99	14.8	52.5	2.75	34.2	0.00	0.00			270	205
300 ISL	7.48 D	7.45	34.217 D	26.739	134.7	0.536	0.96	14.3	55.7	2.82	34.9	0.00	0.00			302	
318	7.44	7.41	34.243	26.766	132.5	0.560	0.95	14.1	57.0	2.85	35.2	0.00	0.00			320	204
378	7.01	6.97	34.230	26.816	128.4	0.638	0.80	11.8	61.7	2.92	36.4	0.00	0.00			381	203
400 ISL	6.99 D	6.95	34.259 D	26.842	126.3	0.666	0.71	10.4	64.0	2.96	36.9	0.00	0.01			403	
437	6.65	6.61	34.251	26.882	122.8	0.712	0.57	8.3	68.0	3.03	37.6	0.00	0.02			440	202
500 ISL	6.36 D	6.31	34.287 D	26.949	117.1	0.788	0.47	6.8	73.9	3.11	38.6	0.00	0.00			504	
513	6.29	6.24	34.293	26.963	115.9	0.803	0.45	6.5	75.1	3.13	38.8	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 0801 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 34.6 N	120 45.3 W	20/01/08	0214 UTC	1399 m	320 09 kn			1020.6 mb	14.8 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	12.35	12.35	33.577	25.418	255.0	0.000	6.26	103.3	8.9	0.83	8.2	0.20	0.08	1.47	0.31	0	
1	12.35	12.35	33.577	25.418	255.0	0.003	6.26	103.3	8.9	0.83	8.2	0.20	0.08	1.47	0.31	1	221
10	12.15	12.15	33.579	25.458	251.5	0.025	6.27	103.0	8.9	0.83	8.2	0.20	0.08	1.54	0.30	10	219
10	12.15	12.15	33.576	25.456	251.7	0.025										10	220
19	12.10	12.10	33.575	25.465	251.1	0.048			8.9	0.85	8.3	0.21	0.10	1.98	0.40	19	218
20 ISL	12.09 D	12.09	33.574 D	25.466	251.0	0.050	6.19	101.6	8.9	0.85	8.3	0.21	0.11	1.95	0.41	20	
30	12.06	12.06	33.577	25.474	250.5	0.076	6.06	99.4	9.1	0.87	8.7	0.23	0.24	1.30	0.47	30	217
40	12.04	12.03	33.596	25.493	248.9	0.101	5.94	97.4	9.7	0.92	9.3	0.25	0.40	0.70	0.41	40	216
50	11.89	11.88	33.614	25.535	245.1	0.125	5.64	92.2	10.8	1.02	11.0	0.29	0.27	0.56	0.47	50	215
59	11.67	11.66	33.644	25.600	239.2	0.147	5.23	85.1	12.5	1.15	13.2	0.31	0.06	0.31	0.39	59	214
69	10.84	10.83	33.743	25.827	217.7	0.170	3.89	62.2	18.5	1.54	19.3	0.02	0.01	0.12	0.24	69	213
75 ISL	10.34 D	10.33	33.812 D	25.968	204.4	0.183	3.33	52.7	21.7	1.72	22.0	0.01	0.01	0.07	0.19	75	
84	9.78	9.77	33.874	26.112	190.9	0.200	2.77	43.3	25.6	1.92	24.9	0.00	0.00	0.04	0.15	84	212
99	9.46	9.45	33.947	26.222	180.7	0.228	2.46	38.2	28.7	2.05	26.4	0.00	0.00	0.01	0.12	100	211
100 ISL	9.44 D	9.43	33.948 D	26.226	180.4	0.230	2.44	37.9	28.9	2.06	26.5	0.00	0.00	0.01	0.12	101	
119	9.27	9.26	34.007	26.300	173.7	0.264	2.23	34.5	31.1	2.14	27.5	0.00	0.00	0.00	0.10	120	210
125 ISL	9.23 D	9.22	34.019 D	26.316	172.3	0.274	2.19	33.9	31.6	2.16	27.7	0.00	0.00	0.00	0.10	126	
139	9.15	9.13	34.044	26.348	169.5	0.298	2.11	32.6	32.6	2.19	28.1	0.00	0.00	0.00	0.09	140	209
150 ISL	9.04 D	9.02	34.059 D	26.378	166.9	0.316	2.01	30.9	33.8	2.23	28.6	0.00	0.00	0.00	0.09	151	
169	8.82	8.80	34.086	26.434	161.9	0.348	1.91	29.3	36.1	2.29	29.5	0.00	0.00	0.00	0.08	170	208
199	8.10	8.08	34.051	26.517	154.3	0.395	2.13	32.1	39.5	2.29	30.6	0.01	0.00	0.00	0.05	200	207
200 ISL	8.07 D	8.05	34.051 D	26.521	153.9	0.397	2.12	31.9	39.7	2.29	30.7	0.01	0.00			201	
229	7.65	7.63	34.071	26.599	146.8	0.440	1.86	27.7	45.3	2.43	32.4	0.00	0.00			230	206
250 ISL	7.35 D	7.33	34.075 D	26.645	142.7	0.471	1.72	25.5	48.8	2.51	33.4	0.00	0.00			252	
268	7.19	7.16	34.082	26.673	140.2	0.496	1.61	23.8	51.6	2.57	34.1	0.00	0.00			270	205
300 ISL	6.95 D	6.92	34.106 D	26.725	135.6	0.540	1.33	19.5	56.5	2.70	35.4	0.00	0.00			302	
318	6.82	6.79	34.131	26.763	132.3	0.564	1.16	17.0	59.1	2.78	36.1	0.00	0.00			320	204
378	6.60	6.57	34.211	26.856	124.2	0.641	0.69	10.1	66.7	2.98	37.5	0.00	0.00			381	203
400 ISL	6.62 D	6.58	34.245 D	26.881	122.3	0.668	0.58	8.5	69.0	3.03	37.9	0.00	0.00			403	
437	6.34	6.30	34.267	26.935	117.5	0.713	0.46	6.7	72.8	3.10	38.6	0.00	0.00			440	202
500 ISL	6.01 D	5.97	34.300 D	27.004	111.5	0.785	0.34	4.9	79.6	3.19	39.5	0.00	0.00			504	
514	5.96	5.91	34.305	27.014	110.7	0.800	0.31	4.4	81.1	3.21	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 0801 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 14.6 N	121 26.3 W	23/01/08	0040 UTC	3684 m	160 20 kn	140 04 09	1	1016.1 mb	13.1 C	11.8 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	13.01	13.01	32.973	24.822	311.8	0.000	6.19	103.2	2.7	0.40	0.5	0.02	0.00	0.58	0.14	0	
2	13.01	13.01	32.973	24.822	311.8	0.006	6.19	103.2	2.7	0.40	0.5	0.02	0.00	0.58	0.14	2	222
9	12.98	12.98	32.967	24.823	311.9	0.028										9	221
10	12.98	12.98	32.966	24.822	312.0	0.031	6.20	103.3	2.8	0.41	0.6	0.03	0.00	0.60	0.15	10	220
15	12.41	12.41	32.933	24.907	304.0	0.047	6.25	102.8	3.6	0.47	1.5	0.06	0.00	0.67	0.20	15	219
20	12.23	12.23	32.954	24.958	299.3	0.062			4.0	0.55	2.6	0.12	0.03	0.65	0.21	20	218
30	11.62	11.62	33.011	25.116	284.4	0.091	5.79	93.7	5.1	0.72	5.1	0.15	0.00	0.56	0.19	30	217
40	11.64	11.63	33.168	25.235	273.4	0.119	5.94	96.3	7.2	0.78	6.5	0.21	0.05	0.92	0.40	40	216
50	11.73	11.72	33.351	25.361	261.7	0.145	5.83	94.8	8.7	0.88	8.2	0.27	0.16	0.65	0.35	50	215
60	11.82	11.81	33.451	25.422	256.1	0.171	5.82	94.9	9.4	0.92	8.8	0.29	0.21	0.59	0.32	60	214
70	11.93	11.92	33.531	25.464	252.4	0.197	5.85	95.6	9.8	0.95	9.1	0.30	0.30	0.51	0.34	70	213
75 ISL	11.94 D	11.93	33.549 D	25.476	251.4	0.209	5.83	95.3	9.9	0.95	9.2	0.30	0.36	0.49	0.32	75	
85	11.94	11.93	33.577	25.498	249.5	0.234	5.80	94.8	10.1	0.96	9.6	0.31	0.42	0.44	0.27	85	212
100	11.84	11.83	33.648	25.572	242.9	0.271	5.60	91.4	11.4	1.07	11.2	0.34	0.22	0.30	0.26	100	211
119	10.01	10.00	33.677	25.920	209.9	0.314	3.55	55.7	20.7	1.72	21.9	0.07	0.00	0.03	0.10	120	210
125 ISL	9.77 D	9.76	33.748 D	26.016	200.9	0.327	3.21	50.1	23.1	1.85	23.8	0.07	0.00	0.02	0.09	126	
139	9.23	9.21	33.849	26.183	185.2	0.354	2.74	42.3	27.7	2.05	26.6	0.07	0.00	0.00	0.07	140	209
150 ISL	8.90 D	8.88	33.936 D	26.304	173.8	0.373	2.56	39.3	29.8	2.11	27.6	0.07	0.00	0.00	0.05	151	
169	8.71	8.69	33.990	26.376	167.3	0.406	2.42	37.0	32.5	2.15	28.4	0.07	0.00	0.00	0.03	170	208
198	8.22	8.20	34.046	26.495	156.4	0.453	2.07	31.3	38.5	2.32	30.7	0.00	0.00	0.00	0.03	199	207
200 ISL	8.15 D	8.13	34.049 D	26.508	155.2	0.456	2.06	31.1	38.9	2.33	30.8	0.00	0.00			201	
229	7.68	7.66	34.056	26.583	148.4	0.500	1.99	29.7	44.1	2.43	32.3	0.01	0.00			230	206
250 ISL	7.28 D	7.26	34.038 D	26.626	144.4	0.531	1.98	29.3	47.6	2.47	33.0	0.01	0.00			251	
268	7.01	6.98	34.035	26.661	141.3	0.556	1.97	28.9	50.7	2.50	33.5	0.00	0.00			270	205
300 ISL	6.56 D	6.53	34.050 D	26.733	134.6	0.601	1.69	24.6	56.8	2.64	35.2	0.00	0.00			302	
318	6.43	6.40	34.065	26.763	132.0	0.625	1.51	21.9	60.1	2.73	36.2	0.00	0.00			320	204
378	5.97	5.94	34.094	26.845	124.7	0.702	1.16	16.6	68.6	2.90	38.1	0.00	0.00			380	203
400 ISL	6.18 D	6.14	34.163 D	26.873	122.6	0.729	0.93	13.4	71.1	2.99	38.7	0.00	0.00			403	
438	5.99	5.95	34.200	26.927	117.9	0.774	0.57	8.2	75.3	3.12	39.5	0.00	0.00			441	202
500 ISL	5.56 D	5.52	34.221 D	26.997	111.6	0.846	0.46	6.5	83.2	3.20	40.8	0.00	0.00			503	
512	5.46	5.42	34.220	27.008	110.6	0.859	0.44	6.2	84.7	3.21	41.0	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 0801 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 54.5 N	122 7.3 W	22/01/08	1849 UTC	4089 m	080 09 kn	310 03 06	1	1018.3 mb	13.6 C	11.5 C	18m	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	12.79	12.79	32.905	24.812	312.7	0.000	6.18	102.5	3.1	0.44	1.0	0.04	0.06	0.72	0.18	0	
2 A	12.79	12.79	32.905	24.812	312.7	0.006	6.18	102.5	3.1	0.44	1.0	0.04	0.06	0.72	0.18	2	222
10 A	12.72	12.72	32.896	24.819	312.3	0.031	6.19	102.5	3.1	0.44	1.0	0.04	0.06	0.50	0.15	10	220
10	12.63	12.63	32.884	24.827	311.5	0.031										10	221
20	12.76	12.76	32.933	24.840	310.5	0.062	6.13	101.6	3.0	0.44	1.0	0.05	0.09	0.52	0.14	20	219
27 A	12.74	12.74	32.947	24.855	309.3	0.084	6.07	100.6	3.1	0.46	1.4	0.07	0.10	0.79	0.27	27	218
30 ISL	12.30 D	12.30	32.853 D	24.867	308.2	0.093	6.13	100.6	3.5	0.48	1.7	0.07	0.09	0.76	0.26	30	
38 A	12.03	12.03	32.843	24.910	304.3	0.118	6.21	101.3	4.2	0.53	2.5	0.08	0.06	0.67	0.25	38	217
44	12.29	12.28	32.956	24.949	300.7	0.136	5.98	98.2	3.8	0.54	2.7	0.11	0.07	0.40	0.19	44	216
50 ISL	12.56 D	12.55	33.080 D	24.993	296.7	0.154	5.74	94.8	3.2	0.54	2.7	0.09	0.01	0.20	0.14	50	
51 A	12.53	12.52	33.082	25.001	296.0	0.157	5.71	94.3	3.1	0.54	2.7	0.09	0.00	0.17	0.13	51	215
62	11.90	11.89	33.051	25.096	287.1	0.189	5.61	91.4	4.3	0.66	4.7	0.07	0.00	0.11	0.09	62	214
74 A	12.03	12.02	33.182	25.174	280.1	0.223	5.46	89.2	4.5	0.66	5.1	0.06	0.00	0.08	0.08	74	213
75 ISL	12.04 D	12.03	33.224 D	25.205	277.2	0.226	5.45	89.1	4.6	0.67	5.3	0.06	0.00	0.08	0.08	75	
87	11.49	11.48	33.188	25.279	270.3	0.259	5.34	86.3	6.4	0.82	7.8	0.08	0.00	0.05	0.06	87	212
100	11.35	11.34	33.305	25.396	259.5	0.293	5.07	81.7	7.9	0.92	9.7	0.07	0.00	0.04	0.05	100	211
119	10.42	10.41	33.532	25.737	227.3	0.339	4.24	67.1	14.9	1.35	17.0	0.08	0.00	0.02	0.04	120	210
125 ISL	10.27 D	10.26	33.606 D	25.821	219.5	0.353	4.06	64.0	16.5	1.43	18.3	0.08	0.00	0.02	0.04	126	
139	9.87	9.85	33.725	25.981	204.5	0.382	3.69	57.7	19.8	1.58	20.8	0.08	0.00	0.01	0.03	140	209
150 ISL	9.54 D	9.52	33.821 D	26.111	192.3	0.404	3.28	51.0	23.3	1.75	23.1	0.08	0.00	0.01	0.03	151	
169	9.16	9.14	33.942	26.267	177.7	0.439	2.64	40.7	28.9	2.01	26.6	0.07	0.00	0.00	0.03	170	208
200	8.80	8.78	34.030	26.394	166.2	0.493	2.26	34.6	33.7	2.18	28.8	0.00	0.00	0.00	0.03	201	207
229	8.19	8.17	34.032	26.489	157.5	0.540	2.47	37.3	37.2	2.17	29.5	0.00	0.00			230	206
250 ISL	7.87 D	7.85	34.057 D	26.556	151.4	0.572	2.20	33.0	41.1	2.29	31.0	0.00	0.00			251	
269	7.72	7.69	34.079	26.596	147.9	0.600	1.86	27.8	44.9	2.43	32.6	0.00	0.00			271	205
300 ISL	7.46 D	7.43	34.092 D	26.644	143.7	0.646	1.52	22.6	50.2	2.58	34.3	0.00	0.00			302	
319	7.23	7.20	34.121	26.699	138.6	0.672	1.35	19.9	53.2	2.66	35.2	0.00	0.00			321	204
379	6.78	6.74	34.178	26.806	129.1	0.753	0.88	12.9	62.0	2.89	37.3	0.00	0.00			381	203
400 ISL	6.64 D	6.60	34.184 D	26.830	127.1	0.780	0.86	12.5	65.6	2.93	38.1	0.00	0.00			403	
438	6.00	5.96	34.145	26.882	122.1	0.827	0.83	11.9	71.7	2.99	39.4	0.00	0.00			441	202
500 ISL	5.73 D	5.69	34.218 D	26.974	114.0	0.900	0.43	6.1	78.2	3.17	40.2	0.00	0.00			503	
515	5.98	5.93	34.290	27.000	112.1	0.917	0.33	4.7	79.8	3.21	40.4	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 0801 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 34.7 N	122 48.5 W	22/01/08	1242 UTC	3988 m	280 17 kn			1016.6 mb	10.8 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	13.89	13.89	33.068	24.718	321.6	0.000	5.98	101.6	1.8	0.34	0.0	0.00	0.00	0.41	0.07	0	
2	13.89	13.89	33.068	24.718	321.7	0.006	5.98	101.6	1.8	0.34	0.0	0.00	0.00	0.41	0.07	2	221
9	13.90	13.90	33.068	24.716	322.1	0.029										9	220
10	13.89	13.89	33.069	24.719	321.8	0.032	5.97	101.4	1.8	0.34	0.0	0.00	0.00	0.34	0.13	10	219
20	13.91	13.91	33.072	24.717	322.3	0.064	5.98	101.6	1.8	0.34	0.0	0.00	0.00	0.35	0.13	20	218
30	13.90	13.90	33.079	24.725	321.8	0.097	5.98	101.6	1.8	0.33	0.0	0.00	0.00	0.40	0.11	30	217
40	13.88	13.87	33.088	24.736	321.0	0.129	5.97	101.4	1.8	0.34	0.0	0.00	0.00	0.37	0.14	40	216
49	13.85	13.84	33.137	24.781	317.0	0.157	5.95	101.0	1.9	0.35	0.0	0.01	0.06	0.49	0.18	49	215
50 ISL	13.85 D	13.84	33.140 D	24.783	316.8	0.161	5.94	100.8	1.9	0.35	0.0	0.01	0.07	0.48	0.18	50	
60	13.83	13.82	33.166	24.807	314.8	0.192	5.88	99.8	2.0	0.38	0.3	0.04	0.15	0.31	0.19	60	214
69	13.79	13.78	33.170	24.819	313.9	0.220	5.84	99.0	2.1	0.39	0.6	0.06	0.17	0.22	0.13	69	213
75 ISL	13.71 D	13.70	33.169 D	24.835	312.6	0.239	5.82	98.5	2.3	0.42	1.0	0.09	0.14	0.18	0.11	75	
85	13.47	13.46	33.170	24.885	308.1	0.270	5.75	96.9	2.7	0.46	1.8	0.13	0.08	0.13	0.10	85	212
99	12.31	12.30	33.222	25.153	282.8	0.312	5.43	89.3	5.2	0.72	6.1	0.07	0.02	0.06	0.07	99	211
100 ISL	12.27 D	12.26	33.243 D	25.177	280.5	0.314	5.40	88.7	5.5	0.74	6.5	0.07	0.02	0.06	0.07	100	
120	10.93	10.92	33.453	25.586	241.8	0.367	4.59	73.4	11.7	1.17	14.0	0.08	0.02	0.03	0.05	121	210
125 ISL	10.52 D	10.51	33.504 D	25.698	231.2	0.379	4.37	69.3	13.5	1.28	15.8	0.08	0.02	0.02	0.05	126	
140	10.07	10.05	33.632	25.875	214.6	0.412	3.69	58.0	19.1	1.59	20.6	0.08	0.03	0.01	0.04	141	209
150 ISL	9.67 D	9.65	33.824 D	26.092	194.1	0.432	3.24	50.5	22.6	1.77	23.0	0.08	0.04	0.00	0.04	151	
169	9.45	9.43	33.932	26.213	183.0	0.468	2.51	39.0	28.5	2.04	26.2	0.08	0.06	0.00	0.05	170	208
199	9.11	9.09	34.073	26.378	167.8	0.521	1.93	29.8	34.2	2.27	28.8	0.00	0.05	0.00	0.04	200	207
200 ISL	9.11 D	9.09	34.069 D	26.375	168.1	0.523	1.92	29.6	34.3	2.28	28.9	0.00	0.05			201	
229	8.93	8.91	34.130	26.452	161.4	0.570	1.60	24.6	37.5	2.40	30.2	0.00	0.00			230	206
250 ISL	8.81 D	8.78	34.172 D	26.504	156.8	0.604	1.39	21.3	39.7	2.49	31.1	0.00	0.00			251	
268	8.73	8.70	34.191	26.532	154.5	0.632	1.25	19.1	41.3	2.55	31.7	0.00	0.00			270	205
300 ISL	8.61 D	8.58	34.210 D	26.566	151.8	0.681	1.12	17.1	43.1	2.61	32.3	0.00	0.00			302	
320	8.52	8.49	34.219	26.587	150.2	0.711	1.08	16.4	44.2	2.64	32.5	0.00	0.00			322	204
374	8.14	8.10	34.235	26.658	144.2	0.790	0.93	14.0	49.1	2.74	33.6	0.00	0.00			376	203
400 ISL	8.01 D	7.97	34.239 D	26.681	142.4	0.828	0.86	12.9	51.7	2.79	34.1	0.00	0.00			402	
438	7.64	7.60	34.248	26.743	136.9	0.881	0.76	11.3	55.6	2.86	34.8	0.00	0.00			441	202
500 ISL	7.18 D	7.13	34.268 D	26.824	129.8	0.963	0.59	8.7	62.3	2.98	36.4	0.01	0.00			503	
511	7.12	7.07	34.272	26.836	128.8	0.978	0.56	8.3	63.5	3.00	36.7	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 0801 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 14.9 N	123 30.0 W	22/01/08	0623 UTC	4191 m	260 08 kn			1017.4 mb	13.1 C	11.3 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	13.76	13.76	33.055	24.734	320.1	0.000	6.00	101.6	1.9	0.35	0.0	0.00	0.01	0.27	0.07	0	
2	13.76	13.76	33.055	24.734	320.1	0.006	6.00	101.6	1.9	0.35	0.0	0.00	0.01	0.27	0.07	2	221
10 ISL	13.76 D	13.76	33.056 D	24.735	320.2	0.032	6.01	101.8	1.9	0.35	0.0	0.00	0.01	0.28	0.08	10	
11	13.77	13.77	33.058	24.735	320.3	0.035	6.01	101.8	1.9	0.35	0.0	0.00	0.01	0.28	0.08	11	219
11	13.77	13.77	33.058	24.735	320.3	0.035										11	220
20 ISL	13.79 D	13.79	33.070 D	24.740	320.0	0.064	6.00	101.7	1.9	0.34	0.0	0.00	0.00	0.29	0.09	20	
21	13.80	13.80	33.072	24.740	320.1	0.067	6.00	101.7	1.9	0.34	0.0	0.00	0.00	0.29	0.09	21	218
30 ISL	13.76 D	13.76	33.077 D	24.752	319.2	0.096	6.00	101.6	1.9	0.34	0.0	0.00	0.01	0.35	0.13	30	
31	13.76	13.76	33.077	24.752	319.2	0.099	6.00	101.6	1.9	0.34	0.0	0.00	0.01	0.36	0.13	31	217
41	13.59	13.58	33.058	24.772	317.6	0.131	6.01	101.4	2.1	0.36	0.3	0.02	0.04	0.43	0.15	41	216
50	13.35	13.34	33.032	24.801	315.1	0.160	6.02	101.1	2.3	0.39	0.6	0.04	0.09	0.47	0.19	50	215
60	13.79	13.78	33.163	24.813	314.2	0.191	5.86	99.4	2.0	0.38	0.5	0.07	0.12	0.33	0.17	60	214
71	13.04	13.03	33.009	24.845	311.4	0.225	6.00	100.1	2.8	0.44	1.2	0.07	0.20	0.37	0.16	71	213
75 ISL	12.67 D	12.66	32.936 D	24.861	309.9	0.238	6.04	99.9	2.9	0.45	1.3	0.07	0.20	0.36	0.16	75	
83	12.60	12.59	32.928	24.869	309.4	0.263	6.08	100.4	3.2	0.47	1.6	0.07	0.21	0.34	0.16	83	212
99	12.16	12.15	32.963	24.980	299.1	0.311	5.93	97.1	4.1	0.59	3.5	0.19	0.14	0.20	0.16	99	211
100 ISL	12.26 D	12.25	33.209 D	25.152	282.8	0.314	5.91	97.1	4.1	0.60	3.7	0.19	0.13	0.19	0.16	100	
119	11.10	11.09	33.118	25.296	269.4	0.367	5.34	85.5	6.5	0.85	8.3	0.05	0.01	0.05	0.08	120	210
125 ISL	10.61 D	10.60	33.184 D	25.433	256.4	0.382	5.05	80.0	9.1	1.02	11.1	0.05	0.01	0.04	0.08	126	
139	9.94	9.92	33.411	25.724	228.8	0.416	4.38	68.5	15.6	1.40	17.6	0.06	0.00	0.02	0.07	140	209
150 ISL	9.56 D	9.54	33.572 D	25.913	211.1	0.441	4.11	63.8	18.4	1.52	19.8	0.06	0.00	0.02	0.05	151	
169	9.31	9.29	33.811	26.141	189.8	0.479	3.81	58.9	21.8	1.60	21.5	0.06	0.00	0.01	0.02	170	208
200	8.90	8.88	33.957	26.321	173.2	0.535	3.25	49.8	27.8	1.83	24.9	0.00	0.00	0.00 A	0.04 A	201	207
229	8.49	8.47	34.004	26.422	164.0	0.584	2.70	41.0	33.5	2.06	27.9	0.00	0.00			230	206
250 ISL	8.30 D	8.27	34.039 D	26.478	159.0	0.618	2.33	35.3	37.5	2.21	29.7	0.00	0.00			251	
269	8.08	8.05	34.072	26.537	153.6	0.647	2.03	30.6	41.0	2.33	31.1	0.00	0.00			270	205
300 ISL	7.55 D	7.52	34.088 D	26.628	145.3	0.694	1.61	24.0	46.7	2.52	33.1	0.00	0.00			302	
318	7.56	7.53	34.137	26.665	142.1	0.720	1.40	20.8	49.9	2.62	34.0	0.00	0.00			320	204
378	7.08	7.04	34.195	26.779	132.0	0.802	0.89	13.1	59.2	2.88	36.3	0.00	0.00			380	203
400 ISL	6.93 D	6.89	34.210 D	26.811	129.1	0.831	0.74	10.9	61.3	2.94	36.6	0.00	0.00			402	
436	6.92	6.88	34.265	26.857	125.4	0.876	0.56	8.2	64.6	3.02	37.1	0.00	0.00			439	202
500 ISL	6.39 D	6.34	34.272 D	26.933	118.6	0.954	0.44	6.4	73.3	3.12	39.0	0.01	0.00			503	
511	6.22	6.17	34.258	26.944	117.5	0.967	0.42	6.1	74.8	3.14	39.3	0.01	0.00			514	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 0801 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 54.7 N	124 10.2 W	22/01/08	0007 UTC	4089 m	250 21 kn	330 04 07	2	1016.7 mb	14.5 C	11.8 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	14.93	14.93	33.275	24.658	327.3	0.000	5.88	102.1	1.9	0.33	0.0	0.00	0.00	0.27	0.08	0	
1	14.93	14.93	33.275	24.658	327.3	0.003	5.88	102.1	1.9	0.33	0.0	0.00	0.00	0.27	0.08	1	221
10	14.92	14.92	33.276	24.661	327.3	0.033	5.87	101.9	1.8	0.32	0.1	0.00	0.00	0.27	0.08	10	219
10	14.93	14.93	33.275	24.659	327.6	0.033										10	220
20	14.92	14.92	33.273	24.659	327.8	0.066	5.87	101.9	1.9	0.32	0.0	0.00	0.00	0.29	0.08	20	218
30	14.88	14.88	33.272	24.668	327.3	0.098	5.87	101.9	1.9	0.32	0.0	0.00	0.01	0.30	0.09	30	217
40	14.15	14.14	33.203	24.769	317.9	0.131	5.83	99.6	2.3	0.41	0.9	0.10	0.02	0.50	0.23	40	216
50	13.66	13.65	33.201	24.869	308.6	0.162	5.71	96.6	3.0	0.50	2.1	0.22	0.01	0.35	0.20	50	215
60	12.90	12.89	33.292	25.092	287.6	0.192	5.34	89.0	5.5	0.76	6.4	0.17	0.01	0.28	0.21	60	214
69	12.09	12.08	33.359	25.300	268.0	0.217	4.94	80.9	8.5	1.01	10.6	0.09	0.01	0.16	0.12	69	213
75 ISL	12.01 D	12.00	33.382 D	25.333	265.0	0.233	4.73	77.4	10.0	1.11	12.5	0.08	0.01	0.12	0.09	75	
84	11.32	11.31	33.457	25.519	247.4	0.256	4.46	71.9	12.1	1.24	14.8	0.07	0.01	0.08	0.07	84	212
99	10.57	10.56	33.567	25.738	226.8	0.291	3.97	63.0	16.5	1.50	18.9	0.01	0.01	0.04	0.04	99	211
100 ISL	10.38 D	10.37	33.614 D	25.807	220.2	0.294	3.93	62.2	16.8	1.52	19.2	0.01	0.01	0.04	0.04	100	
119	9.78	9.77	33.739	26.007	201.6	0.334	3.32	51.9	22.3	1.78	23.2	0.01	0.00	0.01	0.03	120	210
125 ISL	9.60 D	9.59	33.777 D	26.066	196.0	0.346	3.23	50.3	23.4	1.82	23.8	0.01	0.00	0.01	0.03	126	
139	9.33	9.31	33.852	26.169	186.5	0.372	3.08	47.7	25.6	1.87	24.8	0.01	0.00	0.01	0.03	140	209
150 ISL	9.10 D	9.08	33.909 D	26.251	178.9	0.392	2.95	45.4	27.6	1.92	25.7	0.01	0.00	0.01	0.03	151	
169	8.77	8.75	33.981	26.359	168.9	0.425	2.71	41.4	31.1	2.02	27.1	0.00	0.00	0.00	0.03	170	208
198	8.42	8.40	34.040	26.460	159.8	0.473	2.33	35.4	36.1	2.18	29.1	0.00	0.00	0.00	0.02	199	207
200 ISL	8.39 D	8.37	34.042 D	26.466	159.2	0.476	2.30	34.9	36.3	2.19	29.2	0.00	0.00			201	
229	8.25	8.23	34.083	26.520	154.6	0.522	1.91	28.9	39.9	2.35	30.9	0.00	0.00			230	206
250 ISL	8.02 D	7.99	34.121 D	26.585	148.8	0.554	1.63	24.5	43.6	2.47	32.1	0.00	0.01			251	
269	7.84	7.81	34.143	26.629	144.8	0.582	1.42	21.3	47.1	2.57	33.1	0.00	0.01			271	205
300 ISL	7.52 D	7.49	34.177 D	26.702	138.3	0.625	1.28	19.0	52.4	2.68	34.5	0.00	0.00			302	
319	7.13	7.10	34.136	26.725	136.2	0.651	1.21	17.8	55.2	2.73	35.2	0.00	0.00			321	204
376	7.16	7.12	34.248	26.809	129.1	0.727	0.69	10.2	59.9	2.93	36.0	0.00	0.00			378	203
400 ISL	6.94 D	6.90	34.256 D	26.846	125.8	0.758	0.58	8.5	63.7	2.99	36.8	0.00	0.00			403	
436	6.47	6.43	34.251	26.906	120.4	0.802	0.49	7.1	69.9	3.06	38.2	0.00	0.00			439	202
500 ISL	5.83 D	5.79	34.250 D	26.987	112.9	0.877	0.38	5.4	79.2	3.16	39.9	0.00	0.00			503	
513	5.77	5.73	34.257	27.000	111.8	0.891	0.36	5.1	81.1	3.18	40.3	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 0801 STATION 85.4 35.8

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 0.4 N	118 50.0 W	15/01/08	0733 UTC	40 m	060 02 kn			1021.9 mb	13.9 C	11.6 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	13.24	13.24	33.460	25.153	280.2	0.000	5.73	96.3	6.0	0.60	4.8	0.22	0.63	1.36	0.47	0	
1	13.24	13.24	33.460	25.153	280.2	0.003	5.73	96.3	6.0	0.60	4.8	0.22	0.63	1.36	0.47	1	207
5	13.26	13.26	33.461	25.150	280.7	0.014	5.72	96.1	5.9	0.60	4.8	0.21	0.63	1.34	0.49	5	206
10	13.18	13.18	33.461	25.166	279.3	0.028	5.66	95.0	6.0	0.63	5.2	0.23	0.77	1.41	0.49	10	204
10	13.18	13.18	33.460	25.165	279.3	0.028										10	205
15	13.13	13.13	33.462	25.177	278.4	0.042	5.55	93.0	6.4	0.68	5.7	0.25	0.97	1.14	0.43	15	203
20	12.98	12.98	33.462	25.207	275.6	0.056	5.30	88.5	7.3	0.79	6.8	0.30	1.28	0.74	0.38	20	202
30 ISL	12.80 D	12.80	33.471 D	25.249	271.8	0.083	5.15	85.7	7.9	0.84	7.5	0.34	1.17	0.62	0.35	30	
31	12.80	12.80	33.471	25.249	271.9	0.086	5.13	85.4	8.0	0.84	7.6	0.34	1.16	0.61	0.35	31	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0801 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 53.2 N	118 29.4 W	15/01/08	0125 UTC	57 m	180 06 kn	230 01 07	1	1021.5 mb	15.9 C	13.8 C		2/8	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	13.64	13.64	33.467	25.077	287.4	0.000	6.06	102.7	4.4	0.45	1.7	0.10	0.15	1.72	0.69	0	
2	13.64	13.64	33.467	25.077	287.5	0.006	6.06	102.7	4.4	0.45	1.7	0.10	0.15	1.72	0.69	2	207
6	13.64	13.64	33.468	25.078	287.5	0.017	6.03	102.1	4.4	0.44	1.6	0.09	0.14	1.82 A	0.67 A	6	206
10	13.64	13.64	33.467	25.078	287.7	0.029	6.02	102.0	4.4	0.42	1.8	0.10	0.19	1.77	0.63	10	205
20	13.42	13.42	33.454	25.113	284.6	0.057	5.78	97.5	5.1	0.52	3.0	0.17	0.44	1.26	0.50	20	204
30	13.06	13.06	33.442	25.176	278.9	0.086	5.32	89.0	7.7	0.77	6.0	0.32	1.68	0.87	0.38	30	203
41	12.67	12.66	33.473	25.277	269.5	0.116	4.87	80.8	9.6	0.96	8.9	0.44	1.70	0.42	0.32	41	202
50 ISL	11.55 D	11.54	33.599 D	25.587	240.2	0.139	3.82	62.0	15.5	1.42	15.7	0.38	0.86	0.19	0.43	50	
51	11.59	11.58	33.599	25.579	240.9	0.141	3.70	60.1	16.2	1.47	16.5	0.37	0.77	0.17	0.44	51	201

A) 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 0801 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 49.3 N	118 37.5 W	15/01/08	0334 UTC	642 m	340 07 kn			1022.4 mb	16.0 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	13.80	13.80	33.432	25.017	293.1	0.000	6.17	104.8	4.2	0.37	1.3	0.09	0.00	2.95	0.95	0	
1	13.80	13.80	33.432	25.018	293.1	0.003	6.17	104.8	4.2	0.37	1.3	0.09	0.00	2.95	0.95	1	221
10	13.74	13.74	33.430	25.029	292.3	0.029	6.15	104.4	4.2	0.37	1.4	0.11	0.03	2.81	0.85	10	220
15	13.61	13.61	33.415	25.044	291.0	0.044	5.97	101.0	4.5	0.44	2.0	0.15	0.71	1.99	0.76	15	219
20	13.49	13.49	33.413	25.067	289.0	0.058	5.80	97.9	5.0	0.53	2.7	0.19	1.76	1.13	0.57	20	218
30	13.30	13.30	33.435	25.122	284.0	0.087	5.54	93.2	5.9	0.63	4.1	0.29	2.29	0.43	0.30	30	217
40	12.56	12.55	33.439	25.271	270.0	0.115	4.71	78.0	9.1	1.01	10.9	0.67	0.71	0.20	0.21	40	216
50	12.06	12.05	33.467	25.389	259.0	0.141	4.29	70.3	11.1	1.19	14.5	0.49	0.00	0.19	0.20	50	215
60	12.06	12.05	33.484	25.402	258.0	0.167	4.28	70.1	10.9	1.19	14.0	0.13	0.00	0.20	0.23	60	214
69	12.06	12.05	33.504	25.418	256.7	0.190	4.19	68.7	11.1	1.23	14.0	0.08	0.00	0.17	0.22	69	213
75 ISL	11.88 D	11.87	33.561 D	25.496	249.4	0.205	3.99	65.2	12.7	1.33	15.6	0.07	0.00	0.13	0.20	75	
85	11.15	11.14	33.618	25.675	232.6	0.229	3.53	56.8	16.4	1.54	19.0	0.07	0.00	0.07	0.16	85	212
100	10.74	10.73	33.803	25.892	212.3	0.263	2.69	42.9	22.4	1.84	22.1	0.00	0.00	0.02	0.10	101	211
119	10.50	10.49	33.931	26.034	199.2	0.302	2.21	35.1	26.2	2.05	24.1	0.00	0.00	0.00	0.06	120	210
125 ISL	10.41 D	10.40	33.952 D	26.066	196.2	0.314	2.14	33.9	26.9	2.09	24.5	0.00	0.00	0.00	0.06	126	
139	10.24	10.22	34.018	26.147	188.8	0.341	2.04	32.2	28.2	2.15	25.1	0.01	0.00	0.01	0.07	140	209
150 ISL	10.08 D	10.06	34.077 D	26.221	182.1	0.361	1.90	29.9	29.4	2.22	25.8	0.01	0.00	0.01	0.08	151	
170	9.97	9.95	34.153	26.299	175.1	0.397	1.71	26.9	31.6	2.31	27.0	0.02	0.00	0.00	0.08	171	208
199	9.25	9.23	34.143	26.411	164.8	0.446	1.78	27.5	34.8	2.32	28.4	0.03	0.00	0.00	0.07	200	207
200 ISL	9.23 D	9.21	34.141 D	26.412	164.7	0.448	1.78	27.5	34.9	2.32	28.4	0.03	0.00			201	
230	8.89	8.87	34.141	26.467	160.0	0.496	1.69	25.9	38.1	2.36	29.5	0.03	0.00			231	206
250 ISL	8.44 D	8.41	34.183 D	26.570	150.4	0.528	1.48	22.5	42.4	2.49	30.8	0.02	0.00			251	
271	8.16	8.13	34.206	26.631	144.9	0.559	1.22	18.4	47.4	2.64	32.2	0.01	0.00			273	205
300 ISL	7.85 D	7.82	34.233 D	26.698	138.8	0.600	0.92	13.8	53.3	2.79	33.9	0.00	0.00			302	
318	7.54	7.51	34.256	26.761	133.0	0.624	0.76	11.3	56.6	2.87	34.7	0.00	0.00			320	204
379	7.04	7.00	34.284	26.854	124.8	0.703	0.54	8.0	65.1	3.00	36.1	0.00	0.00			381	203
400 ISL	6.87 D	6.83	34.294 D	26.886	122.1	0.729	0.47	6.9	67.7	3.04	36.6	0.00	0.00			403	
438	6.65	6.61	34.308	26.927	118.6	0.774	0.36	5.3	72.4	3.11	37.3	0.00	0.00			441	202
500 ISL	6.20 D	6.16	34.332 D	27.005	111.6	0.846	0.25	3.6	80.7	3.22	38.1	0.00	0.00			503	
511	6.14	6.09	34.337	27.017	110.6	0.858	0.23	3.3	82.2	3.24	38.3	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 0801 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 39.2 N	118 58.4 W	15/01/08	1042 UTC	728 m	360 13 kn			1020.9 mb	15.7 C	12.5 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	13.76	13.76	33.481	25.064	288.7	0.000	6.17	104.8	3.8	0.39	0.7	0.00	0.04	1.30	0.38	0	
2	13.76	13.76	33.481	25.064	288.8	0.006	6.17	104.8	3.8	0.39	0.7	0.00	0.04	1.30	0.38	2	224
10	13.77	13.77	33.480	25.061	289.2	0.029	6.17	104.8	3.8	0.40	1.0	0.00	0.05	1.34	0.41	10	223
20	13.00	13.00	33.495	25.228	273.6	0.057	5.18	86.6	6.9	0.80	7.5	0.12	0.02	0.79	0.40	20	222
30	12.55	12.55	33.530	25.344	262.9	0.084	4.85	80.3	8.9	1.00	10.5	0.13	0.01	0.50	0.33	30	221
40	12.02	12.01	33.532	25.447	253.3	0.110	4.44	72.7	11.0	1.19	13.6	0.03	0.01	0.29	0.28	40	220
50	11.32	11.31	33.596	25.626	236.4	0.134	3.98	64.2	14.0	1.41	16.8	0.02	0.01	0.17	0.17	50	219
60	10.97	10.96	33.623	25.710	228.6	0.157	3.74	59.9	15.9	1.55	18.5	0.01	0.01	0.08	0.13	60	218
69	10.65	10.64	33.686	25.816	218.7	0.178	3.45	54.9	18.3	1.66	20.1	0.01	0.01	0.05	0.12	69	217
75 ISL	10.49 D	10.48	33.737 D	25.884	212.4	0.190	3.25	51.6	19.8	1.73	21.0	0.01	0.01	0.03	0.10	75	
85	10.27	10.26	33.796	25.968	204.6	0.211	3.00	47.4	21.9	1.81	22.1	0.01	0.01	0.01	0.08	85	216
100	9.98	9.97	33.828	26.042	197.8	0.242	2.98	46.8	23.1	1.84	23.3	0.01	0.01	0.01	0.10	101	215
119	9.58	9.57	33.931	26.190	184.2	0.278	2.64	41.1	26.9	1.98	25.1	0.01	0.00	0.00	0.09	120	214
125 ISL	9.33 D	9.32	33.974 D	26.264	177.2	0.289	2.55	39.5	27.8	2.02	25.5	0.01	0.00	0.00	0.08	126	
139	9.36	9.34	34.012	26.289	175.1	0.313	2.37	36.7	29.8	2.11	26.3	0.00	0.00	0.00	0.06	140	213
150 ISL	9.30 D	9.28	34.065 D	26.341	170.5	0.332	2.23	34.5	31.3	2.18	27.0	0.00	0.00	0.00	0.06	151	
169	9.10	9.08	34.091	26.394	165.8	0.364	2.03	31.3	33.7	2.28	28.1	0.00	0.00	0.00	0.06	170	212
199	8.81	8.79	34.125	26.467	159.4	0.413	1.84	28.2	36.9	2.33	29.2	0.00	0.00	0.00	0.06	200	211
200 ISL	8.80 D	8.78	34.129 D	26.471	158.9	0.415	1.83	28.0	37.1	2.33	29.3	0.00	0.00			201	
228	8.46	8.44	34.166	26.553	151.6	0.458	1.52	23.1	41.8	2.48	30.8	0.01	0.00			229	210
250 ISL	8.24 D	8.21	34.201 D	26.615	146.1	0.491	1.29	19.5	45.1	2.58	31.8	0.02	0.00			252	
270	8.08	8.05	34.214	26.649	143.1	0.520	1.12	16.9	47.8	2.66	32.5	0.02	0.00			272	209
300 ISL	7.83 D	7.80	34.234 D	26.702	138.5	0.562	0.96	14.4	51.5	2.75	33.5	0.01	0.00			302	
318	7.67	7.64	34.240	26.730	136.0	0.587	0.89	13.3	53.8	2.80	34.0	0.00	0.00			320	208
376	7.14	7.10	34.278	26.836	126.6	0.663	0.55	8.1	62.9	2.99	35.8	0.00	0.00			378	207
400 ISL	7.02 D	6.98	34.287 D	26.860	124.6	0.693	0.46	6.8	65.9	3.05	36.4	0.00	0.01			403	
437	6.71	6.67	34.303	26.915	119.7	0.738	0.37	5.4	70.2	3.12	37.1	0.00	0.01			440	206
478	6.46	6.42	34.320	26.962	115.7	0.786	0.30	4.4	75.2	3.17	37.8	0.00	0.00			481	205
500 ISL	6.33 D	6.28	34.328 D	26.985	113.6	0.812	0.27	3.9	78.2	3.18	38.1	0.00	0.00			504	
511	6.23	6.18	34.334	27.003	112.0	0.824	0.26	3.8	79.7	3.19	38.3	0.00	0.00			515	204
600 ISL	5.76 D	5.71	34.363 D	27.086	104.8	0.921	0.20	2.9	89.6	3.31	39.2	0.00	0.00			604	
613	5.70	5.65	34.367	27.097	103.9	0.934	0.19	2.7	91.1	3.33	39.3	0.00	0.00			618	203
700 ISL	5.31 D	5.25	34.392 D	27.164	98.1	1.022	0.09	1.3	104.7	3.45	37.3	0.00	0.00			705	
713	5.28	5.22	34.392	27.168	97.9	1.035	0.08	1.1	106.1	3.47	37.0	0.00	0.00			718	202
717	5.28	5.22	34.392	27.168	97.9	1.039	0.09	1.3	106.2	3.46	37.0	0.00	0.00			723	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0801 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 29.5 N	119 19.1 W	15/01/08	1510 UTC	1582 m	280 13 kn	270 02 05	1	1020.0 mb	13.5 C	11.9 C		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	13.69	13.69	33.487	25.083	286.9	0.000	6.02	102.1	4.1	0.45	1.7	0.04	0.13	0.91	0.31	0	
2	13.69	13.69	33.487	25.083	287.0	0.006	6.02	102.1	4.1	0.45	1.7	0.04	0.13	0.91	0.31	2	221
9	13.68	13.68	33.493	25.089	286.5	0.026	6.03	102.2								9	220
10	13.66	13.66	33.487	25.089	286.6	0.029	6.02	102.0	4.2	0.45	1.6	0.05	0.23	0.87	0.27	10	219
20	13.37	13.37	33.484	25.146	281.5	0.057	6.07	102.3	4.9	0.51	3.3	0.08	0.28	0.71	0.32	20	218
30	12.88	12.88	33.511	25.265	270.4	0.085	5.68	94.7	6.8	0.73	6.7	0.17	0.04	0.83	0.44	30	217
40	11.80	11.79	33.527	25.484	249.7	0.111	4.20	68.5	12.2	1.25	14.8	0.05	0.00	0.31	0.39	40	216
50	10.97	10.96	33.630	25.716	227.9	0.135	3.69	59.1	16.1	1.49	18.3	0.02	0.00	0.10	0.20	50	215
60	10.67	10.66	33.659	25.791	220.9	0.157	3.61	57.5	17.5	1.55	19.7	0.02	0.00	0.06	0.19	60	214
70	10.32	10.31	33.722	25.901	210.6	0.179	3.42	54.1	19.6	1.64	21.1	0.02	0.00	0.03	0.11	70	213
75 ISL	10.11 D	10.10	33.772 D	25.976	203.6	0.189	3.29	51.8	20.6	1.69	21.7	0.02	0.00	0.02	0.09	75	
85	10.04	10.03	33.807	26.016	200.1	0.209	3.06	48.1	22.6	1.79	22.9	0.02	0.00	0.01	0.07	85	212
100	9.59	9.58	33.881	26.149	187.7	0.238	2.91	45.3	25.7	1.88	24.6	0.02	0.00	0.01	0.07	101	211
120	9.29	9.28	33.983	26.278	175.8	0.275	2.31	35.7	31.6	2.12	27.1	0.00	0.00	0.01	0.11	121	210
125 ISL	9.26 D	9.25	33.992 D	26.290	174.8	0.283	2.23	34.5	32.4	2.15	27.5	0.00	0.00	0.01	0.10	126	
140	9.08	9.06	34.032	26.350	169.3	0.309	2.07	31.9	34.2	2.22	28.4	0.00	0.00	0.01	0.08	141	209
150 ISL	8.94 D	8.92	34.080 D	26.410	163.8	0.326	1.95	30.0	35.6	2.27	29.0	0.00	0.00	0.01	0.08	151	
170	8.75	8.73	34.131	26.480	157.5	0.358	1.71	26.2	38.4	2.37	30.0	0.00	0.00	0.00	0.09	171	208
199	8.58	8.56	34.167	26.535	152.8	0.403	1.44	22.0	41.7	2.49	31.1	0.00	0.00	0.02	0.05	200	207
200 ISL	8.57 D	8.55	34.172 D	26.541	152.3	0.404	1.43	21.8	41.8	2.50	31.1	0.00	0.00			201	
228	8.26	8.24	34.204	26.614	145.8	0.446	1.20	18.2	45.8	2.64	32.4	0.00	0.00			229	206
250 ISL	8.03 D	8.00	34.232 D	26.670	140.7	0.478	0.99	14.9	49.7	2.75	33.3	0.00	0.00			252	
268	7.84	7.81	34.243	26.707	137.4	0.503	0.84	12.6	52.8	2.83	34.0	0.00	0.00			270	205
300 ISL	7.58 D	7.55	34.256 D	26.755	133.2	0.546	0.76	11.3	55.9	2.88	34.7	0.00	0.00			302	
318	7.54	7.51	34.251	26.757	133.3	0.570	0.74	11.0	57.3	2.89	35.0	0.00	0.00			320	204
380	7.09	7.05	34.281	26.845	125.7	0.650	0.51	7.5	64.6	3.03	36.3	0.00	0.00			383	203
400 ISL	7.03 D	6.99	34.287 D	26.858	124.8	0.675	0.48	7.1	65.5	3.05	36.5	0.00	0.00			403	
439	6.95	6.91	34.288	26.871	124.2	0.724	0.45	6.6	67.1	3.08	36.8	0.00	0.00			442	202
500 ISL	6.49 D	6.44	34.316 D	26.955	116.7	0.797	0.33	4.8	74.5	3.18	37.8	0.00	0.00			504	
513	6.44	6.39	34.318	26.963	116.0	0.812	0.30	4.4	76.1	3.20	38.0	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 0801 — 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 29.7 N	119 19.0 W	15/01/08	1754 UTC	1658 m	050 09 kn	300 04 05	1	1020.4 mb	16.5 C	13.2 C	20m	2/8	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	13.56	13.56	33.487	25.109	284.4	0.000	6.14	103.8	4.2	0.47	2.0	0.03	0.05	0.99	0.23	0	
1 A,B	13.56	13.56	33.487	25.109	284.4	0.003	6.14	103.8	4.2	0.47	2.0	0.03	0.05	0.99	0.23	1	216
10 ISL	13.38 D	13.38	33.491 D	25.149	280.9	0.028	6.07	102.3	4.9	0.54	3.3	0.07	0.04	0.81	0.30	10	
12 B	13.24	13.24	33.497	25.182	277.8	0.034	6.05	101.7	5.1	0.57	3.8	0.09	0.04	0.76	0.32	12	215
19	13.07	13.07	33.505	25.222	274.2	0.053	5.89	98.6	5.7	0.65	5.0	0.17	0.04	0.74	0.40	19	214
20 ISL	12.99 D	12.99	33.511 D	25.243	272.2	0.056	5.87	98.1	5.8	0.67	5.2	0.19	0.04	0.74	0.41	20	
29 B	12.76	12.76	33.534	25.306	266.4	0.080	5.69	94.7	7.1	0.83	6.9	0.34	0.04	0.71	0.48	29	213
30 ISL	12.53 D	12.53	33.545 D	25.359	261.4	0.083	5.40	89.4	8.2	0.93	8.5	0.29	0.03	0.63	0.45	30	
35	11.50	11.50	33.559	25.564	242.0	0.095	4.00	64.8	13.4	1.40	16.0	0.03	0.00	0.24	0.27	35	212
42 B	11.23	11.22	33.607	25.651	233.9	0.112	3.78	60.9	15.0	1.48	17.2	0.01	0.00	0.14	0.21	42	211
49	10.83	10.82	33.653	25.758	223.8	0.128	3.64	58.2	16.7	1.58	18.7	0.01	0.00	0.07	0.14	49	210
50 ISL	10.81 D	10.80	33.656 D	25.764	223.2	0.130	3.63	58.0	16.8	1.59	18.8	0.01	0.00	0.07	0.14	50	
57 B	10.59	10.58	33.672	25.815	218.5	0.146	3.58	56.9	17.6	1.62	19.6	0.00	0.00	0.05	0.13	57	209
70	10.20	10.19	33.745	25.940	207.0	0.173	3.35	52.8	20.1	1.72	21.1	0.00	0.00	0.02	0.14	70	208
75 ISL	9.98 D	9.97	33.793 D	26.015	199.9	0.184	3.25	51.0	21.3	1.76	21.8	0.00	0.00	0.01	0.12	75	
82 B	9.87	9.86	33.812	26.048	196.9	0.197	3.11	48.7	23.0	1.83	22.9	0.00	0.00	0.01	0.08	82	207
91	9.63	9.62	33.867	26.131	189.2	0.215	2.90	45.2	25.3	1.93	24.1	0.00	0.00	0.01	0.06	91	206
100	9.52	9.51	33.916	26.188	184.0	0.232	2.74	42.6	27.0	1.98	24.9	0.00	0.00	0.01	0.08	101	205
120	9.29	9.28	33.984	26.279	175.7	0.268	2.32	35.9	31.1	2.14	26.8	0.00	0.00	0.02	0.10	121	204
125 ISL	9.27 D	9.26	33.989 D	26.286	175.1	0.276	2.25	34.8	31.9	2.16	27.1	0.00	0.00	0.02	0.10	126	
140	9.08	9.06	34.041	26.357	168.6	0.302	2.08	32.0	34.0	2.23	28.0	0.00	0.00	0.01	0.08	141	203
150 ISL	8.98 D	8.96	34.067 D	26.394	165.4	0.319	1.94	29.8	35.6	2.29	28.7	0.00	0.00	0.01	0.07	151	
170	8.74	8.72	34.138	26.487	156.8	0.351	1.66	25.4	38.6	2.41	29.9	0.00	0.00	0.00	0.06	171	202
200	8.51	8.49	34.178	26.555	150.9	0.397	1.36	20.7	42.4	2.53	31.2	0.00	0.00	0.00	0.06	201	201

A) THIS STATION WAS RE-OCCUPIED TO PERFORM THE PRIMARY PRODUCTIVITY ASSAY.
B) 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 0801 — 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 39.6 W	15/01/08	2149 UTC	80 m	300 18 kn	310 03 06	0	1016.9 mb	14.9 C	12.7 C	09m	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	12.89	12.89	33.533	25.279	268.2	0.000	6.19	103.3	6.5	0.66	5.3	0.11	0.03	2.01	0.54	0	
2	12.89	12.89	33.533	25.279	268.3	0.005	6.19	103.3	6.5	0.66	5.3	0.11	0.03	2.01	0.54	2	210
6	12.89	12.89	33.533	25.279	268.4	0.016	6.19	103.3	6.4	0.66	5.3	0.11	0.05	2.07	0.63	6	209
10	12.85	12.85	33.533	25.287	267.7	0.027	6.18	103.0	6.4	0.66	5.4	0.11	0.04	1.87	0.59	10	207
10	12.86	12.86	33.532	25.284	268.0	0.027	6.18	103.0								10	208
20	12.66	12.66	33.534	25.325	264.4	0.053	5.95	98.8	7.1	0.73	6.4	0.12	0.02	1.70	0.64	20	206
30	12.01	12.01	33.555	25.466	251.2	0.079	5.17	84.7	10.0	1.01	10.9	0.13	0.07	0.79	0.42	30	205
40	11.15	11.15	33.628	25.682	230.9	0.103	4.23	68.0	15.1	1.36	16.4	0.10	0.05	0.30	0.22	40	204
50	10.89	10.88	33.655	25.749	224.7	0.126	3.95	63.2	16.7	1.46	18.1	0.07	0.02	0.19	0.17	50	203
60	10.87	10.86	33.690	25.780	222.0	0.148	3.85	61.6	17.7	1.52	18.2	0.09	0.13	0.18	0.17	60	202
75	10.40	10.39	33.788	25.939	207.2	0.181	3.30	52.3	21.8	1.70	21.3	0.09	0.04	0.12	0.21	75	201

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

RV DAVID STARR JORDAN — CALCOFI CRUISE 0801 — 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 59.5 N	120 21.0 W	20/01/08	0857 UTC	724 m	270 09 kn			1019.0 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	12.15	12.15	33.505	25.400	256.7	0.000	6.15	101.0	7.9	0.81	7.7	0.18	0.22	1.30	0.23	0	
1	12.15	12.15	33.505	25.400	256.7	0.003	6.15	101.0	7.9	0.81	7.7	0.18	0.22	1.30	0.23	1	221
9	12.09	12.09	33.505	25.412	255.8	0.023										9	220
10	12.09	12.09	33.507	25.413	255.7	0.026	6.08	99.7	8.1	0.83	7.9	0.19	0.21	1.40	0.44	10	219
19	11.99	11.99	33.512	25.436	253.7	0.049	5.94	97.2	8.7	0.88	8.6	0.21	0.29	1.27	0.45	19	218
20 ISL	12.00 D	12.00	33.532 D	25.450	252.5	0.051	5.93	97.1	8.8	0.89	8.7	0.22	0.28	1.26	0.47	20	
30	12.07	12.07	33.598	25.488	249.1	0.076	5.84	95.8	9.6	0.94	9.7	0.28	0.14	1.12	0.56	30	217
39	11.52	11.52	33.616	25.605	238.2	0.098	4.98	80.7	13.1	1.21	14.3	0.12	0.00	0.28	0.26	39	216
50	10.83	10.82	33.680	25.779	221.8	0.123	4.02	64.2	17.2	1.49	18.7	0.02	0.00	0.09	0.15	50	215
60	10.20	10.19	33.739	25.935	207.2	0.145	3.41	53.8	20.9	1.70	21.9	0.01	0.00	0.05	0.14	60	214
70	9.90	9.89	33.791	26.026	198.7	0.165	3.14	49.2	22.9	1.81	23.5	0.00	0.00	0.03	0.10	70	213
75 ISL	9.88 D	9.87	33.801 D	26.038	197.7	0.175	3.04	47.6	23.6	1.84	23.9	0.00	0.00	0.03	0.10	75	
84	9.81	9.80	33.845	26.084	193.5	0.193	2.88	45.0	24.8	1.89	24.5	0.01	0.00	0.02	0.11	84	212
99	9.58	9.57	33.902	26.167	186.0	0.221	2.68	41.7	26.8	1.96	25.5	0.01	0.00	0.01	0.09	100	211
100 ISL	9.58 D	9.57	33.904 D	26.168	185.8	0.223	2.68	41.7	26.9	1.96	25.5	0.01	0.00	0.01	0.09	101	
119	9.22	9.21	33.946	26.260	177.4	0.257	2.68	41.4	28.6	1.99	26.1	0.00	0.00	0.00	0.07	120	210
125 ISL	9.15 D	9.14	33.950 D	26.275	176.2	0.268	2.74	42.3	29.0	1.98	26.1	0.00	0.00	0.00	0.07	126	
139	8.83	8.82	33.982	26.350	169.2	0.292	2.84	43.5	30.3	1.97	26.4	0.01	0.00	0.00	0.06	140	209
150 ISL	8.77 D	8.75	34.003 D	26.376	166.9	0.311	2.73	41.8	32.2	2.02	27.2	0.01	0.00	0.00	0.06	151	
169	8.32	8.30	34.032	26.469	158.4	0.342	2.42	36.6	36.3	2.16	28.9	0.01	0.00	0.00	0.05	170	208
199	7.87	7.85	34.069	26.565	149.6	0.388	2.03	30.4	42.6	2.34	31.3	0.00	0.00	0.01	0.05	200	207
200 ISL	7.85 D	7.83	34.065 D	26.565	149.6	0.389	2.02	30.3	42.8	2.34	31.4	0.00	0.00			201	
229	7.51	7.49	34.077	26.624	144.4	0.432	1.75	26.0	47.4	2.47	32.9	0.01	0.00			230	206
250 ISL	7.98 D	7.95	34.224 D	26.671	140.6	0.462	1.30	19.6	50.6	2.63	33.7	0.01	0.00			252	
269	7.69	7.66	34.228	26.717	136.4	0.488	0.90	13.4	53.1	2.77	34.3	0.00	0.00			271	205
300 ISL	7.54 D	7.51	34.231 D	26.742	134.5	0.530	0.81	12.1	56.1	2.84	35.0	0.00	0.00			302	
318	7.39	7.36	34.240	26.770	132.0	0.554	0.76	11.3	57.6	2.86	35.3	0.00	0.00			320	204
377	6.93	6.89	34.257	26.848	125.3	0.630	0.59	8.7	64.0	2.98	36.7	0.00	0.00			379	203
400 ISL	6.70 D	6.66	34.254 D	26.877	122.7	0.659	0.53	7.7	66.2	3.02	37.1	0.00	0.00			403	
436	6.62	6.58	34.281	26.909	120.1	0.702	0.45	6.6	69.8	3.07	37.7	0.00	0.00			439	202
500 ISL	6.12 D	6.08	34.293 D	26.984	113.5	0.777	0.35	5.0	77.4	3.15	39.1	0.00	0.00			504	
511	6.08	6.03	34.298	26.994	112.7	0.790	0.33	4.7	78.7	3.16	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 0801 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 1.9 W	20/01/08	1721 UTC	3821 m	340 16 kn	320 02 04	0	1017.5 mb	14.7 C	13.5 C	21m	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	12.62	12.62	33.064	24.968	297.8	0.000	6.19	102.4	3.7	0.50	1.8	0.03	0.08	0.57	0.14	0	
1 A	12.62	12.62	33.064	24.968	297.8	0.003	6.19	102.4	3.7	0.50	1.8	0.03	0.08	0.57	0.14	1	222
10	12.61	12.61	33.064	24.970	297.8	0.030	6.19	102.4	3.6	0.51	1.9	0.03	0.05	0.61	0.15	10	221
13 A	12.60	12.60	33.065	24.973	297.7	0.039	6.19	102.3	3.6	0.49	1.9	0.03	0.05	0.64	0.17	13	220
20 ISL	12.59 D	12.59	33.076 D	24.984	296.8	0.060	6.15	101.7	3.6	0.50	1.8	0.04	0.10	0.68	0.20	20	
22	12.60	12.60	33.080	24.985	296.8	0.065	6.14	101.5	3.6	0.50	1.8	0.04	0.12	0.69	0.21	22	219
30 ISL	12.57 D	12.57	33.090 D	24.999	295.7	0.089	6.10	100.8	3.7	0.52	2.0	0.05	0.18	0.59	0.25	30	
31 A	12.57	12.57	33.090	24.999	295.7	0.092	6.09	100.6	3.7	0.52	2.0	0.05	0.19	0.57	0.25	31	218
38	12.51	12.50	33.092	25.012	294.6	0.113	6.03	99.5	3.9	0.55	2.6	0.08	0.21	0.40	0.28	38	217
44 A	12.08	12.07	33.090 D	25.092	287.1	0.130	5.88	96.2	4.6	0.65	4.4	0.13	0.11	0.29	0.21	44	216
50 ISL	11.82 D	11.81	33.111 D	25.157	281.0	0.147	5.82	94.7	5.5	0.72	5.7	0.12	0.09	0.26	0.19	50	
52	11.78	11.77	33.109	25.163	280.5	0.153	5.80	94.3	5.8	0.74	6.1	0.11	0.09	0.25	0.19	52	215
59 A	11.57	11.56	33.196	25.270	270.5	0.172	5.60	90.6	7.2	0.85	8.3	0.12	0.01	0.19	0.18	59	214
72	12.20	12.19	33.477	25.371	261.3	0.207	5.53	90.9	8.6	0.92	9.4	0.35	0.00	0.18	0.20	72	213
75 ISL	12.09 D	12.08	33.549 D	25.448	254.1	0.214	5.43	89.1	9.1	0.96	10.2	0.31	0.00	0.16	0.19	75	
86 A	11.73	11.72	33.568	25.530	246.5	0.242	4.95	80.6	11.5	1.15	13.4	0.10	0.00	0.09	0.16	86	212
100	10.92	10.91	33.574	25.682	232.2	0.276	4.41	70.6	14.9	1.38	17.0	0.04	0.00	0.06	0.14	100	211
119	10.32	10.31	33.727	25.906	211.3	0.318	3.52	55.6	20.0	1.67	21.4	0.01	0.00	0.03	0.10	120	210
125 ISL	10.21 D	10.20	33.739 D	25.935	208.7	0.330	3.32	52.3	21.5	1.74	22.5	0.01	0.00	0.02	0.09	126	
139	9.61	9.59	33.854	26.125	190.7	0.358	2.97	46.2	24.8	1.88	24.5	0.01	0.00	0.01	0.08	140	209
150 ISL	9.17 D	9.15	33.924 D	26.251	178.9	0.379	2.76	42.6	27.3	1.97	25.8	0.01	0.00	0.00	0.07	151	
169	8.97	8.95	33.995	26.339	170.9	0.412	2.51	38.6	31.2	2.09	27.4	0.00	0.00	0.00	0.07	170	208
199	8.56	8.54	34.049	26.446	161.2	0.462	2.29	34.9	35.4	2.20	29.0	0.00	0.00	0.00	0.06	200	207
200 ISL	8.57 D	8.55	34.054 D	26.448	161.0	0.463	2.28	34.7	35.5	2.20	29.1	0.00	0.00			201	
229	8.28	8.26	34.095	26.525	154.1	0.509	1.94	29.4	40.0	2.36	30.6	0.01	0.00			230	206
250 ISL	8.01 D	7.98	34.134 D	26.596	147.7	0.541	1.61	24.2	43.9	2.50	31.9	0.01	0.00			251	
269	7.93	7.90	34.164	26.632	144.6	0.568	1.33	20.0	47.3	2.62	33.0	0.00	0.00			271	205
300 ISL	7.81 D	7.78	34.203 D	26.681	140.5	0.613	1.16	17.4	51.2	2.71	34.0	0.00	0.00			302	
318	7.49	7.46	34.180	26.709	137.9	0.638	1.11	16.5	53.1	2.75	34.5	0.00	0.00			320	204
378	7.07	7.03	34.216	26.797	130.3	0.718	0.81	11.9	60.1	2.91	36.2	0.00	0.00			380	203
400 ISL	6.92 D	6.88	34.222 D	26.822	128.1	0.746	0.71	10.4	63.1	2.97	36.8	0.00	0.00			403	
440	6.59	6.55	34.252	26.891	121.9	0.796	0.55	8.0	68.7	3.08	37.8	0.00	0.00			443	202
500 ISL	6.15 D	6.11	34.298 D	26.985	113.5	0.867	0.36	5.2	77.1	3.20	39.0	0.00	0.00			503	
512	6.10	6.05	34.302	26.994	112.7	0.881	0.32	4.6	78.8	3.22	39.3	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 0801 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 19.1 N	121 42.9 W	20/01/08	2244 UTC	3937 m	330 19 kn	310 02 05	0	1016.2 mb	13.2 C	11.0 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	12.48	12.48	33.140	25.054	289.6	0.000	6.20	102.3	4.8	0.57	3.0	0.07	0.21	1.04	0.22	0	
1	12.48	12.48	33.140	25.054	289.6	0.003	6.20	102.3	4.8	0.57	3.0	0.07	0.21	1.04	0.22	1	223
10	12.46	12.46	33.190	25.097	285.8	0.029	6.19	102.1	5.1	0.60	3.6	0.08	0.03	1.03	0.29	10	221
10	12.47	12.47	33.176	25.084	287.0	0.029	6.19	102.1								10	222
20	12.14	12.14	33.251	25.206	275.7	0.057	6.19	101.5	6.3	0.69	5.1	0.11	0.01	1.46	0.37	20	219
25	12.13	12.13	33.251	25.208	275.7	0.071	6.16	101.0	6.3	0.70	5.3	0.11	0.01	1.40	0.40	25	218
29	12.10	12.10	33.250	25.213	275.3	0.082	6.13	100.4	6.5	0.71	5.3	0.11	0.00	1.35	0.38	29	217
30 ISL	12.08 D	12.08	33.246 D	25.213	275.2	0.084	6.12	100.2	6.6	0.72	5.4	0.11	0.00	1.31	0.37	30	
39	11.99	11.99	33.283	25.259	271.1	0.109	5.99	97.9	7.3	0.78	6.8	0.14	0.04	0.94	0.31	39	216
49	12.00	11.99	33.317	25.284	269.0	0.136	5.95	97.3	7.4	0.80	7.0	0.17	0.06	1.03	0.40	49	215
50 ISL	12.00 D	11.99	33.330 D	25.294	268.1	0.139	5.94	97.1	7.5	0.81	7.1	0.17	0.07	0.99	0.39	50	
59	12.04	12.03	33.394	25.336	264.3	0.163	5.88	96.3	7.9	0.85	7.8	0.20	0.19	0.62	0.32	59	214
69	12.14	12.13	33.463	25.371	261.2	0.189	5.94	97.5	7.9	0.85	7.9	0.24	0.22	0.70	0.30	69	213
75 ISL	11.96 D	11.95	33.487 D	25.424	256.3	0.205	5.75	94.0	8.3	0.88	8.4	0.28	0.21	0.57	0.30	75	
84	12.01	12.00	33.591	25.496	249.8	0.227	5.47	89.6	10.1	1.03	10.7	0.33	0.15	0.30	0.29	84	212
98	10.55	10.54	33.628	25.789	222.0	0.260	3.67	58.3	17.6	1.61	20.2	0.03	0.00	0.05	0.09	98	211
100 ISL	10.11 D	10.10	33.698 D	25.919	209.6	0.265	3.61	56.8	18.5	1.66	21.0	0.03	0.00	0.05	0.09	100	
119	9.48	9.47	33.806	26.109	191.9	0.303	3.03	47.0	24.5	1.89	24.7	0.01	0.00	0.01	0.05	120	210
125 ISL	9.36 D	9.35	33.844 D	26.158	187.3	0.314	3.00	46.5	25.5	1.91	25.1	0.01	0.00	0.01	0.04	126	
139	9.08	9.06	33.918	26.261	177.7	0.340	2.93	45.1	27.3	1.94	25.5	0.00	0.00	0.00	0.03	140	209
150 ISL	8.88 D	8.86	33.964 D	26.329	171.5	0.359	2.84	43.5	29.2	1.99	26.1	0.00	0.00	0.00	0.03	151	
168	8.59	8.57	33.999	26.401	164.8	0.389	2.66	40.5	32.3	2.08	27.2	0.00	0.00	0.00	0.04	169	208
198	8.34	8.32	34.042	26.474	158.5	0.438	2.35	35.6	36.3	2.21	28.8	0.00	0.00	0.00	0.03	199	207
200 ISL	8.34 D	8.32	34.041 D	26.473	158.5	0.441	2.33	35.3	36.5	2.22	28.9	0.00	0.00			201	
228	8.06	8.04	34.063	26.533	153.3	0.484	2.14	32.2	40.0	2.31	30.3	0.00	0.00			229	206
250 ISL	7.83 D	7.81	34.080 D	26.580	149.1	0.518	1.97	29.5	43.5	2.40	31.4	0.00	0.00			251	
268	7.57	7.54	34.088	26.624	145.1	0.544	1.81	26.9	46.4	2.48	32.3	0.00	0.00			270	205
300 ISL	7.35 D	7.32	34.130 D	26.689	139.3	0.590	1.42	21.0	50.8	2.64	33.7	0.00	0.00			302	
317	7.33	7.30	34.159	26.715	137.2	0.613	1.21	17.9	53.0	2.72	34.3	0.00	0.00			319	204
378	6.92	6.88	34.202	26.806	129.3	0.694	0.83	12.2	60.5	2.92	36.1	0.00	0.00			380	203
400 ISL	6.66 D	6.62	34.213 D	26.850	125.2	0.722	0.69	10.1	64.4	3.00	36.9	0.00	0.00			403	
438	6.35	6.31	34.250	26.920	118.9	0.769	0.48	7.0	71.2	3.12	38.2	0.00	0.00			441	202
500 ISL	5.99 D	5.95	34.301 D	27.007	111.2	0.840	0.32	4.6	79.2	3.22	39.2	0.00	0.00			503	
509	5.94	5.90	34.304	27.016	110.4	0.850	0.30	4.3	80.4	3.23	39.3	0.00	0.00			512	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0801 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 59.2 N	122 23.5 W	21/01/08	0433 UTC	3992 m	300 12 kn			1017.4 mb	13.5 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	13.77	13.77	33.128	24.789	314.9	0.000	5.98	101.4	2.2	0.36	0.0	0.00	0.00	0.29	0.12	0	
2	13.77	13.77	33.128	24.789	314.9	0.006	5.98	101.4	2.2	0.36	0.0	0.00	0.00	0.29	0.12	2	221
10	13.77	13.77	33.127	24.788	315.2	0.032	5.97	101.2	2.2	0.35	0.0	0.00	0.00	0.31	0.08	10	219
11	13.77	13.77	33.127	24.788	315.2	0.035										11	220
20 ISL	13.78 D	13.78	33.126 D	24.786	315.7	0.063	5.97	101.2	2.1	0.36	0.0	0.00	0.02	0.29	0.09	20	
21	13.78	13.78	33.129	24.788	315.5	0.066	5.97	101.2	2.1	0.36	0.0	0.00	0.02	0.29	0.09	21	218
30	13.78	13.78	33.127	24.787	315.9	0.095	5.97	101.2	2.1	0.35	0.0	0.00	0.03	0.29	0.10	30	217
40	13.77	13.76	33.127	24.789	316.0	0.126	5.98	101.3	2.1	0.36	0.0	0.00	0.04	0.28	0.10	40	216
50	12.92	12.91	32.984	24.849	310.5	0.158	6.07	101.0	2.9	0.44	1.1	0.01	0.10	0.38	0.20	50	215
60	12.58	12.57	32.940	24.881	307.6	0.188	6.07	100.2	3.2	0.49	1.8	0.04	0.18	0.49	0.21	60	214
70	12.45	12.44	32.933	24.901	306.0	0.219	6.09	100.3	3.4	0.51	2.1	0.05	0.16	0.40	0.18	70	213
75 ISL	12.11 D	12.10	32.940 D	24.971	299.4	0.234	6.03	98.6	3.9	0.57	3.1	0.08	0.11	0.30	0.18	75	
85	11.56	11.55	32.997	25.118	285.6	0.263	5.77	93.3	5.1	0.72	5.6	0.11	0.01	0.12	0.17	85	212
100	11.72	11.71	33.310	25.332	265.7	0.305	5.12	83.2	6.9	0.88	8.9	0.00	0.00	0.06	0.07	100	211
120	10.85	10.84	33.480	25.622	238.4	0.355	4.52	72.2	11.9	1.18	14.4	0.00	0.00	0.03	0.05	121	210
125 ISL	10.64 D	10.63	33.522 D	25.691	231.9	0.367	4.34	69.0	13.5	1.28	15.9	0.00	0.00	0.02	0.05	126	
139	10.14	10.12	33.627	25.859	216.1	0.398	3.85	60.6	17.8	1.53	19.6	0.00	0.00	0.01	0.04	140	209
150 ISL	9.75 D	9.73	33.734 D	26.008	202.1	0.421	3.56	55.6	20.6	1.66	21.6	0.00	0.00	0.00	0.04	151	
170	9.35	9.33	33.842	26.159	188.1	0.460	3.23	50.0	24.7	1.80	24.0	0.00	0.00	0.00	0.04	171	208
199	8.76	8.74	33.962	26.347	170.7	0.512	3.24	49.5	28.5	1.84	25.0	0.00	0.00	0.00	0.07	200	207
200 ISL	8.74 D	8.72	33.975 D	26.360	169.4	0.514	3.24	49.5	28.6	1.84	25.0	0.00	0.00			201	
229	8.33	8.31	33.999	26.442	162.0	0.562	3.07	46.5	32.8	1.93	26.6	0.00	0.00			230	206
250 ISL	7.95 D	7.92	34.029 D	26.523	154.6	0.595	2.65	39.8	38.1	2.11	28.7	0.00	0.00			251	
269	7.67	7.64	34.045	26.576	149.7	0.624	2.22	33.1	43.3	2.30	30.8	0.00	0.00			271	205
300 ISL	7.21 D	7.18	34.049 D	26.645	143.4	0.670	1.76	26.0	49.6	2.50	33.2	0.00	0.00			302	
319	7.10	7.07	34.090	26.693	139.2	0.697	1.54	22.7	52.9	2.60	34.4	0.00	0.00			321	204
378	6.71	6.68	34.149	26.793	130.3	0.776	0.98	14.3	61.9	2.84	36.7	0.00	0.00			380	203
400 ISL	6.36 D	6.32	34.141 D	26.833	126.6	0.804	0.84	12.2	65.3	2.91	37.4	0.00	0.00			402	
437	6.22	6.18	34.198	26.896	121.0	0.850	0.65	9.4	70.8	3.02	38.3	0.00	0.00			440	202
500 ISL	6.00 D	5.96	34.275 D	26.985	113.2	0.924	0.38	5.5	78.4	3.16	39.6	0.00	0.00			503	
512	5.94	5.90	34.285	27.001	111.9	0.937	0.33	4.7	79.8	3.19	39.8	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 0801 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 39.4 N	123 4.1 W	21/01/08	1046 UTC	3741 m	320 12 kn			1017.9 mb	13.8 C	11.4 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	15.25	15.25	33.296	24.605	332.4	0.000	5.79	101.2	1.9	0.31	0.0	0.00	0.01	0.18	0.06	0	
2	15.25	15.25	33.296	24.605	332.5	0.007	5.79	101.2	1.9	0.31	0.0	0.00	0.01	0.18	0.06	2	221
9	15.26	15.26	33.295	24.602	332.9	0.030										9	220
10	15.26	15.26	33.298	24.604	332.7	0.033	5.79	101.3	1.9	0.31	0.0	0.00	0.01	0.17	0.05	10	219
20	15.26	15.26	33.293	24.601	333.4	0.067	5.80	101.4	1.9	0.31	0.0	0.00	0.01	0.18	0.06	20	218
30	15.26	15.26	33.297	24.604	333.4	0.100	5.80	101.4	1.8	0.30	0.0	0.00	0.00	0.18	0.05	30	217
40	14.48	14.47	33.238	24.727	321.9	0.133	5.92	101.9	2.0	0.35	0.0	0.03	0.02	0.46	0.20	40	216
50	14.02	14.01	33.203	24.797	315.6	0.165	5.98	101.9	2.3	0.37	0.3	0.03	0.05	0.66	0.31	50	215
59	13.76	13.75	33.170	24.825	313.1	0.193	5.87	99.5	2.6	0.43	1.0	0.12	0.05	0.53	0.28	59	214
70	13.20	13.19	33.175	24.942	302.2	0.227	5.64	94.5	3.4	0.54	2.9	0.12	0.01	0.30	0.22	70	213
75 ISL	13.23 D	13.22	33.291 D	25.026	294.3	0.242	5.64	94.6	3.6	0.57	3.4	0.13	0.01	0.23	0.17	75	
84	12.85	12.84	33.288	25.099	287.6	0.268	5.63	93.7	4.4	0.65	4.9	0.15	0.01	0.14	0.10	84	212
99	11.81	11.80	33.340	25.338	265.0	0.309	4.94	80.4	8.5	1.01	11.0	0.01	0.00	0.09	0.09	99	211
100 ISL	11.75 D	11.74	33.348 D	25.356	263.4	0.312	4.90	79.7	8.8	1.03	11.4	0.01	0.00	0.09	0.09	100	
119	10.83	10.82	33.506	25.645	236.1	0.359	4.16	66.4	14.8	1.43	17.8	0.01	0.00	0.05	0.05	120	210
125 ISL	10.49 D	10.48	33.593 D	25.773	224.1	0.373	3.94	62.4	16.9	1.53	19.5	0.01	0.00	0.04	0.04	126	
139	9.88	9.86	33.695	25.956	206.9	0.403	3.47	54.3	21.3	1.73	22.6	0.01	0.01	0.01	0.03	140	209
150 ISL	9.67 D	9.65	33.752 D	26.036	199.5	0.426	3.20	49.9	23.6	1.83	24.1	0.01	0.01	0.01	0.03	151	
169	9.31	9.29	33.867	26.185	185.6	0.462	2.90	44.9	26.6	1.93	25.5	0.01	0.00	0.00	0.03	170	208
198	8.81	8.79	33.963	26.340	171.3	0.514	2.82	43.2	30.3	1.99	26.8	0.00	0.00	0.00	0.03	199	207
200 ISL	8.80 D	8.78	33.963 D	26.341	171.2	0.517	2.84	43.5	30.5	1.99	26.8	0.00	0.00			201	
228	8.30	8.28	34.000	26.447	161.5	0.564	3.12	47.2	33.2	1.95	26.7	0.00	0.00			229	206
250 ISL	8.03 D	8.00	34.035 D	26.516	155.3	0.599	2.82	42.4	37.8	2.09	28.5	0.00	0.00			251	
270	7.68	7.65	34.039	26.570	150.3	0.629	2.38	35.5	42.5	2.27	30.7	0.00	0.00			272	205
300 ISL	7.36 D	7.33	34.071 D	26.641	143.9	0.674	1.80	26.7	48.4	2.51	33.0	0.00	0.00			302	
318	7.27	7.24	34.108	26.683	140.2	0.699	1.50	22.2	51.7	2.63	34.2	0.00	0.00			320	204
378	6.55	6.52	34.106	26.780	131.4	0.781	1.23	17.9	61.3	2.80	36.8	0.00	0.00			380	203
400 ISL	6.22 D	6.18	34.106 D	26.823	127.3	0.809	1.11	16.0	64.7	2.86	37.5	0.00	0.00			402	
437	6.11	6.07	34.143	26.867	123.6	0.855	0.89	12.8	70.4	2.97	38.6	0.00	0.00			440	202
500 ISL	5.67 D	5.63	34.205 D	26.971	114.2	0.930	0.54	7.7	80.5	3.13	40.4	0.00	0.00			503	
513	5.60	5.56	34.217	26.989	112.6	0.945	0.47	6.7	82.6	3.16	40.8	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 0801 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 44.9 W	21/01/08	1811 UTC	4094 m	060 20 kn	320 04 13	6	1019.1 mb	11.8 C	11.8 C	19m	6/8	NS

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	14.86	14.86	33.281	24.678	325.4	0.000	5.87	101.8	2.0	0.32	0.0	0.00	0.00	0.27	0.08	0	
2 A	14.86	14.86	33.281	24.678	325.5	0.007	5.87	101.8	2.0	0.32	0.0	0.00	0.00	0.27	0.08	2	222
10	14.85	14.85	33.280	24.680	325.6	0.033	5.87	101.8	1.9	0.31	0.0	0.00	0.00	0.26	0.07	10	221
11 A	14.85	14.85	33.281	24.680	325.5	0.036	5.88	102.0	1.8	0.31	0.0	0.00	0.00	0.25	0.07	11	220
20	14.85	14.85	33.281	24.681	325.8	0.065	5.87	101.8	1.8	0.31	0.0	0.00	0.00	0.26	0.07	20	219
28 A	14.85	14.85	33.280	24.680	326.1	0.091	5.87	101.8	1.9	0.31	0.0	0.00	0.00	0.28	0.08	28	218
30 ISL	14.85 D	14.85	33.280 D	24.680	326.1	0.098	5.86	101.6	2.0	0.32	0.1	0.01	0.01	0.35	0.11	30	
40 A	14.33	14.32	33.293	24.801	314.9	0.130	5.84	100.2	2.3	0.39	0.9	0.06	0.03	0.61	0.26	40	217
47	13.68	13.67	33.314	24.952	300.6	0.151	5.59	94.7	3.8	0.56	3.4	0.23	0.02	0.48	0.23	47	216
50 ISL	12.80 D	12.79	33.332 D	25.142	282.6	0.160	5.42	90.1	5.0	0.68	5.5	0.18	0.01	0.34	0.18	50	
53 A	12.50	12.49	33.330	25.199	277.2	0.168	5.24	86.6	6.3	0.81	7.7	0.10	0.00	0.20	0.13	53	215
65	11.62	11.61	33.381	25.405	257.9	0.201	4.63	75.1	10.5	1.17	13.3	0.10	0.00	0.14	0.14	65	214
75 ISL	11.15 D	11.14	33.429 D	25.528	246.4	0.226	4.50	72.3	12.1	1.25	14.8	0.09	0.00	0.08	0.07	75	
77 A	11.09	11.08	33.435	25.543	244.9	0.231	4.49	72.0	12.3	1.25	14.9	0.09	0.00	0.07	0.06	77	213
88	10.78	10.77	33.538	25.678	232.3	0.257	4.24	67.6	14.3	1.35	16.7	0.09	0.00	0.03	0.04	88	212
99	10.48	10.47	33.598	25.778	223.0	0.282	3.89	61.6	17.1	1.54	19.6	0.08	0.00	0.03	0.04	99	211
100 ISL	10.30 D	10.29	33.651 D	25.850	216.2	0.284	3.86	61.0	17.4	1.55	19.8	0.08	0.00	0.03	0.04	100	
120	9.63	9.62	33.754	26.043	198.1	0.326	3.27	50.9	23.0	1.80	23.6	0.09	0.02	0.01	0.03	121	210
125 ISL	9.49 D	9.48	33.793 D	26.097	193.1	0.335	3.14	48.7	24.3	1.85	24.3	0.09	0.02	0.01	0.03	126	
140	9.19	9.17	33.902	26.231	180.6	0.363	2.79	43.1	27.7	1.96	26.0	0.09	0.00	0.00	0.02	141	209
150 ISL	9.05 D	9.03	33.934 D	26.278	176.3	0.381	2.63	40.5	29.7	2.02	26.9	0.09	0.00	0.00	0.02	151	
169	8.66	8.64	34.008	26.398	165.2	0.414	2.43	37.1	33.1	2.12	28.2	0.08	0.00	0.00	0.02	170	208
199	8.18	8.16	34.032	26.490	156.8	0.462	2.37	35.8	37.5	2.20	29.7	0.01	0.00	0.00	0.02	200	207
200 ISL	8.18 D	8.16	34.032 D	26.490	156.9	0.464	2.37	35.8	37.7	2.20	29.7	0.01	0.00			201	
229	7.77	7.75	34.048	26.563	150.2	0.508	2.24	33.5	42.1	2.29	30.9	0.00	0.00			230	206
250 ISL	7.49 D	7.47	34.048 D	26.604	146.6	0.539	2.15	31.9	45.3	2.36	31.8	0.00	0.00			251	
268	7.33	7.30	34.055	26.632	144.2	0.565	2.01	29.8	48.2	2.43	32.7	0.00	0.00			270	205
300 ISL	7.12 D	7.09	34.131 D	26.722	136.1	0.610	1.42	20.9	54.0	2.66	34.9	0.00	0.00			302	
318	6.95	6.92	34.146	26.757	132.9	0.634	1.08	15.9	57.5	2.79	36.1	0.00	0.00			320	204
377	6.11	6.08	34.149	26.871	122.4	0.710	0.83	11.9	69.6	2.98	38.6	0.00	0.00			379	203
400 ISL	5.85 D	5.82	34.137 D	26.894	120.3	0.738	0.80	11.4	73.6	3.02	39.3	0.00	0.00			403	
438	5.49	5.45	34.142	26.942	115.9	0.783	0.75	10.6	79.7	3.07	40.2	0.00	0.00			441	202
500 ISL	5.17 D	5.13	34.205 D	27.030	108.0	0.852	0.48	6.8	89.3	3.19	41.4	0.00	0.00			503	
513	5.09	5.05	34.216	27.048	106.4	0.866	0.42	5.9	91.3	3.22	41.6	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 0801 STATION 86.8 32.5

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 53.4 N	118 26.7 W	15/01/08	0025 UTC	23 m	150 04 kn	230 01 08	1	1021.7 mb	16.9 C	14.1 C		2/8	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	13.98	13.98	33.323	24.896	304.7	0.000	6.95	118.4	5.2	0.28	0.5	0.14	0.16	6.09	0.89	0	
1	13.98	13.98	33.323	24.896	304.7	0.003	6.95	118.4	5.2	0.28	0.5	0.14	0.16	6.09	0.89	1	204
5	13.87	13.87	33.325	24.921	302.5	0.015	6.81	115.8	5.1	0.29	0.7	0.14	0.18	6.12	0.99	5	203
10 ISL	13.63 D	13.63	33.343 D	24.984	296.6	0.030	6.38	108.0	5.2	0.35	1.9	0.19	0.46	4.40	0.92	10	
11	13.64	13.64	33.344	24.983	296.7	0.033	6.29	106.5	5.2	0.37	2.1	0.20	0.54	3.97	0.89	11	202
16	13.57	13.57	33.371	25.018	293.5	0.048	6.08	102.8	5.3	0.45	2.4	0.21	0.89	2.63	0.75	16	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0801 STATION 88.5 30.1

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 40.5 N	118 5.2 W	14/01/08	2021 UTC	21 m	260 09 kn	280 01 09	1	1022.2 mb	14.2 C	13.0 C		3/8	CS

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	13.84	13.84	33.000	24.676	325.7	0.000	6.38	108.2	7.1	0.47	3.8	0.23	0.46	5.07	0.79	0	
2 A	13.84	13.84	33.000	24.676	325.7	0.007	6.38	108.2	7.1	0.47	3.8	0.23	0.46	5.07	0.79	2	204
6	13.80	13.80	33.339	24.946	300.1	0.019	6.05	102.7	4.4	0.38	2.5	0.20	1.75	3.20	0.80	6	203
10 ISL	13.71 D	13.71	33.363 D	24.983	296.7	0.031	5.67	96.1	5.1	0.48	2.9	0.21	2.39	1.69	0.76	10	
15	13.54	13.54	33.421	25.063	289.2	0.046	5.28	89.2	5.9	0.70	3.5	0.23	2.70	0.63	0.71	15	202
17	13.49	13.49	33.426	25.077	288.0	0.051	5.19	87.6	6.3	0.76	4.0	0.24	2.79	0.55	0.87	17	201

A) UNUSUAL PROFILES AND ODD NO3/PO4 RATIOS MAY BE DUE TO THE PROXIMITY OF THIS STATION TO THE HYPERION WASTE-WATER OUTFALL.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0801 STATION 90.0 27.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 29.6 N	117 44.8 W	14/01/08	1427 UTC	24 m	360 06 kn			1022.2 mb	16.5 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	13.56	13.56	33.141	24.842	309.9	0.000	6.32	106.7	5.7	0.36	0.3	0.04	0.17	12.14	1.06	0	
2	13.56	13.56	33.141	24.842	309.9	0.006	6.32	106.7	5.7	0.36	0.3	0.04	0.17	12.14	1.06	2	205
5	13.72	13.72	33.381	24.995	295.4	0.015	5.44	92.3	5.1	0.46	1.4	0.13	0.87	2.19	0.58	5	204
10	13.51	13.51	33.439	25.082	287.2	0.030	5.22	88.2	6.1	0.67	3.1	0.18	2.27	0.49	0.48	10	203
15	12.92	12.92	33.459	25.216	274.6	0.044	4.77	79.6	8.6	0.91	7.3	0.24	2.26	0.32	0.41	15	202
17	12.64	12.64	33.458	25.270	269.5	0.049	4.61	76.5	9.4	0.98	8.5	0.25	2.22	0.32	0.41	17	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0801 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 29.0 N	117 45.9 W	14/01/08	1242 UTC	62 m	310 01 kn			1021.3 mb	14.9 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	13.77	13.77	33.286	24.911	303.3	0.000	6.16	104.5	4.9	0.37	1.1	0.08	0.65	2.84	0.53	0	
2	13.77	13.77	33.286	24.911	303.3	0.006	6.16	104.5	4.9	0.37	1.1	0.08	0.65	2.84	0.53	2	208
5	13.69	13.69	33.434	25.042	290.9	0.015	5.65	95.8	4.7	0.51	2.4	0.16	1.51	1.07	0.31	5	207
10	13.44	13.44	33.449	25.104	285.1	0.029	5.45	91.9	5.3	0.61	3.4	0.21	2.22	0.55	0.23	10	206
20	12.44	12.44	33.465	25.314	265.4	0.057	4.56	75.3	10.0	1.04	11.1	0.24	2.69	0.22	0.23	20	205
30	11.93	11.93	33.561	25.486	249.3	0.083	3.92	64.1	12.8	1.27	14.9	0.02	0.00	0.20	0.24	30	204
40	11.54	11.53	33.597	25.587	240.0	0.107	3.62	58.7	14.8	1.42	16.9	0.01	0.00	0.13	0.17	40	203
50	11.27	11.26	33.660 D	25.685	230.8	0.131	3.30	53.2	17.4	1.56	18.6	0.01	0.00	0.06	0.15	50	202
56	11.15	11.14	33.704	25.741	225.6	0.144	3.04	48.9	18.9	1.65	19.5	0.05	0.07	0.07	0.22	56	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0801 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 25.0 N	117 54.5 W	14/01/08	0741 UTC	617 m	130 07 kn			1020.9 mb	15.5 C	13.1 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	14.11	14.11	33.488	24.997	295.1	0.000	6.13	104.9	1.7	0.32	0.2	0.00	0.05	1.02	0.38	0	
2	14.11	14.11	33.488	24.997	295.2	0.006	6.13	104.9	1.7	0.32	0.2	0.00	0.05	1.02	0.38	2	220
10	13.98	13.98	33.482	25.019	293.2	0.029	6.08	103.7	2.8	0.37	0.7	0.03	0.17	0.87	0.44	10	219
20	13.80	13.80	33.478	25.054	290.2	0.059	5.93	100.8	3.9	0.44	1.3	0.08	0.30	0.61	0.36	20	218
30	13.71	13.71	33.477	25.072	288.8	0.088	5.78	98.0	4.2	0.48	1.8	0.14	0.37	0.64	0.45	30	217
40	13.22	13.21	33.489	25.180	278.7	0.116	5.29	88.8	5.9	0.70	5.4	0.26	0.18	0.34	0.39	40	216
49	12.22	12.21	33.593	25.456	252.6	0.140	4.02	66.1	12.2	1.23	13.6	0.12	0.02	0.20	0.22	49	215
50 ISL	12.12 D	12.11	33.608 D	25.487	249.7	0.142	3.88	63.7	12.9	1.28	14.3	0.11	0.02	0.19	0.21	50	
59	11.68	11.67	33.716	25.654	234.1	0.164	2.84	46.2	18.6	1.66	18.8	0.01	0.01	0.10	0.14	59	214
69	11.30	11.29	33.797	25.787	221.6	0.187	2.38	38.4	22.7	1.86	21.2	0.00	0.01	0.04	0.17	69	213
75 ISL	11.09 D	11.08	33.819 D	25.842	216.5	0.200	2.32	37.3	23.4	1.89	21.5	0.00	0.01	0.03	0.15	75	
85	10.98	10.97	33.857	25.891	212.0	0.221	2.21	35.5	24.6	1.95	22.1	0.00	0.00	0.02	0.11	85	212
100	10.43	10.42	33.887	26.012	200.9	0.252	2.58	40.9	23.6	1.89	22.9	0.00	0.01	0.01	0.09	101	211
120	10.00	9.99	33.988	26.164	186.7	0.291	2.47	38.8	26.2	1.97	24.3	0.00	0.00	0.01	0.05	121	210
125 ISL	9.99 D	9.98	34.001 D	26.176	185.7	0.301	2.45	38.5	26.7	1.98	24.5	0.00	0.00	0.01	0.05	126	
139	9.82	9.80	34.044	26.239	180.1	0.326	2.34	36.7	28.1	2.03	25.2	0.00	0.00	0.00	0.06	140	209
150 ISL	10.00 D	9.98	34.143 D	26.286	175.9	0.346	2.06	32.4	29.6	2.13	25.8	0.00	0.00	0.00	0.06	151	
168	10.00	9.98	34.197	26.329	172.3	0.377	1.63	25.7	32.0	2.28	26.9	0.00	0.00	0.00	0.05	169	208
200	9.22	9.20	34.149	26.420	163.9	0.431	1.77	27.4	34.9	2.29	28.4	0.00	0.00	0.01	0.05	201	207
228	8.65	8.63	34.154	26.515	155.3	0.476	1.62	24.7	39.2	2.36	30.1	0.00	0.00			229	206
250 ISL	8.60 D	8.57	34.186 D	26.548	152.6	0.509	1.45	22.1	42.1	2.45	30.8	0.00	0.00			251	
268	8.38	8.35	34.213	26.603	147.6	0.536	1.31	19.9	44.3	2.53	31.3	0.00	0.00			270	205
300 ISL	8.08 D	8.05	34.251 D	26.678	140.9	0.583	1.08	16.3	48.1	2.64	32.3	0.00	0.01			302	
318	7.93	7.90	34.247	26.698	139.3	0.608	0.97	14.6	50.3	2.69	32.9	0.00	0.02			320	204
377	7.22	7.18	34.234	26.790	131.0	0.687	0.81	12.0	58.3	2.83	35.1	0.00	0.00			379	203
400 ISL	6.95 D	6.91	34.248 D	26.839	126.6	0.717	0.67	9.8	61.6	2.90	35.8	0.00	0.00			403	
437	6.83	6.79	34.289	26.888	122.4	0.763	0.44	6.4	66.9	3.01	36.7	0.00	0.00			440	202
500 ISL	6.33 D	6.28	34.325 D	26.983	113.9	0.838	0.29	4.2	75.6	3.13	38.1	0.00	0.00			503	
512	6.26	6.21	34.328	26.995	112.9	0.851	0.26	3.8	77.3	3.15	38.4	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 0801 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 54.5 W	14/01/08	1739 UTC	614 m	280 03 kn	280 01 04	1	1024.3 mb	17.5 C	11.7 C	17m	2/8	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	14.09	14.09	33.488	25.001	294.7	0.000	6.13	104.8	2.0	0.31	0.3	0.00	0.08	0.90	0.38	0	
2 A,B	14.09	14.09	33.488	25.001	294.8	0.006	6.13	104.8	2.0	0.31	0.3	0.00	0.08	0.90	0.38	2	214
10 ISL	13.98 D	13.98	33.487 D	25.023	292.9	0.029	6.13	104.6	2.0	0.30	0.4	0.01	0.08	1.00	0.46	10	
11 B	13.98	13.98	33.487	25.023	292.9	0.032	6.13	104.6	2.0	0.30	0.4	0.01	0.08	1.00	0.47	11	213
18	13.88	13.88	33.479	25.038	291.7	0.053	5.97	101.6	3.2	0.37	1.1	0.06	0.24	0.75	0.41	18	212
20 ISL	13.83 D	13.83	33.477 D	25.047	290.9	0.059	5.95	101.2	3.4	0.38	1.2	0.06	0.24	0.70	0.41	20	
25 B	13.79	13.79	33.476	25.054	290.3	0.073	5.91	100.4	3.6	0.40	1.5	0.07	0.24	0.61	0.40	25	211
30 ISL	13.74 D	13.74	33.476 D	25.065	289.5	0.088	5.86	99.5	3.9	0.44	2.0	0.11	0.33	0.50	0.43	30	
36 B	13.61	13.60	33.478	25.093	286.9	0.105	5.69	96.3	4.2	0.48	2.7	0.15	0.40	0.39	0.46	36	210
48 B	12.61	12.60	33.491	25.302	267.3	0.138	4.66	77.3	8.4	0.95	10.3	0.16	0.04	0.27	0.37	48	209
50 ISL	12.23 D	12.22	33.515 D	25.394	258.6	0.143	4.41	72.5	9.8	1.05	11.9	0.13	0.03	0.24	0.33	50	
59	11.56	11.55	33.658	25.631	236.2	0.166	3.30	53.6	16.1	1.48	17.8	0.02	0.00	0.11	0.19	59	208
69 B	11.64	11.63	33.749	25.687	231.1	0.189	2.58	42.0	20.2	1.71	19.7	0.01	0.00	0.07	0.17	69	207
75 ISL	11.36 D	11.35	33.775 D	25.759	224.4	0.203	2.56	41.4	21.4	1.74	20.5	0.01	0.00	0.05	0.16	75	
85	10.95	10.94	33.821	25.869	214.2	0.225	2.52	40.4	22.4	1.80	21.7	0.00	0.00	0.02	0.13	85	206
99	10.27	10.26	33.912	26.059	196.3	0.253	2.64	41.7	24.0	1.85	23.3	0.00	0.00	0.01	0.09	100	205
100 ISL	10.25 D	10.24	33.919 D	26.068	195.5	0.255	2.63	41.6	24.1	1.85	23.4	0.00	0.00	0.01	0.09	101	
119	9.95	9.94	33.997	26.180	185.2	0.292	2.48	38.9	26.3	1.94	24.6	0.00	0.00	0.00	0.07	120	204
125 ISL	9.93 D	9.92	34.012 D	26.195	183.9	0.303	2.33	36.6	27.4	2.00	25.1	0.00	0.00	0.00	0.06	126	
139	9.99	9.97	34.125	26.273	176.8	0.328	1.97	31.0	29.9	2.14	26.1	0.00	0.01	0.01	0.05	140	203
150 ISL	10.14 D	10.12	34.208 D	26.313	173.4	0.347	1.81	28.6	31.4	2.20	26.8	0.00	0.01	0.01	0.05	151	
169	9.61	9.59	34.170	26.373	168.0	0.380	1.66	25.9	33.4	2.25	27.7	0.00	0.00	0.00	0.05	170	202
200 ISL	9.29 D	9.27	34.187 D	26.439	162.2	0.431	1.61	24.9	35.7	2.32	28.6	0.00	0.00	0.00	0.06	201	
201	9.27	9.25	34.187	26.442	161.9	0.432	1.61	24.9	35.8	2.32	28.6	0.00	0.00	0.00	0.06	202	201

A) THIS STATION WAS RE-OCCUPIED TO PERFORM THE PRIMARY PRODUCTIVITY ASSAY.
B) 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 0801 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 15.1 N	118 14.8 W	14/01/08	0247 UTC	327 m	310 08 kn			1019.4 mb	16.1 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	13.91	13.91	33.465	25.020	292.8	0.000	6.15	104.8	2.8	0.39	1.2	0.02	0.00	1.25	0.42	0	
2	13.91	13.91	33.465	25.020	292.9	0.006	6.15	104.8	2.8	0.39	1.2	0.02	0.00	1.25	0.42	2	219
5	13.92	13.92	33.466	25.019	293.1	0.015	6.14	104.6	2.8	0.41	1.2	0.02	0.00	1.25	0.39	5	218
10	13.92	13.92	33.467	25.020	293.1	0.029	6.14	104.6	2.9	0.40	1.2	0.02	0.00	1.28	0.38	10	217
15	13.86	13.86	33.467	25.033	292.1	0.044	6.09	103.6	2.9	0.42	1.4	0.04	0.00	1.36	0.43	15	216
20	13.69	13.69	33.471	25.071	288.6	0.058	5.73	97.2	3.9	0.52	3.1	0.11	0.13	0.99	0.42	20	215
30	12.82	12.82	33.470	25.245	272.3	0.086	4.96	82.6	7.3	0.89	8.8	0.18	0.01	0.38	0.25	30	214
40	12.04	12.03	33.528	25.440	253.9	0.113	4.33	70.9	11.0	1.19	13.5	0.11	0.00	0.20	0.21	40	213
50	11.93	11.92	33.536	25.467	251.6	0.138	4.28	70.0	11.5	1.22	14.0	0.09	0.00	0.20	0.22	50	212
60	11.11	11.10	33.652	25.708	228.9	0.162	3.50	56.3	16.6	1.53	18.5	0.01	0.00	0.07	0.18	60	211
69	11.01	11.00	33.761	25.811	219.3	0.182	2.88	46.2	20.2	1.73	20.5	0.00	0.00	0.03	0.10	69	210
75 ISL	10.83 D	10.82	33.776 D	25.855	215.3	0.195	2.94	47.0	20.4	1.73	20.7	0.00	0.00	0.03	0.11	75	
84	10.63	10.62	33.759	25.877	213.3	0.215	3.03	48.2	20.6	1.73	21.1	0.00	0.00	0.03	0.12	84	209
100	10.19	10.18	33.835	26.012	200.7	0.248	2.84	44.8	23.1	1.85	22.8	0.00	0.00	0.02	0.10	101	208
119	9.58	9.57	33.945	26.201	183.2	0.284	2.62	40.8	27.1	1.98	25.1	0.00	0.00	0.00	0.09	120	207
125 ISL	9.50 D	9.49	33.962 D	26.227	180.7	0.295	2.54	39.5	28.2	2.02	25.6	0.00	0.00	0.00	0.08	126	
139	9.26	9.24	34.023	26.314	172.7	0.320	2.37	36.7	30.5	2.09	26.6	0.00	0.00	0.00	0.06	140	206
150 ISL	9.17 D	9.15	34.055 D	26.354	169.2	0.339	2.26	34.9	31.8	2.14	27.2	0.00	0.00	0.00	0.06	151	
171	9.01	8.99	34.090	26.407	164.5	0.374	2.05	31.5	34.2	2.23	28.2	0.00	0.00	0.00	0.05	172	205
198	8.77	8.75	34.152	26.494	156.7	0.417	1.72	26.3	38.3	2.37	29.6	0.00	0.00	0.01	0.05	199	204
200 ISL	8.76 D	8.74	34.157 D	26.500	156.2	0.420	1.70	26.0	38.5	2.38	29.7	0.00	0.00			201	
229	8.67	8.65	34.205	26.552	151.9	0.465	1.44	22.0	41.3	2.46	30.4	0.01	0.00			230	203
250 ISL	8.37 D	8.34	34.208 D	26.600	147.5	0.496	1.27	19.3	44.8	2.55	31.6	0.01	0.01			252	
268	8.06	8.03	34.218	26.655	142.5	0.522	1.14	17.2	47.9	2.63	32.6	0.00	0.02			270	202
300 ISL	7.77 D	7.74	34.234 D	26.711	137.6	0.567	0.97	14.5	51.9	2.73	33.6	0.00	0.01			302	
320	7.57	7.54	34.238	26.743	134.8	0.594	0.87	13.0	54.4	2.79	34.2	0.00	0.00			322	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0801 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 11.2 N	118 23.1 W	13/01/08	2333 UTC	1185 m	290 15 kn	290 01 06	0	1018.6 mb	17.9 C	14.0 C	07m	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	14.17	14.17	33.448	24.953	299.2	0.000	6.30	107.9	2.1	0.35	0.0	0.00	0.00	1.46	0.54	0	
2	14.17	14.17	33.448	24.953	299.3	0.006	6.30	107.9	2.1	0.35	0.0	0.00	0.00	1.46	0.54	2	221
10	14.05	14.05	33.449	24.979	297.0	0.030	6.21	106.1	2.1	0.37	0.0	0.01	0.01	1.86	0.83	10	220
16	14.04	14.04	33.451	24.983	296.8	0.048	6.12	104.5	2.2	0.37	0.0	0.03	0.01	1.86	0.89	16	219
20	14.01	14.01	33.453	24.991	296.2	0.060	6.06	103.4	2.2	0.39	0.2	0.04	0.04	1.66	0.88	20	218
30	13.98	13.98	33.454	24.998	295.8	0.089	5.94	101.3	2.4	0.41	0.5	0.08	0.15	1.13	0.71	30	217
41	13.11	13.10	33.461	25.181	278.7	0.121	5.12	85.8	6.3	0.80	7.2	0.21	0.00	0.30	0.25	41	216
50	12.03	12.02	33.520	25.436	254.6	0.145	4.17	68.3	11.3	1.23	13.9	0.03	0.00	0.17	0.23	50	215
61	11.74	11.73	33.553	25.516	247.2	0.172	3.99	65.0	12.6	1.32	15.2	0.02	0.00	0.14	0.21	61	214
71	11.07	11.06	33.625	25.694	230.4	0.196	3.63	58.3	15.9	1.50	18.3	0.01	0.00	0.08	0.16	71	213
75 ISL	10.95 D	10.94	33.654 D	25.738	226.3	0.205	3.48	55.7	17.0	1.56	19.1	0.01	0.00	0.07	0.15	75	
85	10.70	10.69	33.724	25.837	217.1	0.227	3.17	50.5	19.5	1.67	20.6	0.01	0.00	0.04	0.12	85	212
100	10.22	10.21	33.805	25.984	203.4	0.259	2.94	46.4	22.3	1.79	22.5	0.01	0.00	0.01	0.11	101	211
120	9.99	9.98	33.907	26.103	192.6	0.299	2.56	40.2	25.7	1.94	24.1	0.00	0.00	0.01	0.09	121	210
125 ISL	9.90 D	9.89	33.936 D	26.141	189.1	0.308	2.52	39.5	26.4	1.96	24.5	0.00	0.00	0.01	0.10	126	
140	9.59	9.57	33.978	26.225	181.3	0.336	2.44	38.0	28.3	2.01	25.5	0.01	0.00	0.01	0.11	141	209
150 ISL	9.57 D	9.55	34.006 D	26.251	179.1	0.354	2.37	36.9	29.3	2.04	26.0	0.01	0.00	0.01	0.10	151	
171	9.27	9.25	34.040	26.327	172.2	0.391	2.24	34.7	31.2	2.11	26.9	0.01	0.00	0.00	0.06	172	208
198	9.01	8.99	34.080	26.400	165.7	0.436	2.09	32.2	33.8	2.18	28.1	0.01	0.00	0.00	0.06	199	207
200 ISL	8.99 D	8.97	34.088 D	26.409	164.9	0.440	2.06	31.7	34.1	2.19	28.2	0.01	0.00			201	
231	8.62	8.60	34.154	26.519	154.9	0.489	1.62	24.7	39.7	2.39	30.2	0.00	0.00			232	206
250 ISL	8.24 D	8.21	34.185 D	26.602	147.3	0.518	1.42	21.5	43.6	2.49	31.5	0.00	0.00			251	
268	8.02	7.99	34.193	26.641	143.7	0.544	1.26	19.0	47.1	2.57	32.5	0.00	0.00			270	205
300 ISL	7.79 D	7.76	34.228 D	26.703	138.3	0.589	1.02	15.3	50.9	2.68	33.3	0.00	0.00			302	
315	7.74	7.71	34.241	26.721	136.9	0.610	0.93	13.9	52.4	2.73	33.6	0.00	0.00			317	204
377	7.23	7.19	34.268	26.816	128.6	0.692	0.62	9.2	60.2	2.89	35.5	0.00	0.00			379	203
400 ISL	7.03 D	6.99	34.278 D	26.851	125.5	0.722	0.55	8.1	62.9	2.94	36.0	0.00	0.00			403	
435	6.80	6.76	34.290	26.893	121.9	0.765	0.46	6.7	67.0	3.01	36.8	0.00	0.00			438	202
500 ISL	6.30 D	6.25	34.326 D	26.988	113.4	0.841	0.29	4.2	75.8	3.15	38.2	0.00	0.00			503	
516	6.15	6.10	34.332	27.012	111.2	0.859	0.25	3.6	78.0	3.18	38.6	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 0801 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 55.5 N	118 56.3 W	13/01/08	1742 UTC	1711 m	070 05 kn	300 01 06	0	1020.9 mb	16.9 C	14.8 C	20m	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	13.89	13.89	33.449	25.012	293.6	0.000	6.15	104.7	1.6	0.40	0.9	0.03	0.07	0.94	0.35	0	
2 A	13.89	13.89	33.449	25.012	293.7	0.006	6.15	104.7	1.6	0.40	0.9	0.03	0.07	0.94	0.35	2	223
10	13.85	13.85	33.452	25.023	292.9	0.029	6.13	104.3	1.7	0.40	0.9	0.03	0.08	0.94	0.29	10	222
12 A	13.85	13.85	33.452	25.023	292.9	0.035	6.13	104.3	1.7	0.38	0.9	0.03	0.06	1.03	0.34	12	221
19	13.72	13.72	33.471	25.065	289.2	0.056	5.94	100.8	2.8	0.44	1.9	0.05	0.08	1.14	0.40	19	220
20 ISL	13.72 D	13.72	33.471 D	25.065	289.2	0.058	5.93	100.6	2.8	0.44	1.9	0.05	0.08	1.11	0.40	20	
30 A	13.65	13.65	33.477	25.084	287.6	0.087	5.79	98.1	3.2	0.48	2.6	0.06	0.14	0.79	0.36	30	219
36	13.33	13.33	33.478	25.150	281.5	0.104	5.52	92.9	4.6	0.60	4.6	0.13	0.19	0.86	0.50	36	218
42 A	13.14	13.13	33.482	25.191	277.7	0.121	5.36	89.9	5.4	0.71	6.0	0.15	0.16	0.69	0.53	42	217
50	11.65	11.64	33.557	25.536	245.1	0.142	4.02	65.3	12.8	1.29	15.6	0.03	0.00	0.22	0.25	50	216
57 A	11.33	11.32	33.607	25.633	235.9	0.159	3.68	59.4	14.9	1.41	17.3	0.00	0.00	0.15	0.21	57	215
70	10.84	10.83	33.731	25.818	218.6	0.188	3.01	48.1	19.5	1.71	20.9	0.00	0.00	0.05	0.12	70	214
75 ISL	10.79 D	10.78	33.746 D	25.838	216.8	0.199	2.83	45.2	20.7	1.77	21.7	0.00	0.00	0.04	0.12	75	
81 A	10.67	10.66	33.778	25.885	212.5	0.212	2.75	43.8	21.6	1.80	22.2	0.00	0.00	0.03	0.12	81	213
90	10.32	10.31	33.769	25.938	207.6	0.231	3.05	48.2	21.1	1.75	22.0	0.00	0.00	0.03	0.10	90	212
100 ISL	10.11 D	10.10	33.803 D	26.001	201.8	0.252	3.00	47.2	21.8	1.78	22.4	0.00	0.00	0.02	0.09	101	
101	10.17	10.16	33.793	25.983	203.5	0.254	3.00	47.3	21.9	1.78	22.5	0.00	0.00	0.02	0.09	102	211
120	9.92	9.91	33.898	26.108	192.1	0.291	2.71	42.5	24.9	1.91	23.8	0.00	0.00	0.01	0.08	121	210
125 ISL	9.69 D	9.68	33.911 D	26.156	187.5	0.301	2.60	40.6	25.8	1.94	24.2	0.00	0.01	0.01	0.08	126	
139	9.75	9.73	34.020	26.232	180.7	0.326	2.35	36.7	28.0	2.01	25.3	0.00	0.02	0.01	0.07	140	209
150 ISL	9.43 D	9.41	33.998 D	26.267	177.5	0.346	2.37	36.8	29.2	2.03	26.0	0.00	0.01	0.01	0.07	151	
168	9.07	9.05	33.998	26.326	172.2	0.378	2.40	37.0	31.0	2.04	27.0	0.00	0.00	0.00	0.06	169	208
199	8.79	8.77	34.062	26.420	163.7	0.430	2.18	33.4	34.5	2.14	28.3	0.00	0.00	0.00	0.06	200	207
200 ISL	8.78 D	8.76	34.062 D	26.422	163.6	0.431	2.16	33.1	34.6	2.15	28.3	0.00	0.00			201	
229	8.75	8.73	34.153	26.498	156.9	0.478	1.68	25.7	38.2	2.31	29.6	0.00	0.00			230	206
250 ISL	8.52 D	8.49	34.178 D	26.554	152.0	0.510	1.54	23.4	40.7	2.38	30.3	0.00	0.00			251	
269	8.36	8.33	34.187	26.586	149.2	0.539	1.46	22.1	43.0	2.43	31.0	0.00	0.00			271	205
300 ISL	7.94 D	7.91	34.210 D	26.667	141.8	0.584	1.22	18.3	47.5	2.56	32.4	0.00	0.01			302	
318	7.80	7.77	34.211	26.689	140.0	0.609	1.08	16.2	50.1	2.63	33.2	0.00	0.01			320	204
377	7.35	7.31	34.257	26.790	131.1	0.689	0.69	10.2	57.8	2.81	35.2	0.00	0.00			379	203
400 ISL	7.18 D	7.14	34.266 D	26.821	128.4	0.719	0.61	9.0	60.5	2.86	35.8	0.00	0.00			403	
438	6.86	6.82	34.275	26.873	123.9	0.767	0.52	7.6	64.8	2.93	36.6	0.00	0.00			441	202
500 ISL	6.45 D	6.40	34.311 D	26.956	116.5	0.842	0.37	5.4	71.9	3.04	37.9	0.00	0.00			503	
514	6.37	6.32	34.307	26.964	115.9	0.858	0.33	4.8	73.5	3.07	38.2	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 0801 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 39.1 N	119 28.8 W	13/01/08	1201 UTC	1327 m	020 10 kn			1017.9 mb	16.2 C	14.3 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	14.11	14.11	33.326	24.871	307.0	0.000	5.94	101.5	2.2	0.36	0.6	0.04	0.06	0.63	0.22	0	
2	14.11	14.11	33.326	24.871	307.1	0.006	5.94	101.5	2.2	0.36	0.6	0.04	0.06	0.63	0.22	2	220
10	14.11	14.11	33.326	24.872	307.3	0.031	5.94	101.5	2.2	0.36	0.6	0.04	0.05	0.61	0.21	10	219
20	14.10	14.10	33.325	24.873	307.4	0.061	5.94	101.5	2.2	0.37	0.6	0.04	0.05	0.64	0.23	20	218
30	14.08	14.08	33.327	24.879	307.1	0.092	5.93	101.3	2.3	0.39	0.7	0.05	0.06	0.60	0.23	30	217
40	13.95	13.94	33.353	24.927	302.9	0.123	5.86	99.8	2.5	0.41	1.2	0.08	0.13	0.48	0.23	40	216
50	12.42	12.41	33.316	25.203	276.7	0.152	5.23	86.3	6.2	0.81	8.0	0.07	0.03	0.10	0.10	50	215
60	11.52	11.51	33.359	25.406	257.6	0.178	4.74	76.7	9.8	1.09	12.8	0.02	0.02	0.07	0.08	60	214
70	11.22	11.21	33.421	25.509	248.1	0.204	4.53	72.9	11.6	1.22	14.7	0.02	0.02	0.05	0.07	70	213
75 ISL	11.03 D	11.02	33.467 D	25.579	241.5	0.216	4.38	70.2	12.8	1.29	15.8	0.02	0.02	0.05	0.07	75	
85	10.82	10.81	33.561	25.689	231.2	0.240	4.06	64.8	15.5	1.43	18.0	0.03	0.02	0.05	0.07	85	212
100	10.40	10.39	33.687	25.861	215.2	0.273	3.60	57.0	19.1	1.64	21.0	0.03	0.02	0.04	0.09	100	211
119	9.68	9.67	33.793	26.066	196.0	0.312	3.20	49.9	23.2	1.79	23.5	0.01	0.01	0.01	0.04	120	210
125 ISL	9.47 D	9.46	33.837 D	26.135	189.5	0.324	3.09	48.0	24.5	1.83	24.2	0.01	0.01	0.01	0.04	126	
139	9.20	9.18	33.900	26.228	180.9	0.350	2.87	44.3	27.4	1.92	25.5	0.01	0.01	0.00	0.04	140	209
150 ISL	9.06 D	9.04	33.934 D	26.277	176.4	0.369	2.76	42.5	29.0	1.97	26.1	0.01	0.01	0.00	0.04	151	
169	8.88	8.86	33.978	26.340	170.8	0.402	2.61	40.0	31.1	2.03	26.9	0.01	0.02	0.00	0.03	170	208
200 ISL	8.62 D	8.60	34.027 D	26.419	163.8	0.454	2.40	36.6	34.4	2.14	28.2	0.01	0.00	0.00	0.03	201	
201	8.61	8.59	34.029	26.422	163.5	0.456	2.39	36.4	34.5	2.14	28.3	0.01	0.00	0.00	0.03	202	207
229	8.27	8.25	34.090	26.523	154.4	0.500	1.96	29.7	40.1	2.32	30.3		0.00			230	206
250 ISL	8.08 D	8.05	34.123 D	26.577	149.5	0.532	1.66	25.0	43.2	2.43	31.4	0.01	0.00			251	
269	8.02	7.99	34.161	26.616	146.1	0.560	1.42	21.4	45.8	2.52	32.3	0.01	0.00			271	205
300 ISL	7.81 D	7.78	34.206 D	26.683	140.2	0.605	1.09	16.3	50.7	2.67	33.6	0.01	0.00			302	
318	7.59	7.56	34.223	26.728	136.1	0.629	0.94	14.0	53.6	2.75	34.2	0.01	0.00			320	204
377	7.08	7.04	34.260	26.830	127.1	0.707	0.65	9.6	61.6	2.91	36.0	0.01	0.00			379	203
400 ISL	6.97 D	6.93	34.266 D	26.850	125.5	0.736	0.56	8.2	64.4	2.96	36.6	0.01	0.00			403	
437	6.67	6.63	34.286	26.907	120.5	0.782	0.44	6.4	68.5	3.03	37.4	0.00	0.00			440	202
500 ISL	6.31 D	6.26	34.320 D	26.982	114.0	0.856	0.31	4.5	74.9	3.13	38.3	0.01	0.00			503	
512	6.28	6.23	34.324	26.989	113.4	0.869	0.29	4.2	76.1	3.15	38.5	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 0801 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 25.1 N	119 57.4 W	13/01/08	0630 UTC	906 m	320 20 kn			1019.1 mb	14.2 C	12.2 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	13.54	13.54	33.340	25.000	294.8	0.000	5.89	99.5	3.8	0.51	2.7	0.09	0.03	0.69	0.22	0	
2	13.54	13.54	33.340	25.000	294.9	0.006	5.89	99.5	3.8	0.51	2.7	0.09	0.03	0.69	0.22	2	221
10	13.35	13.35	33.357	25.051	290.2	0.029	5.96	100.3	4.7	0.57	3.6	0.11	0.02	0.87	0.25	10	220
16	13.02	13.02	33.371	25.128	283.0	0.046	6.01	100.4	5.4	0.62	4.3	0.12	0.04	1.03	0.31	16	219
20 ISL	12.89 D	12.89	33.376 D	25.158	280.3	0.058	6.01	100.2	5.9	0.64	4.9	0.14	0.06	1.07	0.33	20	
21	12.87	12.87	33.390	25.173	278.9	0.061	6.01	100.1	6.0	0.64	5.0	0.14	0.07	1.08	0.33	21	218
30 ISL	12.67 D	12.67	33.479 D	25.281	268.8	0.085	5.97	99.1	7.1	0.73	6.5	0.19	0.10	1.18	0.40	30	
31	12.66	12.66	33.482	25.285	268.5	0.088	5.97	99.1	7.2	0.74	6.7	0.20	0.10	1.19	0.41	31	217
41	12.35	12.34	33.538	25.389	258.9	0.114	5.72	94.3	8.5	0.87	8.6	0.26	0.13	0.73	0.38	41	216
50	11.32	11.31	33.425	25.493	249.0	0.137	4.52	72.9	11.5	1.25	14.8	0.02	0.00	0.08	0.08	50	215
61	11.12	11.11	33.459	25.556	243.3	0.164	4.39	70.5	12.6	1.29	15.8	0.02	0.00	0.06	0.07	61	214
71	10.96	10.95	33.502	25.618	237.6	0.188	4.20	67.2	14.0	1.40	17.0	0.02	0.00	0.05	0.06	71	213
75 ISL	10.75 D	10.74	33.545 D	25.689	231.0	0.198	4.09	65.2	14.9	1.45	17.8	0.02	0.00	0.04	0.05	75	
84	10.50	10.49	33.605	25.779	222.5	0.218	3.82	60.6	17.2	1.56	19.7	0.01	0.00	0.02	0.04	84	212
99	9.99	9.98	33.716	25.953	206.3	0.250	3.37	52.9	21.0	1.72	22.5	0.01	0.00	0.01	0.04	100	211
100 ISL	9.81 D	9.80	33.770 D	26.026	199.4	0.252	3.34	52.2	21.4	1.73	22.7	0.01	0.00	0.01	0.04	101	
119	9.19	9.18	33.899	26.228	180.5	0.288	3.01	46.4	26.9	1.88	25.1	0.01	0.00	0.01	0.03	120	210
125 ISL	9.16 D	9.15	33.904 D	26.237	179.7	0.299	3.01	46.4	27.0	1.88	25.1	0.01	0.00	0.01	0.03	126	
139	9.12	9.10	33.910	26.248	178.9	0.324	3.05	47.0	27.2	1.89	25.0	0.01	0.00	0.00	0.02	140	209
150 ISL	8.75 D	8.73	33.965 D	26.350	169.4	0.343	2.94	44.9	29.6	1.95	25.9	0.01	0.00	0.00	0.02	151	
170	8.41	8.39	34.033	26.456	159.7	0.376	2.60	39.5	35.1	2.11	28.0	0.01	0.00	0.01	0.03	171	208
199	8.29	8.27	34.106	26.532	153.0	0.422	1.96	29.7	40.4	2.33	30.2	0.01	0.00	0.01	0.02	200	207
200 ISL	8.29 D	8.27	34.108 D	26.533	152.8	0.423	1.95	29.5	40.5	2.33	30.2	0.01	0.00			201	
229	8.27	8.25	34.129	26.553	151.5	0.467	1.79	27.1	41.6	2.39	30.7	0.01	0.00			230	206
250 ISL	8.09 D	8.06	34.176 D	26.617	145.7	0.498	1.57	23.7	44.4	2.49	31.6	0.01	0.00			251	
269	7.95	7.92	34.174	26.637	144.2	0.526	1.36	20.4	47.4	2.58	32.6	0.01	0.00			271	205
300 ISL	7.44 D	7.41	34.173 D	26.710	137.4	0.570	1.19	17.7	51.3	2.68	33.7	0.01	0.03			302	
319	7.38	7.35	34.174	26.720	136.8	0.596	1.12	16.6	53.8	2.73	34.4	0.01	0.04			321	204
379	6.70	6.67	34.193	26.829	126.9	0.675	0.80	11.7	63.7	2.91	36.9	0.00	0.02			381	203
400 ISL	6.35 D	6.31	34.198 D	26.879	122.2	0.701	0.72	10.4	66.9	2.96	37.5	0.00	0.01			403	
438	6.21	6.17	34.219	26.914	119.3	0.747	0.59	8.5	72.4	3.04	38.5	0.00	0.00			441	202
500 ISL	5.82 D	5.78	34.267 D	27.002	111.5	0.818	0.39	5.6	80.9	3.15	39.8	0.00	0.00			503	
512	5.74	5.70	34.275	27.018	110.0	0.832	0.35	5.0	82.5	3.17	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 0801 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 4.9 N	120 38.2 W	12/01/08	2346 UTC	3872 m	330 25 kn	330 06 09	1	1019.1 mb	14.0 C	12.8 C	10m	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	13.58	13.58	33.405	25.042	290.8	0.000	5.98	101.1	3.4	0.49	2.3	0.11	0.03	0.85	0.27	0	
2	13.58	13.58	33.405	25.042	290.9	0.006	5.98	101.1	3.4	0.49	2.3	0.11	0.03	0.85	0.27	2	220
10	13.59	13.59	33.402	25.038	291.5	0.029	5.97	101.0	3.4	0.49	2.3	0.11	0.02	0.84	0.29	10	219
20	13.58	13.58	33.402	25.040	291.5	0.058	5.97	101.0	3.4	0.48	2.3	0.11	0.03	0.84	0.26	20	218
30	13.56	13.56	33.402	25.044	291.4	0.087	5.96	100.7	3.5	0.50	2.4	0.11	0.05	0.81	0.27	30	217
40	13.40	13.39	33.413	25.085	287.8	0.116	5.86	98.7	3.8	0.55	3.2	0.16	0.13	0.63	0.28	40	216
50	13.22	13.21	33.428	25.133	283.4	0.145	5.80	97.4	4.5	0.67	4.1	0.21	0.24	0.47	0.27	50	215
60	12.95	12.94	33.437	25.194	277.9	0.173	5.63	94.0	5.1	0.67	5.2	0.22	0.19	0.37	0.25	60	214
69	11.31	11.30	33.519	25.569	242.3	0.196	4.22	68.1	13.0	1.30	15.7	0.03	0.00	0.04	0.22	69	213
75 ISL	10.94 D	10.93	33.586 D	25.687	231.2	0.211	3.99	63.9	15.5	1.40	17.4	0.02	0.00	0.04	0.17	75	
85	10.58	10.57	33.640	25.793	221.3	0.233	3.62	57.5	17.8	1.58	20.2	0.01	0.00	0.04	0.09	85	212
100	9.89	9.88	33.742	25.990	202.8	0.265	3.22	50.4	22.2	1.77	23.1	0.01	0.00	0.01	0.07	100	211
118	9.61	9.60	33.816	26.095	193.2	0.301	2.93	45.6	24.6	1.88	24.6	0.01	0.00	0.01	0.06	119	210
125 ISL	9.32 D	9.31	33.860 D	26.177	185.5	0.314	2.83	43.8	26.0	1.92	25.2	0.01	0.00	0.01	0.06	126	
139	9.07	9.05	33.922	26.266	177.3	0.339	2.68	41.3	29.0	1.99	26.4	0.01	0.00	0.00	0.06	140	209
150 ISL	8.86 D	8.84	33.993 D	26.355	169.0	0.358	2.63	40.3	30.8	2.02	26.9	0.01	0.00	0.00	0.05	151	
171	8.53	8.51	34.019	26.426	162.5	0.393	2.57	39.1	33.7	2.07	27.7	0.01	0.00	0.01	0.04	172	208
200 ISL	8.29 D	8.27	34.051 D	26.489	157.1	0.440	2.38	36.0	37.0	2.16	29.0	0.01	0.00	0.00	0.03	201	
203	8.21	8.19	34.044	26.495	156.5	0.444	2.36	35.6	37.4	2.17	29.1	0.01	0.00	0.00	0.03	204	207
234	7.71	7.69	34.051	26.575	149.2	0.492	2.18	32.6	43.0	2.28	30.7	0.01	0.00			235	206
250 ISL	7.46 D	7.44	34.065 D	26.622	145.0	0.515	1.98	29.4	46.0	2.37	31.7	0.01	0.00			251	
275	7.25	7.22	34.088	26.670	140.7	0.551	1.63	24.1	50.4	2.52	33.3	0.01	0.00			277	205
300 ISL	7.15 D	7.12	34.129 D	26.716	136.7	0.586	1.32	19.5	54.3	2.64	34.4	0.00	0.00			302	
310	7.08	7.05	34.143	26.737	134.8	0.599	1.20	17.7	55.8	2.69	34.8	0.00	0.00			312	204
370	6.64	6.61	34.212	26.852	124.6	0.677	0.71	10.4	65.2	2.91	36.8	0.00	0.00			372	203
400 ISL	6.49 D	6.45	34.247 D	26.899	120.4	0.714	0.56	8.1	69.0	2.98	37.6	0.00	0.00			403	
440	6.23	6.19	34.266	26.948	116.1	0.761	0.43	6.2	73.7	3.06	38.4	0.00	0.01			443	202
500 ISL	5.83 D	5.79	34.301 D	27.027	109.1	0.829	0.31	4.4	80.8	3.15	39.3	0.00	0.00			503	
510	5.81	5.77	34.301	27.030	109.0	0.839	0.29	4.1	82.0	3.16	39.5	0.00	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 0801 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 45.1 N	121 19.0 W	12/01/08	1735 UTC	3481 m	360 20 kn	310 06 08	1	1022.3 mb	15.2 C	13.8 C	14m	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	13.11	13.11	33.428	25.154	280.1	0.000	6.02	100.8	4.9	0.58	4.5	0.13	0.00	1.09	0.39	0	
2 A	13.11	13.11	33.428	25.154	280.2	0.006	6.02	100.8	4.9	0.58	4.5	0.13	0.00	1.09	0.39	2	221
9 A	13.10	13.10	33.430	25.158	280.0	0.025	6.01	100.6	4.8	0.58	4.4	0.14	0.00	1.06	0.36	9	220
10 ISL	13.10 D	13.10	33.428 D	25.156	280.2	0.028	6.01	100.6	4.8	0.58	4.4	0.14	0.00	1.06	0.36	10	
20 ISL	13.09 D	13.09	33.428 D	25.158	280.2	0.056	6.01	100.6	4.7	0.58	4.4	0.14	0.01	1.05	0.38	20	
22 A	13.09	13.09	33.428	25.159	280.3	0.062	6.01	100.6	4.7	0.58	4.4	0.14	0.01	1.05	0.38	22	219
30 A	13.09	13.09	33.429	25.160	280.4	0.084	5.99	100.3	4.8	0.58	4.4	0.14	0.01	1.14	0.41	30	218
40 A	12.90	12.89	33.460	25.221	274.8	0.112	5.80	96.7	5.8	0.72	5.9	0.26	0.08	0.59	0.30	40	217
50	12.07	12.06	33.528	25.434	254.7	0.138	5.10	83.6	9.8	1.03	11.6	0.23	0.00	0.21	0.18	50	216
58 A	11.29	11.28	33.563	25.606	238.5	0.158	4.52	72.9	13.1	1.26	15.4	0.04	0.00	0.11	0.13	58	215
65	11.03	11.02	33.578	25.665	233.1	0.175	4.39	70.4	13.9	1.31	16.2	0.03	0.00	0.07	0.12	65	214
69	10.61	10.60	33.637	25.785	221.7	0.184	3.85	61.2	17.1	1.51	19.4	0.01	0.00	0.05	0.10	69	213
75 ISL	10.34 D	10.33	33.674 D	25.861	214.6	0.197	3.66	57.9	19.4	1.65	20.7	0.01	0.00	0.03	0.09	75	
84	10.02	10.01	33.714	25.946	206.6	0.216	3.37	52.9	21.2	1.75	22.6	0.01	0.00	0.02	0.08	84	212
100	9.54	9.53	33.913	26.182	184.5	0.247	2.59	40.3	27.4	2.01	25.8	0.00	0.00	0.01	0.06	101	211
119	9.19	9.18	33.958	26.274	176.1	0.281	2.49	38.4	29.8	2.07	26.9	0.00	0.00	0.00	0.05	120	210
125 ISL	9.02 D	9.01	33.969 D	26.310	172.8	0.292	2.47	38.0	30.6	2.08	27.2	0.00	0.00	0.00	0.05	126	
140	8.84	8.83	34.006	26.368	167.6	0.317	2.41	36.9	32.5	2.12	27.9	0.00	0.00	0.00	0.04	141	209
150 ISL	8.76 D	8.74	34.039 D	26.406	164.1	0.334	2.31	35.3	33.8	2.16	28.4	0.00	0.00	0.00	0.04	151	
169	8.64	8.62	34.070	26.449	160.3	0.365	2.07	31.6	36.4	2.25	29.3	0.00	0.00	0.00	0.04	170	208
199	8.31	8.29	34.123	26.542	152.0	0.411	1.68	25.4	41.5	2.43	31.1	0.00	0.00	0.00	0.03	200	207
200 ISL	8.31 D	8.29	34.127 D	26.545	151.7	0.413	1.67	25.3	41.7	2.43	31.2	0.00	0.00			201	
228	7.94	7.92	34.145	26.615	145.5	0.455	1.44	21.6	46.3	2.55	32.6	0.00	0.00			229	206
250 ISL	7.82 D	7.80	34.173 D	26.655	142.0	0.486	1.30	19.5	48.7	2.60	33.3	0.00	0.00			251	
268	7.62	7.59	34.164	26.677	140.1	0.512	1.22	18.2	50.7	2.64	33.8	0.00	0.00			270	205
300 ISL	6.81 D	6.78	34.101 D	26.740	134.1	0.555	1.22	17.8	56.7	2.72	35.3	0.00	0.00			302	
319	6.60	6.57	34.109	26.775	131.0	0.581	1.22	17.8	60.6	2.77	36.3	0.00	0.00			321	204
378	6.06	6.03	34.149	26.877	121.8	0.655	0.82	11.8	71.1	2.96	38.5	0.00	0.00			380	203
400 ISL	5.85 D	5.82	34.168 D	26.918	118.0	0.682	0.71	10.2	74.4	3.02	39.0	0.00	0.00			403	
440	5.66	5.62	34.190	26.960	114.5	0.728	0.56	8.0	79.9	3.11	39.7	0.00	0.00			443	202
500 ISL	5.40 D	5.36	34.248 D	27.037	107.6	0.795	0.39	5.5	87.3	3.19	40.7	0.00	0.00			503	
513	5.39	5.35	34.259	27.047	106.8	0.809	0.35	5.0	88.9	3.21	40.9	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 0801 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 59.1 W	12/01/08	0857 UTC	3587 m	320 24 kn			1020.8 mb	13.5 C	12.5 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	14.74	14.74	33.241	24.673	325.9	0.000	5.81	100.5	1.8	0.34	0.3	0.01	0.03	0.42	0.14	0	
2	14.74	14.74	33.241	24.673	326.0	0.007	5.81	100.5	1.8	0.34	0.3	0.01	0.03	0.42	0.14	2	221
9	14.74	14.74	33.241	24.673	326.2	0.029	5.82	100.7	1.8	0.32	0.3	0.01	0.01	0.41	0.14	9	220
10 ISL	14.72 D	14.72	33.240 D	24.677	325.9	0.033	5.82	100.6	1.8	0.32	0.3	0.01	0.01	0.41	0.15	10	
20	14.68	14.68	33.243	24.688	325.1	0.065	5.82	100.6	1.8	0.33	0.4	0.01	0.01	0.41	0.19	20	219
30	14.52	14.52	33.222	24.706	323.6	0.098	5.82	100.2	1.9	0.36	0.6	0.02	0.01	0.44	0.15	30	218
40	14.35	14.34	33.209	24.732	321.4	0.130	5.84	100.2	2.0	0.37	0.7	0.02	0.02	0.47	0.17	40	217
49	13.67	13.66	33.172	24.845	310.9	0.158	5.82	98.5	2.6	0.44	1.8	0.04	0.04	0.46	0.17	49	216
50 ISL	13.68 D	13.67	33.176 D	24.846	310.9	0.161	5.83	98.6	2.6	0.44	1.8	0.04	0.04	0.47	0.17	50	
60	13.45	13.44	33.206	24.916	304.4	0.192	5.93	99.9	2.9	0.46	2.0	0.07	0.11	0.52	0.21	60	215
70	13.17	13.16	33.304	25.048	292.1	0.222	5.88	98.5	3.8	0.53	3.3	0.14	0.22	0.38	0.22	70	214
75 ISL	13.10 D	13.09	33.346 D	25.095	287.8	0.236	5.79	96.9	4.3	0.58	4.3	0.15	0.18	0.31	0.20	75	
85	12.59	12.58	33.321	25.175	280.3	0.265	5.52	91.4	5.5	0.71	6.6	0.16	0.04	0.18	0.14	85	213
99	11.68	11.67	33.288	25.322	266.6	0.303	5.06	82.1	7.9	0.95	10.6	0.01	0.00	0.09	0.10	99	212
100 ISL	11.64 D	11.63	33.347 D	25.375	261.5	0.306	5.01	81.3	8.2	0.97	11.0	0.01	0.00	0.08	0.10	100	
119	10.55	10.54	33.523	25.708	230.2	0.353	4.15	65.8	15.4	1.41	18.3	0.00	0.00	0.02	0.03	120	211
125 ISL	10.34 D	10.33	33.580 D	25.788	222.6	0.366	3.94	62.2	17.1	1.50	19.7	0.00	0.00	0.02	0.03	126	
139	9.85	9.83	33.700	25.965	206.0	0.396	3.56	55.7	20.4	1.64	22.1	0.00	0.00	0.01	0.02	140	210
150 ISL	9.41 D	9.39	33.794 D	26.111	192.2	0.418	3.34	51.8	22.8	1.72	23.5	0.00	0.00	0.01	0.02	151	
169	9.12	9.10	33.877	26.223	181.9	0.454	3.09	47.6	26.3	1.82	25.2	0.00	0.00	0.00	0.02	170	208
198	8.90	8.88	33.968	26.329	172.3	0.505	2.87	44.0	29.4	1.91	26.2	0.00	0.00	0.00	0.02	199	207
200 ISL	8.89 D	8.87	33.972 D	26.334	171.9	0.508	2.87	44.0	29.7	1.91	26.3	0.00	0.00			201	
228	8.30	8.28	34.010	26.455	160.7	0.555	2.92	44.2	34.1	1.96	27.5	0.00	0.00			229	206
250 ISL	7.87 D	7.85	34.050 D	26.551	151.9	0.589	2.54	38.1	39.2	2.12	29.6	0.00	0.00			251	
269	7.60	7.57	34.053	26.593	148.1	0.618	2.14	31.9	44.0	2.29	31.6	0.00	0.00			271	205
300 ISL	7.10 D	7.07	34.066 D	26.673	140.6	0.663	1.77	26.1	50.9	2.47	33.7	0.00	0.00			302	
318	6.86	6.83	34.072	26.711	137.2	0.688	1.60	23.4	54.6	2.56	34.6	0.00	0.00			320	204
376	6.42	6.39	34.133	26.818	127.6	0.764	1.00	14.5	63.7	2.81	37.2	0.00	0.00			378	203
400 ISL	6.23 D	6.19	34.152 D	26.858	124.0	0.795	0.85	12.3	68.1	2.89	38.1	0.00	0.00			402	
436	5.89	5.85	34.170	26.916	118.8	0.838	0.67	9.6	74.5	2.99	39.1	0.00	0.00			439	202
500 ISL	5.59 D	5.55	34.241 D	27.009	110.5	0.912	0.39	5.5	82.8	3.12	40.1	0.00	0.00			503	
511	5.58	5.54	34.268	27.032	108.5	0.924	0.34	4.8	84.2	3.14	40.3	0.00	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 0801 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 4.9 N	122 39.4 W	12/01/08	0211 UTC	4195 m	350 17 kn			1020.6 mb	14.1 C	13.9 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	14.98	14.98	33.252	24.630	330.0	0.000	5.87	102.1	1.7	0.28	0.1	0.00	0.02	0.30	0.10	0	
2	14.98	14.98	33.252	24.630	330.1	0.007	5.87	102.1	1.7	0.28	0.1	0.00	0.02	0.30	0.10	2	220
10	14.98	14.98	33.252	24.630	330.3	0.033	5.87	102.1	1.7	0.27	0.1	0.00	0.00	0.30	0.09	10	219
20	14.97	14.97	33.252	24.633	330.4	0.066	5.87	102.0	1.7	0.28	0.1	0.00	0.01	0.31	0.10	20	218
30	14.83	14.83	33.269	24.676	326.5	0.099	5.84	101.2	1.7	0.30	0.3	0.02	0.04	0.41	0.15	30	217
39	14.85	14.84	33.291	24.689	325.5	0.128	5.83	101.1	1.6	0.31	0.4	0.02	0.08	0.43	0.19	39	216
50	14.64	14.63	33.260	24.710	323.8	0.164	5.79	100.0	1.8	0.35	0.7	0.06	0.14	0.30	0.14	50	215
60	14.37	14.36	33.249	24.759	319.4	0.196	5.74	98.5	2.1	0.38	1.3	0.10	0.12	0.23	0.13	60	214
70	13.82	13.81	33.240	24.867	309.4	0.228	5.69	96.6	2.8	0.44	2.5	0.15	0.04	0.19	0.12	70	213
75 ISL	13.01 D	13.00	33.144 D	24.956	300.9	0.243	5.64	94.1	3.3	0.50	3.6	0.11	0.02	0.15	0.11	75	
85	12.46	12.45	33.164	25.079	289.5	0.272	5.51	90.9	4.5	0.64	5.8	0.02	0.00	0.07	0.08	85	212
100	12.30	12.29	33.341	25.247	273.8	0.315	5.27	86.7	5.9	0.76	8.0	0.01	0.01	0.04	0.05	100	211
119	11.13	11.12	33.464	25.559	244.4	0.364	4.61	74.0	11.4	1.14	14.0	0.01	0.00	0.03	0.05	120	210
125 ISL	10.80 D	10.78	33.520 D	25.662	234.7	0.378	4.35	69.4	13.6	1.27	16.1	0.01	0.00	0.02	0.04	126	
140	10.08	10.06	33.655	25.891	213.1	0.412	3.76	59.1	18.9	1.54	20.6	0.00	0.00	0.01	0.03	141	209
150 ISL	9.74 D	9.72	33.746 D	26.019	201.0	0.432	3.78	59.0	20.5	1.54	20.8	0.00	0.00	0.01	0.03	151	
169	9.54	9.52	33.813 D	26.105	193.3	0.470										170	208
199	9.06	9.04	33.963	26.300	175.2	0.525	3.85	59.3	24.1	1.54	21.8	0.00	0.01	0.00	0.02	200	207
200 ISL	9.06 D	9.04	33.958 D	26.296	175.6	0.527	3.85	59.3	24.2	1.54	21.8	0.00	0.01			201	
229	8.61	8.59	33.989	26.392	166.9	0.577	3.74	57.0	28.0	1.64	23.3	0.00	0.02			230	206
250 ISL	8.23 D	8.20	33.999 D	26.458	160.9	0.611	3.44	52.0	33.0	1.79	25.4	0.00	0.01			251	
268	7.78	7.75	34.004	26.528	154.3	0.639	3.12	46.7	37.8	1.94	27.4	0.00	0.00			269	205
300 ISL	7.13 D	7.10	34.003 D	26.620	145.7	0.687	2.58	38.0	44.5	2.17	30.3	0.00	0.00			302	
318	7.08	7.05	34.016	26.637	144.4	0.714	2.30	33.8	48.0	2.29	31.8	0.00	0.00			320	204
378	6.42	6.39	34.058	26.759	133.2	0.797	1.60	23.2	59.5	2.61	35.3	0.00	0.00			380	203
400 ISL	6.25 D	6.21	34.094 D	26.810	128.6	0.826	1.32	19.1	62.9	2.73	36.3	0.00	0.00			402	
438	6.17	6.13	34.148	26.863	124.1	0.874	0.88	12.7	68.4	2.92	37.8	0.00	0.00			441	202
500 ISL	5.90 D	5.86	34.219 D	26.954	116.1	0.948	0.50	7.2	77.0	3.09	39.1	0.00	0.06			503	
517	5.84	5.80	34.247	26.984	113.4	0.968	0.39	5.6	79.3	3.14	39.4	0.00	0.08			520	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0801 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 44.9 N	123 20.1 W	11/01/08	1909 UTC	2482 m	070 17 kn	330 05 08	4	1023.5 mb	15.2 C	14.7 C	18m	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	14.74	14.74	33.237	24.670	326.2	0.000	5.93	102.6	1.7	0.33	0.0	0.00	0.01	0.38	0.12	0	
2 A	14.74	14.74	33.237	24.670	326.3	0.007	5.93	102.6	1.7	0.33	0.0	0.00	0.01	0.38	0.12	2	221
10 ISL	14.73 D	14.73	33.238 D	24.673	326.2	0.033	5.91	102.2	1.6	0.54	0.0	0.00	0.18	0.39	0.12	10	
11 A	14.73	14.73	33.237	24.672	326.3	0.036	5.91	102.2	1.6	0.56	0.0	0.00	0.20	0.39	0.12	11	220
19	14.71	14.71	33.238	24.677	326.0	0.062	5.92	102.4	1.7	0.38	0.0	0.00	0.01	0.40	0.13	19	219
20 ISL	14.71 D	14.71	33.238 D	24.678	326.1	0.065	5.92	102.3	1.7	0.38	0.0	0.00	0.01	0.41	0.13	20	
27 A	14.56	14.56	33.222	24.697	324.4	0.088	5.93	102.2	1.6	0.39	0.0	0.00	0.03	0.48	0.16	27	218
30 ISL	14.59 D	14.59	33.234 D	24.700	324.2	0.098	5.93	102.3	1.6	0.38	0.0	0.00	0.03	0.47	0.17	30	
38 A	14.59	14.58	33.238	24.704	324.1	0.124	5.91	101.9	1.6	0.37	0.1	0.01	0.03	0.46	0.18	38	217
44	14.53	14.52	33.234	24.714	323.3	0.143	5.89	101.4	1.6	0.41	0.2	0.02	0.05	0.44	0.19	44	216
50 ISL	14.42 D	14.41	33.224 D	24.729	322.0	0.162	5.86	100.7	1.6	0.39	0.3	0.04	0.13	0.36	0.17	50	
51 A	14.41	14.40	33.224	24.731	321.8	0.166	5.85	100.5	1.6	0.39	0.4	0.04	0.14	0.34	0.16	51	215
62	13.87	13.86	33.216	24.838	312.0	0.201	5.70	96.8	2.6	0.41	2.0	0.12	0.13	0.21	0.12	62	214
73 A	12.37	12.36	33.341	25.233	274.5	0.233	4.90	80.7	7.7	0.91	10.7	0.04	0.01	0.16	0.15	73	213
75 ISL	11.48 D	11.47	33.398 D	25.444	254.4	0.238	4.78	77.3	8.6	0.97	11.8	0.03	0.01	0.15	0.14	75	
88	11.25	11.24	33.495	25.561	243.5	0.270	4.27	68.8	13.0	1.24	16.3	0.01	0.00	0.08	0.08	88	212
100	10.65	10.64	33.536	25.700	230.5	0.299	4.17	66.3	14.9	1.32	17.7	0.00	0.01	0.02	0.03	100	211
120	10.15	10.14	33.671	25.892	212.6	0.343	3.63	57.1	19.1	1.54	21.2	0.00	0.00	0.02	0.04	121	210
125 ISL	9.97 D	9.96	33.695 D	25.941	208.0	0.354	3.54	55.5	20.0	1.58	21.8	0.00	0.00	0.02	0.04	126	
138	9.60	9.58	33.766	26.058	197.1	0.380	3.35	52.1	22.4	1.68	23.2	0.00	0.02	0.01	0.03	139	209
150 ISL	9.22 D	9.20	33.878 D	26.207	183.1	0.403	2.99	46.2	25.2	1.81	24.8	0.00	0.02	0.01	0.03	151	
170	8.91	8.89	33.973 D	26.331	171.6	0.438										171	208
198	8.56	8.54	34.047	26.444	161.3	0.485	2.19	33.3	35.7	2.11	29.2	0.00	0.01	0.00	0.02	199	207
200 ISL	8.41 D	8.39	34.038 D	26.460	159.8	0.488	2.24	34.0	35.9	2.10	29.1	0.00	0.01			201	
229	7.66	7.64	34.004	26.545	152.0	0.533	2.96	44.1	39.4	1.97	28.4	0.00	0.00			230	206
250 ISL	7.37 D	7.35	34.015 D	26.595	147.4	0.565	2.81	41.6	43.1	2.07	29.7	0.00	0.00			251	
270	7.05	7.02	34.005	26.632	144.1	0.594	2.44	35.9	47.2	2.23	31.6	0.00	0.00			272	205
300 ISL	6.57 D	6.54	34.026 D	26.713	136.5	0.636	2.04	29.7	54.2	2.41	33.9	0.00	0.00			302	
318	6.41	6.38	34.033	26.740	134.1	0.660	1.78	25.8	58.2	2.52	35.1	0.00	0.00			320	204
378	6.57	6.54	34.213	26.862	123.7	0.738	0.69	10.0	66.4	2.90	37.5	0.00	0.00			380	203
400 ISL	6.23 D	6.19	34.192 D	26.890	121.1	0.765	0.63	9.1	68.4	2.95	37.9	0.00	0.00			402	
437	6.22	6.18	34.231	26.922	118.5	0.809	0.53	7.7	71.9	3.00	38.5	0.00	0.00			440	202
500 ISL	5.58 D	5.54	34.240 D	27.009	110.5	0.881	0.52	7.4	82.4	3.08	40.2	0.00	0.00			503	
512	5.51	5.47	34.244	27.021	109.4	0.894	0.52	7.4	84.4	3.10	40.5	0.00	0.00			515	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 0801 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 24.8 N	124 0.1 W	11/01/08	1208 UTC	4195 m	040 13 kn			1022.4 mb	14.3 C	13.5 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	14.25	14.25	33.161	24.715	321.9	0.000	5.96	102.0	2.1	0.35	0.2	0.01	0.01	0.51	0.15	0	
2	14.25	14.25	33.161	24.715	322.0	0.006	5.96	102.0	2.1	0.35	0.2	0.01	0.01	0.51	0.15	2	220
10	14.25	14.25	33.160	24.714	322.2	0.032	5.96	102.0	2.1	0.34	0.1	0.01	0.01	0.52	0.13	10	219
20	14.25	14.25	33.161	24.715	322.4	0.064	5.96	102.0	2.0	0.35	0.1	0.01	0.01	0.51	0.14	20	218
30	14.25	14.25	33.161	24.716	322.7	0.097	5.97	102.2	2.1	0.34	0.1	0.01	0.01	0.47	0.14	30	217
41	14.20	14.19	33.162	24.727	321.9	0.132	5.93	101.4	2.0	0.35	0.3	0.03	0.05	0.45	0.14	41	216
50	14.05	14.04	33.169	24.764	318.7	0.161	5.88	100.2	2.1	0.41	0.7	0.06	0.12	0.33	0.12	50	215
60	13.86	13.85	33.169	24.804	315.1	0.193	5.87	99.7	2.4	0.42	1.1	0.09	0.13	0.28	0.13	60	214
70	13.32	13.31	33.130	24.883	307.8	0.224	5.81	97.5	2.9	0.49	2.2	0.17	0.09	0.21	0.12	70	213
75 ISL	13.15 D	13.14	33.127 D	24.915	304.9	0.239	5.76	96.4	3.2	0.54	2.9	0.16	0.06	0.18	0.12	75	
85	12.39	12.38	33.102	25.044	292.8	0.269	5.61	92.3	4.1	0.64	4.7	0.09	0.00	0.13	0.11	85	212
100	11.69	11.68	33.233	25.277	270.8	0.311	5.25	85.2	6.5	0.82	8.4	0.02	0.02	0.09	0.06	100	211
119	10.73	10.72	33.476	25.640	236.7	0.359	4.50	71.6	12.7	1.21	14.9	0.01	0.00	0.03	0.04	120	210
125 ISL	10.52 D	10.51	33.512 D	25.704	230.6	0.374	4.32	68.5	14.2	1.29	16.3	0.01	0.00	0.02	0.04	126	
140	10.15	10.13	33.678	25.897	212.5	0.407	3.92	61.7	17.7	1.47	19.3	0.01	0.00	0.01	0.03	141	209
150 ISL	9.89 D	9.87	33.729 D	25.981	204.7	0.428	3.59	56.2	20.7	1.61	21.4	0.01	0.00	0.00	0.03	151	
169	9.23	9.21	33.867	26.198	184.4	0.465	3.05	47.1	26.3	1.85	24.9	0.00	0.00	0.00	0.03	170	208
199	8.57	8.55	33.978	26.389	166.6	0.517	2.72	41.4	32.4	2.00	27.3	0.00	0.00	0.00	0.02	200	207
200 ISL	8.52 D	8.50	33.994 D	26.409	164.7	0.519	2.71	41.2	32.6	2.01	27.4	0.00	0.00			201	
229	8.10	8.08	34.041	26.510	155.5	0.565	2.29	34.5	39.0	2.20	29.8	0.00	0.00			230	206
250 ISL	7.71 D	7.69	34.061 D	26.583	148.8	0.597	2.07	30.9	43.3	2.30	31.1	0.00	0.00			251	
270	7.53	7.50	34.068	26.614	146.0	0.627	1.91	28.4	47.0	2.38	32.2	0.00	0.00			271	205
300 ISL	7.24 D	7.21	34.082 D	26.667	141.4	0.670	1.72	25.4	51.6	2.49	33.6	0.00	0.00			302	
319	6.95	6.92	34.080	26.705	137.9	0.696	1.59	23.3	54.4	2.56	34.4	0.00	0.00			321	204
380	6.55	6.52	34.155	26.819	127.8	0.777	0.91	13.2	64.8	2.85	37.1	0.00	0.00			382	203
400 ISL	6.40 D	6.36	34.162 D	26.844	125.5	0.803	0.82	11.9	67.6	2.91	37.7	0.00	0.00			402	
436	6.04	6.00	34.166	26.894	121.0	0.847	0.74	10.6	72.5	2.98	38.6	0.00	0.00			439	202
500 ISL	5.61 D	5.57	34.198 D	26.973	114.0	0.922	0.57	8.1	82.7	3.07	40.0	0.00	0.01			503	
511	5.50	5.46	34.187	26.977	113.5	0.935	0.54	7.7	84.4	3.09	40.2	0.00	0.01			514	201

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

RV DAVID STARR JORDAN — CALCOFI CRUISE 0801 — 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 57.3 N	117 18.3 W	07/01/08	2012 UTC	67 m	070 06 kn	230 03 04	1	1015.3 mb	14.5 C	12.8 C	11m	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	13.20	13.20	33.464	25.164	279.2	0.000	5.70	95.7	7.0	0.72	5.3	0.19	0.44	1.95	0.64	0	
1 A	13.20	13.20	33.464	25.164	279.2	0.003	5.70	95.7	7.0	0.72	5.3	0.19	0.44	1.95	0.64	1	209
7 A	13.06	13.06	33.470	25.197	276.2	0.019	5.61	93.9	7.4	0.75	5.7	0.20	0.53	1.62	0.74	7	208
10 ISL	13.03 D	13.03	33.471 D	25.203	275.7	0.028	5.59	93.5	7.4	0.75	5.7	0.20	0.56	1.48	0.73	10	
16 A	13.02	13.02	33.472	25.206	275.6	0.044	5.56	93.0	7.5	0.76	5.8	0.20	0.60	1.31	0.71	16	207
20 ISL	13.01 D	13.01	33.471 D	25.208	275.6	0.055	5.55	92.8	7.6	0.76	5.9	0.21	0.59	1.31	0.72	20	
23 A	13.01	13.01	33.475	25.211	275.3	0.064	5.54	92.6	7.6	0.76	6.0	0.21	0.58	1.31	0.73	23	206
30 ISL	13.02 D	13.02	33.471 D	25.206	276.0	0.083	5.55	92.8	7.7	0.78	5.9	0.21	0.59	1.38	0.76	30	
31 A	13.01	13.01	33.471	25.208	275.8	0.086	5.55	92.8	7.7	0.78	5.9	0.21	0.59	1.38	0.76	31	205
38	13.01	13.00	33.471	25.208	276.0	0.105	5.53	92.4	7.6	0.76	5.9	0.21	0.58	1.21	0.72	38	204
45 A	13.00	12.99	33.472	25.211	275.9	0.124	5.51	92.1	7.7	0.77	5.9	0.21	0.64	1.10	0.73	45	203
50 ISL	13.00 D	12.99	33.473 D	25.212	276.0	0.138	5.51	92.1	7.7	0.78	5.9	0.21	0.70	1.15	0.78	50	
55	12.99	12.98	33.474	25.215	275.8	0.152	5.51	92.1	7.7	0.78	6.0	0.21	0.73	1.19	0.81	55	202
61	12.96	12.95	33.474	25.221	275.4	0.168	5.49	91.7	7.8	0.78	6.1	0.22	0.70	1.09	0.75	61	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 0801 — 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 55.2 N	117 23.5 W	08/01/08	0635 UTC	28 m	130 06 kn			1020.5 mb	14.1 C	12.4 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	13.31	13.31	33.491	25.163	279.3	0.000	5.58	93.9	7.1	0.73	5.6	0.20	0.07	1.30	0.62	0	
2	13.31	13.31	33.491	25.163	279.3	0.006	5.58	93.9	7.1	0.73	5.6	0.20	0.07	1.30	0.62	2	220
10 ISL	13.31 D	13.31	33.491 D	25.163	279.5	0.028	5.60	94.2	7.2	0.73	5.6	0.20	0.03	1.34	0.63	10	
11	13.30	13.30	33.490	25.164	279.4	0.031	5.60	94.2	7.2	0.73	5.6	0.20	0.03	1.35	0.63	11	219
20 ISL	13.15 D	13.15	33.502 D	25.204	275.9	0.056	5.49	92.1	7.6	0.76	6.0	0.23	0.10	1.34	0.83	20	
21	13.15	13.15	33.500	25.202	276.1	0.058	5.47	91.7	7.7	0.77	6.0	0.23	0.11	1.34	0.84	21	218
30 ISL	12.82 D	12.82	33.519 D	25.283	268.7	0.083	5.19	86.4	8.2	0.86	7.5	0.30	0.28	0.87	0.57	30	
31	12.81	12.81	33.520	25.285	268.4	0.086	5.14	85.6	8.3	0.88	7.8	0.31	0.29	0.81	0.53	31	217
41	12.43	12.42	33.570	25.398	258.0	0.112	4.38	72.4	11.0	1.14	11.6	0.35	0.13	0.53	0.44	41	216
50	11.97	11.96	33.681	25.572	241.6	0.134	3.12	51.1	16.6	1.55	17.1	0.07	0.04	0.16	0.14	50	215
61	11.76	11.75	33.754	25.668	232.7	0.161	2.50	40.8	20.8	1.78	19.4	0.02	0.06	0.09	0.14	61	214
71	11.51	11.50	33.779	25.734	226.7	0.184	2.43	39.4	21.9	1.82	20.3	0.02	0.01	0.05	0.10	71	213
75 ISL	11.37 D	11.36	33.812 D	25.786	221.9	0.193	2.38	38.5	22.4	1.85	20.7	0.02	0.01	0.04	0.10	75	
86	11.13	11.12	33.821	25.836	217.3	0.217	2.26	36.4	23.9	1.94	21.8	0.03	0.00	0.03	0.11	86	212
100	10.89	10.88	33.869	25.917	209.9	0.247	2.20	35.2	25.5	1.98	22.5	0.04	0.03	0.02	0.07	101	211
120	10.88	10.87	33.945	25.979	204.6	0.288	1.91	30.6	27.1	2.09	23.7	0.02	0.00	0.02	0.07	121	210
125 ISL	10.84 D	10.82	33.969 D	26.004	202.2	0.298	1.91	30.6	27.3	2.09	23.9	0.02	0.01	0.02	0.07	126	
140	10.60	10.58	33.996	26.068	196.5	0.328	1.90	30.3	27.8	2.10	24.5	0.02	0.03	0.02	0.07	141	209
150 ISL	10.43 D	10.41	33.999 D	26.100	193.6	0.348	1.88	29.8	28.1	2.12	24.9	0.02	0.03	0.02	0.07	151	
170	10.27	10.25	34.082	26.193	185.3	0.386	1.83	29.0	29.3	2.18	25.8	0.03	0.04	0.01	0.06	171	208
199	9.93	9.91	34.204	26.346	171.2	0.437	1.53	24.0	33.0	2.31	27.4	0.01	0.01	0.02	0.06	200	207
200 ISL	9.90 D	9.88	34.209 D	26.355	170.4	0.439	1.52	23.9	33.1	2.31	27.4	0.01	0.01			201	
229	9.48	9.45	34.254	26.461	160.8	0.487	1.37	21.3	37.1	2.40	28.6	0.00	0.00			230	206
250 ISL	9.28 D	9.25	34.292 D	26.524	155.3	0.520	1.25	19.4	39.4	2.46	29.3	0.00	0.00			251	
269	9.01	8.98	34.279	26.557	152.3	0.549	1.16	17.9	41.5	2.52	30.0	0.00				271	205
300 ISL	8.50 D	8.47	34.265 D	26.626	146.1	0.596	1.06	16.1	45.6	2.61	31.3	0.00	0.00			302	
319	8.25	8.22	34.263	26.663	142.8	0.623	1.01	15.3	48.0	2.66	32.0	0.00	0.00			321	204
377	7.90	7.86	34.267	26.719	138.3	0.705	0.88	13.2	52.1	2.71	33.2	0.00	0.02			379	203
400 ISL	7.49 D	7.45	34.260 D	26.773	133.3	0.736	0.82	12.2	55.2	2.79	34.1	0.00	0.02			403	
436	7.11	7.07	34.251	26.820	129.1	0.783	0.70	10.3	60.9	2.92	35.6	0.00	0.01			439	202
500 ISL	6.44 D	6.39	34.302 D	26.950	117.1	0.862	0.39	5.7	71.7	3.08	37.6	0.00	0.00			503	
511	6.39	6.34	34.308	26.962	116.1	0.875	0.34	4.9	73.5	3.11	38.0	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 0801 — 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 50.8 N	117 31.7 W	08/01/08	1005 UTC	850 m	100 05 kn			1020.9 mb	13.5 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	13.66	13.66	33.461	25.069	288.2	0.000	5.85	99.1	4.1	0.46	2.2	0.10	0.15	0.87	0.30	0	
2	13.66	13.66	33.461	25.069	288.3	0.006	5.85	99.1	4.1	0.46	2.2	0.10	0.15	0.87	0.30	2	220
10	13.68	13.68	33.460	25.064	289.0	0.029	5.84	99.0	4.1	0.46	2.3	0.10	0.16	0.88	0.29	10	219
20	13.56	13.56	33.458	25.087	287.0	0.058	5.70	96.4	4.7	0.52	3.3	0.12	0.23	0.89	0.31	20	218
30	13.00	13.00	33.448	25.192	277.3	0.086	5.19	86.7	6.4	0.75	7.0	0.11	0.10	0.52	0.21	30	217
39	12.05	12.04	33.478	25.399	257.8	0.110	4.35	71.3	10.3	1.15	13.3	0.03	0.08	0.25	0.19	39	216
49	11.70	11.69	33.552	25.522	246.3	0.135	3.94	64.1	13.3	1.31	15.7	0.06	0.03	0.32	0.24	49	215
50 ISL	11.53 D	11.52	33.566 D	25.565	242.3	0.138	3.90	63.2	13.6	1.33	16.0	0.06	0.03	0.31	0.23	50	
60	11.25	11.24	33.624	25.661	233.4	0.161	3.49	56.3	16.2	1.49	18.4	0.02	0.06	0.16	0.14	60	214
69	11.10	11.09	33.683	25.734	226.6	0.182	3.21	51.6	18.3	1.60	19.5	0.01	0.05	0.08	0.09	69	213
75 ISL	11.03 D	11.02	33.731 D	25.784	222.0	0.196	3.01	48.3	19.7	1.67	20.3	0.01	0.05	0.05	0.09	75	
85	10.93	10.92	33.783	25.843	216.6	0.217	2.70	43.3	21.9	1.78	21.4	0.01	0.04	0.02	0.09	85	212
99	10.79	10.78	33.864	25.931	208.6	0.247	2.39	38.2	24.2	1.92	22.5	0.01	0.02	0.02	0.08	100	211
100 ISL	10.76 D	10.75	33.873 D	25.943	207.4	0.249	2.37	37.9	24.4	1.93	22.6	0.01	0.02	0.02	0.08	101	
120	10.68	10.67	33.935	26.006	201.9	0.290	2.06	32.9	26.9	2.04	23.9	0.01	0.01	0.01	0.07	121	210
125 ISL	10.43 D	10.42	33.946 D	26.058	197.0	0.300	2.05	32.5	27.2	2.05	24.2	0.01	0.01	0.01	0.06	126	
140	10.31	10.29	34.010	26.129	190.6	0.329	2.04	32.3	28.1	2.09	25.0	0.01	0.01	0.01	0.05	141	209
150 ISL	10.26 D	10.24	34.055 D	26.173	186.7	0.348	1.89	29.9	29.3	2.15	25.7	0.01	0.02	0.01	0.05	151	
169	10.15	10.13	34.142	26.260	178.8	0.383	1.62	25.6	31.4	2.25	26.7	0.01	0.03	0.01	0.05	170	208
199	9.77	9.75	34.159	26.338	171.9	0.435	1.84	28.8	32.3	2.22	27.0	0.02	0.05	0.02	0.05	200	207
200 ISL	9.62 D	9.60	34.141 D	26.349	170.9	0.437	1.84	28.7	32.4	2.22	27.0	0.02	0.05			201	
231	9.11	9.08	34.128	26.422	164.4	0.489	1.95	30.1	34.9	2.22	28.2	0.01	0.01			232	206
250 ISL	8.84 D	8.81	34.164 D	26.493	157.9	0.520	1.80	27.6	37.8	2.30	29.2	0.00	0.01			251	
269	8.64	8.61	34.180	26.537	154.0	0.549	1.59	24.3	40.9	2.39	30.2	0.00	0.02			271	205
300 ISL	8.53 D	8.50	34.248 D	26.608	147.8	0.596	1.31	20.0	44.4	2.51	31.2	0.00	0.01			302	
319	8.36	8.33	34.239	26.627	146.2	0.624	1.17	17.8	46.3	2.57	31.7	0.00	0.00			321	204
380	7.66	7.62	34.237	26.730	137.1	0.711	0.92	13.7	54.0	2.74	34.0	0.00	0.02			382	203
400 ISL	7.35 D	7.31	34.244 D	26.780	132.5	0.737	0.83	12.3	57.2	2.80	34.8	0.00	0.03			403	
439	6.94	6.90	34.249	26.841	126.9	0.788	0.66	9.7	63.6	2.91	36.3	0.00	0.04			442	202
500 ISL	6.33 D	6.28	34.262 D	26.933	118.5	0.863	0.48	6.9	72.8	3.05	38.1	0.00	0.01			503	
512	6.28	6.23	34.274	26.949	117.1	0.877	0.44	6.4	74.6	3.08	38.4	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 0801 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 40.7 N	117 52.2 W	08/01/08	1447 UTC	619 m	220 07 kn	240 04 06	1	1022.0 mb	13.2 C	11.0 C		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	13.66	13.66	33.509	25.106	284.7	0.000	5.68	96.3	4.3	0.56	3.1	0.21	0.10	1.10	0.62	0	
1	13.66	13.66	33.509	25.106	284.7	0.003	5.68	96.3	4.3	0.56	3.1	0.21	0.10	1.10	0.62	1	220
10	13.68	13.68	33.501	25.096	285.9	0.029	5.68	96.3	4.3	0.56	3.0	0.21	0.08	1.13	0.52	10	219
20	13.67	13.67	33.501	25.098	286.0	0.057	5.68	96.3	4.3	0.56	3.1	0.21	0.07	1.10	0.56	20	218
29	13.42	13.42	33.527	25.169	279.5	0.083	5.25	88.6	5.9	0.73	5.4	0.25	0.16	0.74	0.45	29	217
30 ISL	13.30 D	13.30	33.533 D	25.198	276.7	0.085	5.23	88.0	6.0	0.74	5.5	0.27	0.22	0.72	0.45	30	
40	12.71	12.70	33.536	25.318	265.6	0.112	5.08	84.4	8.1	0.91	8.0	0.34	0.61	0.59	0.43	40	216
50	12.27	12.26	33.625	25.472	251.2	0.138	3.75	61.8	13.6	1.32	14.4	0.09	0.01	0.29	0.25	50	215
60	11.79	11.78	33.647	25.580	241.1	0.163	3.50	57.1	14.0	1.42	16.6	0.03	0.00	0.11	0.14	60	214
69	11.04	11.03	33.711	25.767	223.5	0.184	3.23	51.9	17.2	1.58	19.3	0.02	0.00	0.05	0.11	69	213
75 ISL	10.87 D	10.86	33.745 D	25.823	218.2	0.197	3.10	49.6	18.6	1.65	20.2	0.02	0.00	0.04	0.11	75	
85	10.67	10.66	33.794	25.897	211.4	0.219	2.92	46.5	20.5	1.74	21.1	0.01	0.00	0.03	0.11	85	212
100	10.30	10.29	33.884	26.032	198.9	0.249	2.71	42.9	23.3	1.86	22.9	0.01	0.00	0.02	0.09	101	211
120	9.98	9.97	33.956	26.143	188.8	0.288	2.60	40.8	25.4	1.92	24.1	0.01	0.00	0.01	0.08	121	210
125 ISL	9.85 D	9.84	33.995 D	26.195	183.9	0.297	2.55	40.0	26.1	1.94	24.4	0.01	0.00	0.01	0.07	126	
139	9.75	9.73	34.038	26.246	179.4	0.323	2.39	37.4	28.3	1.98	25.3	0.01	0.00	0.01	0.06	140	209
150 ISL	9.55 D	9.53	34.066 D	26.301	174.3	0.342	2.33	36.3	29.7	2.01	25.9	0.01	0.00	0.01	0.06	151	
169	9.37	9.35	34.108	26.363	168.7	0.375	2.17	33.7	31.9	2.09	27.0	0.00	0.00	0.01	0.06	170	208
200	9.48	9.46	34.243	26.452	161.1	0.426	1.49	23.2	36.0	2.33	28.6	0.00	0.00	0.00	0.06	201	207
228	8.71	8.69	34.161	26.511	155.7	0.470	1.79	27.4	38.2	2.31	29.5	0.00	0.00			229	206
250 ISL	8.60 D	8.57	34.226 D	26.579	149.6	0.504	1.59	24.3	41.3	2.39	30.5	0.00	0.00			251	
268	8.34	8.31	34.211	26.608	147.1	0.531	1.34	20.3	44.2	2.48	31.3	0.00	0.00			270	205
300 ISL	7.82 D	7.79	34.196 D	26.674	141.2	0.577	1.17	17.5	49.2	2.59	32.8	0.00	0.00			302	
319	7.63	7.60	34.208	26.711	137.8	0.603	1.09	16.3	52.0	2.65	33.6	0.00	0.00			321	204
380	7.51	7.47	34.296	26.798	130.6	0.685	0.62	9.2	57.7	2.84	34.6	0.00	0.00			382	203
400 ISL	7.18 D	7.14	34.288 D	26.839	126.8	0.711	0.57	8.4	60.8	2.88	35.4	0.00	0.02			403	
437	6.73	6.69	34.267	26.884	122.7	0.757	0.54	7.9	66.8	2.95	36.8	0.00	0.06			440	202
500 ISL	6.31 D	6.26	34.293 D	26.960	116.0	0.832	0.40	5.8	74.3	3.04	38.2	0.00	0.01			503	
511	6.22	6.17	34.292	26.971	115.0	0.845	0.37	5.3	75.6	3.05	38.4	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 0801 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 30.8 N	118 12.9 W	08/01/08	1915 UTC	1663 m	260 05 kn	260 04 05	1	1023.2 mb	15.3 C	11.8 C	11m	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	14.06	14.06	33.528	25.038	291.2	0.000	5.98	102.2	2.1	0.44	1.4	0.09	0.09	2.41	0.58	0	
2 A	14.06	14.06	33.528	25.038	291.2	0.006	5.98	102.2	2.1	0.44	1.4	0.09	0.09	2.41	0.58	2	223
7 A	13.96	13.96	33.530	25.060	289.2	0.020	5.90	100.6	2.2	0.43	1.5	0.09	0.08	2.61	0.77	7	222
10	13.96	13.96	33.526	25.057	289.6	0.029	5.95	101.5	2.1	0.44	1.5	0.09	0.12	2.66	0.81	10	221
16 A	13.95	13.95	33.530	25.063	289.3	0.046	5.87	100.1	2.1	0.45	1.6	0.09	0.07	2.61	0.74	16	220
20 ISL	13.94 D	13.94	33.526 D	25.062	289.5	0.058	5.82	99.2	2.3	0.47	2.0	0.10	0.08	2.46	0.72	20	
23 A	13.89	13.89	33.525	25.072	288.6	0.067	5.78	98.4	2.5	0.48	2.3	0.10	0.09	2.22	0.70	23	219
30 A	13.24	13.24	33.516	25.197	276.9	0.086	5.32	89.4	5.9	0.73	6.0	0.18	0.12	1.04	0.49	30	218
38	12.64	12.63	33.517	25.316	265.7	0.108	4.82	80.0	9.0	0.97	9.7	0.23	0.05	0.40	0.36	38	217
45 A	11.98	11.97	33.476	25.411	256.8	0.126	4.49	73.5	10.0	1.13	12.9	0.06	0.05	0.17	0.25	45	216
50 ISL	11.57 D	11.56	33.502 D	25.507	247.7	0.139	4.29	69.6	11.4	1.23	14.8	0.02	0.02	0.12	0.18	50	
51	11.56	11.55	33.503	25.510	247.5	0.141	4.26	69.1	11.7	1.25	15.1	0.02	0.01	0.12	0.17	51	215
60	11.28	11.27	33.542	25.592	239.9	0.163	4.07	65.6	13.2	1.34	16.5	0.02	0.02	0.09	0.14	60	214
69	10.83	10.82	33.629	25.740	226.0	0.184	3.72	59.4	16.2	1.50	18.7	0.01	0.02	0.04	0.08	69	213
75 ISL	10.58 D	10.57	33.686 D	25.828	217.7	0.198	3.42	54.4	18.5	1.61	20.1	0.01	0.02	0.02	0.08	75	
86	10.28	10.27	33.794	25.965	205.0	0.221	2.98	47.1	22.0	1.78	22.2	0.01	0.01	0.01	0.08	86	212
100	9.80	9.79	33.835	26.078	194.4	0.249	2.96	46.3	23.8	1.83	23.6	0.01	0.00	0.01	0.06	101	211
120	9.54	9.53	33.959	26.218	181.5	0.287	2.67	41.5	27.4	1.94	24.9	0.01	0.00	0.01	0.05	121	210
125 ISL	9.69 D	9.68	34.032 D	26.251	178.6	0.296	2.54	39.7	28.5	1.99	25.3	0.01	0.00	0.01	0.05	126	
139	9.47	9.45	34.068	26.315	172.7	0.320	2.18	33.9	31.4	2.11	26.6	0.01	0.00	0.00	0.05	140	209
150 ISL	9.25 D	9.23	34.086 D	26.365	168.1	0.339	2.14	33.1	33.2	2.16	27.4	0.01	0.01	0.00	0.05	151	
169	8.81	8.79	34.096	26.443	161.0	0.370	2.07	31.7	35.9	2.21	28.6	0.01	0.03	0.00	0.04	170	208
199	8.53	8.51	34.107	26.496	156.5	0.418	1.92	29.2						0.00	0.03	200	207
200 ISL	8.49 D	8.47	34.114 D	26.508	155.4	0.419	1.91	29.0	39.5	2.33	30.0	0.00	0.02			201	
229	8.32	8.30	34.166	26.575	149.5	0.463	1.56	23.6	42.8	2.45	31.1	0.00	0.00			230	206
250 ISL	8.04 D	8.01	34.164 D	26.615	145.9	0.494	1.38	20.8	45.9	2.53	32.0	0.00	0.01			251	
270	7.88	7.85	34.191	26.661	141.9	0.523	1.24	18.6	48.9	2.60	32.8	0.00	0.03			272	205
300 ISL	7.56 D	7.53	34.221 D	26.731	135.6	0.565	1.01	15.0	53.2	2.71	33.9	0.00	0.03			302	
319	7.44	7.41	34.227	26.753	133.7	0.590	0.88	13.1	55.9	2.77	34.5	0.00	0.03			321	204
380	6.95	6.91	34.251	26.841	126.1	0.670	0.67	9.8								382	203
400 ISL	6.72 D	6.68	34.254 D	26.874	123.0	0.695	0.61	8.9	67.7	2.96	37.0	0.00	0.01			403	
439	6.36	6.32	34.271	26.936	117.4	0.741	0.49	7.1	73.0	3.02	38.0	0.00	0.00			442	202
500 ISL	5.98 D	5.94	34.295 D	27.004	111.5	0.811	0.35	5.0	79.9	3.11	39.2	0.00	0.00			503	
508	5.93	5.89	34.296	27.011	110.8	0.820	0.33	4.7	80.8	3.12	39.4	0.00	0.00			512	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 0801 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 20.8 N	118 33.2 W	08/01/08	2334 UTC	1345 m	320 06 kn	320 03 06	1	1021.4 mb	14.9 C	12.8 C	08m	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	14.23	14.23	33.584	25.046	290.4	0.000	6.07	104.2	0.5	0.32	0.5	0.03	0.02	2.59	0.67	0	
1	14.23	14.23	33.584	25.046	290.4	0.003	6.07	104.1	0.5	0.32	0.5	0.03	0.02	2.59	0.67	1	221
10 ISL	14.22 D	14.22	33.583 D	25.047	290.6	0.029	6.06	104.0	0.5	0.34	0.5	0.03	0.02	2.53	0.68	10	
11	14.22	14.22	33.584	25.048	290.5	0.032	6.06	104.0	0.5	0.34	0.5	0.03	0.02	2.52	0.68	11	220
15	14.17	14.17	33.583	25.058	289.7	0.044	5.98	102.5	0.5	0.34	0.5	0.04	0.03	2.88	0.74	15	219
20	14.17	14.17	33.584	25.059	289.8	0.058	5.92	101.4	0.6	0.36	0.7	0.04	0.05	2.74	0.70	20	218
30	14.12	14.12	33.581	25.067	289.3	0.087	5.82	99.6	1.1	0.40	1.3	0.06	0.09	2.30	0.63	30	217
40	11.98	11.97	33.497	25.427	255.1	0.114	4.49	73.5	10.2	1.14	13.3	0.05	0.00	0.34	0.25	40	216
50	11.01	11.00	33.606	25.690	230.3	0.138	3.82	61.3	15.1	1.44	18.2	0.02	0.00	0.13	0.14	50	215
60	10.60	10.59	33.643	25.791	220.9	0.161	3.66	58.2	17.0	1.54	19.6	0.02	0.00	0.09	0.11	60	214
70	10.35	10.34	33.685	25.867	213.8	0.183	3.49	55.2	18.8	1.63	20.9	0.02	0.00	0.04	0.08	70	213
75 ISL	10.24 D	10.23	33.722 D	25.915	209.4	0.193	3.37	53.2	19.8	1.68	21.6	0.02	0.00	0.03	0.08	75	
85	9.95	9.94	33.771	26.003	201.3	0.214	3.14	49.2	21.8	1.76	22.9	0.01	0.00	0.01	0.07	85	212
99	9.70	9.69	33.836	26.095	192.7	0.241	2.96	46.2	24.1	1.83	23.9	0.01	0.00	0.01	0.07	100	211
100 ISL	9.59 D	9.58	33.860 D	26.132	189.2	0.243	2.94	45.8	24.3	1.84	24.0	0.01	0.00	0.01	0.07	101	
118	9.39	9.38	33.947	26.233	180.0	0.277	2.65	41.1	27.8	1.96	25.5	0.01	0.00	0.01	0.07	119	210
125 ISL	9.36 D	9.35	33.950 D	26.241	179.4	0.289	2.65	41.1	28.2	1.97	25.6	0.01	0.00	0.01	0.06	126	
139	9.20	9.18	33.983	26.293	174.8	0.314	2.65	40.9	29.1	1.98	25.8	0.01	0.00	0.01	0.05	140	209
150 ISL	9.04 D	9.02	34.038 D	26.361	168.4	0.333	2.42	37.3	31.5	2.07	26.7	0.01	0.00	0.01	0.05	151	
169	8.83	8.81	34.116	26.456	159.8	0.364	1.96	30.0	36.3	2.25	28.6	0.00	0.00	0.00	0.05	170	208
199	8.32	8.30	34.131	26.547	151.6	0.411	1.71	25.9	41.2	2.43	30.5	0.01	0.00	0.00	0.04	200	207
200 ISL	8.32 D	8.30	34.134 D	26.549	151.4	0.412	1.71	25.9	41.3	2.43	30.5	0.01	0.00			201	
229	8.05	8.03	34.140	26.595	147.4	0.456	1.58	23.8	44.5	2.48	31.6	0.01	0.00			230	206
250 ISL	7.94 D	7.91	34.176 D	26.640	143.5	0.486	1.37	20.6	47.2	2.56	32.2	0.00	0.00			252	
268	7.84	7.81	34.203	26.676	140.4	0.512	1.18	17.7	49.5	2.63	32.7	0.00	0.00			270	205
300 ISL	7.63 D	7.60	34.230 D	26.728	135.9	0.556	1.00	14.9	52.6	2.73	33.5	0.00	0.01			302	
317	7.53	7.50	34.232	26.744	134.6	0.579	0.93	13.8	54.4	2.77	34.0	0.00	0.02			319	204
378	6.85	6.81	34.245	26.850	125.1	0.658	0.66	9.7	64.0	2.93	36.4	0.00	0.00			380	203
400 ISL	6.68 D	6.64	34.265 D	26.888	121.6	0.685	0.58	8.5	66.7	2.98	36.9	0.00	0.03			403	
436	6.50	6.46	34.277	26.922	118.8	0.729	0.48	7.0	70.5	3.06	37.5	0.00	0.07			439	202
500 ISL	6.10 D	6.06	34.316 D	27.005	111.5	0.802	0.34	4.9	76.9	3.17	38.8	0.00	0.04			503	
515	6.09	6.04	34.316	27.007	111.6	0.819	0.31	4.5	78.4	3.19	39.1	0.00	0.03			519	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0801 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 10.9 N	118 53.3 W	09/01/08	0406 UTC	1466 m	330 15 kn			1021.1 mb	14.5 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	14.13	14.13	33.523	25.019	292.9	0.000	5.84	100.0	2.3	0.42	1.5	0.06	0.09	0.79	0.34	0	
2	14.13	14.13	33.523	25.019	293.0	0.006	5.84	100.0	2.3	0.42	1.5	0.06	0.09	0.79	0.34	2	220
10 ISL	14.13 D	14.13	33.522 D	25.019	293.3	0.029	5.83	99.8	2.1	0.40	1.5	0.06	0.10	0.81	0.31	10	
11	14.13	14.13	33.525	25.021	293.1	0.032	5.83	99.8	2.1	0.40	1.5	0.06	0.10	0.81	0.31	11	219
20	14.13	14.13	33.521	25.018	293.6	0.059	5.83	99.8	2.1	0.41	1.4	0.06	0.09	0.79	0.31	20	218
30	14.14	14.14	33.524	25.019	293.8	0.088	5.82	99.6	2.1	0.43	1.5	0.06	0.15	0.84	0.30	30	217
40	14.01	14.00	33.523	25.046	291.6	0.117	5.76	98.3	2.4	0.44	2.0	0.06	0.08	0.81	0.32	40	216
50	12.10	12.09	33.477	25.389	259.0	0.145	4.57	74.9	9.5	1.11	12.7	0.04	0.00	0.33	0.25	50	215
60	11.41	11.40	33.519	25.550	243.9	0.170	4.13	66.8	12.6	1.31	16.0	0.01	0.00	0.18	0.20	60	214
70	10.91	10.90	33.604	25.707	229.2	0.194	3.81	61.0	15.5	1.47	18.4	0.01	0.01	0.08	0.11	70	213
75 ISL	10.65 D	10.64	33.671 D	25.805	220.0	0.205	3.57	56.8	17.5	1.56	19.7	0.01	0.01	0.05	0.11	75	
84	10.19	10.18	33.775	25.965	204.9	0.224	3.18	50.1	21.1	1.70	21.9	0.00	0.00	0.01	0.10	84	212
99	9.67	9.66	33.860	26.119	190.5	0.254	3.01	46.9	24.2	1.81	23.6	0.00	0.00	0.01	0.05	99	211
100 ISL	9.67 D	9.66	33.868 D	26.125	189.9	0.256	3.00	46.8	24.3	1.81	23.7	0.00	0.00	0.01	0.05	101	
120	9.44	9.43	33.930	26.212	182.1	0.293	2.83	43.9	26.5	1.89	24.7	0.00	0.00	0.00	0.07	121	210
125 ISL	9.35 D	9.34	33.931 D	26.228	180.7	0.302	2.75	42.6	27.4	1.92	25.0	0.00	0.00	0.00	0.07	126	
140	9.26	9.24	34.044	26.331	171.2	0.328	2.52	39.0	30.0	2.01	26.0	0.00	0.00	0.00	0.05	141	209
150 ISL	9.08 D	9.06	34.043 D	26.359	168.7	0.345	2.53	39.0	31.0	2.02	26.4	0.00	0.10	0.00	0.05	151	
170	8.73	8.71	34.039	26.411	164.0	0.378	2.54	38.8	33.1	2.05	27.3	0.01	0.26	0.00	0.05	171	208
198	8.71	8.69	34.156	26.506	155.5	0.423	1.79	27.4	38.5	2.31	29.3	0.01	0.00	0.01	0.05	199	207
200 ISL	8.87 D	8.85	34.206 D	26.521	154.3	0.426	1.77	27.2	38.8	2.32	29.4	0.01	0.00			201	
229	8.20	8.18	34.154	26.583	148.6	0.470	1.64	24.8	43.2	2.41	31.0	0.01	0.00			230	206
250 ISL	8.07 D	8.04	34.203 D	26.641	143.4	0.501	1.30	19.6	46.6	2.55	31.9	0.00	0.00			251	
268	8.01	7.98	34.249	26.687	139.4	0.526	1.00	15.1	49.6	2.66	32.7	0.00	0.00			270	205
300 ISL	7.38 D	7.35	34.201 D	26.741	134.5	0.570	0.92	13.6	54.4	2.74	34.1	0.00	0.00			302	
318	7.28	7.25	34.222	26.771	131.8	0.594	0.87	12.9	57.0	2.76	34.9	0.00	0.00			320	204
377	6.74	6.71	34.253	26.871	123.0	0.669	0.59	8.6	65.4	2.94	36.7	0.00	0.02			379	203
400 ISL	6.65 D	6.61	34.255 D	26.885	122.0	0.697	0.52	7.6	68.3	2.99	37.3	0.00	0.02			403	
438	6.40	6.36	34.284	26.941	117.0	0.743	0.42	6.1	72.3	3.06	38.0	0.00	0.01			441	202
500 ISL	6.24 D	6.20	34.324 D	26.994	112.8	0.814	0.30	4.3	76.3	3.16	38.5	0.00				503	
513	6.21	6.16	34.326	26.999	112.4	0.829	0.28	4.0	77.1	3.18	38.6	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 0801 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 0.7 N	119 13.7 W	09/01/08	0840 UTC	1488 m	290 13 kn			1022.3 mb	13.1 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	13.56	13.56	33.429	25.064	288.7	0.000	5.87	99.2	3.9	0.52	2.9	0.09	0.10	0.80	0.29	0	
2	13.56	13.56	33.429	25.064	288.7	0.006	5.87	99.2	3.9	0.52	2.9	0.09	0.10	0.80	0.29	2	221
10	13.56	13.56	33.431	25.066	288.8	0.029	5.87	99.2	3.9	0.52	2.8	0.09	0.09	0.75	0.31	10	219
10	13.56	13.56	33.429	25.065	288.9	0.029										10	220
20 ISL	13.56 D	13.56	33.438 D	25.072	288.5	0.058	5.87	99.2	4.0	0.52	2.8	0.09	0.08	0.85	0.33	20	
21	13.57	13.57	33.441	25.072	288.5	0.061	5.87	99.3	4.0	0.52	2.8	0.09	0.08	0.87	0.33	21	218
30	13.55	13.55	33.468	25.097	286.4	0.086	5.87	99.2	4.3	0.51	3.0	0.10	0.08	1.02	0.40	30	217
40	13.54	13.53	33.470	25.101	286.3	0.115	5.86	99.0	4.4	0.53	3.3	0.10	0.06	0.97	0.38	40	216
50	13.42	13.41	33.446	25.107	286.0	0.144	5.79	97.6	4.5	0.57	3.9	0.10	0.08	0.82	0.30	50	215
59	12.06	12.05	33.383	25.324	265.4	0.169	5.00	81.9	8.2	0.95	10.3	0.07	0.04	0.19	0.12	59	214
70	11.97	11.96	33.554	25.474	251.4	0.197	4.74	77.6	10.9	1.08	12.4	0.12	0.04	0.16	0.13	70	213
75 ISL	11.77 D	11.76	33.601 D	25.548	244.5	0.209	4.47	72.8	12.5	1.20	14.2	0.09	0.04	0.13	0.13	75	
85	11.03	11.02	33.629	25.705	229.7	0.233	3.89	62.4	15.7	1.44	18.0	0.02	0.04	0.08	0.12	85	212
99	10.21	10.20	33.720	25.919	209.6	0.264	3.47	54.7	19.6	1.63	21.2	0.01	0.03	0.03	0.06	99	211
100 ISL	10.20 D	10.19	33.722 D	25.922	209.3	0.266	3.45	54.4	19.8	1.64	21.3	0.01	0.03	0.03	0.06	100	
119	9.77	9.76	33.822	26.073	195.3	0.304	3.13	48.9	23.2	1.75	23.1	0.01	0.02	0.01	0.05	120	210
125 ISL	9.69 D	9.68	33.874 D	26.127	190.3	0.316	3.01	47.0	24.4	1.80	23.7	0.01	0.02	0.01	0.05	126	
140	9.45	9.43	33.943	26.221	181.7	0.344	2.75	42.7	27.3	1.91	25.1	0.00	0.02	0.00	0.04	141	209
150 ISL	9.16 D	9.14	33.971 D	26.290	175.2	0.362	2.71	41.8	28.7	1.94	25.7	0.00	0.03	0.00	0.04	151	
169	8.86	8.84	33.989	26.352	169.7	0.394	2.66	40.8	31.1	1.99	26.8	0.00	0.04	0.00	0.05	170	208
199	8.66	8.64	34.063	26.441	161.7	0.444	2.23	34.0	35.4	2.17	28.7	0.00	0.02	0.01	0.05	200	207
200 ISL	8.67 D	8.65	34.062 D	26.439	161.9	0.446	2.22	33.9	35.5	2.17	28.7	0.00	0.02			201	
228	8.41	8.39	34.093	26.504	156.2	0.490	1.99	30.2	38.8	2.26	29.8	0.00	0.02			229	206
250 ISL	8.31 D	8.28	34.150 D	26.564	150.9	0.524	1.67	25.3	41.8	2.38	30.8	0.00	0.06			251	
268	8.27	8.24	34.182	26.595	148.2	0.551	1.41	21.3	44.3	2.48	31.6	0.00	0.09			270	205
300 ISL	7.93 D	7.90	34.200 D	26.661	142.4	0.598	1.15	17.3	48.9	2.61	33.0	0.00	0.04			302	
318	7.75	7.72	34.211	26.696	139.3	0.623	1.05	15.7	51.5	2.67	33.8	0.00	0.00			320	204
379	7.17	7.13	34.256	26.814	128.7	0.705	0.69	10.2	60.3	2.85	35.8	0.00	0.00			381	203
400 ISL	6.84 D	6.80	34.268 D	26.869	123.6	0.731	0.58	8.5	63.9	2.91	36.5	0.00	0.00			403	
436	6.62	6.58	34.290	26.917	119.5	0.775	0.43	6.3	69.8	3.00	37.7	0.00	0.00			439	202
500 ISL	6.30 D	6.25	34.328 D	26.989	113.2	0.849	0.30	4.3	76.2	3.10	38.7	0.00	0.00			503	
512	6.24	6.19	34.329	26.998	112.5	0.863	0.27	3.9	77.4	3.12	38.9	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 0801 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 50.5 N	119 34.0 W	09/01/08	1307 UTC	2582 m	350 17 kn			1021.4 mb	13.3 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	14.51	14.51	33.271	24.745	319.1	0.000	5.86	100.9	1.8	0.37	0.1	0.03	0.03	0.54	0.18	0	
2	14.51	14.51	33.271	24.745	319.1	0.006	5.86	100.9	1.8	0.37	0.1	0.03	0.03	0.54	0.18	2	220
10	14.51	14.51	33.273	24.747	319.2	0.032	5.86	100.9	1.8	0.37	0.1	0.03	0.00	0.52	0.17	10	219
20	14.51	14.51	33.272	24.746	319.5	0.064	5.86	100.9	1.8	0.37	0.1	0.03	0.00	0.61	0.12	20	218
30	14.50	14.50	33.280	24.755	319.0	0.096	5.86	100.9	1.9	0.37	0.2	0.03	0.03	0.54	0.18	30	217
40	14.36	14.35	33.270	24.777	317.2	0.128	5.87	100.8	2.1	0.38	0.4	0.04	0.01	0.60	0.23	40	216
50 ISL	14.34 D	14.33	33.267 D	24.779	317.3	0.159	5.86	100.6	2.1	0.38	0.4	0.05	0.03	0.63	0.19	50	
51	14.35	14.34	33.271	24.780	317.2	0.162	5.86	100.6	2.1	0.38	0.4	0.05	0.03	0.63	0.19	51	215
60	14.22	14.21	33.279	24.814	314.2	0.191	5.84	100.0	2.3	0.45	0.8	0.08	0.12	0.42	0.19	60	214
69	14.14	14.13	33.288	24.838	312.2	0.219	5.83	99.6	2.5	0.43	1.0	0.09	0.14	0.38	0.18	69	213
75 ISL	13.98 D	13.97	33.334 D	24.907	305.8	0.238	5.74	97.8	3.0	0.50	2.1	0.09	0.13	0.28	0.15	75	
84	12.93	12.92	33.256	25.059	291.4	0.264	5.51	91.8	4.2	0.66	4.8	0.10	0.09	0.13	0.10	84	212
100	11.77	11.76	33.321	25.331	265.7	0.309	4.96	80.7	8.2	1.01	11.0	0.02	0.00	0.06	0.07	100	211
120	10.63	10.62	33.553	25.717	229.3	0.359	4.13	65.6	15.2	1.42	17.7	0.00	0.00	0.01	0.04	121	210
125 ISL	10.36 D	10.35	33.617 D	25.814	220.2	0.370	3.97	62.8	16.5	1.49	18.8	0.00	0.00	0.01	0.04	126	
139	10.11	10.09	33.670	25.898	212.4	0.400	3.57	56.1	19.7	1.66	21.2	0.00	0.00	0.01	0.03	140	209
150 ISL	9.81 D	9.79	33.779 D	26.034	199.7	0.423	3.26	51.0	22.6	1.78	23.0	0.00	0.01	0.01	0.03	151	
170	9.24	9.22	33.892	26.215	182.7	0.461	2.80	43.3	27.6	1.95	25.8	0.00	0.03	0.01	0.03	171	208
198	8.69	8.67	34.002	26.389	166.6	0.510	2.48	37.9	33.2	2.10	27.9	0.00	0.00	0.00	0.03	199	207
200 ISL	8.66 D	8.64	34.011 D	26.401	165.6	0.513	2.46	37.5	33.5	2.11	28.0	0.00	0.00			201	
228	8.39	8.37	34.057	26.479	158.6	0.559	2.16	32.8	37.5	2.22	29.6	0.00	0.00			229	206
250 ISL	8.22 D	8.19	34.095 D	26.534	153.6	0.593	1.86	28.1	40.9	2.34	30.7	0.00	0.01			251	
269	8.05	8.02	34.130	26.588	148.9	0.622	1.62	24.4	44.2	2.45	31.7	0.00	0.01			271	205
300 ISL	7.19 D	7.16	34.078 D	26.670	141.0	0.667	1.49	22.0	50.8	2.56	33.4	0.00	0.00			302	
319	7.05	7.02	34.109	26.714	137.1	0.693	1.44	21.2	54.7	2.62	34.4	0.00	0.00			321	204
379	6.80	6.76	34.189	26.812	128.6	0.773	0.87	12.7	62.4	2.85	36.3	0.00	0.00			381	203
400 ISL	6.63 D	6.59	34.216 D	26.856	124.6	0.799	0.73	10.6	65.8	2.91	37.0	0.00	0.00			402	
441	6.28	6.24	34.231	26.914	119.4	0.849	0.53	7.7	72.5	3.02	38.2	0.00	0.00			444	202
500 ISL	5.85 D	5.81	34.270 D	27.000	111.6	0.917	0.36	5.2	79.9	3.12	39.3	0.00	0.00			503	
512	5.84	5.80	34.284	27.013	110.6	0.931	0.33	4.7	81.4	3.14	39.5	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 0801 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 30.9 N	120 14.8 W	09/01/08	1941 UTC	3886 m	070 18 kn	310 05 08	1	1023.3 mb	14.5 C	12.3 C	16m	6/8	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	13.86	13.86	33.306	24.908	303.5	0.000	5.91	100.5	2.8	0.46	1.7	0.08	0.07	0.64	0.20	0	
2 A	13.86	13.86	33.306	24.908	303.6	0.006	5.91	100.5	2.8	0.46	1.7	0.08	0.07	0.64	0.20	2	221
10 A	13.84	13.84	33.307	24.913	303.3	0.030	5.91	100.4	2.8	0.45	1.7	0.08	0.10	0.64	0.21	10	220
17	13.83	13.83	33.308	24.916	303.2	0.052	5.91	100.4	2.8	0.44	1.8	0.08	0.05	0.66	0.22	17	219
20 ISL	13.83 D	13.83	33.307 D	24.915	303.4	0.061	5.91	100.4	2.8	0.44	1.8	0.08	0.06	0.67	0.22	20	
24 A	13.83	13.83	33.309	24.917	303.4	0.073	5.90	100.2	2.8	0.44	1.9	0.08	0.08	0.67	0.21	24	218
30 ISL	13.84 D	13.84	33.308 D	24.914	303.8	0.091	5.90	100.2	2.9	0.44	2.0	0.08	0.07	0.68	0.23	30	
34 A	13.83	13.83	33.314	24.921	303.2	0.103	5.90	100.2	2.9	0.45	2.1	0.08	0.06	0.68	0.24	34	217
45 A	13.78	13.77	33.322	24.938	301.9	0.136	5.89	100.0	3.0	0.47	2.3	0.09	0.07	0.63	0.23	45	216
50 ISL	13.78 D	13.77	33.321 D	24.937	302.2	0.152	5.88	99.8	3.0	0.47	2.3	0.10	0.08	0.60	0.24	50	
55	13.75	13.74	33.323	24.945	301.5	0.167	5.86	99.4	3.0	0.46	2.4	0.11	0.10	0.55	0.25	55	215
66 A	13.30	13.29	33.418	25.110	286.1	0.199	5.82	97.8	4.4	0.59	4.4	0.20	0.23	0.35	0.21	66	214
75	12.76	12.75	33.404	25.206	277.1	0.224	5.52	91.8	6.0	0.75	7.1	0.18	0.09	0.17	0.14	75	213
85	11.66	11.65	33.411	25.421	256.8	0.251	4.83	78.4	10.0	1.07	12.6	0.01	0.00	0.07	0.08	85	212
99	10.91	10.90	33.586	25.693	231.2	0.285	3.87	61.9	15.9	1.46	18.7	0.01	0.00	0.05	0.09	99	211
100 ISL	10.77 D	10.76	33.591 D	25.722	228.4	0.287	3.85	61.4	16.2	1.47	18.9	0.01	0.00	0.05	0.09	100	
121	9.85	9.84	33.689	25.956	206.5	0.333	3.57	55.8	21.1	1.67	22.1	0.01	0.00	0.01	0.04	122	210
125 ISL	9.74 D	9.73	33.732 D	26.008	201.6	0.341	3.42	53.4	22.4	1.72	22.9	0.01	0.00	0.01	0.04	126	
140	9.35	9.33	33.869	26.179	185.6	0.370	2.87	44.4	26.9	1.90	25.5	0.00	0.00	0.01	0.05	141	209
150 ISL	9.09 D	9.07	33.928 D	26.267	177.3	0.388	2.89	44.5	28.5	1.91	25.8	0.00	0.00	0.01	0.04	151	
169	8.76	8.74	33.963	26.347	170.1	0.421	2.92	44.6	30.5	1.93	26.4	0.00	0.00	0.00	0.03	170	208
199	8.39	8.37	34.009	26.440	161.6	0.471	2.79	42.3	34.4	2.01	27.5	0.00	0.04	0.00	0.03	200	207
200 ISL	8.38 D	8.36	34.010 D	26.443	161.4	0.473	2.78	42.1	34.6	2.02	27.6	0.00	0.04			201	
224	8.12	8.10	34.043	26.508	155.6	0.511	2.40	36.2	39.0	2.16	29.3	0.00	0.00			225	206
250 ISL	7.74 D	7.72	34.082 D	26.595	147.6	0.550	1.96	29.3	44.7	2.35	31.5	0.00	0.01			251	
270	7.55	7.52	34.101	26.637	143.9	0.579	1.63	24.3	48.9	2.49	33.0	0.00	0.02			272	205
300 ISL	7.39 D	7.36	34.149 D	26.698	138.5	0.622	1.24	18.4	53.7	2.64	34.5	0.00	0.01			302	
316	7.24	7.21	34.161	26.729	135.8	0.644	1.07	15.8	55.9	2.70	35.1	0.00	0.00			318	204
368	6.80	6.77	34.190	26.813	128.4	0.712	0.80	11.7	63.2	2.84	36.6	0.00	0.00			370	203
400 ISL	6.54 D	6.50	34.201 D	26.856	124.5	0.753	0.69	10.0	67.4	2.91	37.3	0.00	0.00			403	
439	6.27	6.23	34.219	26.906	120.1	0.801	0.58	8.4	72.4	2.99	38.1	0.00	0.00			442	202
500 ISL	5.87 D	5.83	34.271 D	26.999	111.9	0.871	0.37	5.3	81.0	3.11	39.3	0.00	0.00			503	
513	5.83	5.79	34.280	27.011	110.8	0.886	0.32	4.6	82.8	3.13	39.6	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 0801 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 10.6 N	120 55.1 W	10/01/08	0215 UTC	3836 m	330 20 kn			1022.6 mb	13.4 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	14.63	14.63	33.249	24.703	323.1	0.000	5.86	101.2	1.7	0.36	0.3	0.02	0.00	0.46	0.14	0	
2	14.63	14.63	33.249	24.703	323.1	0.006	5.86	101.2	1.7	0.36	0.3	0.02	0.00	0.46	0.14	2	220
10	14.63	14.63	33.249	24.703	323.4	0.032	5.86	101.2	1.6	0.36	0.4	0.02	0.02	0.47	0.15	10	219
20 ISL	14.63 D	14.63	33.250 D	24.704	323.6	0.065	5.84	100.8	1.6	0.35	0.4	0.02	0.02	0.47	0.13	20	
21	14.63	14.63	33.247	24.702	323.8	0.068	5.84	100.8	1.6	0.35	0.4	0.02	0.02	0.47	0.13	21	218
30	14.58	14.58	33.248	24.713	322.9	0.097	5.85	100.9	1.7	0.36	0.5	0.02	0.00	0.53	0.16	30	217
40	14.55	14.54	33.250	24.722	322.5	0.129	5.84	100.6	1.7	0.37	0.5	0.03	0.03	0.55	0.19	40	216
50	14.51	14.50	33.252	24.732	321.8	0.161	5.84	100.6	1.8	0.37	0.6	0.03	0.04	0.57	0.21	50	215
60	14.47	14.46	33.251	24.740	321.3	0.194	5.82	100.1	1.8	0.38	0.6	0.03	0.06	0.51	0.18	60	214
68	13.94	13.93	33.234	24.838	312.1	0.219	5.73	97.5	2.5	0.46	1.9	0.04	0.05	0.37	0.17	68	213
75 ISL	12.93 D	12.92	33.172 D	24.993	297.4	0.240	5.57	92.8	3.7	0.59	4.1	0.03	0.02	0.24	0.15	75	
84	12.17	12.16	33.208	25.168	280.9	0.266	5.30	86.9	5.7	0.79	7.5	0.01	0.00	0.11	0.11	84	212
99	11.35	11.34	33.387	25.459	253.4	0.306	4.83	77.9	9.5	1.07	12.3	0.00	0.05	0.04	0.04	99	211
100 ISL	11.00 D	10.99	33.467 D	25.584	241.5	0.309	4.79	76.7	9.8	1.09	12.6	0.00	0.05	0.04	0.04	100	
120	10.38	10.37	33.595	25.793	222.0	0.355	4.00	63.3	16.2	1.44	18.8	0.00	0.00	0.01	0.03	121	210
125 ISL	10.08 D	10.07	33.673 D	25.905	211.4	0.366	3.85	60.5	17.4	1.51	19.9	0.00	0.00	0.01	0.03	126	
139	9.85	9.83	33.719	25.980	204.6	0.395	3.49	54.6	20.6	1.66	22.2	0.00	0.00	0.01	0.03	140	209
150 ISL	9.62 D	9.60	33.785 D	26.070	196.2	0.417	3.29	51.2	23.2	1.74	23.5	0.00	0.00	0.01	0.03	151	
169	9.07	9.05	33.923	26.267	177.8	0.453	3.01	46.3	27.4	1.86	25.2	0.00	0.00	0.01	0.03	170	208
199	8.65	8.63	34.013	26.404	165.2	0.504	2.58	39.4	33.0	2.04	27.7	0.00	0.03	0.00	0.03	200	207
200 ISL	8.62 D	8.60	34.024 D	26.417	164.0	0.506	2.56	39.0	33.2	2.05	27.8	0.00	0.03			201	
229	8.20	8.18	34.088	26.531	153.5	0.552	2.00	30.2	40.4	2.31	30.6	0.00	0.03			230	206
250 ISL	8.10 D	8.07	34.129 D	26.579	149.3	0.584	1.58	23.8	44.5	2.47	32.0	0.00	0.01			251	
269	7.93	7.90	34.183	26.647	143.2	0.611	1.24	18.6	48.0	2.59	33.0	0.00	0.00			271	205
300 ISL	7.57 D	7.54	34.228 D	26.735	135.2	0.655	0.86	12.8	54.5	2.78	34.6	0.00	0.01			302	
319	7.32	7.29	34.251	26.789	130.2	0.680	0.70	10.4	58.4	2.87	35.4	0.00				321	204
377	6.79	6.75	34.295	26.897	120.6	0.753	0.42	6.1	67.8	3.02	37.2	0.00	0.04			379	203
400 ISL	6.51 D	6.47	34.315 D	26.950	115.6	0.780	0.35	5.1	71.2	3.07	37.7	0.00	0.02			402	
437	6.35	6.31	34.321	26.976	113.6	0.822	0.28	4.1	75.8	3.13	38.4	0.00	0.00			440	202
500 ISL	6.14 D	6.10	34.337 D	27.017	110.4	0.893	0.25	3.6	79.5	3.19	39.0	0.00				503	
512	6.12	6.07	34.335	27.018	110.5	0.906	0.24	3.5	80.2	3.20	39.1	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 0801 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 50.4 N	121 35.3 W	10/01/08	0845 UTC	4191 m	330 18 kn			1023.3 mb	13.9 C	11.4 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	15.02	15.02	33.268	24.633	329.7	0.000	5.80	100.9	1.5	0.33	0.1	0.01	0.01	0.32	0.13	0	
2	15.02	15.02	33.268	24.633	329.7	0.007	5.80	100.9	1.5	0.33	0.1	0.01	0.01	0.32	0.13	2	220
10 ISL	15.01 D	15.01	33.268 D	24.636	329.7	0.033	5.80	100.9	1.5	0.33	0.0	0.01	0.01	0.34	0.11	10	
15	15.02	15.02	33.270	24.635	329.9	0.049	5.80	100.9	1.5	0.33	0.0	0.01	0.01	0.35	0.09	15	219
20 ISL	15.03 D	15.03	33.268 D	24.632	330.4	0.066	5.80	100.9	1.5	0.33	0.0	0.01	0.01	0.35	0.09	20	
30	15.03	15.03	33.266	24.631	330.8	0.099	5.80	100.9	1.5	0.33	0.1	0.01	0.01	0.33	0.09	30	218
45	15.03	15.02	33.264	24.630	331.4	0.149	5.80	100.9	1.5	0.33	0.1	0.01	0.01	0.31	0.10	45	217
50 ISL	15.04 D	15.03	33.267 D	24.630	331.5	0.165	5.80	101.0	1.5	0.34	0.1	0.01	0.03	0.34	0.09	50	
55	15.03	15.02	33.266	24.631	331.5	0.182	5.80	100.9	1.5	0.34	0.1	0.01	0.04	0.37	0.09	55	216
64	14.96	14.95	33.268	24.648	330.2	0.212	5.80	100.8	1.5	0.33	0.1	0.01	0.03	0.31	0.14	64	215
75	14.71	14.70	33.244	24.684	327.1	0.248	5.75	99.4	1.8	0.37	0.6	0.05	0.04	0.26	0.11	75	214
85	12.98	12.97	33.118	24.942	302.6	0.279	5.60	93.3	3.4	0.59	3.7	0.05	0.01	0.22	0.18	85	213
95	12.60	12.59	33.144	25.036	293.8	0.309	5.51	91.1	4.1	0.66	5.1	0.02	0.00	0.16	0.14	95	212
100 ISL	12.22 D	12.21	33.183 D	25.140	284.0	0.324	5.44	89.3	4.7	0.71	6.1	0.02	0.00	0.13	0.12	100	
110	11.97	11.96	33.192	25.194	279.1	0.352	5.27	86.0	6.2	0.83	8.3	0.01	0.00	0.09	0.09	110	211
125	11.49	11.47	33.352	25.407	259.0	0.392	4.91	79.4	8.8	1.02	11.6	0.01	0.00	0.05	0.06	126	210
144	10.56	10.54	33.467	25.663	235.0	0.439	4.37	69.3	14.1	1.33	16.7	0.00	0.00	0.02	0.03	145	209
150 ISL	10.35 D	10.33	33.513 D	25.735	228.2	0.453	4.11	64.9	16.1	1.43	18.4	0.00	0.00	0.02	0.03	151	
169	9.70	9.68	33.744	26.025	200.9	0.494	3.36	52.4	22.0	1.72	22.8	0.00	0.00	0.01	0.03	170	208
199	8.98	8.96	33.896	26.260	178.9	0.551	2.97	45.6	27.6	1.89	25.6	0.00	0.00	0.04	0.15	200	207
200 ISL	8.98 D	8.96	33.902 D	26.265	178.5	0.552	2.96	45.5	27.7	1.89	25.7	0.00	0.00			201	
231	8.70	8.68	33.998	26.385	167.7	0.606	2.65	40.5	32.0	2.01	27.1	0.00	0.00			232	206
250 ISL	8.45 D	8.42	34.045 D	26.460	160.8	0.637	2.50	38.0	35.6	2.09	28.2	0.00	0.00			251	
268	8.02	7.99	34.048	26.527	154.5	0.666	2.36	35.5	39.4	2.17	29.4	0.00	0.00			269	205
300 ISL	7.46 D	7.43	34.071 D	26.627	145.3	0.714	2.01	29.8	47.0	2.35	31.9	0.00	0.00			302	
318	7.09	7.06	34.063	26.673	141.0	0.739	1.80	26.5	51.1	2.46	33.3	0.00	0.00			320	204
378	6.64	6.61	34.130	26.787	130.8	0.821	1.10	16.0	60.7	2.75	36.2	0.00	0.00			380	203
400 ISL	6.30 D	6.26	34.121 D	26.824	127.3	0.849	0.95	13.7	64.5	2.83	37.0	0.00	0.00			402	
440	6.08	6.04	34.169	26.891	121.4	0.899	0.74	10.6	71.1	2.94	38.2	0.00	0.00			443	202
500 ISL	5.75 D	5.71	34.224 D	26.976	113.8	0.970	0.48	6.9	78.4	3.07	39.4	0.00	0.00			503	
512	5.75	5.71	34.238	26.987	112.9	0.983	0.43	6.1	79.9	3.09	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 0801 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 30.4 N	122 15.7 W	10/01/08	1618 UTC	4195 m	330 15 kn	330 05 05	1	1024.6 mb	15.5 C	13.0 C	28m	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	15.69	15.69	33.346 D	24.546	338.0	0.000	5.78	102.0	1.6	0.31	0.1	0.00	0.01	0.19	0.06	0	
1 A	15.69	15.69	33.346 D	24.546	338.0	0.003	5.78	102.0	1.6	0.31	0.1	0.00	0.01	0.19	0.06	1	222
10	15.69	15.69	33.346	24.546	338.3	0.034	5.73	101.1	1.5	0.30	0.1	0.00	0.01	0.19	0.06	10	221
18 A	15.69	15.69	33.347	24.547	338.4	0.061	5.73	101.1	1.5	0.29	0.1	0.00	0.01	0.19	0.06	18	220
20 ISL	15.69 D	15.69	33.345 D	24.546	338.6	0.068	5.73	101.1	1.5	0.29	0.1	0.00	0.01	0.19	0.06	20	
29	15.69	15.69	33.347	24.548	338.7	0.098	5.73	101.1	1.5	0.29	0.1	0.00	0.01	0.20	0.06	29	219
30 ISL	15.69 D	15.69	33.345 D	24.546	338.9	0.102	5.73	101.1	1.5	0.29	0.1	0.00	0.01	0.20	0.06	30	
41 A	15.68	15.67	33.343	24.547	339.2	0.139	5.73	101.1	1.5	0.29	0.2	0.00	0.01	0.22	0.08	41	218
50	15.57	15.56	33.334	24.565	337.7	0.169	5.74	101.0	1.5	0.28	0.1	0.00	0.02	0.26	0.11	50	217
59 A	15.46	15.45	33.313	24.574	337.2	0.200	5.75	101.0	1.5	0.30	0.2	0.00	0.03	0.28	0.10	59	216
69	15.38	15.37	33.298	24.580	336.9	0.233	5.76	101.0	1.3	0.30	0.2	0.00	0.05	0.25	0.10	69	215
75 ISL	15.35 D	15.34	33.301 D	24.589	336.2	0.254	5.76	100.9	1.3	0.31	0.3	0.00	0.05	0.27	0.12	75	
79 A	15.29	15.28	33.292	24.596	335.7	0.267	5.76	100.8	1.3	0.31	0.3	0.00	0.06	0.28	0.13	79	214
91	14.94	14.93	33.269	24.654	330.4	0.307	5.80	100.7	1.3	0.33	0.5	0.02	0.12	0.20	0.09	91	213
100 ISL	14.78 D	14.77	33.303 D	24.715	324.9	0.336	5.75	99.6	1.4	0.37	1.0	0.07	0.17	0.16	0.09	100	
102	14.74	14.72	33.303	24.724	324.1	0.343	5.73	99.1	1.5	0.38	1.1	0.08	0.17	0.15	0.09	102	212
115 A	14.23	14.21	33.268	24.805	316.6	0.385	5.70	97.6	2.1	0.43	1.9	0.14	0.09	0.12	0.10	115	211
125 ISL	13.31 D	13.29	33.272 D	24.997	298.5	0.415	5.57	93.6	3.2	0.53	3.8	0.04	0.01	0.10	0.09	126	
127	13.26	13.24	33.270	25.005	297.7	0.421	5.53	92.8	3.5	0.55	4.2	0.02	0.00	0.09	0.09	128	210
141	12.67	12.65	33.454	25.264	273.3	0.461	5.22	86.6	5.3	0.68	7.2	0.00	0.00	0.04	0.05	142	209
150 ISL	12.07 D	12.05	33.486 D	25.404	260.1	0.485	5.01	82.1	7.1	0.81	9.5	0.00	0.00	0.03	0.04	151	
170	10.97	10.95	33.510	25.625	239.3	0.535	4.58	73.3	11.3	1.11	14.3	0.00	0.00	0.02	0.03	171	208
200 ISL	10.06 D	10.04	33.817 D	26.022	202.0	0.601	4.23	66.5	16.2	1.29	18.0	0.00	0.00	0.00	0.02	201	
201	10.05	10.03	33.819	26.026	201.7	0.603	4.22	66.3	16.4	1.30	18.1	0.00	0.00	0.00	0.02	202	207
232	9.06	9.03	33.933	26.277	178.0	0.662	3.49	53.7	25.4	1.69	23.8	0.00	0.00			233	206
250 ISL	8.72 D	8.69	33.977 D	26.366	169.9	0.694	3.55	54.2	28.2	1.71	24.5	0.00	0.00			251	
267	8.30	8.27	33.985	26.436	163.3	0.722	3.63	54.9	30.6	1.73	24.8	0.00	0.00			268	205
300 ISL	7.64 D	7.61	34.016 D	26.558	151.9	0.774	2.95	44.0	38.8	2.01	28.4	0.00	0.00			302	
319	7.46	7.43	34.030	26.595	148.6	0.802	2.44	36.2	44.0	2.21	30.8	0.00	0.00			321	204
374	6.77	6.74	34.070	26.722	136.9	0.881	1.64	24.0	55.7	2.56	34.7	0.00	0.00			376	203
400 ISL	6.82 D	6.78	34.137 D	26.769	133.0	0.916	1.28	18.7	60.2	2.70	36.0	0.00	0.00			402	
441	6.37	6.33	34.167	26.852	125.3	0.969	0.83	12.0	67.0	2.89	37.6	0.00	0.00			444	202
500 ISL	5.74 D	5.70	34.186 D	26.947	116.5	1.040	0.59	8.4	77.8	3.04	39.4	0.00	0.00			503	
506	5.78	5.74	34.201	26.954	116.0	1.047	0.57	8.1	78.9	3.05	39.6	0.00	0.00			509	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 0801 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 10.9 N	122 55.5 W	10/01/08	2210 UTC	2782 m	340 17 kn	340 05 07	1	1022.8 mb	15.1 C	13.9 C	25m	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	15.59	15.59	33.299	24.532	339.3	0.000	5.80	102.1	1.7	0.32	0.0	0.00	0.00	0.17	0.05	0	
2	15.59	15.59	33.299	24.532	339.4	0.007	5.80	102.1	1.7	0.32	0.0	0.00	0.00	0.17	0.05	2	220
10 ISL	15.58 D	15.58	33.304 D	24.539	339.0	0.034	5.78	101.7	1.7	0.33	0.0	0.00	0.00	0.17	0.05	10	
15	15.59	15.59	33.312	24.543	338.8	0.051	5.77	101.6	1.7	0.33	0.0	0.00	0.00	0.17	0.05	15	219
20 ISL	15.65 D	15.65	33.332 D	24.545	338.7	0.068	5.77	101.7	1.7	0.32	0.0	0.00	0.00	0.18	0.05	20	
30	15.56	15.56	33.324	24.559	337.7	0.102	5.79	101.9	1.8	0.31	0.0	0.00	0.00	0.19	0.06	30	218
45	14.95	14.94	33.205	24.601	334.1	0.152	5.83	101.3	1.8	0.34	0.0	0.02	0.00	0.34	0.13	45	217
50 ISL	14.74 D	14.73	33.192 D	24.637	330.8	0.169	5.82	100.6	1.8	0.36	0.1	0.04	0.03	0.32	0.13	50	
55	14.68	14.67	33.199	24.655	329.2	0.185	5.81	100.4	1.8	0.37	0.1	0.06	0.07	0.29	0.12	55	216
65	14.75	14.74	33.246	24.677	327.5	0.218	5.81	100.5	1.6	0.37	0.1	0.03	0.10	0.27	0.14	65	215
75	14.82	14.81	33.295	24.700	325.6	0.251	5.76	99.8	1.5	0.38	0.3	0.05	0.15	0.23	0.13	75	214
85	14.68	14.67	33.293	24.728	323.1	0.283	5.74	99.2	1.7	0.40	0.5	0.09	0.15	0.19	0.11	85	213
95	13.06	13.05	33.153	24.954	301.7	0.314	5.65	94.4	3.5	0.57	3.4	0.10	0.00	0.11	0.10	95	212
100 ISL	12.61 D	12.60	33.115 D	25.012	296.2	0.329	5.59	92.4	4.1	0.64	4.5	0.08	0.00	0.10	0.10	100	
110	12.00	11.99	33.074	25.097	288.3	0.358	5.44	88.8	5.0	0.75	6.3	0.02	0.00	0.09	0.10	110	211
124	11.77	11.75	33.264	25.287	270.5	0.398	5.23	85.0	6.4	0.84	8.4	0.01	0.00	0.04	0.05	125	210
125 ISL	11.74 D	11.72	33.277 D	25.303	269.0	0.400	5.22	84.8	6.4	0.84	8.4	0.01	0.00	0.04	0.05	126	
145	11.61	11.59	33.542	25.533	247.6	0.452	4.90	79.5	8.4	0.90	10.2	0.01	0.00	0.02	0.03	146	209
150 ISL	10.95 D	10.93	33.518 D	25.634	238.0	0.464	4.70	75.2	10.3	1.03	12.2	0.01	0.00	0.02	0.03	151	
170	10.14	10.12	33.617	25.852	217.5	0.510	3.80	59.8	18.8	1.59	20.8	0.00	0.00	0.01	0.03	171	208
198	9.44	9.42	33.853	26.153	189.3	0.567	2.90	45.0	26.1	1.91	25.2	0.00	0.00	0.00	0.02	199	207
200 ISL	9.38 D	9.36	33.868 D	26.175	187.3	0.570	2.86	44.3	26.5	1.92	25.4	0.00	0.00			201	
229	8.97	8.95	33.988	26.335	172.5	0.623	2.48	38.1	31.4	2.06	27.4	0.00	0.00			230	206
250 ISL	8.57 D	8.54	34.025 D	26.426	164.0	0.658	2.53	38.5	34.2	2.10	28.2	0.00	0.01			251	
268	8.17	8.14	34.022	26.485	158.6	0.687	2.58	38.9	36.7	2.12	28.7	0.00	0.02			269	205
300 ISL	7.47 D	7.44	34.007 D	26.575	150.2	0.736	2.53	37.6	42.5	2.18	30.0	0.00	0.01			302	
317	7.28	7.25	34.022	26.614	146.7	0.762	2.51	37.1	45.9	2.23	30.9	0.00	0.00			319	204
377	6.52	6.49	34.076	26.760	133.2	0.845	1.49	21.6	59.5	2.67	35.7	0.00	0.05			379	203
400 ISL	6.33 D	6.29	34.092 D	26.798	129.8	0.876	1.29	18.7	63.7	2.77	36.7	0.00	0.07			402	
444	5.93	5.89	34.117	26.869	123.3	0.931	1.02	14.6	71.2	2.91	38.1	0.00	0.09			447	202
500 ISL	5.47 D	5.43	34.176 D	26.972	113.8	0.998	0.65	9.2	81.8	3.08	40.0	0.00	0.10			503	
515	5.38	5.34	34.190	26.994	111.9	1.015	0.55	7.8	84.7	3.13	40.5	0.00	0.10			518	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0801 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 34.5 W	11/01/08	0453 UTC	4502 m	010 22 kn			1023.6 mb	15.0 C	13.7 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	15.59	15.59	33.277	24.515	340.9	0.000	5.74	101.0	1.7	0.42	0.0	0.00	0.00	0.17	0.05	0	
2	15.59	15.59	33.277	24.515	341.0	0.007	5.74	101.0	1.7	0.42	0.0	0.00	0.00	0.17	0.05	2	220
10	15.59	15.59	33.275	24.514	341.4	0.034	5.75	101.2	1.7	0.39	0.0	0.00	0.00	0.19	0.04	10	219
20	15.59	15.59	33.277	24.516	341.5	0.068	5.75	101.2	1.7	0.38	0.0	0.00	0.00	0.17	0.05	20	218
30	15.59	15.59	33.275	24.515	341.9	0.102	5.76	101.4	1.7	0.32	0.0	0.00	0.00	0.18	0.05	30	217
41	15.58	15.57	33.272	24.515	342.2	0.140	5.75	101.2	1.7	0.34	0.0	0.00	0.00	0.18	0.05	41	216
49	15.26	15.25	33.239	24.560	338.1	0.167	5.80	101.4	1.7	0.34	0.0	0.02	0.00	0.28	0.10	49	215
50 ISL	15.11 D	15.10	33.224 D	24.582	336.1	0.171	5.81	101.2	1.7	0.34	0.0	0.02	0.00	0.29	0.11	50	
60	14.74	14.73	33.176	24.625	332.3	0.204	5.85	101.2	1.8	0.35	0.0	0.02	0.01	0.38	0.17	60	214
71	14.02	14.01	33.104	24.721	323.4	0.240	5.84	99.5	2.1	0.41	0.6	0.10	0.07	0.35	0.18	71	213
75 ISL	13.81 D	13.80	33.102 D	24.763	319.5	0.253	5.80	98.3	2.4	0.45	1.2	0.13	0.05	0.31	0.18	75	
83	13.26	13.25	33.122	24.890	307.5	0.278	5.71	95.7	3.0	0.54	2.5	0.15	0.00	0.23	0.17	83	212
99	12.52	12.51	33.181	25.081	289.6	0.326	5.51	91.0	4.0	0.66	4.8	0.03	0.01	0.13	0.11	99	211
100 ISL	12.33 D	12.32	33.165 D	25.105	287.3	0.329	5.48	90.1	4.2	0.68	5.1	0.03	0.01	0.12	0.11	100	
120	11.22	11.21	33.352	25.456	254.2	0.383	4.83	77.7	9.9	1.10	12.7	0.01	0.00	0.05	0.05	121	210
125 ISL	10.99 D	10.97	33.368 D	25.510	249.2	0.395	4.66	74.6	11.4	1.19	14.2	0.01	0.00	0.04	0.05	126	
140	10.49	10.47	33.514	25.711	230.3	0.431	4.15	65.7	15.8	1.45	18.2	0.01	0.00	0.02	0.04	141	209
150 ISL	10.07 D	10.05	33.670 D	25.905	212.0	0.454	3.74	58.8	18.9	1.60	20.6	0.01	0.00	0.01	0.04	151	
169	9.52	9.50	33.813	26.108	193.0	0.492	3.10	48.2	24.2	1.82	24.2	0.00	0.00	0.01	0.03	170	208
199	8.87	8.85	33.923	26.299	175.2	0.547	2.90	44.4	28.8	1.91	26.1	0.00	0.00	0.00	0.03	200	207
200 ISL	8.84 D	8.82	33.938 D	26.315	173.7	0.549	2.90	44.4	29.0	1.91	26.1	0.00	0.00			201	
228	8.24	8.22	34.001	26.457	160.5	0.596	2.86	43.2	34.3	1.97	27.4	0.00	0.00			229	206
250 ISL	7.94 D	7.91	34.050 D	26.541	152.9	0.630	2.35	35.3	39.9	2.17	29.6	0.00	0.00			251	
268	7.74	7.71	34.081	26.594	148.0	0.657	1.86	27.8	44.5	2.36	31.6	0.00	0.00			269	205
300 ISL	7.30 D	7.27	34.110 D	26.680	140.2	0.703	1.38	20.4	50.9	2.56	33.7	0.00	0.00			302	
317	7.26	7.23	34.146	26.714	137.2	0.727	1.23	18.2	53.8	2.63	34.5	0.00	0.00			319	204
377	6.35	6.32	34.098	26.800	129.3	0.807	1.22	17.7	63.3	2.73	36.6	0.00	0.00			379	203
400 ISL	5.95 D	5.92	34.089 D	26.844	125.1	0.836	1.10	15.8	67.6	2.80	37.5	0.00	0.00			402	
438	5.72	5.68	34.130	26.905	119.6	0.883	0.86	12.3	74.7	2.93	38.9	0.00	0.00			441	202
500 ISL	5.38 D	5.34	34.185 D	26.990	112.0	0.955	0.54	7.6	84.5	3.08	40.3	0.00	0.00			503	
513	5.31	5.27	34.204	27.013	109.9	0.969	0.47	6.6	86.6	3.11	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 0801 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 57.1 N	117 17.2 W	07/01/08	2155 UTC	28 m	340 10 kn	340 03 04	1	1016.0 mb	14.7 C	11.9 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	13.68	13.68	33.156	24.829	311.1	0.000	6.12	103.6	6.7	0.67	3.9	0.16	0.62	1.57	0.61	0	
1	13.68	13.68	33.156 D	24.829	311.1	0.003	6.12	103.6	6.7	0.67	3.9	0.16	0.62	1.57	0.61	1	205
5	13.40	13.40	33.421	25.091	286.3	0.015	5.84	98.4	5.8	0.63	4.1	0.16	0.36	1.58	0.66	5	204
10	13.31	13.31	33.451	25.132	282.5	0.029	5.75	96.7	6.0	0.65	4.4	0.16	0.41	1.40	0.69	10	203
15	13.07	13.07	33.463	25.189	277.2	0.043	5.59	93.6	6.9	0.73	5.5	0.20	0.57	1.20	0.73	15	202
20 ISL	13.04 D	13.04	33.469 D	25.200	276.3	0.057	5.54	92.7	7.1	0.75	5.7	0.21	0.66	1.09	0.73	20	
24	13.02	13.02	33.470	25.205	275.9	0.068	5.50	92.0	7.3	0.77	5.9	0.21	0.74	1.01	0.73	24	201

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

PRIMARY PRODUCTIVITY CASTS

RV DAVID STARR JORDAN — CALCOFI CRUISE 0801 — STATION 76.7 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 43.6 N	123 37.6 W	24/01/08	1809 UTC	22 m	1222 - 1801 PST	1227 PST	1801 PST	158.0 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	14.21	33.080	24.661	5.90	100.9	2.4	0.34	0.0	0.00	0.34	0.13	87. A	0.22	0.24	0.23	0.02
8	14.20	33.075	24.659	5.90	100.9	2.3	0.33	0.0	0.00	0.34	0.11					
14	14.22	33.079	24.658	5.90	100.9	2.2	0.33	0.0	0.00	0.34	0.13	38.	3.4	3.4	3.4	0.02
23	14.21	33.078	24.660	5.90	100.9	2.2	0.32	0.1	0.00	0.35	0.10					
32	14.23	33.084	24.661	5.90	100.9	2.1	0.32	0.1	0.00	0.34	0.10	11.	3.1	2.9	3.0	0.02
38	14.29	33.099	24.660	5.88	100.7	2.1	0.32	0.0	0.00	0.33	0.11					
47	14.24	33.091	24.664	5.89	100.8	2.0	0.32	0.0	0.00	0.35	0.13	3.8	2.0	2.1	2.0	0.02
53	14.20	33.080	24.664	5.90	100.8	2.0	0.31	0.0	0.00	0.37	0.08					
62	14.26	33.089	24.659	5.83	99.8	1.9	0.32	0.0	0.00	0.32	0.11	1.3	1.1	1.0	1.1	0.02
77	13.92	33.037	24.690	5.92	100.6	2.0	0.35	0.1	0.02	0.33	0.10					
91	13.54	33.115	24.828	5.80	97.8	2.2	0.41	0.9	0.14	0.17	0.11	0.17	0.09	0.11	0.10	0.01

RV DAVID STARR JORDAN — CALCOFI CRUISE 0801 — STATION 80.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 8.9 N	121 8.9 W	19/01/08	1951 UTC	11 m	1245 - 1748 PST	1215 PST	1748 PST	343.5 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	12.63	33.575	25.362	6.07	100.7	7.8	0.77	6.5	0.07	1.92	0.52	76. A	19.2	17.1	18.1	0.13
7	12.65	33.574	25.358	6.07	100.8	7.8	0.74	6.4	0.06	1.98	0.50	38.	24.4	22.6	23.5	0.12
15	12.53	33.576	25.383	6.01	99.5	7.9	0.76	6.8	0.07	1.97	0.66	12.	10.9	11.1	11.0	0.10
23	12.27	33.592	25.445	5.62	92.6	9.2	0.89	9.1	0.15	0.97	0.49	4.0	2.2	2.5	2.3	0.06
31	11.34	33.682	25.689	4.49	72.5	14.9	1.33	16.3	0.22	0.31	0.30	1.3	0.26	0.26	0.26	0.03
38	10.76	33.747	25.844	3.69	58.9	19.0	1.59	20.4	0.06	0.17	0.20					
45	10.31	33.792	25.957	3.20	50.6	21.7	1.76	22.7	0.02	0.08	0.13	0.19	0.02	0.01	0.01	0.02

RV DAVID STARR JORDAN — CALCOFI CRUISE 0801 — STATION 80.0 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 28.6 N	122 32.2 W	23/01/08	1658 UTC	20 m	1218 - 1803 PST	1222 PST	1802 PST	182.7 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	13.52	32.937	24.692	6.01	101.2	2.1	0.36	0.0	0.01	0.45	0.15	86. A	0.50	0.44	0.47	0.03
12	13.52	32.940	24.695	6.01	101.2	2.0	0.36	0.0	0.01	0.41	0.13	40.	4.3	4.4	4.3	0.03
20	13.48	32.941	24.704	6.01	101.1	2.0	0.37	0.1	0.02	0.39	0.14					
29	12.56	32.873	24.833	6.05	99.8	3.1	0.49	1.6	0.11	0.45	0.17	11.	3.8	4.0	3.9	0.02
36	12.25	32.822	24.852	6.17	101.1	3.6	0.51	2.0	0.08	0.61	0.21					
42	12.06	32.805	24.875	6.18	100.8	3.9	0.52	2.4	0.09	0.57	0.22	4.0	2.8	3.0	2.9	0.03
50	11.99	32.813	24.895	6.14	100.0	4.1	0.57	3.0	0.12	0.45	0.20					
57	11.91	32.822	24.917	6.12	99.6	4.3	0.59	3.3	0.13	0.39	0.20	1.3	1.1	1.0	1.1	0.02
70	11.70	32.846	24.974	6.01	97.3	5.0	0.65	4.3	0.17	0.24	0.15					
81	11.33	32.893	25.078	5.93	95.3	5.9	0.73	5.6	0.17	0.19	0.13	0.20	0.05	0.08	0.07	0.02

RV DAVID STARR JORDAN — CALCOFI CRUISE 0801 — STATION 83.3 51.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 52.7 N	120 8.2 W	16/01/08	1904 UTC	22 m	1210 - 1745 PST	1210 PST	1745 PST	198.7 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
1	13.51	33.488	25.120	5.92	100.0	2.8	0.52	2.9	0.05	0.50	0.14	93. A	5.8	6.1	6.0	0.05
8	13.48	33.487	25.126	5.93	100.1	2.8	0.51	2.9	0.05	0.50	0.16					
10	13.36	33.496	25.157	5.87	98.9											
14	13.34	33.496	25.161	5.88	99.0	3.3	0.55	3.5	0.06	0.54	0.17	38.	8.8	8.5	8.6	0.05
18	12.86	33.529	25.282	5.57	92.9	6.6	0.72	6.4	0.09	1.16	0.42					
22	12.48	33.562	25.382	5.18	85.7	9.0	0.89	9.1	0.10	0.97	0.43					
31	10.96	33.682	25.758	3.57	57.2	17.5	1.54	19.1	0.04	0.17	0.19	11.	0.91	0.91	0.91	0.03
38	10.66	33.746	25.860	3.28	52.2	20.0	1.67	20.8	0.04	0.13	0.16					
46	10.65	33.748	25.864	3.28	52.2	20.2	1.67	20.8	0.03	0.13	0.18	4.0	0.36	0.39	0.38	0.02
54	10.59	33.766	25.889	3.23	51.4	20.8	1.69	21.2	0.04	0.14	0.16					
62	10.56	33.775	25.901	3.20	50.9	21.2	1.71	21.3	0.04	0.14	0.16	1.3	0.17	0.16	0.17	0.03
76	10.31	33.826	25.984	2.95	46.6	23.3	1.81	22.8	0.03	0.09	0.14					
91	10.13	33.862	26.043	2.80	44.1	24.7	1.88	23.6	0.02	0.07	0.13	0.17	0.03	0.02	0.03	0.02

A) INCUBATION LIGHT INTENSITIES WERE 96, 39, 10, 4.0, 1.3, 0.18 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV DAVID STARR JORDAN — CALCOFI CRUISE 0801 — STATION 83.3 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 54.5 N	122 7.3 W	22/01/08	1849 UTC	18 m	1215 - 1754 PST	1220 PST	1754 PST	277.9 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	12.79	32.905	24.812	6.18	102.5	3.1	0.44	1.0	0.04	0.72	0.18	84. A	6.7	6.9	6.8	0.07
10	12.72	32.896	24.819	6.19	102.5	3.1	0.44	1.0	0.04	0.50	0.15	43.	8.3	8.8	8.5	0.07
20	12.76	32.933	24.840	6.13	101.6	3.0	0.44	1.0	0.05	0.52	0.14					
27	12.74	32.947	24.855	6.07	100.6	3.1	0.46	1.4	0.07	0.79	0.27	10.	5.1	5.0	5.1	0.05
38	12.03	32.843	24.910	6.21	101.3	4.2	0.53	2.5	0.08	0.67	0.25	3.9	4.2	4.3	4.2	0.04
44	12.29	32.956	24.949	5.98	98.2	3.8	0.54	2.7	0.11	0.40	0.19					
51	12.53	33.082	25.001	5.71	94.3	3.1	0.54	2.7	0.09	0.17	0.13	1.3	0.46	0.49	0.47	0.02
62	11.90	33.051	25.096	5.61	91.4	4.3	0.66	4.7	0.07	0.11	0.09					
74	12.03	33.182	25.174	5.46	89.2	4.5	0.66	5.1	0.06	0.08	0.08	0.18	0.04	0.06	0.05	0.01

RV DAVID STARR JORDAN — CALCOFI CRUISE 0801 — STATION 86.7 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 29.7 N	119 19.0 W	15/01/08	1754 UTC	20 m	1205 - 1742 PST	1207 PST	1742 PST	331.7 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
1 B	13.56	33.487	25.109	6.14	103.8	4.2	0.47	2.0	0.03	0.99	0.23	93. A	10.6	10.1	10.4	0.07
12	13.24	33.497	25.182	6.05	101.7	5.1	0.57	3.8	0.09	0.76	0.32	40.	10.6	10.7	10.7	0.06
19	13.07	33.505	25.222	5.89	98.6	5.7	0.65	5.0	0.17	0.74	0.40					
29	12.76	33.534	25.306	5.69	94.7	7.1	0.83	6.9	0.34	0.71	0.48	11.	7.2	7.0	7.1	0.04
35	11.50	33.559	25.564	4.00	64.8	13.4	1.40	16.0	0.03	0.24	0.27					
42	11.23	33.607	25.651	3.78	60.9	15.0	1.48	17.2	0.01	0.14	0.21	4.0	0.39	0.43	0.41	0.01
49	10.83	33.653	25.758	3.64	58.2	16.7	1.58	18.7	0.01	0.07	0.14					
57	10.59	33.672	25.815	3.58	56.9	17.6	1.62	19.6	0.00	0.05	0.13	1.3	0.11	0.07	0.09	0.02
70	10.20	33.745	25.940	3.35	52.8	20.1	1.72	21.1	0.00	0.02	0.14					
82	9.87	33.812	26.048	3.11	48.7	23.0	1.83	22.9	0.00	0.01	0.08	0.18	0.01	0.03	0.02	0.01

B) THIS STATION WAS RE-OCCUPIED TO PERFORM THE PRIMARY PRODUCTIVITY ASSAY.

RV DAVID STARR JORDAN — CALCOFI CRUISE 0801 — STATION 86.7 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 39.3 N	121 1.9 W	20/01/08	1721 UTC	21 m	1210 - 1755 PST	1215 PST	1755 PST	224.5 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
1	12.62	33.064	24.968	6.19	102.4	3.7	0.50	1.8	0.03	0.57	0.14	93. A	3.4	3.1	3.2	0.04
10	12.61	33.064	24.970	6.19	102.4	3.6	0.51	1.9	0.03	0.61	0.15					
13	12.60	33.065	24.973	6.19	102.3	3.6	0.49	1.9	0.03	0.64	0.17	39.	7.9	8.1	8.0	0.04
22	12.60	33.080	24.985	6.14	101.5	3.6	0.50	1.8	0.04	0.69	0.21					
31	12.57	33.090	24.999	6.09	100.6	3.7	0.52	2.0	0.05	0.57	0.25	10.	3.8	4.0	3.9	0.02
38	12.51	33.092	25.012	6.03	99.5	3.9	0.55	2.6	0.08	0.40	0.28					
44	12.08	33.090 D	25.092	5.88	96.2	4.6	0.65	4.4	0.13	0.29	0.21	4.0	1.0	1.1	1.0	0.03
52	11.78	33.109	25.163	5.80	94.3	5.8	0.74	6.1	0.11	0.25	0.19					
59	11.57	33.196	25.270	5.60	90.6	7.2	0.85	8.3	0.12	0.19	0.18	1.3	0.37	0.33	0.35	0.03
72	12.20	33.477	25.371	5.53	90.9	8.6	0.92	9.4	0.35	0.18	0.20					
86	11.73	33.568	25.530	4.95	80.6	11.5	1.15	13.4	0.10	0.09	0.16	0.19	0.02	0.02	0.02	0.03

RV DAVID STARR JORDAN — CALCOFI CRUISE 0801 — 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 44.9 W	21/01/08	1811 UTC	19 m	1220 - 1806 PST	1226 PST	1806 PST	135.5 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	14.86	33.281	24.678	5.87	101.8	2.0	0.32	0.0	0.00	0.27	0.08	85. A	2.8	2.6	2.7	0.05
10	14.85	33.280	24.680	5.87	101.8	1.9	0.31	0.0	0.00	0.26	0.07					
11	14.85	33.281	24.680	5.88	102.0	1.8	0.31	0.0	0.00	0.25	0.07	41.	3.9	3.8	3.8	0.06
20	14.85	33.281	24.681	5.87	101.8	1.8	0.31	0.0	0.00	0.26	0.07					
28	14.85	33.280	24.680	5.87	101.8	1.9	0.31	0.0	0.00	0.28	0.08	10.	2.2	2.3	2.2	0.05
40	14.33	33.293	24.801	5.84	100.2	2.3	0.39	0.9	0.06	0.61	0.26	3.9	2.4	2.5	2.5	0.03
47	13.68	33.314	24.952	5.59	94.7	3.8	0.56	3.4	0.23	0.48	0.23					
53	12.50	33.330	25.199	5.24	86.6	6.3	0.81	7.7	0.10	0.20	0.13	1.4	0.26	0.29	0.28	0.02
65	11.62	33.381	25.405	4.63	75.1	10.5	1.17	13.3	0.10	0.14	0.14					
77	11.09	33.435	25.543	4.49	72.0	12.3	1.25	14.9	0.09	0.07	0.06	0.20	0.02	0.03	0.02	0.01

A) INCUBATION LIGHT INTENSITIES WERE 96, 39, 10, 4.0, 1.3, 0.18 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV DAVID STARR JORDAN — CALCOFI CRUISE 0801 — STATION 90.0 30.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 25.2 N	117 54.5 W	14/01/08	1739 UTC	17 m	1201 - 1735 PST	1201 PST	1735 PST	392.9 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 B	14.09	33.488	25.001	6.13	104.8	2.0	0.31	0.3	0.00	0.90	0.38	83. A	13.5	12.3	12.9	0.10
11	13.98	33.487	25.023	6.13	104.6	2.0	0.30	0.4	0.01	1.00	0.47	37.	18.8	18.8	18.8	0.10
18	13.88	33.479	25.038	5.97	101.6	3.2	0.37	1.1	0.06	0.75	0.41					
25	13.79	33.476	25.054	5.91	100.4	3.6	0.40	1.5	0.07	0.61	0.40	10.	5.6	5.6	5.6	0.04
36	13.61	33.478	25.093	5.69	96.3	4.2	0.48	2.7	0.15	0.39	0.46	3.9	1.4	1.5	1.4	0.03
48	12.61	33.491	25.302	4.66	77.3	8.4	0.95	10.3	0.16	0.27	0.37	1.3	0.35	0.42	0.39	0.04
59	11.56	33.658	25.631	3.30	53.6	16.1	1.48	17.8	0.02	0.11	0.19					
69	11.64	33.749	25.687	2.58	42.0	20.2	1.71	19.7	0.01	0.07	0.17	0.20	0.04	0.02	0.03	0.03

B) THIS STATION WAS RE-OCCUPIED TO PERFORM THE PRIMARY PRODUCTIVITY ASSAY.

RV DAVID STARR JORDAN — CALCOFI CRUISE 0801 — STATION 90.0 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 55.5 N	118 56.3 W	13/01/08	1742 UTC	20 m	1201 - 1735 PST	1204 PST	1735 PST	600.3 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	13.89	33.449	25.012	6.15	104.7	1.6	0.40	0.9	0.03	0.94	0.35	86. A	18.2	19.0	18.6	0.10
10	13.85	33.452	25.023	6.13	104.3	1.7	0.40	0.9	0.03	0.94	0.29					
12	13.85	33.452	25.023	6.13	104.3	1.7	0.38	0.9	0.03	1.03	0.34	40.	21.8	21.6	21.7	0.09
19	13.72	33.471	25.065	5.94	100.8	2.8	0.44	1.9	0.05	1.14	0.40					
30	13.65	33.477	25.084	5.79	98.1	3.2	0.48	2.6	0.06	0.79	0.36	10.	8.1	8.0	8.0	0.06
36	13.33	33.478	25.150	5.52	92.9	4.6	0.60	4.6	0.13	0.86	0.50					
42	13.14	33.482	25.191	5.36	89.9	5.4	0.71	6.0	0.15	0.69	0.53	4.0	3.0	3.1	3.0	0.05
50	11.65	33.557	25.536	4.02	65.3	12.8	1.29	15.6	0.03	0.22	0.25					
57	11.33	33.607	25.633	3.68	59.4	14.9	1.41	17.3	0.00	0.15	0.21	1.3	0.27	0.28	0.28	0.03
70	10.84	33.731	25.818	3.01	48.1	19.5	1.71	20.9	0.00	0.05	0.12					
81	10.67	33.778	25.885	2.75	43.8	21.6	1.80	22.2	0.00	0.03	0.12	0.20	0.00	0.06	0.03	0.03

RV DAVID STARR JORDAN — CALCOFI CRUISE 0801 — STATION 90.0 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 45.1 N	121 19.0 W	12/01/08	1735 UTC	14 m	1210 - 1746 PST	1214 PST	1744 PST	341.9 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	13.11	33.428	25.154	6.02	100.8	4.9	0.58	4.5	0.13	1.09	0.39	80. A	5.7	6.2	6.0	0.08
9	13.10	33.430	25.158	6.01	100.6	4.8	0.58	4.4	0.14	1.06	0.36	37.	13.2	13.9	13.6	0.07
22	13.09	33.428	25.159	6.01	100.6	4.7	0.58	4.4	0.14	1.05	0.38	9.0	10.0	9.9	9.9	0.07
30	13.09	33.429	25.160	5.99	100.3	4.8	0.58	4.4	0.14	1.14	0.41	3.7	5.2	5.3	5.3	0.05
40	12.90	33.460	25.221	5.80	96.7	5.8	0.72	5.9	0.26	0.59	0.30	1.2	1.5	1.4	1.5	0.04
50	12.07	33.528	25.434	5.10	83.6	9.8	1.03	11.6	0.23	0.21	0.18					
58	11.29	33.563	25.606	4.52	72.9	13.1	1.26	15.4	0.04	0.11	0.13	0.17	0.03	0.03	0.03	0.03

RV DAVID STARR JORDAN — CALCOFI CRUISE 0801 — STATION 90.0 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 44.9 N	123 20.1 W	11/01/08	1909 UTC	18 m	1215 - 1756 PST	1221 PST	1754 PST	188.8 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	14.74	33.237	24.670	5.93	102.6	1.7	0.33	0.0	0.00	0.38	0.12	84. A	3.8	3.7	3.8	0.06
11	14.73	33.237	24.672	5.91	102.2	1.6	0.56	0.0	0.00	0.39	0.12	39.	5.1	5.1	5.1	0.06
19	14.71	33.238	24.677	5.92	102.4	1.7	0.38	0.0	0.00	0.40	0.13					
27	14.56	33.222	24.697	5.93	102.2	1.6	0.39	0.0	0.00	0.48	0.16	10.	4.4	4.6	4.5	0.06
38	14.59	33.238	24.704	5.91	101.9	1.6	0.37	0.1	0.01	0.46	0.18	3.9	2.3	2.4	2.3	0.04
44	14.53	33.234	24.714	5.89	101.4	1.6	0.41	0.2	0.02	0.44	0.19					
51	14.41	33.224	24.731	5.85	100.5	1.6	0.39	0.4	0.04	0.34	0.16	1.3	0.68	0.62	0.65	0.03
62	13.87	33.216	24.838	5.70	96.8	2.6	0.41	2.0	0.12	0.21	0.12					
73	12.37	33.341	25.233	4.90	80.7	7.7	0.91	10.7	0.04	0.16	0.15	0.20	0.04	0.08	0.06	0.02

A) INCUBATION LIGHT INTENSITIES WERE 96, 39, 10, 4.0, 1.3, 0.18 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV DAVID STARR JORDAN — CALCOFI CRUISE 0801 — STATION 93.3 26.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 57.3 N	117 18.3 W	07/01/08	2012 UTC	11 m	1250 - 1730 PST	1155 PST	1725 PST	337.5 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
1	13.20	33.464	25.164	5.70	95.7	7.0	0.72	5.3	0.19	1.95	0.64	87. A	36.6	22.4	29.5	0.09
7	13.06	33.470	25.197	5.61	93.9	7.4	0.75	5.7	0.20	1.62	0.74	38.	11.5	10.5	11.0	0.18
16	13.02	33.472	25.206	5.56	93.0	7.5	0.76	5.8	0.20	1.31	0.71	11.	10.3	11.4	10.9	0.12
23	13.01	33.475	25.211	5.54	92.6	7.6	0.76	6.0	0.21	1.31	0.73	4.0	4.2	3.8	4.0	0.12
31	13.01	33.471	25.208	5.55	92.8	7.7	0.78	5.9	0.21	1.38	0.76	1.3	1.8	1.5	1.7	0.11
38	13.01	33.471	25.208	5.53	92.4	7.6	0.76	5.9	0.21	1.21	0.72					
45	13.00	33.472	25.211	5.51	92.1	7.7	0.77	5.9	0.21	1.10	0.73	0.19	0.13	0.19	0.16	0.10

RV DAVID STARR JORDAN — CALCOFI CRUISE 0801 — STATION 93.3 40.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 30.8 N	118 12.9 W	08/01/08	1915 UTC	11 m	1206 - 1733 PST	1159 PST	1731 PST	693.6 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	14.06	33.528	25.038	5.98	102.2	2.1	0.44	1.4	0.09	2.41	0.58	76. A	34.5	34.7	34.6	0.18
7	13.96	33.530	25.060	5.90	100.6	2.2	0.43	1.5	0.09	2.61	0.77	38.	47.5	37.0	42.3	0.29
10	13.96	33.526	25.057	5.95	101.5	2.1	0.44	1.5	0.09	2.66	0.81					
16	13.95	33.530	25.063	5.87	100.1	2.1	0.45	1.6	0.09	2.61	0.74	11.	22.8	22.0	22.4	0.09
23	13.89	33.525	25.072	5.78	98.4	2.5	0.48	2.3	0.10	2.22	0.70	4.0	6.7	7.0	6.8	0.07
30	13.24	33.516	25.197	5.32	89.4	5.9	0.73	6.0	0.18	1.04	0.49	1.5	1.3	1.1	1.3	0.05
38	12.64	33.517	25.316	4.82	80.0	9.0	0.97	9.7	0.23	0.40	0.36					
45	11.98	33.476	25.411	4.49	73.5	10.0	1.13	12.9	0.06	0.17	0.25	0.19	0.13	0.04	0.09	0.03

RV DAVID STARR JORDAN — CALCOFI CRUISE 0801 — STATION 93.3 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 30.9 N	120 14.8 W	09/01/08	1941 UTC	16 m	1238 - 1745 PST	1208 PST	1745 PST	224.9 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	13.86	33.306	24.908	5.91	100.5	2.8	0.46	1.7	0.08	0.64	0.20	83. A	6.5	6.3	6.4	0.14
10	13.84	33.307	24.913	5.91	100.4	2.8	0.45	1.7	0.08	0.64	0.21	38.	7.8	7.8	7.8	0.12
17	13.83	33.308	24.916	5.91	100.4	2.8	0.44	1.8	0.08	0.66	0.22					
24	13.83	33.309	24.917	5.90	100.2	2.8	0.44	1.9	0.08	0.67	0.21	10.	5.3	5.6	5.4	0.09
34	13.83	33.314	24.921	5.90	100.2	2.9	0.45	2.1	0.08	0.68	0.24	3.8	2.0	2.3	2.1	0.05
45	13.78	33.322	24.938	5.89	100.0	3.0	0.47	2.3	0.09	0.63	0.23	1.3	0.86	0.80	0.83	0.03
55	13.75	33.323	24.945	5.86	99.4	3.0	0.46	2.4	0.11	0.55	0.25					
66	13.30	33.418	25.110	5.82	97.8	4.4	0.59	4.4	0.20	0.35	0.21	0.18	0.03	0.07	0.05	0.05

RV DAVID STARR JORDAN — CALCOFI CRUISE 0801 — STATION 93.3 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 30.4 N	122 15.7 W	10/01/08	1618 UTC	28 m	1210 - 1759 PST	1216 PST	1755 PST	125.7 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
1	15.69	33.346 D	24.546	5.78	102.0	1.6	0.31	0.1	0.00	0.19	0.06	95. A	0.07	0.13	0.10	0.13
10	15.69	33.346	24.546	5.73	101.1	1.5	0.30	0.1	0.00	0.19	0.06					
18	15.69	33.347	24.547	5.73	101.1	1.5	0.29	0.1	0.00	0.19	0.06	37.	2.5	2.5	2.5	0.03
29	15.69	33.347	24.548	5.73	101.1	1.5	0.29	0.1	0.00	0.20	0.06					
41	15.68	33.343	24.547	5.73	101.1	1.5	0.29	0.2	0.00	0.22	0.08	11.	1.9	2.1	2.0	0.04
50	15.57	33.334	24.565	5.74	101.0	1.5	0.28	0.1	0.00	0.26	0.11					
59	15.46	33.313	24.574	5.75	101.0	1.5	0.30	0.2	0.00	0.28	0.10	3.9	1.0	1.1	1.1	0.02
69	15.38	33.298	24.580	5.76	101.0	1.3	0.30	0.2	0.00	0.25	0.10					
79	15.29	33.292	24.596	5.76	100.8	1.3	0.31	0.3	0.00	0.28	0.13	1.3	0.46	0.43	0.44	0.02
91	14.94	33.269	24.654	5.80	100.7	1.3	0.33	0.5	0.02	0.20	0.09					
102	14.74	33.303	24.724	5.73	99.1	1.5	0.38	1.1	0.08	0.15	0.09					
115	14.23	33.268	24.805	5.70	97.6	2.1	0.43	1.9	0.14	0.12	0.10	0.18	0.03	0.03	0.03	0.02

A) INCUBATION LIGHT INTENSITIES WERE 96, 39, 10, 4.0, 1.3, 0.18 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 44.9	122 01.4	01/26	1622	1643	389	213	1354	57
66.7	55.0	36 37.2	122 24.8	01/26	2235	2256	500	209	4154	156
76.7	55.0	34 53.4	121 11.9	01/29	0132	0154	436	216	179	179
76.7	60.0	34 43.4	121 32.8	01/29	0544	0606	482	210	52	52
76.7	70.0	34 23.2	122 14.8	01/24	2355	0016	454	208	82	82
76.7	80.0	34 03.3	122 56.4	01/24	1725	1746	448	212	16	16
76.7	90.0	33 43.3	123 38.1	01/24	1121	1142	430	217	28	28
76.7	100.0	33 23.1	124 19.2	01/24	0453	0515	447	214	103	103
80.0	51.0	34 26.8	120 31.4	01/19	0457	0503	131	55	30	30
80.0	55.0	34 19.1	120 48.0	01/19	0837	0859	439	213	32	32
80.0	60.0	34 09.0	121 08.9	01/19	1318	1339	426	215	38	38
80.0	70.0	33 49.0	121 50.7	01/23	0106	0127	449	212	25	25
80.0	80.0	33 29.1	122 31.9	01/23	0630	0652	451	216	33	33
80.0	90.0	33 09.0	123 13.2	01/23	1558	1620	435	215	44	44
80.0	100.0	32 49.1	123 54.3	01/23	2230	2252	430	215	65	65
81.8	46.9	34 16.6	120 01.6	01/18	2351	0013	415	214	46	46
83.3	40.6	34 13.4	119 24.5	01/18	1655	1658	54	21	56	56
83.3	42.0	34 10.7	119 30.5	01/18	1854	1903	183	85	55	55
83.3	51.0	33 52.7	120 07.9	01/16	1009	1017	180	76	39	39
83.3	55.0	33 44.8	120 24.5	01/16	1523	1545	446	215	22	22
83.3	60.0	33 34.7	120 45.3	01/19	1934	1955	439	209	82	82
83.3	70.0	33 14.7	121 26.6	01/22	1806	1828	446	212	34	34
83.3	80.0	32 54.6	122 07.7	01/22	1145	1207	437	213	14	14
83.3	90.0	32 34.6	122 48.8	01/22	0543	0605	433	215	32	32
83.3	100.0	32 14.7	123 29.6	01/21	2329	2351	435	214	83	83
83.3	110.0	31 54.6	124 10.2	01/21	1712	1733	450	213	18	18
85.4	35.8	34 00.5	118 50.0	01/14	2348	2351	71	28	56	56
86.7	33.0	33 53.4	118 29.3	01/14	1814	1819	99	42	61	61
86.7	35.0	33 49.4	118 37.7	01/14	2102	2124	446	216	76	76
86.7	40.0	33 39.4	118 58.4	01/15	0416	0437	434	213	150	150
86.7	45.0	33 29.4	119 19.0	01/15	0834	0856	424	215	47	47
86.7	50.0	33 19.4	119 39.8	01/15	1453	1459	127	56	63	63
86.7	60.0	32 59.4	120 21.0	01/20	0225	0247	442	211	63	63
86.7	70.0	32 39.4	121 02.0	01/20	0800	0822	406	216	39	39
86.7	80.0	32 19.4	121 42.9	01/20	1551	1613	426	213	47	47
86.7	90.0	31 59.4	122 23.6	01/20	2137	2158	410	217	46	46
86.7	100.0	31 39.4	123 04.2	01/21	0351	0413	423	215	47	47
86.7	110.0	31 19.4	123 44.6	01/21	0857	0919	436	213	202	202
86.8	32.5	33 53.3	118 26.7	01/14	1637	1639	47	13	21	21
88.5	30.1	33 40.5	118 05.1	01/14	1236	1238	42	13	24	24
90.0	27.7	33 29.6	117 44.8	01/14	0641	0644	59	19	34	34
90.0	28.0	33 29.1	117 46.1	01/14	0535	0541	126	56	32	32
90.0	30.0	33 25.1	117 54.4	01/14	0105	0127	414	213	70	70
90.0	35.0	33 15.1	118 15.0	01/13	2006	2027	430	208	128	58
90.0	37.0	33 11.1	118 23.2	01/13	1706	1727	441	210	61	61
90.0	45.0	32 55.1	118 56.2	01/13	1118	1139	442	210	27	27
90.0	53.0	32 39.1	119 29.0	01/13	0522	0544	444	213	34	34
90.0	60.0	32 25.0	119 57.6	01/13	0003	0024	457	213	77	77
90.0	70.0	32 05.1	120 38.4	01/12	1702	1724	467	214	26	26
90.0	80.0	31 45.0	121 19.0	01/02	0813	0835	453	210	38	38
90.0	90.0	31 25.0	121 59.4	01/12	0219	0240	491	205	39	39
90.0	100.0	31 05.0	122 39.7	01/11	1925	1947	444	215	437	437
90.0	110.0	30 45.0	123 20.0	01/11	1238	1260	449	212	27	27
90.0	120.0	30 25.0	123 59.9	01/11	0528	0550	440	214	39	39
93.3	26.7	32 57.4	117 18.4	01/07	1306	1312	137	56	37	37
93.3	28.0	32 55.1	117 23.7	01/08	0001	0022	429	215	121	121
93.3	30.0	32 50.8	117 31.9	01/08	0321	0343	442	211	86	86
93.3	35.0	32 40.8	117 52.4	01/08	0800	0822	444	222	45	45
93.3	40.0	32 30.9	118 12.6	01/08	1229	1251	454	214	31	31
93.3	45.0	32 20.8	118 33.3	01/08	1655	1717	439	211	41	41
93.3	50.0	32 10.9	118 53.5	01/08	2118	2140	430	217	65	65
93.3	55.0	32 00.8	119 13.9	01/09	0152	0213	423	214	47	47
93.3	60.0	31 50.8	119 34.2	01/09	0613	0635	428	214	61	61
93.3	70.0	31 30.9	120 14.6	01/09	1252	1313	429	215	61	61
93.3	80.0	31 10.8	120 55.2	01/09	1912	1933	463	214	56	56
93.3	90.0	30 50.8	121 35.3	01/10	0146	0208	464	211	43	43
93.3	100.0	30 30.8	122 15.4	01/10	0654	0715	435	213	83	83
93.3	110.0	30 10.8	122 55.3	01/10	1527	1549	461	214	39	39
93.3	120.0	29 50.9	123 35.0	01/10	2217	2239	464	215	43	43
93.4	26.4	32 57.1	117 17.2	01/07	1413	1416	56	20	72	72