UNIVERSITY OF CALIFORNIA, SAN DIEGO SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

CalCOFI Cruise 0602
4 – 20 February 2006

CC Reference 08-01
19 May 2008

UNIVERSITY OF CALIFORNIA, SAN DIEGO

SCRIPPS INSTITUTION OF OCEANOGRAPHY

LA JOLLA, CALIFORNIA 92093-0227

PHYSICAL, CHEMICAL AND BIOLOGICAL DATA

CalCOFI Cruise 0602
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INTRODUCTION

The data presented in this report were collected during cruise 0602* 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 for dissolved silicate, phosphate, nitrate and nitrite using procedures similar to those described in Gordon et al., 1993. 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 59.10 µCi of ^{14}C as $NaHCO_3$ (200 µl of 335.90 µCi/ml stock) prepared in a 0.3 g/liter solution of sodium carbonate (Fitzwater *et al*., 1982). An adjustment to the specific activity was made to account for the 10 ml aliquot removed for DOC-14 analysis on CCE-LTER samples. 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.

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.

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 0602

1. CalCOFI Cruise 0602 track and station positions.

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

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

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

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

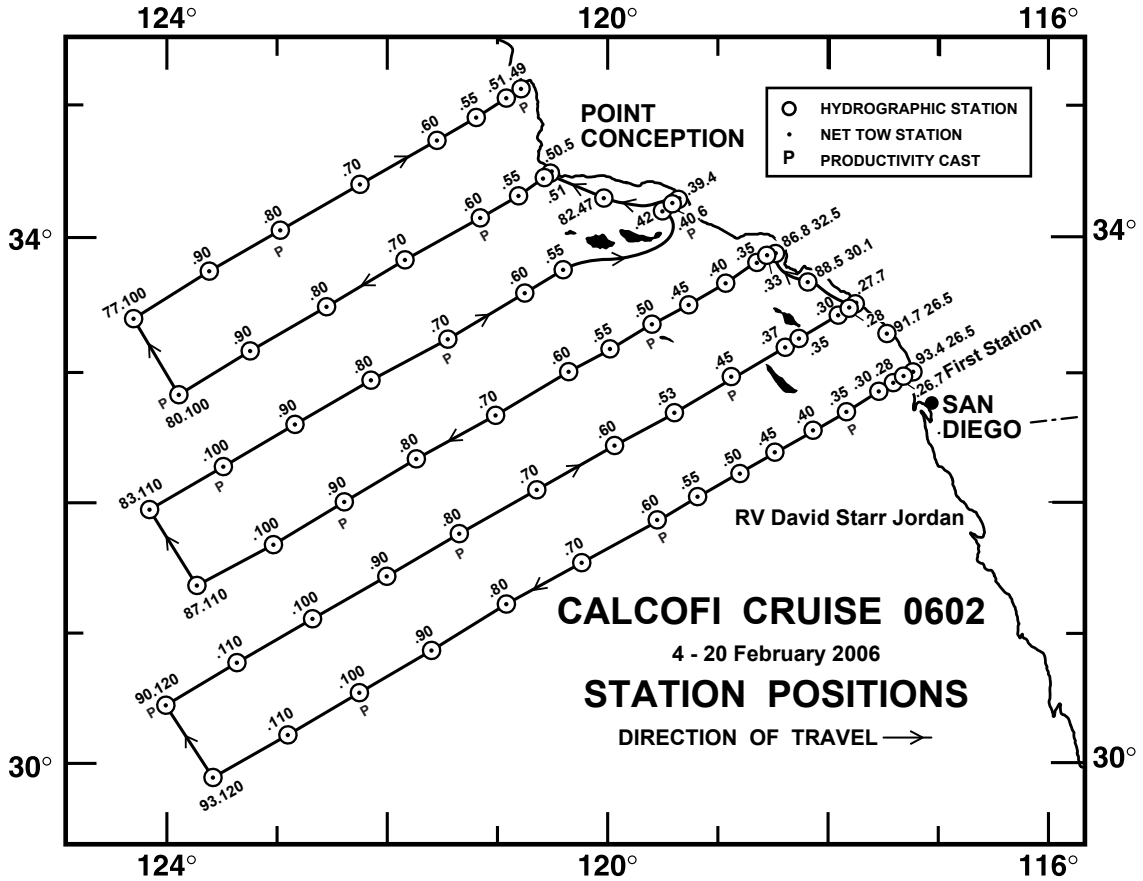

FIGURE 1

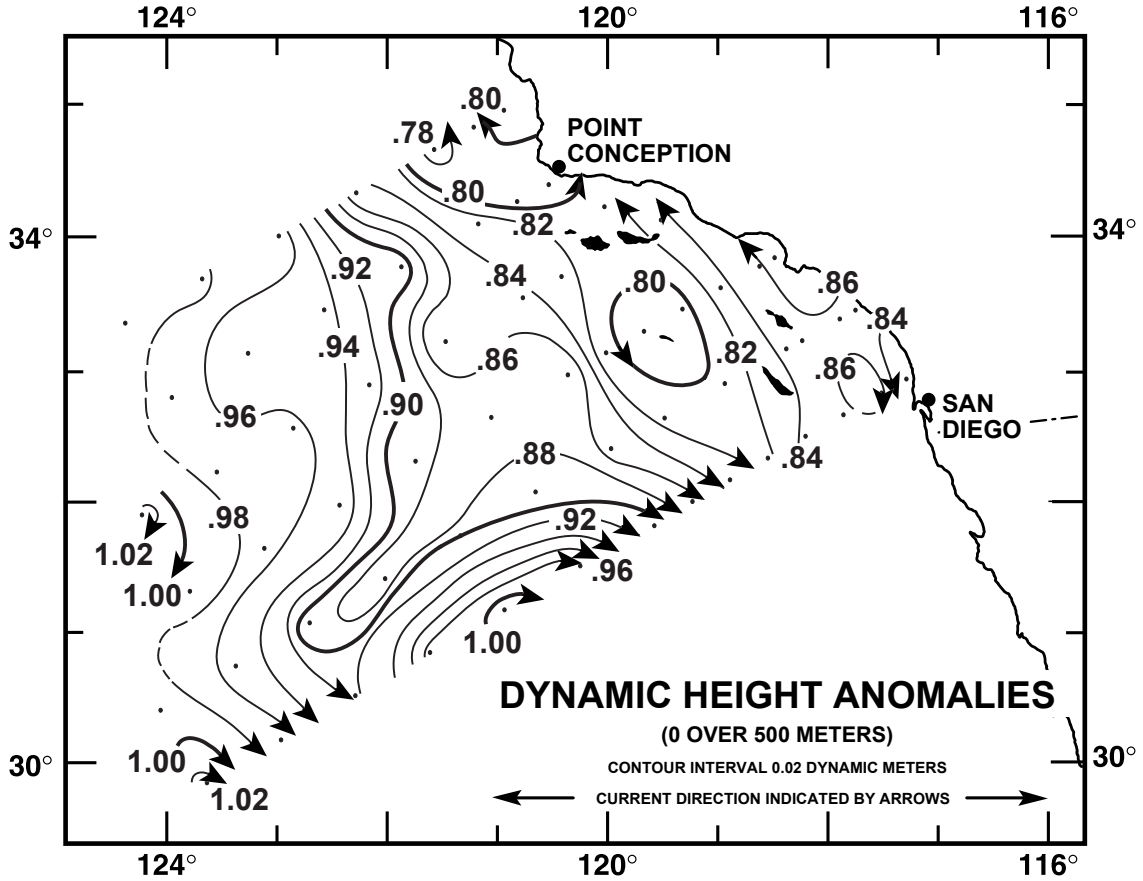

FIGURE 2

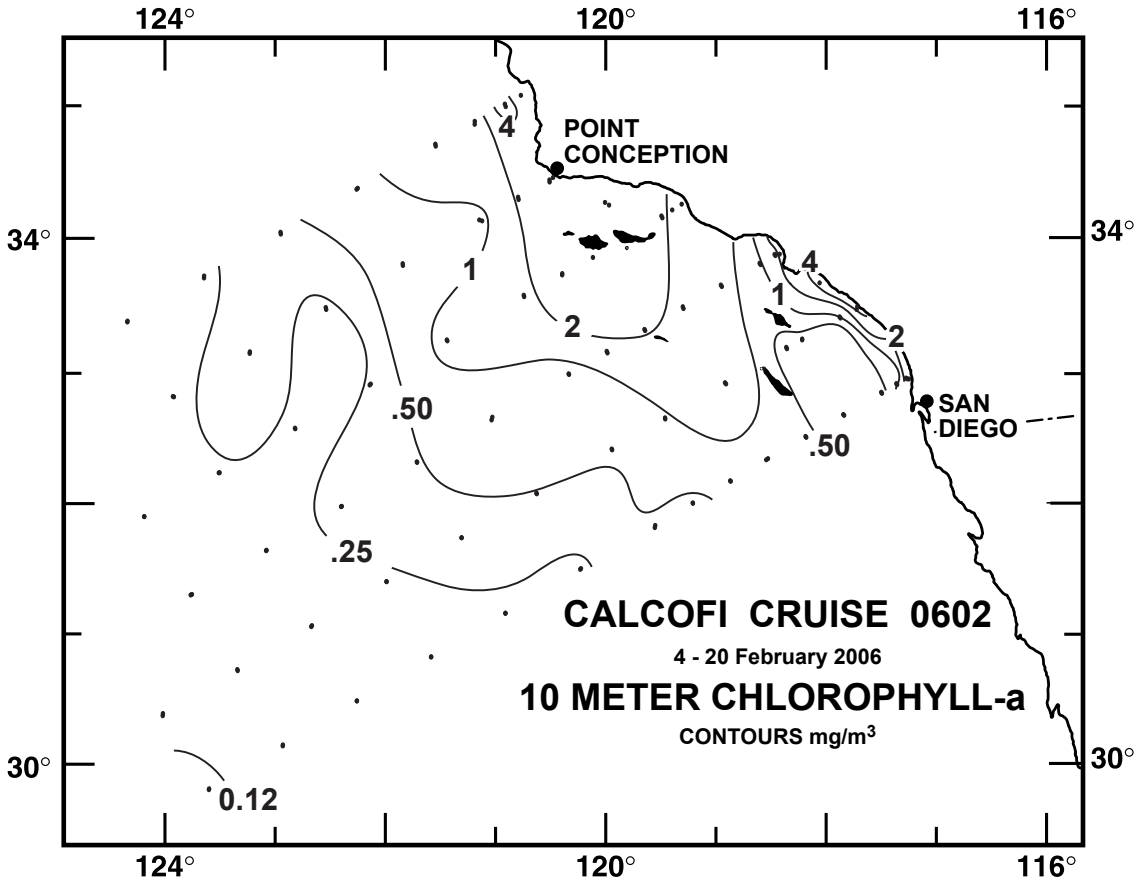

FIGURE 3A

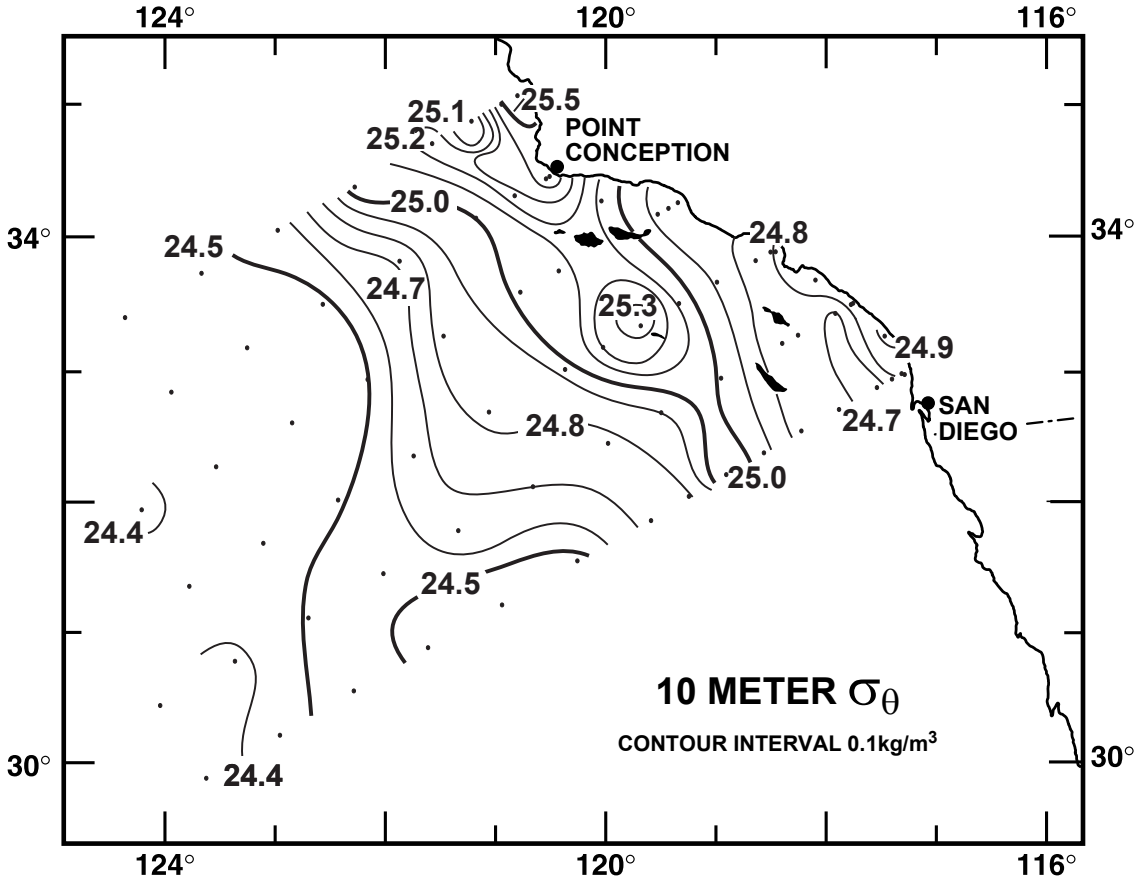

FIGURE 3B

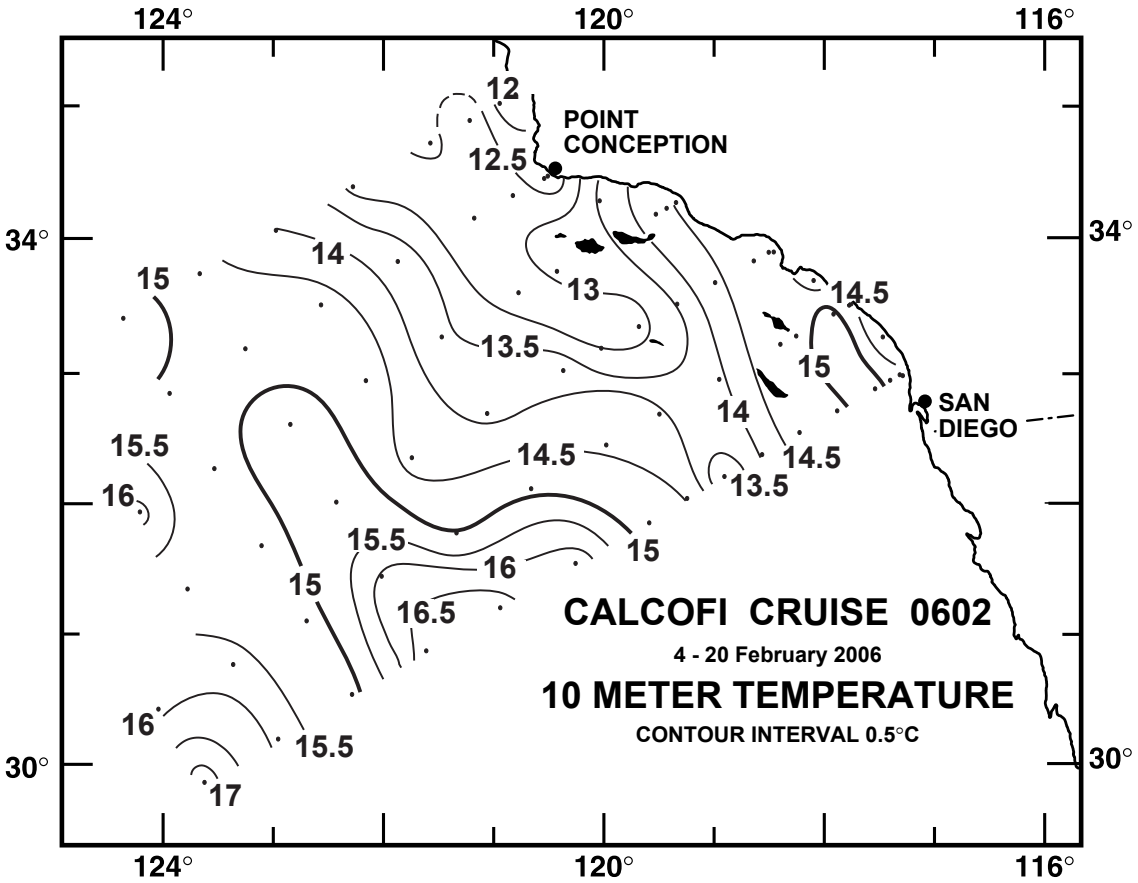

FIGURE 3C

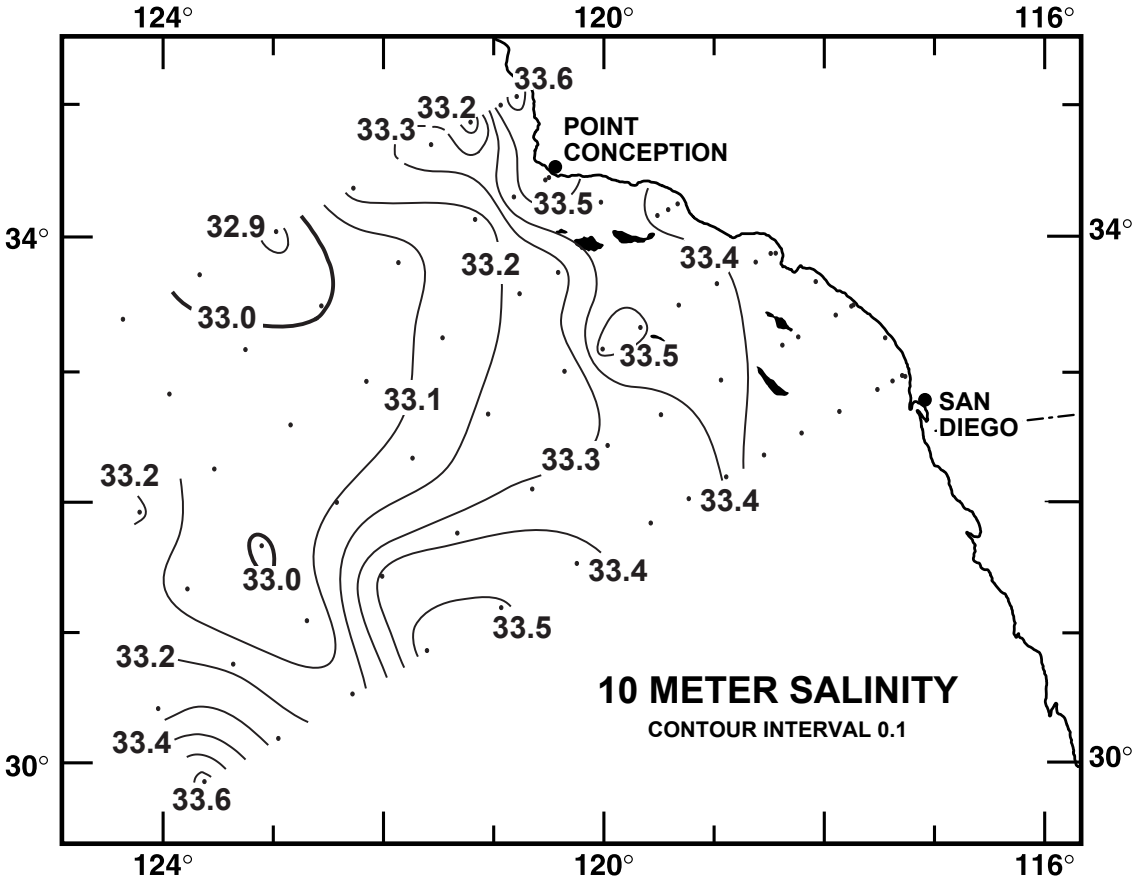

FIGURE 3D

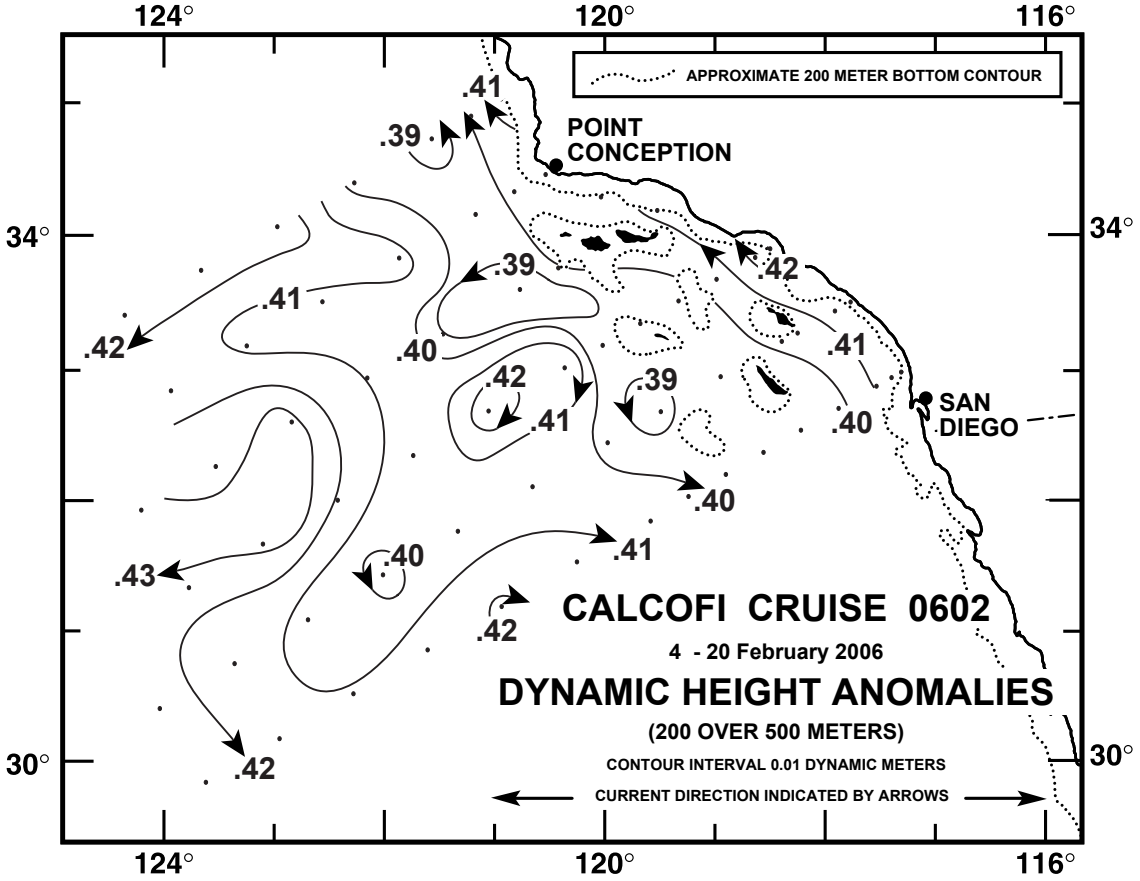

FIGURE 4A

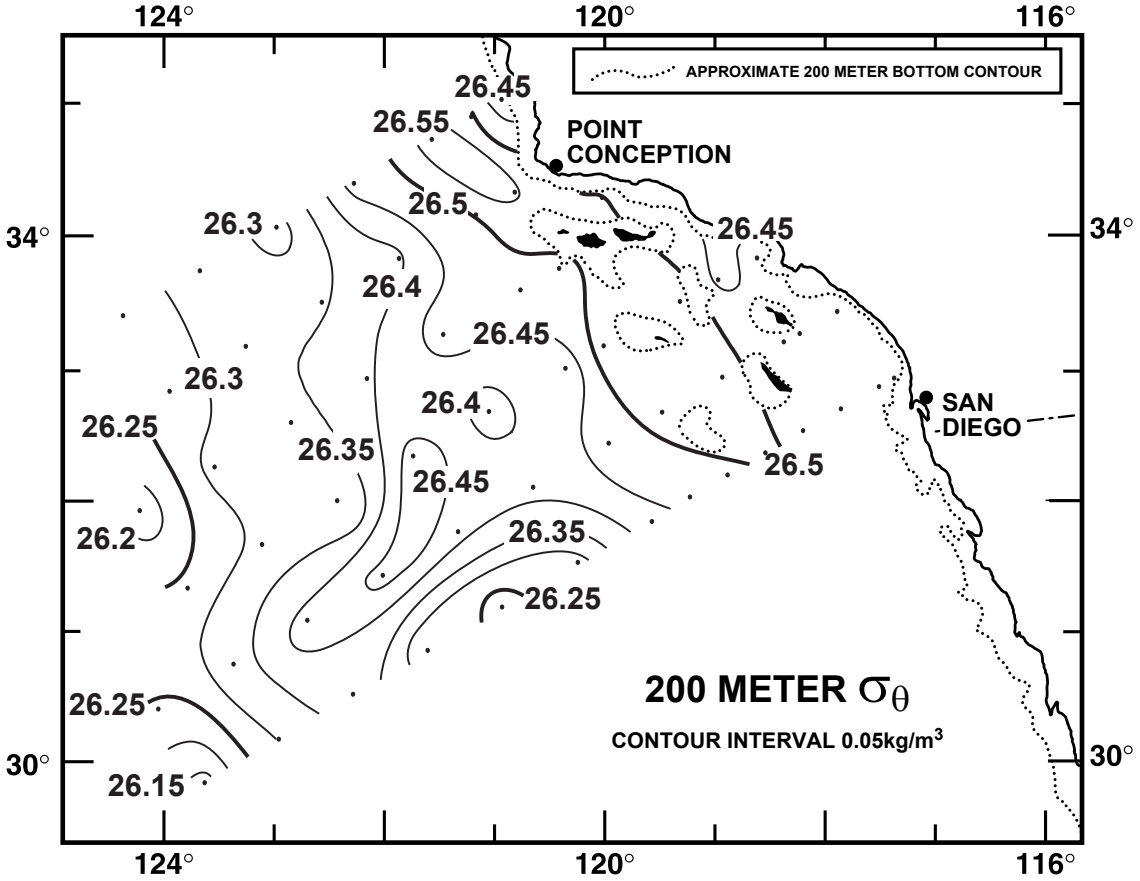

FIGURE 4B

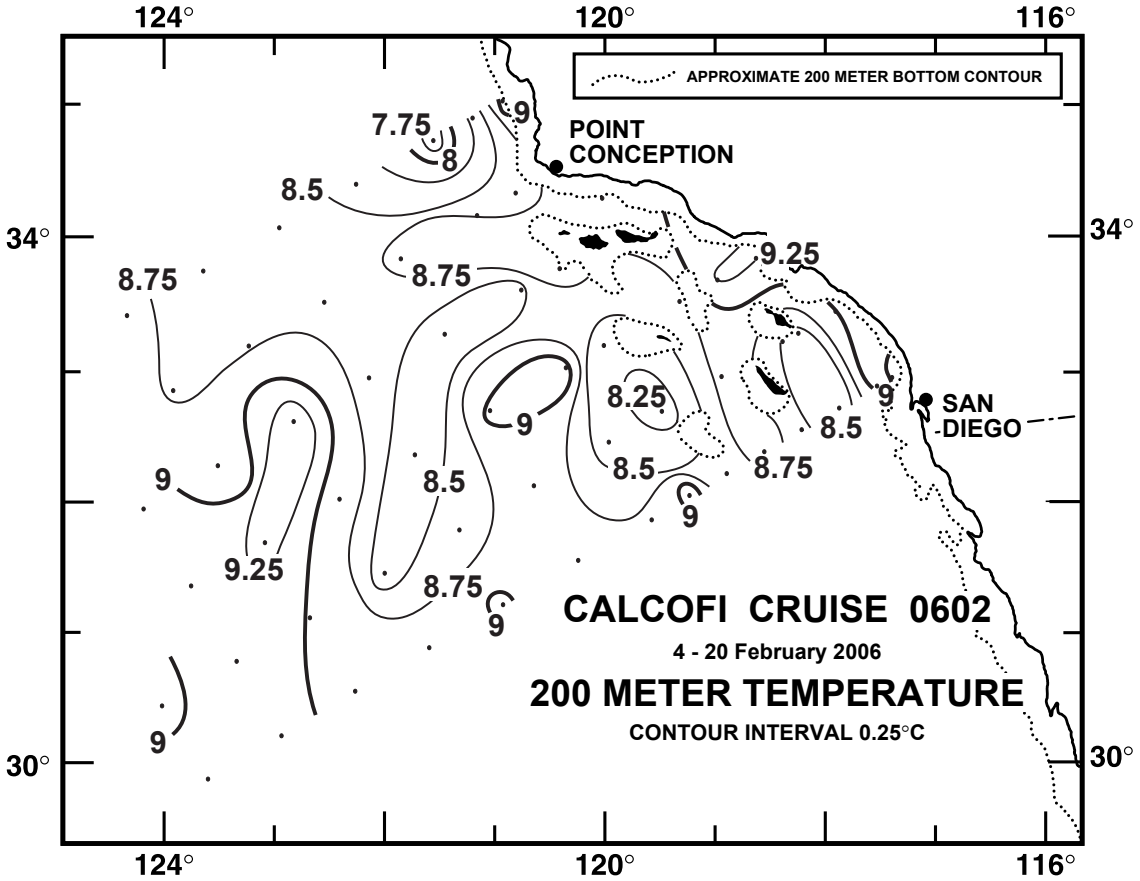

FIGURE 4C

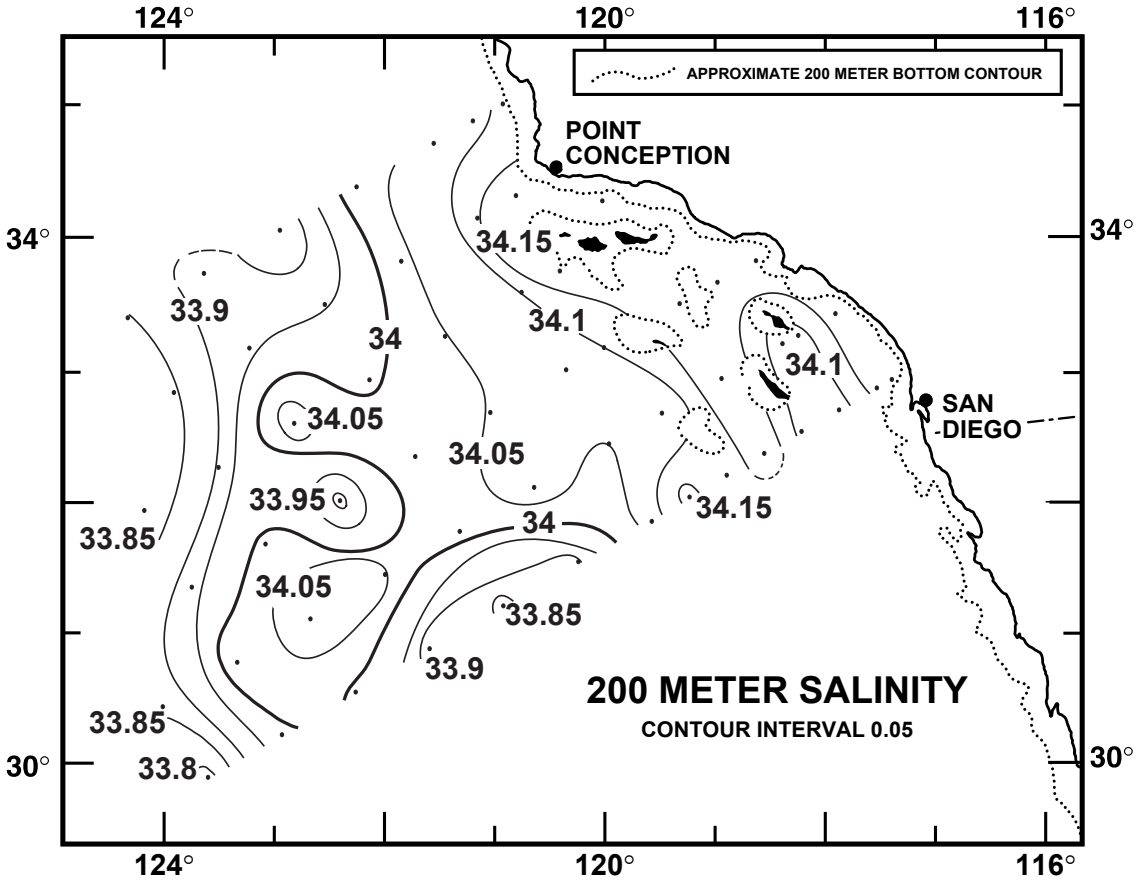

FIGURE 4D

CALCOFI CRUISE 0602

7 - 10 February 2006

POTENTIAL DENSITY (σ_θ) ALONG CALCOFI LINE 90

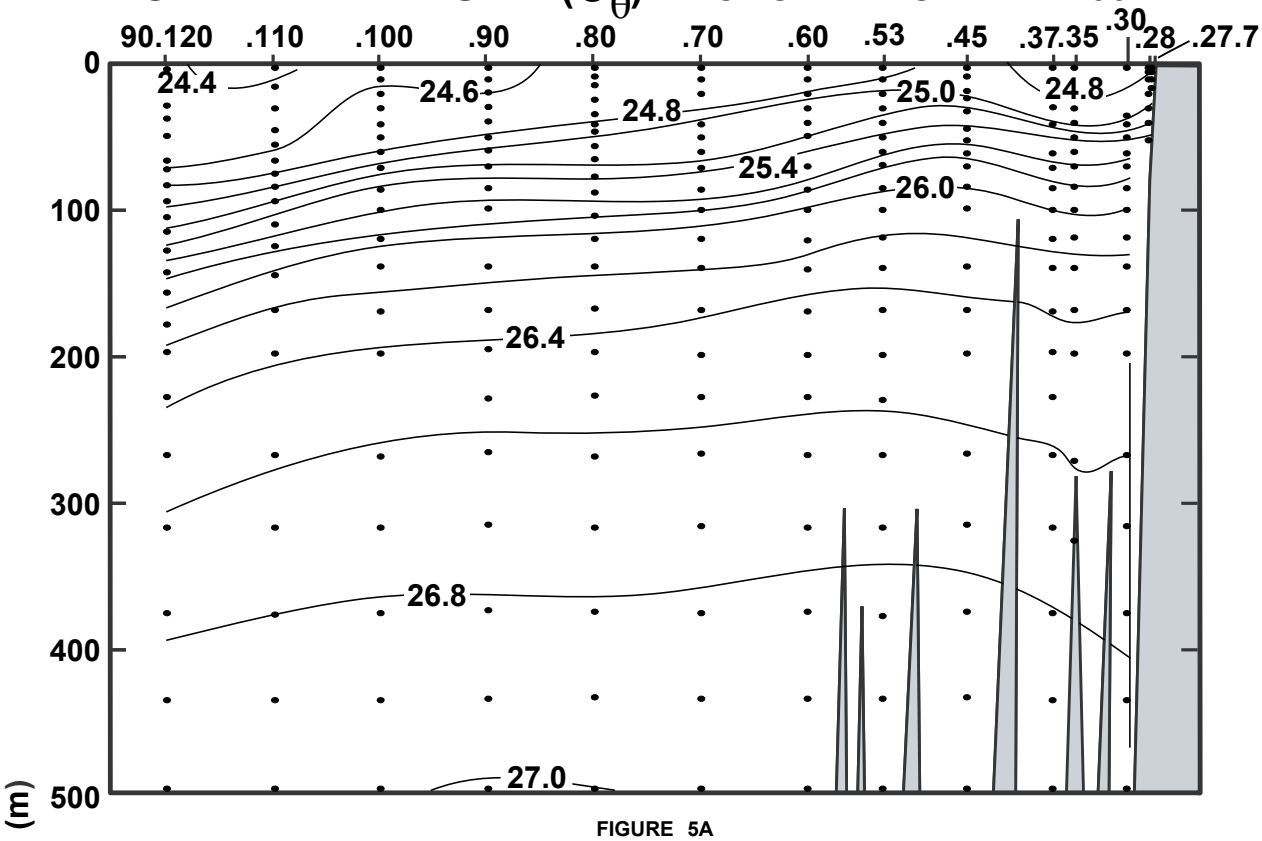

FIGURE 5A

TEMPERATURE (^{o}C) ALONG CALCOFI LINE 90

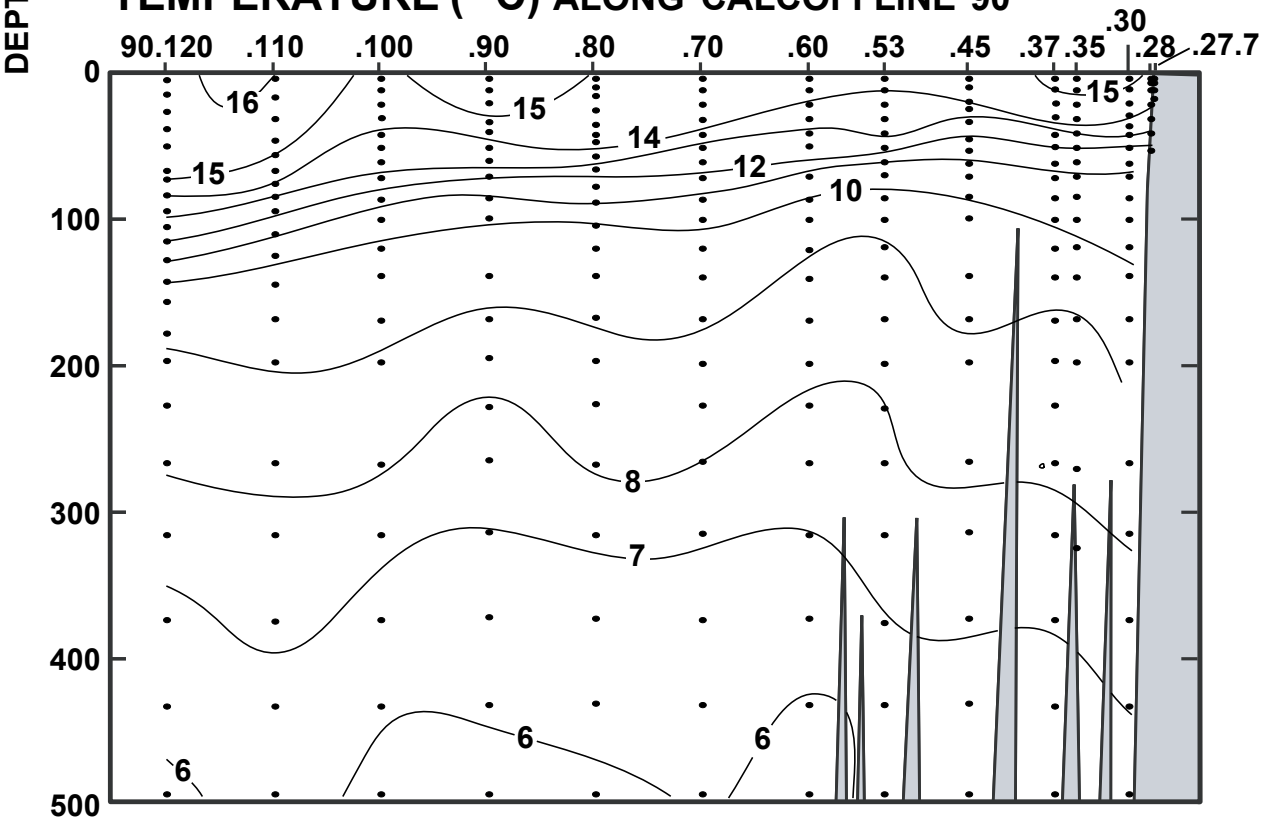

FIGURE 5B

CALCOFI CRUISE 0602

7- 10 February 2006

SALINITY ALONG CALCOFI LINE 90

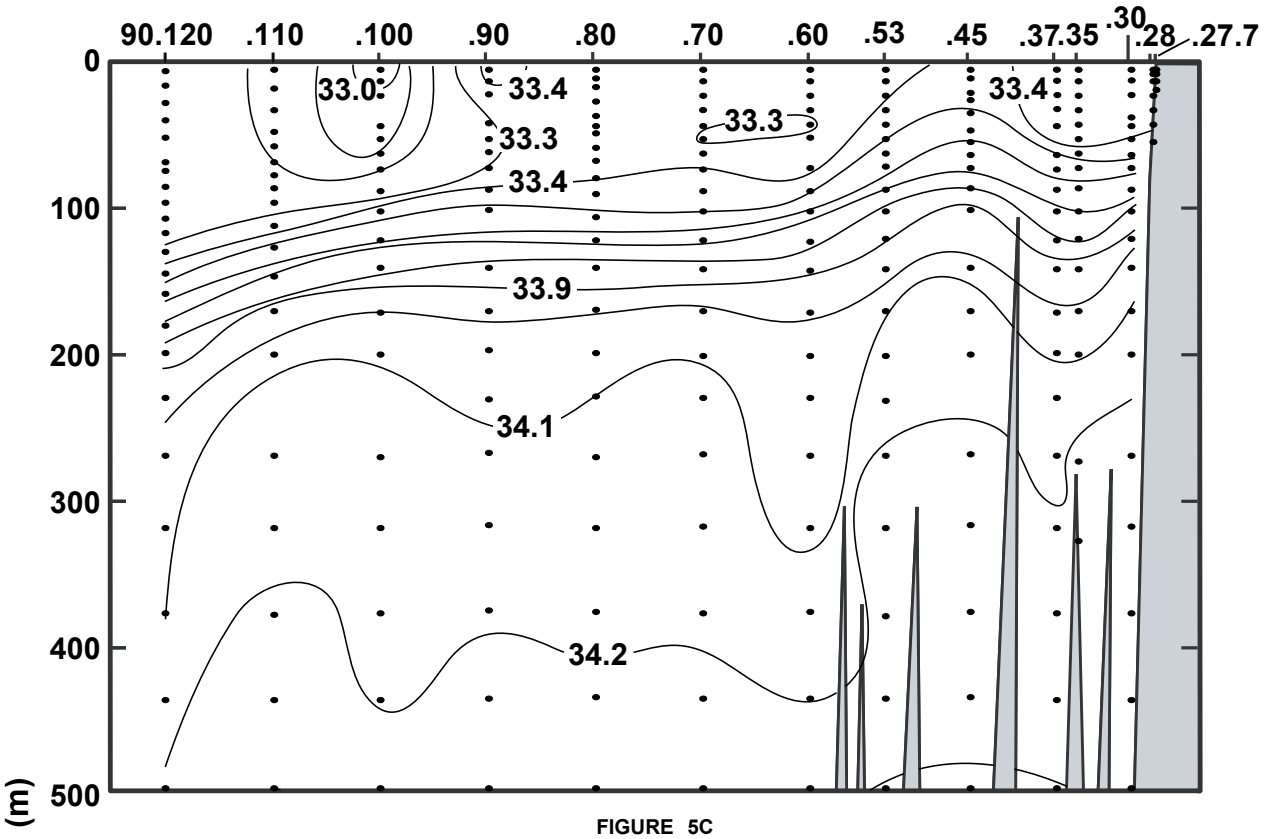

FIGURE 5C

SILICATE (μM/L) ALONG CALCOFI LINE 90

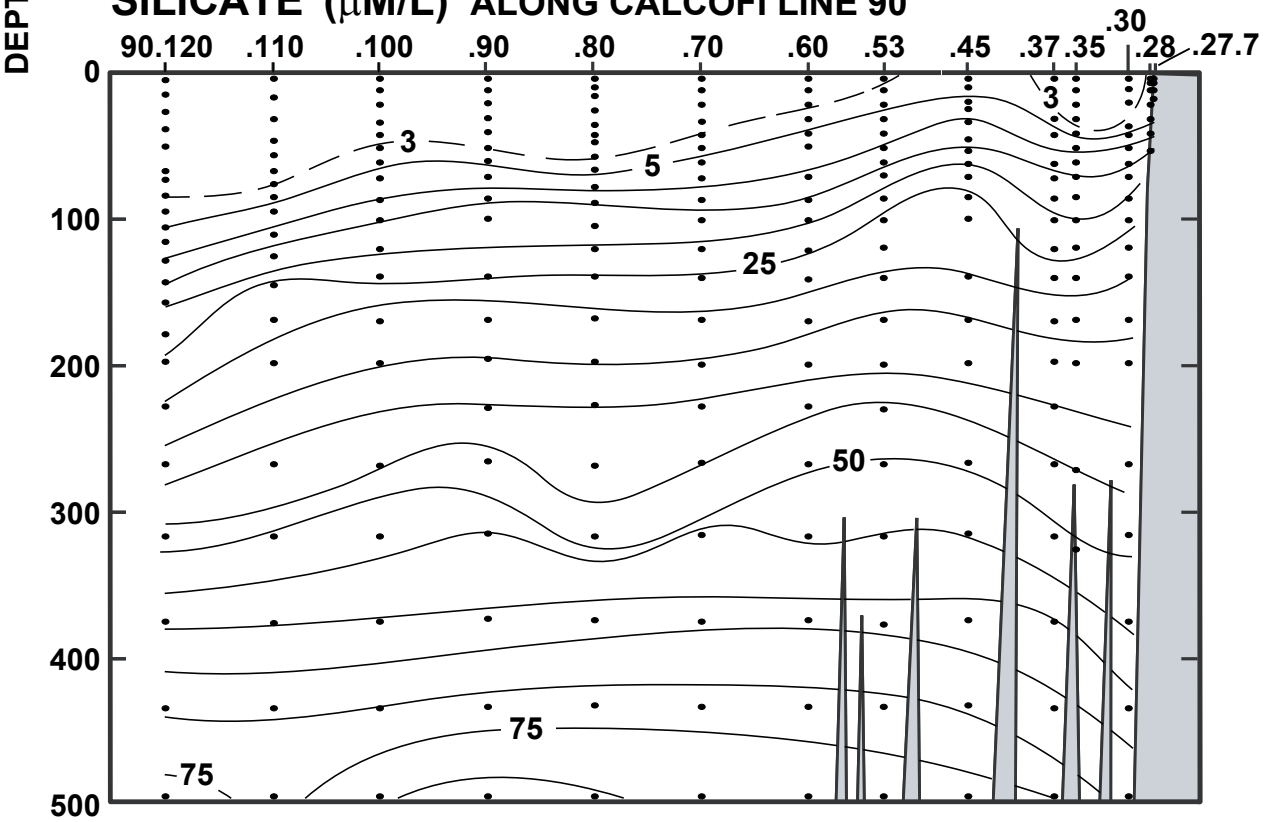

FIGURE 5D

CALCOFI CRUISE 0602

7- 10 February 2006

NITRATE (μM/L) ALONG CALCOFI LINE 90

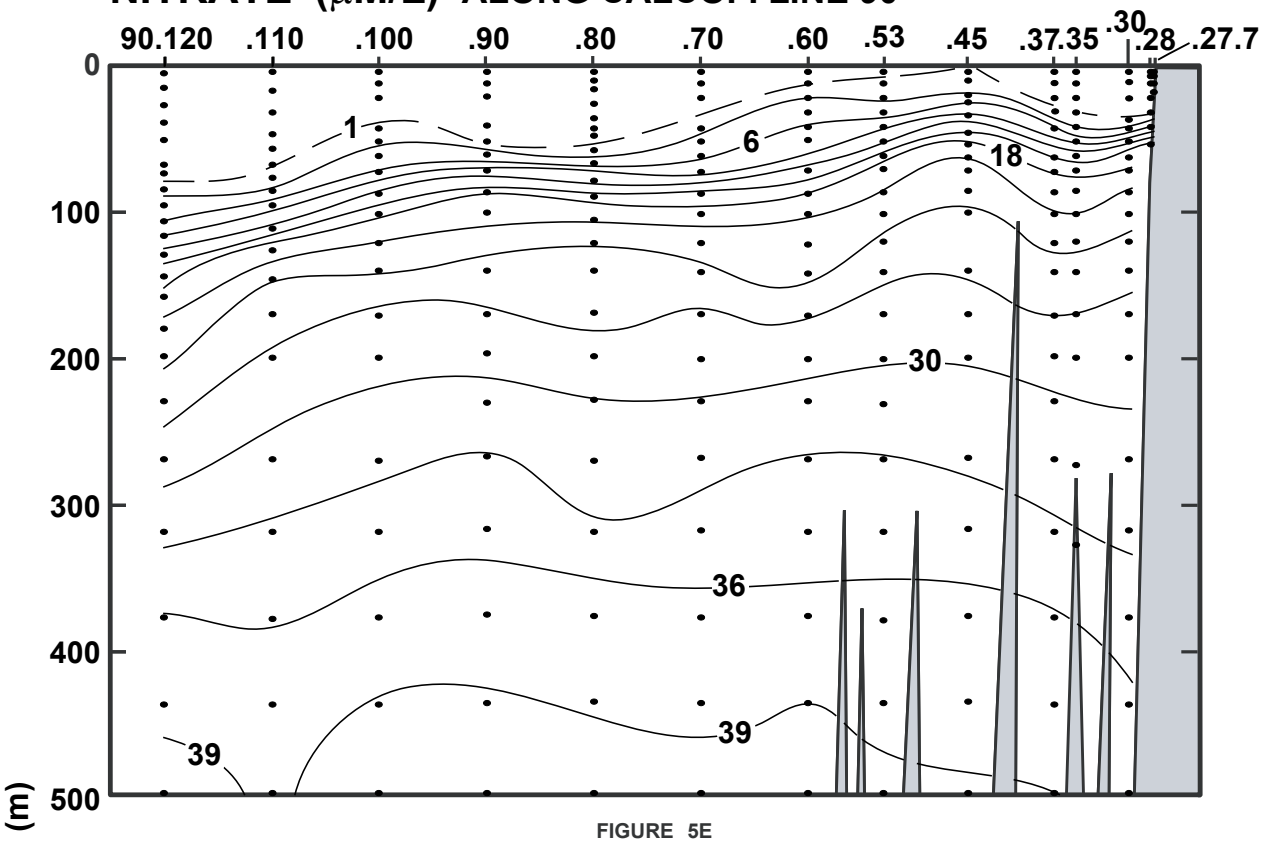

FIGURE 5E

PHOSPHATE (μM/L) ALONG CALCOFI LINE 90

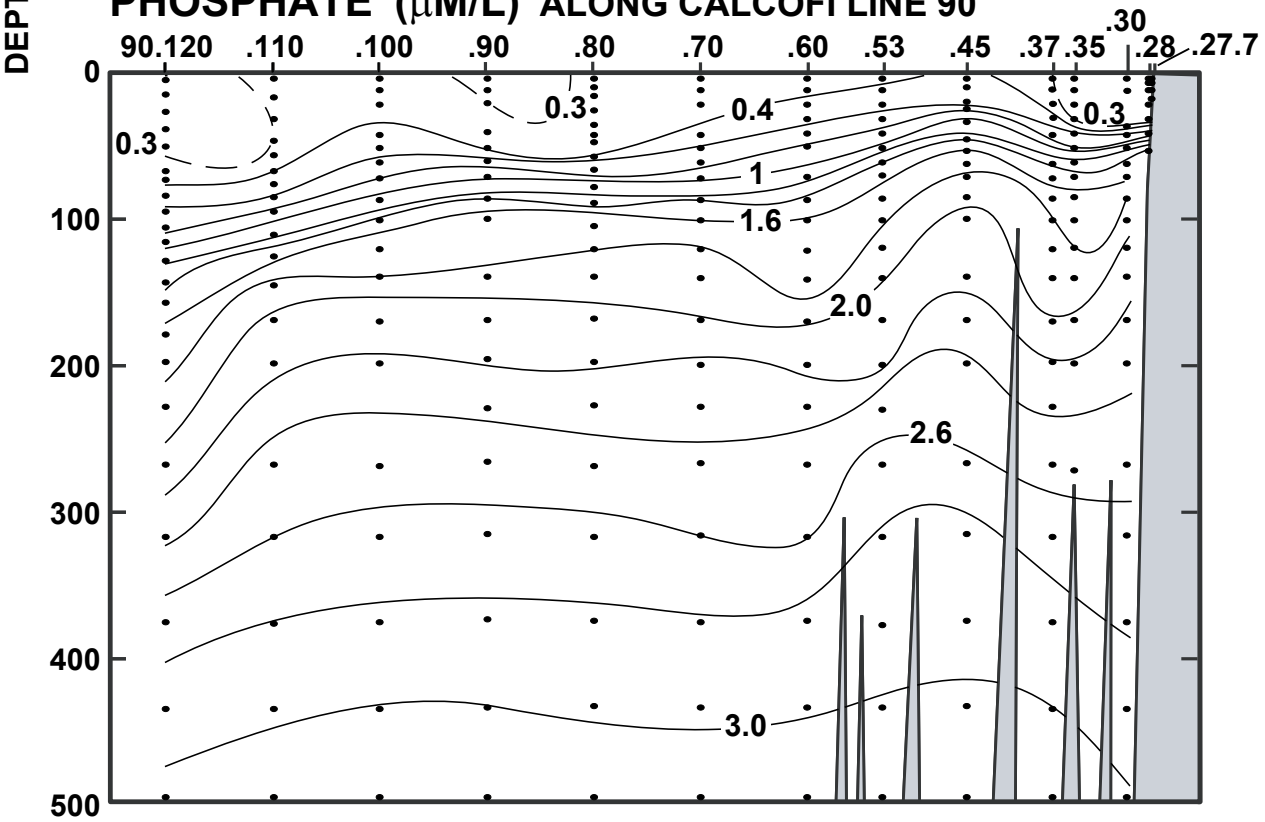

FIGURE 5F

CALCOFI CRUISE 0602

7 - 10 February 2006

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

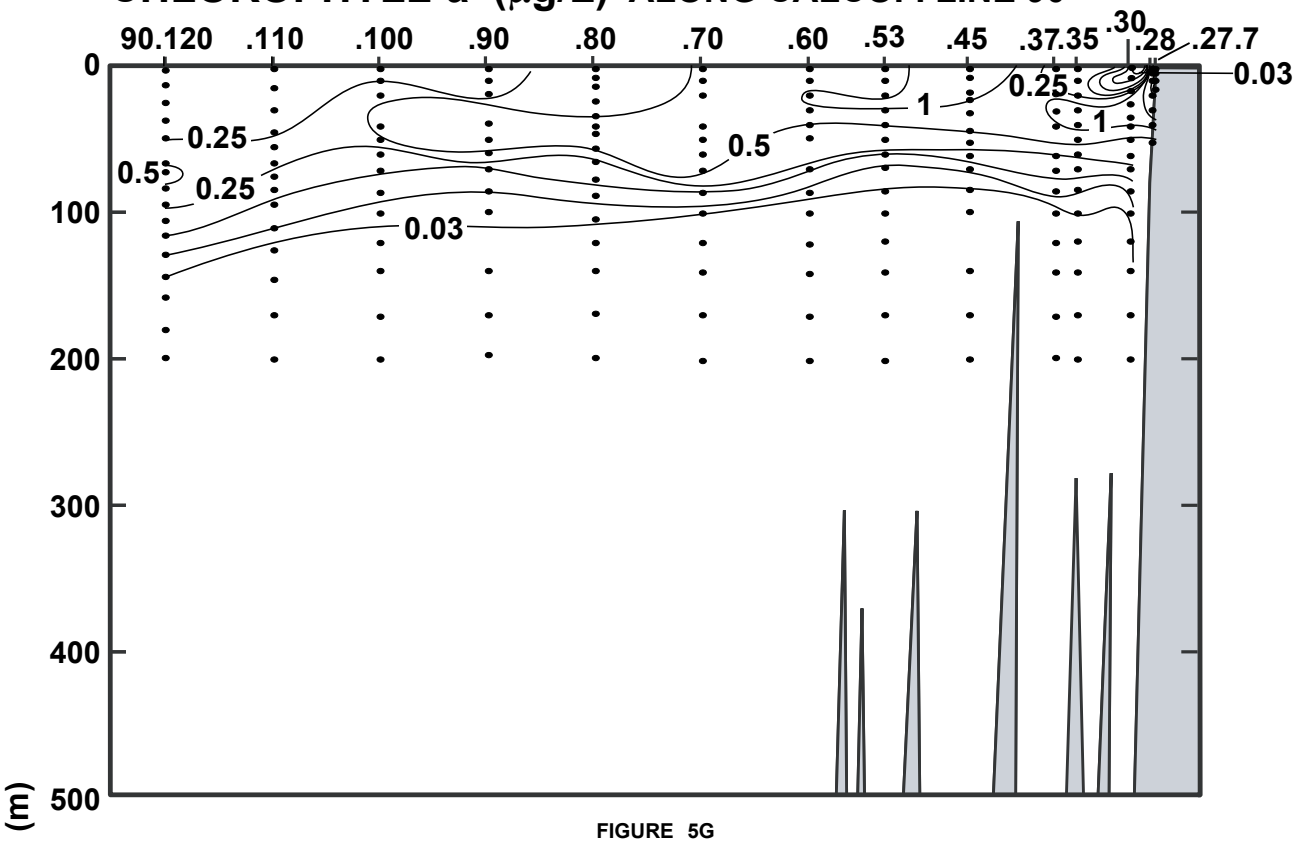

FIGURE 5G

OXYGEN SATURATION (%) ALONG CALCOFI LINE 90

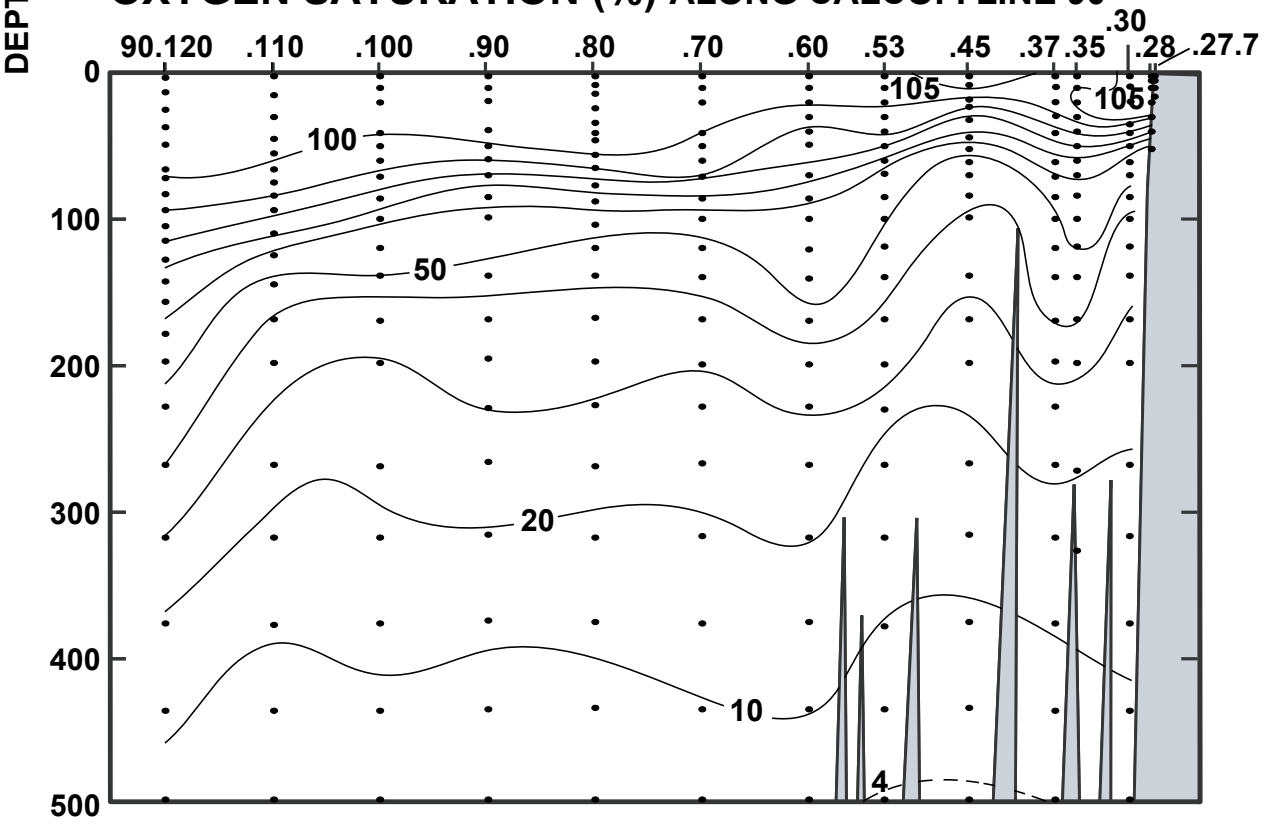

FIGURE 5H

PERSONNEL

CalCOFI Cruise 0602

SHIP'S CAPTAIN

Alexandria Von Saunder, RV *David Starr Jordan*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

		Participating (Legs)
Hays, Amy (Chief Scientist)	Fishery Biologist, NMFS	1-4
Abremenkoff, Dimitry	Fishery Biologist, NMFS	1,3,4
Blum, Marguerite	Staff Research Associate, MBARI	3,4
Bowlin, Noelle M.	Fishery Biologist, NMFS	1-4
Camacho, Dominique	Marine Mammal Observer, Cascadia Research	3-4
Campbell, Gregory	Staff Research Associate, SIO	1,4
Chih-hao, Hsieh	Graduate Student, SIO	1-3
Claussen, Stephen	Marine Mammal Observer, Cascadia Research	1-3
Dotson, Ronald	Fishery Biologist, NMFS	1,2
Dovel, Shonna	Staff Research Associate, SIO	1-4
Kacena, Teresa	Staff Research Associate, SIO	1-4
Manion, Sue	Fishery Biologist, NMFS	2,3
Murdoch, Craig	Staff Research Associate, SIO	1-4
Ramirez, Fernando	Staff Research Associate, SIO	1-4
Sheldon, Jennifer L.	Staff Research Associate, SIO	1-4
Tietz, Jim	Seabird Biologist, Pt. Reyes Bird Observatory	1-4
Wilkinson, James R.	Programmer Analyst, SIO	1-4
Wolgast, David M.	Staff Research Associate, SIO	1-4

Leg 1: San Diego to Dana Point, California 3-10 February, 2006
Leg 2: Dana Point to Ventura, California 10-15 February, 2006
Leg 3: Ventura to Port Hueneme, California 15-19 February, 2006
Leg 4: Port Hueneme to Monterrey, California 19-22 February, 2006

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — 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 5.3 N	120 46.7 W	20/02/06	1846	UTC	65 m	130	03 kn	300 02 06	1	1024.5 mb	11.5 C	9.7 C	10m	3/8	CU

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.02	12.02	33.580	25.483	248.8	0.000	5.79	94.9	11.5	0.82	8.0	0.24	8.68	0.07	0	
2 A	12.02	12.02	33.580	25.483	248.9	0.005	5.79	94.9	11.5	0.82	8.0	0.24	8.68	0.07	2	208
7 A	11.87	11.87	33.598	25.525	245.0	0.017	5.21	85.1	12.6	0.95	9.7	0.25	2.77	0.30	7	207
10 ISL	11.79	11.79	33.610	25.550	242.7	0.025	4.99	81.4	13.3	1.02	10.6	0.26	2.25	0.35	10	
18 A	11.49	11.49	33.653	25.639	234.5	0.044	4.38	71.0	16.3	1.28	13.6	0.30	0.87	0.43	18	206
20 ISL	11.36	11.36	33.670	25.676	231.0	0.048	4.13	66.8	17.6	1.39	14.8	0.31	0.74	0.49	20	
23 A	11.19	11.19	33.694	25.725	226.3	0.055	3.78	60.9	19.5	1.55	16.5	0.33	0.62	0.58	23	205
30 ISL	11.12	11.12	33.704	25.746	224.5	0.071	3.68	59.2	20.0	1.59	17.0	0.32	0.62	0.53	30	
32 A	11.10	11.10	33.707	25.752	224.0	0.076	3.65	58.7	20.1	1.60	17.1	0.32	0.62	0.52	32	204
44 A	11.02	11.01	33.718	25.775	222.1	0.102	3.53	56.7	20.8	1.63	17.7	0.32	0.49	0.60	44	203
50 ISL	10.96	10.95	33.731	25.796	220.2	0.116	3.44	55.1	21.2	1.67	18.1	0.31	0.46	0.56	50	
52	10.94	10.93	33.736	25.804	219.6	0.120	3.40	54.5	21.3	1.68	18.3	0.30	0.45	0.54	52	202
62	10.77	10.76	33.764	25.856	214.9	0.142	3.21	51.3	22.4	1.70	19.4	0.27	0.37	0.49	62	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — STATION 76.7 51.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
35 1.3 N	120 55.3 W	20/02/06	1522	UTC	241 m	050	06 kn	280 03 05	0	1023.4 mb	9.5 C	8.3 C	12m	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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	11.82	11.82	33.565	25.509	246.4	0.000	5.77	94.1	11.7	0.88	8.2	0.21	5.99	0.41	0	
2	11.82	11.82	33.565	25.509	246.4	0.005	5.77	94.1	11.7	0.88	8.2	0.21	5.99	0.41	2	215
10	11.80	11.80	33.570	25.517	245.8	0.025	5.68	92.6	12.0	0.89	8.6	0.21	5.41	0.69	10	214
20	11.33	11.33	33.640	25.658	232.7	0.049	5.04	81.4	15.4	1.20	13.1	0.23	2.95	0.77	20	213
30	10.67	10.67	33.716	25.835	216.0	0.071	3.56	56.7	20.6	1.66	19.4	0.14	0.90	0.66	30	212
40	10.47	10.47	33.740	25.889	211.1	0.092	3.20	50.8	22.0	1.75	20.8	0.09	0.49	0.35	40	211
50	10.30	10.29	33.809	25.972	203.4	0.113	2.59	40.9	24.4	1.92	23.0	0.03	0.13	0.36	50	210
59	10.15	10.14	33.855	26.034	197.8	0.131	2.44	38.5	25.8	1.99	23.8	0.02	0.09	0.30	59	209
70	10.06	10.05	33.872	26.063	195.3	0.153	2.39	37.6	26.5	2.01	24.2	0.02	0.08	0.30	70	208
75 ISL	10.02	10.01	33.893	26.086	193.2	0.162	2.33	36.6	27.0	2.03	24.5	0.02	0.07	0.28	75	
85	9.94	9.93	33.939	26.136	188.7	0.182	2.19	34.4	28.2	2.09	25.1	0.02	0.05	0.25	85	207
100	9.74	9.73	33.986	26.206	182.3	0.209	2.03	31.7	30.7	2.17	26.1	0.05	0.04	0.27	101	206
120	9.42	9.41	34.083	26.335	170.4	0.245	1.81	28.1	33.3	2.25	27.6	0.01	0.01	0.13	121	205
125 ISL	9.38	9.37	34.095	26.351	169.0	0.253	1.78	27.6	33.7	2.26	27.8	0.01	0.01	0.13	126	
139	9.31	9.29	34.110	26.374	167.1	0.277	1.74	27.0	34.4	2.29	28.1	0.01	0.01	0.12	140	204
150 ISL	9.31	9.29	34.108	26.373	167.4	0.295	1.74	27.0	34.6	2.29	28.1	0.02	0.01	0.12	151	
169	9.32	9.30	34.104	26.368	168.2	0.327	1.75	27.1	34.7	2.28	28.1	0.03	0.01	0.12	170	203
199	9.10	9.08	34.112	26.411	164.8	0.377	1.73	26.7	36.0	2.31	28.6	0.05	0.01	0.17	200	202
200 ISL	9.09	9.07	34.113	26.413	164.6	0.379	1.72	26.5	36.1	2.31	28.6	0.05			201	
229	8.82	8.80	34.142	26.479	158.8	0.425	1.56	23.9	38.9	2.39	29.5	0.06			230	201

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — 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 53.5 N	121 11.6 W	20/02/06	1143	UTC	570 m	200	10 kn			1022.4 mb	13.3 C	10.6 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.99	12.99	33.120	24.939	300.5	0.000	6.03	100.6	3.8	0.46	1.7	0.10	0.81	0.17	0	
2	12.99	12.99	33.120	24.939	300.6	0.006	6.03	100.6	3.8	0.46	1.7	0.10	0.81	0.17	2	220
10	13.00	13.00	33.150	24.961	298.8	0.030	6.03	100.6	4.1	0.50	2.4	0.12	0.96	0.54	10	219
20	12.86	12.86	33.183	25.014	294.0	0.060	5.94	98.8	4.9	0.57	3.5	0.14	0.90	0.17	20	218
30	12.07	12.07	33.381	25.320	265.1	0.088	5.80	95.0	8.5	0.78	7.2	0.16	1.82	0.46	30	217
40	11.34	11.34	33.387	25.460	252.0	0.113	4.90	79.0	11.4	1.12	12.3	0.19	0.29	0.22	40	216
50	10.84	10.83	33.511	25.646	234.5	0.138	4.28	68.3	15.3	1.37	16.1	0.19	0.32	0.38	50	215
60	9.64	9.63	33.551	25.882	212.2	0.160	3.61	56.2	19.6	1.65	21.2	0.03	0.05	0.43	60	214
70	9.33	9.32	33.662	26.019	199.3	0.181	3.53	54.6	21.7	1.69	22.1	0.02	0.02	0.11	70	213
75 ISL	9.14	9.13	33.687	26.069	194.6	0.191	3.62	55.7	22.2	1.68	22.1	0.02	0.02	0.09	75	
85	8.83	8.82	33.722	26.146	187.5	0.210	3.78	57.8	23.3	1.66	22.3	0.01	0.01	0.06	85	212
100	8.72	8.71	33.816	26.237	179.1	0.237	3.38	51.6	26.5	1.79	24.3	0.02	0.00	0.06	101	211
120	8.57	8.56	33.893	26.321	171.5	0.272	3.13	47.6	29.1	1.88	25.6	0.02	0.01	0.05	121	210
125 ISL	8.54	8.53	33.912	26.340	169.8	0.281	3.04	46.2	29.9	1.91	26.0	0.02	0.01	0.06	126	
140	8.48	8.47	33.964	26.391	165.3	0.306	2.74	41.6	32.3	2.00	27.3	0.02	0.01	0.10	141	209
150 ISL	8.49	8.47	33.997	26.415	163.2	0.322	2.53	38.5	33.6	2.06	28.0	0.02	0.01	0.11	151	
169	8.51	8.49	34.048	26.452	160.0	0.353	2.19	33.3	35.7	2.17	29.1	0.01	0.00	0.12	170	208
200 ISL	8.27	8.25	34.075	26.510	155.0	0.402	1.99	30.1	38.8	2.26	30.3	0.02	0.00	0.11	201	
201	8.26	8.24	34.075	26.512	154.9	0.403	1.99	30.1	38.9	2.26	30.3	0.02	0.00	0.11	202	207
226	8.08	8.06	34.095	26.555	151.2	0.442	1.83	27.6	41.3	2.34	31.2	0.01			227	206
250 ISL	7.86	7.83	34.114	26.603	147.0	0.477	1.65	24.7	44.5	2.43	32.2	0.01			252	
268	7.70	7.67	34.127	26.636	144.0	0.504	1.52	22.7	47.1	2.49	32.9	0.01			270	205
300 ISL	7.46	7.43	34.148	26.688	139.6	0.549	1.30	19.3	50.8	2.59	34.0	0.01			302	
318	7.35	7.32	34.162	26.714	137.3	0.574	1.18	17.5	52.7	2.65	34.5	0.01			320	204
378	7.09	7.05	34.236	26.810	129.1	0.654	0.74	10.9	59.7	2.83	35.9	0.01			381	203
400 ISL	6.88	6.84	34.237	26.839	126.4	0.682	0.66	9.7	63.0	2.88	36.4	0.01			403	
438	6.49	6.45	34.233	26.889	122.0	0.729	0.58	8.4	68.7	2.96	37.4	0.01			441	202
500 ISL	6.09	6.05	34.262	26.964	115.4	0.803	0.42	6.0	75.8	3.05	38.9	0.02			504	
513	6.01	5.96	34.268	26.979	114.0	0.818	0.39	5.6	77.3	3.07	39.2	0.02			517	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 43.2 N	121 32.9 W	19/02/06	0352	UTC	947 m	350 09 kn			1017.1 mb	10.9 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.40	12.40	33.391	25.264	269.6	0.000	6.14	101.3	7.4	0.71	5.9	0.19	1.78	0.47	0	
2	12.40	12.40	33.391	25.264	269.7	0.005	6.14	101.3	7.4	0.71	5.9	0.19	1.78	0.47	2	220
10	12.39	12.39	33.420	25.289	267.5	0.027	6.15	101.5	7.4	0.72	6.0	0.19	1.84	0.44	10	219
20	12.16	12.16	33.452	25.358	261.3	0.053	5.94	97.5	7.7	0.79	6.9	0.21	1.78	0.46	20	218
30	11.80	11.80	33.486	25.452	252.5	0.079	5.43	88.5	9.7	0.97	9.5	0.23	1.45	0.63	30	217
40	11.57	11.56	33.499	25.505	247.7	0.104	5.14	83.4	11.2	1.07	11.1	0.25	1.60	0.76	40	216
50	10.51	10.50	33.534	25.722	227.2	0.128	3.88	61.5	17.0	1.50	18.2	0.13	0.39	0.58	50	215
60	10.08	10.07	33.706	25.930	207.7	0.150	3.00	47.2	22.0	1.80	22.2	0.05	0.13	0.49	60	214
70	9.81	9.80	33.823	26.067	194.9	0.170	2.61	40.8	25.6	1.95	24.2	0.04	0.07	0.31	70	213
75 ISL	9.68	9.67	33.866	26.122	189.7	0.179	2.56	39.9	26.7	1.95	24.8	0.04	0.06	0.27	75	
85	9.40	9.39	33.915	26.206	181.9	0.198	2.47	38.3	28.0	1.96	25.5	0.04	0.04	0.23	85	212
100	8.87	8.86	33.878	26.262	176.8	0.225	3.03	46.4	28.3	1.89	25.3	0.03	0.02	0.19	101	211
120	8.38	8.37	33.927	26.376	166.2	0.259	3.10	47.0	31.4	1.90	26.2	0.02	0.01	0.09	121	210
125 ISL	8.36	8.35	33.939	26.389	165.1	0.267	3.07	46.5	31.3	1.90	26.2	0.02	0.01	0.09	126	
139	8.31	8.30	33.960	26.413	163.1	0.290	2.91	44.0	31.0	1.90	26.3	0.02	0.01	0.08	140	209
150 ISL	8.26	8.24	33.981	26.437	161.0	0.308	2.75	41.6	32.8	1.96	27.1	0.02	0.01	0.07	151	
170	8.10	8.08	34.016	26.489	156.4	0.340	2.44	36.8	37.4	2.12	29.2	0.03	0.01	0.05	171	208
199	7.65	7.63	34.051	26.583	147.8	0.384	2.02	30.1	43.5	2.31	31.7	0.02	0.00	0.03	200	207
200 ISL	7.64	7.62	34.052	26.585	147.6	0.385	2.01	30.0	43.6	2.31	31.7	0.02			201	
229	7.47	7.45	34.065	26.620	144.8	0.428	1.80	26.7	46.9	2.41	32.9	0.02			230	206
250 ISL	7.20	7.18	34.066	26.659	141.3	0.458	1.67	24.6	50.1	2.47	34.0	0.01			252	
268	6.95	6.93	34.069	26.696	137.9	0.483	1.56	22.9	53.1	2.53	34.9	0.01			270	205
300 ISL	6.65	6.62	34.091	26.754	132.7	0.526	1.29	18.8	58.4	2.65	36.2	0.01			302	
318	6.52	6.49	34.109	26.786	129.9	0.550	1.14	16.6	61.2	2.72	36.8	0.01			320	204
378	6.25	6.22	34.182	26.879	121.8	0.625	0.74	10.7	68.7	2.88	38.3	0.01			381	203
400 ISL	6.09	6.05	34.189	26.905	119.5	0.652	0.65	9.4	71.9	2.91	39.0	0.01			403	
438	5.83	5.79	34.197	26.944	116.1	0.697	0.54	7.7	77.2	2.95	40.0	0.00			441	202
500 ISL	5.64	5.60	34.251	27.011	110.4	0.767	0.37	5.3	82.5	3.08	40.6	0.00			504	
515	5.59	5.55	34.264	27.027	109.0	0.783	0.33	4.7	83.8	3.11	40.8	0.00			519	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 14.8 W	18/02/06	2142	UTC	4019 m	330 15 kn	270 04 08	1	1016.9 mb	13.1 C	10.9 C	16m	3/8	AC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.93	12.93	33.203	25.015	293.3	0.000	6.06	101.0	5.0	0.54	3.1	0.17	1.10	0.39	0	
2	12.93	12.93	33.203	25.015	293.4	0.006	6.06	101.0	5.0	0.54	3.1	0.17	1.10	0.39	2	221
10 ISL	12.83	12.83	33.241	25.065	288.9	0.029	6.06	100.8	5.2	0.56	3.5	0.19	1.10	0.31	10	
11	12.82	12.82	33.247	25.071	288.3	0.032	6.06	100.8	5.2	0.56	3.6	0.19	1.10	0.29	11	220
20 ISL	12.81	12.81	33.252	25.077	287.9	0.058	6.04	100.4	5.2	0.57	3.6	0.19	1.05	0.15	20	
21	12.81	12.81	33.253	25.078	287.9	0.061	6.04	100.4	5.2	0.57	3.6	0.19	1.05	0.14	21	219
30	12.79	12.79	33.268	25.094	286.6	0.087	6.00	99.7	5.3	0.58	3.9	0.20	1.43	0.18	30	218
40	12.73	12.72	33.292	25.125	284.0	0.115	5.93	98.4	5.7	0.62	4.4	0.21	0.90	0.22	40	217
50	12.64	12.63	33.296	25.145	282.2	0.144	5.84	96.8	6.2	0.66	4.9	0.22	0.71	0.25	50	216
60	11.81	11.80	33.251	25.268	270.7	0.171	5.32	86.6	8.2	0.89	8.7	0.12	0.33	0.20	60	215
69	10.60	10.59	33.238	25.476	251.0	0.195	4.69	74.4	11.7	1.24	14.5	0.02	0.12	0.13	69	214
75 ISL	10.19	10.18	33.287	25.584	240.8	0.209	4.44	69.8	13.6	1.36	16.5	0.02	0.09	0.10	75	
85	9.88	9.87	33.402	25.726	227.5	0.233	4.13	64.5	16.3	1.48	18.5	0.01	0.05	0.06	85	213
100	9.66	9.65	33.556	25.883	212.9	0.266	3.57	55.6	20.1	1.69	21.5	0.01	0.03	0.05	101	212
119	9.56	9.55	33.785	26.079	194.7	0.305	2.85	44.3	24.9	1.88	24.3	0.01	0.06	0.09	120	211
125 ISL	9.52	9.51	33.817	26.111	191.8	0.316	2.81	43.7	25.6	1.91	24.6	0.01	0.05	0.08	126	
139	9.36	9.34	33.863	26.173	186.2	0.343	2.73	42.3	27.0	1.95	25.1	0.01	0.01	0.05	140	210
150 ISL	9.11	9.09	33.908	26.249	179.1	0.363	2.71	41.7	28.7	1.96	25.8	0.01	0.01	0.05	151	
169	8.66	8.64	33.978	26.374	167.4	0.396	2.67	40.7	31.9	1.98	27.1	0.01	0.01	0.04	170	209
199	8.31	8.29	34.033	26.471	158.7	0.445	2.37	35.9	36.5	2.13	29.0	0.01	0.00	0.03	200	208
200 ISL	8.30	8.28	34.035	26.474	158.4	0.446	2.36	35.7	36.6	2.13	29.1	0.01	0.00	0.03	201	
228	8.09	8.07	34.075	26.538	152.8	0.490	2.04	30.7	40.3	2.27	30.6	0.01	0.00	0.04	229	207
250 ISL	7.78	7.76	34.084	26.591	148.1	0.523	1.87	28.0	44.0	2.37	31.8	0.01			252	
268	7.49	7.46	34.086	26.634	144.1	0.549	1.75	26.0	47.3	2.44	32.7	0.01			270	206
300 ISL	7.07	7.04	34.093	26.699	138.2	0.594	1.48	21.8	53.0	2.57	34.6	0.00			302	
319	6.85	6.82	34.099	26.734	135.1	0.620	1.32	19.3	56.3	2.64	35.6	0.00			321	205
378	6.41	6.38	34.148	26.831	126.4	0.697	0.94	13.6	64.6	2.84	37.3	0.00			380	204
400 ISL	6.35	6.31	34.180	26.865	123.5	0.725	0.78	11.3	67.3	2.90	37.7	0.00			403	
438	6.25	6.21	34.233	26.920	118.8	0.771	0.54	7.8	72.0	2.99	38.4	0.00			441	203
500 ISL	5.76	5.72	34.258	27.002	111.4	0.842	0.37	5.3	80.9	3.09	40.2	0.00			504	
515	5.63	5.59	34.261	27.020	109.7	0.859	0.35	5.0	82.9	3.11	40.6	0.00			519	202
600 ISL	5.28	5.23	34.304	27.097	103.1	0.949	0.26	3.7	90.4	3.17	41.5	0.00			604	
615	5.22	5.17	34.312	27.110	101.9	0.965	0.25	3.5	91.7	3.18	41.7	0.00			620	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 3.3 N	122 56.5 W	18/02/06	1632 UTC	4230 m	270 18 kn	310 04 09	1	1017.7 mb	12.8 C	9.6 C	26m	4/8	AC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.00	14.00	32.857	24.532	339.3	0.000	6.00	102.0	2.4	0.34	0.0	0.01	0.35	0.17	0	
2 A	14.00	14.00	32.857	24.532	339.4	0.007	6.00	102.0	2.4	0.34	0.0	0.01	0.35	0.17	2	221
10 ISL	13.99	13.99	32.856	24.534	339.4	0.034	6.01	102.2	2.4	0.34	0.0	0.01	0.39	0.16	10	
18 A	13.98	13.98	32.855	24.535	339.5	0.061	6.01	102.1	2.4	0.34	0.0	0.01	0.43	0.14	18	220
20 ISL	13.98	13.98	32.855	24.535	339.6	0.068	6.01	102.1	2.4	0.34	0.0	0.01	0.43	0.13	20	
30 ISL	13.97	13.97	32.853	24.536	339.8	0.102	6.00	101.9	2.5	0.33	0.0	0.01	0.42	0.08	30	
31	13.97	13.97	32.853	24.536	339.8	0.105	6.00	101.9	2.5	0.33	0.0	0.01	0.42	0.08	31	219
44 A	13.98	13.97	32.857	24.538	340.0	0.149	6.00	102.0	2.4	0.33	0.0	0.01	0.31	0.15	44	218
50 ISL	13.99	13.98	32.858	24.536	340.3	0.170	6.00	102.0	2.3	0.33	0.0	0.01	0.33	0.17	50	
52	13.99	13.98	32.858	24.536	340.4	0.177	6.00	102.0	2.3	0.33	0.0	0.01	0.34	0.18	52	217
60 A	13.97	13.96	32.890	24.566	337.8	0.204	5.96	101.3	2.4	0.35	0.2	0.04	0.31	0.18	60	216
72	14.23	14.22	33.240	24.782	317.6	0.243	5.79	99.1	2.0	0.36	0.5	0.16	0.36	0.21	72	215
75 ISL	14.04	14.03	33.252	24.831	313.0	0.253	5.80	98.9	2.1	0.37	0.7	0.14	0.35	0.21	75	
82 A	13.51	13.50	33.243	24.933	303.4	0.274	5.82	98.2	2.3	0.41	1.2	0.06	0.31	0.21	82	214
93	13.15	13.14	33.302	25.051	292.4	0.307	5.52	92.4	2.7	0.45	2.1	0.02	0.24	0.12	93	213
100 ISL	12.51	12.50	33.307	25.180	280.2	0.327	5.36	88.6	4.0	0.58	4.2	0.02	0.16	0.08	100	
102	12.31	12.30	33.308	25.219	276.5	0.333	5.32	87.5	4.4	0.62	4.9	0.02	0.14	0.07	102	212
113 A	11.58	11.57	33.339	25.380	261.3	0.362	5.18	83.9	5.6	0.75	7.1	0.01	0.12	0.05	114	211
125 ISL	10.86	10.84	33.338	25.509	249.2	0.393	5.02	80.1	7.9	0.92	10.1	0.01	0.07	0.05	126	
129	10.64	10.62	33.341	25.550	245.3	0.403	4.96	78.7	8.8	0.98	11.1	0.01	0.06	0.05	130	210
144	9.92	9.90	33.440	25.750	226.5	0.438	4.72	73.8	12.3	1.16	14.4	0.01	0.04	0.04	145	209
150 ISL	9.66	9.64	33.499	25.840	218.1	0.451	4.58	71.2	14.4	1.25	15.9	0.01	0.03	0.03	151	
169	9.01	8.99	33.686	26.091	194.4	0.491	4.19	64.3	20.7	1.50	20.1	0.01	0.00	0.01	170	208
199	8.64	8.62	33.838	26.268	178.1	0.546	4.06	61.8	24.5	1.57	21.5	0.01	0.00	0.01	200	207
200 ISL	8.63	8.61	33.843	26.274	177.6	0.548	4.01	61.1	24.8	1.58	21.7	0.01			201	
229	8.40	8.38	33.956	26.398	166.2	0.598	2.64	40.0	33.4	2.00	28.1	0.00			230	206
250 ISL	8.06	8.03	33.981	26.469	159.7	0.632	2.71	40.8	36.8	2.03	28.4	0.00			251	
269	7.78	7.75	33.997	26.523	154.8	0.662	2.77	41.4	39.2	2.05	28.7	0.00			271	205
300 ISL	7.80	7.77	34.097	26.599	148.2	0.709	1.96	29.3	44.4	2.31	31.2	0.00			302	
319	7.82	7.79	34.149	26.637	144.9	0.737	1.40	21.0	47.5	2.48	32.9	0.00			321	204
378	7.24	7.20	34.172	26.739	135.9	0.820	1.07	15.8	55.4	2.69	34.9	0.00			380	203
400 ISL	6.97	6.93	34.175	26.778	132.3	0.849	0.97	14.2	59.0	2.76	35.9	0.00			403	
437	6.52	6.48	34.181	26.844	126.2	0.897	0.81	11.8	65.2	2.86	37.5	0.00			440	202
500 ISL	5.95	5.91	34.200	26.932	118.1	0.974	0.56	8.0	75.4	2.99	39.4	0.00			503	
516	5.81	5.77	34.206	26.955	116.1	0.993	0.50	7.1	78.0	3.02	39.9	0.00			519	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 43.5 N	123 37.8 W	18/02/06	0855 UTC	4295 m	290 15 kn			1016.9 mb	12.4 C	9.9 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.60	14.60	32.907	24.445	347.6	0.000	5.88	101.2	2.0	0.33	0.0	0.00	0.24	0.12	0	
2	14.60	14.60	32.907	24.445	347.7	0.007	5.88	101.2	2.0	0.33	0.0	0.00	0.24	0.12	2	220
10 ISL	14.59	14.59	32.903	24.444	348.0	0.035	5.89	101.4	2.0	0.33	0.0	0.00	0.22	0.13	10	
16	14.58	14.58	32.900	24.444	348.1	0.056	5.90	101.5	2.0	0.33	0.0	0.00	0.20	0.13	16	219
20 ISL	14.58	14.58	32.900	24.445	348.2	0.070	5.90	101.5	2.0	0.33	0.0	0.00	0.21	0.11	20	
30	14.60	14.60	32.900	24.441	348.9	0.104	5.91	101.7	1.9	0.32	0.0	0.00	0.23	0.07	30	218
45	14.60	14.59	32.898	24.440	349.5	0.157	5.91	101.7	1.9	0.33	0.0	0.00	0.22	0.09	45	217
50 ISL	14.59	14.58	32.898	24.442	349.4	0.174	5.90	101.5	1.9	0.33	0.0	0.00	0.22	0.10	50	
55	14.59	14.58	32.898	24.442	349.5	0.192	5.89	101.4	1.9	0.32	0.0	0.00	0.22	0.10	55	216
65	14.59	14.58	32.904	24.447	349.3	0.227	5.89	101.4	2.0	0.32	0.0	0.00	0.23	0.10	65	215
75	14.43	14.42	33.181	24.695	326.0	0.260	5.79	99.5	1.7	0.36	0.4	0.12	0.35	0.22	75	214
85	13.61	13.60	33.207	24.885	308.1	0.292	5.70	96.3	2.2	0.41	1.1	0.06	0.35	0.29	85	213
95	12.81	12.80	33.197	25.037	293.8	0.322	5.54	92.1	3.2	0.52	2.8	0.02	0.23	0.15	95	212
100 ISL	12.36	12.35	33.180	25.111	286.8	0.337	5.45	89.7	3.9	0.60	4.1	0.02	0.18	0.12	100	
110	11.59	11.58	33.162	25.241	274.5	0.365	5.27	85.3	5.5	0.77	6.8	0.01	0.11	0.09	110	211
125	11.11	11.09	33.238	25.387	260.9	0.405	5.03	80.6	7.2	0.92	9.6	0.01	0.07	0.07	126	210
144	9.77	9.75	33.426	25.764	225.1	0.451	4.45	69.3	14.2	1.30	16.2	0.00	0.02	0.04	145	209
150 ISL	9.58	9.56	33.492	25.847	217.3	0.464	4.19	65.0	16.5	1.42	18.1	0.00	0.01	0.04	151	
170	9.22	9.20	33.697	26.066	196.9	0.506	3.40	52.4	23.3	1.75	23.0	0.00	0.00	0.03	171	208
199	8.65	8.63	33.906	26.320	173.2	0.560	3.00	45.7	29.6	1.88	25.6	0.01	0.00	0.02	200	207
200 ISL	8.64	8.62	33.910	26.325	172.7	0.561	2.99	45.6	29.8	1.89	25.7	0.01			201	
228	8.41	8.39	33.989	26.422	163.9	0.608	2.68	40.7	33.6	2.03	27.7	0.01			229	206
250 ISL	8.22	8.19	34.030	26.483	158.5	0.644	2.39	36.1	36.9	2.14	29.2	0.00			251	
268	8.04	8.01	34.053	26.528	154.4	0.672	2.16	32.5	39.8	2.23	30.4	0.00			269	205
300 ISL	7.58	7.55	34.072	26.611	146.9	0.720	1.89	28.1	45.5	2.36	32.2	0.00			302	
318	7.31	7.28	34.077	26.653	143.0	0.746	1.77	26.2	48.7	2.43	33.1	0.00			320	204
378	6.64	6.61	34.087	26.753	134.0	0.829	1.36	19.8	58.0	2.64	35.9	0.00			380	203
400 ISL	6.43	6.39	34.097	26.789	130.8	0.859	1.20	17.4	61.6	2.72	36.8	0.00			403	
438	6.11	6.07	34.124	26.852	125.1	0.907	0.93	13.4	67.9	2.84	38.3	0.01			441	202
500 ISL	5.77	5.73	34.197	26.952	116.1	0.982	0.54	7.7	78.0	3.02	39.9	0.00			503	
513	5.70	5.66	34.212	26.973	114.2	0.997	0.46	6.6	80.1	3.06	40.2	0.00			516	201

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — 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 23.1 N	124 19.2 W	18/02/06	0248	UTC	4584 m	300	18 kn			1016.9 mb	12.8 C	9.9 C				

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.31	15.31	33.075	24.422	349.9	0.000	5.80	101.4	1.2	0.29	0.0	0.00	0.17	0.05	0	
2	15.31	15.31	33.075	24.422	349.9	0.007	5.80	101.4	1.2	0.29	0.0	0.00	0.17	0.05	2	220
10 ISL	15.31	15.31	33.074	24.421	350.2	0.035	5.80	101.4	1.3	0.29	0.0	0.00	0.17	0.04	10	
15	15.31	15.31	33.074	24.421	350.4	0.053	5.80	101.4	1.4	0.29	0.0	0.00	0.17	0.04	15	219
20 ISL	15.31	15.31	33.074	24.421	350.5	0.070	5.80	101.4	1.4	0.29	0.0	0.00	0.17	0.04	20	
30	15.32	15.32	33.075	24.420	350.9	0.105	5.79	101.2	1.3	0.29	0.0	0.00	0.16	0.04	30	218
45	15.32	15.31	33.078	24.423	351.1	0.158	5.81	101.6	1.3	0.29	0.0	0.00	0.17	0.05	45	217
50 ISL	15.32	15.31	33.078	24.423	351.2	0.175	5.81	101.6	1.3	0.29	0.0	0.00	0.18	0.05	50	
60	15.33	15.32	33.077	24.421	351.8	0.210	5.80	101.4	1.3	0.29	0.0	0.00	0.19	0.05	60	216
75	15.34	15.33	33.079	24.421	352.2	0.263	5.80	101.4	1.3	0.29	0.0	0.00	0.19	0.06	75	215
84	15.16	15.15	33.157	24.520	343.0	0.295	5.81	101.3	1.3	0.30	0.0	0.03	0.27	0.13	84	214
95	13.56	13.55	33.192	24.884	308.5	0.330	5.74	96.9	2.0	0.40	0.9	0.05	0.30	0.22	95	213
100 ISL	13.29	13.28	33.221	24.961	301.2	0.346	5.67	95.2	2.2	0.42	1.3	0.03	0.26	0.20	100	
105	13.10	13.09	33.246	25.018	295.9	0.361	5.59	93.5	2.5	0.45	1.9	0.01	0.20	0.16	105	212
115	12.36	12.34	33.269	25.180	280.6	0.389	5.38	88.6	3.8	0.60	4.4	0.01	0.12	0.09	115	211
124	11.74	11.72	33.311	25.329	266.5	0.414	5.24	85.2	4.8	0.70	6.3	0.00	0.08	0.06	125	210
125 ISL	11.66	11.64	33.314	25.347	264.9	0.417	5.23	84.9	5.0	0.72	6.6	0.00	0.08	0.06	126	
139	10.60	10.58	33.367	25.578	242.9	0.452	4.95	78.5	8.7	0.98	11.2	0.00	0.04	0.04	140	209
150 ISL	9.98	9.96	33.448	25.747	227.0	0.478	4.49	70.3	13.3	1.25	15.5	0.00	0.02	0.03	151	
164	9.41	9.39	33.570	25.936	209.1	0.509	3.85	59.6	19.3	1.58	20.6	0.00	0.00	0.02	165	208
194	8.89	8.87	33.809	26.206	183.9	0.568	3.10	47.5	26.7	1.87	25.3	0.00	0.00	0.02	195	207
200 ISL	8.81	8.79	33.845	26.247	180.1	0.578	3.03	46.3	27.7	1.90	25.7	0.00			201	
229	8.47	8.45	33.969	26.397	166.3	0.629	2.83	43.0	32.1	1.98	27.1	0.00			230	206
250 ISL	8.21	8.18	34.009	26.468	159.9	0.663	2.68	40.5	35.4	2.05	28.2	0.00			251	
269	7.96	7.93	34.025	26.518	155.3	0.693	2.52	37.8	38.6	2.12	29.3	0.00			270	205
300 ISL	7.46	7.43	34.046	26.607	147.1	0.740	2.13	31.6	45.2	2.31	31.8	0.00			302	
317	7.18	7.15	34.053	26.652	143.0	0.764	1.90	28.0	49.0	2.42	33.2	0.00			319	204
377	6.45	6.42	34.078	26.771	132.1	0.847	1.37	19.9	59.9	2.67	36.3	0.00			379	203
400 ISL	6.30	6.26	34.095	26.804	129.2	0.877	1.20	17.3	62.9	2.75	37.2	0.00			402	
437	6.11	6.07	34.127	26.854	124.8	0.924	0.94	13.5	67.5	2.86	38.4	0.00			440	202
500 ISL	5.72	5.68	34.187	26.950	116.2	1.000	0.57	8.1	77.3	3.02	40.0	0.00			503	
514	5.63	5.59	34.201	26.973	114.2	1.016	0.49	7.0	79.5	3.05	40.4	0.00			517	201

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — STATION 80.0 50.5

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE
34 28.1 N	120 29.3 W	16/02/06	0951	UTC	22 m	330	17 kn			1018.9 mb	10.0 C	7.0 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	11.95	11.95	33.587	25.502	247.0	0.000	4.68	76.6	14.0	1.14	10.7	0.24	2.84	0.37	0	
2	11.95	11.95	33.587	25.502	247.1	0.005	4.68	76.6	14.0	1.14	10.7	0.24	2.84	0.37	2	205
5	11.96	11.96	33.588	25.501	247.3	0.012	4.65	76.1	14.2	1.14	10.7	0.24	2.69	0.39	5	204
10	11.96	11.96	33.587	25.500	247.4	0.025	4.67	76.4	14.0	1.14	10.7	0.25	2.78	0.42	10	203
15	11.82	11.82	33.595	25.533	244.5	0.037	4.24	69.2	15.1	1.28	12.4	0.28	1.88	0.52	15	202
20	11.71	11.71	33.612	25.566	241.4	0.049	4.15	67.6	15.8	1.33	13.3	0.27	1.81	0.41	20	201

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — 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 27.0 N	120 31.2 W	16/02/06	1048	UTC	74 m	340	17 kn			1018.9 mb	9.9 C	7.8 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.15	12.15	33.555	25.439	253.0	0.000	5.14	84.4	12.1	1.00	9.3	0.25	1.52	0.32	0	
2	12.15	12.15	33.555	25.439	253.1	0.005	5.14	84.4	12.1	1.00	9.3	0.25	1.52	0.32	2	209
5	12.14	12.14	33.556	25.442	252.9	0.013	5.13	84.3	12.1	0.99	9.3	0.25	1.53	0.34	5	208
10 ISL	12.14	12.14	33.558	25.444	252.8	0.025	5.10	83.8	12.3	1.00	9.5	0.25	1.45	0.31	10	
11	12.14	12.14	33.558	25.444	252.9	0.028	5.10	83.8	12.3	1.00	9.5	0.25	1.43	0.30	11	207
20 ISL	12.14	12.14	33.559	25.445	253.0	0.051	5.08	83.4	12.2	1.00	9.7	0.26	1.62	0.33	20	
21	12.14	12.14	33.559	25.445	253.0	0.053	5.08	83.4	12.2	1.00	9.7	0.26	1.63	0.33	21	206
30 ISL	11.92	11.92	33.578	25.501	247.9	0.076	4.66	76.2	13.4	1.13	11.3	0.27	0.90	0.32	30	
31	11.88	11.88	33.582	25.512	246.9	0.078	4.60	75.1	13.7	1.15	11.6	0.27	0.80	0.32	31	205
40	11.37	11.37	33.663	25.669	232.1	0.100	3.92	63.4	17.8	1.44	15.5	0.26	0.41	0.31	40	204
50	10.99	10.98	33.734	25.793	220.5	0.122	3.39	54.4	20.9	1.65	18.4	0.21	0.25	0.30	50	203
60	10.48	10.47	33.832	25.959	204.9	0.144	2.71	43.0	25.1	1.90	22.0	0.13	0.14	0.24	60	202
69	10.25	10.24	33.888	26.043	197.2	0.162	2.42	38.2	27.0	2.01	23.4	0.09	0.10	0.23	69	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 19.2 N	120 48.2 W	16/02/06	1401 UTC	749 m	340 19 kn			1019.0 mb	10.9 C	8.2 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.87	12.87	33.504	25.260	270.0	0.000	5.88	98.0	8.0	0.56	4.3	0.16	3.06	0.27	0	
2	12.87	12.87	33.504	25.260	270.1	0.005	5.88	98.0	8.0	0.56	4.3	0.16	3.06	0.27	2	221
10 ISL	12.88	12.88	33.504	25.259	270.4	0.027	5.87	97.9	8.0	0.56	4.3	0.16	2.98	0.22	10	
11	12.88	12.88	33.504	25.259	270.5	0.030	5.87	97.9	8.0	0.56	4.3	0.16	2.97	0.21	11	220
20 ISL	12.88	12.88	33.504	25.259	270.7	0.054	5.85	97.6	8.0	0.57	4.3	0.16	2.98	0.23	20	
21	12.88	12.88	33.504	25.259	270.7	0.057	5.85	97.6	8.0	0.57	4.3	0.16	2.98	0.23	21	219
30 ISL	12.88	12.88	33.505	25.260	270.8	0.081	5.86	97.7	8.0	0.56	4.3	0.16	2.80	0.42	30	
31	12.88	12.88	33.505	25.260	270.9	0.084	5.86	97.7	8.0	0.56	4.3	0.16	2.78	0.43	31	218
36	12.88	12.88	33.505	25.260	271.0	0.097	5.87	97.9	8.0	0.56	4.3	0.16	2.70	0.31	36	217
39	12.86	12.85	33.508	25.266	270.5	0.106	5.81	96.8	8.2	0.58	4.6	0.17	2.81	0.28	39	216
50	11.57	11.56	33.601	25.584	240.4	0.134	4.60	74.7	14.2	1.21	12.8	0.24	0.41	0.49	50	215
61	10.57	10.56	33.653	25.804	219.7	0.159	3.62	57.5	19.0	1.63	19.0	0.27	0.13	0.32	61	214
70	10.02	10.01	33.798	26.012	200.1	0.178	2.73	42.9	24.3	1.91	23.2	0.08	0.09	0.30	70	213
75 ISL	9.88	9.87	33.852	26.078	194.0	0.188	2.59	40.6	26.0	1.99	24.3	0.06	0.07	0.29	75	
85	9.76	9.75	33.920	26.151	187.2	0.207	2.32	36.3	27.9	2.07	25.3	0.03	0.05	0.28	85	212
100	9.62	9.61	33.964	26.209	182.0	0.234	2.22	34.6	29.4	2.11	26.1	0.03	0.04	0.25	101	211
119	9.21	9.20	34.049	26.342	169.6	0.268	2.07	32.0	32.6	2.19	27.6	0.03	0.02	0.21	120	210
125 ISL	9.16	9.15	34.082	26.376	166.5	0.278	1.94	30.0	34.0	2.24	28.1	0.03	0.02	0.20	126	
140	9.07	9.05	34.154	26.447	160.1	0.302	1.62	25.0	37.4	2.36	29.1	0.04	0.02	0.18	141	209
150 ISL	8.98	8.96	34.173	26.477	157.5	0.318	1.53	23.5	38.6	2.40	29.6	0.03	0.02	0.16	151	
170	8.79	8.77	34.186	26.517	154.0	0.349	1.44	22.1	40.2	2.45	30.2	0.02	0.01	0.13	171	208
200 ISL	8.61	8.59	34.204	26.560	150.5	0.395	1.33	20.3	42.2	2.50	31.0	0.02	0.01	0.11	201	
201	8.60	8.58	34.204	26.561	150.4	0.397	1.33	20.3	42.3	2.50	31.0	0.02	0.01	0.11	202	207
229	8.35	8.33	34.216	26.609	146.2	0.438	1.20	18.2	45.1	2.58	31.9	0.02			230	206
250 ISL	8.17	8.14	34.222	26.641	143.5	0.469	1.11	16.8	47.2	2.63	32.5	0.02			252	
269	8.03	8.00	34.227	26.667	141.4	0.496	1.04	15.7	49.0	2.66	33.0	0.02			271	205
300 ISL	7.87	7.84	34.233	26.695	139.1	0.539	0.97	14.6	51.1	2.70	33.6	0.02			302	
319	7.78	7.75	34.237	26.712	137.8	0.565	0.93	13.9	52.4	2.73	33.9	0.02			321	204
378	7.31	7.27	34.251	26.791	131.0	0.645	0.74	11.0	58.5	2.84	35.4	0.02			381	203
400 ISL	7.13	7.09	34.251	26.816	128.9	0.673	0.70	10.3	60.8	2.87	36.0	0.02			403	
438	6.81	6.77	34.252	26.861	124.9	0.722	0.62	9.1	64.8	2.93	37.0	0.01			441	202
500 ISL	6.31	6.26	34.264	26.937	118.1	0.797									504	
515	6.19	6.14	34.267 D	26.955	116.5	0.814									519	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 9.1 W	16/02/06	1844 UTC	2186 m	330 21 kn	330 04 06	1	1021.1 mb	12.1 C	8.9 C	22m	1/8 CU

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.79	12.79	33.121	24.979	296.7	0.000	5.83	96.8	5.2	0.62	4.1	0.13	0.73	0.14	0	
2 A	12.79	12.79	33.121	24.979	296.8	0.006	5.83	96.8	5.2	0.62	4.1	0.13	0.73	0.14	2	222
9	12.79	12.79	33.119	24.978	297.1	0.027	5.82	96.6	5.1	0.62	4.0	0.13	0.65	0.18	9	221
10 ISL	12.79	12.79	33.119	24.978	297.1	0.030	5.82	96.6	5.1	0.62	4.0	0.13	0.65	0.18	10	
16 A	12.77	12.77	33.120	24.983	296.8	0.048	5.81	96.4	5.1	0.62	4.1	0.13	0.66	0.18	16	220
20 ISL	12.73	12.73	33.115	24.987	296.5	0.059	5.78	95.9	5.2	0.63	4.2	0.13	0.65	0.16	20	
26	12.66	12.66	33.107	24.995	296.0	0.077	5.73	94.9	5.3	0.64	4.5	0.12	0.63	0.14	26	219
30 ISL	12.62	12.62	33.107	25.002	295.3	0.089	5.70	94.3	5.4	0.65	4.7	0.12	0.59	0.15	30	
38 A	12.54	12.53	33.107	25.018	294.1	0.113	5.65	93.3	5.6	0.68	5.0	0.12	0.51	0.18	38	218
44	11.95	11.94	33.226	25.222	274.7	0.130	5.34	87.2	8.1	0.91	8.7	0.20	0.48	0.23	44	217
50 ISL	11.00	10.99	33.229	25.398	258.0	0.146	4.88	78.0	10.3	1.12	12.4	0.06	0.19	0.12	50	
51 A	10.85	10.84	33.226	25.422	255.8	0.148	4.81	76.7	10.6	1.15	12.9	0.03	0.14	0.10	51	216
60	10.39	10.38	33.269	25.536	245.1	0.171	4.79	75.6	11.1	1.16	13.3	0.02	0.08	0.07	60	215
70 A	10.06	10.05	33.372	25.672	232.3	0.195	4.36	68.4	14.5	1.37	16.7	0.02	0.06	0.08	70	214
75 ISL	10.13	10.12	33.523	25.779	222.4	0.206	3.74	58.8	18.0	1.57	19.3	0.02	0.06	0.12	75	
83	10.21	10.20	33.758	25.949	206.4	0.223	2.81	44.3	23.4	1.87	23.0	0.01	0.05	0.17	83	213
96 A	9.47	9.46	33.816	26.118	190.5	0.249	2.86	44.4	26.0	1.93	24.7	0.01	0.03	0.10	96	212
100 ISL	9.44	9.43	33.870	26.165	186.2	0.256	2.71	42.0	27.3	1.98	25.3	0.01	0.03	0.10	101	
108	9.37	9.36	33.949	26.238	179.3	0.271	2.41	37.4	29.5	2.08	26.2	0.01	0.02	0.10	109	211
117	9.31	9.30	33.969	26.264	177.1	0.287	2.38	36.8	30.2	2.08	26.5	0.02	0.01	0.11	118	210
125 ISL	9.32	9.31	34.014	26.297	174.1	0.301	2.19	33.9	31.7	2.14	27.0	0.02	0.01	0.13	126	
139	9.36	9.34	34.096	26.355	168.9	0.325	1.80	27.9	34.4	2.28	28.0	0.02	0.02	0.15	140	209
150 ISL	9.31	9.29	34.120	26.382	166.5	0.344	1.75	27.1	35.4	2.32	28.4	0.02	0.03	0.15	151	
170	9.16	9.14	34.136	26.419	163.4	0.377	1.66	25.6	36.5	2.35	28.9	0.03	0.03	0.13	171	208
200	8.90	8.88	34.174	26.491	157.1	0.425	1.55	23.8	39.0	2.40	29.9	0.01	0.01	0.13	201	207
229	8.60	8.58	34.209	26.566	150.5	0.469	1.29	19.7	42.9	2.52	31.2	0.02			230	206
250 ISL	8.43	8.40	34.221	26.601	147.4	0.501	1.16	17.6	44.9	2.58	32.0	0.02			252	
268	8.29	8.26	34.227	26.628	145.2	0.527	1.07	16.2	46.6	2.62	32.6	0.01			270	205
300 ISL	7.96	7.93	34.236	26.685	140.2	0.573	0.94	14.1	50.5	2.70	33.6	0.01			302	
318	7.76	7.73	34.240	26.717	137.3	0.598	0.87	13.0	52.9	2.74	34.2	0.01			320	204
378	7.05	7.01	34.253	26.829	127.2	0.677	0.65	9.6	61.9	2.90	36.5	0.01			380	203
400 ISL	6.89	6.85	34.260	26.856	124.9	0.705	0.59	8.7	64.5	2.94	37.1	0.01			403	
437	6.66	6.62	34.271	26.896	121.4	0.750	0.52	7.6	68.3	3.00	37.9	0.00			440	202
500 ISL	6.28	6.24	34.279	26.953	116.6	0.825	0.43	6.2	74.1	3.07	39.1	0.00			504	
513	6.20	6.15	34.281	26.965	115.6	0.840	0.41	5.9	75.3	3.08	39.4	0.00			517	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 49.1 N	121 50.5 W	17/02/06	0107	UTC	3628 m	360	15 kn	310 05 05	1	1018.3 mb	14.1 C	10.9 C		6/8	CU

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.93	13.93	33.025	24.676	325.6	0.000	6.04	102.6	2.8	0.37	0.4	0.04	0.53	0.13	0	
2	13.93	13.93	33.025	24.676	325.6	0.007	6.04	102.6	2.8	0.37	0.4	0.04	0.53	0.13	2	221
10 ISL	13.92	13.92	33.025	24.679	325.6	0.033	6.03	102.5	2.9	0.37	0.4	0.03	0.55	0.13	10	
11	13.92	13.92	33.025	24.679	325.7	0.036	6.03	102.5	2.9	0.37	0.4	0.03	0.55	0.13	11	220
20	13.92	13.92	33.026	24.680	325.8	0.065	6.05	102.8	2.8	0.37	0.3	0.03	0.53	0.16	20	219
30	13.91	13.91	33.026	24.682	325.9	0.098	6.02	102.3	2.7	0.37	0.3	0.03	0.59	0.14	30	218
41	13.91	13.90	33.029	24.685	325.9	0.134	6.01	102.1	2.7	0.37	0.4	0.03	0.60	0.16	41	217
50	13.34	13.33	33.107	24.861	309.4	0.162	5.90	99.1	4.2	0.51	2.4	0.17	0.64	0.33	50	216
60	12.89	12.88	33.185	25.011	295.3	0.192	5.82	96.9	5.5	0.62	4.0	0.32	0.65	0.31	60	215
70	12.85	12.84	33.197	25.028	293.9	0.222	5.78	96.1	5.7	0.64	4.2	0.33	0.62	0.36	70	214
75 ISL	12.80	12.79	33.203	25.043	292.7	0.237	5.76	95.7	5.9	0.65	4.3	0.34	0.58	0.33	75	
81	12.71	12.70	33.234	25.085	288.9	0.254	5.75	95.4	6.1	0.68	4.7	0.35	0.45	0.26	81	213
85	12.62	12.61	33.283	25.140	283.7	0.265	5.76	95.4	6.7	0.71	5.3	0.36	0.29	0.19	85	212
100	11.79	11.78	33.422	25.406	258.6	0.306	5.07	82.6	10.3	1.03	10.5	0.34	0.10	0.14	100	211
119	10.69	10.68	33.660	25.790	222.4	0.352	3.43	54.6	19.5	1.62	19.4	0.03	0.05	0.15	120	210
125 ISL	10.46	10.45	33.717	25.875	214.4	0.365	3.11	49.3	21.5	1.74	21.1	0.02	0.05	0.14	126	
140	9.98	9.96	33.829	26.044	198.6	0.396	2.60	40.8	25.3	1.95	23.8	0.01	0.04	0.12	141	209
150 ISL	9.63	9.61	33.880	26.142	189.4	0.415	2.59	40.4	27.2	1.97	25.0	0.01	0.03	0.11	151	
169	9.09	9.07	33.949	26.284	176.1	0.450	2.56	39.4	29.9	2.02	26.3	0.01	0.01	0.08	170	208
198	8.85	8.83	34.021	26.379	167.7	0.500	2.30	35.2	33.1	2.12	27.8	0.01	0.00	0.05	199	207
200 ISL	8.83	8.81	34.024	26.384	167.2	0.503	2.28	34.9	33.4	2.13	27.9	0.01			201	
228	8.56	8.54	34.075	26.467	159.8	0.549	2.02	30.8	37.0	2.24	29.4	0.00			229	206
250 ISL	8.58	8.55	34.143	26.517	155.5	0.584	1.66	25.3	39.6	2.37	30.2	0.00			251	
268	8.60	8.57	34.195	26.555	152.2	0.611	1.37	20.9	41.7	2.47	30.8	0.01			270	205
300 ISL	8.25	8.22	34.220	26.629	145.7	0.659	1.15	17.4	46.2	2.58	32.1	0.00			302	
317	7.99	7.96	34.218	26.666	142.3	0.683	1.09	16.4	48.7	2.63	32.9	0.00			319	204
377	7.08	7.04	34.195	26.779	131.9	0.766	0.94	13.8	58.3	2.78	35.6	0.00			379	203
400 ISL	6.86	6.82	34.200	26.813	128.9	0.796	0.85	12.5	61.4	2.83	36.4	0.00			403	
438	6.55	6.51	34.216	26.867	124.1	0.844	0.68	9.9	66.3	2.92	37.6	0.00			441	202
500 ISL	6.03	5.99	34.249	26.961	115.5	0.918	0.45	6.5	75.8	3.06	39.6	0.00			503	
515	5.91	5.87	34.257	26.983	113.6	0.935	0.40	5.7	78.1	3.10	40.1	0.00			519	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 STATION 80.0 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 29.2 N	122 32.1 W	17/02/06	0730	UTC	3999 m	250	17 kn			1018.3 mb	13.0 C	10.1 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.82	14.82	32.996	24.467	345.5	0.000	5.85	101.2	1.7	0.33	0.0	0.00	0.16	0.06	0	
2	14.82	14.82	32.996	24.467	345.6	0.007	5.85	101.2	1.7	0.33	0.0	0.00	0.16	0.06	2	220
10 ISL	14.83	14.83	32.996	24.465	346.0	0.035	5.86	101.4	1.6	0.32	0.0	0.00	0.17	0.05	10	
15	14.83	14.83	32.996	24.465	346.2	0.052	5.86	101.4	1.6	0.32	0.0	0.00	0.17	0.04	15	219
20 ISL	14.83	14.83	32.996	24.465	346.3	0.069	5.86	101.4	1.6	0.32	0.0	0.00	0.17	0.05	20	
30	14.83	14.83	32.997	24.466	346.5	0.104	5.85	101.2	1.7	0.33	0.0	0.00	0.17	0.06	30	218
45	14.67	14.66	33.153	24.621	332.2	0.155	5.78	99.8	2.0	0.37	0.1	0.06	0.41	0.14	45	217
50 ISL	14.65	14.64	33.166	24.636	330.9	0.171	5.77	99.6	2.1	0.37	0.2	0.07	0.41	0.15	50	
55	14.61	14.60	33.169	24.647	330.0	0.188	5.75	99.2	2.2	0.38	0.2	0.09	0.41	0.16	55	216
65	14.36	14.35	33.178	24.707	324.6	0.221	5.70	97.8	2.4	0.42	0.7	0.19	0.36	0.14	65	215
75	13.48	13.47	33.174	24.885	307.7	0.252	5.50	92.7	3.4	0.57	3.1	0.14	0.21	0.13	75	214
85	13.06	13.05	33.173	24.969	300.0	0.283	5.39	90.0	4.1	0.63	4.3	0.07	0.18	0.12	85	213
95	12.49	12.48	33.182	25.087	288.9	0.312	5.22	86.1	5.4	0.74	6.3	0.03	0.14	0.11	95	212
100 ISL	11.98	11.97	33.213	25.208	277.5	0.326	5.02	82.0	7.0	0.86	8.5	0.02	0.11	0.09	100	
110	10.93	10.92	33.292	25.461	253.5	0.353	4.65	74.3	10.1	1.09	12.8	0.01	0.06	0.05	110	211
125	10.06	10.05	33.358	25.663	234.4	0.389	4.72	74.0	11.8	1.13	14.0	0.01	0.03	0.04	126	210
145	9.25	9.23	33.531	25.931	209.2	0.434	4.30	66.3	18.3	1.39	18.8	0.01	0.01	0.03	146	209
150 ISL	9.13	9.11	33.578	25.987	203.9	0.444	4.16	64.0	19.7	1.45	19.8	0.01	0.01	0.03	151	
169	8.86	8.84	33.749	26.164	187.5	0.481	3.61	55.2	24.3	1.66	23.0	0.00	0.00	0.02	170	208
200	8.70	8.68	33.947	26.344	170.9	0.537	2.73	41.7	30.9	1.92	26.9	0.00	0.01	0.03	201	207
229	8.38	8.36	34.032	26.460	160.3	0.585	2.47	37.5	35.5	2.05	28.5	0.00			230	206
250 ISL	8.08	8.05	34.059	26.527	154.2	0.618	2.26	34.0	39.5	2.18	30.0	0.00			251	
268	7.80	7.77	34.071	26.578	149.6	0.645	2.07	31.0	43.1	2.30	31.3	0.00			270	205
300 ISL	7.37	7.34	34.088	26.653	142.7	0.692	1.74	25.8	48.7	2.49	33.3	0.00			302	
319	7.12	7.09	34.094	26.693	139.1	0.719	1.55	22.8	51.9	2.59	34.4	0.00			321	204
377	6.35	6.32	34.110	26.809	128.4	0.796	1.12	16.2	62.8	2.82	37.2	0.00			379	203
400 ISL	6.15	6.11	34.124	26.846	125.1	0.825	0.97	14.0	66.8	2.89	38.0	0.00			403	
436	5.92	5.88	34.152	26.897	120.5	0.870	0.75	10.7	72.5	2.99	39.1	0.00			439	202
500 ISL	5.62	5.58	34.209	26.980	113.3	0.944	0.49	7.0	79.9	3.12	40.5	0.00			503	
516	5.55	5.51	34.223	27.000	111.5	0.962	0.42	6.0	81.8	3.15	40.9	0.00			520	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 9.2 N	123 13.1 W	17/02/06	1323 UTC	4226 m	290 18 kn			1015.2 mb	14.1 C	11.1 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.73	14.73	33.075	24.547	337.9	0.000	5.89	101.8	2.1	0.34	0.0	0.01	0.41	0.09	0	
2	14.73	14.73	33.075	24.547	338.0	0.007	5.89	101.8	2.1	0.34	0.0	0.01	0.41	0.09	2	221
10 ISL	14.73	14.73	33.078	24.550	337.9	0.034	5.89	101.8	2.1	0.34	0.0	0.00	0.41	0.11	10	
16	14.73	14.73	33.080	24.551	338.0	0.054	5.89	101.8	2.1	0.34	0.0	0.00	0.41	0.12	16	220
20 ISL	14.73	14.73	33.080	24.552	338.1	0.068	5.89	101.8	2.1	0.34	0.0	0.00	0.40	0.12	20	
30	14.74	14.74	33.080	24.550	338.5	0.101	5.90	102.0	2.2	0.33	0.0	0.00	0.39	0.11	30	219
45	14.72	14.71	33.082	24.556	338.4	0.152	5.87	101.4	2.0	0.35	0.0	0.02	0.41	0.14	45	218
50 ISL	14.59	14.58	33.086	24.587	335.6	0.169	5.85	100.8	2.2	0.37	0.3	0.04	0.52	0.17	50	
55	14.46	14.45	33.091	24.618	332.7	0.186	5.82	100.0	2.4	0.39	0.5	0.06	0.63	0.22	55	217
61	13.79	13.78	33.116	24.777	317.7	0.205	5.63	95.4	3.3	0.52	2.4	0.10	0.69	0.36	61	216
65	13.47	13.46	33.130	24.853	310.5	0.218	5.54	93.3	3.6	0.58	3.4	0.05	0.47	0.26	65	215
75	12.72	12.71	33.172	25.034	293.5	0.248	5.37	89.1	4.6	0.68	5.1	0.02	0.27	0.17	75	214
84	12.15	12.14	33.168	25.141	283.5	0.274	5.11	83.7	6.8	0.89	8.6	0.01	0.15	0.11	84	213
95	11.73	11.72	33.187	25.234	274.8	0.305	5.00	81.2	7.6	0.97	9.7	0.01	0.13	0.09	95	212
100 ISL	11.41	11.40	33.215	25.315	267.2	0.318	4.83	77.9	8.8	1.06	11.3	0.01	0.10	0.08	100	
110	10.73	10.72	33.290	25.495	250.2	0.344	4.46	70.9	11.7	1.27	14.9	0.01	0.05	0.05	110	211
124	9.97	9.96	33.400	25.710	229.8	0.378	4.18	65.4	15.2	1.44	17.8	0.01	0.03	0.05	125	210
125 ISL	9.93	9.92	33.409	25.724	228.6	0.380	4.16	65.1	15.5	1.45	18.0	0.01	0.03	0.05	126	
145	9.32	9.30	33.597	25.971	205.4	0.423	3.83	59.2	20.3	1.62	21.1	0.01	0.01	0.03	146	209
150 ISL	9.17	9.15	33.639	26.028	200.0	0.434	3.81	58.7	21.3	1.64	21.6	0.01	0.01	0.03	151	
168	8.75	8.73	33.771	26.198	184.1	0.468	3.71	56.6	24.9	1.71	23.0	0.01	0.00	0.02	169	208
199	8.65	8.63	33.932	26.340	171.2	0.523	2.79	42.5	31.0	1.99	26.9	0.00	0.00	0.04	200	207
200 ISL	8.64	8.62	33.936	26.345	170.8	0.525	2.77	42.2	31.2	2.00	27.0	0.00			201	
229	8.36	8.34	34.025	26.458	160.5	0.573	2.38	36.1	35.8	2.14	28.9	0.00			230	206
250 ISL	8.07	8.04	34.049	26.521	154.8	0.606	2.22	33.4	39.3	2.22	30.2	0.00			251	
269	7.78	7.75	34.056	26.569	150.4	0.635	2.09	31.3	42.6	2.29	31.3	0.00			271	205
300 ISL	7.28	7.25	34.069	26.651	142.9	0.681	1.78	26.3	48.8	2.45	33.3	0.00			302	
322	6.96	6.93	34.078	26.702	138.2	0.711	1.56	22.9	53.2	2.57	34.7	0.00			324	204
377	6.45	6.42	34.112	26.798	129.6	0.785	1.11	16.1	61.8	2.77	37.3	0.00			379	203
400 ISL	6.28	6.24	34.133	26.837	126.1	0.814	0.94	13.6	65.5	2.85	38.1	0.00			403	
437	6.01	5.97	34.167	26.898	120.6	0.860	0.71	10.2	71.6	2.96	39.2	0.00			440	202
500 ISL	5.51	5.47	34.207	26.992	112.0	0.933	0.49	7.0	82.0	3.09	40.9	0.00			503	
510	5.43	5.39	34.214	27.007	110.6	0.945	0.45	6.4	83.7	3.11	41.2	0.00			513	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 48.8 N	123 54.1 W	17/02/06	1946 UTC	4359 m	300 22 kn	290 04 05	1	1017.0 mb	13.7 C	11.2 C	28m	1/8	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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.95	14.95	33.016	24.454	346.7	0.000	5.85	101.5	1.9	0.33	0.0	0.00	0.25	0.05	0	
2 A	14.95	14.95	33.016	24.454	346.8	0.007	5.85	101.5	1.9	0.33	0.0	0.00	0.25	0.05	2	223
10 ISL	14.95	14.95	33.014	24.453	347.2	0.035	5.83	101.1	1.8	0.32	0.0	0.00	0.22	0.05	10	
11	14.95	14.95	33.014	24.453	347.2	0.038	5.83	101.1	1.8	0.32	0.0	0.00	0.22	0.05	11	222
20 ISL	14.94	14.94	33.014	24.456	347.2	0.069	5.88	102.0	1.8	0.33	0.0	0.00	0.22	0.05	20	
21 A	14.94	14.94	33.014	24.456	347.2	0.073	5.88	102.0	1.8	0.33	0.0	0.00	0.22	0.05	21	221
29	14.94	14.94	33.013	24.455	347.5	0.101	5.84	101.3	1.7	0.32	0.0	0.00	0.27	0.02	29	220
30 ISL	14.94	14.94	33.013	24.455	347.6	0.104	5.84	101.3	1.7	0.32	0.0	0.00	0.27	0.02	30	
38	14.94	14.93	33.013	24.455	347.8	0.132	5.84	101.3	1.7	0.32	0.0	0.00	0.23	0.06	38	219
47 A	14.93	14.92	33.012	24.457	347.9	0.163	5.86	101.6	1.7	0.32	0.0	0.00	0.22	0.05	47	218
50 ISL	14.93	14.92	33.012	24.457	348.0	0.174	5.86	101.6	1.7	0.32	0.0	0.00	0.23	0.05	50	
56	14.92	14.91	33.013	24.460	347.8	0.195	5.84	101.2	1.6	0.32	0.0	0.00	0.24	0.05	56	217
65 A	14.65	14.64	33.116	24.598	335.0	0.225	5.78	99.7	1.8	0.36	0.2	0.11	0.38	0.26	65	216
75 ISL	13.84	13.83	33.171	24.810	315.0	0.258	5.71	96.9	2.3	0.44	1.2	0.09	0.33	0.24	75	
77	13.64	13.63	33.175	24.854	310.8	0.264	5.68	96.0	2.5	0.46	1.6	0.08	0.32	0.24	77	215
89 A	12.60	12.59	33.148	25.039	293.3	0.300	5.31	87.8	5.0	0.74	6.1	0.02	0.12	0.09	89	214
100	11.80	11.79	33.171	25.209	277.3	0.332	5.05	82.1	6.8	0.91	8.8	0.03	0.08	0.08	100	213
111	11.05	11.04	33.297	25.443	255.2	0.361	5.03	80.6	7.5	0.91	9.4	0.01	0.06	0.05	111	212
123 A	10.27	10.26	33.379	25.643	236.3	0.390	4.88	76.9	9.7	1.06	12.1	0.01	0.04	0.04	124	211
125 ISL	10.21	10.20	33.395	25.666	234.1	0.395	4.86	76.5	10.1	1.08	12.4	0.01	0.04	0.04	126	
134	10.00	9.98	33.461	25.753	226.0	0.416	4.80	75.2	11.6	1.14	13.7	0.01	0.03	0.03	135	210
144	9.72	9.70	33.513	25.841	217.8	0.438	4.72	73.5	13.3	1.21	15.0	0.00	0.02	0.03	145	209
150 ISL	9.55	9.53	33.547	25.895	212.8	0.451	4.62	71.7	14.7	1.27	16.1	0.00	0.01	0.03	151	
168	9.10	9.08	33.655	26.052	198.1	0.488	4.23	65.0	19.3	1.48	19.5	0.00	0.00	0.02	169	208
199	8.75	8.73	33.836	26.250	179.9	0.547	3.52	53.8	26.7	1.77	23.7	0.00	0.00	0.01	200	207
200 ISL	8.74	8.72	33.840	26.254	179.4	0.548	3.51	53.6	26.9	1.78	23.8	0.00			201	
229	8.39	8.37	33.941	26.388	167.2	0.599	3.12	47.3	31.5	1.91	26.0	0.00			230	206
250 ISL	8.11	8.08	33.998	26.475	159.2	0.633	2.67	40.2	36.4	2.08	28.4	0.00			251	
268	7.85	7.82	34.035	26.542	153.0	0.661	2.30	34.5	40.9	2.23	30.5	0.00			269	205
300 ISL	7.36	7.33	34.059	26.632	144.8	0.709	1.96	29.0	47.4	2.42	32.8	0.00			302	
318	7.10	7.07	34.064	26.672	141.1	0.734	1.83	26.9	50.7	2.50	33.8	0.00			320	204
378	6.53	6.50	34.100	26.778	131.6	0.816	1.23	17.9	60.4	2.75	36.5	0.00			380	203
400 ISL	6.32	6.28	34.113	26.816	128.1	0.845	1.06	15.3	64.3	2.83	37.4	0.00			402	
439	5.97	5.93	34.141	26.883	122.0	0.893	0.84	12.0	71.0	2.94	38.9	0.00			442	202
500 ISL	5.63	5.59	34.201	26.973	114.0	0.965	0.70	10.0	79.5	3.08	40.3	0.00			503	
515	5.55	5.51	34.216	26.994	112.1	0.982	0.67	9.5	81.6	3.11	40.7	0.00			518	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — 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 16.8 N	120 1.2 W	16/02/06	0519	UTC	573 m	320 31 kn			1018.2 mb	11.4 C	9.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.65	13.65	33.435	25.051	290.0	0.000	6.18	104.7	4.2	0.36	1.3	0.06	3.60	0.49	0	
2 A	13.65	13.65	33.435	25.051	290.0	0.006	6.18	104.7	4.2	0.36	1.3	0.06	3.60	0.49	2	224
10	13.66	13.66	33.434	25.048	290.5	0.029	6.19	104.9	4.2	0.36	1.3	0.06	3.42	0.53	10	223
20	13.40	13.40	33.448	25.112	284.7	0.058	5.87	98.9	5.4	0.48	2.9	0.13	4.36	0.36	20	222
30	12.25	12.25	33.535	25.405	257.0	0.085	4.94	81.3	10.9	0.99	9.6	0.31	1.50	0.21	30	221
40	11.37	11.37	33.554	25.584	240.2	0.110	3.70	59.8	15.7	1.47	16.4	0.16	0.35	0.26	40	220
50	10.88	10.87	33.649	25.746	224.9	0.133	3.10	49.6	19.3	1.68	19.6	0.05	0.14	0.18	50	219
60	10.49	10.48	33.712	25.864	214.0	0.155	2.83	44.9	21.5	1.82	21.7	0.02	0.07	0.15	60	218
70	10.32	10.31	33.877	26.022	199.2	0.176	2.36	37.3	25.5	2.01	23.8	0.02	0.03	0.12	70	217
75 ISL	10.23	10.22	33.916	26.068	194.9	0.185	2.25	35.5	26.7	2.05	24.4	0.02	0.03	0.12	75	
85	10.08	10.07	33.959	26.128	189.5	0.205	2.14	33.7	28.1	2.09	25.0	0.01	0.02	0.12	85	216
100	9.93	9.92	34.021	26.202	182.7	0.233	2.05	32.2	29.1	2.14	25.7	0.00	0.02	0.08	101	215
120	9.79	9.78	34.056	26.253	178.3	0.269	1.98	31.0	30.3	2.16	26.3	0.00	0.01	0.08	121	214
125 ISL	9.75	9.74	34.067	26.268	176.9	0.278	1.94	30.3	30.9	2.18	26.5	0.00	0.01	0.08	126	
139	9.63	9.61	34.099	26.313	172.9	0.302	1.80	28.1	32.9	2.25	27.2	0.00	0.01	0.09	140	213
150 ISL	9.46	9.44	34.119	26.357	169.0	0.321	1.69	26.3	34.6	2.30	27.8	0.01	0.01	0.09	151	
169	9.15	9.13	34.146	26.429	162.5	0.352	1.53	23.6	37.5	2.38	28.9	0.02	0.01	0.10	170	212
199	8.83	8.81	34.172	26.500	156.2	0.400	1.36	20.9	40.6	2.45	30.2	0.00	0.01	0.10	200	211
200 ISL	8.82	8.80	34.173	26.503	156.0	0.402	1.35	20.7	40.8	2.45	30.2	0.00			201	
228	8.54	8.52	34.187	26.558	151.2	0.445	1.15	17.5	45.2	2.57	31.2	0.00			229	210
250 ISL	8.33	8.30	34.191	26.593	148.1	0.478	1.06	16.1	48.0	2.64	31.8	0.00			252	
269	8.16	8.13	34.192	26.620	145.9	0.506	1.01	15.3	50.2	2.68	32.3	0.00			271	209
300 ISL	7.86	7.83	34.197	26.669	141.7	0.550	0.93	13.9	53.3	2.74	33.0	0.00			302	
318	7.69	7.66	34.200	26.696	139.3	0.575	0.88	13.1	55.1	2.77	33.4	0.00			320	208
377	7.12	7.08	34.207	26.783	131.6	0.655	0.71	10.5	63.6	2.91	34.5	0.00			380	207
400 ISL	6.89	6.85	34.212	26.818	128.4	0.685	0.56	8.2	70.6	3.03	33.9	0.00			403	
437	6.59	6.55	34.222	26.867	124.1	0.732	0.30	4.4	83.1	3.28	31.5	0.00			440	206
477	6.48	6.44	34.231	26.889	122.5	0.781	0.11	1.6	94.6	3.59	26.9	0.00			480	205
500 ISL	6.44	6.39	34.232	26.895	122.2	0.809	0.08	1.2	97.5	3.65	26.0	0.00			504	
511	6.43	6.38	34.232	26.897	122.3	0.823	0.08	1.2	98.5	3.67	25.6	0.00			515	204
536	6.40	6.35	34.233	26.902	122.1	0.853	0.05	0.7	102.2	3.82	23.6	0.00			540	203
561	6.35	6.30	34.232	26.908	121.9	0.884	0.01	0.1	104.0	3.96	23.7	0.00			565	202
567	6.35	6.30	34.233	26.909	121.9	0.891	0.01	0.1	104.3	3.94	23.8	0.00			571	201

A) SANTA BARBARA BASIN STATION.

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — STATION 83.3 39.4

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 16.0 N	119 19.8 W	15/02/06	1607	UTC	15 m	150 02 kn	240 02 06	1	1013.1 mb	14.6 C	12.1 C		2/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.55	14.55	33.396	24.833	310.7	0.000	6.17	106.4	3.3	0.29	0.0	0.01	3.48	0.06	0	
2	14.55	14.55	33.396	24.833	310.7	0.006	6.17	106.4	3.3	0.29	0.0	0.01	3.48	0.06	2	205
6	14.55	14.55	33.396	24.833	310.8	0.019	6.17	106.4	3.4	0.29	0.0	0.02	2.83	0.30	6	204
10	14.54	14.54	33.395	24.835	310.8	0.031									10	203
11	14.53	14.53	33.393	24.835	310.8	0.034	6.06	104.5	3.5	0.28	0.0	0.01	3.55	0.11	11	202
15	14.26	14.26	33.393	24.892	305.5	0.047	5.71	97.9	4.3	0.42	0.0	0.05	3.10	0.32	15	201

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — 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 13.4 N	119 24.9 W	15/02/06	1839	UTC	34 m	280 25 kn	260 06 06	1	1014.0 mb	14.0 C	11.4 C	7m	2/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.48	14.48	33.390	24.843	309.7	0.000	6.11	105.2	2.6	0.30	0.5	0.01	1.82	0.38	0	
2 A	14.48	14.48	33.390	24.843	309.8	0.006	6.11	105.2	2.6	0.30	0.5	0.01	1.82	0.38	2	207
5 A	14.47	14.47	33.390	24.845	309.6	0.015	6.09	104.9	2.7	0.30	0.6	0.01	1.88	0.33	5	206
10	14.40	14.40	33.388	24.859	308.5	0.031									10	205
10 ISL	14.39	14.39	33.388	24.861	308.3	0.031	6.03	103.7	2.6	0.33	0.8	0.02	1.91	0.40	10	
12 A	14.36	14.36	33.387	24.867	307.8	0.037	6.01	103.3	2.5	0.34	0.9	0.02	1.92	0.45	12	204
16 A	14.01	14.01	33.385	24.938	301.1	0.049	5.84	99.6	4.1	0.42	1.8	0.05	1.87	0.48	16	203
20 ISL	13.38	13.38	33.403	25.081	287.6	0.061	5.27	88.7	6.5	0.82	4.7	0.15	1.79	0.78	20	
23 A	12.93	12.93	33.422	25.186	277.7	0.070	4.84	80.8	8.2	1.13	7.0	0.23	1.70	1.04	23	202
30 ISL	12.84	12.84	33.427	25.207	275.8	0.089	4.76	79.3	8.7	1.21	7.5	0.25	1.40	1.24	30	
32 A	12.81	12.81	33.429	25.215	275.2	0.094	4.74	78.9	8.9	1.23	7.7	0.25	1.31	1.30	32	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — 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	15/02/06	1316 UTC	131 m	270	18 kn			1012.8 mb	13.2 C	10.9 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.40	14.40	33.391	24.861	308.0	0.000	6.07	104.4	2.7	0.29	0.3	0.02	1.70	0.40	0	
2	14.40	14.40	33.391	24.861	308.1	0.006	6.07	104.4	2.7	0.29	0.3	0.02	1.70	0.40	2	212
10 ISL	14.39	14.39	33.388	24.861	308.3	0.031	6.03	103.7	2.6	0.33	0.8	0.02	1.91	0.40	10	
11	14.40	14.40	33.388	24.859	308.5	0.034									11	211
11	14.38	14.38	33.388	24.863	308.1	0.034	6.07	104.3	2.8	0.31	0.4	0.03	2.02	0.25	11	210
20 ISL	14.24	14.24	33.392	24.896	305.3	0.062	5.95	102.0	3.1	0.37	0.9	0.05	2.54	0.33	20	
21	14.22	14.22	33.393	24.901	304.8	0.065	5.94	101.8	3.1	0.38	1.0	0.05	2.58	0.35	21	209
30 ISL	13.57	13.57	33.405	25.044	291.4	0.091	5.45	92.1	5.1	0.59	3.4	0.13	2.20	0.43	30	
31	13.46	13.46	33.408	25.069	289.1	0.094	5.37	90.6	5.5	0.63	3.9	0.14	2.11	0.44	31	208
40	12.10	12.09	33.459	25.375	260.1	0.119	4.25	69.7	11.0	1.15	11.8	0.19	1.02	0.47	40	207
50 ISL	11.53	11.52	33.500	25.513	247.2	0.144	3.71	60.1	14.1	1.39	15.5	0.07	0.48	0.39	50	
51	11.50	11.49	33.506	25.523	246.2	0.147	3.67	59.4	14.4	1.41	15.7	0.06	0.45	0.37	51	206
60	10.90	10.89	33.619	25.720	227.7	0.168	3.12	49.9	18.6	1.67	19.4	0.01	0.18	0.18	60	205
71	10.62	10.61	33.796	25.907	210.2	0.192	2.51	40.0	23.6	1.93	22.3	0.01	0.04	0.13	71	204
75 ISL	10.54	10.53	33.826	25.945	206.7	0.201	2.43	38.6	24.3	1.97	22.8	0.01	0.04	0.15	75	
85	10.38	10.37	33.871	26.008	200.9	0.221	2.34	37.1	25.3	2.02	23.4	0.02	0.04	0.19	85	203
100	10.18	10.17	33.960	26.112	191.3	0.250	2.15	33.9	27.5	2.08	24.6	0.01	0.02	0.12	101	202
120	9.90	9.89	34.049	26.229	180.6	0.288	1.96	30.8	30.1	2.16	25.8	0.01	0.01	0.13	121	201

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — 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 44.6 N	120 24.3 W	15/02/06	0407 UTC	965 m	320	13 kn			1013.0 mb	14.4 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.51	13.51	33.241	24.929	301.5	0.000	6.05	102.1	3.7	0.48	2.2	0.11	1.31	0.31	0	
2	13.51	13.51	33.241	24.929	301.6	0.006	6.05	102.1	3.7	0.48	2.2	0.11	1.31	0.31	2	221
10 ISL	13.51	13.51	33.242	24.930	301.7	0.030	6.06	102.2	3.7	0.48	2.2	0.10	1.31	0.31	10	
11	13.51	13.51	33.245	24.932	301.5	0.033									11	220
11	13.51	13.51	33.242	24.930	301.7	0.033	6.06	102.2	3.7	0.48	2.2	0.10	1.31	0.31	11	219
20	13.19	13.19	33.285	25.028	292.7	0.060	6.02	100.9	4.7	0.55	3.4	0.14	1.62	0.39	20	218
30 ISL	13.06	13.06	33.349	25.104	285.7	0.089	6.17	103.2	5.5	0.58	3.9	0.13	2.46	0.56	30	
31	13.05	13.05	33.360	25.114	284.8	0.092	6.19	103.5	5.6	0.58	4.0	0.13	2.47	0.56	31	217
40	12.00	11.99	33.381	25.333	264.1	0.116	5.32	87.0	8.6	0.93	9.1	0.25	0.51	0.26	40	216
50	11.88	11.87	33.497	25.446	253.6	0.142	5.25	85.7	10.6	1.07	10.5	0.23	0.35	0.22	50	215
61	11.58	11.57	33.547	25.541	244.8	0.170	4.98	80.8	12.3	1.19	12.1	0.22	0.26	0.25	61	214
70	10.11	10.10	33.435	25.713	228.4	0.191	4.11	64.5	15.5	1.45	17.8	0.06	0.07	0.09	70	213
75 ISL	10.01	10.00	33.494	25.776	222.6	0.202	3.91	61.3	16.8	1.52	19.2	0.07	0.07	0.12	75	
85	9.81	9.80	33.592	25.886	212.3	0.224	3.58	55.9	19.6	1.65	20.7	0.08	0.06	0.18	85	212
100	9.87	9.86	33.893	26.112	191.2	0.254	2.37	37.1	26.9	2.02	24.9	0.04	0.05	0.22	101	211
121	9.84	9.83	34.007	26.206	182.8	0.294	2.11	33.1	29.0	2.14	25.8	0.03	0.03	0.20	122	210
125 ISL	9.83	9.82	34.027	26.224	181.2	0.301	2.06	32.3	29.4	2.15	26.0	0.03	0.03	0.19	126	
140	9.72	9.70	34.085	26.287	175.4	0.328	1.94	30.3	30.9	2.19	26.6	0.02	0.01	0.14	141	209
150 ISL	9.53	9.51	34.087	26.321	172.5	0.345	1.97	30.7	31.8	2.20	27.0	0.02	0.01	0.14	151	
169	9.14	9.12	34.083	26.381	167.0	0.377	2.01	31.0	33.7	2.22	27.9	0.01	0.01	0.16	170	208
198	8.94	8.92	34.167	26.479	158.2	0.424	1.57	24.1	38.1	2.38	29.5	0.02	0.01	0.10	199	207
200 ISL	8.93	8.91	34.172	26.485	157.7	0.428	1.55	23.8	38.4	2.39	29.6	0.02			201	
230	8.68	8.66	34.221	26.563	150.8	0.474	1.29	19.7	41.8	2.50	30.7	0.01			231	206
250 ISL	8.49	8.46	34.232	26.601	147.5	0.504	1.18	18.0	43.9	2.56	31.4	0.01			252	
270	8.28	8.25	34.233	26.634	144.6	0.533	1.10	16.7	46.1	2.61	32.1	0.01			272	205
300 ISL	7.94	7.91	34.235	26.687	140.0	0.576	0.98	14.7	49.8	2.68	33.2	0.00			302	
319	7.71	7.68	34.234	26.720	137.1	0.602	0.92	13.8	52.3	2.73	33.9	0.00			321	204
376	6.95	6.91	34.230	26.824	127.6	0.677	0.75	11.0	61.1	2.87	36.2	0.00			378	203
400 ISL	6.84	6.80	34.242	26.849	125.5	0.708	0.67	9.8	63.3	2.91	36.6	0.00			403	
435	6.74	6.70	34.264	26.880	123.0	0.751	0.56	8.2	66.0	2.96	37.1	0.00			438	202
500 ISL	6.27	6.23	34.289	26.962	115.7	0.829	0.40	5.8	73.5	3.07	38.7	0.00			503	
510	6.20	6.15	34.293	26.974	114.6	0.840	0.37	5.3	74.6	3.09	39.0	0.00			514	201

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — 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 34.8 N	120 45.1 W	14/02/06	2347 UTC	1284 m	310	10 kn	330 05 06	2	1011.3 mb	15.0 C	13.4 C	11m	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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.92	12.92	33.252	25.055	289.5	0.000	6.22	103.7	6.0	0.60	3.9	0.11	3.11	0.13	0	
1	12.92	12.92	33.252	25.055	289.5	0.003	6.22	103.7	6.0	0.60	3.9	0.11	3.11	0.13	1	221
10	12.92	12.92	33.254	25.057	289.6	0.029	6.23	103.8	6.0	0.60	3.9	0.11	2.67	0.36	10	219
11	12.92	12.92	33.252	25.056	289.8	0.032									11	220
20 ISL	12.91	12.91	33.254	25.059	289.7	0.058	6.20	103.3	5.9	0.60	3.9	0.11	2.58	0.45	20	
21	12.91	12.91	33.254	25.059	289.7	0.061	6.20	103.3	5.9	0.60	3.9	0.11	2.57	0.46	21	218
30	12.89	12.89	33.260	25.068	289.1	0.087	6.21	103.4	6.2	0.61	4.1	0.11	2.86	0.36	30	217
40	12.86	12.85	33.273	25.084	287.8	0.116	6.15	102.4	6.1	0.61	4.1	0.11	2.50	0.41	40	216
50	12.76	12.75	33.329	25.148	282.0	0.144	6.12	101.7	5.9	0.63	4.3	0.14	1.92	0.35	50	215
60	12.09	12.08	33.340	25.285	269.2	0.172	5.51	90.3	8.1	0.88	8.0	0.23	1.04	0.41	60	214
70	12.42	12.41	33.528	25.368	261.6	0.198	5.89	97.3	7.3	0.89	7.1	0.21	1.33	0.50	70	213
75 ISL	12.28	12.27	33.558	25.418	256.9	0.211	5.65	93.1	8.7	0.97	8.5	0.24	1.02	0.45	75	
85	11.65	11.64	33.550	25.531	246.4	0.236	4.86	79.0	12.6	1.20	12.6	0.28	0.26	0.28	85	212
100	10.23	10.22	33.489	25.736	227.0	0.272	3.85	60.6	16.2	1.50	18.5	0.02	0.07	0.10	100	211
120	9.61	9.60	33.691	25.997	202.5	0.315	3.25	50.6	21.9	1.76	22.5	0.01	0.02	0.07	121	210
125 ISL	9.52	9.51	33.736	26.047	197.8	0.325	3.14	48.8	23.0	1.80	23.2	0.01	0.02	0.07	126	
140	9.31	9.29	33.857	26.176	185.8	0.354	2.85	44.1	26.1	1.91	24.7	0.01	0.01	0.06	141	209
150 ISL	9.15	9.13	33.923	26.254	178.6	0.372	2.71	41.8	28.1	1.97	25.6	0.01	0.01	0.06	151	
169	8.86	8.84	34.020	26.376	167.4	0.405	2.47	37.9	31.9	2.07	27.1	0.01	0.00	0.05	170	208
199	8.49	8.47	34.098	26.495	156.5	0.453	1.97	30.0	37.7	2.26	29.5	0.01	0.00	0.04	200	207
200 ISL	8.47	8.45	34.098	26.498	156.2	0.455	1.97	29.9	37.9	2.26	29.6	0.01			201	
230	7.79	7.77	34.077	26.583	148.4	0.501	1.98	29.6	43.6	2.33	31.3	0.01			231	206
250 ISL	7.52	7.50	34.093	26.635	143.7	0.530	1.77	26.3	47.2	2.43	32.5	0.01			251	
269	7.33	7.30	34.113	26.678	139.9	0.557	1.53	22.7	50.4	2.54	33.5	0.01			271	205
300 ISL	7.02	6.99	34.124	26.730	135.3	0.599	1.34	19.7	54.2	2.64	34.8	0.00			302	
318	6.86	6.83	34.128	26.755	133.0	0.624	1.25	18.3	56.4	2.68	35.4	0.00			320	204
378	6.32	6.29	34.166	26.857	123.9	0.701	0.83	12.0	66.6	2.87	37.8	0.00			380	203
400 ISL	6.14	6.10	34.178	26.890	120.9	0.728	0.72	10.4	70.0	2.93	38.5	0.00			403	
438	5.88	5.84	34.198	26.939	116.6	0.773	0.57	8.2	75.3	3.01	39.5	0.00			441	202
500 ISL	5.60	5.56	34.240	27.007	110.7	0.843	0.40	5.7	82.2	3.11	40.5	0.00			503	
516	5.53	5.49	34.251	27.024	109.2	0.861	0.36	5.1	84.0	3.13	40.8	0.00			520	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 26.7 W	14/02/06	1812 UTC	4095 m	310 20 kn	320 05 07	2	1014.1 mb	14.9 C	13.2 C	12m	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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.55	13.55	33.165	24.862	307.9	0.000	6.10	102.9	4.7	0.51	2.1	0.07	1.40	0.31	0	
2 A	13.55	13.55	33.165	24.862	307.9	0.006	6.10	102.9	4.7	0.51	2.1	0.07	1.40	0.31	2	222
8 A	13.53	13.53	33.163	24.865	307.9	0.025	6.10	102.9	4.5	0.52	2.1	0.06	1.33	0.31	8	221
10	13.51	13.51	33.168	24.873	307.1	0.031	6.09	102.7	4.7	0.51	2.2	0.07	1.27	0.32	10	220
20 A	12.55	12.55	33.264	25.137	282.2	0.060	5.87	97.1	6.3	0.70	5.3	0.17	1.33	0.40	20	219
28 A	12.32	12.32	33.337	25.238	272.8	0.082	5.75	94.7	7.2	0.80	6.5	0.20	0.68	0.24	28	218
30 ISL	12.24	12.24	33.336	25.253	271.5	0.088	5.70	93.7	7.4	0.82	6.8	0.20	0.57	0.24	30	
39 A	11.72	11.72	33.296	25.319	265.3	0.112	5.32	86.5	8.4	0.94	8.9	0.20	0.25	0.22	39	217
46	11.12	11.11	33.270	25.409	257.0	0.130	4.86	78.0	9.5	1.08	11.5	0.09	0.14	0.13	46	216
50 ISL	10.94	10.93	33.286	25.453	252.8	0.141	4.77	76.2	10.1	1.12	12.3	0.11	0.10	0.14	50	
53 A	10.88	10.87	33.313	25.485	249.9	0.148	4.73	75.5	10.7	1.15	12.8	0.12	0.09	0.14	53	215
62	11.14	11.13	33.486	25.573	241.7	0.170	4.46	71.7	13.0	1.31	14.4	0.26	0.10	0.17	62	214
71	10.27	10.26	33.433	25.685	231.2	0.191	4.33	68.2	14.5	1.38	16.4	0.13	0.09	0.14	71	213
75 ISL	10.01	10.00	33.436	25.731	226.9	0.201	4.25	66.6	15.4	1.42	17.3	0.09	0.07	0.12	75	
84	9.61	9.60	33.471	25.825	218.1	0.221	4.07	63.2	17.4	1.51	19.2	0.02	0.03	0.09	84	212
99	9.26	9.25	33.564	25.954	206.0	0.252	3.83	59.1	20.1	1.64	21.1	0.02	0.02	0.06	100	211
100 ISL	9.26	9.25	33.574	25.962	205.3	0.255	3.80	58.6	20.3	1.65	21.3	0.02	0.02	0.06	101	
120	9.24	9.23	33.761	26.112	191.5	0.294	3.11	48.0	25.0	1.86	24.1	0.02	0.01	0.06	121	210
125 ISL	9.20	9.19	33.793	26.144	188.6	0.304	3.01	46.4	25.8	1.90	24.6	0.02	0.01	0.07	126	
140	9.03	9.01	33.868	26.230	180.7	0.331	2.78	42.7	28.1	1.98	25.8	0.01	0.02	0.11	141	209
150 ISL	8.90	8.88	33.909	26.282	175.9	0.349	2.68	41.1	29.6	2.02	26.5	0.01	0.02	0.10	151	
169	8.66	8.64	33.972	26.370	167.9	0.382	2.51	38.3	32.5	2.08	27.8	0.01	0.01	0.06	170	208
199	8.33	8.31	34.054	26.485	157.4	0.431	2.15	32.6	37.9	2.23	29.8	0.01	0.00	0.05	200	207
200 ISL	8.32	8.30	34.056	26.488	157.1	0.432	2.14	32.4	38.1	2.23	29.9	0.01			201	
229	7.95	7.93	34.091	26.571	149.6	0.477	1.83	27.5	42.9	2.37	31.6	0.01			230	206
250 ISL	7.64	7.62	34.106	26.628	144.4	0.508	1.63	24.3	47.0	2.47	32.8	0.01			251	
269	7.37	7.34	34.117	26.676	140.1	0.535	1.47	21.8	50.6	2.55	33.8	0.01			271	205
300 ISL	7.10	7.07	34.139	26.731	135.2	0.577	1.24	18.3	55.1	2.67	35.1	0.00			302	
317	6.98	6.95	34.152	26.758	132.9	0.600	1.12	16.5	57.3	2.73	35.7	0.00			319	204
377	6.49	6.46	34.202	26.864	123.4	0.677	0.71	10.3	66.1	2.91	37.9	0.00			379	203
400 ISL	6.37	6.33	34.214	26.889	121.3	0.705	0.63	9.1	68.7	2.96	38.4	0.00			403	
438	6.18	6.14	34.230	26.926	118.1	0.751	0.53	7.6	72.8	3.02	39.1	0.00			441	202
500 ISL	5.80	5.76	34.260	26.998	111.8	0.822	0.38	5.4	81.0	3.11	40.3	0.00			503	
513	5.72	5.68	34.266	27.013	110.4	0.836	0.35	5.0	82.7	3.13	40.6	0.00			517	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 54.6 N	122 7.8 W	14/02/06	0807 UTC	4178 m	320 18 kn			1016.8 mb	15.1 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.85	14.85	33.019	24.478	344.5	0.000	5.88	101.8	1.9	0.33	0.0	0.00	0.20	0.05	0	
2	14.85	14.85	33.019	24.478	344.5	0.007	5.88	101.8	1.9	0.33	0.0	0.00	0.20	0.05	2	222
3	14.85	14.85				0.010									3	223
10 ISL	14.85	14.85	33.019	24.478	344.7	0.034	5.88	101.8	1.7	0.32	0.0	0.00	0.21	0.05	10	
11	14.85	14.85	33.019	24.479	344.8	0.038	5.88	101.8	1.7	0.32	0.0	0.00	0.21	0.05	11	221
15	14.85	14.85	33.019	24.479	344.9	0.052	5.88	101.8	1.8	0.33	0.0	0.00	0.21	0.05	15	220
20 ISL	14.83	14.83	33.016	24.481	344.8	0.069	5.88	101.8	1.8	0.33	0.0	0.00	0.22	0.05	20	
30	14.76	14.76	33.009	24.491	344.2	0.103	5.89	101.8	1.8	0.33	0.0	0.00	0.24	0.05	30	219
45	14.67	14.66	33.011	24.512	342.6	0.155	5.87	101.3	1.9	0.34	0.0	0.02	0.38	0.10	45	218
50 ISL	14.55	14.54	33.016	24.541	339.9	0.172	5.85	100.7	2.0	0.36	0.2	0.09	0.44	0.15	50	
55	14.42	14.41	33.022	24.574	337.0	0.189	5.82	99.9	2.2	0.38	0.4	0.13	0.50	0.21	55	217
60	13.70	13.69	33.027	24.727	322.5	0.205	5.99	101.3	3.3	0.41	1.1	0.09	0.58	0.25	60	216
65	13.54	13.53	33.054	24.780	317.5	0.221	6.00	101.1	3.6	0.43	1.3	0.10	0.54	0.24	65	215
75	13.32	13.31	33.079	24.844	311.6	0.253	5.80	97.3	3.8	0.51	2.4	0.15	0.37	0.21	75	214
85	12.90	12.89	33.140	24.975	299.4	0.283	5.42	90.2	4.5	0.65	4.8	0.08	0.18	0.12	85	213
94	11.90	11.89	33.255	25.255	272.8	0.309	4.77	77.8	8.2	0.96	10.5	0.02	0.08	0.08	94	212
100 ISL	11.41	11.40	33.283	25.368	262.2	0.325	4.60	74.2	9.5	1.07	12.4	0.02	0.07	0.07	100	
110	10.72	10.71	33.315	25.516	248.2	0.351	4.46	70.9	11.4	1.19	14.3	0.01	0.06	0.06	110	211
124	9.79	9.78	33.444	25.775	223.7	0.384	4.12	64.2	16.2	1.42	18.2	0.01	0.02	0.04	125	210
125 ISL	9.75	9.74	33.456	25.791	222.2	0.386	4.09	63.7	16.6	1.44	18.5	0.01	0.02	0.04	126	
144	9.23	9.21	33.682	26.052	197.6	0.426	3.46	53.4	22.7	1.70	22.7	0.00	0.01	0.03	145	209
150 ISL	9.15	9.13	33.735	26.107	192.6	0.438	3.36	51.7	23.9	1.74	23.4	0.00	0.01	0.03	151	
169	8.97	8.95	33.863	26.236	180.7	0.473	3.15	48.4	27.0	1.79	24.6	0.00	0.00	0.03	170	208
199	8.64	8.62	33.988	26.386	166.9	0.525	2.84	43.3	31.6	1.88	26.5	0.00	0.00	0.03	200	207
200 ISL	8.63	8.61	33.991	26.390	166.6	0.527	2.83	43.1	31.8	1.89	26.6	0.00			201	
228	8.31	8.29	34.037	26.475	158.9	0.572	2.49	37.7	36.4	2.06	28.5	0.00			229	206
250 ISL	8.04	8.01	34.054	26.529	154.0	0.607	2.24	33.7	40.1	2.17	30.0	0.00			251	
268	7.80	7.77	34.061	26.570	150.3	0.634	2.07	31.0	43.1	2.25	31.2	0.00			270	205
300 ISL	7.36	7.33	34.064	26.636	144.4	0.681	1.87	27.7	48.2	2.36	32.8	0.00			302	
318	7.12	7.09	34.065	26.670	141.3	0.707	1.78	26.2	50.9	2.42	33.6	0.00			320	204
378	6.54	6.51	34.089	26.768	132.5	0.789	1.32	19.2	59.5	2.63	36.2	0.00			380	203
400 ISL	6.32	6.28	34.100	26.805	129.1	0.818	1.18	17.1	63.4	2.70	37.1	0.00			403	
437	5.97	5.93	34.124	26.869	123.3	0.865	0.95	13.6	70.0	2.81	38.6	0.00			440	202
500 ISL	5.59	5.55	34.192	26.970	114.2	0.939	0.57	8.1	80.0	2.97	40.3	0.00			503	
514	5.51	5.47	34.208	26.993	112.1	0.955	0.49	7.0	82.2	3.01	40.7	0.00			517	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 STATION 83.3 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 34.6 N	122 48.7 W	14/02/06	0204	UTC	4266 m	330	17 kn	340 05 07	1	1017.6 mb	16.1 C	14.9 C		4/8	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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.27	15.27	33.060	24.419	350.1	0.000	5.85	102.2	1.6	0.29	0.0	0.00	0.14	0.04	0	
2	15.27	15.27	33.060	24.419	350.2	0.007	5.85	102.2	1.6	0.29	0.0	0.00	0.14	0.04	2	221
10	15.26	15.26	33.060	24.421	350.2	0.035									10	220
10	15.25	15.25	33.059	24.423	350.1	0.035	5.83	101.8	1.6	0.32	0.0	0.00	0.16	0.04	10	219
19	15.22	15.22	33.061	24.431	349.5	0.067	5.83	101.7	1.6	0.33	0.0	0.00	0.17	0.03	19	218
20 ISL	15.21	15.21	33.061	24.433	349.3	0.070	5.83	101.7	1.6	0.33	0.0	0.00	0.17	0.03	20	
29	15.15	15.15	33.063	24.448	348.2	0.101	5.84	101.8	1.6	0.32	0.0	0.00	0.18	0.05	29	217
30 ISL	15.15	15.15	33.063	24.448	348.2	0.105	5.84	101.8	1.6	0.32	0.0	0.00	0.18	0.05	30	
40	15.07	15.06	33.066	24.468	346.6	0.140	5.85	101.8	1.6	0.32	0.0	0.00	0.26	0.08	40	216
50	14.77	14.76	33.074	24.539	340.1	0.174	5.89	101.8	1.8	0.33	0.0	0.00	0.48	0.20	50	215
59	14.53	14.52	33.089	24.602	334.4	0.204	5.90	101.5	1.9	0.35	0.0	0.01	0.49	0.27	59	214
69	14.41	14.40	33.127	24.657	329.4	0.237	5.81	99.8	2.0	0.38	0.1	0.06	0.34	0.18	69	213
75 ISL	14.24	14.23	33.146	24.708	324.8	0.257	5.75	98.4	2.5	0.42	0.7	0.10	0.27	0.15	75	
85	13.68	13.67	33.180	24.850	311.4	0.289	5.52	93.4	3.2	0.55	3.1	0.13	0.19	0.13	85	212
99	12.14	12.13	33.267	25.220	276.4	0.330	4.80	78.7	7.5	0.96	9.7	0.02	0.10	0.10	99	211
100 ISL	12.03	12.02	33.277	25.248	273.6	0.333	4.74	77.5	7.9	0.99	10.2	0.02	0.10	0.10	100	
119	10.28	10.27	33.505	25.740	227.0	0.380	3.75	59.1	16.5	1.54	18.9	0.01	0.03	0.06	120	210
125 ISL	10.05	10.04	33.579	25.837	217.9	0.394	3.50	54.9	18.7	1.65	20.5	0.01	0.02	0.05	126	
138	9.81	9.79	33.730	25.995	203.1	0.421	3.01	47.0	22.7	1.84	23.0	0.01	0.01	0.04	139	209
150 ISL	9.78	9.76	33.868	26.108	192.6	0.445	2.58	40.3	25.6	1.99	24.7	0.01	0.00	0.04	151	
169	9.74	9.72	34.016	26.231	181.4	0.480	2.06	32.2	28.9	2.15	26.3	0.01	0.00	0.04	170	208
199	9.51	9.49	34.095	26.331	172.5	0.533	1.87	29.1	32.0	2.23	27.5	0.00	0.00	0.03	200	207
200 ISL	9.50	9.48	34.097	26.334	172.2	0.535	1.86	28.9	32.1	2.23	27.5	0.00			201	
229	9.26	9.23	34.133	26.402	166.3	0.584	1.73	26.8	34.2	2.30	28.5	0.00			230	206
250 ISL	9.04	9.01	34.154	26.454	161.7	0.619	1.63	25.1	36.1	2.35	29.3	0.00			251	
269	8.84	8.81	34.169	26.498	157.8	0.649	1.54	23.6	38.1	2.40	30.0	0.00			271	205
300 ISL	8.54	8.51	34.185	26.557	152.6	0.697	1.40	21.3	41.6	2.48	31.0	0.00			302	
319	8.35	8.32	34.192	26.592	149.6	0.726	1.32	20.0	44.0	2.53	31.7	0.00			321	204
378	7.53	7.49	34.208	26.726	137.3	0.811	1.01	15.0	52.9	2.72	34.2	0.00			380	203
400 ISL	7.27	7.23	34.208	26.763	134.0	0.840	0.92	13.6	55.9	2.78	35.0	0.00			402	
438	6.87	6.83	34.209	26.819	128.9	0.890	0.79	11.6	61.1	2.87	36.4	0.00			441	202
500 ISL	6.33	6.28	34.231	26.909	120.9	0.968	0.57	8.2	70.6	3.02	38.4	0.00			503	
514	6.21	6.16	34.236	26.928	119.1	0.985	0.52	7.5	72.7	3.05	38.9	0.00			517	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 14.4 N	123 29.9 W	13/02/06	1954	UTC	4124 m	340	16 kn	350 04 06	2	1020.6 mb	17.5 C	15.9 C	16m	7/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.10	15.10	33.067	24.461	346.1	0.000	5.90	102.7	1.9	0.33	0.0	0.00	0.26	0.02	0	
1 A	15.10	15.10	33.067	24.461	346.1	0.003	5.90	102.7	1.9	0.33	0.0	0.00	0.26	0.02	1	223
10	15.03	15.03	33.067	24.477	344.9	0.035	5.88	102.2					0.24	0.06	10	222
12 A	15.04	15.04	33.066	24.474	345.2	0.041	5.90	102.6	1.9	0.33	0.0	0.00	0.25	0.03	12	221
20	15.00	15.00	33.071	24.487	344.3	0.069	5.89	102.3	1.9	0.33	0.0	0.00	0.25	0.04	20	220
28 A	14.96	14.96	33.076	24.499	343.3	0.097	5.90	102.4	1.8	0.33	0.0	0.00	0.36	0.03	28	219
30 ISL	14.92	14.92	33.080	24.511	342.2	0.103	5.91	102.5	1.8	0.33	0.0	0.00	0.37	0.05	30	
37 A	14.75	14.74	33.093	24.558	338.0	0.127	5.94	102.7	2.0	0.33	0.0	0.00	0.42	0.13	37	218
45	14.51	14.50	33.092	24.608	333.4	0.154	5.93	102.0	2.1	0.33	0.0	0.00	0.51	0.20	45	217
50 ISL	14.49	14.48	33.094	24.614	333.0	0.171	5.92	101.8	2.1	0.34	0.0	0.01	0.54	0.20	50	
51 A	14.48	14.47	33.095	24.617	332.7	0.174	5.92	101.8	2.1	0.34	0.0	0.01	0.55	0.20	51	216
54	14.41	14.40	33.096	24.633	331.3	0.184	5.89	101.1	2.1	0.35	0.0	0.03	0.94	0.04	54	215
60	14.29	14.28	33.096	24.658	329.0	0.204	5.85	100.2	2.2	0.37	0.2	0.07	0.62	0.16	60	214
70 A	14.02	14.01	33.133	24.743	321.2	0.236	5.68	96.8	2.8	0.45	1.3	0.29	0.27	0.13	70	213
75 ISL	13.85	13.84	33.161	24.800	315.9	0.252	5.64	95.7	3.1	0.49	2.0	0.25	0.22	0.11	75	
85	13.40	13.39	33.203	24.924	304.3	0.283	5.56	93.5	3.7	0.56	3.3	0.17	0.13	0.08	85	212
100	12.41	12.40	33.172	25.095	288.3	0.328	5.36	88.3	4.3	0.66	4.8	0.03	0.14	0.07	100	211
119	10.99	10.98	33.375	25.515	248.5	0.379	4.32	69.1	11.8	1.23	14.2	0.01	0.05	0.05	120	210
125 ISL	10.56	10.55	33.418	25.624	238.2	0.393	4.24	67.2	13.6	1.33	15.9	0.01	0.04	0.04	126	
140	9.67	9.65	33.516	25.851	216.8	0.427	4.05	63.0	17.3	1.48	18.6	0.01	0.02	0.03	141	209
150 ISL	9.36	9.34	33.600	25.967	205.8	0.449	4.01	62.0	19.4	1.51	19.9	0.01	0.01	0.03	151	
169	9.05	9.03	33.754	26.138	190.0	0.486	3.94	60.5	22.5	1.58	21.2	0.01	0.00	0.02	170	208
199	8.77	8.75	33.926	26.317	173.5	0.541	4.08	62.4	25.3	1.54	21.2	0.01	0.00	0.01	200	207
200 ISL	8.76	8.74	33.929	26.321	173.1	0.542	4.08	62.4	25.4	1.54	21.2	0.01			201	
229	8.48	8.46	33.971	26.397	166.3	0.592	3.81	57.9	28.9	1.66	23.0	0.01			230	206
250 ISL	8.14	8.11	33.992	26.465	160.1	0.626	3.49	52.6	33.6	1.80	25.1	0.01			251	
268	7.83	7.80	34.007	26.523	154.8	0.654	3.15	47.2	38.1	1.94	27.1	0.01			269	205
300 ISL	7.43	7.40	34.034	26.602	147.6	0.703	2.43	36.0	45.1	2.22	30.6	0.00			302	
319	7.23	7.20	34.049	26.642	144.0	0.730	2.02	29.8	48.9	2.38	32.5	0.00			321	204
378	6.73	6.70	34.088	26.742	135.1	0.813	1.41	20.6	57.7	2.64	35.5	0.00			380	203
400 ISL	6.54	6.50	34.102	26.778	131.9	0.842	1.23	17.9	61.2	2.73	36.5	0.00			402	
437	6.23	6.19	34.126	26.838	126.5	0.890	0.97	14.0	67.1	2.86	37.9	0.00			440	202
500 ISL	5.79	5.75	34.168	26.927	118.5	0.967	0.69	9.9	76.9	3.01	39.6	0.00			503	
515	5.68	5.64	34.178	26.948	116.5	0.985	0.62	8.8	79.2	3.05	40.0	0.00			518	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — 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 54.6 N	124 10.2 W	13/02/06	1322	UTC	4205 m	350	16 kn			1020.9 mb	16.1 C	14.9 C				

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.15	16.15	33.212	24.339	357.7	0.000	5.73	102.0	1.5	0.28	0.0	0.00	0.15	0.02	0	
1	16.15	16.15	33.212	24.340	357.7	0.004	5.73	102.0	1.5	0.28	0.0	0.00	0.15	0.02	1	221
10	16.14	16.14	33.213	24.343	357.7	0.036	5.73	101.9	1.5	0.28	0.0	0.00	0.14	0.02	10	220
15	16.14	16.14	33.213	24.343	357.8	0.054	5.71	101.6	1.5	0.28	0.0	0.00	0.15	0.01	15	219
20 ISL	16.14	16.14	33.213	24.343	358.0	0.072	5.71	101.6	1.5	0.28	0.0	0.00	0.15	0.01	20	
29	16.15	16.15	33.212	24.341	358.5	0.104	5.71	101.6	1.4	0.28	0.0	0.00	0.15	0.01	29	218
30 ISL	16.15	16.15	33.212	24.341	358.5	0.107	5.71	101.6	1.4	0.28	0.0	0.00	0.15	0.01	30	
44	16.15	16.14	33.213	24.342	358.8	0.158	5.72	101.8	1.5	0.28	0.0	0.00	0.14	0.02	44	217
50 ISL	16.10	16.09	33.205	24.347	358.5	0.179	5.72	101.7	1.5	0.28	0.0	0.00	0.15	0.02	50	
60	15.95	15.94	33.179	24.361	357.5	0.215	5.71	101.2	1.5	0.29	0.0	0.00	0.18	0.03	60	216
75	15.60	15.59	33.110	24.387	355.5	0.268	5.77	101.5	1.4	0.30	0.0	0.00	0.28	0.09	75	215
84	15.36	15.35	33.104	24.436	351.1	0.300	5.74	100.4	1.5	0.33	0.0	0.04	0.34	0.09	84	214
94	15.03	15.02	33.111	24.513	343.9	0.335	5.75	100.0	1.7	0.35	0.2	0.12	0.38	0.03	94	213
100 ISL	14.15	14.14	33.113	24.702	326.0	0.355	5.68	97.0	2.4	0.45	1.7	0.07	0.31	0.05	100	
105	13.35	13.34	33.137	24.884	308.7	0.371	5.58	93.7	3.1	0.55	3.1	0.02	0.23	0.08	105	212
114	12.58	12.56	33.248	25.121	286.2	0.398	5.35	88.5	4.2	0.63	4.5	0.02	0.14	0.10	114	211
125	12.29	12.27	33.467	25.347	265.0	0.428	5.15	84.8	5.1	0.68	6.2	0.02	0.10	0.08	126	210
138	11.47	11.45	33.454	25.490	251.5	0.462	4.98	80.6	7.3	0.85	8.9	0.01	0.07	0.07	139	209
150 ISL	10.78	10.76	33.490	25.642	237.1	0.491	4.87	77.6	9.7	1.00	11.4	0.00	0.04	0.06	151	
165	10.05	10.03	33.570	25.831	219.4	0.525	4.68	73.4	13.1	1.18	14.5	0.00	0.01	0.04	166	208
194	9.24	9.22	33.756	26.109	193.2	0.585	3.91	60.3	21.5	1.58	20.7	0.00	0.00	0.03	195	207
200 ISL	9.18	9.16	33.801	26.154	189.1	0.596	3.68	56.7	23.1	1.66	21.8	0.00			201	
230	8.94	8.92	33.988	26.339	172.1	0.651	2.65	40.7	30.9	2.02	26.4	0.00			231	206
250 ISL	8.55	8.52	34.038	26.440	162.8	0.684	2.36	35.9	35.7	2.15	28.5	0.00			251	
268	8.17	8.14	34.057	26.512	156.0	0.713	2.22	33.5	39.5	2.23	29.9	0.00			269	205
300 ISL	7.76	7.73	34.079	26.590	149.0	0.762	1.94	29.0	44.7	2.37	31.7	0.00			302	
318	7.58	7.55	34.083	26.620	146.4	0.788	1.80	26.8	47.2	2.44	32.5	0.00			320	204
377	6.89	6.85	34.104	26.733	136.1	0.871	1.32	19.3	56.1	2.67	35.5	0.00			379	203
400 ISL	6.59	6.55	34.105	26.774	132.3	0.902	1.21	17.6	60.5	2.74	36.4	0.00			402	
437	6.14	6.10	34.113	26.839	126.3	0.950	1.06	15.3	67.8	2.84	37.8	0.00			440	202
500 ISL	5.73	5.69	34.171	26.937	117.5	1.027	0.66	9.4	77.8	3.02	39.8	0.00			503	
512	5.65	5.61	34.182	26.955	115.8	1.041	0.58	8.3	79.7	3.06	40.2	0.00			515	201

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — 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 26.9 W	11/02/06	0205	UTC	25 m	270	05 kn	270 01 07	1	1020.4 mb	15.3 C	14.0 C			4/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.66	14.66	33.401	24.813	312.5	0.000	7.22	124.8	2.5	0.18	0.0	0.00	5.28	0.42	0	
2	14.66	14.66	33.401	24.813	312.6	0.006	7.22	124.8	2.5	0.18	0.0	0.00	5.28	0.42	2	205
5	14.65	14.65	33.399	24.814	312.6	0.016	7.13	123.2	2.4	0.19	0.0	0.00	4.93	0.53	5	204
10	14.41	14.41	33.397	24.864	308.0	0.031	6.83	117.5	2.7	0.18	0.0	0.00	3.61	0.38	10	203
15	14.16	14.16	33.400	24.919	303.0	0.046	6.57	112.4	3.1	0.21	0.0	0.02	5.71	0.33	15	202
20	14.13	14.13	33.400	24.925	302.5	0.062	6.38	109.1	3.3	0.24	0.1	0.03	4.89	0.48	20	201

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — STATION 86.7 33.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE
33 53.3 N	118 29.6 W	11/02/06	0242	UTC	56 m	260	08 kn			1020.7 mb	15.1 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.02	15.02	33.375	24.716	321.8	0.000	6.10	106.2	1.9	0.27	0.0	0.00	0.88	0.08	0	
2	15.02	15.02	33.375	24.716	321.9	0.006	6.10	106.2	1.9	0.27	0.0	0.00	0.88	0.08	2	208
5	15.02	15.02	33.376	24.717	321.9	0.016	6.10	106.2	2.2	0.27	0.0	0.00	0.85	0.09	5	207
10	15.02	15.02	33.376	24.717	322.0	0.032	6.10	106.2	2.0	0.28	0.0	0.00	0.94	0.09	10	205
10	15.02	15.02	33.375	24.716	322.1	0.032									10	206
20	14.80	14.80	33.372	24.762	318.1	0.064	6.20	107.5	2.0	0.26	0.0	0.00	0.93	0.13	20	204
30	13.48	13.48	33.394	25.054	290.4	0.095	5.68	95.8	3.9	0.40	1.0	0.09	5.65	0.59	30	203
41	12.92	12.91	33.435	25.198	277.0	0.126	4.64	77.4	8.2	0.75	5.5	0.36	1.05	0.40	41	202
50 ISL	12.48	12.47	33.441	25.289	268.6	0.150	4.38	72.4	9.9	1.02	9.6	0.43	0.82	0.40	50	
51	12.43	12.42	33.442	25.299	267.6	0.153	4.35	71.8	10.1	1.05	10.0	0.44	0.79	0.40	51	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 37.7 W	11/02/06	0447 UTC	666 m	280 12 kn			1021.5 mb	14.9 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.91	14.91	33.387	24.749	318.7	0.000	6.15	106.9	1.7	0.26	0.0	0.00	0.43	0.13	0	
2	14.91	14.91	33.387	24.749	318.7	0.006	6.15	106.9	1.7	0.26	0.0	0.00	0.43	0.13	2	221
10	14.78	14.78	33.388	24.778	316.2	0.032	6.29	109.0	1.7	0.25	0.0	0.00	0.48	0.13	10	219
10	14.86	14.86	33.387	24.760	317.9	0.032									10	220
20	14.07	14.07	33.392	24.931	301.9	0.063	6.37	108.8	2.4	0.20	0.0	0.01	1.24	0.26	20	218
30 ISL	13.64	13.64	33.389	25.018	293.9	0.093	5.89	99.7	2.9	0.30	0.4	0.06	2.52	0.41	30	
31	13.59	13.59	33.388	25.027	293.0	0.095	5.82	98.4	3.0	0.31	0.4	0.07	2.58	0.42	31	217
41	12.77	12.76	33.391	25.193	277.5	0.124	4.87	81.0	7.6	0.87	7.9	0.39	0.78	0.32	41	216
50	11.65	11.64	33.438	25.443	253.9	0.148	3.98	64.6	12.2	1.29	14.1	0.06	0.28	0.37	50	215
60	11.09	11.08	33.567	25.645	234.8	0.172	3.32	53.3	16.8	1.58	18.2	0.02	0.15	0.19	60	214
70	10.85	10.84	33.628	25.736	226.4	0.195	3.05	48.7	19.0	1.70	19.8	0.02	0.10	0.14	70	213
75 ISL	10.77	10.76	33.661	25.776	222.7	0.207	2.93	46.8	20.0	1.76	20.4	0.02	0.08	0.13	75	
85	10.61	10.60	33.731	25.859	215.1	0.229	2.71	43.1	21.9	1.86	21.6	0.01	0.05	0.12	85	212
100	10.29	10.28	33.839	25.998	202.1	0.260	2.46	38.9	24.7	1.97	23.3	0.02	0.02	0.10	101	211
120	10.11	10.10	34.042	26.188	184.5	0.298	1.99	31.4	28.9	2.15	25.4	0.01	0.01	0.06	121	210
125 ISL	10.01	10.00	34.059	26.218	181.7	0.308	2.00	31.5	29.4	2.16	25.7	0.01	0.01	0.06	126	
140	9.72	9.70	34.079	26.283	175.9	0.334	2.02	31.6	30.5	2.17	26.3	0.01	0.01	0.07	141	209
150 ISL	9.61	9.59	34.100	26.318	172.8	0.352	1.97	30.7	31.4	2.20	26.7	0.01	0.01	0.11	151	
170	9.47	9.45	34.144	26.375	167.7	0.386	1.79	27.8	33.4	2.27	27.6	0.01	0.01	0.16	171	208
199	9.28	9.26	34.211	26.459	160.3	0.433	1.50	23.2	36.7	2.40	28.9	0.01	0.01	0.05	200	207
200 ISL	9.27	9.25	34.212	26.462	160.1	0.435	1.49	23.1	36.8	2.40	28.9	0.01			201	
229	8.97	8.95	34.220	26.516	155.3	0.481	1.40	21.5	39.5	2.44	29.9	0.00			230	206
250 ISL	8.78	8.75	34.226	26.551	152.3	0.513	1.34	20.5	40.9	2.48	30.4	0.00			252	
269	8.62	8.59	34.231	26.580	149.9	0.542	1.28	19.5	42.2	2.53	30.9	0.01			271	205
300 ISL	8.40	8.37	34.237	26.619	146.7	0.588	1.15	17.5	45.0	2.60	31.7	0.01			302	
319	8.27	8.24	34.240	26.642	144.8	0.616	1.07	16.2	46.7	2.64	32.2	0.01			321	204
378	7.87	7.83	34.253	26.712	138.9	0.699	0.91	13.7	51.0	2.73	33.5	0.01			380	203
400 ISL	7.66	7.62	34.256	26.745	136.0	0.729	0.83	12.4	53.5	2.78	34.2	0.01			403	
438	7.28	7.24	34.262	26.805	130.7	0.780	0.68	10.1	58.6	2.88	35.5	0.01			441	202
500 ISL	6.66	6.61	34.287	26.910	121.2	0.858	0.45	6.6	69.0	3.04	37.6	0.01			503	
516	6.50	6.45	34.294	26.937	118.7	0.877	0.39	5.7	71.7	3.08	38.1	0.01			520	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 39.4 N	118 58.6 W	11/02/06	0848 UTC	739 m	220 04 kn			1023.5 mb	13.7 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.39	14.39	33.417	24.883	305.9	0.000	6.37	109.5	1.4	0.28	0.3	0.01	1.48	0.31	0	
3	14.39	14.39	33.417	24.883	306.0	0.009	6.37	109.5	1.4	0.28	0.3	0.01	1.48	0.31	3	221
10	14.38	14.38	33.417	24.885	306.0	0.031									10	220
10	14.38	14.38	33.418	24.886	305.9	0.031	6.36	109.3	1.5	0.28	0.3	0.02	1.34	0.36	10	219
20	13.86	13.86	33.425	25.000	295.3	0.061	6.17	105.0	1.7	0.38	1.5	0.05	1.80	0.56	20	218
30	13.16	13.16	33.463	25.172	279.2	0.089	5.27	88.4	5.8	0.73	6.1	0.12	1.85	0.82	30	217
40	12.43	12.42	33.462	25.314	265.9	0.117	4.62	76.3	9.1	1.00	9.9	0.21	1.05	0.43	40	216
50	11.67	11.66	33.533	25.513	247.2	0.142	3.95	64.2	13.7	1.32	14.7	0.23	0.60	0.36	50	215
60	11.14	11.13	33.608	25.668	232.6	0.166	3.43	55.2	17.2	1.55	18.0	0.12	0.33	0.25	60	214
70	10.83	10.82	33.651	25.757	224.4	0.189	3.16	50.5	19.3	1.67	19.7	0.06	0.22	0.21	70	213
75 ISL	10.70	10.69	33.680	25.803	220.1	0.200	3.00	47.8	20.3	1.74	20.6	0.04	0.18	0.19	75	
85	10.48	10.47	33.748	25.894	211.7	0.222	2.70	42.8	22.4	1.87	22.2	0.02	0.11	0.16	85	212
100	10.16	10.15	33.869	26.044	197.7	0.253	2.45	38.6	25.7	1.99	24.0	0.01	0.04	0.14	101	211
120	9.95	9.94	34.014	26.193	184.0	0.291	2.08	32.7	29.1	2.13	25.6	0.01	0.01	0.09	121	210
125 ISL	9.90	9.89	34.029	26.213	182.2	0.300	2.04	32.0	29.6	2.14	25.8	0.01	0.01	0.09	126	
139	9.78	9.76	34.053	26.252	178.7	0.325	1.99	31.1	30.5	2.17	26.3	0.00	0.01	0.09	140	209
150 ISL	9.74	9.72	34.075	26.276	176.7	0.345	1.95	30.5	31.1	2.19	26.6	0.00	0.01	0.08	151	
169	9.65	9.63	34.114	26.322	172.7	0.378	1.87	29.2	32.2	2.23	27.1	0.00	0.01	0.06	170	208
199	9.30	9.28	34.183	26.434	162.7	0.428	1.64	25.4	35.7	2.33	28.5	0.00	0.01	0.07	200	207
200 ISL	9.28	9.26	34.184	26.438	162.3	0.430	1.63	25.2	35.9	2.33	28.6	0.00			201	
228	8.81	8.79	34.208	26.532	153.8	0.474	1.42	21.8	40.3	2.45	30.1	0.00			229	206
250 ISL	8.58	8.55	34.223	26.580	149.5	0.507	1.26	19.2	43.0	2.53	31.1	0.01			252	
268	8.41	8.38	34.231	26.613	146.7	0.534	1.14	17.3	45.3	2.59	31.8	0.01			270	205
300 ISL	7.91	7.88	34.238	26.693	139.3	0.580	0.95	14.3	51.2	2.71	33.4	0.01			302	
317	7.66	7.63	34.241	26.732	135.8	0.603	0.86	12.8	54.2	2.76	34.2	0.01			319	204
377	7.26	7.22	34.259	26.804	129.7	0.683	0.70	10.4	60.0	2.87	35.5	0.00			379	203
400 ISL	7.09	7.05	34.267	26.834	127.1	0.712	0.62	9.1	62.6	2.92	36.1	0.00			403	
438	6.79	6.75	34.281	26.887	122.5	0.760	0.48	7.0	67.3	2.99	37.1	0.00			441	202
500 ISL	6.34	6.29	34.311	26.971	115.0	0.833	0.34	4.9	76.5	3.10	38.3	0.00			503	
516	6.22	6.17	34.319	26.993	113.1	0.852	0.31	4.5	78.9	3.13	38.6	0.00			520	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 29.6 N	119 19.2 W	11/02/06	1305 UTC	1643 m	300 01 kn			1022.5 mb	13.2 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.74	13.74	33.459	25.051	290.0	0.000	6.11	103.7	1.5	0.42	2.3	0.09	1.83	0.35	0	
2	13.74	13.74	33.459	25.051	290.0	0.006	6.11	103.7	1.5	0.42	2.3	0.09	1.83	0.35	2	221
10 ISL	13.50	13.50	33.460	25.101	285.5	0.029	5.93	100.2	1.9	0.46	2.9	0.10	1.59	0.42	10	
11	13.45	13.45	33.461	25.112	284.5	0.032	5.90	99.5	2.0	0.47	3.1	0.10	1.56	0.43	11	219
11	13.50	13.50	33.459	25.100	285.6	0.032									11	220
20 ISL	12.86	12.86	33.494	25.255	271.0	0.057	5.83	97.2	3.2	0.61	5.2	0.13	1.96	0.53	20	
21	12.79	12.79	33.498	25.272	269.5	0.059	5.82	96.9	3.4	0.63	5.5	0.14	1.98	0.54	21	218
30	12.30	12.30	33.525	25.388	258.6	0.083	5.44	89.6	6.5	0.92	8.4	0.20	1.04	0.62	30	217
40	11.31	11.31	33.604	25.634	235.4	0.108	4.24	68.4	14.0	1.38	15.0	0.25	0.25	0.36	40	216
50	10.55	10.54	33.721	25.860	214.1	0.130	2.80	44.5	21.7	1.90	21.6	0.04	0.15	0.32	50	215
60	10.15	10.14	33.848	26.029	198.3	0.151	2.44	38.5	25.4	1.99	23.8	0.03	0.06	0.27	60	214
70	10.09	10.08	33.960	26.126	189.3	0.170	2.10	33.1	28.3	2.11	25.1	0.01	0.04	0.25	70	213
75 ISL	10.01	10.00	33.981	26.156	186.5	0.180	2.10	33.0	28.6	2.12	25.4	0.01	0.03	0.23	75	
85	9.84	9.83	33.997	26.198	182.8	0.198	2.11	33.1	29.2	2.13	25.8	0.01	0.02	0.19	85	212
100	9.73	9.72	34.025	26.238	179.2	0.225	2.07	32.4	30.3	2.16	26.2	0.01	0.02	0.15	101	211
120	9.60	9.59	34.098	26.317	172.2	0.261	1.91	29.8	32.0	2.22	27.1	0.01	0.02	0.10	121	210
125 ISL	9.57	9.56	34.111	26.332	170.8	0.269	1.88	29.3	32.3	2.23	27.2	0.01	0.02	0.10	126	
140	9.47	9.45	34.143	26.374	167.2	0.294	1.80	28.0	33.4	2.27	27.7	0.01	0.01	0.10	141	209
150 ISL	9.35	9.33	34.164	26.410	163.9	0.311	1.70	26.4	34.7	2.31	28.2	0.01	0.01	0.09	151	
169	9.09	9.07	34.194	26.476	158.0	0.342	1.52	23.4	37.7	2.40	29.2	0.01	0.01	0.07	170	208
199	8.64	8.62	34.195	26.548	151.6	0.388	1.36	20.8	41.8	2.49	30.8	0.00	0.01	0.07	200	207
200 ISL	8.63	8.61	34.195	26.550	151.5	0.390	1.36	20.8	41.9	2.49	30.8	0.00			201	
228	8.40	8.38	34.211	26.598	147.3	0.431	1.22	18.5	44.8	2.55	31.7	0.01			229	206
250 ISL	8.19	8.16	34.219	26.636	144.0	0.463	1.11	16.8	47.2	2.61	32.5	0.01			252	
269	8.02	7.99	34.225	26.667	141.4	0.491	1.02	15.4	49.3	2.67	33.1	0.01			271	205
300 ISL	7.80	7.77	34.235	26.707	138.0	0.534	0.92	13.8	52.0	2.73	33.8	0.00			302	
318	7.67	7.64	34.241	26.731	135.9	0.558	0.87	13.0	53.8	2.77	34.2	0.00			320	204
376	7.11	7.07	34.264	26.829	127.2	0.635	0.61	9.0	62.7	2.93	36.1	0.00			379	203
400 ISL	6.96	6.92	34.272	26.856	124.9	0.665	0.53	7.8	65.0	2.97	36.6	0.00			403	
437	6.75	6.71	34.285	26.895	121.6	0.711	0.44	6.4	68.2	3.02	37.3	0.00			440	202
500 ISL	6.35	6.30	34.311	26.969	115.2	0.785	0.31	4.5	76.0	3.12	38.3	0.00			504	
515	6.25	6.20	34.317	26.987	113.6	0.802	0.28	4.0	77.9	3.14	38.5	0.00			519	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 39.9 W	11/02/06	1724 UTC	82 m	340 07 kn	340 02 06	2	1024.2 mb	12.5 C	12.0 C	13m	8/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.75	12.75	33.500	25.281	268.1	0.000	5.99	99.6	6.9	0.74	6.0	0.13	2.08	0.43	0	
2 A	12.75	12.75	33.500	25.281	268.1	0.005	5.99	99.6	6.9	0.74	6.0	0.13	2.08	0.43	2	211
9 A	12.59	12.59	33.513	25.322	264.4	0.024	5.66	93.8	8.0	0.83	7.2	0.16	2.11	0.26	9	210
10	12.58	12.58	33.514	25.325	264.1	0.027									10	209
10 ISL	12.53	12.53	33.515	25.335	263.1	0.027	5.61	92.9	8.2	0.86	7.6	0.17	1.93	0.32	10	
16	12.10	12.10	33.540	25.437	253.6	0.042	5.17	84.8	9.9	1.06	10.6	0.23	0.86	0.65	16	208
20 ISL	11.76	11.76	33.582	25.534	244.5	0.052	4.57	74.5	12.4	1.22	12.8	0.23	0.79	0.50	20	
22 A	11.61	11.61	33.602	25.577	240.4	0.057	4.28	69.5	13.7	1.30	13.8	0.23	0.75	0.40	22	207
30 A	11.30	11.30	33.617	25.646	234.1	0.076	3.93	63.4	15.2	1.42	15.7	0.21	0.58	0.37	30	206
41 A	10.84	10.84	33.694	25.788	220.8	0.101	3.40	54.3	19.2	1.63	18.7	0.25	0.31	0.40	41	205
49	10.44	10.43	33.781	25.926	207.8	0.118	2.98	47.2	22.8	1.82	21.2	0.25	0.18	0.29	49	204
50 ISL	10.44	10.43	33.782	25.927	207.7	0.120	2.98	47.2	22.9	1.82	21.2	0.25	0.18	0.29	50	
57 A	10.41	10.40	33.790	25.939	206.8	0.135	2.95	46.7	23.3	1.83	21.4	0.25	0.19	0.31	57	203
64	10.42	10.41	33.789	25.936	207.2	0.149	2.93	46.4	23.2	1.83	21.5	0.24	0.19	0.28	64	202
73	10.41	10.40	33.791	25.940	207.1	0.168	2.93	46.4	23.2	1.84	21.5	0.24	0.17	0.31	73	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 STATION 86.7 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 9.4 N	120 0.3 W	11/02/06	2053 UTC	1199 m	340 10 kn	330 02 05	2	1025.0 mb	13.9 C	12.6 C	10m	8/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.06	13.06	33.511	25.228	273.1	0.000	6.16	103.1	5.5	0.68	5.7	0.12	1.62	0.42	0	
2	13.06	13.06	33.511	25.228	273.1	0.005	6.16	103.1	5.5	0.68	5.7	0.12	1.62	0.42	2	221
10	12.98	12.98	33.509	25.243	271.9	0.027	6.15	102.8	5.8	0.69	5.9	0.12	1.62	0.49	10	219
11	12.98	12.98	33.510	25.244	271.9	0.030									11	220
20	12.54	12.54	33.484	25.310	265.8	0.054	6.01	99.5	6.9	0.79	7.1	0.12	1.97	0.69	20	218
30 ISL	12.18	12.18	33.525	25.411	256.5	0.080	5.63	92.5	7.5	0.95	8.9	0.17	1.07	0.44	30	
31	12.15	12.15	33.530	25.420	255.6	0.083	5.59	91.8	7.6	0.97	9.1	0.17	0.96	0.41	31	217
41	12.04	12.03	33.548	25.455	252.5	0.108	5.46	89.5	8.9	1.03	10.1	0.17	0.75	0.37	41	216
50	11.50	11.49	33.497	25.516	246.9	0.131	5.04	81.6	10.4	1.14	12.0	0.19	0.31	0.20	50	215
60	11.48	11.47	33.582	25.586	240.5	0.155	4.82	78.1	12.7	1.28	13.8	0.25	0.31	0.28	60	214
70	10.58	10.57	33.707	25.845	216.0	0.178	3.32	52.8	20.1	1.69	20.1	0.09	0.12	0.18	70	213
75 ISL	10.38	10.37	33.734	25.901	210.8	0.189	3.20	50.7	21.6	1.77	21.3	0.05	0.11	0.17	75	
85	10.17	10.16	33.774	25.968	204.6	0.209	2.95	46.5	23.4	1.83	22.3	0.02	0.09	0.16	85	212
100	9.74	9.73	33.917	26.152	187.4	0.239	2.41	37.7	28.1	2.03	25.0	0.00	0.03	0.12	101	211
119	9.60	9.59	34.012	26.250	178.5	0.274	2.15	33.5	30.5	2.14	26.3	0.00	0.02	0.12	120	210
125 ISL	9.57	9.56	34.032	26.271	176.7	0.284	2.10	32.7	30.9	2.16	26.6	0.00	0.02	0.11	126	
139	9.49	9.47	34.069	26.313	172.9	0.309	1.99	30.9	32.0	2.20	27.1	0.00	0.01	0.08	140	209
150 ISL	9.35	9.33	34.103	26.363	168.4	0.327	1.88	29.2	33.5	2.24	27.8	0.00	0.01	0.07	151	
169	9.01	8.99	34.140	26.446	160.8	0.359	1.75	26.9	36.4	2.29	29.0	0.00	0.00	0.06	170	208
199	8.30	8.28	34.098	26.524	153.7	0.406	1.90	28.8	40.1	2.32	30.5	0.00	0.00	0.04	200	207
200 ISL	8.29	8.27	34.098	26.525	153.6	0.407	1.90	28.8	40.2	2.32	30.5	0.00			201	
229	8.14	8.12	34.135	26.577	149.1	0.451	1.64	24.7	43.1	2.43	31.5	0.00			230	206
250 ISL	8.01	7.98	34.179	26.632	144.3	0.482	1.36	20.5	46.6	2.55	32.3	0.00			252	
268	7.89	7.86	34.216	26.679	140.1	0.508	1.12	16.8	49.8	2.65	33.1	0.00			270	205
300 ISL	7.62	7.59	34.248	26.743	134.4	0.552	0.84	12.5	54.8	2.78	34.4	0.01			302	
318	7.47	7.44	34.258	26.773	131.8	0.576	0.73	10.9	57.3	2.83	35.0	0.01			320	204
378	7.08	7.04	34.269	26.837	126.5	0.653	0.61	9.0	62.8	2.93	36.3	0.00			380	203
400 ISL	6.96	6.92	34.274	26.858	124.8	0.681	0.56	8.2	64.6	2.97	36.9	0.00			403	
437	6.76	6.72	34.282	26.892	122.0	0.726	0.49	7.2	67.8	3.03	37.8	0.00			440	202
500 ISL	6.32	6.27	34.296	26.961	115.9	0.801	0.38	5.5	74.1	3.10	38.9	0.00			503	
514	6.22	6.17	34.299	26.977	114.5	0.817	0.35	5.1	75.5	3.12	39.1	0.00			518	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 59.2 N	120 20.9 W	12/02/06	0103	UTC	721 m	330 13 kn	340 03 06	1	1023.7 mb	14.8 C	13.3 C		4/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.71	13.71	33.200	24.857	308.4	0.000	6.05	102.5	3.2	0.46	1.6	0.08	0.56	0.19	0	
2	13.71	13.71	33.200	24.857	308.5	0.006	6.05	102.5	3.2	0.46	1.6	0.08	0.56	0.19	2	221
10 ISL	13.71	13.71	33.200	24.857	308.7	0.031	6.04	102.3	2.9	0.46	1.6	0.08	0.53	0.17	10	
11	13.71	13.71	33.200	24.857	308.7	0.034	6.04	102.3	2.9	0.46	1.6	0.08	0.53	0.17	11	219
11	13.71	13.71	33.200	24.857	308.7	0.034									11	220
20 ISL	13.71	13.71	33.201	24.858	308.8	0.062	6.03	102.1	2.9	0.45	1.6	0.08	0.57	0.19	20	
21	13.71	13.71	33.201	24.858	308.9	0.065	6.03	102.1	2.9	0.45	1.6	0.08	0.58	0.19	21	218
30 ISL	13.63	13.63	33.205	24.878	307.3	0.093	5.97	100.9	3.0	0.47	1.8	0.12	0.64	0.24	30	
31	13.62	13.62	33.205	24.880	307.1	0.096	5.96	100.7	3.0	0.47	1.8	0.12	0.64	0.25	31	217
40	13.44	13.43	33.208	24.919	303.6	0.123	5.89	99.2	3.3	0.52	2.4	0.14	0.53	0.25	40	216
50 ISL	13.16	13.15	33.199	24.968	299.1	0.153	5.75	96.3	4.0	0.59	3.6	0.16	0.36	0.17	50	
51	13.13	13.12	33.199	24.974	298.6	0.156	5.73	95.9	4.1	0.60	3.7	0.16	0.34	0.16	51	215
61	12.97	12.96	33.225	25.026	293.9	0.186	5.63	93.9	4.6	0.64	4.5	0.18	0.27	0.14	61	214
71	12.78	12.77	33.341	25.154	282.0	0.215	5.66	94.1	5.8	0.74	5.8	0.37	0.25	0.17	71	213
75 ISL	12.26	12.25	33.346	25.258	272.2	0.226	5.34	87.8	7.2	0.88	8.1	0.29	0.21	0.15	75	
85	10.84	10.83	33.353	25.524	246.9	0.252	4.43	70.7	11.4	1.24	14.5	0.01	0.09	0.09	85	212
99	10.09	10.08	33.439	25.720	228.4	0.285	4.05	63.6	15.5	1.47	18.1	0.01	0.04	0.08	99	211
100 ISL	10.06	10.05	33.450	25.734	227.1	0.287	4.01	62.9	15.8	1.49	18.4	0.01	0.04	0.08	100	
120	9.68	9.67	33.672	25.971	205.0	0.330	3.25	50.6	21.8	1.77	22.5	0.00	0.02	0.07	121	210
125 ISL	9.57	9.56	33.718	26.025	199.9	0.341	3.15	49.0	23.0	1.81	23.1	0.00	0.02	0.07	126	
139	9.31	9.29	33.827	26.153	188.0	0.368	2.96	45.8	25.6	1.89	24.4	0.00	0.01	0.06	140	209
150 ISL	9.22	9.20	33.880	26.209	182.9	0.388	2.84	43.8	26.9	1.95	25.1	0.00	0.01	0.06	151	
170	9.15	9.13	33.954	26.278	176.7	0.424	2.61	40.3	29.0	2.05	26.1	0.00	0.01	0.05	171	208
199	9.01	8.99	34.085	26.404	165.4	0.474	2.10	32.3	33.5	2.18	27.9	0.00	0.01	0.04	200	207
200 ISL	9.00	8.98	34.087	26.407	165.1	0.475	2.09	32.1	33.7	2.18	27.9	0.00			201	
229	8.76	8.74	34.127	26.477	159.0	0.522	1.86	28.5	38.0	2.27	29.3	0.00			230	206
250 ISL	8.43	8.40	34.141	26.539	153.4	0.555	1.70	25.8	41.0	2.36	30.6	0.00			251	
269	8.14	8.11	34.152	26.591	148.6	0.584	1.57	23.7	43.5	2.44	31.6	0.00			271	205
300 ISL	7.97	7.94	34.178	26.637	144.7	0.629	1.36	20.4	46.0	2.53	32.4	0.00			302	
319	7.87	7.84	34.192	26.663	142.5	0.657	1.24	18.6	47.9	2.58	32.8	0.00			321	204
378	6.89	6.85	34.210	26.817	128.2	0.736	0.82	12.0	62.5	2.84	36.3	0.00			380	203
400 ISL	6.73	6.69	34.213	26.841	126.2	0.764	0.76	11.1	64.6	2.87	36.9	0.00			403	
437	6.56	6.52	34.220	26.869	123.9	0.811	0.69	10.0	66.9	2.91	37.5	0.00			440	202
500 ISL	6.15	6.11	34.267	26.960	115.8	0.886	0.45	6.5	74.5	3.05	39.1	0.00			503	
513	6.06	6.01	34.277	26.980	114.0	0.901	0.40	5.8	76.1	3.08	39.4	0.00			517	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 39.6 N	121 2.1 W	12/02/06	0658	UTC	3780 m	350 20 kn			1024.8 mb	14.0 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.85	13.85	33.219	24.843	309.8	0.000	6.08	103.3	3.0	0.41	1.1	0.06	0.76	0.23	0	
2	13.85	13.85	33.219	24.843	309.8	0.006	6.08	103.3	3.0	0.41	1.1	0.06	0.76	0.23	2	221
10 ISL	13.85	13.85	33.219	24.843	310.0	0.031	6.10	103.6	2.8	0.41	1.1	0.06	0.73	0.22	10	
11	13.85	13.85	33.219	24.843	310.0	0.034	6.10	103.6	2.8	0.41	1.1	0.06	0.73	0.22	11	219
11	13.85	13.85	33.221	24.844	309.9	0.034									11	220
20	13.85	13.85	33.220	24.844	310.2	0.062	6.10	103.6	2.7	0.41	1.0	0.06	0.73	0.24	20	218
30 ISL	13.84	13.84	33.220	24.846	310.2	0.093	6.10	103.6	2.8	0.40	1.1	0.06	0.75	0.26	30	
31	13.84	13.84	33.220	24.846	310.3	0.096	6.10	103.6	2.8	0.40	1.1	0.06	0.75	0.26	31	217
41	13.52	13.51	33.233	24.922	303.3	0.127	5.97	100.7	3.3	0.48	2.1	0.12	0.84	0.35	41	216
50 ISL	13.11	13.10	33.272	25.035	292.8	0.154	5.82	97.4	4.7	0.61	3.8	0.27	0.60	0.25	50	
51	13.06	13.05	33.278	25.049	291.5	0.157	5.80	96.9	4.9	0.63	4.0	0.29	0.56	0.23	51	215
60	12.69	12.68	33.348	25.176	279.6	0.182	5.68	94.2	6.0	0.75	5.8	0.39	0.26	0.15	60	214
71	12.34	12.33	33.402	25.286	269.4	0.212	5.48	90.3	7.2	0.87	7.7	0.46	0.14	0.14	71	213
75 ISL	12.18	12.17	33.402	25.317	266.6	0.223	5.35	87.8	7.6	0.91	8.5	0.42	0.13	0.14	75	
85	11.68	11.67	33.406	25.413	257.5	0.249	4.88	79.3	9.5	1.06	11.3	0.25	0.11	0.13	85	212
100	10.65	10.64	33.523	25.690	231.4	0.286	3.70	58.8	15.7	1.50	18.3	0.02	0.08	0.10	100	211
120	10.07	10.06	33.725	25.947	207.3	0.330	2.91	45.7	22.2	1.83	22.6	0.01	0.02	0.06	121	210
125 ISL	9.88	9.87	33.736	25.988	203.5	0.340	2.96	46.3	22.8	1.83	23.0	0.01	0.02	0.06	126	
140	9.41	9.39	33.763	26.087	194.4	0.370	3.14	48.6	24.0	1.83	23.6	0.01	0.02	0.06	141	209
150 ISL	9.43	9.41	33.871	26.168	186.9	0.389	2.77	43.0	26.2	1.94	24.8	0.01	0.01	0.06	151	
169	9.58	9.56	34.050	26.284	176.4	0.424	2.01	31.3	30.5	2.16	26.9	0.00	0.00	0.05	170	208
200	9.03	9.01	34.041	26.366	169.0	0.477	2.24	34.5	32.2	2.13	27.5	0.00	0.00	0.05	201	207
229	8.82	8.80	34.092	26.440	162.5	0.525	2.00	30.6	35.4	2.23	28.8	0.00			230	206
250 ISL	8.70	8.67	34.124	26.484	158.7	0.559	1.83	28.0	37.5	2.30	29.6	0.00			251	
269	8.58	8.55	34.148	26.521	155.4	0.589	1.68	25.6	39.5	2.36	30.3	0.00			271	205
300 ISL	8.24	8.21	34.175	26.595	148.9	0.636	1.47	22.2	43.8	2.46	31.5	0.00			302	
318	8.02	7.99	34.188	26.638	144.9	0.662	1.34	20.2	46.5	2.53	32.3	0.00			320	204
378	7.39	7.35	34.240	26.771	133.0	0.746	0.84	12.5	56.2	2.79	35.0	0.00			380	203
400 ISL	7.16	7.12	34.247	26.809	129.6	0.775	0.74	10.9	59.4	2.85	35.8	0.00			403	
439	6.79	6.75	34.254	26.865	124.5	0.824	0.61	8.9	64.5	2.93	37.0	0.00			442	202
500 ISL	6.45	6.40	34.279	26.931	118.9	0.898	0.45	6.5	70.2	3.02	38.3	0.00			503	
518	6.35	6.30	34.286	26.950	117.3	0.920	0.40	5.8	71.9	3.05	38.7	0.00			522	201

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — 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 19.4 N	121 42.9 W	12/02/06	1316	UTC	4038 m	350	20 kn			1023.0 mb	15.0 C	13.8 C				

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.33	14.33	33.120	24.667	326.5	0.000	6.01	103.0	2.6	0.35	0.2	0.02	0.46	0.09	0	
3	14.33	14.33	33.120	24.667	326.6	0.010	6.01	103.0	2.6	0.35	0.2	0.02	0.46	0.09	3	221
10	14.29	14.29	33.119	24.674	326.1	0.033	5.99	102.6	2.4	0.35	0.2	0.02	0.49	0.09	10	219
10	14.29	14.29	33.121	24.676	325.9	0.033									10	220
20 ISL	14.29	14.29	33.120	24.675	326.3	0.065	6.01	102.9	2.4	0.35	0.2	0.02	0.47	0.11	20	
21	14.29	14.29	33.120	24.675	326.3	0.069	6.01	102.9	2.4	0.35	0.2	0.02	0.47	0.11	21	218
30	14.11	14.11	33.133	24.723	322.0	0.098	6.02	102.7	2.6	0.38	0.5	0.04	0.48	0.15	30	217
40	13.54	13.53	33.207	24.898	305.6	0.129	5.87	99.1	3.6	0.51	2.2	0.16	0.54	0.21	40	216
49	12.87	12.86	33.252	25.066	289.8	0.156	5.82	96.9	5.4	0.66	4.5	0.22	0.74	0.33	49	215
50 ISL	12.81	12.80	33.254	25.080	288.5	0.159	5.79	96.3	5.5	0.68	4.8	0.22	0.70	0.32	50	
60	12.15	12.14	33.269	25.219	275.5	0.187	5.36	87.9	6.9	0.86	7.9	0.23	0.17	0.15	60	214
71	11.25	11.24	33.304	25.412	257.2	0.216	4.63	74.5	10.3	1.15	12.8	0.02	0.10	0.11	71	213
75 ISL	10.93	10.92	33.323	25.484	250.4	0.226	4.47	71.4	11.6	1.24	14.3	0.02	0.08	0.11	75	
85	10.26	10.25	33.394	25.656	234.2	0.251	4.17	65.7	14.8	1.42	17.5	0.01	0.04	0.10	85	212
98	9.77	9.76	33.538	25.851	215.9	0.280	3.69	57.6	19.1	1.63	20.7	0.01	0.02	0.06	98	211
100 ISL	9.71	9.70	33.558	25.877	213.5	0.284	3.63	56.5	19.7	1.66	21.1	0.01	0.02	0.06	100	
119	9.26	9.25	33.729	26.084	194.1	0.323	3.13	48.3	24.5	1.86	24.2	0.00	0.01	0.05	120	210
125 ISL	9.18	9.17	33.784	26.140	188.9	0.334	2.97	45.8	26.0	1.91	25.0	0.00	0.01	0.05	126	
138	9.06	9.05	33.887	26.240	179.7	0.358	2.66	40.9	28.8	2.00	26.3	0.00	0.01	0.05	139	209
150 ISL	8.91	8.89	33.938	26.304	173.8	0.380	2.53	38.8	30.7	2.05	27.2	0.00	0.01	0.05	151	
168	8.69	8.67	33.979	26.370	167.8	0.410	2.43	37.1	33.1	2.11	28.1	0.00	0.02	0.04	169	208
199	8.36	8.34	34.032	26.463	159.5	0.461	2.21	33.5	36.9	2.19	29.6	0.00	0.01	0.03	200	207
200 ISL	8.35	8.33	34.034	26.466	159.2	0.463	2.20	33.3	37.0	2.19	29.6	0.00			201	
228	8.12	8.10	34.066	26.526	154.0	0.506	2.01	30.3	40.6	2.29	30.8	0.00			229	206
250 ISL	7.79	7.77	34.064	26.573	149.7	0.540	1.97	29.5	44.0	2.34	31.7	0.00			251	
269	7.51	7.48	34.065	26.615	145.9	0.568	1.91	28.4	47.0	2.39	32.5	0.00			271	205
300 ISL	7.38	7.35	34.125	26.681	140.1	0.612	1.49	22.1	50.9	2.56	33.8	0.00			302	
315	7.35	7.32	34.157	26.710	137.6	0.633	1.26	18.7	52.8	2.64	34.4	0.00			317	204
375	6.78	6.75	34.186	26.812	128.5	0.713	0.85	12.4	61.6	2.82	36.7	0.00			377	203
400 ISL	6.59	6.55	34.194	26.844	125.7	0.745	0.76	11.1	64.7	2.87	37.4	0.00			403	
436	6.34	6.30	34.205	26.886	122.0	0.789	0.65	9.4	69.2	2.94	38.4	0.00			439	202
500 ISL	5.84	5.80	34.243	26.980	113.5	0.865	0.43	6.2	78.9	3.08	40.2	0.00			503	
516	5.71	5.67	34.253	27.004	111.3	0.883	0.37	5.3	81.3	3.11	40.6	0.00			520	201

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — 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 59.1 N	122 23.8 W	12/02/06	1911	UTC	4135 m	350	21 kn	350 04 06	1	1024.0 mb	17.0 C	15.5 C	22m	7/8		ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.02	15.02	33.071	24.482	344.1	0.000	5.87	102.0	1.8	0.32	0.0	0.00	0.23	0.03	0	
2 B	15.02	15.02	33.071	24.482	344.2	0.007	5.87	102.0	1.8	0.32	0.0	0.00	0.23	0.03	2	223
10 ISL	15.02	15.02	33.071	24.482	344.4	0.034	5.88	102.2	1.7	0.32	0.0	0.00	0.24	0.04	10	
11	15.01	15.01	33.072	24.485	344.2	0.038									11	222
15 B	15.01	15.01	33.072	24.485	344.3	0.052	5.88	102.2	1.7	0.32	0.0	0.00	0.24 A	0.05 A	15	221
20 ISL	15.00	15.00	33.072	24.487	344.2	0.069	5.88	102.2	1.7	0.32	0.0	0.00	0.22	0.05	20	
26	14.99	14.99	33.071	24.489	344.2	0.090	5.87	102.0	1.7	0.32	0.0	0.00	0.20	0.06	26	220
30 ISL	14.96	14.96	33.066	24.492	344.1	0.103	5.87	101.9	1.7	0.32	0.0	0.00	0.21	0.07	30	
37 B	14.92	14.91	33.065	24.500	343.5	0.127	5.87	101.8	1.7	0.32	0.0	0.00	0.24	0.08	37	219
44	14.75	14.74	33.047	24.522	341.5	0.151	5.88	101.6	1.8	0.32	0.0	0.00	0.40	0.14	44	218
50 ISL	14.70	14.69	33.047	24.533	340.7	0.172	5.85	101.0	1.7	0.33	0.0	0.01	0.40	0.15	50	
51 B	14.70	14.69	33.049	24.535	340.6	0.175	5.84	100.8	1.7	0.33	0.0	0.01	0.40	0.15	51	217
60	14.57	14.56	33.102	24.604	334.3	0.206	5.82	100.2	2.0	0.36	0.2	0.08	0.42	0.20	60	216
70 B	14.01	14.00	33.133	24.745	321.0	0.238	5.68	96.7	2.8	0.47	1.8	0.22	0.24	0.26	70	215
75 ISL	13.66	13.65	33.134	24.818	314.2	0.254	5.65	95.5	2.9	0.49	2.2	0.19	0.25	0.21	75	
79	13.36	13.35	33.134	24.879	308.5	0.267	5.61	94.3	3.0	0.52	2.6	0.14	0.25	0.17	79	214
88	12.60	12.59	33.150	25.041	293.2	0.294	5.33	88.2	4.5	0.69	5.3	0.03	0.17	0.14	88	213
95 B	11.74	11.73	33.176	25.224	275.8	0.314	5.08	82.5	6.4	0.86	8.2	0.02	0.11	0.12	95	212
100 ISL	11.32	11.31	33.208	25.326	266.2	0.327	4.92	79.2	7.8	0.96	10.0	0.02	0.09	0.10	100	
109	10.81	10.80	33.276	25.470	252.6	0.351	4.66	74.2	10.1	1.12	12.8	0.01	0.07	0.07	109	211
125	10.33	10.32	33.403	25.652	235.5	0.390	4.24	66.9	13.6	1.34	16.3	0.01	0.04	0.05	126	210
147	9.71	9.69	33.670	25.965	206.1	0.438	3.26	50.8	21.5	1.76	22.3	0.01	0.01	0.03	148	209
150 ISL	9.66	9.64	33.701	25.998	203.1	0.444	3.16	49.2	22.4	1.79	22.8	0.01	0.01	0.03	151	
170	9.38	9.36	33.857	26.166	187.5	0.483	2.77	42.9	26.6	1.93	24.9	0.01	0.01	0.03	171	208
200	8.86	8.84	33.877	26.265	178.5	0.538	3.00	45.9	28.2	1.90	25.5	0.01	0.00	0.03	201	207
229	8.55	8.53	34.012	26.419	164.3	0.588	2.65	40.3	33.2	2.04	27.5	0.00			230	206
250 ISL	8.28	8.25	34.039	26.481	158.7	0.622	2.44	36.9	36.6	2.13	28.8	0.00			251	
269	8.00	7.97	34.039	26.523	154.9	0.652	2.28	34.3	39.7	2.20	30.0	0.00			270	205
300 ISL	7.46	7.43	34.042	26.604	147.4	0.699	2.08	30.9	45.8	2.33	32.0	0.00			302	
318	7.17	7.14	34.045	26.647	143.5	0.725	1.96	28.9	49.3	2.41	33.1	0.00			320	204
376	6.69	6.66	34.105	26.761	133.3	0.805	1.23	17.9	58.7	2.70	36.2	0.00			378	203
400 ISL	6.47	6.43	34.122	26.803	129.4	0.836	1.04	15.1	62.8	2.79	37.2	0.00			402	
437	6.13	6.09	34.144	26.865	123.8	0.883	0.83	11.9	68.9	2.90	38.6	0.00			440	202
500 ISL	5.68	5.64	34.184	26.953	115.9	0.959	0.57	8.1	78.2	3.04	40.2	0.00			503	
515	5.57	5.53	34.194	26.974	113.9	0.976	0.51	7.2	80.4	3.07	40.6	0.00			518	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 39.2 N	123 4.3 W	13/02/06	0047	UTC	4123 m	340 15 kn	360 05 07	2	1022.4 mb	15.0 C	14.0 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.76	14.76	32.982	24.469	345.3	0.000	5.91	102.1	1.8	0.33	0.0	0.00	0.21	0.06	0	
2	14.76	14.76	32.982	24.469	345.4	0.007	5.91	102.1	1.8	0.33	0.0	0.00	0.21	0.06	2	221
10	14.71	14.71	32.982	24.480	344.6	0.035	5.92	102.2	1.8	0.33	0.0	0.00	0.21	0.07	10	219
11	14.71	14.71	32.982	24.480	344.6	0.038									11	220
20 ISL	14.70	14.70	32.984	24.484	344.5	0.069	5.91	102.0	1.6	0.33	0.0	0.00	0.22	0.07	20	
21	14.70	14.70	32.984	24.484	344.5	0.072	5.91	102.0	1.6	0.33	0.0	0.00	0.22	0.07	21	218
30	14.70	14.70	32.982	24.483	344.9	0.103	5.93	102.3	1.6	0.33	0.0	0.00	0.23	0.06	30	217
41	14.64	14.63	32.982	24.496	344.0	0.141	5.92	102.0	1.7	0.33	0.0	0.00	0.28	0.09	41	216
50	14.59	14.58	33.000	24.521	341.9	0.172	5.90	101.6	1.8	0.34	0.0	0.00	0.53	0.21	50	215
60	14.39	14.38	33.050	24.602	334.4	0.206	5.72	98.1	2.0	0.40	0.6	0.17	0.46	0.19	60	214
70	13.84	13.83	33.107	24.760	319.6	0.239	5.58	94.7	2.8	0.52	2.4	0.17	0.22	0.13	70	213
75 ISL	13.58	13.57	33.115	24.820	314.0	0.255	5.54	93.5	3.1	0.56	3.0	0.13	0.19	0.12	75	
85	13.04	13.03	33.124	24.935	303.2	0.285	5.43	90.6	4.0	0.65	4.6	0.05	0.14	0.11	85	212
100	12.01	12.00	33.191	25.185	279.6	0.329	4.99	81.5	7.0	0.92	9.2	0.02	0.11	0.09	100	211
118	11.35	11.34	33.237	25.343	264.9	0.378	4.75	76.5	8.8	1.06	11.6	0.01	0.07	0.08	119	210
125 ISL	10.92	10.90	33.326	25.489	251.1	0.396	4.41	70.4	11.5	1.23	14.3	0.01	0.05	0.07	126	
139	10.09	10.07	33.540	25.800	221.7	0.429	3.65	57.3	17.8	1.60	19.9	0.01	0.02	0.05	140	209
150 ISL	9.77	9.75	33.671	25.956	207.1	0.453	3.25	50.7	21.3	1.76	22.3	0.01	0.02	0.05	151	
169	9.51	9.49	33.849	26.138	190.1	0.491	2.75	42.7	26.0	1.94	24.7	0.00	0.01	0.04	170	208
199	9.31	9.29	34.010	26.297	175.6	0.545	2.25	34.8	30.5	2.10	26.9	0.00	0.00	0.04	200	207
200 ISL	9.30	9.28	34.012	26.300	175.3	0.547	2.25	34.8	30.6	2.10	26.9	0.00			201	
230	8.86	8.84	34.037	26.390	167.2	0.599	2.32	35.6	33.1	2.12	27.9	0.00			231	206
250 ISL	8.77	8.74	34.078	26.437	163.2	0.632	2.17	33.2	35.0	2.18	28.6	0.00			251	
269	8.73	8.70	34.121	26.477	159.7	0.662	1.95	29.8	37.1	2.26	29.4	0.00			270	205
300 ISL	8.52	8.49	34.178	26.555	152.8	0.711	1.58	24.1	41.1	2.41	30.7	0.00			302	
317	8.34	8.31	34.196	26.597	149.1	0.736	1.40	21.2	43.7	2.49	31.5	0.00			319	204
378	7.14	7.10	34.133	26.722	137.4	0.824	1.26	18.6	54.8	2.66	35.1	0.00			380	203
400 ISL	6.96	6.92	34.146	26.757	134.3	0.854	1.13	16.6	57.5	2.72	35.8	0.00			402	
439	6.75	6.71	34.181	26.813	129.4	0.905	0.87	12.7	62.0	2.83	36.9	0.00			442	202
500 ISL	6.23	6.19	34.206	26.902	121.4	0.982	0.61	8.8	71.2	2.98	38.8	0.00			503	
515	6.10	6.05	34.213	26.924	119.3	1.000	0.54	7.8	73.5	3.02	39.3	0.00			518	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 STATION 86.7 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 19.4 N	123 44.4 W	13/02/06	0627	UTC	4033 m	340 18 kn			1024.0 mb	15.1 C	14.0 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.02	15.02	33.032	24.452	347.0	0.000	5.95	103.4	1.9	0.34	0.0	0.00	0.21	0.05	0	
2	15.02	15.02	33.032	24.452	347.1	0.007	5.95	103.4	1.9	0.34	0.0	0.00	0.21	0.05	2	222
10 ISL	14.98	14.98	33.023	24.453	347.1	0.035	5.90	102.4	1.8	0.34	0.0	0.00	0.21	0.05	10	
11	14.98	14.98	33.022	24.453	347.2	0.038	5.89	102.3	1.8	0.34	0.0	0.00	0.21	0.05	11	221
16	14.99	14.99	33.022	24.451	347.5	0.056	5.90	102.4	1.8	0.34	0.0	0.00	0.20	0.04	16	220
20 ISL	14.99	14.99	33.022	24.451	347.7	0.069	5.90	102.4	1.8	0.34	0.0	0.00	0.20	0.04	20	
30 ISL	14.95	14.95	33.016	24.455	347.5	0.104	5.90	102.4	1.9	0.34	0.0	0.00	0.20	0.05	30	
31	14.95	14.95	33.015	24.455	347.6	0.108	5.90	102.4	1.9	0.34	0.0	0.00	0.20	0.05	31	219
45	14.88	14.87	33.004	24.462	347.4	0.156	5.94	102.9	1.8	0.34	0.0	0.00	0.20	0.05	45	218
50 ISL	14.88	14.87	33.005	24.463	347.4	0.174	5.93	102.7	1.8	0.34	0.0	0.00	0.21	0.05	50	
55	14.87	14.86	33.007	24.466	347.2	0.191	5.91	102.4	1.8		0.0	0.00	0.22	0.06	55	217
65	14.91	14.90	33.092	24.524	342.1	0.226	5.87	101.8	1.6		0.0	0.00	0.38 A	0.12 A	65	216
70	14.71	14.70	33.080	24.557	339.0	0.243	5.90	101.9	1.7		0.0	0.00	0.41	0.17	70	215
75	14.59	14.58	33.087	24.588	336.2	0.259	5.90	101.6	1.9		0.0	0.01	0.43	0.14	75	214
86	14.33	14.32	33.113	24.664	329.3	0.296	5.80	99.4	2.0	0.38	0.4	0.14	0.31	0.14	86	213
95	13.98	13.97	33.170	24.781	318.3	0.325	5.63	95.8	2.5	0.45	1.7	0.20	0.21	0.13	95	212
100 ISL	13.61	13.60	33.199	24.879	309.1	0.341	5.53	93.4	3.0	0.50	2.5	0.15	0.17	0.12	100	
111	12.59	12.58	33.255	25.125	285.8	0.374	5.23	86.5	4.9	0.69	5.4	0.02	0.12	0.10	111	211
125	11.25	11.23	33.296	25.407	259.0	0.412	4.56	73.3	9.9	1.14	12.8	0.01	0.06	0.06	126	210
145	10.10	10.08	33.485	25.755	226.1	0.460	4.28	67.2	14.8	1.33	16.3	0.01	0.03	0.04	146	209
150 ISL	9.93	9.91	33.536	25.824	219.6	0.471	4.08	63.9	16.5	1.42	17.7	0.01	0.02	0.04	151	
170	9.48	9.46	33.725	26.046	198.8	0.513	3.27	50.7	23.0	1.76	22.7	0.01	0.00	0.04	171	208
200	9.09	9.07	33.917	26.260	179.1	0.570	2.91	44.8	27.9	1.91	25.0	0.00	0.00	0.03	201	207
230	8.87	8.85	34.066	26.411	165.2	0.622	2.25	34.5	33.9	2.13	27.7	0.01			231	206
250 ISL	8.69	8.66	34.119	26.481	158.9	0.654	1.95	29.8	37.2	2.25	29.1	0.01			251	
270	8.49	8.46	34.150	26.537	153.9	0.685	1.71	26.0	40.3	2.36	30.2	0.00			271	205
300 ISL	8.15	8.12	34.182	26.614	147.0	0.730	1.43	21.6	44.7	2.49	31.7	0.00			302	
319	7.94	7.91	34.195	26.656	143.3	0.758	1.28	19.2	47.4	2.56	32.5	0.00			321	204
378	7.44	7.40	34.224	26.751	134.9	0.840	0.90	13.4	54.9	2.75	34.8	0.00			380	203
400 ISL	7.26	7.22	34.232	26.783	132.1	0.869	0.79	11.7	57.6	2.80	35.5	0.00			402	
437	6.94	6.90	34.243	26.837	127.3	0.917	0.65	9.5	62.3	2.88	36.6	0.00			440	202
500 ISL	6.36	6.31	34.255	26.924	119.5	0.995	0.50	7.2	71.0	3.01	38.5	0.00			503	
515	6.22	6.17	34.258	26.944	117.6	1.013	0.46	6.6	73.1	3.04	38.9	0.00			518	201

A) SECOND FLUOROMETER READING NOT RECORDED, CHLOROPHYLL AND PHAEOPIGMENT
CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — 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 40.4 N	118 5.3 W	10/02/06	2140	UTC	20 m	180	06 kn	190 01 09	0	1020.2 mb	16.0 C	15.0 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.32	14.32	33.391	24.878	306.4	0.000	7.36	126.4	2.5	0.09	0.0	0.00	3.01	0.26	0	
2	14.32	14.32	33.391	24.878	306.5	0.006	7.36	126.4	2.5	0.09	0.0	0.00	3.01	0.26	2	204
5	14.41	14.41	33.391	24.859	308.3	0.015	7.26	124.9	2.6	0.09	0.0	0.00	3.25	0.27	5	203
10	14.21	14.21	33.391	24.901	304.5	0.031	7.26	124.4	2.5	0.09	0.0	0.00	4.01	0.29	10	202
15	14.19	14.19	33.392	24.906	304.1	0.046	7.27	124.5	2.4	0.10	0.0	0.00	3.88	0.23	15	201

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — 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 29.7 N	117 44.9 W	10/02/06	1135	UTC	1880 m	150	04 kn			1018.2 mb	12.8 C	11.2 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.50	14.50	33.385	24.835	310.5	0.000	7.30	125.8	4.2	0.13	0.0	0.02	5.34	0.28	0	
2	14.50	14.50	33.385	24.835	310.5	0.006	7.30	125.8	4.2	0.13	0.0	0.02	5.34	0.28	2	204
5	14.49	14.49	33.385	24.837	310.4	0.016	7.29	125.6	4.1	0.12	0.0	0.02	5.26 A	0.30 A	5	203
10	14.42	14.42	33.385	24.852	309.1	0.031	7.31	125.8	4.1	0.12	0.0	0.02	6.40	0.42	10	202
16	14.32	14.32	33.385	24.874	307.3	0.050	7.10	121.9	4.3	0.15	0.0	0.02	6.96	0.48	16	201

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

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — STATION 90.0 28.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 29.1 N	117 46.0 W	10/02/06	1010	UTC	60 m	110	02 kn			1018.5 mb	14.8 C	13.6 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.73	14.73	33.390	24.790	314.8	0.000	6.41	111.0	2.4	0.23	0.0	0.00	0.74	0.09	0	
2	14.73	14.73	33.390	24.790	314.8	0.006	6.41	111.0	2.4	0.23	0.0	0.00	0.74	0.09	2	207
5	14.73	14.73	33.388	24.788	315.1	0.016	6.41	111.0	2.3	0.23	0.0	0.00	0.38	0.47	5	206
10	14.66	14.66	33.388	24.804	313.8	0.031	7.15	123.6	2.5	0.15	0.0	0.00	2.89 A	0.17 A	10	205
20	14.03	14.03	33.385	24.934	301.6	0.062	7.27	124.1	2.8	0.06	0.0	0.00	2.83	0.09	20	204
30	13.63	13.63	33.384	25.016	294.1	0.092	5.94	100.5	3.6	0.18	0.1	0.02	3.02	0.16	30	203
40	12.77	12.76	33.383	25.187	278.0	0.121	4.68	77.8	8.5	0.70	6.4	0.33	1.07 B	0.29 B	40	202
50 ISL	11.63	11.62	33.433	25.443	253.9	0.147	3.61	58.6	14.6	1.38	14.6	0.32	0.36	0.16	50	
52	11.40	11.39	33.445	25.494	249.0	0.152	3.39	54.8	15.8	1.52	16.3	0.32	0.22	0.14	52	201

A) FIRST FLUOROMETER READING NOT RECORDED, CHLOROPHYLL AND PHAEOPIGMENT
CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.
B) SECOND FLUOROMETER READING RECALCULATED BECAUSE ACID RATIO > TAU OF PURE CHL-A.
CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ACID RATIO FROM ADJACENT SAMPLES.

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — 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	10/02/06	0705	UTC	606 m	340	14 kn			1017.1 mb	14.1 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.31	15.31	33.381	24.657	327.4	0.000	6.07	106.3	2.3	0.27	0.0	0.00	0.32	0.07	0	
2	15.31	15.31	33.381	24.657	327.5	0.007	6.07	106.3	2.3	0.27	0.0	0.00	0.32	0.07	2	221
10 ISL	15.25	15.25	33.378	24.668	326.7	0.033	6.05	105.8	2.2	0.28	0.0	0.00	0.33	0.07	10	
11	15.24	15.24	33.378	24.671	326.5	0.036	6.05	105.8	2.2	0.28	0.0	0.00	0.33	0.07	11	220
20 ISL	14.77	14.77	33.379	24.773	316.9	0.065	6.14	106.4	2.3	0.29	0.0	0.00	0.43	0.15	20	
21	14.71	14.71	33.379	24.786	315.7	0.068	6.15	106.4	2.3	0.29	0.0	0.00	0.44	0.16	21	219
30 ISL	14.30	14.30	33.388	24.880	307.0	0.096	6.22	106.7	2.6	0.28	0.0	0.00	0.87	0.28	30	
31	14.25	14.25	33.388	24.891	306.1	0.099	6.23	106.8	2.6	0.28	0.0	0.00	0.96	0.29	31	218
35	13.96	13.96	33.384	24.948	300.7	0.111	6.10	103.9	3.2	0.33	0.5	0.04	1.47	0.31	35	217
41	13.41	13.40	33.382	25.059	290.2	0.129	5.57	93.8	5.2	0.54	3.4	0.18	0.97	0.32	41	216
50	12.18	12.17	33.415	25.326	265.0	0.154	4.24	69.6	10.2	1.14	12.0	0.08	0.49	0.31	50	215
61	11.29	11.28	33.470	25.534	245.4	0.182	3.81	61.4	13.6	1.38	15.8	0.03	0.31	0.20	61	214
70	10.88	10.87	33.555	25.674	232.3	0.204	3.39	54.2	16.8	1.58	18.6	0.01	0.16	0.17	70	213
75 ISL	10.67	10.66	33.612	25.755	224.7	0.215	3.19	50.8	18.6	1.67	19.9	0.01	0.11	0.14	75	
85	10.39	10.38	33.731	25.897	211.4	0.237	2.84	45.0	21.8	1.83	21.8	0.01	0.05	0.09	85	212
100	10.44	10.43	33.892	26.014	200.7	0.268	2.37	37.6	24.7	1.98	23.4	0.00	0.02	0.07	100	211
119	10.27	10.26	33.985	26.116	191.4	0.305	2.08	32.9	27.3	2.10	24.7	0.00	0.01	0.07	120	210
125 ISL	10.14	10.13	34.012	26.160	187.3	0.316	2.05	32.3	28.1	2.12	25.2	0.00	0.01	0.06	126	
139	9.82	9.80	34.069	26.258	178.2	0.342	2.01	31.5	29.9	2.15	26.2	0.00	0.01	0.05	140	209
150 ISL	9.63	9.61	34.107	26.320	172.6	0.361	1.95	30.4	31.4	2.19	26.9	0.00	0.01	0.04	151	
169	9.38	9.36	34.156	26.399	165.3	0.393	1.82	28.2	33.8	2.26	27.8	0.00	0.00	0.04	170	208
199	9.09	9.07	34.187	26.471	159.1	0.442	1.65	25.4	36.8	2.34	29.0	0.00	0.00	0.04	200	207
200 ISL	9.08	9.06	34.188	26.473	158.9	0.444	1.64	25.3	36.9	2.34	29.0	0.00			201	
228	8.84	8.82	34.213	26.531	153.9	0.487	1.50	23.0	39.6	2.43	29.9	0.00			229	206
250 ISL	8.67	8.64	34.227	26.569	150.6	0.521	1.36	20.8	41.7	2.49	30.5	0.00			251	
269	8.52	8.49	34.237	26.601	147.9	0.549	1.24	18.9	43.6	2.54	31.1	0.00			271	205
300 ISL	8.22	8.19	34.249	26.656	143.1	0.594	1.08	16.3	47.3	2.62	32.1	0.00			302	
318	8.05	8.02	34.254	26.686	140.5	0.620	1.00	15.1	49.4	2.67	32.7	0.00			320	204
378	7.62	7.58	34.261	26.755	134.7	0.702	0.81	12.1	54.0	2.78	34.2	0.00			380	203
400 ISL	7.41	7.37	34.261	26.785	132.0	0.732	0.74	11.0	56.5	2.82	34.9	0.00			403	
438	7.05	7.01	34.264	26.838	127.3	0.781	0.62	9.1	61.2	2.90	36.2	0.00			441	202
500 ISL	6.67	6.62	34.282	26.904	121.7	0.858	0.45	6.6	67.8	3.01	37.5	0.00			503	
516	6.57	6.52	34.287	26.922	120.2	0.878	0.40	5.8	69.5	3.04	37.8	0.00			520	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 STATION 90.0 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 15.0 N	118 14.7 W	10/02/06	0304 UTC	336 m	350 05 kn			1014.1 mb	16.8 C	15.4 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.27	15.27	33.358	24.648	328.3	0.000	5.95	104.1	2.0	0.29	0.0	0.00	0.38	0.09	0	
2	15.27	15.27	33.358	24.648	328.3	0.007	5.95	104.1	2.0	0.29	0.0	0.00	0.38	0.09	2	217
10	14.88	14.88	33.365	24.739	319.9	0.032	6.04	104.9	1.9	0.27	0.0	0.00	0.45	0.16	10	216
20	14.78	14.78	33.374	24.767	317.5	0.064	6.11	105.9	1.6	0.25	0.0	0.00	0.47	0.21	20	215
30	14.44	14.44	33.374	24.840	310.9	0.096	6.02	103.6	2.0	0.29	0.2	0.02	1.40	0.47	30	214
40	14.01	14.00	33.355	24.916	303.9	0.127	5.70	97.2	3.4	0.44	2.0	0.09	1.17	0.37	40	213
50	12.97	12.96	33.396	25.158	281.0	0.156	4.98	83.1	6.6	0.79	6.9	0.28	0.88	0.36	50	212
60	11.76	11.75	33.453	25.435	254.9	0.183	3.99	65.0	12.1	1.28	14.1	0.05	0.34	0.25	60	211
70	11.27	11.26	33.493	25.556	243.6	0.208	3.63	58.5	14.4	1.45	16.6	0.02	0.22	0.19	70	210
75 ISL	11.11	11.10	33.526	25.610	238.5	0.220	3.46	55.6	15.6	1.53	17.7	0.01	0.17	0.17	75	
84	10.88	10.87	33.583	25.696	230.6	0.241	3.23	51.6	17.5	1.64	19.3	0.01	0.10	0.13	84	209
100	10.41	10.40	33.631	25.816	219.5	0.277	3.23	51.1	19.4	1.69	20.5	0.00	0.05	0.10	100	208
119	9.43	9.42	33.739	26.064	196.1	0.316	3.33	51.6	22.6	1.76	22.9	0.00	0.01	0.05	120	207
125 ISL	9.28	9.27	33.782	26.122	190.6	0.328	3.29	50.8	23.7	1.78	23.4	0.00	0.01	0.05	126	
140	9.06	9.04	33.882	26.236	180.1	0.356	3.13	48.2	26.3	1.84	24.5	0.00	0.00	0.06	141	206
150 ISL	8.92	8.90	33.926	26.293	174.9	0.373	3.02	46.3	27.9	1.89	25.3	0.00	0.00	0.05	151	
169	8.70	8.68	33.989	26.377	167.2	0.406	2.77	42.3	31.2	1.99	26.8	0.00	0.00	0.03	170	205
199	8.38	8.36	34.076	26.495	156.5	0.454	2.18	33.1	37.3	2.21	29.4	0.00	0.00	0.03	200	204
200 ISL	8.39	8.37	34.080	26.496	156.4	0.456	2.16	32.8	37.4	2.22	29.4	0.00			201	
230	8.61	8.59	34.195	26.553	151.7	0.502	1.56	23.8	40.4	2.45	30.3	0.00			231	203
250 ISL	8.55	8.52	34.207	26.572	150.3	0.532	1.43	21.8	41.4	2.47	30.6	0.00			251	
273	8.48	8.45	34.220	26.593	148.7	0.567	1.37	20.8	42.6	2.50	31.0	0.00			275	202
300 ISL	8.21	8.18	34.237	26.648	143.8	0.606	1.18	17.8	46.0	2.60	32.0	0.00			302	
328	7.93	7.90	34.255	26.704	138.8	0.646	0.98	14.7	49.6	2.70	33.0	0.01			330	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 23.3 W	09/02/06	2348 UTC	1174 m	010 04 kn	290 01 09	0	1012.7 mb	19.5 C	17.2 C	19m	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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.24	15.24	33.360	24.656	327.5	0.000	5.94	103.9	2.6	0.30	0.0	0.00	0.31	0.07	0	
2	15.24	15.24	33.360	24.656	327.6	0.007	5.94	103.9	2.6	0.30	0.0	0.00	0.31	0.07	2	220
10 ISL	15.02	15.02	33.352	24.698	323.8	0.033	5.95	103.6	2.4	0.30	0.0	0.00	0.31	0.08	10	
11	14.98	14.98	33.351	24.706	323.1	0.036	5.95	103.5	2.4	0.30	0.0	0.00	0.31	0.08	11	219
20 ISL	14.66	14.66	33.353	24.777	316.6	0.065	6.00	103.7	2.7	0.31	0.1	0.00	0.66	0.24	20	
21	14.61	14.61	33.353	24.788	315.6	0.068	6.01	103.8	2.8	0.31	0.1	0.00	0.71	0.26	21	218
30 ISL	13.97	13.97	33.340	24.912	304.0	0.096	5.67	96.6	3.9	0.47	2.2	0.09	1.23	0.28	30	
31	13.88	13.88	33.338	24.929	302.4	0.099	5.62	95.6	4.1	0.50	2.5	0.10	1.26	0.28	31	217
41	12.83	12.82	33.332	25.136	282.9	0.128	5.02	83.5	6.6	0.81	7.1	0.21	0.75	0.39	41	216
50 ISL	12.14	12.13	33.333	25.270	270.4	0.153	4.66	76.4	8.3	0.99	9.9	0.12	0.53	0.33	50	
51	12.07	12.06	33.335	25.285	269.0	0.156	4.62	75.7	8.5	1.01	10.2	0.10	0.51	0.32	51	215
61	11.29	11.28	33.406	25.484	250.2	0.182	4.12	66.4	12.2	1.28	14.5	0.03	0.25	0.26	61	214
71	10.99	10.98	33.519	25.626	236.9	0.206	3.53	56.5	16.0	1.53	17.8	0.02	0.16	0.16	71	213
75 ISL	10.88	10.87	33.549	25.669	232.9	0.215	3.40	54.3	17.0	1.59	18.6	0.02	0.13	0.14	75	
85	10.63	10.62	33.621	25.769	223.6	0.238	3.16	50.3	19.2	1.70	20.1	0.01	0.06	0.11	85	212
100	10.23	10.22	33.779	25.962	205.5	0.270	2.79	44.0	23.1	1.87	22.4	0.01	0.02	0.06	100	211
120	9.45	9.44	33.823	26.127	190.2	0.310	3.14	48.7	24.2	1.82	23.3	0.01	0.01	0.06	121	210
125 ISL	9.36	9.35	33.838	26.153	187.7	0.319	3.11	48.2	24.7	1.83	23.6	0.01	0.01	0.06	126	
140	9.20	9.18	33.887	26.218	181.9	0.347	3.03	46.8	26.6	1.88	24.5	0.01	0.00	0.04	141	209
150 ISL	9.06	9.04	33.927	26.271	177.0	0.365	2.92	44.9	28.2	1.92	25.2	0.01	0.00	0.04	151	
170	8.79	8.77	34.002	26.373	167.7	0.399	2.67	40.9	31.5	2.02	26.8	0.00	0.00	0.04	171	208
198	8.52	8.50	34.058	26.459	159.9	0.445	2.35	35.8	35.8	2.16	28.7	0.00	0.01	0.03	199	207
200 ISL	8.50	8.48	34.061	26.464	159.4	0.448	2.33	35.4	36.1	2.17	28.8	0.00			201	
229	8.29	8.27	34.108	26.534	153.4	0.494	1.97	29.8	40.1	2.31	30.2	0.00			230	206
250 ISL	8.12	8.09	34.137	26.582	149.1	0.526	1.74	26.2	43.0	2.41	31.2	0.01			251	
269	7.97	7.94	34.160	26.623	145.5	0.554	1.54	23.1	45.7	2.50	32.0	0.01			271	205
300 ISL	7.71	7.68	34.187	26.682	140.2	0.598	1.26	18.8	50.2	2.62	33.3	0.01			302	
319	7.54	7.51	34.200	26.717	137.2	0.624	1.11	16.5	52.9	2.69	34.0	0.01			321	204
378	6.99	6.95	34.232	26.820	128.0	0.702	0.74	10.9	61.3	2.88	36.4	0.00			380	203
400 ISL	6.83	6.79	34.247	26.854	125.0	0.730	0.64	9.4	64.1	2.94	37.1	0.00			403	
438	6.58	6.54	34.272	26.908	120.3	0.777	0.49	7.1	68.6	3.03	38.0	0.00			441	202
500 ISL	6.27	6.23	34.305	26.975	114.5	0.850	0.35	5.1	75.0	3.14	39.1	0.00			503	
514	6.20	6.15	34.313	26.990	113.2	0.866	0.32	4.6	76.5	3.16	39.4	0.00			518	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 STATION 90.0 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 55.2 N	118 56.4 W	09/02/06	1816 UTC	1689 m	320 07 kn	280 01 07	0	1013.4 mb	20.1 C	17.2 C	10m	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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.10	14.10	33.444	24.965	298.1	0.000	6.31	107.9	4.3	0.45	1.2	0.05	1.74	0.28	0	
2 A	14.10	14.10	33.444	24.965	298.2	0.006	6.31	107.9	4.3	0.45	1.2	0.05	1.74	0.28	2	221
8 A	13.98	13.98	33.441	24.988	296.2	0.024	6.30	107.4	4.2	0.45	1.2	0.05	1.66	0.36	8	220
10 ISL	13.94	13.94	33.439	24.994	295.6	0.030	6.22	106.0	4.3	0.47	1.5	0.05	1.57	0.38	10	
18 A	13.53	13.53	33.443	25.082	287.5	0.053	5.92	100.0	4.8	0.54	2.9	0.07	1.20	0.43	18	219
20 ISL	13.30	13.30	33.452	25.135	282.5	0.059	5.67	95.4	5.9	0.63	4.3	0.08	1.17	0.42	20	
23 A	12.95	12.95	33.468	25.217	274.7	0.067	5.28	88.2	7.7	0.78	6.5	0.11	1.12	0.40	23	218
30 ISL	12.37	12.37	33.500	25.355	261.8	0.086	4.71	77.7	10.5	1.02	10.1	0.17	0.91	0.33	30	
32 A	12.23	12.23	33.509	25.389	258.6	0.091	4.59	75.5	11.1	1.08	11.0	0.18	0.84	0.31	32	217
44 A	11.28	11.27	33.556	25.602	238.5	0.121	3.92	63.2	15.3	1.39	15.9	0.12	0.47	0.24	44	216
50 ISL	10.92	10.91	33.612	25.710	228.4	0.135	3.45	55.2	17.8	1.57	18.4	0.10	0.38	0.19	50	
52	10.82	10.81	33.631	25.743	225.3	0.139	3.30	52.7	18.6	1.63	19.2	0.09	0.36	0.18	52	215
61	10.44	10.43	33.691	25.856	214.7	0.159	2.98	47.2	21.1	1.77	21.3	0.04	0.19	0.13	61	214
70	10.31	10.30	33.747	25.923	208.6	0.178	2.82	44.6	22.7	1.86	22.3	0.02	0.09	0.10	70	213
75 ISL	10.23	10.22	33.781	25.963	204.9	0.189	2.73	43.1	23.6	1.90	22.8	0.02	0.06	0.10	75	
84	10.10	10.09	33.841	26.032	198.5	0.207	2.57	40.5	25.2	1.97	23.7	0.02	0.03	0.09	84	212
99	9.94	9.93	33.922	26.123	190.2	0.236	2.37	37.2	27.2	2.05	24.7	0.01	0.01	0.08	100	211
100 ISL	9.93	9.92	33.927	26.128	189.7	0.238	2.36	37.0	27.3	2.05	24.8	0.01	0.01	0.08	101	
119	9.78	9.77	34.015	26.222	181.2	0.273	2.14	33.5	29.6	2.13	25.9	0.01	0.01	0.06	120	210
125 ISL	9.73	9.72	34.037	26.248	178.8	0.284	2.09	32.7	30.2	2.15	26.2	0.01	0.01	0.06	126	
139	9.60	9.58	34.081	26.304	173.8	0.309	1.99	31.0	31.5	2.19	26.8	0.01	0.01	0.06	140	209
150 ISL	9.51	9.49	34.113	26.344	170.2	0.327	1.90	29.6	32.7	2.23	27.3	0.01	0.01	0.06	151	
169	9.32	9.30	34.160	26.412	164.1	0.359	1.73	26.8	35.1	2.31	28.2	0.01	0.00	0.05	170	208
199	8.90	8.88	34.212	26.521	154.3	0.407	1.43	22.0	39.9	2.44	29.9	0.01	0.00	0.05	200	207
200 ISL	8.89	8.87	34.213	26.523	154.1	0.409	1.42	21.8	40.0	2.44	29.9	0.01			201	
228	8.64	8.62	34.230	26.576	149.5	0.451	1.28	19.5	42.9	2.53	31.0	0.01			229	206
250 ISL	8.46	8.43	34.238	26.610	146.6	0.484	1.17	17.8	44.9	2.59	31.6	0.01			252	
268	8.29	8.26	34.243	26.640	144.0	0.510	1.07	16.2	46.9	2.64	32.2	0.01			270	205
300 ISL	7.80	7.77	34.250	26.719	136.8	0.555	0.89	13.3	52.7	2.76	33.8	0.00			302	
317	7.54	7.51	34.254	26.760	133.1	0.578	0.80	11.9	55.8	2.82	34.7	0.00			319	204
377	7.12	7.08	34.261	26.825	127.6	0.656	0.64	9.4	61.8	2.92	36.2	0.00			379	203
400 ISL	6.93	6.89	34.267	26.856	124.9	0.685	0.57	8.4	64.6	2.97	36.8	0.00			403	
436	6.63	6.59	34.281	26.908	120.3	0.729	0.46	6.7	69.2	3.04	37.8	0.00			439	202
500 ISL	6.20	6.16	34.309	26.987	113.3	0.804	0.32	4.6	77.2	3.13	39.2	0.00			503	
517	6.09	6.04	34.317	27.008	111.5	0.823	0.28	4.0	79.3	3.16	39.6	0.00			521	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 39.3 N	119 28.8 W	09/02/06	1240 UTC	1320 m	300 07 kn			1012.0 mb	17.2 C	16.2 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.53	14.53	33.321	24.779	315.8	0.000	5.97	102.9	2.8	0.36	0.5	0.03	0.67	0.12	0	
2	14.53	14.53	33.321	24.779	315.8	0.006	5.97	102.9	2.8	0.36	0.5	0.03	0.67	0.12	2	220
10	14.17	14.17	33.323	24.857	308.7	0.031	6.01	102.8	3.2	0.41	1.3	0.06	0.82	0.14	10	219
20	13.93	13.93	33.361	24.936	301.4	0.062	6.03	102.7	4.0	0.48	2.1	0.07	0.79	0.23	20	218
30	13.27	13.27	33.427	25.122	284.0	0.091	5.97	100.3	5.6	0.63	4.3	0.12	1.16	0.44	30	217
40	12.71	12.70	33.414	25.223	274.6	0.119	5.54	92.0	6.9	0.80	6.8	0.16	0.78	0.35	40	216
50	12.23	12.22	33.396	25.302	267.4	0.146	5.01	82.4	8.6	0.97	9.6	0.17	0.40	0.25	50	215
60	10.63	10.62	33.484	25.662	233.2	0.171	3.85	61.2	15.7	1.47	17.8	0.02	0.09	0.13	60	214
69	10.16	10.15	33.523	25.773	222.7	0.192	3.77	59.3	17.3	1.54	19.1	0.02	0.05	0.09	69	213
75 ISL	9.94	9.93	33.567	25.845	216.0	0.205	3.66	57.3	18.8	1.61	20.1	0.02	0.03	0.10	75	
85	9.66	9.65	33.643	25.951	206.1	0.226	3.52	54.8	21.0	1.69	21.4	0.02	0.02	0.11	85	212
100	9.30	9.29	33.719	26.069	195.2	0.256	3.67	56.7	22.2	1.66	21.7	0.02	0.01	0.04	101	211
119	9.03	9.02	33.887	26.244	178.9	0.292	2.99	46.0	28.0	1.92	25.1	0.01	0.00	0.04	120	210
125 ISL	8.95	8.94	33.915	26.279	175.7	0.302	2.98	45.7	28.9	1.93	25.5	0.01	0.00	0.04	126	
140	8.72	8.71	33.960	26.350	169.2	0.328	2.94	44.9	30.7	1.95	26.0	0.01	0.00	0.03	141	209
150 ISL	8.52	8.50	33.990	26.405	164.1	0.345	2.81	42.7	33.1	2.00	26.9	0.01	0.00	0.03	151	
169	8.18	8.16	34.034	26.491	156.2	0.375	2.55	38.5	37.4	2.11	28.7	0.01	0.00	0.02	170	208
200	8.05	8.03	34.046	26.521	153.9	0.423	2.38	35.8	39.5	2.18	29.6	0.01	0.00	0.02	201	207
231	7.87	7.85	34.113	26.600	146.9	0.470	1.79	26.8	45.3	2.41	31.8	0.01			232	206
250 ISL	7.93	7.90	34.188	26.651	142.5	0.497	1.35	20.3	48.3	2.56	32.6	0.01			251	
269	7.97	7.94	34.255	26.698	138.4	0.524	0.96	14.4	51.0	2.70	33.2	0.00			271	205
300 ISL	7.63	7.60	34.266	26.756	133.2	0.566	0.84	12.5	55.4	2.81	34.5	0.00			302	
319	7.37	7.34	34.255	26.785	130.7	0.591	0.77	11.4	57.9	2.84	35.3	0.00			321	204
380	7.01	6.97	34.267	26.845	125.7	0.669	0.60	8.8	63.3	2.93	36.5	0.00			382	203
400 ISL	6.85	6.81	34.273	26.872	123.3	0.694	0.53	7.8	66.0	2.97	37.1	0.00			403	
437	6.55	6.51	34.288	26.924	118.7	0.739	0.42	6.1	71.1	3.04	38.1	0.00			440	202
500 ISL	6.15	6.11	34.314	26.997	112.3	0.812	0.31	4.5	78.2	3.13	39.4	0.00			503	
515	6.05	6.00	34.321	27.016	110.7	0.829	0.28	4.0	79.9	3.15	39.7	0.00			519	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 STATION 90.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 25.2 N	119 57.6 W	09/02/06	0743 UTC	868 m	340 05 kn			1014.3 mb	15.3 C	14.0 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.55	14.55	33.313	24.769	316.8	0.000	5.97	102.9	2.3	0.33	0.2	0.02	0.53	0.09	0	
2	14.55	14.55	33.313	24.769	316.8	0.006	5.97	102.9	2.3	0.33	0.2	0.02	0.53	0.09	2	220
10	14.49	14.49	33.312	24.781	315.9	0.032	5.98	103.0	2.2	0.33	0.3	0.03	0.52	0.11	10	219
20	13.41	13.41	33.323	25.013	294.1	0.062	5.91	99.5	4.1	0.53	3.2	0.17	1.30	0.32	20	218
30	13.24	13.24	33.324	25.048	291.0	0.091	5.80	97.3	4.4	0.59	4.0	0.23	0.84	0.28	30	217
40	12.55	12.54	33.286	25.155	281.1	0.120	5.14	85.0	6.0	0.80	7.4	0.08	0.39	0.21	40	216
49	12.59	12.58	33.344	25.192	277.8	0.145	5.27	87.3	6.4	0.82	7.5	0.15	0.58	0.27	49	215
50 ISL	12.56	12.55	33.345	25.199	277.1	0.148	5.24	86.7	6.5	0.83	7.7	0.15	0.56	0.27	50	
60	12.13	12.12	33.342	25.279	269.7	0.175	4.83	79.2	7.9	0.97	10.0	0.08	0.31	0.21	60	214
70	11.61	11.60	33.369	25.397	258.7	0.202	4.49	72.8	9.9	1.13	12.6	0.05	0.22	0.15	70	213
75 ISL	11.28	11.27	33.399	25.481	250.8	0.214	4.30	69.3	11.4	1.23	14.2	0.04	0.17	0.13	75	
86	10.59	10.58	33.483	25.669	233.1	0.241	3.90	61.9	15.0	1.44	17.6	0.02	0.08	0.11	86	212
100	10.08	10.07	33.590	25.840	217.1	0.273	3.45	54.2	18.8	1.65	20.6	0.01	0.04	0.12	100	211
121	9.35	9.34	33.755	26.090	193.7	0.316	3.26	50.4	23.3	1.77	23.0	0.01	0.01	0.05	122	210
125 ISL	9.26	9.25	33.769	26.115	191.3	0.323	3.32	51.3	23.5	1.76	23.0	0.01	0.01	0.05	126	
141	8.98	8.96	33.812	26.194	184.1	0.353	3.56	54.6	24.4	1.70	22.8	0.02	0.01	0.04	142	209
150 ISL	8.85	8.83	33.861	26.253	178.6	0.370	3.47	53.1	25.9	1.73	23.5	0.02	0.01	0.04	151	
170	8.60	8.58	33.972	26.379	167.0	0.404	3.06	46.6	30.3	1.88	25.7	0.01	0.00	0.03	171	208
200	8.27	8.25	34.047	26.488	157.1	0.453	2.45	37.1	37.2	2.16	29.3	0.01	0.00	0.03	201	207
229	7.87	7.85	34.068	26.565	150.2	0.497	2.08	31.2	42.0	2.28	31.1	0.01			230	206
250 ISL	7.65	7.63	34.081	26.607	146.4	0.529	1.87	27.9	45.1	2.37	32.3	0.01			251	
269	7.46	7.43	34.089	26.641	143.5	0.556	1.71	25.4	47.8	2.45	33.2	0.01			271	205
300 ISL	7.12	7.09	34.091	26.690	139.1	0.600	1.56	23.0	51.8	2.53	34.3	0.00			302	
319	6.92	6.89	34.093	26.719	136.5	0.626	1.48	21.7	54.3	2.58	35.0	0.00			321	204
377	6.36	6.33	34.143	26.834	126.1	0.702	1.01	14.6	64.4	2.81	37.6	0.00			379	203
400 ISL	6.18	6.14	34.149	26.862	123.6	0.731	0.90	13.0	67.7	2.86	38.3	0.00			403	
437	5.94	5.90	34.162	26.903	120.0	0.776	0.76	10.9	72.4	2.93	39.1	0.00			440	202
500 ISL	5.76	5.72	34.243	26.990	112.5	0.849	0.45	6.4	79.1	3.06	40.3	0.00			503	
512	5.72	5.68	34.258	27.007	111.0	0.863	0.39	5.6	80.4	3.09	40.5	0.00			516	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 STATION 90.0 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 5.2 N	120 38.3 W	09/02/06	0053 UTC	3766 m	020 05 kn	310 03 05	0	1013.5 mb	18.0 C	16.2 C	17m	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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.92	14.92	33.334	24.706	322.8	0.000	5.92	102.9	2.3	0.32	0.1	0.01	0.51	0.10	0	
2	14.92	14.92	33.334	24.706	322.8	0.006	5.92	102.9	2.3	0.32	0.1	0.01	0.51	0.10	2	220
10	14.86	14.86	33.332	24.718	322.0	0.032	5.92	102.7	2.3	0.32	0.1	0.01	0.51	0.10	10	219
20	14.57	14.57	33.332	24.780	316.3	0.064	5.85	100.9	2.5	0.35	0.3	0.03	0.54	0.15	20	218
30 ISL	14.29	14.29	33.321	24.831	311.7	0.096	5.92	101.5	2.8	0.39	0.9	0.05	0.71	0.16	30	
31	14.26	14.26	33.320	24.836	311.2	0.099	5.93	101.6	2.8	0.39	1.0	0.05	0.73	0.16	31	217
41	13.99	13.98	33.304	24.881	307.3	0.130	5.96	101.6	3.2	0.44	1.7	0.07	0.84	0.22	41	216
50	13.32	13.31	33.289	25.006	295.6	0.157	5.95	100.0	4.3	0.57	3.5	0.14	0.92	0.33	50	215
60	12.91	12.90	33.365	25.146	282.4	0.186	5.86	97.7	5.6	0.69	5.2	0.21	0.64	0.28	60	214
71	12.63	12.62	33.403	25.231	274.7	0.216	5.65	93.7	6.6	0.79	6.7	0.24	0.58	0.17	71	213
75 ISL	12.11	12.10	33.414	25.339	264.4	0.227	5.18	84.9	8.8	0.97	9.6	0.19	0.45	0.15	75	
86	10.56	10.55	33.467	25.661	233.8	0.254	3.86	61.2	15.3	1.46	17.8	0.03	0.09	0.11	86	212
100	9.88	9.87	33.555	25.846	216.5	0.286	3.68	57.5	18.6	1.59	20.1	0.01	0.03	0.07	100	211
120	9.66	9.65	33.700	25.996	202.6	0.328	3.16	49.2	22.7	1.80	22.9	0.01	0.01	0.06	121	210
125 ISL	9.58	9.57	33.749	26.048	197.8	0.338	3.04	47.3	23.9	1.84	23.5	0.01	0.01	0.06	126	
140	9.35	9.33	33.890	26.196	184.0	0.367	2.74	42.4	27.4	1.95	25.2	0.01	0.01	0.06	141	209
150 ISL	9.23	9.21	33.950	26.262	177.9	0.385	2.59	40.0	29.2	2.00	26.0	0.01	0.01	0.06	151	
169	9.04	9.02	34.027	26.353	169.6	0.418	2.35	36.2	32.0	2.09	27.2	0.01	0.00	0.05	170	208
200	8.82	8.80	34.108	26.452	160.8	0.469	1.96	30.0	36.2	2.24	29.0	0.01	0.00	0.04	201	207
229	8.51	8.49	34.155	26.537	153.1	0.514	1.68	25.6	41.0	2.37	30.4	0.01			230	206
250 ISL	8.23	8.20	34.168	26.590	148.4	0.546	1.54	23.3	43.9	2.45	31.4	0.01			251	
268	7.96	7.93	34.170	26.632	144.6	0.572	1.45	21.8	46.5	2.51	32.3	0.01			270	205
300 ISL	7.45	7.42	34.162	26.700	138.4	0.618	1.30	19.3	52.4	2.61	34.0	0.00			302	
318	7.18	7.15	34.157	26.734	135.3	0.642	1.22	18.0	55.7	2.67	34.9	0.00			320	204
378	6.62	6.59	34.181	26.830	126.7	0.721	0.89	13.0	64.1	2.84	37.1	0.00			380	203
400 ISL	6.56	6.52	34.207	26.859	124.3	0.749	0.75	10.9	66.4	2.90	37.6	0.00			403	
437	6.50	6.46	34.254	26.904	120.5	0.794	0.53	7.7	70.1	2.99	38.2	0.00			440	202
500 ISL	6.10	6.06	34.293	26.987	113.2	0.867	0.37	5.3	77.5	3.11	39.5	0.00			503	
513	6.02	5.97	34.302	27.004	111.7	0.882	0.34	4.9	79.0	3.14	39.8	0.00			516	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 45.0 N	121 18.7 W	08/02/06	1844 UTC	3381 m	330 13 kn	340 04 03	0	1016.6 mb	16.8 C	15.9 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.90	14.90	33.309	24.691	324.2	0.000	5.87	101.9	2.3	0.31	0.0	0.00	0.40	0.04	0	
2 A	14.90	14.90	33.309	24.691	324.3	0.006	5.87	101.9	2.3	0.31	0.0	0.00	0.40	0.04	2	222
8	14.93	14.93	33.310	24.685	325.0	0.026	5.88	102.2	2.3	0.31	0.0	0.00	0.40	0.05	8	221
10 ISL	14.90	14.90	33.313	24.694	324.2	0.032	5.88	102.1	2.3	0.31	0.0	0.00	0.39	0.06	10	
14 A	14.84	14.84	33.318	24.711	322.7	0.045	5.88	102.0	2.2	0.31	0.0	0.00	0.38	0.08	14	220
20 ISL	14.83	14.83	33.316	24.712	322.8	0.065	5.89	102.1	2.2	0.31	0.0	0.00	0.39	0.09	20	
24	14.83	14.83	33.314	24.711	323.0	0.078	5.90	102.3	2.2	0.31	0.0	0.00	0.40	0.10	24	219
30 ISL	14.78	14.78	33.308	24.717	322.6	0.097	5.88	101.8	2.1	0.32	0.0	0.01	0.46	0.16	30	
34 A	14.75	14.74	33.305	24.721	322.3	0.110	5.87	101.6	2.1	0.32	0.0	0.01	0.50	0.20	34	218
41	14.71	14.70	33.307	24.731	321.6	0.132									41	217
46 A	14.69	14.68	33.310	24.738	321.1	0.149	5.85	101.1	2.2	0.33	0.1	0.02	0.50	0.22	46	216
50 ISL	14.64	14.63	33.313	24.751	319.9	0.161	5.81	100.3	2.3	0.35	0.3	0.04	0.48	0.20	50	
56	14.57	14.56	33.319	24.771	318.2	0.181	5.76	99.3	2.5	0.37	0.5	0.08	0.41	0.17	56	215
65 A	13.65	13.64	33.304	24.951	301.2	0.208	5.24	88.7	4.5	0.65	4.9	0.09	0.18	0.13	65	214
75 ISL	12.54	12.53	33.337	25.197	278.0	0.237	4.63	76.6	7.8	0.98	10.0	0.04	0.15	0.11	75	
77	12.33	12.32	33.349	25.247	273.3	0.243	4.51	74.3	8.5	1.04	11.0	0.03	0.14	0.11	77	213
88 A	11.39	11.38	33.430	25.485	250.7	0.272	3.96	63.9	12.3	1.33	15.7	0.02	0.09	0.08	88	212
100 ISL	10.44	10.43	33.534	25.735	227.1	0.300	3.54	56.0	17.0	1.58	19.7	0.01	0.05	0.06	100	
104	10.18	10.17	33.570	25.807	220.3	0.309	3.44	54.2	18.5	1.64	20.7	0.01	0.04	0.05	104	211
120	9.59	9.58	33.694	26.003	201.9	0.343	3.19	49.6	22.4	1.78	23.0	0.01	0.02	0.03	121	210
125 ISL	9.49	9.48	33.730	26.047	197.8	0.353	3.11	48.3	23.5	1.82	23.5	0.01	0.02	0.03	126	
139	9.30	9.28	33.824	26.152	188.1	0.380	2.89	44.7	26.2	1.90	24.8	0.01	0.01	0.03	140	209
150 ISL	9.21	9.19	33.896	26.223	181.6	0.400	2.74	42.3	27.9	1.96	25.6	0.01	0.01	0.03	151	
168	9.08	9.06	33.988	26.316	173.1	0.432	2.54	39.1	30.4	2.03	26.6	0.01	0.00	0.02	169	208
198	8.61	8.59	34.034	26.426	163.1	0.483	2.33	35.5	34.5	2.13	28.3	0.01	0.00	0.02	199	207
200 ISL	8.60	8.58	34.040	26.433	162.5	0.486	2.30	35.1	34.8	2.14	28.4	0.01			201	
228	8.49	8.47	34.124	26.516	155.1	0.530	1.89	28.7	39.1	2.30	30.0	0.00			229	206
250 ISL	8.41	8.38	34.177	26.570	150.4	0.564	1.59	24.1	42.4	2.42	31.0	0.00			251	
270	8.26	8.23	34.202	26.613	146.6	0.594	1.38	20.9	44.7	2.51	31.7	0.00			272	205
300 ISL	7.64	7.61	34.159	26.671	141.3	0.637	1.36	20.3	44.6	2.51	31.7	0.00			302	
319	7.22	7.19	34.128	26.706	138.0	0.663	1.35	19.9	44.6 U	2.51 U	31.7 U	0.00 U			321	204
377	6.79	6.76	34.181	26.807	129.0	0.741	0.90	13.2	60.9	2.81	36.5	0.00			379	203
400 ISL	6.56	6.52	34.188	26.844	125.7	0.770	0.79	11.5	65.0	2.88	37.5	0.00			403	
436	6.20	6.16	34.199	26.899	120.6	0.815	0.65	9.4	70.4	2.96	38.7	0.00			439	202
500 ISL	5.73	5.69	34.254	27.002	111.3	0.889	0.40	5.7	80.8	3.10	40.5	0.00			503	
512	5.64	5.60	34.264	27.021	109.6	0.902	0.35	5.0	82.8	3.13	40.8	0.00			515	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 25.2 N	121 59.3 W	08/02/06	1207 UTC	3083 m	350 17 kn			1017.3 mb	16.1 C	14.9 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.01	16.01	33.427	24.536	338.9	0.000	5.71	101.5	1.8	0.30	0.0	0.00	0.18	0.05	0	
2	16.01	16.01	33.427	24.537	339.0	0.007	5.71	101.4	1.8	0.30	0.0	0.00	0.18	0.05	2	220
10	16.02	16.02	33.428	24.535	339.3	0.034	5.70	101.3	1.7	0.28	0.0	0.00	0.18	0.05	10	219
19	16.00	16.00	33.424	24.537	339.5	0.064	5.71	101.4	1.7	0.31	0.0	0.00	0.19	0.04	19	218
20 ISL	15.91	15.91	33.411	24.547	338.5	0.068	5.73	101.6	1.8	0.31	0.0	0.00	0.20	0.05	20	
30	14.92	14.92	33.289	24.672	326.9	0.101	5.91	102.6	2.3	0.31	0.0	0.00	0.35	0.14	30	217
39	14.59	14.58	33.280	24.736	321.0	0.130	5.91	101.9	2.4	0.32	0.1	0.01	0.70	0.23	39	216
50	14.49	14.48	33.302	24.775	317.7	0.165	5.82	100.2	2.6	0.35	0.4	0.07	0.79	0.23	50	215
59	13.94	13.93	33.286	24.878	308.1	0.194	5.50	93.6	3.9	0.54	3.2	0.18	0.36	0.20	59	214
70	12.27	12.26	33.304	25.223	275.3	0.226	4.81	79.1	7.7	0.94	9.8	0.02	0.11	0.11	70	213
75 ISL	11.65	11.64	33.357	25.381	260.4	0.239	4.42	71.7	10.3	1.14	12.9	0.02	0.09	0.09	75	
85	10.71	10.70	33.479	25.645	235.4	0.264	3.75	59.7	15.2	1.47	18.0	0.01	0.06	0.08	85	212
99	10.18	10.17	33.572	25.809	220.0	0.296	3.46	54.5	18.8	1.63	20.6	0.01	0.04	0.05	99	211
100 ISL	10.14	10.13	33.580	25.822	218.8	0.298	3.44	54.1	19.1	1.64	20.8	0.01	0.04	0.05	100	
118	9.52	9.51	33.728	26.041	198.3	0.335	3.10	48.1	23.6	1.81	23.5	0.01	0.01	0.04	119	210
125 ISL	9.39	9.38	33.773	26.097	193.0	0.349	3.00	46.5	24.9	1.86	24.2	0.01	0.00	0.04	126	
139	9.21	9.19	33.851	26.188	184.7	0.376	2.83	43.7	27.2	1.93	25.4	0.00	0.00	0.03	140	209
150 ISL	9.04	9.02	33.907	26.259	178.1	0.396	2.71	41.7	29.0	1.97	26.2	0.00	0.00	0.03	151	
169	8.78	8.76	33.987	26.363	168.6	0.428	2.51	38.4	32.2	2.05	27.4	0.01	0.00	0.03	170	208
196	8.53	8.51	34.059	26.458	160.0	0.473	2.15	32.7	36.6	2.20	29.4	0.00	0.00	0.02	197	207
200 ISL	8.47	8.45	34.063	26.471	158.8	0.479	2.12	32.2	37.2	2.21	29.6	0.00			201	
230	7.97	7.95	34.071	26.552	151.4	0.526	2.03	30.5	42.0	2.29	31.1	0.00			231	206
250 ISL	7.63	7.61	34.078	26.608	146.4	0.556	2.01	30.0	45.9	2.38	32.3	0.00			251	
267	7.37	7.34	34.085	26.650	142.5	0.580	1.99	29.5	49.2	2.47	33.4	0.00			269	205
300 ISL	7.03	7.00	34.106	26.714	136.7	0.626	1.55	22.8	54.4	2.60	34.9	0.00			302	
317	6.90	6.87	34.120	26.744	134.2	0.649	1.28	18.8	56.8	2.66	35.6	0.00			319	204
376	6.61	6.58	34.193	26.841	125.7	0.726	0.78	11.4	64.9	2.87	37.4	0.00			378	203
400 ISL	6.45	6.41	34.217	26.881	122.1	0.756	0.64	9.3	68.5	2.94	38.1	0.00			403	
437	6.17	6.13	34.246	26.940	116.8	0.800	0.48	6.9	74.0	3.03	39.2	0.00			440	202
500 ISL	5.71	5.67	34.264	27.013	110.3	0.871	0.35	5.0	82.2	3.12	40.7	0.00			503	
510	5.64	5.60	34.267	27.024	109.3	0.882	0.33	4.7	83.5	3.14	40.9	0.00			513	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 4.8 N	122 39.9 W	08/02/06	0533	UTC	4017 m	340	11 kn			1019.6 mb	14.3 C	12.9 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.72	14.72	32.996	24.488	343.5	0.000	5.90	101.9	1.9	0.34	0.1	0.01	0.22	0.06	0	
2	14.72	14.72	32.996	24.488	343.6	0.007	5.90	101.9	1.9	0.34	0.1	0.01	0.22	0.06	2	220
10	14.66	14.66	32.994	24.500	342.7	0.034	5.89	101.6	2.0	0.34	0.1	0.01	0.23	0.06	10	219
20	14.08	14.08	33.011	24.635	330.1	0.068	5.92	100.9	2.6	0.40	0.8	0.07	0.52	0.17	20	218
30 ISL	13.95	13.95	33.044	24.688	325.3	0.101	5.96	101.3	2.8	0.41	0.9	0.06	0.50	0.17	30	
31	13.94	13.94	33.047	24.692	325.0	0.104	5.96	101.3	2.8	0.41	0.9	0.06	0.50	0.17	31	217
41	13.85	13.84	33.050	24.713	323.2	0.136	5.96	101.1	2.9	0.42	1.1	0.07	0.60	0.18	41	216
50	13.55	13.54	33.085	24.802	315.0	0.165	5.75	97.0	3.3	0.50	2.3	0.09	0.34	0.16	50	215
60	12.80	12.79	33.105	24.967	299.5	0.196	5.41	89.8	4.3	0.67	5.0	0.04	0.22	0.13	60	214
71	12.14	12.13	33.203	25.170	280.4	0.228	5.39	88.3	6.2	0.79	7.0	0.14	0.16	0.12	71	213
75 ISL	11.73	11.72	33.222	25.261	271.8	0.239	5.23	85.0	7.2	0.88	8.6	0.11	0.14	0.10	75	
86	10.67	10.66	33.279	25.496	249.5	0.267	4.68	74.3	10.4	1.15	13.2	0.01	0.08	0.06	86	212
100	10.21	10.20	33.409	25.677	232.6	0.301	4.21	66.2	14.3	1.37	16.8	0.01	0.04	0.05	100	211
120	9.75	9.74	33.573	25.882	213.4	0.346	3.56	55.5	19.7	1.66	21.1	0.00	0.02	0.05	121	210
125 ISL	9.59	9.58	33.619	25.944	207.6	0.356	3.49	54.2	20.8	1.70	21.8	0.00	0.02	0.04	126	
139	9.20	9.18	33.751	26.111	192.0	0.384	3.29	50.7	23.9	1.79	23.6	0.00	0.01	0.03	140	209
150 ISL	9.22	9.20	33.861	26.194	184.3	0.405	2.90	44.8	26.5	1.91	25.0	0.00	0.01	0.03	151	
170	9.27	9.25	34.000	26.295	175.2	0.441	2.20	34.0	30.8	2.12	27.2	0.00	0.01	0.04	171	208
199	8.99	8.97	34.097	26.416	164.2	0.490	1.94	29.8	34.5	2.23	28.7	0.00	0.00	0.03	200	207
200 ISL	8.98	8.96	34.100	26.420	163.8	0.492	1.93	29.7	34.7	2.23	28.8	0.00			201	
230	8.61	8.59	34.158	26.524	154.4	0.540	1.67	25.5	39.3	2.37	30.3	0.00			231	206
250 ISL	8.38	8.35	34.173	26.571	150.2	0.570	1.53	23.2	41.9	2.44	31.2	0.00			251	
270	8.13	8.10	34.173	26.609	146.9	0.600	1.42	21.4	44.6	2.49	32.1	0.00			272	205
300 ISL	7.57	7.54	34.148	26.672	141.1	0.643	1.37	20.4	49.3	2.57	33.6	0.00			302	
319	7.21	7.18	34.132	26.710	137.5	0.669	1.34	19.8	52.5	2.62	34.6	0.00			321	204
378	6.59	6.56	34.160	26.817	127.9	0.748	0.94	13.7	62.5	2.82	37.2	0.00			380	203
400 ISL	6.35	6.31	34.166	26.854	124.6	0.775	0.83	12.0	66.4	2.88	38.1	0.00			402	
438	5.98	5.94	34.180	26.912	119.2	0.822	0.66	9.5	72.5	2.98	39.3	0.00			441	202
500 ISL	5.74	5.70	34.232	26.984	113.1	0.894	0.44	6.3	79.3	3.08	40.4	0.00			503	
515	5.68	5.64	34.245	27.001	111.5	0.911	0.39	5.6	80.9	3.11	40.7	0.00			518	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 19.7 W	07/02/06	2306	UTC	3486 m	350	06 kn	280 04 10	1	1018.3 mb	17.2 C	15.1 C	34m		2/8	AC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.01	16.01	33.190	24.354	356.3	0.000	5.73	101.7	1.8	0.31	0.0	0.00	0.15	0.04	0	
2	16.01	16.01	33.190	24.354	356.3	0.007	5.73	101.7	1.8	0.31	0.0	0.00	0.15	0.04	2	220
2	16.02	16.02				0.007									2	221
10 ISL	15.89	15.89	33.189	24.381	354.1	0.036	5.74	101.6	1.7	0.31	0.0	0.00	0.15	0.04	10	
15	15.80	15.80	33.188	24.401	352.3	0.053	5.75	101.6	1.7	0.31	0.0	0.00	0.15	0.04	15	219
20 ISL	15.78	15.78	33.187	24.404	352.1	0.071	5.75	101.5	1.7	0.31	0.0	0.00	0.15	0.04	20	
30	15.75	15.75	33.185	24.410	351.9	0.106	5.75	101.5	1.7	0.30	0.0	0.00	0.17	0.05	30	218
45	15.73	15.72	33.188	24.417	351.7	0.159	5.75	101.4	1.8	0.30	0.0	0.00	0.22	0.08	45	217
50 ISL	15.34	15.33	33.161	24.483	345.6	0.176	5.78	101.2	1.9	0.32	0.0	0.00	0.27	0.10	50	
55	14.95	14.94	33.143	24.554	338.9	0.193	5.80	100.7	2.0	0.34	0.0	0.01	0.32	0.12	55	216
66	14.79	14.78	33.203	24.635	331.5	0.230	5.69	98.5	2.2	0.39	0.4	0.29	0.32	0.16	66	215
75	14.32	14.31	33.221	24.749	320.9	0.260	5.66	97.1	2.5	0.42	1.1	0.21	0.21	0.13	75	214
84	13.39	13.38	33.272	24.980	299.0	0.287	5.38	90.5	3.9	0.58	3.5	0.05	0.14	0.10	84	213
94	12.47	12.46	33.277	25.165	281.5	0.316	5.08	83.9	6.0	0.78	6.8	0.02	0.10	0.09	94	212
100 ISL	11.91	11.90	33.294	25.284	270.2	0.333	4.86	79.3	7.7	0.92	9.1	0.02	0.08	0.08	100	
110	11.07	11.06	33.358	25.487	251.0	0.359	4.44	71.2	11.3	1.17	13.3	0.01	0.06	0.07	110	211
125	10.15	10.14	33.547	25.795	221.9	0.395	3.65	57.4	18.2	1.57	19.5	0.01	0.02	0.05	126	210
145	9.52	9.50	33.823	26.116	191.7	0.436	2.86	44.4	26.3	1.91	24.4	0.00	0.00	0.03	146	209
150 ISL	9.45	9.43	33.857	26.154	188.2	0.445	2.76	42.8	27.2	1.95	24.9	0.00	0.00	0.03	151	
169	9.34	9.32	33.934	26.232	181.1	0.481	2.52	39.0	29.3	2.02	26.0	0.00	0.00	0.03	170	208
199	9.19	9.17	34.041	26.341	171.4	0.533	2.20	34.0	32.5	2.14	27.3	0.00	0.00	0.02	200	207
200 ISL	9.18	9.16	34.046	26.346	170.9	0.535	2.18	33.7	32.7	2.15	27.4	0.00			201	
230	8.86	8.84	34.172	26.496	157.2	0.584	1.66	25.5	38.8	2.35	29.6	0.00			231	206
250 ISL	8.61	8.58	34.194	26.553	152.1	0.615	1.51	23.0	41.5	2.42	30.5	0.00			251	
269	8.36	8.33	34.194	26.591	148.7	0.644	1.44	21.8	43.8	2.47	31.2	0.00			270	205
300 ISL	7.96	7.93	34.195	26.652	143.3	0.689	1.28	19.2	48.1	2.57	32.6	0.00			302	
319	7.74	7.71	34.197	26.686	140.2	0.716	1.17	17.5	50.8	2.64	33.4	0.00			321	204
379	7.28	7.24	34.251	26.795	130.6	0.797	0.72	10.7	58.9	2.84	35.6	0.00			381	203
400 ISL	7.11	7.07	34.263	26.828	127.7	0.824	0.61	9.0	62.0	2.90	36.3	0.00			402	
438	6.81	6.77	34.280	26.883	122.8	0.872	0.47	6.9	67.2	2.99	37.4	0.00			441	202
500 ISL	6.43	6.38	34.303	26.953	116.8	0.946	0.35	5.1	73.5	3.09	38.7	0.00			503	
515	6.34	6.29	34.309	26.969	115.4	0.964	0.32	4.6	75.0	3.11	39.0	0.00			518	201

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — 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 24.5 N	124 0.2 W	07/02/06	1726	UTC	2983 m	340	04 kn	300 07 12	1	1019.5 mb	15.5 C	13.3 C	36m	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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.91	15.91	33.244	24.418	350.2	0.000	5.75	101.8	1.5	0.30	0.0	0.00	0.17	0.02	0	
3 A	15.91	15.91	33.244	24.418	350.2	0.011	5.75	101.8	1.5	0.30	0.0	0.00	0.17	0.02	3	223
10 ISL	15.88	15.88	33.243	24.425	349.9	0.035	5.74	101.6	1.5	0.30	0.0	0.00	0.18	0.01	10	
13	15.87	15.87	33.243	24.427	349.7	0.046	5.74	101.6	1.5	0.30	0.0	0.00	0.19	0.00	13	222
20 ISL	15.87	15.87	33.243	24.427	349.9	0.070	5.73	101.4	1.5	0.29	0.0	0.00	0.18	0.02	20	
25 A	15.87	15.87	33.243	24.427	350.1	0.087	5.73	101.4	1.5	0.29	0.0	0.00	0.18	0.03	25	221
30 ISL	15.88	15.88	33.247	24.428	350.1	0.105	5.73	101.4	1.5	0.29	0.0	0.00	0.17	0.03	30	
37	15.89	15.88	33.249	24.428	350.4	0.130	5.74	101.6	1.5	0.29	0.0	0.00	0.16	0.03	37	220
49	15.82	15.81	33.256	24.449	348.7	0.171	5.75	101.7	1.5	0.29	0.0	0.00	0.23	0.05	49	219
50 ISL	15.80	15.79	33.254	24.452	348.5	0.175	5.75	101.6	1.5	0.29	0.0	0.00	0.24	0.05	50	
61 A	15.52	15.51	33.235	24.500	344.2	0.213	5.79	101.7	1.7	0.31	0.0	0.00	0.40	0.05	61	218
66	15.33	15.32	33.233	24.541	340.5	0.230									66	217
72	15.02	15.01	33.231	24.607	334.3	0.250	5.74	99.8	2.0	0.36	0.3	0.12	0.58	0.19	72	216
75 ISL	14.76	14.75	33.225	24.659	329.5	0.260	5.72	99.0	2.2	0.39	0.6	0.18	0.57	0.19	75	
83 A	14.02	14.01	33.209	24.802	316.0	0.286	5.62	95.8	2.9	0.49	1.9	0.26	0.46	0.20	83	215
94	13.18	13.17	33.194	24.961	301.0	0.320	5.37	89.9	4.1	0.65	4.6	0.03	0.27	0.13	94	214
100 ISL	12.92	12.91	33.204	25.021	295.4	0.338	5.28	87.9	4.5	0.69	5.3	0.02	0.22	0.12	100	
105	12.71	12.70	33.218	25.073	290.6	0.353	5.20	86.2	4.9	0.73	6.0	0.02	0.19	0.12	105	213
115 A	11.98	11.97	33.255	25.241	274.7	0.381	4.92	80.4	7.0	0.91	9.1	0.01	0.12	0.10	115	212
125 ISL	11.28	11.26	33.311	25.413	258.4	0.408	4.59	73.9	9.6	1.11	12.4	0.01	0.07	0.08	126	
128	11.07	11.05	33.331	25.467	253.4	0.415	4.50	72.1	10.5	1.17	13.4	0.01	0.06	0.07	129	211
143	9.99	9.97	33.454	25.750	226.5	0.451	4.27	66.9	14.8	1.37	17.1	0.01	0.03	0.05	144	210
150 ISL	9.75	9.73	33.507	25.831	218.9	0.467	4.22	65.8	16.0	1.41	17.9	0.01	0.02	0.04	151	
157 A	9.59	9.57	33.557	25.897	212.8	0.482	4.16	64.6	17.2	1.45	18.6	0.00	0.01	0.03	158	209
179	9.11	9.09	33.720	26.102	193.6	0.527	3.68	56.6	22.9	1.67	22.2	0.00	0.00	0.03	180	208
198	8.90	8.88	33.844	26.232	181.5	0.562	3.55	54.4	25.6	1.72	23.2	0.00	0.00	0.02	199	207
200 ISL	8.88	8.86	33.854	26.243	180.5	0.566	3.52	53.9	25.9	1.73	23.4	0.00			201	
229	8.60	8.58	33.967	26.376	168.4	0.617	3.06	46.6	30.5	1.88	25.8	0.00			230	206
250 ISL	8.35	8.32	34.005	26.444	162.2	0.651	2.84	43.0	33.9	1.98	27.2	0.00			251	
269	8.10	8.07	34.023	26.496	157.5	0.682	2.66	40.1	37.2	2.07	28.5	0.00			270	205
300 ISL	7.68	7.65	34.051	26.580	149.9	0.729	2.26	33.7	43.0	2.25	30.9	0.00			302	
319	7.42	7.39	34.063	26.627	145.6	0.757	2.00	29.7	46.8	2.36	32.3	0.00			321	204
378	6.62	6.59	34.095	26.762	133.1	0.840	1.30	18.9	59.1	2.69	36.2	0.00			380	203
400 ISL	6.40	6.36	34.115	26.807	129.0	0.868	1.10	15.9	63.1	2.78	37.3	0.00			402	
438	6.09	6.05	34.152	26.876	122.7	0.916	0.82	11.8	69.4	2.90	38.7	0.00			441	202
500 ISL	5.78	5.74	34.202	26.955	115.8	0.990	0.53	7.6	77.6	3.05	40.1	0.00			503	
514	5.71	5.67	34.214	26.973	114.2	1.006	0.46	6.6	79.4	3.08	40.4	0.00			517	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — STATION 91.7 26.5

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 14.6 N	117 27.8 W	04/02/06	0641	UTC	23 m	100	05 kn			1018.1 mb	13.0 C	12.6 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.45	14.45	33.396	24.854	308.7	0.000	6.39	110.0	4.2	0.32	0.0	0.01	1.02	0.27	0	
2	14.45	14.45	33.396	24.854	308.7	0.006	6.39	110.0	4.2	0.32	0.0	0.01	1.02	0.27	2	204
5	14.39	14.39	33.396	24.867	307.6	0.015	6.32	108.7	4.4	0.33	0.1	0.01	1.24	0.30	5	203
10	14.00	14.00	33.383	24.939	300.9	0.031	5.92	101.0	5.5	0.44	1.1	0.06	1.94	0.43	10	202
15	13.53	13.53	33.380	25.033	292.1	0.045	5.61	94.8	6.7	0.55	2.5	0.13	1.85	0.41	15	201

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — STATION 93.4 26.5

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 56.9 N	117 17.0 W	04/02/06	0354	UTC	26 m	160	05 kn			1018.3 mb	15.0 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.73	14.73	33.363	24.769	316.8	0.000	6.75	116.8	4.3	0.26	0.0	0.01	5.11	0.52	0	
2	14.73	14.73	33.363	24.769	316.8	0.006	6.75	116.8	4.3	0.26	0.0	0.01	5.11 A	0.52 A	2	205
5	14.69	14.69	33.360	24.775	316.3	0.016	6.87	118.8	4.5	0.25	0.0	0.01	4.17	0.43	5	204
10	14.68	14.68	33.358	24.776	316.4	0.032	6.83	118.1	4.7	0.25	0.0	0.01	4.37	0.31	10	203
16	13.91	13.91	33.358	24.938	301.1	0.050	5.23 U	89.0 U	6.3	0.37	0.5	0.05	6.58	0.14	16	202
20 ISL	13.77	13.77	33.362	24.970	298.2	0.062	6.48	110.0	6.7	0.40	0.7	0.06	7.08	0.12	20	
21	13.73	13.73	33.363	24.979	297.3	0.065	6.45	109.4	6.8	0.41	0.8	0.06	7.20 A	0.12 A	21	201

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

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — 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 18.6 W	04/02/06	0227	UTC	93 m	270	04 kn	280 01 03	2	1015.7 mb	14.8 C	13.6 C		8/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.83	14.83	33.389	24.768	316.9	0.000	6.24	108.3	2.4	0.27	0.0	0.01	0.61	0.30	0	
2	14.83	14.83	33.389	24.768	317.0	0.006	6.24	108.3	2.4	0.27	0.0	0.01	0.61	0.30	2	211
5	14.83	14.83	33.394	24.772	316.7	0.016	6.24	108.3	2.4	0.27	0.0	0.01	0.79	0.08	5	210
10	14.64	14.64	33.391	24.810	313.1	0.032	6.32	109.2	2.6	0.27	0.0	0.00	1.12	0.01	10	209
20	13.94	13.94	33.361	24.934	301.6	0.062	5.88	100.1	3.9	0.41	1.3	0.09	3.40	0.09	20	208
25	13.26	13.26	33.354	25.068	289.0	0.077	5.22	87.7	5.9	0.71	5.4	0.20	2.01	0.06	25	207
30	12.61	12.61	33.368	25.207	275.9	0.091	4.65	77.0	8.6	0.95	9.0	0.23	1.19	0.52	30	206
40	11.63	11.62	33.459	25.463	251.7	0.118	3.74	60.7	14.0	1.38	15.1	0.21	0.51	0.41	40	205
50	10.95	10.94	33.626	25.716	227.8	0.142	2.94	47.1	20.3	1.76	19.9	0.28	0.20	0.27	50	204
60	10.95	10.94	33.627	25.717	228.0	0.164	2.93	46.9	20.5	1.75	19.9	0.28	0.16	0.28	60	203
72	10.61	10.60	33.748	25.872	213.6	0.191	2.54	40.4	24.0	1.92	22.1	0.31	0.08	0.39	72	202
75 ISL	10.54	10.53	33.786	25.913	209.6	0.197	2.46	39.1	24.9	1.96	22.6	0.28	0.07	0.33	75	
85	10.29	10.28	33.914	26.057	196.2	0.217	2.18	34.5	27.7	2.08	24.3	0.17	0.04	0.14	85	201

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — STATION 93.3 28.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 54.8 N	117 23.8 W	04/02/06	0940	UTC	617 m	270	07 kn			1018.0 mb	14.9 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.85	14.85	33.392	24.766	317.1	0.000	6.24	108.3	2.8	0.27	0.0	0.00	0.45	0.11	0	
2	14.85	14.85	33.392	24.766	317.2	0.006	6.24	108.3	2.8	0.27	0.0	0.00	0.45	0.11	2	220
10 ISL	14.73	14.73	33.391	24.791	315.0	0.032	6.32	109.4	2.8	0.26	0.0	0.00	0.93	0.14	10	
11	14.72	14.72	33.391	24.793	314.8	0.035	6.33	109.6	2.8	0.26	0.0	0.00	0.99	0.14	11	219
20	13.98	13.98	33.391	24.949	300.2	0.062	6.21	105.9	3.7	0.27	0.2	0.03	3.40	0.50	20	218
30 ISL	12.56	12.56	33.380	25.225	274.1	0.091	4.57	75.6	9.4	0.92	9.1	0.23	1.03	0.34	30	
31	12.41	12.41	33.382	25.256	271.2	0.094	4.39	72.4	10.0	1.00	10.1	0.24	0.71	0.31	31	217
40	11.45	11.45	33.443	25.483	249.8	0.117	3.85	62.3	13.2	1.34	15.1	0.06	0.29	0.26	40	216
50	10.97	10.96	33.546	25.650	234.1	0.142	3.38	54.1	17.0	1.57	18.4	0.03	0.20	0.20	50	215
60	10.77	10.76	33.641	25.760	223.9	0.164	2.82	45.0	20.7	1.78	21.4	0.12	0.07	0.14	60	214
70	10.69	10.68	33.686	25.809	219.4	0.187	2.68	42.7	21.9	1.84	22.1	0.32	0.04	0.12	70	213
75 ISL	10.66	10.65	33.700	25.825	218.0	0.198	2.59	41.2	22.5	1.87	22.4	0.38	0.03	0.11	75	
85	10.57	10.56	33.753	25.883	212.8	0.219	2.40	38.1	24.0	1.94	23.1	0.49	0.02	0.09	85	212
100	10.32	10.31	33.968	26.094	193.0	0.250	2.06	32.6	27.8	2.11	24.7	0.02	0.02	0.06	101	211
119	10.12	10.11	34.052	26.194	183.9	0.285	1.88	29.6	29.7	2.18	25.8	0.01	0.01	0.06	120	210
125 ISL	10.02	10.01	34.068	26.224	181.2	0.296	1.88	29.6	30.2	2.19	26.1	0.01	0.01	0.06	126	
139	9.76	9.74	34.095	26.289	175.3	0.321	1.89	29.6	31.4	2.20	26.7	0.01	0.01	0.05	140	209
150 ISL	9.59	9.57	34.115	26.333	171.3	0.340	1.87	29.2	32.4	2.22	27.2	0.01	0.01	0.05	151	
170	9.32	9.30	34.142	26.398	165.5	0.374	1.82	28.2	34.2	2.26	28.1	0.01	0.02	0.05	171	208
200	8.97	8.95	34.159	26.468	159.3	0.423	1.74	26.8	36.8	2.32	29.2	0.01	0.02	0.04	201	207
229	8.81	8.79	34.235	26.553	151.8	0.468	1.34	20.5	41.3	2.48	30.4	0.01			230	206
250 ISL	8.63	8.60	34.243	26.588	148.8	0.499	1.24	18.9	43.2	2.53	31.0	0.00			251	
269	8.46	8.43	34.237	26.610	147.0	0.527	1.21	18.4	44.6	2.56	31.5	0.00			271	205
300 ISL	8.25	8.22	34.244	26.648	143.9	0.573	1.08	16.3	47.3	2.63	32.3	0.00			302	
319	8.11	8.08	34.249	26.673	141.8	0.600	1.00	15.1	49.1	2.67	32.9	0.00			321	204
378	7.45	7.41	34.253	26.773	132.9	0.681	0.78	11.6	56.3	2.81	35.0	0.00			380	203
400 ISL	7.30	7.26	34.257	26.797	130.8	0.710	0.71	10.5	58.5	2.86	35.5	0.00			403	
438	7.07	7.03	34.267	26.838	127.4	0.759	0.60	8.8	62.3	2.93	36.4	0.00			441	202
500 ISL	6.61	6.56	34.291	26.920	120.2	0.836	0.44	6.4	69.6	3.04	38.0	0.00			503	
515	6.50	6.45	34.297	26.939	118.5	0.853	0.40	5.8	71.4	3.07	38.4	0.00			519	201

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — 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 50.9 N	117 32.0 W	04/02/06	1239	UTC	850 m	330	03 kn			1017.8 mb	14.4 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.34	15.34	33.353	24.629	330.1	0.000	5.83	102.2	2.0	0.33	0.0	0.00	0.21	0.05	0	
2	15.34	15.34	33.353	24.629	330.2	0.007	5.83	102.2	2.0	0.33	0.0	0.00	0.21	0.05	2	220
10 ISL	15.32	15.32	33.358	24.638	329.6	0.033	5.83	102.1	2.0	0.30	0.0	0.00	0.22	0.05	10	
11	15.32	15.32	33.358	24.638	329.6	0.036	5.83	102.1	2.0	0.30	0.0	0.00	0.22	0.05	11	219
20	15.25	15.25	33.346	24.644	329.3	0.066	5.85	102.3	2.1	0.30	0.0	0.00	0.24	0.06	20	218
30	14.91	14.91	33.338	24.712	323.1	0.099	5.88	102.1	2.4	0.32	0.0	0.01	0.44	0.14	30	217
40	13.78	13.77	33.291	24.914	304.1	0.130	5.42	92.0	4.2	0.57	3.3	0.08	0.75	0.35	40	216
50 ISL	12.60	12.59	33.297	25.154	281.4	0.159	4.92	81.5	6.7	0.84	7.7	0.06	0.58	0.34	50	
51	12.48	12.47	33.301	25.180	278.9	0.162	4.87	80.4	7.0	0.87	8.2	0.05	0.55	0.34	51	215
60	11.30	11.29	33.366	25.451	253.3	0.186	4.34	69.9	11.0	1.18	13.2	0.02	0.28	0.24	60	214
70	10.70	10.69	33.494	25.658	233.8	0.210	3.76	59.8	15.6	1.47	17.4	0.02	0.12	0.13	70	213
75 ISL	10.59	10.58	33.551	25.721	227.9	0.222	3.51	55.7	17.4	1.57	18.7	0.02	0.08	0.10	75	
85	10.48	10.47	33.651	25.819	218.8	0.244	3.13	49.6	20.1	1.72	20.5	0.01	0.05	0.08	85	212
100	10.04	10.03	33.768	25.986	203.3	0.276	3.02	47.5	22.7	1.81	22.1	0.02	0.04	0.07	100	211
119	9.70	9.69	33.888	26.136	189.3	0.313	2.80	43.7	25.8	1.91	23.8	0.01	0.03	0.06	120	210
125 ISL	9.71	9.70	33.941	26.176	185.6	0.324	2.65	41.4	26.9	1.96	24.3	0.01	0.03	0.06	126	
139	9.78	9.76	34.056	26.255	178.5	0.350	2.29	35.8	29.2	2.07	25.3	0.01	0.02	0.06	140	209
150 ISL	9.69	9.67	34.096	26.301	174.3	0.369	2.19	34.2	30.4	2.11	25.9	0.01	0.02	0.07	151	
169	9.45	9.43	34.127	26.365	168.6	0.402	2.12	32.9	32.2	2.15	26.8	0.02	0.01	0.09	170	208
199	9.11	9.09	34.171	26.455	160.6	0.451	1.90	29.3	35.5	2.25	28.1	0.01	0.01	0.05	200	207
200 ISL	9.11	9.09	34.173	26.457	160.4	0.453	1.89	29.2	35.6	2.25	28.1	0.01			201	
229	9.12	9.09	34.230	26.500	156.9	0.499	1.57	24.2	37.8	2.37	29.0	0.01			230	206
250 ISL	8.99	8.96	34.279	26.560	151.7	0.531	1.25	19.2	40.8	2.49	29.9	0.00			251	
268	8.80	8.77	34.308	26.613	146.9	0.558	1.02	15.6	43.6	2.59	30.7	0.00			270	205
300 ISL	8.33	8.30	34.284	26.667	142.1	0.604	1.03	15.6	46.7	2.64	31.9	0.00			302	
318	8.04	8.01	34.257	26.689	140.1	0.630	1.04	15.7	48.3	2.65	32.5	0.00			320	204
378	7.28	7.24	34.222	26.772	132.8	0.712	0.89	13.2	56.6	2.78	35.2	0.00			380	203
400 ISL	7.14	7.10	34.243	26.809	129.6	0.740	0.75	11.1	59.4	2.85	35.9	0.00			403	
438	6.95	6.91	34.285	26.868	124.4	0.789	0.51	7.5	64.1	2.97	36.9	0.00			441	202
500 ISL	6.46	6.41	34.293	26.941	118.0	0.864	0.40	5.8	71.5	3.07	38.5	0.01			503	
515	6.34	6.29	34.296	26.959	116.4	0.881	0.37	5.4	73.3	3.09	38.9	0.01			519	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 40.8 N	117 52.5 W	04/02/06	1937	UTC	615 m	280 06 kn	290 03 06	2	1017.6 mb	15.1 C	14.3 C	22m	8/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.95	14.95	33.363	24.722	321.3	0.000	5.94	103.3	2.4	0.31	0.0	0.00	0.54	0.03	0	
3 A	14.95	14.95	33.363	24.722	321.4	0.010	5.94	103.3	2.4	0.31	0.0	0.00	0.54	0.03	3	222
8	14.96	14.96	33.364	24.721	321.6	0.026	5.93	103.1	2.4	0.30	0.0	0.00	0.48	0.09	8	221
10 ISL	14.87	14.87	33.368	24.743	319.5	0.032	5.96	103.5	2.5	0.30	0.0	0.00	0.49	0.10	10	
15 A	14.64	14.64	33.378	24.800	314.2	0.048	6.05	104.5	2.7	0.31	0.0	0.01	0.54	0.13	15	220
20 ISL	14.59	14.59	33.382	24.814	313.1	0.064	6.06	104.6	2.7	0.31	0.0	0.01	0.56	0.16	20	
26	14.52	14.52	33.397	24.841	310.7	0.082	6.07	104.6	2.8	0.30	0.0	0.01	0.58	0.19	26	219
30 ISL	14.49	14.49	33.392	24.844	310.6	0.095	6.07	104.6	2.8	0.30	0.0	0.01	0.59	0.20	30	
37 A	14.45	14.44	33.382 D	24.844	310.7	0.117	6.06	104.3	2.8	0.31	0.0	0.01	0.61	0.21	37	218
44	14.10	14.09	33.381	24.917	303.9	0.138	5.88	100.5	3.4	0.38	0.7	0.06	0.89	0.06	44	217
50 ISL	13.48	13.47	33.371	25.037	292.6	0.156	5.38	90.8	5.3	0.60	3.8	0.17	0.63	0.29	50	
51 A	13.37	13.36	33.370	25.058	290.6	0.159	5.29	89.0	5.7	0.64	4.4	0.19	0.57	0.33	51	216
60	12.68	12.67	33.383	25.205	276.8	0.184	4.71	78.1	8.2	0.92	8.3	0.25	0.53	0.36	60	215
70 A	11.76	11.75	33.488	25.462	252.6	0.211	3.78	61.5	13.4	1.35	14.5	0.21	0.46	0.37	70	214
75 ISL	11.28	11.27	33.569	25.613	238.3	0.223	3.37	54.3	16.5	1.54	17.3	0.14	0.33	0.33	75	
83	10.60	10.59	33.678	25.819	218.8	0.241	2.97	47.2	20.6	1.75	20.7	0.03	0.13	0.24	83	213
96 A	9.89	9.88	33.670	25.934	208.0	0.269	3.30	51.7	21.0	1.73	21.4	0.02	0.05	0.13	96	212
100 ISL	9.74	9.73	33.686	25.972	204.5	0.277	3.26	50.9	21.7	1.75	21.9	0.02	0.04	0.11	100	
108	9.52	9.51	33.730	26.042	197.9	0.294	3.19	49.5	23.3	1.79	23.0	0.01	0.03	0.08	109	211
120	9.39	9.38	33.802	26.120	190.8	0.317	3.03	46.9	25.1	1.86	24.0	0.01	0.01	0.05	121	210
125 ISL	9.30	9.29	33.828	26.155	187.5	0.326	3.05	47.2	25.7	1.86	24.2	0.01	0.01	0.05	126	
140	8.99	8.97	33.895	26.257	178.1	0.354	3.13	48.1	27.4	1.85	24.6	0.01	0.00	0.04	141	209
150 ISL	8.84	8.82	33.935	26.312	173.0	0.371	3.04	46.6	28.9	1.89	25.3	0.01	0.00	0.04	151	
169	8.61	8.59	33.999	26.398	165.1	0.403	2.74	41.8	32.3	2.00	26.9	0.01	0.00	0.03	170	208
199	8.33	8.31	34.076	26.502	155.8	0.452	2.12	32.1	38.7	2.23	29.7	0.01	0.00	0.03	200	207
200 ISL	8.32	8.30	34.078	26.505	155.5	0.453	2.11	32.0	38.9	2.24	29.8	0.01			201	
229	8.07	8.05	34.116	26.573	149.5	0.497	1.81	27.3	43.3	2.37	31.1	0.01			230	206
250 ISL	7.92	7.89	34.129	26.606	146.7	0.528	1.67	25.1	45.3	2.43	31.8	0.01			251	
270	7.77	7.74	34.139	26.636	144.2	0.557	1.55	23.2	47.1	2.49	32.5	0.01			272	205
300 ISL	7.48	7.45	34.170	26.702	138.2	0.600	1.25	18.6	51.9	2.63	33.9	0.01			302	
320	7.29	7.26	34.194	26.748	134.1	0.627	1.04	15.4	55.2	2.72	34.8	0.01			322	204
378	7.02	6.98	34.257	26.836	126.5	0.703	0.66	9.7	61.6	2.90	36.3	0.00			380	203
400 ISL	6.88	6.84	34.264	26.861	124.4	0.730	0.58	8.5	64.0	2.94	36.9	0.00			403	
439	6.61	6.57	34.269	26.901	120.9	0.778	0.49	7.1	68.4	3.00	37.9	0.01			442	202
500 ISL	6.20	6.16	34.299	26.979	114.1	0.850	0.34	4.9	76.0	3.10	39.4	0.00			503	
513	6.11	6.06	34.306	26.996	112.5	0.865	0.31	4.5	77.6	3.12	39.7	0.00			517	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 STATION 93.3 40.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 30.9 N	118 12.9 W	04/02/06	2359	UTC	1652 m	340 06 kn	340 03 10	2	1014.2 mb	14.5 C	13.1 C	18m	8/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.84	14.84	33.369	24.750	318.6	0.000	5.85	101.5	2.4	0.32	0.0	0.01	0.50	0.15	0	
3	14.84	14.84	33.369	24.750	318.7	0.010	5.85	101.5	2.4	0.32	0.0	0.01	0.50	0.15	3	220
10 ISL	14.83	14.83	33.369	24.753	318.6	0.032	5.85	101.5	2.4	0.31	0.0	0.01	0.51	0.15	10	
11	14.83	14.83	33.369	24.753	318.7	0.035	5.85	101.5	2.4	0.31	0.0	0.01	0.51	0.15	11	219
20	14.78	14.78	33.374	24.767	317.5	0.064	5.82	100.8	2.5	0.32	0.0	0.01	0.46	0.18	20	218
30	14.77	14.77	33.373	24.769	317.6	0.095	5.83	101.0	2.4	0.33	0.0	0.01	0.49	0.18	30	217
40	14.38	14.37	33.353	24.837	311.5	0.127	5.80	99.7	3.0	0.37	0.7	0.03	0.59	0.20	40	216
50	12.61	12.60	33.282	25.140	282.7	0.157	4.98	82.5	6.7	0.82	7.4	0.08	0.55	0.50	50	215
60	11.50	11.49	33.344	25.398	258.4	0.184	4.44	71.8	10.5	1.13	12.5	0.03	0.28	0.29	60	214
71	10.75	10.74	33.468	25.629	236.6	0.211	3.83	61.0	15.0	1.43	16.8	0.02	0.14	0.14	71	213
75 ISL	10.51	10.50	33.505	25.700	229.9	0.220	3.70	58.6	16.3	1.50	17.9	0.02	0.11	0.11	75	
85	10.02	10.01	33.589	25.849	215.9	0.242	3.51	55.1	19.0	1.61	20.0	0.01	0.05	0.06	85	212
100	9.71	9.70	33.697	25.985	203.2	0.274	3.39	52.9	21.5	1.70	21.5	0.01	0.02	0.03	100	211
120	9.62	9.61	33.903	26.161	186.9	0.313	2.73	42.5	26.6	1.92	24.2	0.01	0.01	0.03	121	210
125 ISL	9.55	9.54	33.930	26.194	183.9	0.322	2.71	42.2	27.3	1.94	24.6	0.01	0.01	0.03	126	
140	9.27	9.25	33.975	26.275	176.5	0.349	2.65	41.0	29.0	1.98	25.4	0.01	0.00	0.02	141	209
150 ISL	9.06	9.04	33.982	26.314	172.9	0.367	2.67	41.1	29.9	1.99	25.9	0.01	0.00	0.02	151	
169	8.71	8.69	33.991	26.377	167.2	0.399	2.71	41.4	31.9	2.00	26.8	0.00	0.00	0.02	170	208
200 ISL	8.50	8.48	34.084	26.483	157.7	0.449	2.16	32.9	37.2	2.20	29.0	0.00	0.00	0.02	201	
201	8.50	8.48	34.088	26.486	157.5	0.451	2.14	32.5	37.4	2.21	29.1	0.00	0.00	0.02	202	207
229	8.24	8.22	34.158	26.580	148.9	0.494	1.63	24.7	43.0	2.41	31.0	0.01			230	206
250 ISL	8.01	7.98	34.170	26.625	145.0	0.525	1.44	21.7	46.1	2.50	32.1	0.01			251	
270	7.81	7.78	34.174	26.657	142.1	0.553	1.32	19.8	48.5	2.57	33.0	0.00			272	205
300 ISL	7.66	7.63	34.216	26.713	137.4	0.595	1.02	15.2	52.1	2.69	33.9	0.00			302	
318	7.58	7.55	34.242	26.745	134.6	0.620	0.86	12.8	54.2	2.75	34.4	0.00			320	204
376	7.03	6.99	34.260	26.837	126.4	0.696	0.63	9.3	62.2	2.91	36.3	0.00			378	203
400 ISL	6.85	6.81	34.273	26.872	123.3	0.725	0.54	7.9	65.1	2.96	37.0	0.00			403	
439	6.59	6.55	34.293	26.923	118.9	0.773	0.42	6.1	69.5	3.03	38.0	0.00			442	202
500 ISL	6.20	6.16	34.300	26.980	114.0	0.844	0.33	4.8	75.4	3.10	39.4	0.00			503	
514	6.11	6.06	34.302	26.993	112.8	0.860	0.31	4.5	76.8	3.12	39.7	0.00			518	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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	05/02/06	0405 UTC	1328 m	330 11 kn			1013.8 mb	14.5 C	13.4 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.13	14.13	33.383	24.911	303.2	0.000	5.92	101.2	3.5	0.40	1.2	0.06	0.68	0.19	0	
3	14.13	14.13	33.383	24.911	303.3	0.009	5.92	101.2	3.5	0.40	1.2	0.06	0.68	0.19	3	220
10	14.05	14.05	33.390	24.934	301.4	0.030	5.93	101.2	3.7	0.43	1.5	0.06	0.77	0.20	10	219
20 ISL	13.60	13.60	33.407	25.040	291.6	0.060	5.90	99.8	4.4	0.50	2.7	0.09	0.97	0.34	20	
21	13.55	13.55	33.409	25.051	290.5	0.063	5.90	99.7	4.5	0.51	2.8	0.09	0.98	0.35	21	218
30 ISL	13.51	13.51	33.407	25.058	290.1	0.089	5.86	99.0	4.7	0.53	3.0	0.10	0.87	0.31	30	
31	13.51	13.51	33.406	25.057	290.2	0.092	5.85	98.8	4.7	0.53	3.0	0.10	0.84	0.31	31	217
41	12.91	12.90	33.452	25.213	275.6	0.120	5.10	85.1	7.8	0.83	7.2	0.34	0.49	0.27	41	216
50 ISL	12.31	12.30	33.480	25.352	262.6	0.144	4.55	75.0	10.6	1.05	10.8	0.31	0.41	0.26	50	
51	12.23	12.22	33.484	25.370	260.9	0.147	4.48	73.7	11.0	1.08	11.3	0.31	0.41	0.26	51	215
61	11.10	11.09	33.553	25.633	236.0	0.172	3.46	55.6	16.5	1.53	18.0	0.05	0.20	0.17	61	214
70	10.65	10.64	33.639	25.780	222.2	0.192	3.23	51.4	19.4	1.65	20.0	0.02	0.09	0.13	70	213
75 ISL	10.47	10.46	33.683	25.845	216.1	0.203	3.09	49.0	20.8	1.72	21.0	0.02	0.06	0.12	75	
86	10.19	10.18	33.764	25.957	205.7	0.227	2.81	44.3	23.3	1.85	22.7	0.02	0.03	0.10	86	212
100 ISL	10.06	10.05	33.828	26.029	199.1	0.255	2.59	40.7	25.1	1.93	23.6	0.01	0.01	0.07	101	
101	10.06	10.05	33.833	26.033	198.8	0.257	2.58	40.6	25.2	1.94	23.7	0.01	0.01	0.07	102	211
121	9.81	9.80	34.019	26.221	181.4	0.295	2.12	33.2	29.7	2.11	26.0	0.01	0.01	0.06	122	210
125 ISL	9.75	9.74	34.040	26.247	178.9	0.302	2.07	32.4	30.3	2.13	26.3	0.01	0.01	0.06	126	
140	9.53	9.51	34.088	26.321	172.2	0.328	1.95	30.4	32.1	2.19	27.2	0.01	0.01	0.05	141	209
150 ISL	9.37	9.35	34.100	26.357	169.0	0.346	1.99	30.9	32.8	2.19	27.5	0.01	0.01	0.04	151	
169	9.12	9.10	34.115	26.409	164.3	0.377	2.03	31.3	34.2	2.19	27.9	0.01	0.01	0.03	170	208
199	8.96	8.94	34.196	26.499	156.4	0.425	1.54	23.7	38.8	2.38	29.6	0.01	0.01	0.03	200	207
200 ISL	8.95	8.93	34.197	26.501	156.2	0.427	1.53	23.5	38.9	2.38	29.6	0.01			201	
229	8.57	8.55	34.201	26.564	150.6	0.471	1.44	22.0	42.0	2.44	30.5	0.00			230	206
250 ISL	8.21	8.18	34.206	26.623	145.3	0.502	1.36	20.6	45.4	2.53	31.8	0.00			251	
269	7.90	7.87	34.212	26.674	140.6	0.530	1.26	18.9	48.7	2.61	33.0	0.00			271	205
300 ISL	7.62	7.59	34.226	26.726	136.0	0.572	1.01	15.1	52.8	2.71	34.2	0.00			302	
318	7.49	7.46	34.235	26.752	133.8	0.597	0.87	12.9	55.0	2.76	34.7	0.00			320	204
379	6.96	6.92	34.261	26.847	125.4	0.676	0.62	9.1	63.2	2.91	36.7	0.00			381	203
400 ISL	6.80	6.76	34.265	26.872	123.3	0.702	0.54	7.9	65.5	2.95	37.3	0.00			403	
439	6.52	6.48	34.274	26.917	119.4	0.749	0.42	6.1	69.6	3.01	38.2	0.00			442	202
500 ISL	6.13	6.09	34.308	26.995	112.5	0.820	0.35	5.0	77.2	3.10	39.6	0.00			503	
515	6.04	5.99	34.317	27.014	110.8	0.837	0.33	4.7	79.1	3.12	40.0	0.00			519	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 STATION 93.3 50.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 10.8 N	118 53.6 W	05/02/06	0814 UTC	1462 m	300 07 kn			1013.7 mb	14.7 C	13.6 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.18	13.18	33.407	25.124	283.0	0.000	5.84	97.9	5.4	0.62	4.2	0.10	0.83	0.24	0	
3	13.18	13.18	33.407	25.124	283.1	0.008	5.84	97.9	5.4	0.62	4.2	0.10	0.83	0.24	3	220
10 ISL	13.18	13.18	33.408	25.125	283.2	0.028	5.86	98.3	5.3	0.61	4.2	0.10	0.80	0.27	10	
11	13.18	13.18	33.408	25.125	283.2	0.031	5.86	98.3	5.3	0.61	4.2	0.10	0.80	0.27	11	219
20 ISL	13.19	13.19	33.407	25.122	283.7	0.057	5.84	98.0	5.3	0.62	4.2	0.10	0.78	0.24	20	
21	13.19	13.19	33.407 D	25.122	283.7	0.059	5.84	98.0	5.3	0.62	4.2	0.10	0.78	0.23	21	218
30 ISL	13.19	13.19	33.410	25.125	283.7	0.085	5.85	98.1	5.2	0.61	4.2	0.10	0.82	0.23	30	
31	13.19	13.19	33.410	25.125	283.7	0.088	5.85	98.1	5.2	0.61	4.2	0.10	0.82	0.23	31	217
41	12.96	12.95	33.397	25.161	280.6	0.116	5.64	94.1	5.8	0.68	5.1	0.12	0.60	0.26	41	216
50 ISL	12.57	12.56	33.391	25.233	274.0	0.141	5.27	87.2	7.2	0.81	7.3	0.15	0.45	0.21	50	
51	12.51	12.50	33.391	25.244	272.9	0.144	5.22	86.3	7.4	0.83	7.6	0.15	0.43	0.21	51	215
60	11.75	11.74	33.406	25.400	258.2	0.168	4.53	73.7	10.6	1.11	12.2	0.09	0.23	0.27	60	214
70	10.93	10.92	33.447	25.581	241.2	0.193	4.09	65.4	13.7	1.33	15.8	0.03	0.13	0.14	70	213
75 ISL	10.60	10.59	33.464	25.652	234.5	0.205	3.99	63.4	14.8	1.40	17.0	0.03	0.10	0.11	75	
84	10.13	10.12	33.504	25.764	223.9	0.225	3.88	61.0	16.5	1.49	18.6	0.02	0.06	0.09	84	212
100	9.69	9.68	33.640	25.944	207.1	0.260	3.56	55.5	20.4	1.64	21.1	0.01	0.03	0.06	100	211
120	9.31	9.30	33.778	26.114	191.3	0.299	3.20	49.5	24.5	1.81	23.7	0.01	0.01	0.05	121	210
125 ISL	9.22	9.21	33.824	26.165	186.6	0.309	3.05	47.1	25.9	1.86	24.5	0.01	0.01	0.05	126	
139	9.01	9.00	33.941	26.290	174.9	0.334	2.66	40.9	29.5	2.00	26.5	0.01	0.01	0.05	140	209
150 ISL	8.94	8.92	33.976	26.329	171.5	0.353	2.56	39.3	30.7	2.03	27.0	0.01	0.01	0.05	151	
170	8.84	8.82	34.003	26.366	168.3	0.387	2.45	37.5	32.3	2.07	27.5	0.01	0.00	0.04	171	208
199	8.50	8.48	34.087	26.485	157.5	0.435	1.98	30.1	37.6	2.26	30.0	0.00	0.00	0.03	200	207
200 ISL	8.50	8.48	34.093	26.490	157.1	0.436	1.95	29.7	37.8	2.27	30.1	0.00			201	
229	8.53	8.51	34.234	26.596	147.6	0.480	1.22	18.6	43.9	2.53	31.4	0.00			230	206
250 ISL	8.36	8.33	34.252	26.636	144.1	0.511	1.11	16.8	46.2	2.61	32.2	0.01			251	
268	8.15	8.12	34.243	26.661	141.9	0.537	1.02	15.4	47.7	2.64	32.8	0.01			270	205
300 ISL	7.81	7.78	34.249	26.717	137.1	0.581	0.87	13.0	51.7	2.72	34.0	0.00			302	
318	7.61	7.58	34.252	26.748	134.3	0.606	0.79	11.8	54.2	2.77	34.6	0.00			320	204
378	7.00	6.96	34.264	26.844	125.7	0.684	0.59	8.7	62.2	2.92	36.7	0.00			380	203
400 ISL	6.82	6.78	34.270	26.874	123.2	0.711	0.53	7.8	65.2	2.97	37.3	0.00			403	
437	6.56	6.52	34.280	26.917	119.4	0.756	0.44	6.4	69.9	3.03	38.2	0.00			440	202
500 ISL	6.26	6.22	34.302	26.974	114.6	0.830	0.35	5.1	75.6	3.09	39.2	0.00			503	
516	6.19	6.14	34.308	26.988	113.5	0.848	0.33	4.8	77.0	3.11	39.5	0.00			520	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 0.8 N	119 13.8 W	05/02/06	1214 UTC	1587 m	150 06 kn			1011.5 mb	15.2 C	14.2 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.56	14.56	33.313	24.767	317.0	0.000	5.84	100.7	2.5	0.35	0.4	0.02	0.43	0.11	0	
2	14.56	14.56	33.313	24.767	317.0	0.006	5.84	100.7	2.5	0.35	0.4	0.02	0.43	0.11	2	220
10	14.51	14.51	33.311	24.776	316.4	0.032	5.84	100.6	2.6	0.36	0.5	0.02	0.45	0.14	10	219
20 ISL	14.34	14.34	33.308	24.810	313.4	0.063	5.85	100.4	2.8	0.39	1.0	0.04	0.50	0.14	20	
21	14.32	14.32	33.308	24.814	313.1	0.066	5.85	100.4	2.8	0.39	1.0	0.04	0.50	0.14	21	218
30 ISL	14.26	14.26	33.307	24.826	312.2	0.094	5.81	99.6	2.9	0.41	1.2	0.04	0.50	0.17	30	
31	14.25	14.25	33.307	24.828	312.0	0.098	5.81	99.6	2.9	0.41	1.2	0.04	0.50	0.17	31	217
41	14.17	14.16	33.308	24.846	310.6	0.129	5.80	99.2	3.1	0.41	1.3	0.05	0.54	0.19	41	216
50 ISL	13.71	13.70	33.300	24.935	302.3	0.156	5.48	92.9	4.2	0.56	3.5	0.08	0.36	0.16	50	
51	13.65	13.64	33.299	24.947	301.3	0.159	5.44	92.1	4.4	0.58	3.8	0.08	0.34	0.16	51	215
60	13.09	13.08	33.301	25.061	290.6	0.186	5.22	87.3	5.7	0.72	5.9	0.08	0.28	0.16	60	214
70	11.66	11.65	33.311	25.343	263.9	0.214	4.59	74.5	9.1	1.07	11.5	0.02	0.16	0.15	70	213
75 ISL	11.25	11.24	33.368	25.462	252.6	0.227	4.23	68.1	11.5	1.24	14.1	0.01	0.12	0.13	75	
85	10.73	10.72	33.492	25.651	234.8	0.251	3.66	58.3	16.0	1.50	18.2	0.00	0.06	0.09	85	212
100	10.20	10.19	33.560	25.796	221.3	0.285	3.61	56.8	18.1	1.59	19.5	0.00	0.04	0.06	100	211
119	9.27	9.26	33.711	26.068	195.6	0.325	3.90	60.2	21.1	1.57	20.7	0.01	0.01	0.03	120	210
125 ISL	9.15	9.14	33.774	26.137	189.2	0.336	3.70	57.0	23.1	1.65	21.8	0.01	0.01	0.03	126	
139	9.03	9.02	33.912	26.264	177.4	0.362	3.10	47.7	27.8	1.86	24.6	0.01	0.01	0.03	140	209
150 ISL	9.02	9.00	33.977	26.317	172.6	0.381	2.83	43.5	29.9	1.95	25.8	0.01	0.01	0.03	151	
170	9.00	8.98	34.044	26.373	167.7	0.415	2.42	37.2	32.6	2.08	27.1	0.00	0.01	0.04	171	208
199	9.09	9.07	34.175	26.462	160.0	0.463	1.69	26.1	36.8	2.31	28.9	0.00	0.00	0.04	200	207
200 ISL	9.08	9.06	34.177	26.465	159.7	0.464	1.68	25.9	36.9	2.31	29.0	0.00			201	
229	8.75	8.73	34.197	26.533	153.7	0.510	1.49	22.8	40.7	2.42	30.3	0.00			230	206
250 ISL	8.45	8.42	34.200	26.582	149.3	0.542	1.37	20.8	43.7	2.48	31.3	0.00			251	
271	8.13	8.10	34.198	26.629	145.0	0.572	1.28	19.3	46.7	2.54	32.2	0.00			273	205
300 ISL	7.73	7.70	34.189	26.681	140.4	0.614	1.22	18.2	50.4	2.60	33.3	0.00			302	
318	7.51	7.48	34.185	26.710	137.8	0.639	1.18	17.6	52.6	2.63	34.0	0.00			320	204
381	7.01	6.97	34.216	26.805	129.5	0.723	0.83	12.2	60.3	2.82	36.1	0.00			383	203
400 ISL	6.90	6.86	34.235	26.835	126.8	0.747	0.71	10.4	62.8	2.88	36.6	0.00			403	
443	6.67	6.63	34.277	26.900	121.2	0.801	0.48	7.0	68.5	2.99	37.7	0.00			446	202
500 ISL	6.29	6.24	34.303	26.971	115.0	0.868	0.34	4.9	75.6	3.08	39.0	0.00			503	
510	6.22	6.17	34.308	26.984	113.8	0.880	0.32	4.6	76.9	3.10	39.2	0.00			513	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 49.6 N	119 34.3 W	05/02/06	1732 UTC	1885 m	310 08 kn	290 06 12	1	1013.5 mb	15.5 C	14.3 C	21m	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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.67	14.67	33.304	24.736	319.9	0.000	5.88	101.6	2.3	0.34	0.2	0.03	0.53	0.16	0	
2 A	14.67	14.67	33.304	24.736	319.9	0.006	5.88	101.6	2.3	0.34	0.2	0.03	0.53	0.16	2	223
10 ISL	14.65	14.65	33.300	24.738	320.0	0.032	5.87	101.4	2.3	0.34	0.2	0.03	0.54	0.15	10	
15 A	14.64	14.64	33.297	24.738	320.2	0.048	5.86	101.2	2.3	0.34	0.2	0.03	0.54	0.15	15	222
20 ISL	14.64	14.64	33.298	24.739	320.2	0.064	5.85	101.0	2.3	0.34	0.2	0.03	0.53	0.16	20	
26	14.62	14.62	33.296	24.742	320.1	0.083	5.85	101.0	2.3	0.34	0.2	0.03	0.52	0.16	26	221
30 ISL	14.59	14.59	33.295	24.747	319.7	0.096	5.85	100.9	2.3	0.35	0.3	0.03	0.48	0.15	30	
36 A	14.54	14.53	33.294	24.757	318.9	0.115	5.86	101.0	2.4	0.36	0.4	0.04	0.43	0.14	36	220
42	14.54	14.53	33.294	24.758	319.1	0.134	5.83	100.5	2.5	0.36	0.4	0.04	0.41	0.13	42	219
48 A	14.54	14.53	33.294	24.758	319.2	0.153	5.85	100.8	2.4	0.36	0.4	0.04	0.41	0.13	48	218
50 ISL	14.53	14.52	33.293	24.759	319.2	0.160	5.84	100.6	2.4	0.36	0.4	0.04	0.41	0.14	50	
58	14.48	14.47	33.291	24.769	318.5	0.185	5.81	100.0	2.5	0.37	0.6	0.05	0.39	0.15	58	217
67 A	14.43	14.42	33.288	24.777	317.9	0.214	5.79	99.6	2.6	0.39	0.8	0.05	0.36	0.12	67	216
75	14.34	14.33	33.284	24.793	316.6	0.239	5.74	98.5	2.8	0.40	1.0	0.07	0.34	0.12	75	215
83	13.53	13.52	33.266	24.947	302.1	0.264	5.49	92.6	3.8	0.54	3.1	0.11	0.20	0.11	83	214
92 A	11.48	11.47	33.323	25.386	260.3	0.289	4.59	74.2	9.6	1.08	11.9	0.03	0.13	0.12	92	213
100 ISL	11.05	11.04	33.370	25.500	249.5	0.310	4.29	68.7	11.6	1.24	14.4	0.02	0.08	0.10	100	
101	11.03	11.02	33.374	25.507	248.9	0.312	4.27	68.4	11.8	1.25	14.5	0.02	0.08	0.10	101	212
110	10.31	10.30	33.422	25.670	233.5	0.334	4.14	65.3	14.6	1.38	16.9	0.02	0.06	0.07	110	211
125	9.88	9.87	33.667	25.934	208.6	0.367	3.20	50.1	21.4	1.76	22.3	0.01	0.02	0.05	126	210
144	9.56	9.54	33.834	26.118	191.5	0.405	2.80	43.5	25.9	1.92	24.5	0.01	0.00	0.04	145	209
150 ISL	9.46	9.44	33.869	26.162	187.5	0.417	2.75	42.7	26.8	1.94	24.9	0.01	0.00	0.04	151	
170	9.15	9.13	33.960	26.283	176.3	0.453	2.63	40.6	29.4	1.99	26.1	0.01	0.00	0.03	171	208
199	8.81	8.79	34.076	26.428	163.0	0.502	2.18	33.4	34.8	2.16	28.4	0.01	0.01	0.03	200	207
200 ISL	8.80	8.78	34.079	26.432	162.6	0.504	2.17	33.2	35.0	2.17	28.5	0.01			201	
229	8.43	8.41	34.128	26.528	153.9	0.550	1.85	28.1	40.0	2.31	30.3	0.01			230	206
250 ISL	8.16	8.13	34.124	26.566	150.6	0.582	1.80	27.2	42.4	2.36	31.1	0.01			251	
268	7.96	7.93	34.117	26.590	148.5	0.609	1.78	26.7	44.2	2.39	31.7	0.01			270	205
300 ISL	7.79	7.76	34.155	26.646	143.8	0.655	1.46	21.9	47.6	2.52	32.8	0.01			302	
318	7.67	7.64	34.175	26.679	140.8	0.681	1.27	19.0	49.9	2.59	33.5	0.01			320	204
378	6.57	6.54	34.128	26.795	130.0	0.762	1.12	16.3	61.3	2.75	36.8	0.01			380	203
400 ISL	6.37	6.33	34.140	26.831	126.8	0.790	1.00	14.5	64.7	2.81	37.6	0.01			403	
437	6.15	6.11	34.172	26.884	122.0	0.836	0.78	11.2	70.0	2.92	38.6	0.01			440	202
500 ISL	5.78	5.74	34.219	26.969	114.5	0.911	0.52	7.4	78.1	3.06	40.2	0.00			503	
511	5.72	5.68	34.227	26.982	113.3	0.924	0.47	6.7	79.5	3.08	40.5	0.00			514	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 31.1 N	120 14.2 W	05/02/06	2311	UTC	3896 m	340	12 kn	310 05 08	1	1012.9 mb	16.7 C	14.5 C	30m	6/8	CI

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.48	16.48	33.467	24.460	346.2	0.000	5.65	101.3	0.7	0.27	0.0	0.00	0.16	0.04	0	
2	16.48	16.48	33.467	24.460	346.3	0.007	5.65	101.3	0.7	0.27	0.0	0.00	0.16	0.04	2	220
10 ISL	16.49	16.49	33.470	24.460	346.5	0.035	5.64	101.2	0.8	0.27	0.0	0.00	0.15	0.04	10	
15	16.49	16.49	33.472	24.462	346.5	0.052	5.64	101.2	0.9	0.27	0.0	0.00	0.15	0.04	15	219
20 ISL	16.49	16.49	33.470	24.461	346.8	0.069	5.64	101.2	0.9	0.27	0.0	0.00	0.15	0.04	20	
30	16.47	16.47	33.464	24.461	347.1	0.104	5.64	101.1	0.8	0.27	0.0	0.00	0.16	0.04	30	218
45	16.44	16.43	33.465	24.469	346.8	0.156	5.65	101.2	0.8	0.27	0.0	0.00	0.17	0.04	45	217
50 ISL	16.44	16.43	33.463	24.468	347.1	0.173	5.65	101.2	0.8	0.27	0.0	0.00	0.18	0.04	50	
61	16.44	16.43	33.461	24.467	347.5	0.212	5.64	101.1	0.9	0.27	0.0	0.00	0.19	0.05	61	216
75 ISL	16.34	16.33	33.447	24.479	346.8	0.260	5.64	100.9	1.0	0.27	0.0	0.00	0.22	0.06	75	
76	16.33	16.32	33.446	24.481	346.7	0.264	5.64	100.8	1.0	0.27	0.0	0.00	0.22	0.06	76	215
85	15.24	15.23	33.384	24.678	328.1	0.294	5.66	99.0	1.5	0.33	0.2	0.07	0.23	0.12	85	214
96	13.85	13.84	33.342	24.941	303.2	0.329	5.44	92.5	2.9	0.50	2.5	0.10	0.18	0.12	96	213
100 ISL	13.31	13.30	33.273	24.997	297.8	0.341	5.40	90.7	3.4	0.57	3.5	0.07	0.16	0.12	100	
105	12.74	12.73	33.207	25.058	292.0	0.355	5.35	88.8	4.0	0.65	4.8	0.03	0.14	0.11	105	212
114	12.30	12.29	33.290	25.208	277.9	0.381	5.10	83.9	5.5	0.78	7.1	0.02	0.11	0.10	114	211
125	11.63	11.61	33.328	25.363	263.3	0.411	4.90	79.5	7.3	0.91	9.3	0.02	0.09	0.09	126	210
140	10.92	10.90	33.389	25.539	246.8	0.449	4.17	66.6	12.3	1.29	15.3	0.01	0.06	0.08	141	209
150 ISL	10.33	10.31	33.455	25.693	232.2	0.473	3.94	62.2	15.4	1.45	18.0	0.00	0.04	0.06	151	
164	9.57	9.55	33.571	25.911	211.6	0.504	3.80	59.0	19.3	1.59	20.5	0.00	0.01	0.03	165	208
195	8.93	8.91	33.866	26.245	180.3	0.565	3.66	56.1	25.1	1.67	22.8	0.00	0.00	0.01	196	207
200 ISL	8.87	8.85	33.891	26.274	177.6	0.574	3.62	55.5	25.8	1.69	23.1	0.00			201	
230	8.57	8.55	33.980	26.391	167.0	0.626	3.24	49.3	30.7	1.83	25.2	0.00			231	206
250 ISL	8.28	8.25	34.023	26.469	159.8	0.658	2.79	42.2	35.4	2.01	27.6	0.00			251	
268	7.99	7.96	34.052	26.535	153.8	0.686	2.37	35.6	40.0	2.18	29.9	0.00			269	205
300 ISL	7.50	7.47	34.081	26.629	145.1	0.734	1.86	27.6	47.3	2.41	32.7	0.00			302	
320	7.22	7.19	34.090	26.676	140.8	0.763	1.63	24.1	51.4	2.52	34.0	0.00			322	204
378	6.58	6.55	34.109	26.778	131.6	0.842	1.25	18.2	60.3	2.71	36.5	0.00			380	203
400 ISL	6.40	6.36	34.128	26.817	128.1	0.870	1.07	15.5	64.0	2.79	37.4	0.00			402	
437	6.18	6.14	34.167	26.877	122.8	0.917	0.78	11.2	69.9	2.92	38.7	0.00			440	202
500 ISL	5.99	5.95	34.242	26.961	115.5	0.992	0.46	6.6	76.9	3.05	39.8	0.00			503	
512	5.95	5.91	34.256	26.977	114.2	1.006	0.40	5.7	78.2	3.08	40.0	0.00			515	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 10.8 N	120 55.0 W	06/02/06	0544	UTC	3878 m	200	03 kn			1015.5 mb	15.5 C	14.0 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.80	16.80	33.521	24.427	349.3	0.000	5.59	100.9	1.6	0.26	0.0	0.00	0.14	0.04	0	
2	16.80	16.80	33.521	24.427	349.4	0.007	5.59	100.9	1.6	0.26	0.0	0.00	0.14	0.04	2	221
10 ISL	16.81	16.81	33.521	24.425	349.8	0.035	5.58	100.8	1.5	0.26	0.0	0.00	0.14	0.06	10	
16	16.82	16.82	33.522	24.424	350.2	0.056	5.58	100.8	1.5	0.26	0.0	0.00	0.14	0.08	16	220
20 ISL	16.82	16.82	33.522	24.424	350.3	0.070	5.58	100.8	1.5	0.26	0.0	0.00	0.14	0.07	20	
30	16.82	16.82	33.524	24.426	350.4	0.105	5.59	101.0	1.5	0.26	0.0	0.00	0.14	0.04	30	219
45	16.84	16.83	33.530	24.426	350.9	0.158	5.58	100.8	1.5	0.26	0.0	0.00	0.15	0.04	45	218
50 ISL	16.86	16.85	33.538	24.428	350.9	0.175	5.58	100.9	1.5	0.26	0.0	0.00	0.15	0.04	50	
60	16.89	16.88	33.556	24.435	350.5	0.210	5.59	101.1	1.5	0.25	0.0	0.00	0.15	0.04	60	217
75 ISL	16.93	16.92	33.572	24.439	350.7	0.263	5.57	100.8	1.5	0.25	0.0	0.00	0.16	0.04	75	
76	16.93	16.92	33.573	24.440	350.7	0.266	5.57	100.8	1.5	0.25	0.0	0.00	0.16	0.04	76	216
85	16.86	16.85	33.561	24.447	350.3	0.298	5.57	100.7	1.5	0.25	0.0	0.00	0.17	0.05	85	215
95	16.03	16.02	33.556	24.635	332.6	0.332	5.61	99.8	1.8	0.28	0.1	0.04	0.25	0.15	95	214
100	15.73	15.71	33.615	24.748	322.0	0.348	5.59	98.8	1.9	0.29	0.1	0.07	0.26	0.17	100	213
106	15.35	15.33	33.592	24.814	315.7	0.368	5.55	97.4	2.3	0.33	0.5	0.12	0.22	0.16	106	212
115	14.21	14.19	33.437	24.940	303.8	0.395	5.53	94.7	2.6	0.39	1.1	0.12	0.16	0.24	115	211
125	13.15	13.13	33.439	25.158	283.1	0.425	5.12	85.8	4.8	0.64	4.9	0.05	0.14	0.15	126	210
140	11.57	11.55	33.427	25.451	255.3	0.465	4.88	79.1	7.7	0.88	9.3	0.02	0.09	0.09	141	209
150 ISL	10.82	10.80	33.452	25.606	240.6	0.490	4.77	76.1	9.9	1.02	11.8	0.01	0.06	0.06	151	
165	10.00	9.98	33.527	25.805	221.7	0.525	4.60	72.1	13.6	1.21	15.1	0.00	0.03	0.04	166	208
195	9.14	9.12	33.784	26.147	189.6	0.586	4.02	61.9	21.7	1.54	20.7	0.00	0.00	0.01	196	207
200 ISL	9.03	9.01	33.820	26.193	185.3	0.596	3.91	60.1	23.1	1.59	21.5	0.00			201	
229	8.51	8.49	33.978	26.398	166.3	0.647	3.28	49.9	30.7	1.84	25.3	0.00			230	206
250 ISL	8.25	8.22	34.022	26.473	159.5	0.681	2.88	43.5	35.0	1.99	27.5	0.00			251	
269	8.03	8.00	34.035	26.516	155.6	0.711	2.56	38.5	38.5	2.12	29.2	0.00			270	205
300 ISL	7.58	7.55	34.056	26.598	148.1	0.758	2.13	31.7	44.9	2.31	31.7	0.00			302	
318	7.31	7.28	34.063	26.642	144.1	0.784	1.92	28.4	48.5	2.41	32.9	0.00			320	204
378	6.55	6.52	34.085	26.763	132.9	0.867	1.41	20.5	59.3	2.67	36.2	0.00			380	203
400 ISL	6.35	6.31	34.101	26.802	129.4	0.896	1.23	17.8	62.9	2.76	37.1	0.00			402	
438	6.09	6.05	34.134	26.862	124.1	0.944	0.94	13.5	68.7	2.89	38.5	0.00			441	202
500 ISL	5.80	5.76	34.198	26.949	116.4	1.019	0.59	8.4	76.7	3.03	40.0	0.00			503	
515	5.73	5.69	34.214	26.971	114.5	1.036	0.51	7.3	78.6	3.07	40.4	0.00			518	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 51.1 N	121 35.1 W	06/02/06	1202	UTC	4089 m	100 04 kn			1015.4 mb	16.1 C	14.4 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.88	16.88	33.557	24.436	348.5	0.000	5.59	101.1	1.7	0.26	0.0	0.00	0.15	0.04	0	
2	16.88	16.88	33.557	24.436	348.5	0.007	5.59	101.1	1.7	0.26	0.0	0.00	0.15	0.04	2	220
10 ISL	16.87	16.87	33.555	24.437	348.7	0.035	5.59	101.1	1.7	0.26	0.0	0.00	0.14	0.04	10	
15	16.86	16.86	33.553	24.438	348.8	0.052	5.59	101.1	1.7	0.26	0.0	0.00	0.14	0.04	15	219
20 ISL	16.87	16.87	33.554	24.437	349.1	0.070	5.59	101.1	1.7	0.26	0.0	0.00	0.14	0.04	20	
30 ISL	16.89	16.89	33.557	24.435	349.6	0.105	5.58	100.9	1.6	0.26	0.0	0.00	0.14	0.03	30	
31	16.89	16.88	33.557	24.435	349.6	0.108	5.58	100.9	1.6	0.26	0.0	0.00	0.14	0.03	31	218
46	16.88	16.87	33.551	24.433	350.3	0.161	5.57	100.7	1.7	0.26	0.0	0.00	0.14	0.03	46	217
50 ISL	16.82	16.81	33.535	24.435	350.2	0.175	5.58	100.8	1.7	0.26	0.0	0.00	0.15	0.04	50	
60	16.67	16.66	33.495	24.440	350.1	0.210	5.61	101.0	1.7	0.26	0.0	0.00	0.16	0.05	60	216
75	14.49	14.48	33.164	24.669	328.5	0.261	5.85	100.6	2.3	0.36	0.2	0.06	0.34	0.14	75	215
85	14.30	14.29	33.167	24.712	324.7	0.293	5.78	99.0	2.5	0.41	0.8	0.15	0.35	0.17	85	214
95	13.85	13.84	33.215	24.842	312.4	0.325	5.73	97.3	3.1	0.47	1.8	0.12	0.25	0.12	95	213
100 ISL	13.35	13.34	33.211	24.941	303.1	0.340	5.54	93.1	3.6	0.56	3.1	0.07	0.21	0.12	100	
105	12.82	12.81	33.207	25.043	293.5	0.355	5.34	88.8	4.2	0.65	4.5	0.02	0.17	0.12	105	212
115	12.15	12.14	33.243	25.200	278.7	0.384	5.20	85.2	5.4	0.75	6.4	0.02	0.13	0.11	115	211
125	11.45	11.43	33.279	25.358	263.7	0.411	4.95	79.9	7.2	0.90	8.9	0.01	0.09	0.08	126	210
139	10.55	10.53	33.334	25.561	244.6	0.447	4.62	73.2	11.1	1.18	13.6	0.00	0.04	0.06	140	209
150 ISL	10.02	10.00	33.470	25.757	226.0	0.473	4.54	71.2	13.6	1.27	15.6	0.00	0.02	0.04	151	
165	9.50	9.48	33.678	26.006	202.5	0.505	4.48	69.5	16.7	1.33	17.3	0.00	0.01	0.02	166	208
196	9.02	9.00	33.879	26.241	180.7	0.564	4.00	61.5	23.0	1.55	21.0	0.00	0.00	0.02	197	207
200 ISL	8.96	8.94	33.896	26.264	178.6	0.571	3.91	60.0	23.9	1.58	21.5	0.00			201	
229	8.51	8.49	33.983	26.402	165.9	0.621	3.27	49.7	30.6	1.83	25.2	0.00			230	206
250 ISL	8.25	8.22	34.013	26.465	160.2	0.656	2.94	44.4	34.5	1.97	27.2	0.00			251	
269	8.02	7.99	34.027	26.511	156.1	0.686	2.67	40.1	38.0	2.09	28.8	0.00			270	205
300 ISL	7.54	7.51	34.048	26.598	148.1	0.733	2.17	32.3	44.6	2.31	31.5	0.00			302	
317	7.27	7.24	34.057	26.643	143.9	0.758	1.91	28.2	48.3	2.42	32.9	0.00			319	204
377	6.45	6.42	34.088	26.779	131.4	0.840	1.33	19.3	60.5	2.72	36.5	0.00			379	203
400 ISL	6.21	6.17	34.104	26.823	127.4	0.870	1.15	16.6	64.8	2.81	37.5	0.00			402	
438	5.89	5.85	34.132	26.885	121.6	0.917	0.91	13.0	71.3	2.92	38.9	0.00			441	202
500 ISL	5.48	5.44	34.172	26.968	114.3	0.990	0.64	9.1	79.7	3.05	40.6	0.00			503	
513	5.40	5.36	34.181	26.984	112.7	1.005	0.58	8.2	81.5	3.08	40.9	0.00			516	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 31.2 N	122 15.3 W	06/02/06	1827	UTC	3587 m	150 06 kn	310 05 08	1	1019.6 mb	15.7 C	13.9 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.99	14.99	33.150	24.549	337.7	0.000	5.86	101.8	2.2	0.32	0.0	0.00	0.37	0.04	0	
3 A	14.99	14.99	33.150	24.549	337.8	0.010	5.86	101.8	2.2	0.32	0.0	0.00	0.37	0.04	3	222
10	14.86	14.86	33.146	24.574	335.6	0.034	5.91	102.4	2.1	0.33	0.0	0.00	0.46	0.12	10	221
18 A	14.69	14.69	33.149	24.613	332.1	0.060	5.93	102.4	2.5	0.33	0.0	0.01	0.54	0.06	18	220
20 ISL	14.60	14.60	33.148	24.632	330.4	0.067	5.92	102.1	2.5	0.34	0.1	0.03	0.58	0.06	20	
23	14.51	14.51	33.161	24.661	327.7	0.077									23	219
29	14.23	14.23	33.160	24.719	322.4	0.096	5.86	100.3	2.5	0.39	0.6	0.09	0.72	0.05	29	218
30 ISL	14.23	14.23	33.169	24.726	321.7	0.100	5.86	100.3	2.5	0.39	0.6	0.09	0.71	0.05	30	
42 A	14.27	14.26	33.257	24.786	316.4	0.138	5.89	100.9	2.5	0.37	0.5	0.06	0.56	0.11	42	217
49	14.14	14.13	33.262	24.817	313.6	0.160	5.91	101.0	2.7	0.38	0.7	0.06	0.53	0.13	49	216
50 ISL	14.10	14.09	33.259	24.823	313.0	0.163	5.89	100.6	2.7	0.39	0.8	0.06	0.51	0.13	50	
55 A	13.85	13.84	33.242	24.862	309.5	0.179	5.78	98.2	2.9	0.44	1.5	0.08	0.39	0.11	55	215
66	13.34	13.33	33.204	24.937	302.6	0.212	5.44	91.4	3.5	0.57	3.5	0.04	0.24	0.10	66	214
75 ISL	12.71	12.70	33.192	25.052	291.8	0.239	5.36	88.9	4.1	0.65	4.6	0.03	0.19	0.10	75	
77 A	12.56	12.55	33.193	25.082	289.0	0.245	5.34	88.3	4.3	0.67	5.0	0.03	0.18	0.10	77	213
91	11.61	11.60	33.246	25.302	268.2	0.284	4.79	77.6	8.5	1.03	11.0	0.02	0.07	0.10	91	212
100 ISL	11.10	11.09	33.349	25.475	251.9	0.307	4.32	69.3	11.6	1.25	14.5	0.01	0.06	0.08	100	
106 A	10.80	10.79	33.421	25.584	241.6	0.322	4.04	64.4	13.5	1.37	16.4	0.01	0.05	0.07	106	211
120	10.21	10.20	33.510	25.756	225.5	0.355	3.78	59.5	16.5	1.52	18.8	0.01	0.04	0.05	121	210
125 ISL	10.08	10.07	33.560	25.817	219.8	0.366	3.60	56.5	18.0	1.60	19.9	0.01	0.03	0.05	126	
139	9.82	9.80	33.703	25.972	205.3	0.396	3.09	48.3	22.1	1.80	22.8	0.00	0.02	0.04	140	209
150 ISL	9.58	9.56	33.776	26.069	196.3	0.418	2.92	45.4	24.3	1.88	24.1	0.00	0.01	0.04	151	
169	9.21	9.19	33.869	26.202	183.9	0.454	2.78	42.9	27.3	1.95	25.5	0.00	0.01	0.04	170	208
200	8.79	8.77	33.989	26.363	169.2	0.509	2.51	38.4	31.8	2.06	27.4	0.00	0.00	0.04	201	207
239	8.18	8.16	34.024	26.484	158.1	0.572	2.60	39.2	37.2	2.09	28.6	0.00			240	206
250 ISL	8.02	7.99	34.039	26.520	154.9	0.590	2.41	36.2	39.4	2.17	29.6	0.00			251	
269	7.77	7.74	34.066	26.578	149.6	0.619	2.03	30.4	43.3	2.32	31.5	0.00			270	205
300 ISL	7.44	7.41	34.093	26.647	143.4	0.664	1.64	24.3	48.4	2.49	33.4	0.00			302	
318	7.26	7.23	34.103	26.681	140.4	0.690	1.48	21.9	51.1	2.56	34.2	0.00			320	204
377	6.62	6.59	34.127	26.787	130.7	0.770	1.11	16.2	60.5	2.76	36.8	0.00			379	203
400 ISL	6.44	6.40	34.141	26.822	127.6	0.799	0.98	14.2	63.8	2.83	37.5	0.00			402	
440	6.15	6.11	34.166	26.880	122.5	0.849	0.78	11.2	69.6	2.93	38.6	0.00			443	202
500 ISL	5.65	5.61	34.197	26.967	114.5	0.920	0.54	7.7	79.3	3.05	40.4	0.00			503	
513	5.54	5.50	34.204	26.986	112.8	0.935	0.49	7.0	81.4	3.08	40.8	0.00			516	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 10.8 N	122 55.3 W	07/02/06	0150 UTC	2985 m	210 02 kn	340 04 11	1	1018.0 mb	15.4 C	13.2 C		6/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.99	15.99	33.269	24.420	350.1	0.000	5.72	101.5	1.6	0.29	0.0	0.00	0.13	0.04	0	
2	15.99	15.99	33.269	24.420	350.1	0.007	5.72	101.5	1.6	0.29	0.0	0.00	0.13	0.04	2	220
10 ISL	15.91	15.91	33.260	24.431	349.3	0.035	5.74	101.7	1.5	0.30	0.0	0.00	0.14	0.04	10	
15	15.82	15.82	33.249	24.443	348.3	0.052	5.76	101.8	1.5	0.30	0.0	0.00	0.15	0.05	15	219
20 ISL	15.73	15.73	33.227	24.446	348.1	0.070	5.77	101.8	1.5	0.30	0.0	0.00	0.17	0.06	20	
30	15.55	15.55	33.190	24.458	347.3	0.105	5.79	101.8	1.6	0.31	0.0	0.00	0.23	0.08	30	218
45	15.40	15.39	33.205	24.503	343.5	0.156	5.78	101.3	1.7	0.31	0.0	0.02	0.34	0.14	45	217
50 ISL	15.24	15.23	33.202	24.536	340.4	0.174	5.76	100.6	1.9	0.33	0.1	0.08	0.35	0.15	50	
56	15.00	14.99	33.199	24.586	335.8	0.194	5.74	99.8	2.2	0.36	0.2	0.15	0.36	0.16	56	216
65	14.57	14.56	33.201	24.680	327.1	0.224	5.71	98.4	2.3	0.41	0.7	0.20	0.31	0.14	65	215
75	14.21	14.20	33.167	24.730	322.6	0.256	5.68	97.1	2.5	0.44	1.3	0.18	0.24	0.13	75	214
85	13.85	13.84	33.234	24.857	310.8	0.288	5.53	93.9	3.2	0.53	2.4	0.05	0.23	0.14	85	213
95	13.33	13.32	33.345	25.048	292.8	0.318	5.33	89.6	3.8	0.57	3.6	0.04	0.17	0.15	95	212
100 ISL	13.03	13.02	33.396	25.148	283.4	0.332	5.20	86.9	4.5	0.63	4.7	0.04	0.15	0.14	100	
109	12.45	12.44	33.459	25.310	268.1	0.357	4.98	82.3	6.0	0.76	7.0	0.03	0.12	0.13	109	211
125	11.39	11.37	33.424	25.481	252.0	0.399	4.78	77.2	8.7	0.96	10.4	0.02	0.08	0.11	126	210
145	10.28	10.26	33.403	25.661	235.1	0.448	4.41	69.5	13.2	1.27	15.3	0.00	0.04	0.06	146	209
150 ISL	10.08	10.06	33.454	25.735	228.1	0.459	4.19	65.8	15.1	1.37	16.9	0.00	0.03	0.05	151	
170	9.49	9.47	33.716	26.037	199.7	0.502	3.27	50.7	22.8	1.76	22.9	0.00	0.01	0.03	171	208
200	9.16	9.14	33.986	26.302	175.1	0.558	2.50	38.6	29.9	2.03	26.4	0.00	0.00	0.04	201	207
228	8.79	8.77	34.058	26.418	164.5	0.606	2.29	35.0	34.0	2.13	28.0	0.00			229	206
250 ISL	8.47	8.44	34.093	26.495	157.5	0.641	2.08	31.6	37.9	2.23	29.4	0.00			251	
268	8.23	8.20	34.113	26.547	152.8	0.669	1.90	28.7	41.1	2.32	30.6	0.00			269	205
300 ISL	7.93	7.90	34.145	26.617	146.5	0.717	1.58	23.7	45.3	2.46	32.1	0.00			302	
318	7.76	7.73	34.160	26.654	143.2	0.743	1.41	21.1	47.8	2.54	32.9	0.00			320	204
377	6.95	6.91	34.197	26.798	130.0	0.824	0.88	12.9	59.8	2.82	36.2	0.00			379	203
400 ISL	6.73	6.69	34.215	26.842	126.0	0.853	0.73	10.7	63.8	2.90	37.1	0.00			402	
438	6.44	6.40	34.242	26.902	120.6	0.900	0.54	7.8	69.3	2.99	38.3	0.00			441	202
500 ISL	6.14	6.10	34.263	26.958	116.0	0.973	0.43	6.2	74.6	3.06	39.4	0.00			503	
514	6.07	6.02	34.268	26.971	114.8	0.989	0.40	5.8	75.8	3.08	39.6	0.00			517	201

RV DAVID STARR JORDAN CALCOFI CRUISE 0602 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 51.0 N	123 35.2 W	07/02/06	0735 UTC	4104 m	300 03 kn			1018.9 mb	16.5 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.38	17.38	33.661	24.398	352.1	0.000	5.53	101.1	1.3	0.24	0.0	0.00	0.12	0.02	0	
3	17.38	17.38	33.661	24.398	352.2	0.011	5.53	101.1	1.3	0.24	0.0	0.00	0.12	0.02	3	220
10 ISL	17.38	17.38	33.660	24.397	352.5	0.035	5.53	101.1	1.3	0.24	0.0	0.00	0.12	0.03	10	
15	17.38	17.38	33.660	24.397	352.7	0.053	5.53	101.1	1.3	0.24	0.0	0.00	0.12	0.03	15	219
20 ISL	17.38	17.38	33.660	24.398	352.8	0.070	5.53	101.1	1.3	0.24	0.0	0.00	0.12	0.03	20	
30	17.39	17.39	33.660	24.396	353.4	0.106	5.52	100.9	1.4	0.24	0.0	0.00	0.12	0.03	30	218
44	17.34	17.33	33.652	24.402	353.2	0.155	5.54	101.2	1.3	0.23	0.0	0.00	0.17	0.05	44	217
50 ISL	17.35	17.34	33.652	24.400	353.6	0.176	5.54	101.2	1.3	0.23	0.0	0.00	0.17	0.05	50	
59	17.36	17.35	33.655	24.400	353.9	0.208	5.53	101.0	1.3	0.23	0.0	0.00	0.17	0.05	59	216
75 ISL	17.32	17.31	33.661	24.415	353.1	0.265	5.53	100.9	1.3	0.23	0.0	0.00	0.18	0.05	75	
76	17.32	17.31	33.661	24.415	353.1	0.268	5.53	100.9	1.3	0.23	0.0	0.00	0.18	0.05	76	215
86	17.15	17.14	33.610	24.417	353.3	0.304	5.56	101.1	1.3	0.24	0.0	0.00	0.20	0.07	86	214
95	15.73	15.72	33.575	24.717	324.8	0.334	5.68	100.4	1.8	0.27	0.0	0.01	0.25	0.22	95	213
100 ISL	15.03	15.01	33.499	24.812	315.7	0.350	5.65	98.4	2.0	0.31	0.2	0.06	0.25	0.22	100	
105	14.41	14.39	33.431	24.893	308.0	0.366	5.57	95.8	2.3	0.37	0.7	0.11	0.25	0.21	105	212
115	13.53	13.51	33.453	25.092	289.2	0.396	5.35	90.4	3.3	0.48	2.6	0.05	0.20	0.19	115	211
125 ISL	12.66	12.64	33.418	25.238	275.4	0.424	5.05	83.8	5.4	0.71	6.0	0.02	0.15	0.14	126	
126	12.58	12.56	33.414	25.250	274.2	0.427	5.02	83.1	5.6	0.73	6.4	0.02	0.15	0.13	127	210
140	11.53	11.51	33.397	25.435	256.8	0.464	4.73	76.6	8.6	0.97	10.4	0.01	0.11	0.12	141	209
150 ISL	10.92	10.90	33.427	25.569	244.2	0.489	4.58	73.2	10.7	1.10	12.7	0.00	0.08	0.09	151	
165	10.20	10.18	33.511	25.759	226.2	0.524	4.38	68.9	14.0	1.26	15.5	0.00	0.03	0.05	166	208
195	9.36	9.34	33.736	26.075	196.6	0.588	3.87	59.9	20.8	1.55	20.4	0.00	0.00	0.02	196	207
200 ISL	9.25	9.23	33.776	26.124	192.0	0.597	3.79	58.5	22.0	1.59	21.1	0.00			201	
229	8.72	8.70	33.970	26.360	170.0	0.650	3.32	50.7	29.0	1.79	24.4	0.00			230	206
250 ISL	8.41	8.38	34.018	26.445	162.2	0.685	3.02	45.8	33.1	1.92	26.3	0.00			251	
269	8.16	8.13	34.029	26.492	158.0	0.715	2.77	41.8	36.6	2.03	27.9	0.00			270	205
300 ISL	7.72	7.69	34.052	26.575	150.4	0.763	2.37	35.4	42.3	2.21	30.3	0.00			302	
318	7.47	7.44	34.061	26.618	146.4	0.790	2.14	31.8	45.6	2.31	31.6	0.00			320	204
378	6.76	6.73	34.099	26.746	134.7	0.874	1.44	21.0	56.9	2.63	35.3	0.00			380	203
400 ISL	6.56	6.52	34.118	26.788	130.9	0.903	1.23	17.9	60.5	2.72	36.3	0.00			402	
438	6.26	6.22	34.153	26.855	124.9	0.952	0.92	13.3	66.6	2.86	37.7	0.00			441	202
500 ISL	5.81	5.77	34.211	26.958	115.5	1.026	0.56	8.0	77.0	3.05	39.9	0.00			503	
515	5.70	5.66	34.225	26.983	113.3	1.043	0.47	6.7	79.5	3.09	40.4	0.00			518	201

PRIMARY PRODUCTIVITY CASTS

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — STATION 76.7 49.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
35 5.3 N	120 46.7 W	20/02/06	1846 UTC	10 m	1217 - 1820 PST	1217 PST	1819 PST	496.1 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	12.02	33.580	25.483	5.79	94.9	11.5	0.82	8.0	0.24	8.68	0.07	74. A	49.7	51.0	50.3	0.49
7	11.87	33.598	25.525	5.21	85.1	12.6	0.95	9.7	0.25	2.77	0.30	34.	24.4	26.7	25.6	0.26
18	11.49	33.653	25.639	4.38	71.0	16.3	1.28	13.6	0.30	0.87	0.43	6.3	5.9	5.4	5.6	0.14
23	11.19	33.694	25.725	3.78	60.9	19.5	1.55	16.5	0.33	0.62	0.58	2.9	2.3	1.9	2.1	0.12
32	11.10	33.707	25.752	3.65	58.7	20.1	1.60	17.1	0.32	0.62	0.52	0.74	0.46	0.42	0.44	0.13
44	11.02	33.718	25.775	3.53	56.7	20.8	1.63	17.7	0.32	0.49	0.60	0.12	0.14	0.11	0.13	0.04

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — STATION 76.7 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 3.3 N	122 56.5 W	18/02/06	1632 UTC	26 m	1226 - 1818 PST	1226 PST	1819 PST	182.8 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	14.00	32.857	24.532	6.00	102.0	2.4	0.34	0.0	0.01	0.35	0.17	89. A	0.57	0.57	0.57	0.07
18	13.98	32.855	24.535	6.01	102.1	2.4	0.34	0.0	0.01	0.43	0.14	35.	3.6	3.7	3.7	0.06
31	13.97	32.853	24.536	6.00	101.9	2.5	0.33	0.0	0.01	0.42	0.08					
44	13.98	32.857	24.538	6.00	102.0	2.4	0.33	0.0	0.01	0.31	0.15	7.4	2.9	2.8	2.8	0.06
52	13.99	32.858	24.536	6.00	102.0	2.3	0.33	0.0	0.01	0.34	0.18					
60	13.97	32.890	24.566	5.96	101.3	2.4	0.35	0.2	0.04	0.31	0.18	2.9	1.4	1.5	1.5	0.05
72	14.23	33.240	24.782	5.79	99.1	2.0	0.36	0.5	0.16	0.36	0.21					
82	13.51	33.243	24.933	5.82	98.2	2.3	0.41	1.2	0.06	0.31	0.21	0.79	0.46	0.43	0.44	0.01
93	13.15	33.302	25.051	5.52	92.4	2.7	0.45	2.1	0.02	0.24	0.12					
102	12.31	33.308	25.219	5.32	87.5	4.4	0.62	4.9	0.02	0.14	0.07					
113	11.58	33.339	25.380	5.18	83.9	5.6	0.75	7.1	0.01	0.12	0.05	0.13	0.02	0.03	0.03	0.01

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — 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 9.1 W	16/02/06	1844 UTC	22 m	1219 - 1818 PST	1219 PST	1818 PST	356.2 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	33.121	24.979	5.83	96.8	5.2	0.62	4.1	0.13	0.73	0.14	87. A	7.2	6.6	6.9	0.12
9	12.79	33.119	24.978	5.82	96.6	5.1	0.62	4.0	0.13	0.65	0.18					
16	12.77	33.120	24.983	5.81	96.4	5.1	0.62	4.1	0.13	0.66	0.18	33.	10.3	10.6	10.5	0.10
26	12.66	33.107	24.995	5.73	94.9	5.3	0.64	4.5	0.12	0.63	0.14					
38	12.54	33.107	25.018	5.65	93.3	5.6	0.68	5.0	0.12	0.51	0.18	7.1	5.5	5.4	5.4	0.06
44	11.95	33.226	25.222	5.34	87.2	8.1	0.91	8.7	0.20	0.48	0.23					
51	10.85	33.226	25.422	4.81	76.7	10.6	1.15	12.9	0.03	0.14	0.10	2.8	0.57	0.52	0.55	0.03
60	10.39	33.269	25.536	4.79	75.6	11.1	1.16	13.3	0.02	0.08	0.07					
70	10.06	33.372	25.672	4.36	68.4	14.5	1.37	16.7	0.02	0.06	0.08	0.76	0.07	0.08	0.08	0.02
83	10.21	33.758	25.949	2.81	44.3	23.4	1.87	23.0	0.01	0.05	0.17					
96	9.47	33.816	26.118	2.86	44.4	26.0	1.93	24.7	0.01	0.03	0.10	0.12	0.01	0.00	0.00	0.02

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — STATION 80.0 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 48.8 N	123 54.1 W	17/02/06	1946 UTC	28 m	1239 - 1830 PST	1230 PST	1829 PST	137.4 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	14.95	33.016	24.454	5.85	101.5	1.9	0.33	0.0	0.00	0.25	0.05	90. A	1.2	1.4	1.3	0.06
11	14.95	33.014	24.453	5.83	101.1	1.8	0.32	0.0	0.00	0.22	0.05					
21	14.94	33.014	24.456	5.88	102.0	1.8	0.33	0.0	0.00	0.22	0.05	32.	2.5	2.5	2.5	0.06
29	14.94	33.013	24.455	5.84	101.3	1.7	0.32	0.0	0.00	0.27	0.02					
38	14.94	33.013	24.455	5.84	101.3	1.7	0.32	0.0	0.00	0.23	0.06					
47	14.93	33.012	24.457	5.86	101.6	1.7	0.32	0.0	0.00	0.22	0.05	7.6	1.5	1.5	1.5	0.05
56	14.92	33.013	24.460	5.84	101.2	1.6	0.32	0.0	0.00	0.24	0.05					
65	14.65	33.116	24.598	5.78	99.7	1.8	0.36	0.2	0.11	0.38	0.26	2.8	1.5	1.4	1.4	0.06
77	13.64	33.175	24.854	5.68	96.0	2.5	0.46	1.6	0.08	0.32	0.24					
89	12.60	33.148	25.039	5.31	87.8	5.0	0.74	6.1	0.02	0.12	0.09	0.76	0.13	0.13	0.13	0.03
100	11.80	33.171	25.209	5.05	82.1	6.8	0.91	8.8	0.03	0.08	0.08					
111	11.05	33.297	25.443	5.03	80.6	7.5	0.91	9.4	0.01	0.06	0.05					
123	10.27	33.379	25.643	4.88	76.9	9.7	1.06	12.1	0.01	0.04	0.04	0.12	0.00	0.00	0.00	0.01

A) INCUBATION LIGHT INTENSITIES WERE 94, 34, 7, 2.9, .75, 0.12 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — STATION 83.3 40.6

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 13.4 N	119 24.9 W	15/02/06	1839 UTC	7 m	1212 - 1815 PST	1212 PST	1809 PST	321.3 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	14.48	33.390	24.843	6.11	105.2	2.6	0.30	0.5	0.01	1.82	0.38	64. A	9.7	12.5	11.1	0.25
5	14.47	33.390	24.845	6.09	104.9	2.7	0.30	0.6	0.01	1.88	0.33	33.	26.2	28.3	27.2	0.29
12	14.36	33.387	24.867	6.01	103.3	2.5	0.34	0.9	0.02	1.92	0.45	7.2	17.8	16.9	17.3	0.28
16	14.01	33.385	24.938	5.84	99.6	4.1	0.42	1.8	0.05	1.87	0.48	3.0	7.9	6.4	7.2	0.22
23	12.93	33.422	25.186	4.84	80.8	8.2	1.13	7.0	0.23	1.70	1.04	0.64	1.3	1.5	1.4	0.14
32	12.81	33.429	25.215	4.74	78.9	8.9	1.23	7.7	0.25	1.31	1.30	0.09	0.11	0.09	0.10	0.15

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — STATION 83.3 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 14.6 N	121 26.7 W	14/02/06	1812 UTC	12 m	1220 - 1830 PST	1220 PST	1811 PST	410.8 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	13.55	33.165	24.862	6.10	102.9	4.7	0.51	2.1	0.07	1.40	0.31	77. A	19.8	19.4	19.6	0.15
8	13.53	33.163	24.865	6.10	102.9	4.5	0.52	2.1	0.06	1.33	0.31	36.	19.6	19.8	19.7	0.16
10	13.51	33.168	24.873	6.09	102.7	4.7	0.51	2.2	0.07	1.27	0.32					
20	12.55	33.264	25.137	5.87	97.1	6.3	0.70	5.3	0.17	1.33	0.40	7.7	11.8	10.7	11.2	0.14
28	12.32	33.337	25.238	5.75	94.7	7.2	0.80	6.5	0.20	0.68	0.24	2.8	2.1	2.1	2.1	0.10
39	11.72	33.296	25.319	5.32	86.5	8.4	0.94	8.9	0.20	0.25	0.22	0.68	0.28	0.26	0.27	0.06
46	11.12	33.270	25.409	4.86	78.0	9.5	1.08	11.5	0.09	0.14	0.13					
53	10.88	33.313	25.485	4.73	75.5	10.7	1.15	12.8	0.12	0.09	0.14	0.11	0.03	0.02	0.02	0.04

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — STATION 83.3 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 14.4 N	123 29.9 W	13/02/06	1954 UTC	16 m	1245 - 1820 PST	1228 PST	1817 PST	127.3 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
1	15.10	33.067	24.461	5.90	102.7	1.9	0.33	0.0	0.00	0.26	0.02	91. A	1.7	1.7	1.7	0.07
12	15.04	33.066	24.474	5.90	102.6	1.9	0.33	0.0	0.00	0.25	0.03	32.	2.8	2.9	2.8	0.08
20	15.00	33.071	24.487	5.89	102.3	1.9	0.33	0.0	0.00	0.25	0.04					
28	14.96	33.076	24.499	5.90	102.4	1.8	0.33	0.0	0.00	0.36	0.03	6.8	2.5	2.6	2.6	0.10
37	14.75	33.093	24.558	5.94	102.7	2.0	0.33	0.0	0.00	0.42	0.13	2.9	2.3	2.2	2.2	0.09
45	14.51	33.092	24.608	5.93	102.0	2.1	0.33	0.0	0.00	0.51	0.20					
51	14.48	33.095	24.617	5.92	101.8	2.1	0.34	0.0	0.01	0.55	0.20	0.75	1.3	1.2	1.2	0.08
54	14.41	33.096	24.633	5.89	101.1	2.1	0.35	0.0	0.03	0.94	0.04					
60	14.29	33.096	24.658	5.85	100.2	2.2	0.37	0.2	0.07	0.62	0.16					
70	14.02	33.133	24.743	5.68	96.8	2.8	0.45	1.3	0.29	0.27	0.13	0.12	0.11	0.08	0.09	0.03

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — STATION 86.7 50.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 19.3 N	119 39.9 W	11/02/06	1724 UTC	13 m	1215 - 1808 PST	1213 PST	1809 PST	530.4 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	12.75	33.500	25.281	5.99	99.6	6.9	0.74	6.0	0.13	2.08	0.43	79. A	28.9	28.3	28.6	0.21
9	12.59	33.513	25.322	5.66	93.8	8.0	0.83	7.2	0.16	2.11	0.26	35.	29.7	28.5	29.1	0.26
16	12.10	33.540	25.437	5.17	84.8	9.9	1.06	10.6	0.23	0.86	0.65					
22	11.61	33.602	25.577	4.28	69.5	13.7	1.30	13.8	0.23	0.75	0.40	7.4	5.4	5.9	5.7	0.10
30	11.30	33.617	25.646	3.93	63.4	15.2	1.42	15.7	0.21	0.58	0.37	2.9	1.9	1.9	1.9	0.10
41	10.84	33.694	25.788	3.40	54.3	19.2	1.63	18.7	0.25	0.31	0.40	0.79	0.29	0.33	0.31	0.08
49	10.44	33.781	25.926	2.98	47.2	22.8	1.82	21.2	0.25	0.18	0.29					
57	10.41	33.790	25.939	2.95	46.7	23.3	1.83	21.4	0.25	0.19	0.31	0.12	0.00	0.00	0.00	0.08

A) INCUBATION LIGHT INTENSITIES WERE 94, 34, 7, 2.9, .75, 0.12 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — STATION 86.7 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 59.1 N	122 23.8 W	12/02/06	1911 UTC	22 m	1224 - 1825 PST	1224 PST	1824 PST	140.3 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	15.02	33.071	24.482	5.87	102.0	1.8	0.32	0.0	0.00	0.23	0.03	87. A	1.8	2.0	1.9	0.07
15	15.01	33.072	24.485	5.88	102.2	1.7	0.32	0.0	0.00	0.24 B	0.05 B	35.	2.5	2.5	2.5	0.07
26	14.99	33.071	24.489	5.87	102.0	1.7	0.32	0.0	0.00	0.20	0.06					
37	14.92	33.065	24.500	5.87	101.8	1.7	0.32	0.0	0.00	0.24	0.08	7.6	2.1	2.1	2.1	0.08
44	14.75	33.047	24.522	5.88	101.6	1.8	0.32	0.0	0.00	0.40	0.14					
51	14.70	33.049	24.535	5.84	100.8	1.7	0.33	0.0	0.01	0.40	0.15	2.8	2.0	1.9	2.0	0.05
60	14.57	33.102	24.604	5.82	100.2	2.0	0.36	0.2	0.08	0.42	0.20					
70	14.01	33.133	24.745	5.68	96.7	2.8	0.47	1.8	0.22	0.24	0.26	0.76	0.40	0.43	0.42	0.06
79	13.36	33.134	24.879	5.61	94.3	3.0	0.52	2.6	0.14	0.25	0.17					
88	12.60	33.150	25.041	5.33	88.2	4.5	0.69	5.3	0.03	0.17	0.14					
95	11.74	33.176	25.224	5.08	82.5	6.4	0.86	8.2	0.02	0.11	0.12	0.13	0.04	0.03	0.03	0.03

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

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — STATION 90.0 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 55.2 N	118 56.4 W	09/02/06	1816 UTC	10 m	1210 - 1800 PST	1210 PST	1757 PST	478.3 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	14.10	33.444	24.965	6.31	107.9	4.3	0.45	1.2	0.05	1.74	0.28	74. A	22.7	20.7	21.7	0.30
8	13.98	33.441	24.988	6.30	107.4	4.2	0.45	1.2	0.05	1.66	0.36	29.	25.3	22.3	23.8	0.21
18	13.53	33.443	25.082	5.92	100.0	4.8	0.54	2.9	0.07	1.20	0.43	6.3	14.5	13.8	14.1	0.17
23	12.95	33.468	25.217	5.28	88.2	7.7	0.78	6.5	0.11	1.12	0.40	2.9	7.5	7.3	7.4	0.12
32	12.23	33.509	25.389	4.59	75.5	11.1	1.08	11.0	0.18	0.84	0.31	0.74	2.0	2.0	2.0	0.09
44	11.28	33.556	25.602	3.92	63.2	15.3	1.39	15.9	0.12	0.47	0.24	0.12	0.16	0.13	0.14	0.06

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — STATION 90.0 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 45.0 N	121 18.7 W	08/02/06	1844 UTC	20 m	1215 - 1825 PST	1214 PST	1810 PST	282.1 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	14.90	33.309	24.691	5.87	101.9	2.3	0.31	0.0	0.00	0.40	0.04	86. A	2.4	2.3	2.3	0.10
8	14.93	33.310	24.685	5.88	102.2	2.3	0.31	0.0	0.00	0.40	0.05					
14	14.84	33.318	24.711	5.88	102.0	2.2	0.31	0.0	0.00	0.38	0.08	34.	5.2	5.3	5.2	0.12
24	14.83	33.314	24.711	5.90	102.3	2.2	0.31	0.0	0.00	0.40	0.10					
34	14.75	33.305	24.721	5.87	101.6	2.1	0.32	0.0	0.01	0.50	0.20	7.4	6.6	6.3	6.5	0.09
46	14.69	33.310	24.738	5.85	101.1	2.2	0.33	0.1	0.02	0.50	0.22	2.9	4.0	4.1	4.1	0.08
56	14.57	33.319	24.771	5.76	99.3	2.5	0.37	0.5	0.08	0.41	0.17					
65	13.65	33.304	24.951	5.24	88.7	4.5	0.65	4.9	0.09	0.18	0.13	0.68	0.60	0.58	0.59	0.05
77	12.33	33.349	25.247	4.51	74.3	8.5	1.04	11.0	0.03	0.14	0.11					
88	11.39	33.430	25.485	3.96	63.9	12.3	1.33	15.7	0.02	0.09	0.08	0.12	0.05	0.04	0.05	0.03

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — STATION 90.0 120.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 24.5 N	124 0.2 W	07/02/06	1726 UTC	36 m	1228 - 1818 PST	1230 PST	1817 PST	201.8 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
3	15.91	33.244	24.418	5.75	101.8	1.5	0.30	0.0	0.00	0.17	0.02	88. A	0.39	0.51	0.45	0.06
13	15.87	33.243	24.427	5.74	101.6	1.5	0.30	0.0	0.00	0.19	0.00					
25	15.87	33.243	24.427	5.73	101.4	1.5	0.29	0.0	0.00	0.18	0.03	34.	2.2	2.2	2.2	0.05
37	15.89	33.249	24.428	5.74	101.6	1.5	0.29	0.0	0.00	0.16	0.03					
49	15.82	33.256	24.449	5.75	101.7	1.5	0.29	0.0	0.00	0.23	0.05					
61	15.52	33.235	24.500	5.79	101.7	1.7	0.31	0.0	0.00	0.40	0.05	7.4	2.3	2.4	2.4	0.06
72	15.02	33.231	24.607	5.74	99.8	2.0	0.36	0.3	0.12	0.58	0.19					
83	14.02	33.209	24.802	5.62	95.8	2.9	0.49	1.9	0.26	0.46	0.20	2.9	2.1	2.0	2.0	0.04
94	13.18	33.194	24.961	5.37	89.9	4.1	0.65	4.6	0.03	0.27	0.13					
105	12.71	33.218	25.073	5.20	86.2	4.9	0.73	6.0	0.02	0.19	0.12					
115	11.98	33.255	25.241	4.92	80.4	7.0	0.91	9.1	0.01	0.12	0.10	0.74	0.22	0.23	0.22	0.02
128	11.07	33.331	25.467	4.50	72.1	10.5	1.17	13.4	0.01	0.06	0.07					
143	9.99	33.454	25.750	4.27	66.9	14.8	1.37	17.1	0.01	0.03	0.05					
157	9.59	33.557	25.897	4.16	64.6	17.2	1.45	18.6	0.00	0.01	0.03	0.12	0.00	0.00	0.00	0.02

A) INCUBATION LIGHT INTENSITIES WERE 94, 34, 7, 2.9, .75, 0.12 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — STATION 93.3 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 40.8 N	117 52.5 W	04/02/06	1937 UTC	22 m	1250 - 1759 PST	1205 PST	1754 PST	269.4 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
3	14.95	33.363	24.722	5.94	103.3	2.4	0.31	0.0	0.00	0.54	0.03	81. A	7.9	7.6	7.7	0.11
8	14.96	33.364	24.721	5.93	103.1	2.4	0.30	0.0	0.00	0.48	0.09					
15	14.64	33.378	24.800	6.05	104.5	2.7	0.31	0.0	0.01	0.54	0.13	35.	6.5	6.2	6.3	0.14
26	14.52	33.397	24.841	6.07	104.6	2.8	0.30	0.0	0.01	0.58	0.19					
37	14.45	33.382 D	24.844	6.06	104.3	2.8	0.31	0.0	0.01	0.61	0.21	7.6	3.7	3.6	3.6	0.10
44	14.10	33.381	24.917	5.88	100.5	3.4	0.38	0.7	0.06	0.89	0.06					
51	13.37	33.370	25.058	5.29	89.0	5.7	0.64	4.4	0.19	0.57	0.33	2.8	1.2	1.4	1.3	0.06
60	12.68	33.383	25.205	4.71	78.1	8.2	0.92	8.3	0.25	0.53	0.36					
70	11.76	33.488	25.462	3.78	61.5	13.4	1.35	14.5	0.21	0.46	0.37	0.76	0.29	0.30	0.29	0.06
83	10.60	33.678	25.819	2.97	47.2	20.6	1.75	20.7	0.03	0.13	0.24					
96	9.89	33.670	25.934	3.30	51.7	21.0	1.73	21.4	0.02	0.05	0.13	0.12	0.02	0.02	0.02	0.02

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — STATION 93.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 49.6 N	119 34.3 W	05/02/06	1732 UTC	21 m	1210 - 1810 PST	1212 PST	1808 PST	338.2 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	14.67	33.304	24.736	5.88	101.6	2.3	0.34	0.2	0.03	0.53	0.16	86. A	5.9	6.4	6.2	0.08
15	14.64	33.297	24.738	5.86	101.2	2.3	0.34	0.2	0.03	0.54	0.15	33.	8.4	9.1	8.7	0.08
26	14.62	33.296	24.742	5.85	101.0	2.3	0.34	0.2	0.03	0.52	0.16					
36	14.54	33.294	24.757	5.86	101.0	2.4	0.36	0.4	0.04	0.43	0.14	7.2	4.9	5.1	5.0	0.07
42	14.54	33.294	24.758	5.83	100.5	2.5	0.36	0.4	0.04	0.41	0.13					
48	14.54	33.294	24.758	5.85	100.8	2.4	0.36	0.4	0.04	0.41	0.13	3.0	2.5	2.9	2.7	0.07
58	14.48	33.291	24.769	5.81	100.0	2.5	0.37	0.6	0.05	0.39	0.15					
67	14.43	33.288	24.777	5.79	99.6	2.6	0.39	0.8	0.05	0.36	0.12	0.75	0.58	0.58	0.58	0.05
75	14.34	33.284	24.793	5.74	98.5	2.8	0.40	1.0	0.07	0.34	0.12					
83	13.53	33.266	24.947	5.49	92.6	3.8	0.54	3.1	0.11	0.20	0.11					
92	11.48	33.323	25.386	4.59	74.2	9.6	1.08	11.9	0.03	0.13	0.12	0.12	0.04	0.04	0.04	0.04

RV DAVID STARR JORDAN — CALCOFI CRUISE 0602 — STATION 93.3 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 31.2 N	122 15.3 W	06/02/06	1827 UTC	24 m	1225 - 1820 PST	1228 PST	1819 PST	251.5 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
3	14.99	33.150	24.549	5.86	101.8	2.2	0.32	0.0	0.00	0.37	0.04	83. A	3.6	3.7	3.6	0.09
10	14.86	33.146	24.574	5.91	102.4	2.1	0.33	0.0	0.00	0.46	0.12					
18	14.69	33.149	24.613	5.93	102.4	2.5	0.33	0.0	0.01	0.54	0.06	32.	5.9	5.9	5.9	0.10
29	14.23	33.160	24.719	5.86	100.3	2.5	0.39	0.6	0.09	0.72	0.05					
42	14.27	33.257	24.786	5.89	100.9	2.5	0.37	0.5	0.06	0.56	0.11	6.8	3.7	3.5	3.6	0.06
49	14.14	33.262	24.817	5.91	101.0	2.7	0.38	0.7	0.06	0.53	0.13					
55	13.85	33.242	24.862	5.78	98.2	2.9	0.44	1.5	0.08	0.39	0.11	3.0	1.5	1.5	1.5	0.05
66	13.34	33.204	24.937	5.44	91.4	3.5	0.57	3.5	0.04	0.24	0.10					
77	12.56	33.193	25.082	5.34	88.3	4.3	0.67	5.0	0.03	0.18	0.10	0.73	0.23	0.22	0.22	0.03
91	11.61	33.246	25.302	4.79	77.6	8.5	1.03	11.0	0.02	0.07	0.10					
106	10.80	33.421	25.584	4.04	64.4	13.5	1.37	16.4	0.01	0.05	0.07	0.11	0.01	0.01	0.01	0.03

A) INCUBATION LIGHT INTENSITIES WERE 94, 34, 7, 2.9, .75, 0.12 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)
76.7	49.0	35 05.3	120 46.7	02/20	1013	1017	106	41	38	38
76.7	51.0	35 01.3	120 55.5	02/20	0823	0840	370	171	38	38
76.7	55.0	34 53.5	121 11.7	02/20	0455	0516	440	211	150	150
76.7	60.0	34 43.3	121 32.9	02/18	2056	2117	437	213	103	103
76.7	70.0	34 23.2	122 14.8	02/18	1457	1519	434	214	60	60
76.7	80.0	34 03.4	122 56.5	02/18	0649	0711	452	205	38	38
76.7	90.0	33 43.4	123 38.0	02/18	0156	0217	458	210	17	17
76.7	100.0	33 23.2	124 19.3	02/17	1951	2013	448	214	36	36
80.0	50.5	34 28.1	120 29.3	02/16	0203	0205	45.3	13	44	44
80.0	51.0	34 27.0	120 31.4	02/16	0349	0355	122	51	33	33
80.0	55.0	34 19.1	120 48.2	02/16	0735	0757	483	214	68	68
80.0	60.0	34 08.9	121 09.1	02/16	1213	1235	460	215	35	35
80.0	70.0	33 49.1	121 50.5	02/16	1834	1856	442	210	77	77
80.0	80.0	33 29.1	122 32.0	02/17	0029	0050	469	211	45	45
80.0	90.0	33 09.1	123 13.2	02/17	0629	0651	450	214	56	56
80.0	100.0	32 48.9	123 54.3	02/17	1306	1328	458	213	44	44
83.3	39.4	34 16.0	119 19.9	02/15	0821	0823	45.3	14	88	88
83.3	40.6	34 13.6	119 24.9	02/15	0959	1002	127	29	16	16
83.3	42.0	34 10.7	119 30.6	02/15	0622	0636	304	138	26	26
83.3	55.0	33 44.7	120 24.6	02/14	2137	2158	474	215	101	101
83.3	60.0	33 34.8	120 45.2	02/14	1707	1728	463	211	117	117
83.3	70.0	33 14.6	121 26.7	02/14	0846	0908	559	206	64	64
83.3	80.0	32 54.7	122 07.8	02/14	0114	0136	494	212	47	47
83.3	90.0	32 34.6	122 48.7	02/13	1904	1926	472	213	44	44
83.3	100.0	32 14.6	123 29.7	02/13	1250	1312	453	211	152	152
83.3	110.0	31 54.7	124 10.2	02/13	0628	0650	481	214	25	25
86.7	33.0	33 53.3	118 29.5	02/10	1928	1932	102	40	39	39
86.7	35.0	33 49.3	118 37.8	02/10	2208	2229	456	212	55	55
86.7	40.0	33 39.4	118 58.6	02/11	0211	0233	441	211	131	131
86.7	45.0	33 29.5	119 19.2	02/11	0634	0656	432	215	93	93
86.7	50.0	33 19.4	119 39.8	02/11	1027	1033	141	55	85	85
86.7	55.0	33 09.4	120 00.4	02/11	1417	1439	438	213	98	98
86.7	60.0	32 59.4	120 20.9	02/11	1820	1842	449	208	96	96
86.7	70.0	32 39.1	121 02.1	02/12	0027	0049	484	209	74	74
86.7	80.0	32 19.4	121 42.9	02/12	0617	0639	516	216	70	70
86.7	90.0	31 59.4	122 23.6	02/12	1212	1234	420	212	24	24
86.7	100.0	31 39.4	123 04.2	02/12	1743	1805	475	213	55	55
86.7	110.0	31 19.4	123 44.5	02/12	2329	2351	497	200	40	40
86.8	32.5	33 53.5	118 26.7	02/10	1737	1739	63.4	9	79	79
88.5	30.1	33 40.5	118 05.1	02/10	1351	1353	48	13	104	104
90.0	27.7	33 29.7	117 44.9	02/10	0349	0351	45.5	12	88	88
90.0	28.0	33 29.1	117 46.0	02/10	0300	0305	121	47	58	58
90.0	30.0	33 24.9	117 54.4	02/10	0031	0053	461	210	50	50
90.0	35.0	33 15.0	118 14.9	02/09	2023	2045	474	209	46	46
90.0	37.0	33 11.1	118 23.3	02/09	1721	1743	458	212	41	41
90.0	45.0	32 55.2	118 56.4	02/09	1141	1203	456	209	79	79
90.0	53.0	32 39.2	119 28.9	02/09	0607	0628	446	207	81	81
90.0	60.0	32 25.1	119 57.7	02/09	0109	0131	459	209	98	98
90.0	70.0	32 05.1	120 38.3	02/08	1820	1842	447	211	105	105
90.0	80.0	31 45.0	121 18.8	02/08	1206	1228	454	212	59	59
90.0	90.0	31 25.2	121 59.3	02/08	0530	0552	461	216	80	80
90.0	100.0	31 04.9	122 39.9	02/07	2258	2319	447	210	92	92
90.0	110.0	30 45.0	123 20.0	02/07	1640	1702	443	217	16	16
90.0	120.0	30 24.7	124 00.4	02/07	0810	0831	464	209	19	19
91.7	26.4	33 14.6	117 27.8	02/03	2253	2255	38.2	13	52	52
93.3	26.7	32 57.4	117 18.3	02/03	1742	1753	247	110	36	36
93.3	28.0	32 54.8	117 23.7	02/04	0254	0312	389	189	64	64
93.3	30.0	32 50.8	117 31.9	02/04	0828	0849	433	208	21	21
93.3	35.0	32 40.8	117 52.5	02/04	1257	1319	443	211	52	52
93.3	40.0	32 30.8	118 12.9	02/04	1712	1734	450	213	53	53
93.3	45.0	32 20.9	118 33.3	02/04	2116	2138	464	226	127	127
93.3	50.0	32 10.8	118 53.6	02/05	0126	0148	450	207	107	107
93.3	55.0	32 00.8	119 13.9	02/05	0525	0547	472	205	76	76
93.3	60.0	31 49.6	119 34.6	02/05	0829	0851	473	211	65	65
93.3	70.0	31 31.0	120 14.5	02/05	1629	1651	451	216	35	35
93.3	80.0	31 10.8	120 55.1	02/05	2250	2312	460	210	33	33
93.3	90.0	30 51.0	121 35.2	02/06	0507	0529	459	207	39	39
93.3	100.0	30 31.1	122 15.3	02/06	1244	1306	463	211	112	71
93.3	110.0	30 10.8	122 55.4	02/06	1851	1913	471	201	51	51
93.3	120.0	29 51.0	123 35.2	02/07	0038	0060	479	211	21	21
93.4	26.4	32 56.9	117 17.0	02/03	2013	2015	43	15	47	47