UNIVERSITY OF CALIFORNIA SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

PHYSICAL, CHEMICAL AND BIOLOGICAL DATA

CalCOFI Cruise 8105
18 May - 12 June 1981

CalCOFI Cruise 8107
26 June - 7 August 1981

SIO Reference 85-12
31 July 1985

UNIVERSITY OF CALIFORNIA

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31 July 1985

Approved for distribution:

W. A. Nierenberg, Director

CONTENTS

INTRODUCTION

The data in this report were collected during Cruises 8105*, and 8107 of the California Cooperative Oceanic Fisheries Investigations (CalCOFI) program aboard the RV *David Starr Jordan* of the National Marine Fisheries Service and the RV *New Horizon* of the Scripps Institution of Oceanography. On Cruise 8105, four stations were occupied for 48 hours each to make repeated casts and net tows in order to assess within-station hydrographic, chemical and biological variability. Primary productivity casts were taken daily near local noontime on Cruise 8105.

The data were collected and processed by personnel of the Marine Life Research Group (MLRG), the Southwest Fisheries Center, National Marine Fisheries Service (NMFS), and the Physical and Chemical Oceanographic Data Facility (PACODF).

STANDARD PROCEDURES

In-situ Conductivity/Temperature/Depth Recorder (CTD) Data

CTD lowerings were made at most stations on Cruise 8105 and on cardinal CalCOFI line stations on Cruise 8107. Temperature and salinity corrections were applied to the CTD data, based upon comparisons with shallow and deep rosette cast data.

Rosette or Hydrographic Cast Data

A rosette frame holding 12 1.7-liter Niskin bottles was lowered with the CTD probe, the bottles were closed during the up cast by the CTD operator. On Cruise 8105, samples were taken from each rosette bottle for oxygen and nutrients. Chlorophyll-*a* and phaeopigments were usually determined from the top 10 depths. Two or three salinity samples were taken from each cast for calibration of the CTD. On stations where the CTD-rosette system failed, 12-bottle hydrographic casts were done. The maximum sampling depth was 500 meters, bottom depth permitting.

Two or three racks of paired protected thermometers were used on each rosette cast for calibration of the CTD. The temperature data is reported to the nearest hundredths of a degree Celsius. Wire casts had paired protected thermometers on each bottle and unprotected thermometers on bottles used below a depth of 100 meters for determining the depth of sampling.

Salinity samples were analyzed at sea on inductive-type salinometers standardized with Wormley Standard Seawater.

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

Silicate, phosphate, nitrate and nitrite nutrients were determined at sea using an automated analyzer. The procedures used are similar to those described in Atlas *et al.* (1971).

Chlorophyll was measured with a fluorometric technique (Yentsch and Menzel, 1963; Holm-Hansen *et al.*, 1965). Samples (65 or 140 ml) were drawn from the Niskin bottles and filtered onto GF/C filters. The filters were placed in scintillation vials containing 10 ml of 90% acetone and the pigments were extracted in the dark in a refrigerator for a period between 12 and 14 hours. The samples were then brought to room temperature and the fluorescence of the sample was determined before and after acidification with a Turner 111 fluorometer.

At selected stations on Cruise 8105, the retention efficiency of the standard GF/C filter was checked by drawing replicate sea water samples from the Niskin bottles and filtering one of each pair through a GF/C filter (manufacturer's specified retention size: 1.2 μ), the other through a GF/F filter (retention size: 0.7 μ). Chlorophyll and phaeophytin results from both filter sizes have been tabulated in a separate table. Potential biases of the chlorophyll extraction method and of the effect of filter size

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

are discussed in Venrick and Hayward (1984).

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

Primary Productivity Casts

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). On 8105 *New Horizon*, seven depths (corresponding to predetermined levels of light penetration) were sampled on a single cast at each productivity station. On 8105 *Jordan*, six depths were sampled on each of two replicate casts at each productivity station. The water samples were collected with 5-liter Niskin bottles on both cruises. Triplicate subsamples (two light and one dark control) were drawn from each water sample into 250 ml glass incubation bottles which were innoculated with 10 μci of ^{14}C as $NaHCO_3$. These were incubated approximately from local apparent noon to civil twilight in sea water-cooled incubators with neutral-density screens which simulate the *in situ* light levels. At the end of the incubation, the samples were filtered onto HA milipore 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 fluor were added to each sample and the samples were returned to S.I.O. where the radioactivity was determined with a scintillation counter.

Macrozooplankton Net Tows

Macrozooplankton was sampled with a 71 cm mouth diameter paired net (bongo net) equipped with 0.505 mm plankton mesh. Bottom depth permitting, the nets were towed obliquely from ~210 m to the surface. The tow time for a standard tow was 21.5 minutes. Volumes filtered were determined from flowmeter readings and the mouth area of the net. 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).

TABULATED DATA

The time reported is Greenwich Mean Time (GMT). For CTD lowerings it is the "start down" time; for wire casts it is the time of messenger release; and for rosette casts it is the "start up" time.

Bottom depths, determined acoustically, have been corrected using Matthews (1939) tables and are reported in meters. Weather conditions have been coded using WMO code 4051.

Data in this report were obtained by CTD lowerings, rosette samples, or wire casts and appear in seven forms:

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

2. Data from CTD lowerings are presented with two stations printed side by side. Temperature and salinity are tabulated at closer "standard" intervals than the interpolated standard depth bottle data.

The computed values are the same as for the bottle data.

3. Ten-meter temperature and salinity data from net tow station 10-meter bottles and CTD 10-meter check bottles appear as separate sections.

4. The tabulated data from primary productivity casts include sample depths, the light levels at which the samples were incubated, 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, the dark uptake, nutrients (when measured), chlorophyll and phaeophytin. The uptake values shown are the total for the incubation period. The times of local apparent noon (LAN), civil twilight, and the vertically integrated value of the mean uptake from the surface to the deepest sample depth (assuming that the shallowest measured value extends to the surface and that negative values are zero) are also shown for each experiment. The uptake data have been presented to two significant digits (values < 1.00) or one decimal (values > 1.00). The higher production values may not warrant all of the significant digits presented. Incubation time, LAN, and civil twilight are given in local Pacific Standard Time (PST); to convert to GMT, add eight hours to the PST time.

5. Special wire casts for chlorophyll, phaeopigments and nutrients appear after the primary productivity cast tabulations.

6. A table of chlorophyll filter comparisons appears after the special chlorophyll cast tabulations. Chlorophyll-*a* and phaeopigment data from the 1.2 μ GF/C and from the 0.7 μ GF/F filters are shown tabulated by depth. The GF/C data are from the hydrographic or special chlorophyll casts and are repeated for comparison.

7. Macrozooplankton biomass volumes are tabulated as total biomass volume ($cm^3/1000\ m^3$ strained) and as the total volume minus the volume of larger organisms under the heading "Small".

FOOTNOTES

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

H: Ship-board hydrographic measurement listed in place of *in-situ* CTD values.

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

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

LITERATURE CITED

Anderson, G. C., compiler, 1971. "Oxygen Analysis," Marine Technician's Handbook, SIO Ref. No. 71-8, Sea Grant Pub. No. 9.

Atlas, E. L., J. C. Callaway, R. D. Tomlinson, L. I. Gordon, L. Barstow, and P. K. Park, 1971. *A Practical Manual for Use of the Technicon*[R] *AutoAnalyzer*[R] *in Sea Water Nutrient Analysis*; Revised. Oregon State University Technical Report 215, Reference No. 71-22.

Carpenter, J. H., 1965. The Chesapeake Bay Institute technique for the Winkler dissolved oxygen method. *Limnol. Oceanogr., 10*: 141-143.

Holm-Hansen, O., C. J. Lorenzen, R. W. Holmes, and J. D. H. Strickland, 1965. Fluorometric determination of chlorophyll. *J. Cons. perm. int. Explor. Mer, 30*: 3-15.

Klein, Hans T., 1973. A new technique for processing physical oceanographic data. SIO Ref. No. 73-14.

Kramer, D., M. J. Kalin, E. G. Stevens, J. R. Thrailkill, and J. R. Zweifel, 1972. Collecting and processing data on fish eggs and larvae in the California Current region. *NOAA Technical Report NMFS CIRC-370*: 38 pp.

Lean, D. R. S., and B. K. Burnison, 1979. An evaluation of errors in the ^{14}C method of primary production measurement. *Limnol. Oceanogr., 24*: 799-998.

Matthews, D. J., 1939. Tables of the velocity of sound in pure water and seawater for use in echo-sounding and sound-ranging. Second Edition. Hydrographic Department, Admiralty, H. D. 282, 52 pp.

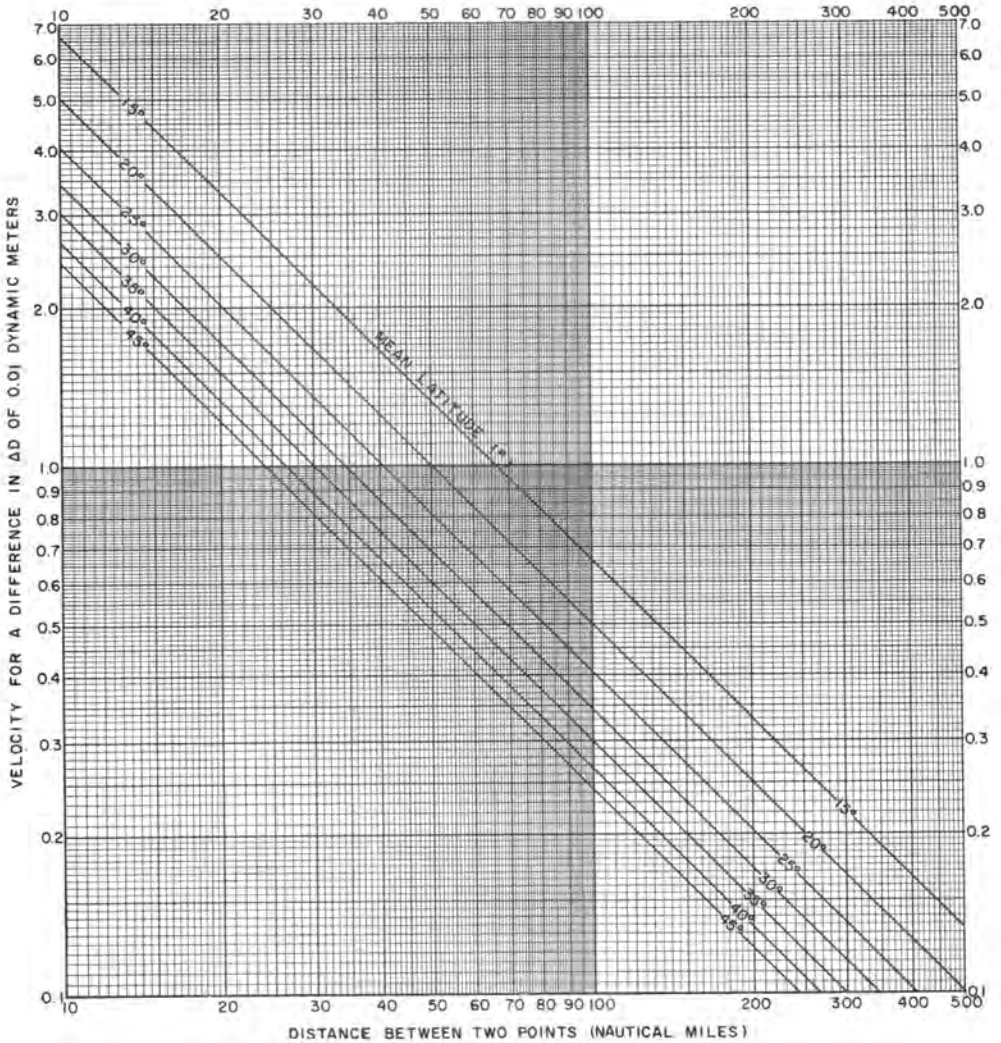
Scripps Institution of Oceanography, University of California, 1984. Physical, Chemical and Biological Data, CalCOFI Cruise 8401, 4-27 January 1984. SIO Ref. No. 84-18, 120 pp.

UNESCO, 1981. Background papers and supporting data on the International Equation of State 1980. *UNESCO Tech. Pap. in Mar. Sci., No. 38.*

Venrick, E. L., and T. L. Hayward, 1984. Determining chlorophyll on the 1984 CalCOFI surveys. *CalCOFI Rep., Vol. XXV*: 74-79.

Weiss, R. F., 1970. The solubility of nitrogen, oxygen and argon in water and seawater. *Deep-Sea Res., 17*: 721-735.

Yentsch, C. S., and D. W. Menzel, 1963. A method for the determination of phytoplankton, chlorophyll and phaeophytin by fluorescence. *Deep-Sea Res., 10*: 221-231.



VELOCITY OF GEOSTROPHIC FLOW
(NAUTICAL MILES PER DAY)

cm/sec	0	1	2	3	4	5	6	7	8	9
0	KNOTS / NM/DAY	0.02 / 0.47	0.04 / 0.93	0.06 / 1.40	0.08 / 1.86	0.10 / 2.33	0.12 / 2.80	0.14 / 3.26	0.16 / 3.73	0.17 / 4.20
10	0.19 / 4.66	0.21 / 5.13	0.23 / 5.59	0.25 / 6.06	0.27 / 6.53	0.29 / 6.99	0.31 / 7.46	0.33 / 7.93	0.35 / 8.39	0.37 / 8.86
20	0.39 / 9.32	0.41 / 9.79	0.43 / 10.26	0.45 / 10.72	0.47 / 11.19	0.49 / 11.66	0.51 / 12.12	0.52 / 12.59	0.54 / 13.05	0.56 / 13.52
30	0.58 / 13.99	0.60 / 14.45	0.62 / 14.92	0.64 / 15.38	0.66 / 15.85	0.68 / 16.32	0.70 / 16.78	0.72 / 17.25	0.74 / 17.72	0.76 / 18.18
40	0.78 / 18.65	0.80 / 19.11	0.82 / 19.58	0.84 / 20.05	0.85 / 20.51	0.87 / 20.98	0.89 / 21.45	0.91 / 21.91	0.93 / 22.38	0.95 / 22.84
50	0.97 / 23.31	0.99 / 23.78	1.01 / 24.24	1.03 / 24.71	1.05 / 25.17	1.07 / 25.64	1.09 / 26.11	1.11 / 26.57	1.13 / 27.04	1.15 / 27.51
60	1.17 / 27.98	1.18 / 28.44	1.20 / 28.90	1.22 / 29.37	1.24 / 29.84	1.26 / 30.30	1.28 / 30.77	1.30 / 31.24	1.32 / 31.70	1.34 / 32.17
70	1.36 / 32.63	1.38 / 33.10	1.40 / 33.57	1.42 / 34.03	1.44 / 34.50	1.46 / 34.96	1.48 / 35.43	1.50 / 35.90	1.52 / 36.36	1.53 / 36.83
80	1.55 / 37.30	1.57 / 37.76	1.59 / 38.23	1.61 / 38.69	1.63 / 39.16	1.65 / 39.63	1.67 / 40.09	1.69 / 40.56	1.71 / 41.03	1.73 / 41.49
90	1.75 / 41.96	1.77 / 42.42	1.79 / 42.89	1.81 / 43.36	1.83 / 43.82	1.85 / 44.29	1.86 / 44.76	1.88 / 45.22	1.90 / 45.69	1.92 / 46.15
100	1.94 / 46.62	1.96 / 47.09	1.98 / 47.55	2.00 / 48.02	2.02 / 48.48	2.04 / 48.95	2.06 / 49.42	2.08 / 49.88	2.10 / 50.35	2.12 / 50.82

CONVERSION TABLE
(CENTIMETERS / SECOND – KNOTS – NAUTICAL MILES / DAY)

1 cm/sec = 0.019 kts = 0.466 NAUTICAL MILES / DAY
1 kt = 24 NAUTICAL MILES / DAY = 51.48 cm/sec
1 NAUTICAL MILE / DAY = 0.042 kts = 2.14 cm/sec

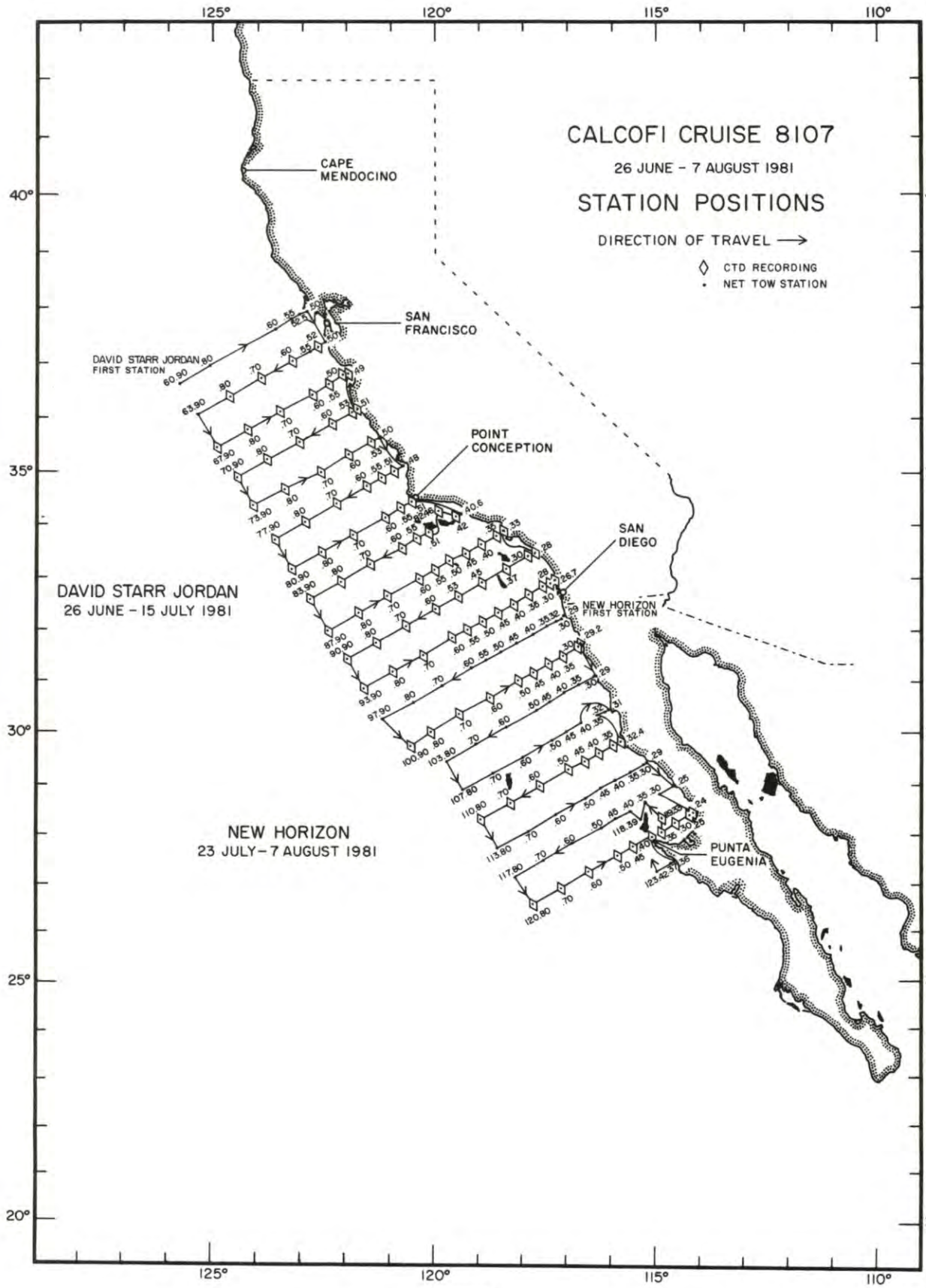

CALCOFI CRUISE 8107
26 JUNE - 7 AUGUST 1981
STATION POSITIONS
DIRECTION OF TRAVEL ⟶
◊ CTD RECORDING
• NET TOW STATION
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
DAVID STARR JORDAN
26 JUNE - 15 JULY 1981
DAVID STARR JORDAN FIRST STATION
NEW HORIZON
23 JULY - 7 AUGUST 1981
NEW HORIZON FIRST STATION
125°
120°
115°
110°
40°
35°
30°
25°
20°

FIGURE 1

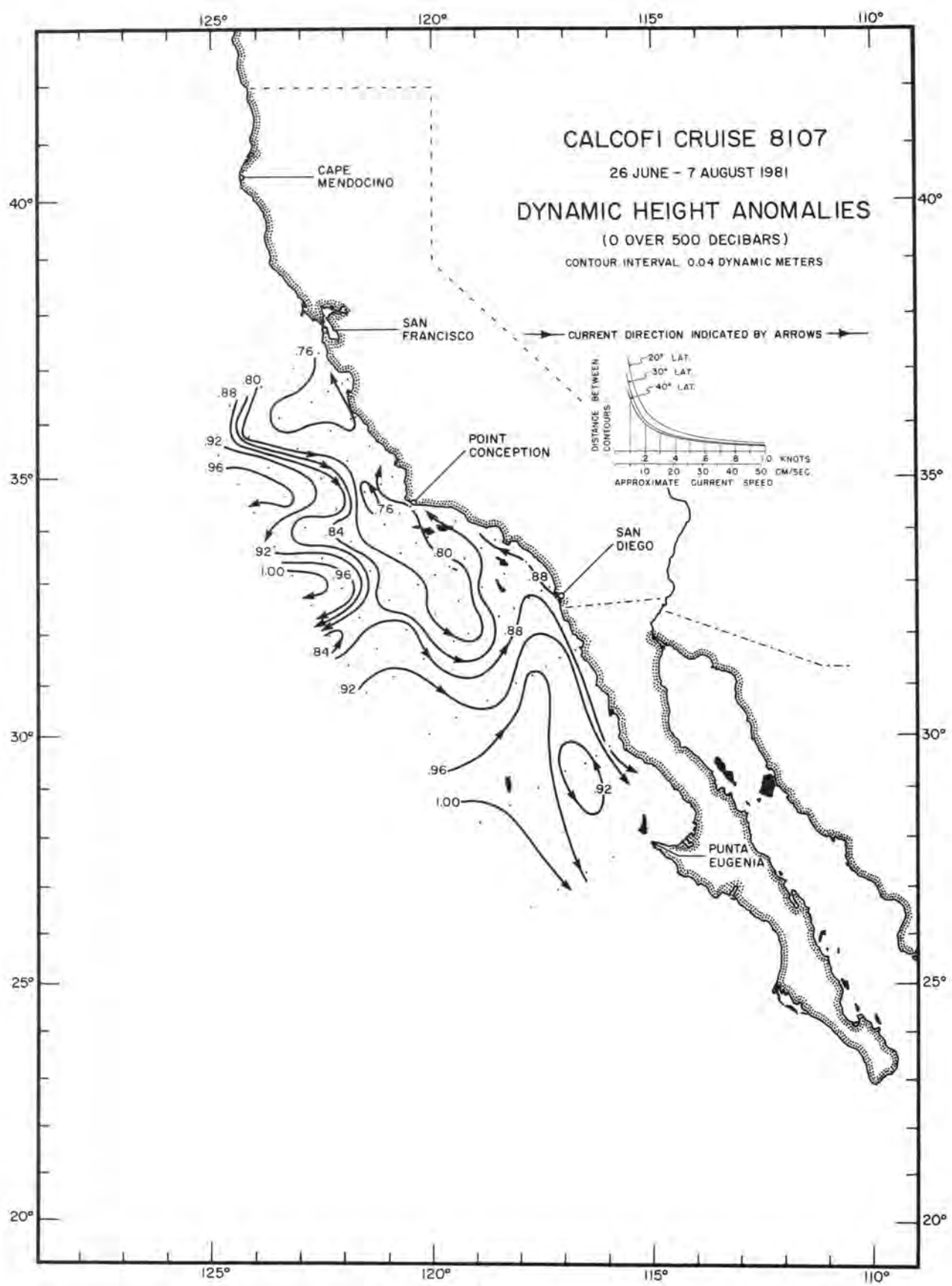

CALCOFI CRUISE 8107
26 JUNE – 7 AUGUST 1981
DYNAMIC HEIGHT ANOMALIES
(0 OVER 500 DECIBARS)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
CURRENT DIRECTION INDICATED BY ARROWS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
.2 .4 .6 .8 1.0 KNOTS
10 20 30 40 50 CM/SEC.
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
.76
.80
.88
.92
.96
1.00
.84

FIGURE 2

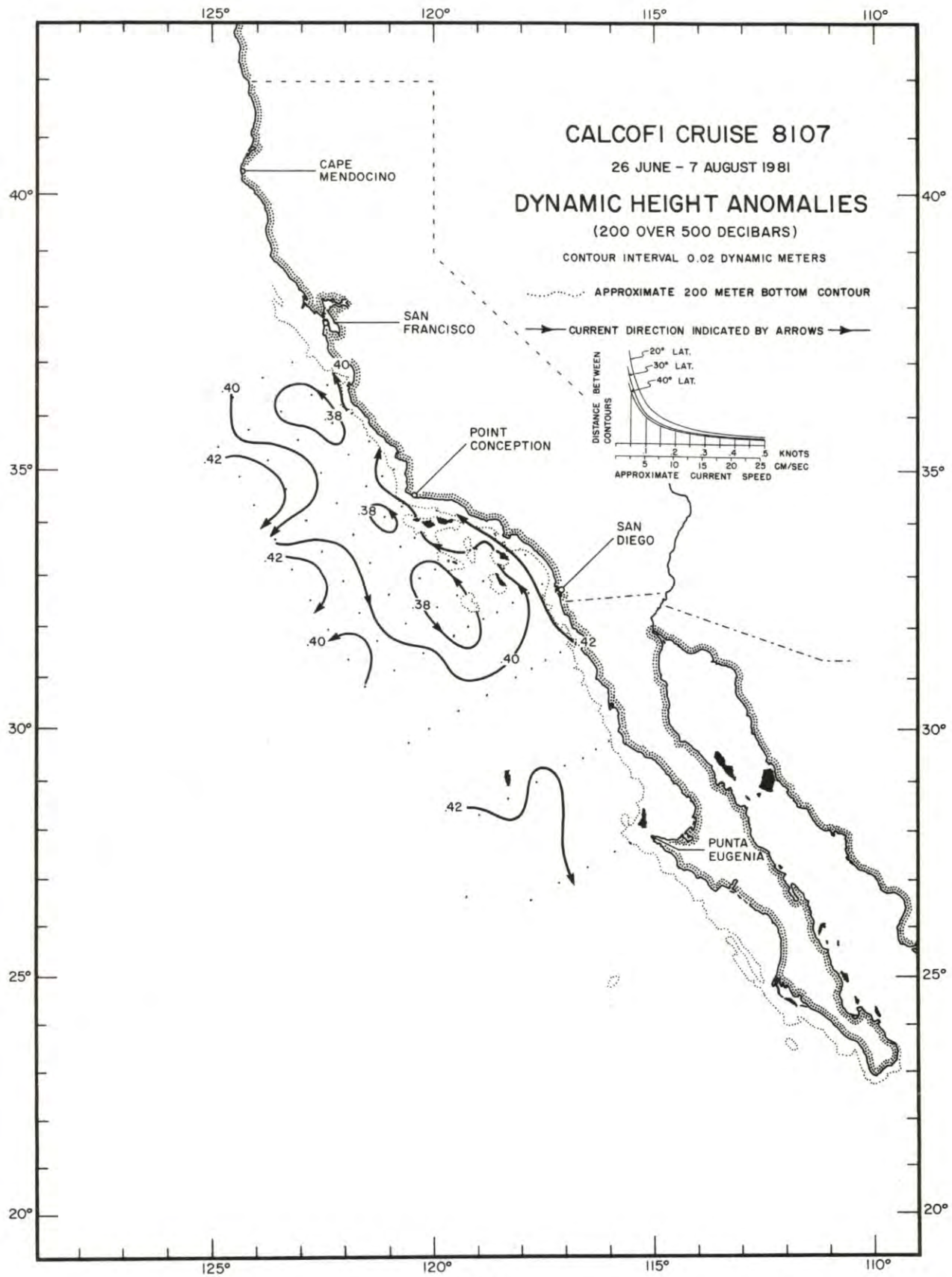

CALCOFI CRUISE 8107
26 JUNE – 7 AUGUST 1981
DYNAMIC HEIGHT ANOMALIES
(200 OVER 500 DECIBARS)
CONTOUR INTERVAL 0.02 DYNAMIC METERS
APPROXIMATE 200 METER BOTTOM CONTOUR
CURRENT DIRECTION INDICATED BY ARROWS
20° LAT.
30° LAT.
40° LAT.
DISTANCE BETWEEN CONTOURS
APPROXIMATE CURRENT SPEED
KNOTS
CM/SEC
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
.40
.38
.42

FIGURE 3

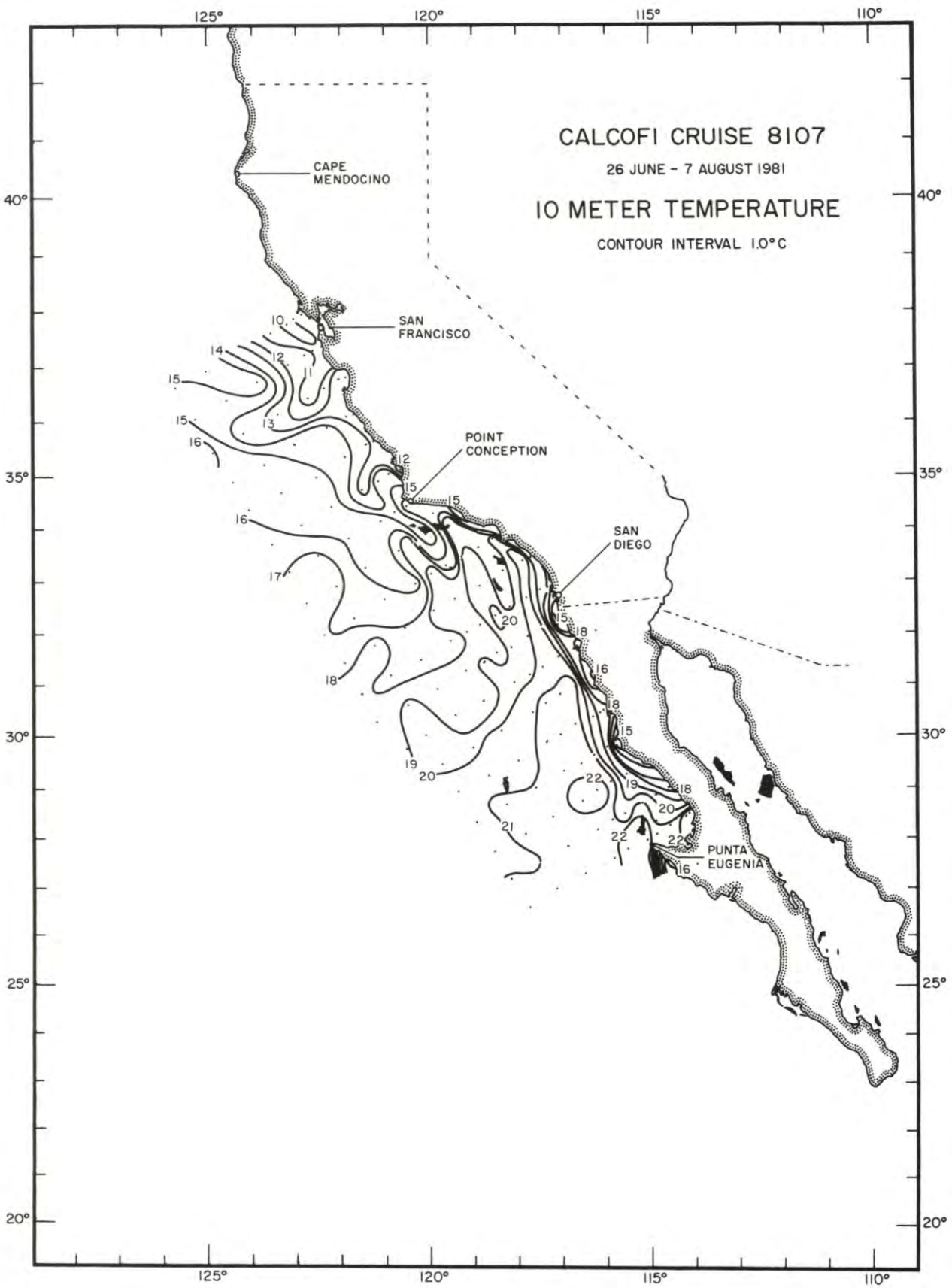

CALCOFI CRUISE 8107
26 JUNE - 7 AUGUST 1981
10 METER TEMPERATURE
CONTOUR INTERVAL 1.0°C
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°

FIGURE 4

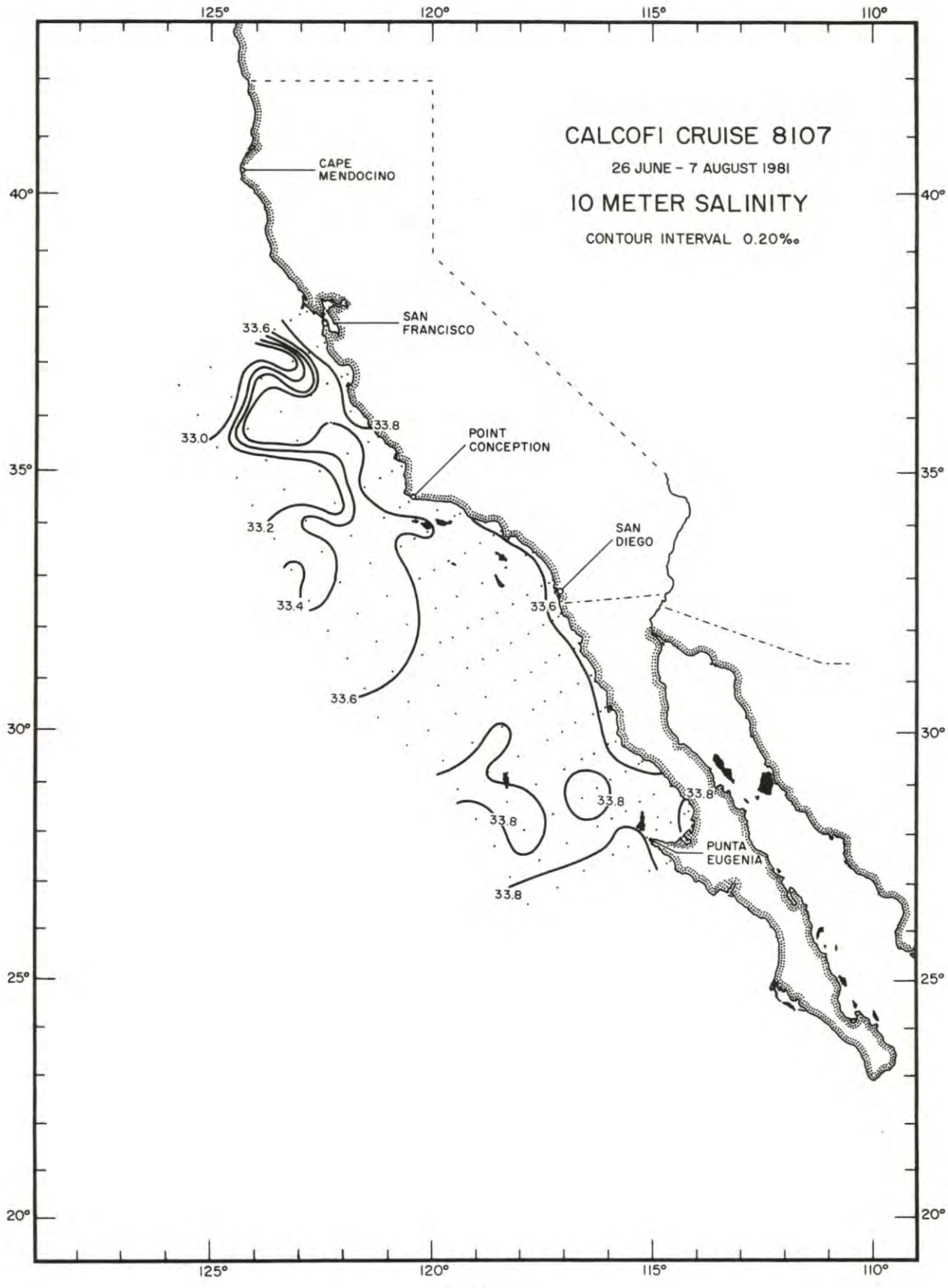

CALCOFI CRUISE 8107
26 JUNE - 7 AUGUST 1981
10 METER SALINITY
CONTOUR INTERVAL 0.20‰
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
33.0
33.2
33.4
33.6
33.8
125°
120°
115°
110°
40°
35°
30°
25°
20°

FIGURE 5

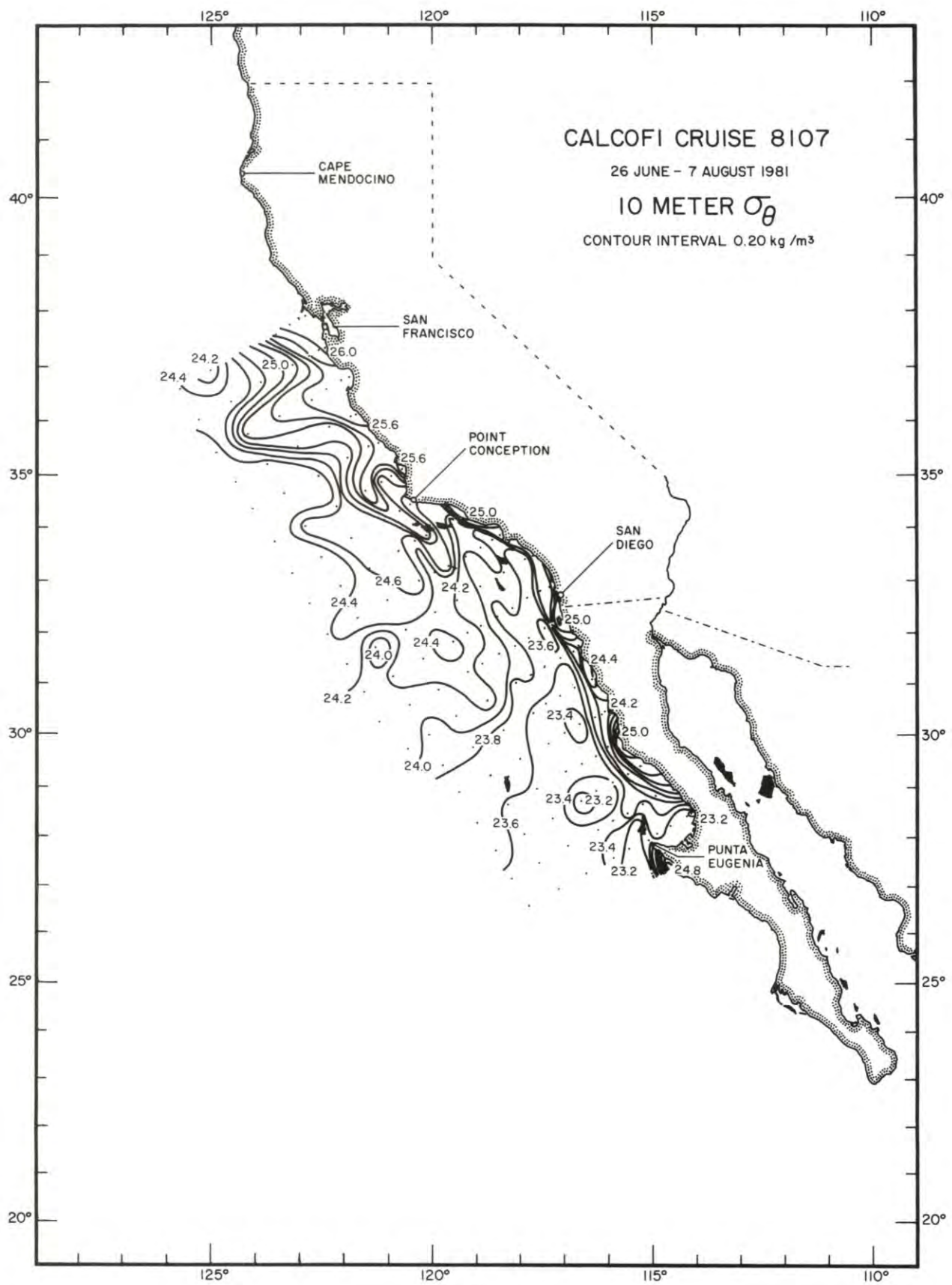

CALCOFI CRUISE 8107
26 JUNE - 7 AUGUST 1981
10 METER σ_θ
CONTOUR INTERVAL 0.20 kg /m3
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
24.2
24.4
25.0
26.0
25.6
24.6
24.0
23.6
23.8
23.4
23.2
24.8

FIGURE 6

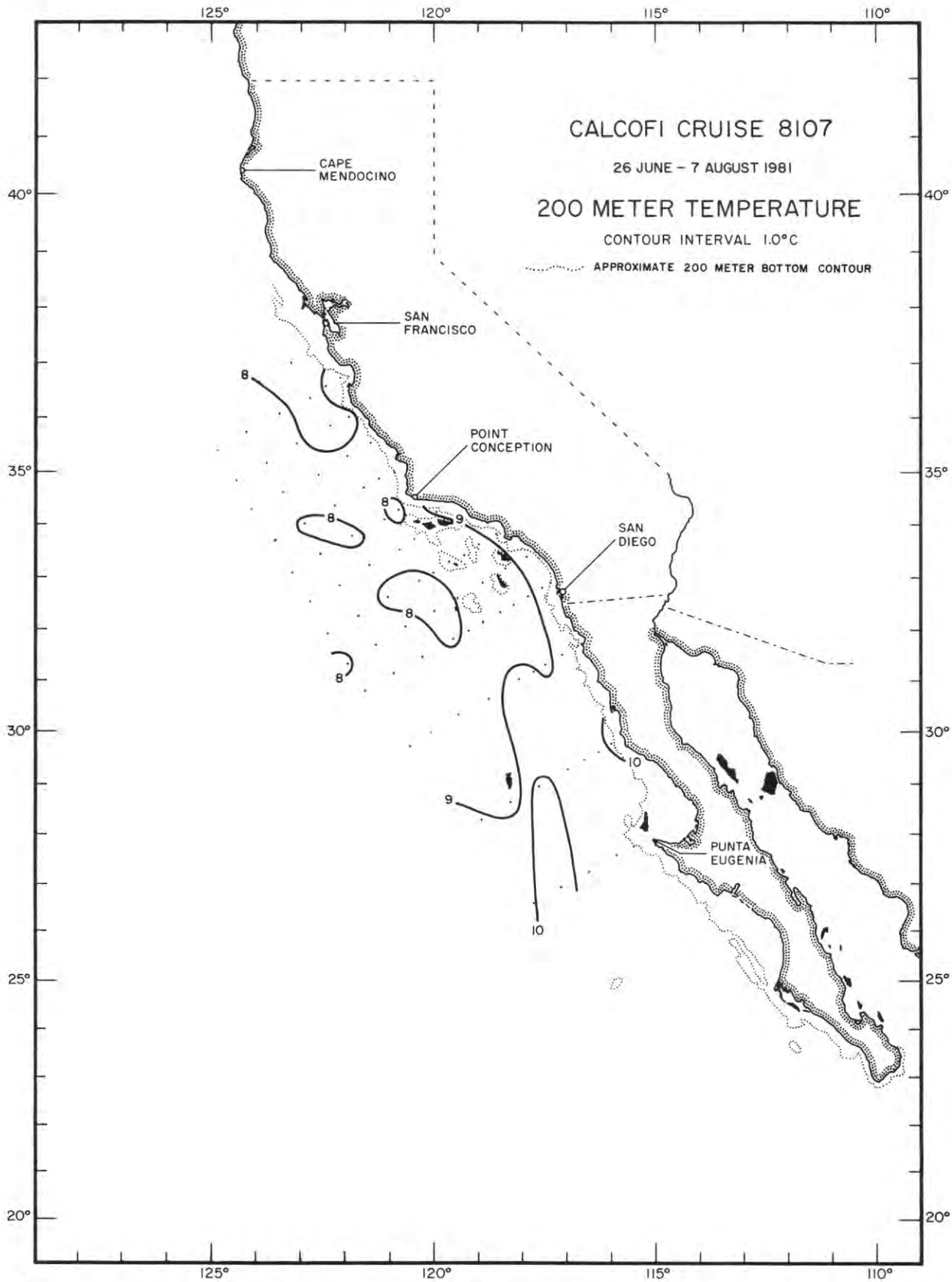

CALCOFI CRUISE 8107
26 JUNE – 7 AUGUST 1981
200 METER TEMPERATURE
CONTOUR INTERVAL 1.0°C
APPROXIMATE 200 METER BOTTOM CONTOUR
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
8
9
10

FIGURE 7

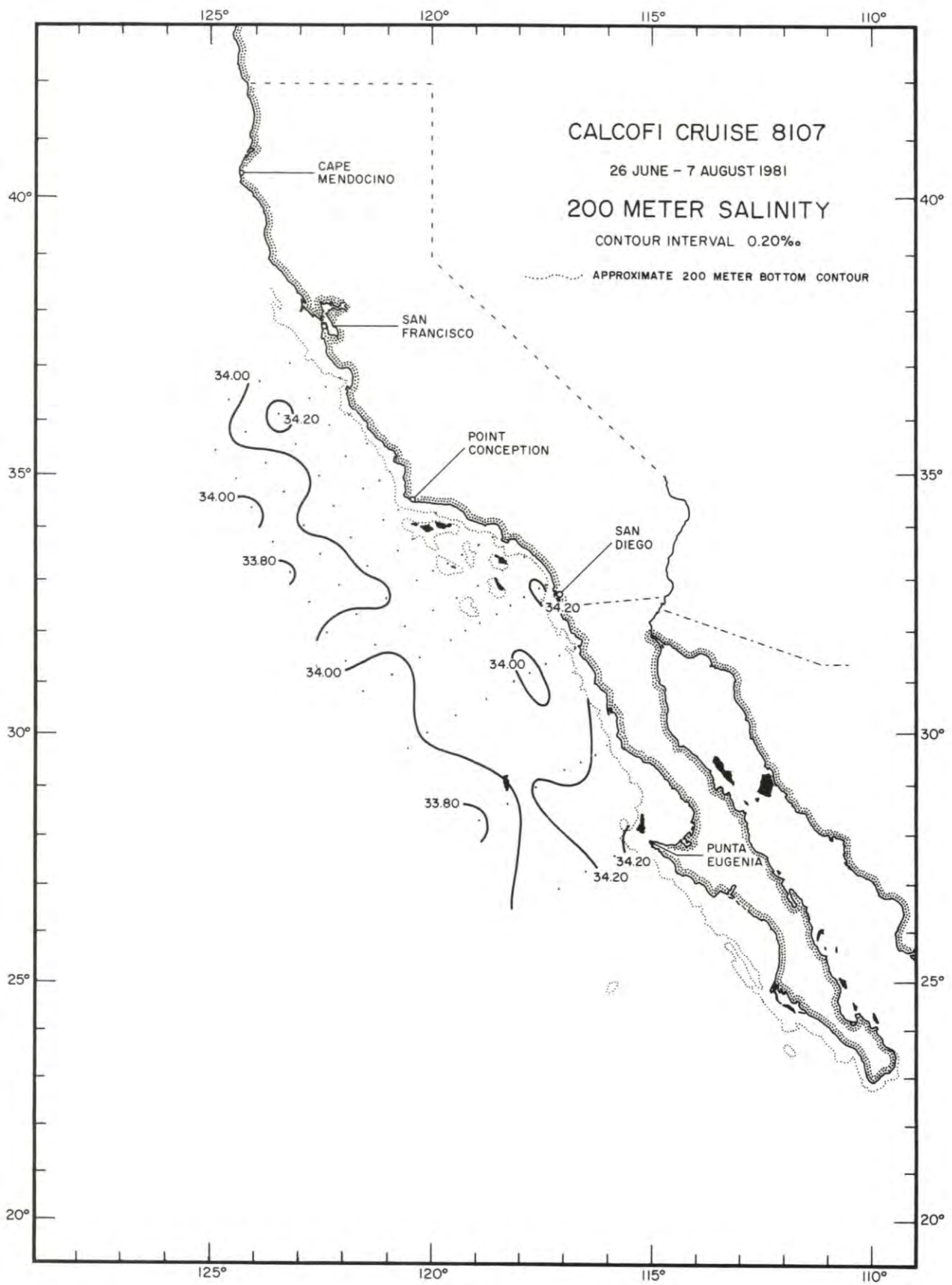

CALCOFI CRUISE 8107
26 JUNE – 7 AUGUST 1981
200 METER SALINITY
CONTOUR INTERVAL 0.20‰
APPROXIMATE 200 METER BOTTOM CONTOUR
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
34.00
34.20
33.80
125°
120°
115°
110°
40°
35°
30°
25°
20°

FIGURE 8

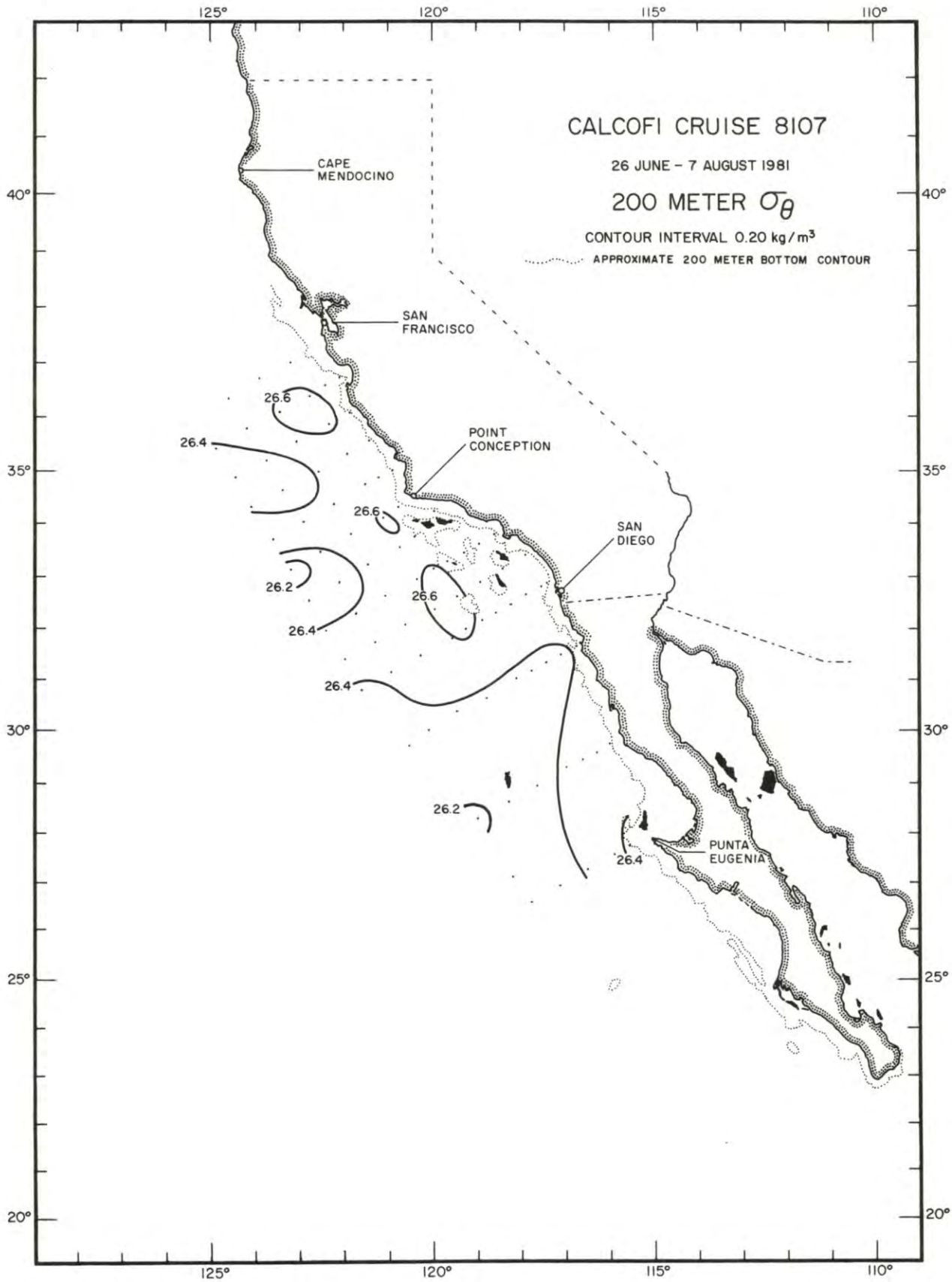

CALCOFI CRUISE 8107
26 JUNE – 7 AUGUST 1981
200 METER σ_θ
CONTOUR INTERVAL 0.20 kg/m³
APPROXIMATE 200 METER BOTTOM CONTOUR
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
26.6
26.4
26.2
125°
120°
115°
110°
40°
35°
30°
25°
20°

FIGURE 9

PERSONNEL

Cruise 8107

SHIPS' CAPTAINS

Ferreira, Manuel, RV *David Starr Jordan*
Johnson, Curtis D., RV *New Horizon*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

RV *David Starr Jordan*

Metoyer, Jack D. (in charge)	Biological Technician, NMFS
Abramenkoff, Dimitry N.	Biological Technician, NMFS
Butler, John L.	Fishery Biologist, NMFS
Cass, R.	Seaworthy Systems
Flerx, William C.	Fishery Biologist, NMFS
Graham, Jery B.	Electronics Technician, NMFS
MacDonald, J.	Seaworthy Systems

RV *New Horizon*

Schmitt, James A. (in charge)	Electronics Technician, SIO
Abramenkoff, Dimitry N.	Biological Technician, NMFS
Mauck, William W.	Marine Technician, SIO
Morales, Ruben A.	Student, ESCM/UABC
Rowe, Raymond A.	Marine Technician, SIO
Vega V., Armando	Marine Biologist, INP
Voss, Kenneth J.	Research Assistant, TAMU

STATION 63 52 RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
37 18.6 N	122 37.1 W	28/06/81	2127 GMT	89 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
160	16 KT	160 04 03	2	1011.9 MB	14.3 C	13.0 C	8/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	11.33	11.33	33.973	25.917	207.6	.000	0
10	11.01	11.01	34.021	26.012	198.8	.020	10
20	10.54	10.54	34.070	26.134	187.5	.039	20
30	9.63	9.63	34.072	26.290	172.8	.057	30
40	8.98	8.96	34.083	26.404	162.1	.074	40
50	8.77	8.76	34.098	26.449	158.0	.090	50
70	8.67	8.66	34.110	26.474	156.0	.121	70

CALCOFI CRUISE 8107 STATION 63 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
37 02.6 N	123 11.7 W	29/06/81	0300 GMT	2595 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
180	11 KT		2	1011.9 MB	13.6 C	12.8 C	8/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	12.20	12.20	32.972	24.977	297.0	.000	0
10	11.50	11.50	32.999	25.128	282.8	.029	10
20	10.98	10.98	33.158	25.346	262.3	.056	20
30	10.85	10.85	33.220	25.417	255.6	.082	30
40	10.85	10.85	33.301	25.481	250.0	.107	40
50	10.66	10.65	33.339	25.544	244.2	.131	50
75	9.95	9.94	33.576	25.850	215.5	.189	75
100	9.43	9.42	33.841	26.144	188.2	.241	101
125	9.27	9.26	33.880	26.201	183.2	.287	126
150	8.52	8.50	33.893	26.329	171.3	.331	151
175	8.18	8.16	33.958	26.432	161.9	.372	176
200	7.89	7.87	34.009	26.515	154.4	.412	201
225	7.44	7.42	34.050	26.612	145.4	.449	226
250	7.30	7.28	34.089	26.663	140.9	.486	252
275	7.02	6.99	34.076	26.693	138.3	.521	277
300	6.83	6.80	34.095	26.733	134.9	.554	302
350	6.39	6.36	34.122	26.813	127.7	.619	352
400	5.84	5.81	34.122	26.883	121.3	.682	403
450	5.68	5.64	34.165	26.938	116.7	.741	453
500	5.30	5.26	34.177	26.993	111.6	.799	504
520	5.24	5.20	34.196	27.015	109.7	.821	524

STATION 63 70 RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
36 42.6 N	123 54.8 W	29/06/81	0840 GMT	3918 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
190	08 KT			1012.9 MB	13.3 C	12.4 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	12.48	12.48	33.224	25.119	283.4	.000	0
10	12.61	12.61	33.529	25.331	263.5	.027	10
20	12.09	12.09	33.555	25.451	252.4	.053	20
30	11.78	11.78	33.530	25.490	248.9	.078	30
40	11.84	11.83	33.576	25.515	246.8	.102	40
50	11.26	11.25	33.530	25.586	240.2	.127	50
75	10.28	10.27	33.783	25.956	205.5	.182	75
100	9.53	9.52	33.869	26.149	187.6	.233	101
125	8.92	8.91	33.864	26.243	179.1	.278	126
150	8.46	8.44	33.918	26.358	168.6	.322	151
175	8.23	8.21	33.977	26.439	161.2	.363	176
200	7.99	7.97	34.032	26.518	154.1	.402	201
225	7.61	7.59	34.034	26.576	149.0	.439	226
250	7.11	7.09	34.025	26.639	143.1	.477	252
275	7.05	7.02	34.054	26.671	140.5	.512	277
300	6.78	6.75	34.082	26.729	135.1	.546	302
350	6.37	6.34	34.086	26.787	130.1	.612	352
400	6.00	5.97	34.121	26.863	123.4	.676	403
450	6.03	5.99	34.222	26.939	116.9	.736	453
500	5.78	5.74	34.240	26.985	113.0	.794	504
540	5.51	5.46	34.263	27.036	108.3	.838	544

CALCOFI CRUISE 8107 STATION 63 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
36 22.6 N	124 37.7 W	29/06/81	1455 GMT	4206 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
190	04 KT	340 06 07	2	1013.9 MB	13.7 C	12.5 C	8/8 SC

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	14.89	14.89	32.940	24.409	351.1	.000	0
10	14.56	14.56	32.975	24.507	342.0	.035	10
20	14.36	14.36	32.909	24.498	343.2	.069	20
30	13.21	13.21	32.803	24.651	328.3	.102	30
40	13.05	13.04	32.823	24.699	324.5	.135	40
50	12.80	12.79	32.830	24.753	319.6	.167	50
75	10.92	10.91	33.060	25.281	269.7	.240	75
100	10.01	10.00	33.472	25.760	224.7	.301	100
125	9.27	9.26	33.712	26.069	195.7	.356	126
150	8.61	8.59	33.801	26.243	179.5	.402	151
175	8.18	8.16	33.860	26.355	169.2	.446	176
200	8.06	8.04	33.959	26.451	160.5	.487	201
225	7.92	7.90	34.012	26.513	155.0	.526	226
250	7.59	7.57	34.035	26.579	149.0	.563	251
275	7.25	7.22	33.990	26.593	148.0	.602	277
300	6.90	6.87	34.046	26.685	139.4	.637	302
350	6.21	6.18	34.053	26.782	130.5	.704	352
400	6.03	6.00	34.111	26.851	124.5	.769	403
450	5.76	5.72	34.162	26.925	117.9	.829	453
500	5.26	5.22	34.170	26.992	111.7	.887	504

STATION 67 49 RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
36 49.2 N	121 59.1 W	01/07/81	0450 GMT	461 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
310	05 KT			1014.2 MB	12.3 C	12.0 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	12.38	12.38	33.842	25.618	236.0	.000	0
10	12.21	12.21	33.799	25.617	236.3	.023	10
20	11.34	11.34	33.897	25.856	213.8	.046	20
30	11.02	11.02	33.884	25.904	209.5	.067	30
40	10.55	10.55	33.883	25.987	201.9	.087	40
50	10.22	10.21	33.879	26.041	196.9	.107	50
75	9.56	9.55	33.924	26.187	183.5	.154	75
100	9.49	9.48	33.962	26.229	180.1	.201	101
125	9.46	9.45	33.981	26.249	178.7	.246	126
150	9.39	9.37	33.993	26.270	177.2	.290	151
175	9.12	9.10	34.044	26.354	169.7	.333	176
200	8.75	8.73	34.099	26.456	160.4	.374	201
225	8.24	8.22	34.146	26.573	149.5	.413	226
250	7.95	7.92	34.170	26.633	144.1	.451	252
275	7.72	7.69	34.177	26.673	140.7	.486	277
300	7.56	7.53	34.188	26.705	138.0	.521	302
350	7.33	7.30	34.195	26.744	135.1	.588	352
400	7.22	7.18	34.199	26.763	133.9	.656	403

CALCOFI CRUISE 8107 STATION 67 50

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
36 47.2 N	122 03.4 W	01/07/81	0255 GMT	296 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
320	06 KT	290 01 02	2	1014.6 MB	12.9 C	12.4 C	8/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	12.55	12.55	33.832	25.577	239.9	.000	0
10	11.93	11.93	33.881	25.734	225.2	.023	10
20	11.42	11.42	33.877	25.826	216.7	.045	20
30	10.99	10.99	33.909	25.929	207.2	.066	30
40	10.45	10.45	33.937	26.046	196.2	.086	40
50	10.10	10.09	33.955	26.121	189.4	.105	50
75	9.58	9.57	33.984	26.231	179.4	.151	75
100	9.22	9.21	34.028	26.324	171.0	.196	101
125	9.20	9.19	34.038	26.335	170.4	.239	126
150	9.15	9.13	34.045	26.349	169.6	.281	151
175	9.00	8.98	34.073	26.396	165.7	.323	176
200	8.66	8.64	34.134	26.497	156.4	.363	201
225	8.50	8.48	34.152	26.536	153.1	.401	226
250	8.32	8.29	34.165	26.574	149.9	.440	252

STATION 67 55 RV DAVID STARR JORDAN CALCOFI CRUISE 8107

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
36 37.2 N	122 24.9 W	30/06/81	2255 GMT	2595 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
290	12 KT	300 01 03	2	1016.3 MB	13.7 C	12.8 C	8/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	12.30	12.30	33.930	25.701	228.1	.000	0
10	11.78	11.78	33.753	25.663	232.0	.023	10
20	11.31	11.31	33.755	25.751	223.8	.046	20
30	10.88	10.88	33.840	25.895	210.4	.067	30
40	10.42	10.42	33.725	25.886	211.4	.088	40
50	9.61	9.60	33.745	26.038	197.1	.108	50
75	9.29	9.28	33.896	26.209	181.4	.155	75
100	8.88	8.87	33.933	26.304	172.9	.201	101
125	8.78	8.77	34.036	26.401	164.1	.243	126
150	8.66	8.64	34.075	26.450	159.9	.283	151
175	8.38	8.36	34.100	26.513	154.3	.322	176
200	8.11	8.09	34.126	26.574	148.8	.360	201
225	7.86	7.84	34.160	26.638	143.2	.396	226
250	7.63	7.61	34.195	26.700	137.6	.432	252
275	7.48	7.45	34.188	26.716	136.5	.466	277
300	7.10	7.07	34.176	26.760	132.5	.500	302
350	7.04	7.01	34.226	26.808	128.7	.565	352
400	6.44	6.40	34.199	26.868	123.3	.628	403
450	6.02	5.98	34.181	26.908	119.8	.689	453
500	5.80	5.76	34.228	26.973	114.1	.748	504

STATION 67 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
36 27.2 N	122 46.4 W	30/06/81	1930 GMT	3068 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
290	08 KT	310 02 06	2	1016.5 MB	14.2 C	13.1 C	8/8 SC

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	11.72	11.72	33.445	25.434	253.5	.000	0
10	11.29	11.29	33.568	25.609	237.1	.024	10
20	10.74	10.74	33.646	25.768	222.2	.047	20
30	10.45	10.45	33.616	25.796	219.8	.069	30
40	10.00	10.00	33.734	25.965	203.9	.090	40
50	9.67	9.66	33.784	26.059	195.2	.110	50
75	9.24	9.23	33.882	26.206	181.6	.157	75
100	8.76	8.75	33.971	26.352	168.2	.202	101
125	8.54	8.53	34.035	26.437	160.7	.243	126
150	8.29	8.27	34.058	26.493	155.7	.282	151
175	7.98	7.96	34.104	26.576	148.2	.320	176
200	7.77	7.75	34.127	26.625	143.9	.356	201
225	7.36	7.34	34.131	26.688	138.3	.391	226
250	7.56	7.54	34.203	26.716	136.1	.427	252
275	7.07	7.04	34.166	26.756	132.4	.460	277
300	7.09	7.06	34.186	26.770	131.6	.493	302
350	6.57	6.54	34.213	26.861	123.3	.556	352
400	6.23	6.19	34.218	26.910	119.1	.617	403
450	5.91	5.87	34.273	26.995	111.5	.674	453
500	5.56	5.52	34.284	27.047	107.0	.730	504

STATION 67 70 RV DAVID STARR JORDAN CALCOFI CRUISE 8107

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
36 07.0 N	123 29.3 W	30/06/81	1325 GMT	3635 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
310	06 KT	310 02 04	2	1016.3 MB	14.0 C	12.3 C	8/8 SC

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	13.25	13.25	33.734	25.363	260.3	.000	0
10	12.71	12.71	33.727	25.465	250.8	.025	10
20	12.34	12.34	33.736	25.544	243.6	.050	20
30	12.05	12.05	33.725	25.591	239.3	.074	30
40	11.40	11.40	33.763	25.741	225.2	.097	40
50	10.47	10.46	33.824	25.955	205.1	.119	50
75	9.60	9.59	33.904	26.165	185.6	.167	75
100	9.12	9.11	33.974	26.298	173.5	.213	101
125	8.74	8.73	34.040	26.410	163.3	.255	126
150	8.49	8.47	34.096	26.493	155.8	.295	151
175	8.34	8.32	34.169	26.573	148.6	.333	176
200	8.30	8.28	34.208	26.610	145.6	.369	201
225	8.01	7.99	34.210	26.656	141.6	.405	226
250	7.65	7.63	34.224	26.720	135.8	.441	252
275	7.19	7.16	34.178	26.749	133.2	.474	277
300	7.15	7.12	34.228	26.794	129.3	.507	302
350	6.80	6.77	34.224	26.840	125.6	.570	352
400	6.43	6.39	34.223	26.888	121.4	.632	403
450	6.16	6.12	34.247	26.943	116.7	.691	453
500	5.72	5.68	34.286	27.029	108.8	.748	504
520	5.52	5.48	34.274	27.044	107.4	.770	524

STATION 67 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
35 47.2 N	124 11.7 W	30/06/81	0745 GMT	4100 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
220	03 KT			1015.6 MB	14.0 C	12.9 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	14.82	14.82	33.700	25.010	293.9	.000	0
10	13.56	13.56	33.748	25.311	265.5	.028	10
20	13.27	13.27	33.774	25.390	258.2	.054	20
30	13.23	13.23	33.776	25.400	257.5	.080	30
40	13.08	13.07	33.753	25.413	256.6	.105	40
50	10.99	10.98	33.678	25.750	224.7	.129	50
75	9.94	9.93	33.738	25.979	203.3	.182	75
100	9.08	9.07	33.822	26.185	184.1	.232	101
125	8.86	8.85	33.926	26.302	173.5	.277	126
150	8.69	8.67	34.034	26.413	163.4	.319	151
175	8.32	8.30	34.075	26.502	155.3	.358	176
200	8.15	8.13	34.090	26.540	152.1	.396	201
225	7.92	7.90	34.099	26.582	148.5	.434	226
250	7.50	7.48	34.086	26.633	143.9	.471	252
275	7.18	7.15	34.080	26.673	140.3	.507	277
300	6.82	6.79	34.101	26.739	134.3	.541	302
350	6.53	6.50	34.158	26.823	126.9	.605	352
400	6.14	6.10	34.165	26.880	121.9	.668	403
450	5.68	5.64	34.166	26.938	116.6	.728	453
500	5.37	5.33	34.211	27.011	110.0	.785	504

STATION 67 90 RV DAVID STARR JORDAN CALCOFI CRUISE 8107

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
35 27.2 N	124 54.2 W	30/06/81	0230 GMT	4493 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
360	03 KT	310 02 03	1	1015.2 MB	15.3 C	13.4 C	7/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	16.51	16.51	32.974	24.075	382.9	.000	0
10	16.06	16.06	33.023	24.215	369.9	.037	10
20	16.00	16.00	33.019	24.226	369.2	.074	20
30	15.95	15.95	33.022	24.240	368.1	.111	30
40	15.95	15.94	33.031	24.247	367.8	.148	40
50	15.92	15.91	33.009	24.237	369.0	.184	50
75	12.92	12.91	33.075	24.920	304.3	.268	75
100	11.38	11.37	33.352	25.427	256.6	.338	100
125	9.87	9.86	33.586	25.872	214.5	.399	126
150	9.07	9.05	33.727	26.113	191.9	.449	151
175	8.70	8.68	33.817	26.242	180.1	.495	176
200	8.25	8.23	33.926	26.396	165.7	.538	201
225	7.98	7.96	33.976	26.476	158.5	.579	226
250	7.79	7.77	34.019	26.538	153.0	.617	251
275	7.44	7.41	34.028	26.596	147.8	.656	277
300	7.17	7.14	34.048	26.650	143.0	.692	302
350	6.77	6.74	34.065	26.718	137.0	.762	352
400	6.30	6.26	34.092	26.802	129.5	.829	403
450	5.85	5.81	34.132	26.890	121.3	.891	453
500	5.57	5.53	34.167	26.953	115.8	.950	503

STATION 70 51

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
36 10.9 N	121 43.6 W	01/07/81	1125 GMT	276 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
130	05 KT			1013.2 MB	12.0 C	11.6 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	12.50	12.50	33.858	25.607	237.1	.000	0
10	12.31	12.31	33.840	25.630	235.1	.023	10
20	11.96	11.96	33.898	25.742	224.7	.046	20
30	11.90	11.90	33.876	25.736	225.5	.069	30
40	11.79	11.78	33.878	25.759	223.6	.091	40
50	10.88	10.87	33.935	25.969	203.8	.112	50
75	10.36	10.35	33.936	26.062	195.5	.162	75
100	9.63	9.62	34.006	26.240	179.1	.210	101
125	9.32	9.31	34.035	26.314	172.5	.254	126
150	9.22	9.20	34.061	26.351	169.5	.296	151
175	9.02	9.00	34.104	26.417	163.7	.338	176
200	8.79	8.77	34.141	26.482	157.9	.378	201
225	8.60	8.58	34.168	26.533	153.5	.416	226
250	8.39	8.36	34.191	26.584	149.1	.455	252

STATION 70 53 RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
36 06.9 N	121 52.1 W	01/07/81	1400 GMT	907 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
340	09 KT	310 04 04	2	1013.5 MB	12.0 C	11.7 C	8/8 SC

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	13.22	13.22	33.838	25.449	252.1	.000	0
10	12.54	12.54	33.855	25.597	238.2	.024	10
20	11.97	11.97	33.802	25.665	232.0	.048	20
30	11.48	11.48	33.866	25.807	218.8	.070	30
40	11.14	11.14	33.884	25.883	211.8	.092	40
50	10.68	10.67	33.875	25.958	204.9	.112	50
75	9.64	9.63	33.906	26.160	186.1	.161	75
100	9.10	9.09	33.980	26.306	172.7	.207	101
125	8.85	8.84	34.064	26.411	163.2	.249	126
150	8.44	8.42	34.078	26.486	156.4	.289	151
175	8.23	8.21	34.111	26.544	151.3	.327	176
200	7.95	7.93	34.103	26.580	148.2	.364	201
225	7.78	7.76	34.126	26.624	144.5	.400	226
250	7.71	7.69	34.143	26.647	142.7	.437	252
275	7.66	7.63	34.196	26.697	138.5	.472	277
300	7.48	7.45	34.222	26.743	134.3	.506	302
350	7.15	7.12	34.245	26.808	128.8	.571	352
400	6.74	6.70	34.256	26.873	123.1	.635	403
450	6.47	6.43	34.259	26.912	119.9	.695	453
500	6.22	6.18	34.272	26.955	116.4	.755	504
520	6.07	6.02	34.283	26.983	113.8	.778	524

CALCOFI CRUISE 8107 STATION 70 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
35 52.9 N	122 21.9 W	01/07/81	1820 GMT	3068 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
340	16 KT	310 06 06	2	1014.6 MB	14.3 C	12.2 C	8/8 SC

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	14.21	14.21	33.613	25.072	287.9	.000	0
10	14.20	14.20	33.616	25.077	287.7	.029	10
20	13.83	13.83	33.627	25.163	279.8	.057	20
30	13.44	13.44	33.634	25.248	272.0	.084	30
40	13.19	13.18	33.606	25.277	269.5	.111	40
50	11.18	11.17	33.604	25.658	233.4	.136	50
75	9.80	9.79	33.804	26.053	196.2	.190	75
100	9.04	9.03	33.915	26.264	176.6	.238	101
125	8.70	8.69	33.976	26.366	167.4	.281	126
150	8.27	8.25	34.007	26.456	159.2	.321	151
175	8.04	8.02	34.088	26.555	150.2	.360	176
200	7.71	7.69	34.095	26.609	145.4	.396	201
225	7.43	7.41	34.098	26.652	141.7	.432	226
250	7.23	7.21	34.123	26.700	137.4	.468	252
275	7.04	7.01	34.132	26.733	134.6	.502	277
300	6.90	6.87	34.145	26.763	132.0	.535	302
350	6.32	6.29	34.166	26.857	123.5	.598	352
400	5.75	5.72	34.156	26.921	117.6	.659	403
450	5.43	5.39	34.173	26.974	113.0	.716	453
500	5.18	5.14	34.221	27.042	106.9	.772	504

STATION 70 70 RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
35 32.9 N	123 04.4 W	02/07/81	0035 GMT	3730 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
310	14 KT	320 05 05	2	1013.5 MB	15.3 C	13.9 C	8/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	14.47	14.47	33.677	25.067	288.4	.000	0
10	14.30	14.30	33.676	25.102	285.4	.029	10
20	13.93	13.93	33.615	25.133	282.7	.057	20
30	13.28	13.28	33.630	25.277	269.2	.084	30
40	12.04	12.03	33.531	25.442	253.7	.110	40
50	10.75	10.74	33.592	25.725	227.0	.134	50
75	9.28	9.27	33.634	26.006	200.6	.187	75
100	9.32	9.31	33.891	26.201	182.7	.237	101
125	8.98	8.97	33.948	26.300	173.7	.281	126
150	8.54	8.52	33.984	26.397	164.9	.323	151
175	8.27	8.25	34.030	26.475	157.9	.363	176
200	8.06	8.04	34.076	26.543	151.8	.402	201
225	7.76	7.74	34.104	26.609	145.9	.439	226
250	7.45	7.43	34.105	26.655	141.8	.476	252
275	7.10	7.07	34.098	26.698	137.9	.511	277
300	6.87	6.84	34.099	26.731	135.1	.544	302
350	6.45	6.42	34.127	26.810	128.1	.610	352
400	5.94	5.91	34.143	26.887	121.0	.673	403
450	5.77	5.73	34.215	26.966	114.1	.731	453
500	5.47	5.43	34.234	27.018	109.5	.787	504

CALCOFI CRUISE 8107 STATION 70 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
35 12.9 N	123 46.7 W	02/07/81	0655 GMT	4110 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
320	14 KT			1012.9 MB	15.5 C	13.8 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	15.81	15.81	33.012	24.262	365.0	.000	0
10	15.80	15.80	33.018	24.270	364.7	.036	10
20	15.80	15.80	33.020	24.271	364.8	.073	20
30	15.46	15.46	32.963	24.303	362.0	.109	30
40	15.79	15.78	33.146	24.371	355.9	.145	40
50	15.78	15.77	33.185	24.404	353.1	.180	50
75	13.12	13.11	33.151	24.940	302.5	.261	75
100	12.59	12.58	33.296	25.156	282.5	.334	100
125	10.36	10.35	33.474	25.702	230.8	.401	126
150	9.50	9.48	33.701	26.024	200.5	.454	151
175	9.01	8.99	33.828	26.202	183.9	.502	176
200	8.64	8.62	33.951	26.357	169.7	.546	201
225	8.34	8.32	34.012	26.451	161.1	.587	226
250	7.93	7.91	34.028	26.525	154.4	.626	251
275	7.59	7.56	34.058	26.598	147.7	.665	277
300	7.28	7.25	34.061	26.645	143.5	.701	302
350	6.69	6.66	34.097	26.754	133.5	.770	352
400	6.82	6.78	34.104	26.743	135.5	.838	403
450	5.73	5.69	34.152	26.921	118.3	.901	453
500	5.60	5.56	34.197	26.973	113.9	.958	503

STATION 70 90 RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
34 52.9 N	124 28.8 W	02/07/81	1250 GMT	4493 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
340	16 KT	340 06 08	2	1013.2 MB	15.6 C	13.8 C	8/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	15.57	15.57	33.079	24.367	355.1	.000	0
10	15.58	15.58	33.074	24.362	355.9	.035	10
20	15.49	15.49	33.057	24.369	355.5	.071	20
30	15.19	15.19	33.041	24.423	350.7	.106	30
40	14.61	14.60	33.126	24.613	332.8	.140	40
50	13.92	13.91	33.322	24.909	304.8	.172	50
75	12.68	12.67	33.322	25.158	281.6	.245	75
100	11.87	11.86	33.492	25.445	254.9	.311	100
125	11.43	11.41	33.530	25.557	244.9	.376	126
150	11.25	11.23	33.662	25.692	232.6	.435	151
175	10.26	10.24	33.798	25.973	206.1	.490	176
200	8.90	8.88	33.808	26.204	184.2	.538	201
225	8.49	8.47	33.911	26.349	170.8	.582	226
250	8.25	8.22	33.967	26.429	163.6	.624	251
275	7.66	7.63	34.008	26.549	152.4	.665	277
300	7.45	7.42	34.051	26.613	146.6	.702	302
350	6.95	6.92	34.079	26.705	138.4	.773	352
400	6.52	6.48	34.102	26.781	131.6	.841	403
450	6.09	6.05	34.112	26.845	125.8	.905	453
500	5.70	5.66	33.789	26.638	145.5	.972	503

CALCOFI CRUISE 8107 STATION 73 53

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
35 32.6 N	121 28.1 W	03/07/81	1700 GMT	488 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
330	08 KT	280 04 06	2	1015.9 MB	14.8 C	13.8 C	8/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	13.80	13.80	33.613	25.158	279.8	.000	0
10	13.32	13.32	33.628	25.267	269.7	.027	10
20	13.03	13.03	33.695	25.377	259.4	.054	20
30	12.49	12.49	33.727	25.508	247.2	.079	30
40	11.54	11.54	33.756	25.710	228.2	.103	40
50	10.92	10.91	33.778	25.840	216.1	.125	50
75	9.87	9.86	33.843	26.072	194.4	.176	75
100	9.05	9.04	33.958	26.296	173.6	.223	101
125	8.84	8.83	34.022	26.380	166.1	.265	126
150	8.76	8.74	34.074	26.434	161.5	.306	151
175	8.59	8.57	34.145	26.516	154.1	.345	176
200	8.40	8.38	34.187	26.579	148.6	.383	201
225	8.25	8.23	34.198	26.610	146.0	.419	226
250	7.87	7.84	34.191	26.662	141.4	.456	252
275	7.71	7.68	34.187	26.682	139.8	.491	277
300	7.64	7.61	34.206	26.708	137.8	.526	302
350	7.44	7.41	34.208	26.739	135.6	.594	352
400	6.83	6.79	34.213	26.827	127.5	.660	403
450	6.51	6.47	34.248	26.898	121.3	.722	453

STATION 73 60 RV DAVID STARR JORDAN CALCOFI CRUISE 8107

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
35 18.6 N	121 57.7 W	03/07/81	1235 GMT	2502 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
260	03 KT	290 03 07	1	1015.2 MB	14.4 C	13.0 C	1/8 CU

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	14.52	14.52	33.514	24.930	301.4	.000	0
10	14.52	14.52	33.562	24.968	298.1	.030	10
20	14.49	14.49	33.564	24.976	297.7	.059	20
30	13.90	13.90	33.547	25.087	287.4	.089	30
40	12.20	12.19	33.588	25.456	252.4	.115	40
50	10.74	10.73	33.477	25.637	235.3	.140	50
75	9.82	9.81	33.681	25.954	205.6	.195	75
100	9.07	9.06	33.773	26.148	187.6	.245	101
125	8.82	8.81	33.906	26.292	174.4	.290	126
150	8.47	8.45	33.997	26.418	162.9	.332	151
175	8.32	8.30	34.044	26.478	157.6	.372	176
200	8.04	8.02	34.075	26.545	151.6	.410	201
225	7.54	7.52	34.066	26.611	145.6	.447	226
250	7.23	7.21	34.070	26.658	141.4	.484	252
275	6.96	6.93	34.082	26.705	137.2	.519	277
300	6.74	6.71	34.094	26.744	133.7	.552	302
350	6.33	6.30	34.139	26.834	125.6	.617	352
400	5.91	5.88	34.161	26.906	119.3	.679	403
450	5.67	5.63	34.189	26.958	114.8	.737	453
500	5.54	5.50	34.232	27.008	110.5	.794	504
520	5.45	5.41	34.240	27.025	109.1	.816	524

STATION 73 70 CALCOFI CRUISE 8107

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
34 58.6 N	122 39.9 W	03/07/81	0657 GMT	4110 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
060	02 KT			1014.2 MB	16.0 C	13.2 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	15.60	15.60	33.003	24.302	361.2	.000	0
10	15.26	15.26	33.004	24.378	354.3	.036	10
20	15.20	15.20	33.013	24.398	352.7	.071	20
30	15.02	15.02	33.020	24.443	348.7	.106	30
40	14.39	14.38	33.017	24.576	336.3	.140	40
50	13.55	13.54	32.956	24.702	324.5	.173	50
75	11.90	11.89	33.038	25.086	288.3	.249	75
100	10.92	10.91	33.338	25.498	249.7	.316	100
125	9.96	9.95	33.558	25.836	218.0	.376	126
150	9.29	9.27	33.743	26.091	194.2	.428	151
175	8.73	8.71	33.904	26.306	174.1	.473	176
200	8.38	8.36	34.008	26.441	161.6	.515	201
225	8.03	8.01	34.036	26.516	154.8	.554	226
250	7.83	7.81	34.078	26.579	149.2	.592	251
275	7.31	7.28	34.076	26.652	142.4	.630	277
300	7.08	7.05	34.098	26.701	138.0	.664	302
350	6.87	6.84	34.159	26.779	131.4	.731	352
400	6.49	6.45	34.177	26.844	125.6	.796	403
450	5.62	5.58	34.146	26.930	117.4	.857	453
500	5.51	5.47	34.196	26.983	112.9	.914	503

STATION 73 80 RV DAVID STARR JORDAN CALCOFI CRUISE 8107

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
34 38.6 N	123 21.9 W	03/07/81	0050 GMT	4302 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
200	07 KT	330 03 04	2	1013.2 MB	16.7 C	14.8 C	8/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	15.95	15.95	33.224	24.394	352.5	.000	0
10	15.83	15.83	33.071	24.304	361.4	.036	10
20	15.80	15.80	33.075	24.314	360.7	.072	20
30	15.63	15.63	33.078	24.354	357.2	.107	30
40	15.55	15.54	33.068	24.365	356.5	.143	40
50	14.94	14.93	33.008	24.452	348.5	.178	50
75	12.64	12.63	33.150	25.033	293.6	.258	75
100	11.86	11.85	33.241	25.252	273.2	.328	100
125	10.56	10.55	33.477	25.670	233.9	.394	126
150	9.67	9.65	33.630	25.940	208.5	.449	151
175	9.16	9.14	33.742	26.111	192.6	.499	176
200	8.97	8.95	33.888	26.256	179.3	.545	201
225	8.55	8.53	34.018	26.424	163.8	.587	226
250	8.09	8.06	34.030	26.503	156.5	.627	251
275	7.82	7.79	34.047	26.556	151.8	.667	277
300	7.54	7.51	34.054	26.603	147.7	.704	302
350	6.86	6.83	34.067	26.708	138.0	.775	352
400	6.33	6.29	34.102	26.806	129.1	.843	403
450	5.93	5.89	34.132	26.880	122.3	.905	453
500	5.60	5.56	34.144	26.931	117.8	.965	503

STATION 73 90 CALCOFI CRUISE 8107

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
34 18.6 N	124 03.7 W	02/07/81	1850 GMT	3050 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
330	08 KT	320 06 10	2	1013.9 MB	18.6 C	15.5 C	8/8 SC

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	16.04	16.04	33.058	24.246	366.6	.000	0
10	15.74	15.74	33.127	24.367	355.4	.036	10
20	15.60	15.60	33.137	24.406	352.0	.071	20
30	15.08	15.08	33.181	24.554	338.1	.106	30
40	13.33	13.32	33.124	24.876	307.7	.138	40
50	12.71	12.70	33.136	25.008	295.3	.168	50
75	11.54	11.53	33.164	25.251	272.7	.238	75
100	11.00	10.99	33.474	25.590	241.0	.302	100
125	10.00	9.99	33.574	25.842	217.5	.361	126
150	9.59	9.57	33.694	26.004	202.5	.414	151
175	9.20	9.18	33.809	26.157	188.3	.462	176
200	8.94	8.92	34.042	26.381	167.5	.506	201
225	8.89	8.87	34.128	26.457	160.8	.547	226
250	8.65	8.62	34.171	26.529	154.4	.586	251
275	8.48	8.45	34.193	26.573	150.7	.626	277
300	8.33	8.30	34.206	26.606	147.9	.663	302
350	8.04	8.00	34.224	26.664	143.1	.735	352
400	7.71	7.67	34.223	26.712	139.2	.806	403
450	6.65	6.61	34.183	26.828	128.0	.873	453
500	6.03	5.99	34.184	26.910	120.4	.934	503

STATION 77 51 RV DAVID STARR JORDAN CALCOFI CRUISE 8107

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
35 01.3 N	120 55.1 W	04/07/81	0340 GMT	238 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
330	13 KT			1014.6 MB	15.0 C	14.2 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	14.62	14.62	33.705	25.056	289.4	.000	0
10	14.53	14.53	33.683	25.059	289.5	.029	10
20	12.37	12.37	33.737	25.539	244.1	.055	20
30	11.92	11.92	33.787	25.663	232.5	.079	30
40	11.36	11.36	33.791	25.771	222.5	.102	40
50	11.24	11.23	33.774	25.779	221.9	.124	50
75	10.02	10.01	33.817	26.027	198.8	.176	75
100	9.04	9.03	33.915	26.264	176.6	.223	100
125	9.20	9.19	34.074	26.364	167.7	.267	126
150	9.15	9.13	34.091	26.385	166.2	.309	151
175	8.94	8.92	34.127	26.448	160.8	.349	176
200	8.88	8.86	34.136	26.464	159.6	.389	201

STATION 77 55 CALCOFI CRUISE 8107

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
34 53.3 N	121 11.9 W	04/07/81	0645 GMT	574 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
320	16 KT			1014.6 MB	15.2 C	14.3 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	15.04	15.04	33.696	24.959	298.7	.000	0
10	14.70	14.70	33.648	24.996	295.5	.030	10
20	13.30	13.30	33.654	25.292	267.6	.058	20
30	12.51	12.51	33.677	25.465	251.3	.083	30
40	11.51	11.51	33.756	25.716	227.7	.107	40
50	11.43	11.42	33.762	25.735	226.1	.130	50
75	10.26	10.25	33.850	26.012	200.2	.183	75
100	9.73	9.72	33.969	26.194	183.4	.230	100
125	9.40	9.39	34.034	26.300	173.9	.277	126
150	9.22	9.20	34.100	26.381	166.6	.319	151
175	9.02	9.00	34.136	26.442	161.3	.360	176
200	8.75	8.73	34.180	26.519	154.4	.399	201
225	8.56	8.54	34.196	26.562	150.7	.437	226
250	8.32	8.29	34.215	26.614	146.2	.475	252
275	8.03	8.00	34.224	26.665	141.7	.511	277
300	7.76	7.73	34.231	26.710	137.7	.545	302
350	7.49	7.46	34.234	26.752	134.4	.613	352
400	7.11	7.07	34.237	26.808	129.6	.680	403
450	6.56	6.52	34.250	26.893	121.9	.742	453
500	6.24	6.20	34.252	26.937	118.1	.803	504

STATION 77 60 RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
34 43.3 N	121 32.9 W	04/07/81	1025 GMT	998 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
320	18 KT			1014.9 MB	15.5 C	14.5 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	14.93	14.93	33.709	24.993	295.5	.000	0
10	14.91	14.91	33.710	24.998	295.3	.029	10
20	13.02	13.02	33.558	25.273	269.3	.058	20
30	11.34	11.34	33.728	25.725	226.6	.082	30
40	11.09	11.09	33.756	25.792	220.4	.104	40
50	10.10	10.09	33.862	26.048	196.2	.125	50
75	9.51	9.50	34.000	26.255	177.1	.172	75
100	9.20	9.19	34.096	26.381	165.6	.216	101
125	9.14	9.13	34.117	26.407	163.7	.257	126
150	8.91	8.89	34.164	26.481	157.1	.297	151
175	8.62	8.60	34.182	26.541	151.8	.335	176
200	8.55	8.53	34.190	26.558	150.6	.372	201
225	8.18	8.16	34.180	26.607	146.3	.409	226
250	7.79	7.77	34.150	26.641	143.3	.447	252
275	7.22	7.19	34.130	26.707	137.2	.481	277
300	7.13	7.10	34.135	26.724	135.9	.515	302
350	6.91	6.88	34.235	26.833	126.3	.580	352
400	6.40	6.36	34.243	26.908	119.6	.643	403
450	6.15	6.11	34.254	26.949	116.1	.701	453
500	5.89	5.85	34.270	26.995	112.2	.759	504
520	5.77	5.73	34.278	27.017	110.3	.781	524

CALCOFI CRUISE 8107 STATION 77 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
34 23.3 N	122 14.8 W	04/07/81	1555 GMT	4110 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
340	15 KT	340 05 06	1	1015.2 MB	16.3 C	15.5 C	7/8 CI

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	15.24	15.24	33.072	24.434	348.7	.000	0
10	15.16	15.16	33.072	24.452	347.3	.035	10
20	14.48	14.48	33.044	24.577	335.7	.069	20
30	13.57	13.57	33.124	24.827	312.0	.101	30
40	13.57	13.56	33.158	24.854	309.8	.132	40
50	13.52	13.51	33.210	24.905	305.2	.162	50
75	13.46	13.45	33.380	25.049	292.2	.237	75
100	10.89	10.88	33.341	25.506	248.9	.304	100
125	9.76	9.75	33.642	25.935	208.6	.363	126
150	9.00	8.98	33.816	26.194	184.3	.412	151
175	8.60	8.58	33.945	26.358	169.1	.456	176
200	8.39	8.37	34.020	26.449	160.8	.497	201
225	8.01	7.99	34.044	26.525	153.9	.536	226
250	7.53	7.51	34.060	26.608	146.3	.573	251
275	7.32	7.29	34.092	26.663	141.4	.610	277
300	7.17	7.14	34.161	26.739	134.6	.645	302
350	6.65	6.62	34.166	26.814	127.9	.710	352
400	6.57	6.53	34.253	26.894	121.1	.773	403
450	6.18	6.14	34.255	26.946	116.4	.832	453
500	5.71	5.67	34.255	27.005	111.0	.888	503

STATION 77 80 RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
34 03.3 N	122 56.5 W	04/07/81	2100 GMT	4302 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
340	13 KT	340 04 04	2	1016.5 MB	16.5 C	15.7 C	8/8 SC

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	15.32	15.32	33.407	24.675	325.7	.000	0
10	15.27	15.27	33.380	24.666	326.9	.032	10
20	14.88	14.88	33.411	24.774	316.8	.065	20
30	14.20	14.20	33.391	24.904	304.8	.095	30
40	13.76	13.75	33.412	25.012	294.8	.125	40
50	12.86	12.85	33.465	25.233	273.9	.154	50
75	11.44	11.43	33.582	25.594	240.1	.216	75
100	10.44	10.43	33.766	25.916	210.0	.273	100
125	9.62	9.61	33.846	26.117	191.2	.325	126
150	9.03	9.01	33.911	26.264	177.7	.371	151
175	8.40	8.38	33.944	26.387	166.2	.414	176
200	7.95	7.93	34.008	26.506	155.3	.454	201
225	7.68	7.66	34.018	26.553	151.1	.492	226
250	7.20	7.18	34.007	26.613	145.7	.529	251
275	6.84	6.81	34.026	26.677	139.7	.565	277
300	6.60	6.57	34.036	26.718	136.2	.600	302
350	6.17	6.14	34.057	26.790	129.7	.666	352
400	5.95	5.92	34.123	26.871	122.6	.729	403
450	5.59	5.55	34.156	26.941	116.2	.789	453
500	5.38	5.34	34.185	26.990	112.0	.845	503

CALCOFI CRUISE 8107 STATION 77 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
33 43.3 N	123 38.0 W	05/07/81	0245 GMT	4493 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
350	18 KT	340 03 03	1	1014.9 MB	16.7 C	15.7 C	7/8 SC

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	16.82	16.82	33.302	24.254	365.8	.000	0
10	16.68	16.68	33.194	24.205	370.9	.037	10
20	15.01	15.01	33.207	24.589	334.5	.072	20
30	14.72	14.72	33.224	24.665	327.6	.105	30
40	14.63	14.62	33.251	24.705	324.0	.137	40
50	13.87	13.86	33.261	24.872	308.4	.169	50
75	12.82	12.81	33.272	25.093	287.9	.243	75
100	10.85	10.84	33.352	25.521	247.5	.309	100
125	9.28	9.27	33.557	25.946	207.3	.368	126
150	8.93	8.91	33.748	26.152	188.2	.417	151
175	8.47	8.45	33.858	26.310	173.6	.462	176
200	8.12	8.10	33.960	26.442	161.3	.504	201
225	7.83	7.81	34.006	26.522	154.2	.543	226
250	7.31	7.29	34.000	26.592	147.7	.581	251
275	7.05	7.02	34.004	26.631	144.2	.618	277
300	6.56	6.53	34.006	26.699	137.9	.653	302
350	6.29	6.26	34.057	26.775	131.2	.720	352
400	6.05	6.02	34.101	26.841	125.5	.785	403
450	5.83	5.79	34.155	26.911	119.3	.846	453
500	5.54	5.50	34.197	26.980	113.2	.903	503

STATION 80 51 RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
34 27.0 N	120 31.4 W	06/07/81	0850 GMT	75 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
300	18 KT			1011.2 MB	16.3 C	15.4 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	16.24	16.24	33.666	24.668	326.4	.000	0
10	16.08	16.08	33.626	24.674	326.1	.032	10
20	13.40	13.40	33.612	25.239	272.6	.062	20
30	11.29	11.29	33.707	25.718	227.2	.087	30
40	10.83	10.83	33.742	25.827	217.0	.109	40
50	10.39	10.38	33.795	25.946	206.0	.130	50
60	9.99	9.98	33.849	26.056	195.6	.150	60

CALCOFI CRUISE 8107 STATION 80 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
34 19.0 N	120 48.1 W	06/07/81	0520 GMT	814 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
310	18 KT			1011.5 MB	16.3 C	15.1 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	14.98	14.98	33.563	24.869	307.2	.000	0
10	14.34	14.34	33.675	25.093	286.2	.030	10
20	13.86	13.86	33.685	25.201	276.2	.058	20
30	13.44	13.44	33.687	25.289	268.1	.085	30
40	13.17	13.16	33.672	25.332	264.3	.111	40
50	11.75	11.74	33.657	25.595	239.4	.136	50
75	10.11	10.10	33.633	26.024	199.0	.191	75
100	9.41	9.40	33.971	26.249	178.2	.239	101
125	9.12	9.11	34.050	26.357	168.3	.282	126
150	8.89	8.87	34.108	26.440	160.9	.323	151
175	8.60	8.58	34.126	26.500	155.6	.363	176
200	7.93	7.91	34.062	26.551	151.0	.401	201
225	7.79	7.77	34.126	26.622	144.7	.437	226
250	7.59	7.57	34.139	26.661	141.3	.474	252
275	7.37	7.34	34.144	26.697	138.2	.509	277
300	7.14	7.11	34.153	26.736	134.8	.543	302
350	6.74	6.71	34.201	26.829	126.5	.608	352
400	6.69	6.65	34.240	26.867	123.6	.671	403
450	6.36	6.32	34.238	26.910	120.0	.731	453
500	6.11	6.07	34.271	26.968	115.0	.791	504

STATION 80 60 RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
34 09.0 N	121 09.0 W	06/07/81	0155 GMT	2222 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
330	14 KT	310 03 04	1	1011.9 MB	17.3 C	16.0 C	1/8 AC

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	16.42	16.42	33.513	24.509	341.5	.000	0
10	15.30	15.30	33.564	24.801	314.1	.033	10
20	13.42	13.42	33.601	25.226	273.8	.062	20
30	12.71	12.71	33.647	25.403	257.2	.088	30
40	11.55	11.55	33.461	25.479	250.2	.114	40
50	10.59	10.58	33.588	25.750	224.6	.137	50
75	9.96	9.95	33.816	26.036	197.9	.190	75
100	9.38	9.37	33.919	26.213	181.6	.239	101
125	9.00	8.99	34.037	26.367	167.4	.282	126
150	8.57	8.55	34.104	26.487	156.4	.322	151
175	8.16	8.14	34.098	26.545	151.2	.360	176
200	8.10	8.08	34.194	26.629	143.7	.397	201
225	7.82	7.80	34.206	26.680	139.2	.432	226
250	7.75	7.73	34.246	26.722	135.6	.468	252
275	7.48	7.45	34.216	26.738	134.4	.501	277
300	7.38	7.35	34.251	26.780	130.8	.534	302
350	6.95	6.92	34.244	26.835	126.1	.598	352
400	6.63	6.59	34.256	26.888	121.6	.660	403
450	6.20	6.16	34.268	26.954	115.7	.719	453
500	5.89	5.85	34.295	27.015	110.3	.776	504
520	5.04	5.00	34.306	27.125	99.1	.797	524

CALCOFI CRUISE 8107 STATION 80 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
33 49.0 N	121 50.6 W	05/07/81	2007 GMT	3824 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
330	15 KT	340 03 03	1	1014.2 MB	16.8 C	16.0 C	2/8 CC

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	15.80	15.80	33.481	24.625	330.5	.000	0
10	15.64	15.64	33.489	24.667	326.8	.033	10
20	14.31	14.31	33.472	24.943	300.8	.064	20
30	13.25	13.25	33.523	25.200	276.5	.093	30
40	12.70	12.69	33.542	25.324	265.0	.120	40
50	11.45	11.44	33.487	25.518	246.7	.145	50
75	10.86	10.85	33.749	25.828	217.7	.203	75
100	9.48	9.47	33.759	26.072	195.0	.256	101
125	8.78	8.77	33.856	26.259	177.5	.302	126
150	8.55	8.53	33.931	26.354	169.0	.346	151
175	8.31	8.29	33.986	26.434	161.7	.387	176
200	7.93	7.91	34.046	26.538	152.2	.426	201
225	7.72	7.70	34.060	26.580	148.6	.463	226
250	7.44	7.42	34.064	26.624	144.7	.499	251
275	6.89	6.86	34.064	26.700	137.6	.536	277
300	6.54	6.51	34.059	26.743	133.7	.569	302
350	6.05	6.02	34.080	26.823	126.4	.634	352
400	6.13	6.09	34.173	26.887	121.2	.697	403
450	5.85	5.81	34.216	26.957	115.0	.755	453
500	5.25	5.21	34.198	27.015	109.5	.811	503

STATION 80 80 RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
33 29.0 N	122 32.0 W	05/07/81	1410 GMT	4110 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
330	18 KT	320 04 04	1	1013.2 MB	17.6 C	16.5 C	3/8 CC

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	17.23	17.23	33.386	24.223	368.8	.000	0
10	17.23	17.23	33.382	24.223	368.8	.037	10
20	17.22	17.22	33.373	24.216	370.1	.074	20
30	17.16	17.16	33.370	24.228	369.3	.111	30
40	17.07	17.06	33.365	24.246	367.9	.148	40
50	16.94	16.93	33.363	24.275	365.5	.184	50
75	14.28	14.27	33.260	24.787	317.2	.270	75
100	13.60	13.59	33.267	24.934	303.9	.347	100
125	11.86	11.84	33.336	25.327	266.8	.419	126
150	9.66	9.64	33.937	25.869	215.2	.479	151
175	8.70	8.68	33.820	26.244	179.9	.528	176
200	8.40	8.38	33.944	26.388	166.6	.572	201
225	8.03	8.01	33.994	26.483	157.9	.612	226
250	7.72	7.70	34.008	26.540	152.8	.651	251
275	7.35	7.32	34.027	26.608	146.6	.688	277
300	7.13	7.10	34.055	26.660	141.9	.724	302
350	6.78	6.75	34.091	26.737	135.2	.794	352
400	6.34	6.30	34.113	26.813	128.4	.860	402
450	5.92	5.88	34.130	26.880	122.3	.922	453
500	5.60	5.56	34.191	26.968	114.4	.981	503

CALCOFI CRUISE 8107 STATION 80 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
33 09.0 N	123 13.3 W	05/07/81	0820 GMT	4206 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
320	15 KT			1015.2 MB	17.0 C	16.2 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	17.06	17.06	33.453	24.314	360.1	.000	0
10	17.08	17.08	33.434	24.295	362.2	.036	10
20	17.07	17.07	33.416	24.284	363.6	.072	20
30	16.70	16.70	33.400	24.359	356.8	.108	30
40	16.62	16.61	33.430	24.401	353.2	.143	40
50	16.35	16.34	33.391	24.433	350.4	.178	50
75	14.48	14.47	33.200	24.699	325.6	.263	75
100	13.58	13.57	33.239	24.916	305.5	.341	100
125	11.52	11.50	33.348	25.399	259.9	.414	126
150	10.54	10.52	33.478	25.675	234.0	.476	151
175	9.52	9.50	33.633	25.968	206.4	.530	176
200	8.99	8.97	33.799	26.183	186.3	.579	201
225	8.58	8.56	33.940	26.358	170.0	.623	226
250	8.19	8.16	33.983	26.451	161.5	.665	251
275	7.96	7.93	33.977	26.481	159.0	.704	276
300	7.45	7.42	33.961	26.542	153.3	.745	302
350	6.70	6.67	33.968	26.651	143.3	.818	352
400	6.21	6.17	34.030	26.764	132.9	.887	402
450	6.26	6.22	34.166	26.866	124.1	.952	453
500	5.78	5.74	34.142	26.908	120.3	1.012	503

STATION 82 46 RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
34 16.2 N	119 56.3 W	07/07/81	2140 GMT	516 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
270	08 KT	270 02 03	1	1011.2 MB	20.6 C	18.7 C	1/8 CI

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	20.16	20.16	33.587	23.644	424.1	.000	0
10	17.27	17.27	33.556	24.344	357.6	.039	10
20	15.77	15.77	33.618	24.738	320.3	.073	20
30	13.25	13.25	33.647	25.296	267.4	.102	30
40	11.94	11.93	33.549	25.475	250.6	.128	40
50	11.49	11.48	33.584	25.586	240.3	.152	50
75	9.97	9.96	33.776	26.003	201.0	.207	75
100	9.69	9.68	33.938	26.177	185.1	.257	101
125	9.50	9.49	34.028	26.279	175.9	.302	126
150	9.40	9.38	34.066	26.326	171.9	.345	151
175	9.36	9.34	34.082	26.345	170.6	.387	176
200	9.21	9.19	34.128	26.406	165.3	.429	201
225	8.99	8.97	34.166	26.471	159.5	.469	226
250	8.62	8.59	34.179	26.540	153.4	.510	252
275	8.46	8.43	34.181	26.566	151.3	.548	277
300	8.19	8.16	34.191	26.615	147.0	.585	302
350	7.60	7.57	34.204	26.713	138.2	.655	352
400	7.23	7.19	34.216	26.775	132.8	.724	403
450	6.64	6.60	34.241	26.875	123.6	.788	453

CALCOFI CRUISE 8107 STATION 83 42

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
34 10.7 N	119 30.5 W	07/07/81	1655 GMT	155 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
330	03 KT	290 03 07	1	1011.2 MB	19.9 C	18.0 C	1/8 CI

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	19.06	19.06	33.635	23.964	393.5	.000	0
10	18.69	18.69	33.684	24.095	381.3	.039	10
20	17.96	17.96	33.620	24.227	369.1	.076	20
30	13.36	13.36	33.679	25.299	267.2	.108	30
40	11.65	11.64	33.606	25.573	241.2	.133	40
50	10.64	10.63	33.680	25.813	218.6	.156	50
75	10.00	9.99	33.812	26.026	198.8	.208	75
100	9.81	9.80	33.893	26.122	190.3	.258	101
125	9.62	9.61	33.983	26.224	181.1	.304	126
140	9.53	9.51	34.022	26.270	177.1	.331	141

STATION 83 51 RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
33 52.7 N	120 08.0 W	08/07/81	0230 GMT	93 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
230	16 KT	270 02 03	1	1010.2 MB	18.5 C	15.9 C	1/8 CI

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	19.95	19.95	33.683	23.772	411.8	.000	0
10	14.19	14.19	33.555	25.032	292.0	.035	10
20	12.80	12.80	33.523	25.289	267.8	.063	20
30	11.81	11.81	33.548	25.498	248.1	.089	30
40	11.36	11.36	33.604	25.625	236.3	.113	40
50	11.29	11.28	33.605	25.639	235.2	.136	50
75	11.22	11.21	33.678	25.709	229.1	.194	75

CALCOFI CRUISE 8107 STATION 83 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
33 44.7 N	120 24.6 W	08/07/81	0515 GMT	971 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
310	16 KT			1010.5 MB	17.0 C	15.1 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	17.44	17.44	33.687	24.403	351.6	.000	0
10	17.43	17.43	33.683	24.403	352.0	.035	10
20	15.97	15.97	33.623	24.697	324.3	.069	20
30	10.95	10.95	33.725	25.793	220.1	.096	30
40	10.29	10.29	33.806	25.972	203.3	.117	40
50	10.09	10.08	33.845	26.036	197.3	.137	50
75	9.64	9.63	33.910	26.163	185.8	.184	75
100	9.28	9.27	34.000	26.292	174.0	.231	101
125	9.00	8.99	34.059	26.384	165.8	.273	126
150	8.86	8.84	34.110	26.446	160.3	.314	151
175	8.74	8.72	34.152	26.498	155.8	.353	176
200	8.51	8.49	34.187	26.562	150.2	.391	201
225	8.34	8.32	34.200	26.598	147.2	.428	226
250	8.13	8.10	34.214	26.642	143.5	.465	252
275	7.98	7.95	34.224	26.672	141.0	.501	277
300	7.96	7.93	34.234	26.683	140.4	.536	302
350	7.44	7.41	34.249	26.771	132.6	.603	352
400	6.98	6.94	34.248	26.835	127.0	.669	403
450	6.51	6.47	34.266	26.912	119.9	.730	453
500	6.25	6.21	34.285	26.962	115.8	.789	503

STATION 83 60 RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
33 34.7 N	120 45.3 W	08/07/81	0855 GMT	1368 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
310	13 KT			1011.5 MB	16.1 C	14.6 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	16.19	16.19	33.682	24.692	324.1	.000	0
10	16.19	16.19	33.686	24.695	324.1	.032	10
20	14.59	14.59	33.683	25.046	290.9	.063	20
30	12.87	12.87	33.671	25.391	258.4	.090	30
40	11.04	11.04	33.750	25.796	220.0	.114	40
50	10.35	10.34	33.763	25.928	207.7	.135	50
75	9.31	9.30	33.860	26.177	184.4	.184	75
100	9.08	9.07	33.966	26.298	173.4	.230	101
125	8.78	8.77	34.007	26.378	166.3	.272	126
150	8.55	8.53	34.073	26.465	158.4	.313	151
175	8.54	8.52	34.138	26.518	153.9	.352	176
200	8.39	8.37	34.156	26.556	150.7	.389	201
225	8.08	8.06	34.156	26.603	146.6	.426	226
250	7.62	7.60	34.125	26.646	142.7	.464	252
275	7.16	7.13	34.106	26.696	138.1	.499	277
300	6.87	6.84	34.096	26.729	135.3	.532	302
350	6.89	6.86	34.230	26.832	126.3	.597	352
400	6.66	6.62	34.260	26.887	121.7	.660	403
450	6.37	6.33	34.278	26.940	117.2	.719	453
500	5.99	5.95	34.296	27.003	111.5	.777	504

CALCOFI CRUISE 8107 STATION 83 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
33 14.7 N	121 26.6 W	08/07/81	1425 GMT	3918 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
320	11 KT	310 04 08	1	1011.2 MB	17.0 C	16.4 C	5/8 CC

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	15.53	15.53	33.384	24.611	331.8	.000	0
10	15.53	15.53	33.381	24.609	332.3	.033	10
20	15.54	15.54	33.379	24.606	332.9	.066	20
30	14.35	14.35	33.378	24.862	308.8	.098	30
40	13.73	13.72	33.377	24.991	296.8	.128	40
50	13.16	13.15	33.380	25.108	285.8	.157	50
75	12.00	11.99	33.265	25.244	273.4	.227	75
100	10.80	10.79	33.420	25.583	241.6	.291	100
125	9.05	9.04	33.750	26.134	189.5	.347	126
150	8.57	8.55	33.903	26.329	171.3	.391	151
175	8.40	8.38	33.946	26.389	166.0	.433	176
200	8.14	8.12	34.029	26.494	156.5	.473	201
225	8.00	7.98	34.080	26.555	151.1	.512	226
250	7.58	7.56	34.086	26.621	145.1	.548	251
275	7.20	7.17	34.086	26.675	140.2	.585	277
300	6.83	6.80	34.107	26.742	133.9	.619	302
350	6.54	6.51	34.132	26.802	128.9	.684	352
400	6.33	6.29	34.201	26.884	121.7	.748	403
450	5.99	5.95	34.212	26.936	117.1	.807	453
500	5.81	5.77	34.292	27.022	109.5	.863	503

STATION 83 80 RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
32 54.7 N	122 07.7 W	08/07/81	2040 GMT	4187 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
360	11 KT	340 06 06	1	1016.3 MB	17.9 C	15.9 C	7/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	17.43	17.43	33.387	24.176	373.3	.000	0
10	17.24	17.24	33.377	24.214	370.0	.037	10
20	17.18	17.18	33.383	24.233	368.5	.074	20
30	17.16	17.16	33.385	24.240	368.2	.111	30
40	16.88	16.87	33.357	24.284	364.3	.147	40
50	16.40	16.39	33.354	24.394	354.2	.183	50
75	14.40	14.39	33.219	24.730	322.6	.267	75
100	13.48	13.47	33.230	24.929	304.3	.345	100
125	11.71	11.69	33.372	25.383	261.5	.418	126
150	9.86	9.84	33.454	25.772	224.6	.479	151
175	9.10	9.08	33.719	26.103	193.5	.531	176
200	8.80	8.78	33.824	26.232	181.5	.577	201
225	8.50	8.48	33.913	26.349	170.8	.621	226
250	8.02	7.99	33.991	26.482	158.4	.662	251
275	7.64	7.61	34.020	26.561	151.2	.700	276
300	7.30	7.27	34.031	26.618	146.0	.739	302
350	6.60	6.57	34.059	26.736	135.1	.808	352
400	6.14	6.10	34.087	26.818	127.7	.874	402
450	6.22	6.18	34.175	26.878	122.8	.937	453
500	5.77	5.73	34.194	26.950	116.3	.996	503

CALCOFI CRUISE 8107 STATION 83 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
32 34.7 N	122 48.7 W	09/07/81	0315 GMT	4398 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
340	14 KT	340 04 03	2	1016.3 MB	16.1 C	14.9 C	8/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	17.22	17.22	33.375	24.217	369.4	.000	0
10	17.20	17.20	33.380	24.225	368.9	.037	10
20	17.05	17.05	33.373	24.256	366.3	.073	20
30	16.98	16.98	33.374	24.273	365.0	.110	30
40	16.51	16.50	33.381	24.388	354.3	.146	40
50	15.59	15.58	33.325	24.554	338.8	.180	50
75	14.42	14.41	33.270	24.766	319.3	.262	75
100	13.12	13.11	33.229	25.001	297.4	.339	100
125	11.77	11.75	33.424	25.412	258.7	.411	126
150	10.16	10.14	33.575	25.816	220.5	.470	151
175	9.12	9.10	33.759	26.131	190.8	.521	176
200	8.83	8.81	33.927	26.309	174.3	.567	201
225	8.38	8.36	34.008	26.442	162.0	.609	226
250	8.25	8.22	34.049	26.494	157.5	.648	251
275	7.92	7.89	34.066	26.557	151.8	.687	276
300	7.64	7.61	34.064	26.596	148.4	.725	302
350	7.07	7.04	34.104	26.708	138.2	.796	352
400	6.89	6.85	34.187	26.799	130.3	.863	402
450	6.42	6.38	34.193	26.867	124.2	.927	453
500	6.16	6.12	34.218	26.920	119.6	.988	503
520	5.94	5.89	34.247	26.971	114.8	1.011	523

STATION 87 33 RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
33 53.4 N	118 29.4 W	11/07/81	0315 GMT	55 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
270	08 KT		2	1012.5 MB	19.9 C	18.5 C	8/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	20.24	20.24	33.653	23.673	421.3	.000	0
10	17.51	17.51	33.489	24.235	368.0	.039	10
20	13.52	13.52	33.354	25.015	293.9	.072	20
30	12.27	12.27	33.419	25.312	265.9	.100	30
40	11.74	11.73	33.426	25.417	256.1	.126	40

CALCOFI CRUISE 8107 STATION 87 35

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
33 49.4 N	118 37.7 W	11/07/81	0055 GMT	574 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
280	07 KT	280 01 01	1	1012.5 MB	21.0 C	18.9 C	1/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	21.57	21.57	33.686	23.340	453.0	.000	0
10	20.09	20.09	33.516	23.608	427.8	.044	10
20	16.17	16.17	33.523	24.575	335.9	.082	20
30	14.07	14.07	33.469	24.991	296.5	.113	30
40	11.98	11.97	33.569	25.483	249.8	.141	40
50	11.52	11.51	33.582	25.579	240.9	.165	50
75	10.76	10.75	33.678	25.791	221.3	.223	75
100	10.10	10.09	33.783	25.987	203.1	.275	100
125	9.83	9.82	33.924	26.143	188.8	.326	126
150	9.63	9.61	33.987	26.226	181.4	.372	151
175	9.45	9.43	34.062	26.315	173.5	.416	176
200	9.21	9.19	34.163	26.433	162.7	.458	201
225	9.12	9.10	34.199	26.476	159.1	.498	226
250	8.98	8.95	34.211	26.508	156.6	.537	251
275	8.73	8.70	34.231	26.563	151.6	.577	277
300	8.46	8.43	34.265	26.632	145.5	.614	302
350	8.12	8.08	34.275	26.692	140.5	.685	352
400	7.79	7.75	34.272	26.739	136.7	.755	403
450	7.41	7.37	34.281	26.802	131.3	.821	453
500	6.85	6.80	34.270	26.871	125.0	.885	503

STATION 87 40 RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
33 39.4 N	118 58.5 W	10/07/81	2210 GMT	824 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
250	02 KT	280 02 03	1	1014.2 MB	20.3 C	18.0 C	2/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	21.51	21.51	33.651	23.330	454.0	.000	0
10	18.90	18.90	33.662	24.026	388.0	.042	10
20	18.33	18.33	33.630	24.144	377.0	.080	20
30	16.45	16.45	33.569	24.546	339.0	.116	30
40	14.64	14.63	33.581	24.958	300.0	.148	40
50	12.22	12.21	33.603	25.464	251.9	.175	50
75	10.73	10.72	33.623	25.753	224.9	.234	75
100	9.60	9.59	33.807	26.089	193.3	.286	100
125	9.12	9.11	33.925	26.260	177.6	.334	126
150	9.62	9.60	34.073	26.295	174.9	.378	151
175	9.00	8.98	34.150	26.456	160.0	.420	176
200	8.78	8.76	34.196	26.527	153.6	.459	201
225	8.58	8.56	34.228	26.583	148.7	.496	226
250	8.41	8.38	34.257	26.633	144.4	.532	251
275	8.20	8.17	34.269	26.674	140.9	.569	277
300	8.01	7.98	34.287	26.717	137.2	.604	302
350	7.62	7.59	34.287	26.775	132.4	.671	352
400	7.05	7.01	34.256	26.831	127.4	.736	403
450	6.60	6.56	34.281	26.913	120.0	.798	453
500	6.37	6.32	34.301	26.959	116.2	.856	503

CALCOFI CRUISE 8107 STATION 87 45

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
33 29.4 N	119 19.1 W	10/07/81	1640 GMT	1700 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
240	10 KT	250 04 08	1	1014.2 MB	18.8 C	17.8 C	7/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	19.46	19.46	33.675	23.893	400.3	.000	0
10	18.40	18.40	33.683	24.167	374.5	.039	10
20	16.32	16.32	33.635	24.626	331.0	.074	20
30	14.22	14.22	33.572	25.039	291.9	.105	30
40	11.89	11.88	33.566	25.498	248.4	.132	40
50	11.20	11.19	33.641	25.683	231.0	.155	50
75	9.94	9.93	33.730	25.972	204.0	.210	75
100	9.47	9.46	33.859	26.151	187.4	.260	101
125	9.26	9.25	33.982	26.282	175.5	.305	126
150	8.99	8.97	34.061	26.387	165.9	.348	151
175	8.70	8.68	34.096	26.461	159.4	.388	176
200	8.53	8.51	34.130	26.514	154.8	.427	201
225	8.35	8.33	34.152	26.559	150.9	.465	226
250	8.10	8.07	34.184	26.622	145.3	.502	251
275	7.85	7.82	34.196	26.669	141.2	.539	277
300	7.68	7.65	34.217	26.710	137.6	.573	302
350	7.38	7.35	34.255	26.784	131.3	.640	352
400	7.01	6.97	34.246	26.829	127.5	.706	403
450	6.73	6.69	34.271	26.887	122.6	.768	453
500	6.43	6.38	34.282	26.936	118.4	.827	503

STATION 87 50 RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
33 19.4 N	119 39.8 W	10/07/81	1219 GMT	73 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
310	15 KT			1013.9 MB	16.8 C	15.7 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	18.06	18.06	33.732	24.288	362.6	.000	0
10	17.57	17.57	33.599	24.305	361.3	.036	10
20	13.69	13.69	33.687	25.238	272.7	.068	20
30	11.64	11.64	33.717	25.661	232.6	.093	30
40	11.23	11.23	33.750	25.762	223.3	.115	40
50	10.14	10.13	33.806	25.998	201.0	.137	50
60	9.98	9.97	33.815	26.031	198.0	.156	60

CALCOFI CRUISE 8107 STATION 87 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
33 09.4 N	120 00.4 W	10/07/81	0825 GMT	1202 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
310	19 KT			1014.9 MB	16.5 C	15.4 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	18.35	18.35	33.727	24.212	369.8	.000	0
10	17.89	17.89	33.345	24.033	387.2	.038	10
20	12.19	12.19	33.709	25.552	242.8	.069	20
30	11.11	11.11	33.702	25.746	224.5	.092	30
40	10.47	10.47	33.748	25.895	210.5	.114	40
50	10.16	10.15	33.789	25.981	202.7	.135	50
75	9.60	9.59	33.864	26.133	188.6	.183	75
100	9.02	9.01	34.006	26.338	169.6	.229	101
125	8.66	8.65	34.082	26.455	158.9	.270	126
150	8.40	8.38	34.120	26.525	152.7	.309	151
175	8.32	8.30	34.136	26.550	150.7	.347	176
200	8.07	8.05	34.166	26.612	145.3	.383	201
225	7.92	7.90	34.206	26.666	140.6	.419	226
250	7.82	7.80	34.225	26.696	138.2	.455	252
275	7.54	7.51	34.240	26.748	133.4	.489	277
300	7.33	7.30	34.253	26.789	129.9	.521	302
350	6.99	6.96	34.268	26.848	124.9	.584	352
400	6.52	6.48	34.293	26.932	117.4	.646	403
450	6.30	6.26	34.282	26.952	116.0	.704	453
500	6.14	6.10	34.304	26.991	112.9	.761	504

STATION 87 60 RV DAVID STARR JORDAN CALCOFI CRUISE 8107 STATION 87 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
32 59.4 N	120 21.0 W	10/07/81	0430 GMT	759 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
320	14 KT			1015.2 MB	16.4 C	15.4 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	16.19	16.19	33.629	24.651	328.0	.000	0
10	15.81	15.81	33.640	24.746	319.3	.032	10
20	15.24	15.24	33.635	24.869	307.9	.063	20
30	14.50	14.50	33.642	25.034	292.4	.093	30
40	13.97	13.96	33.579	25.097	286.7	.122	40
50	12.78	12.77	33.630	25.377	260.2	.149	50
75	11.01	11.00	33.706	25.768	223.5	.210	75
100	9.53	9.52	33.718	26.031	198.8	.262	100
125	8.84	8.83	33.853	26.248	178.6	.311	126
150	8.46	8.44	33.945	26.379	166.6	.354	151
175	7.98	7.96	34.010	26.502	155.2	.394	176
200	7.63	7.61	34.029	26.568	149.2	.431	201
225	7.40	7.38	34.040	26.610	145.6	.468	226
250	7.17	7.15	34.060	26.658	141.3	.504	251
275	7.18	7.15	34.159	26.735	134.5	.539	277
300	7.25	7.22	34.206	26.763	132.4	.572	302
350	6.62	6.59	34.204	26.848	124.6	.636	352
400	6.26	6.22	34.205	26.896	120.5	.698	403
450	5.92	5.88	34.271	26.992	111.8	.756	453
500	5.72	5.68	34.320	27.056	106.3	.810	503

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
32 39.4 N	121 02.0 W	09/07/81	2200 GMT	3918 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
300	06 KT	330 03 03	2	1013.9 MB	17.0 C	16.2 C	8/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	17.04	17.04	33.480	24.339	357.7	.000	0
10	16.22	16.22	33.459	24.514	341.4	.035	10
20	15.83	15.83	33.407	24.563	337.1	.069	20
30	14.69	14.69	33.501	24.885	306.6	.101	30
40	13.38	13.37	33.510	25.165	280.2	.130	40
50	12.02	12.01	33.530	25.446	253.7	.156	50
75	10.56	10.55	33.543	25.721	227.9	.216	75
100	9.75	9.74	33.731	26.005	201.3	.270	100
125	9.20	9.19	33.850	26.188	184.4	.320	126
150	8.79	8.77	33.958	26.338	170.5	.364	151
175	8.25	8.23	34.000	26.454	159.8	.405	176
200	7.88	7.86	33.997	26.507	155.1	.444	201
225	7.51	7.49	34.036	26.592	147.4	.481	226
250	7.16	7.14	34.053	26.654	141.7	.517	251
275	6.88	6.85	34.058	26.697	137.9	.553	277
300	6.57	6.54	34.067	26.746	133.4	.587	302
350	6.27	6.24	34.109	26.818	127.1	.652	352
400	5.80	5.77	34.139	26.902	119.5	.714	403
450	6.06	6.02	34.257	26.963	114.7	.772	453
500	5.80	5.76	34.294	27.025	109.2	.828	503

STATION 87 80 RV DAVID STARR JORDAN CALCOFI CRUISE 8107 STATION 87 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
32 19.4 N	121 42.9 W	09/07/81	1525 GMT	4302 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
340	11 KT	320 03 06	2	1014.2 MB	15.6 C	14.5 C	8/8 SC

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	16.73	16.73	33.537	24.456	346.6	.000	0
10	16.47	16.47	33.523	24.506	342.2	.034	10
20	15.12	15.12	33.520	24.807	313.8	.067	20
30	14.68	14.68	33.424	24.828	312.1	.098	30
40	14.07	14.06	33.381	24.923	303.2	.129	40
50	13.26	13.25	33.371	25.082	288.4	.158	50
75	11.68	11.67	33.482	25.472	251.7	.225	75
100	10.52	10.51	33.560	25.741	226.5	.285	100
125	9.70	9.69	33.710	25.998	202.6	.340	126
150	9.18	9.16	33.812	26.162	187.3	.389	151
175	8.78	8.76	33.963	26.344	170.5	.433	176
200	8.60	8.58	34.011	26.410	164.6	.475	201
225	8.23	8.21	34.076	26.518	154.7	.514	226
250	8.10	8.07	34.127	26.578	149.5	.552	251
275	7.83	7.80	34.142	26.629	144.9	.590	277
300	7.59	7.56	34.149	26.670	141.3	.626	302
350	7.19	7.16	34.188	26.758	133.6	.694	352
400	6.63	6.59	34.222	26.861	124.1	.759	403
450	6.31	6.27	34.247	26.923	118.7	.819	453
500	6.05	6.01	34.273	26.978	114.0	.877	503

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
31 59.4 N	122 23.6 W	09/07/81	0910 GMT	4014 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
360	10 KT			1016.5 MB	16.2 C	14.8 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	17.10	17.10	33.574	24.397	352.2	.000	0
10	17.08	17.08	33.554	24.387	353.5	.035	10
20	16.80	16.80	33.569	24.465	346.4	.070	20
30	16.72	16.72	33.506	24.436	349.5	.105	30
40	15.01	15.00	33.615	24.904	305.1	.137	40
50	14.61	14.60	33.593	24.974	298.8	.167	50
75	2.90	2.90	33.595	26.773	126.8	.220	75
100	1.34	1.34	33.611	26.907	113.8	.250	100
125	.10	.10	33.704	27.055	99.4	.278	126
150	9.39	9.37	33.795	26.115	191.8	.314	151
175	8.85	8.83	33.918	26.298	174.8	.359	176
200	8.57	8.55	34.005	26.410	164.6	.402	201
225	8.28	8.26	34.062	26.499	156.5	.441	226
250	8.02	7.99	34.096	26.565	150.6	.480	251
275	7.74	7.71	34.122	26.627	145.1	.518	277
300	7.48	7.45	34.146	26.683	140.0	.553	302
350	7.08	7.05	34.200	26.782	131.2	.620	352
400	6.72	6.68	34.230	26.855	124.8	.685	403
450	5.99	5.95	34.202	26.928	117.9	.745	453
500	5.78	5.74	34.242	26.987	112.9	.803	503

STATION 90 28 RV DAVID STARR JORDAN CALCOFI CRUISE 8107 STATION 90 30

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
33 29.1 N	117 46.1 W	11/07/81	0910 GMT	55 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
	00			1013.5 MB	20.5 C	19.8 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	22.26	22.26	33.495	23.004	485.2	.000	0
10	16.17	16.17	33.605	24.637	329.6	.041	10
20	14.70	14.70	33.497	24.879	306.8	.072	20
30	13.60	13.60	33.533	25.137	282.5	.102	30
40	12.85	12.84	33.535	25.290	268.3	.129	40

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
33 25.1 N	117 54.3 W	11/07/81	1110 GMT	620 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
080	07 KT			1012.9 MB	20.7 C	18.9 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	22.99	22.99	33.756	22.995	486.0	.000	0
10	20.17	20.17	33.667	23.703	418.8	.045	10
20	17.55	17.55	33.535	24.261	365.8	.084	20
30	14.27	14.27	33.496	24.970	298.5	.117	30
40	12.45	12.44	33.524	25.359	261.7	.145	40
50	11.71	11.70	33.569	25.534	245.2	.170	50
75	10.68	10.67	33.719	25.837	216.9	.228	75
100	9.98	9.97	33.833	26.046	197.5	.279	100
125	9.78	9.77	33.930	26.156	187.6	.329	126
150	9.57	9.55	34.013	26.256	178.6	.375	151
175	9.44	9.42	34.116	26.358	169.4	.418	176
200	9.30	9.28	34.193	26.442	161.9	.459	201
225	9.08	9.06	34.228	26.505	156.4	.498	226
250	8.88	8.85	34.237	26.544	153.1	.537	251
275	8.56	8.53	34.258	26.611	147.1	.576	277
300	8.40	8.37	34.256	26.634	145.3	.612	302
350	8.17	8.13	34.284	26.692	140.6	.683	352
400	7.63	7.59	34.273	26.763	134.3	.752	403
450	7.21	7.17	34.281	26.830	128.5	.818	453
500	6.81	6.76	34.297	26.897	122.4	.880	503

STATION 90 37 RV DAVID STARR JORDAN CALCOFI CRUISE 8107 STATION 90 45

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
33 11.1 N	118 23.2 W	11/07/81	1530 GMT	1202 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
230	06 KT	280 02 04	2	1014.6 MB	18.7 C	17.2 C	8/8 SC

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	21.61	21.61	33.682	23.326	454.4	.000	0
10	19.32	19.32	33.681	23.934	396.8	.042	10
20	18.04	18.04	33.613	24.202	371.5	.081	20
30	15.51	15.51	33.558	24.750	319.5	.115	30
40	14.24	14.23	33.495	24.976	298.3	.146	40
50	13.00	12.99	33.487	25.223	274.9	.174	50
75	11.00	10.99	33.601	25.688	231.1	.237	75
100	10.20	10.19	33.735	25.933	208.3	.292	100
125	9.42	9.41	34.916	26.987	108.8	.333	126
150	9.17	9.15	34.013	26.321	172.3	.368	151
175	8.86	8.84	34.086	26.428	162.6	.409	176
200	8.60	8.58	34.106	26.484	157.6	.449	201
225	8.56	8.54	34.175	26.545	152.3	.488	226
250	8.33	8.30	34.246	26.636	144.1	.524	251
275	8.14	8.11	34.279	26.691	139.2	.561	277
300	7.96	7.93	34.290	26.727	136.2	.595	302
350	7.66	7.63	34.285	26.768	133.1	.662	352
400	7.19	7.15	34.281	26.832	127.4	.728	403
450	6.84	6.80	34.281	26.880	123.3	.790	453
500	6.51	6.46	34.309	26.947	117.5	.850	503

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
32 55.1 N	118 56.1 W	11/07/81	2037 GMT	1812 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
290	11 KT	300 04 03	2	1014.6 MB	19.8 C	17.9 C	8/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	20.36	20.36	33.696	23.674	421.1	.000	0
10	19.31	19.31	33.574	23.854	404.3	.041	10
20	17.02	17.02	33.656	24.480	345.0	.078	20
30	14.61	14.61	33.496	24.898	305.4	.111	30
40	13.25	13.24	33.517	25.196	277.2	.140	40
50	12.05	12.04	33.447	25.375	260.3	.167	50
75	10.53	10.52	33.598	25.769	223.4	.227	75
100	9.81	9.80	33.699	25.970	204.7	.280	100
125	9.12	9.11	33.858	26.207	182.5	.330	126
150	8.67	8.65	33.972	26.368	167.7	.374	151
175	8.40	8.38	34.056	26.475	157.9	.414	176
200	8.24	8.22	34.118	26.549	151.3	.452	201
225	8.04	8.02	34.145	26.600	146.9	.489	226
250	7.86	7.84	34.188	26.661	141.5	.525	251
275	7.83	7.80	34.205	26.679	140.2	.562	277
300	7.67	7.64	34.238	26.728	135.9	.596	302
350	7.17	7.14	34.247	26.807	128.9	.661	352
400	6.99	6.95	34.291	26.867	123.9	.725	403
450	6.57	6.53	34.289	26.923	119.0	.786	453
500	6.25	6.21	34.301	26.974	114.6	.844	503

STATION 90 53 RV DAVID STARR JORDAN CALCOFI CRUISE 8107 STATION 90 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
32 39.1 N	119 28.9 W	12/07/81	0205 GMT	1387 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
310	25 KT	300 04 03	0	1012.5 MB	17.7 C	16.2 C	0/8

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	18.89	18.89	33.745	24.091	381.4	.000	0
10	18.83	18.83	33.698	24.071	383.7	.038	10
20	17.39	17.39	33.642	24.382	354.4	.075	20
30	13.27	13.27	33.602	25.258	271.1	.106	30
40	11.38	11.38	33.595	25.614	237.3	.131	40
50	10.39	10.38	33.744	25.906	209.8	.154	50
75	9.33	9.32	33.834	26.154	186.6	.203	75
100	8.68	8.67	33.936	26.337	169.6	.249	101
125	8.54	8.53	34.056	26.453	159.1	.290	126
150	8.33	8.31	34.090	26.512	153.9	.329	151
175	8.18	8.16	34.142	26.576	148.2	.366	176
200	8.03	8.01	34.174	26.624	144.1	.402	201
225	7.78	7.76	34.172	26.660	141.1	.438	226
250	7.31	7.29	34.168	26.724	135.2	.473	252
275	7.04	7.01	34.176	26.768	131.3	.507	277
300	6.91	6.88	34.194	26.800	128.5	.539	302
350	6.81	6.78	34.258	26.865	123.2	.601	352
400	6.54	6.50	34.275	26.915	119.0	.663	403
450	6.32	6.28	34.291	26.957	115.6	.721	453
500	6.10	6.06	34.305	26.997	112.3	.777	503

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
32 25.1 N	119 57.6 W	12/07/81	0630 GMT	925 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
310	22 KT			1013.9 MB	16.2 C	15.1 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	18.12	18.12	33.752	24.288	362.6	.000	0
10	18.14	18.14	33.743	24.277	364.0	.036	10
20	18.01	18.01	33.602	24.201	371.6	.073	20
30	14.14	14.14	33.629	25.100	286.1	.106	30
40	12.68	12.67	33.664	25.423	255.6	.133	40
50	12.08	12.07	33.735	25.593	239.6	.157	50
75	10.06	10.05	33.784	25.994	201.9	.212	75
100	9.18	9.17	33.906	26.235	179.4	.259	100
125	8.76	8.75	34.052	26.416	162.7	.304	126
150	8.40	8.38	34.107	26.515	153.7	.343	151
175	8.13	8.11	34.140	26.582	147.7	.380	176
200	7.95	7.93	34.168	26.631	143.4	.417	201
225	7.72	7.70	34.172	26.668	140.3	.452	226
250	7.49	7.47	34.175	26.704	137.2	.486	251
275	7.28	7.25	34.181	26.739	134.2	.521	277
300	7.07	7.04	34.203	26.785	130.1	.554	302
350	6.76	6.73	34.241	26.858	123.8	.617	352
400	6.43	6.39	34.266	26.922	118.2	.678	403
450	5.97	5.93	34.306	27.013	109.9	.735	453
500	5.75	5.71	34.324	27.055	106.4	.788	503

STATION 90 70 RV DAVID STARR JORDAN CALCOFI CRUISE 8107 STATION 90 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
32 05.1 N	120 38.3 W	12/07/81	1240 GMT	4110 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
320	24 KT	330 06 06	1	1015.2 MB	15.5 C	14.5 C	6/8 CU

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	17.04	17.04	33.541	24.386	353.2	.000	0
10	17.05	17.05	33.540	24.384	353.8	.035	10
20	17.05	17.05	33.532	24.378	354.7	.071	20
30	16.70	16.70	33.518	24.449	348.2	.106	30
40	15.95	15.94	33.525	24.627	331.6	.139	40
50	14.74	14.73	33.566	24.925	303.4	.171	50
75	12.65	12.64	33.564	25.352	263.3	.241	75
100	11.43	11.42	33.565	25.583	241.7	.304	100
125	9.84	9.83	33.726	25.987	203.7	.362	126
150	8.93	8.91	33.888	26.261	177.8	.409	151
175	8.54	8.52	33.966	26.384	166.6	.452	176
200	8.37	8.35	34.017	26.450	160.8	.493	201
225	8.06	8.04	34.068	26.537	152.9	.532	226
250	7.70	7.68	34.102	26.616	145.6	.569	251
275	7.42	7.39	34.107	26.661	141.6	.606	277
300	7.24	7.21	34.131	26.705	137.8	.640	302
350	6.95	6.92	34.199	26.800	129.5	.707	352
400	6.63	6.59	34.226	26.864	123.8	.771	403
450	6.30	6.26	34.245	26.923	118.7	.831	453
500	6.05	6.01	34.281	26.984	113.4	.889	503

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
31 45.1 N	121 18.9 W	12/07/81	1935 GMT	3730 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
330	23 KT	330 07 05	1	1016.5 MB	16.5 C	14.9 C	2/8 CU

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	16.90	16.90	33.560	24.434	348.7	.000	0
10	16.81	16.81	33.568	24.461	346.4	.035	10
20	16.81	16.81	33.569	24.463	346.6	.069	20
30	16.74	16.74	33.564	24.475	345.7	.104	30
40	16.55	16.54	33.562	24.518	342.0	.138	40
50	15.26	15.25	33.598	24.837	311.9	.170	50
75	13.66	13.65	33.571	25.156	282.1	.244	75
100	11.63	11.62	33.579	25.557	244.2	.310	100
125	10.47	10.46	33.645	25.817	219.9	.370	126
150	9.72	9.70	33.727	26.008	202.1	.422	151
175	8.96	8.94	33.894	26.262	178.3	.470	176
200	8.61	8.59	34.008	26.406	165.0	.512	201
225	8.34	8.32	34.044	26.476	158.7	.552	226
250	8.00	7.97	34.078	26.554	151.7	.591	251
275	7.64	7.61	34.101	26.625	145.2	.629	277
300	7.33	7.30	34.121	26.685	139.8	.665	302
350	6.88	6.85	34.189	26.801	129.2	.731	352
400	6.60	6.56	34.227	26.869	123.4	.794	402
450	6.31	6.27	34.267	26.939	117.2	.855	453
500	6.00	5.96	34.286	26.994	112.4	.912	503

STATION 90 90 — RV DAVID STARR JORDAN — CALCOFI CRUISE 8107

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
31 25.1 N	121 59.4 W	13/07/81	0226 GMT	4014 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
330	21 KT	340 08 05	1	1016.3 MB	16.8 C	15.0 C	4/8 SC

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	17.29	17.29	33.908	24.302	361.3	.000	0
10	17.30	17.30	33.901	24.294	362.3	.036	10
20	17.30	17.30	33.497	24.292	362.9	.072	20
30	17.18	17.18	33.475	24.304	362.1	.108	30
40	15.95	15.94	33.269	24.430	350.3	.144	40
50	14.69	14.68	33.421	24.824	313.1	.177	50
75	12.79	12.78	33.415	25.209	276.8	.250	75
100	11.39	11.38	33.574	25.598	240.3	.315	100
125	10.17	10.16	33.648	25.870	214.7	.373	126
150	9.10	9.08	33.819	26.180	185.6	.423	151
175	8.64	8.62	33.950	26.355	169.3	.467	176
200	7.98	7.96	34.008	26.501	155.8	.508	201
225	7.62	7.60	34.036	26.576	148.9	.545	226
250	7.34	7.32	34.046	26.624	144.7	.582	251
275	7.14	7.11	34.054	26.658	141.7	.619	277
300	6.95	6.92	34.082	26.707	137.4	.653	302
350	6.62	6.59	34.134	26.793	129.8	.720	352
400	6.26	6.22	34.189	26.883	121.7	.782	402
450	6.01	5.97	34.221	26.941	116.7	.842	453
500	5.76	5.72	34.256	27.000	111.5	.899	503

STATION 93 26.7 — CALCOFI CRUISE 8107

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
32 57.4 N	117 18.3 W	15/07/81	1100 GMT	64 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
120	05 KT			1011.5 MB	21.8 C	19.7 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	22.87	22.87	33.674	22.967	488.7	.000	0
10	15.44	15.44	33.541	24.752	318.7	.040	10
20	13.87	13.87	33.515	25.068	288.9	.070	20
30	12.82	12.82	33.516	25.280	268.9	.098	30
40	12.00	11.99	33.570	25.480	250.1	.124	40
50	11.90	11.89	33.602	25.524	246.2	.149	50

STATION 93 28 — RV DAVID STARR JORDAN — CALCOFI CRUISE 8107

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
32 54.8 N	117 23.7 W	15/07/81	0850 GMT	594 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
290	03 KT			1011.9 MB	21.9 C	20.8 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	23.25	23.25	33.640	22.832	501.5	.000	0
10	18.56	18.56	33.715	24.151	376.0	.044	10
20	15.64	15.64	33.504	24.679	325.9	.079	20
30	14.38	14.38	33.544	24.984	297.1	.110	30
40	13.12	13.11	33.576	25.268	270.4	.138	40
50	12.40	12.39	33.581	25.413	256.8	.164	50
75	10.79	10.78	33.605	25.729	227.2	.224	75
100	10.24	10.23	33.734	25.925	209.0	.279	100
125	9.85	9.84	33.851	26.083	194.5	.331	126
150	9.66	9.64	33.975	26.212	182.8	.378	151
175	9.46	9.44	34.090	26.335	171.6	.422	176
200	9.38	9.36	34.164	26.406	165.4	.464	201
225	9.27	9.25	34.218	26.467	160.1	.504	226
250	9.11	9.08	34.241	26.511	156.4	.543	251
275	9.00	8.97	34.250	26.536	154.4	.583	277
300	8.74	8.71	34.254	26.580	150.6	.621	302
350	8.30	8.26	34.257	26.651	144.6	.694	352
400	7.79	7.75	34.274	26.741	136.6	.766	403
450	7.23	7.19	34.277	26.823	129.1	.832	453
500	6.76	6.71	34.280	26.891	123.0	.894	503

STATION 93 30 — CALCOFI CRUISE 8107

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
32 50.8 N	117 31.9 W	15/07/81	0615 GMT	832 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
280	03 KT			1011.5 MB	22.6 C	20.8 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	23.16	23.16	33.463	22.724	511.9	.000	0
10	20.71	20.71	33.553	23.473	440.8	.048	10
20	16.49	16.49	33.512	24.493	343.7	.087	20
30	15.20	15.20	33.508	24.780	316.6	.119	30
40	13.24	13.23	33.573	25.241	272.9	.149	40
50	12.37	12.36	33.552	25.396	258.4	.175	50
75	11.10	11.09	33.648	25.707	229.3	.236	75
100	10.14	10.13	33.704	25.853	209.6	.290	100
125	9.76	9.75	33.884	26.124	190.7	.341	126
150	9.67	9.65	34.048	26.267	177.6	.388	151
175	9.58	9.56	34.140	26.354	169.8	.431	176
200	9.45	9.43	34.208	26.429	163.2	.472	201
225	9.29	9.27	34.253	26.491	157.8	.512	226
250	9.13	9.10	34.279	26.538	153.9	.551	251
275	8.95	8.92	34.287	26.573	151.0	.590	277
300	8.82	8.79	34.298	26.602	148.6	.628	302
350	8.39	8.35	34.301	26.672	142.7	.702	352
400	7.88	7.84	34.294	26.743	136.5	.770	403
450	7.37	7.33	34.301	26.823	129.3	.836	453
500	6.80	6.75	34.299	26.900	122.2	.899	503

STATION 93 35 — RV DAVID STARR JORDAN — CALCOFI CRUISE 8107

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
32 40.8 N	117 52.4 W	15/07/81	0230 GMT	611 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
260	09 KT	270 03 03	1	1011.5 MB	21.5 C	20.0 C	3/8 AC

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	22.50	22.50	33.748	23.128	473.3	.000	0
10	18.81	18.81	33.711	24.086	382.2	.043	10
20	18.51	18.51	33.566	24.050	386.0	.081	20
30	16.45	16.45	33.603	24.573	336.5	.117	30
40	15.30	15.29	33.567	24.804	314.7	.149	40
50	14.79	14.78	33.529	24.886	307.1	.180	50
75	12.16	12.15	33.492	25.390	259.5	.251	75
100	10.28	10.27	33.618	25.828	218.3	.310	100
125	9.58	9.57	33.813	26.098	193.1	.363	126
150	9.37	9.35	33.887	26.190	184.8	.410	151
175	8.96	8.94	34.010	26.353	169.7	.454	176
200	8.98	8.96	34.184	26.486	157.6	.495	201
225	8.86	8.84	34.240	26.550	152.1	.533	226
250	8.70	8.67	34.307	26.627	145.1	.570	251
275	8.60	8.57	34.340	26.669	141.6	.607	277
300	8.28	8.25	34.317	26.700	138.9	.642	302
350	7.51	7.48	34.248	26.760	133.7	.710	352
400	7.16	7.12	34.270	26.827	127.9	.776	403
450	6.77	6.73	34.296	26.902	121.3	.838	453
500	6.49	6.44	34.314	26.954	116.8	.897	503

STATION 93 40 — CALCOFI CRUISE 8107

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
32 30.8 N	118 12.8 W	14/07/81	2215 GMT	1664 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
300	12 KT	300 02 03	1	1012.2 MB	20.9 C	19.3 C	4/8 AC

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	21.39	21.39	33.742	23.432	444.3	.000	0
10	20.25	20.25	33.534	23.580	430.5	.044	10
20	16.95	16.95	33.668	24.506	342.5	.082	20
30	15.38	15.38	33.541	24.766	318.0	.115	30
40	14.33	14.32	33.596	25.035	292.6	.145	40
50	13.61	13.60	33.600	25.188	278.3	.174	50
75	11.37	11.36	33.566	25.594	240.0	.238	75
100	9.96	9.95	33.682	25.932	208.3	.294	100
125	9.34	9.33	33.799	26.126	190.3	.346	126
150	8.94	8.92	33.919	26.284	175.7	.391	151
175	8.62	8.60	34.040	26.429	162.3	.433	176
200	8.52	8.50	34.089	26.483	157.6	.473	201
225	8.32	8.30	34.142	26.556	151.2	.511	226
250	8.12	8.09	34.199	26.631	144.4	.548	251
275	7.89	7.86	34.232	26.691	139.1	.584	277
300	7.60	7.57	34.246	26.745	134.3	.618	302
350	7.17	7.14	34.260	26.817	128.0	.683	352
400	6.79	6.75	34.298	26.900	120.7	.746	403
450	6.51	6.47	34.312	26.949	116.5	.805	453
500	6.25	6.21	34.333	27.000	112.2	.862	503

CORRIGENDA

PHYSICAL, CHEMICAL AND BIOLOGICAL DATA REPORT, SIO Reference 85-12

The tabulated temperature is in error at 100 m, station 93 30, Cruise 8107 (p. 134). The correct data are listed below:

DEPTH	TEMP	POT TEMP	SIGMA THETA	SVA	DYN HT
100	10.14	10.13	25.919	209.6	.290
125					.342
150					.388
175					.431
200					.472
225					.512
250					.551
275					.590
300					.628
350					.700
400					.770
450					.836
500					.899

STATION 93 45 RV DAVID STARR JORDAN CALCOFI CRUISE 8107 STATION 93 50

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
32 20.8 N	118 33.3 W	14/07/81	1715 GMT	1387 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
310	14 KT	290 03 05	1	1013.2 MB	19.9 C	18.5 C	6/8 CU

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	20.39	20.39	33.705	23.673	421.3	.000	0
10	18.97	18.97	33.570	23.938	396.4	.041	10
20	17.00	17.00	33.608	24.448	348.0	.078	20
30	14.96	14.96	33.545	24.861	308.9	.111	30
40	14.09	14.08	33.622	25.105	285.9	.140	40
50	13.69	13.68	33.621	25.188	278.3	.168	50
75	11.48	11.47	33.574	25.581	241.4	.233	75
100	9.78	9.77	33.704	25.979	203.8	.288	100
125	9.26	9.25	33.840	26.171	186.0	.339	126
150	8.85	8.83	33.943	26.317	172.6	.383	151
175	8.58	8.56	33.998	26.402	164.9	.425	176
200	8.19	8.17	34.072	26.520	154.0	.465	201
225	8.26	8.24	34.145	26.567	150.1	.502	226
250	8.09	8.06	34.216	26.649	142.7	.539	251
275	7.84	7.81	34.225	26.693	138.9	.575	277
300	7.64	7.61	34.238	26.733	135.4	.609	302
350	7.24	7.21	34.262	26.809	128.8	.675	352
400	6.83	6.79	34.295	26.892	121.4	.738	403
450	6.53	6.49	34.324	26.955	115.9	.797	453
500	6.10	6.06	34.314	27.004	111.6	.853	503

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
32 10.8 N	118 53.6 W	14/07/81	1245 GMT	1525 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
310	13 KT	290 03 06	1	1012.9 MB	17.4 C	16.7 C	4/8 SC

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	18.61	18.61	33.740	24.158	375.0	.000	0
10	18.62	18.62	33.728	24.146	376.5	.037	10
20	15.43	15.43	33.603	24.802	314.2	.072	20
30	13.87	13.87	33.578	25.117	284.5	.102	30
40	12.64	12.63	33.599	25.380	259.7	.129	40
50	11.35	11.34	33.609	25.631	236.0	.153	50
75	10.02	10.01	33.697	25.933	207.7	.209	75
100	9.29	9.28	33.871	26.190	183.7	.257	100
125	8.88	8.87	33.982	26.342	169.7	.303	126
150	8.78	8.76	34.067	26.425	162.3	.344	151
175	8.58	8.56	34.124	26.501	155.5	.384	176
200	8.34	8.32	34.146	26.555	150.8	.422	201
225	8.02	8.00	34.150	26.607	146.2	.458	226
250	7.74	7.72	34.156	26.653	142.1	.494	251
275	7.58	7.55	34.190	26.703	137.8	.530	277
300	7.27	7.24	34.214	26.766	132.0	.564	302
350	6.89	6.86	34.229	26.831	126.4	.628	352
400	6.52	6.48	34.263	26.908	119.7	.690	403
450	6.32	6.28	34.275	26.944	116.8	.749	453
500	6.01	5.97	34.323	27.022	109.8	.805	503
520	5.94	5.89	34.324	27.032	109.1	.828	524

STATION 93 55 RV DAVID STARR JORDAN CALCOFI CRUISE 8107 STATION 93 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
32 00.8 N	119 14.0 W	14/07/81	0820 GMT	1627 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
310	14 KT			1014.2 MB	16.8 C	15.9 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	18.13	18.13	33.727	24.267	364.6	.000	0
10	18.03	18.03	33.707	24.276	364.1	.036	10
20	14.37	14.37	33.758	25.151	281.0	.068	20
30	13.67	13.67	33.597	25.173	279.2	.096	30
40	12.22	12.21	33.618	25.476	250.5	.123	40
50	11.47	11.46	33.699	25.679	231.4	.147	50
75	10.08	10.07	33.712	25.935	207.5	.201	75
100	9.01	9.00	33.926	26.278	175.3	.251	101
125	8.76	8.75	34.002	26.377	166.4	.293	126
150	8.48	8.46	34.087	26.487	156.3	.333	151
175	8.24	8.22	34.139	26.564	149.3	.371	176
200	8.09	8.07	34.190	26.627	143.8	.408	201
225	7.68	7.66	34.194	26.691	138.0	.443	226
250	7.49	7.47	34.201	26.724	135.2	.477	251
275	7.40	7.37	34.239	26.767	131.6	.511	277
300	7.16	7.13	34.262	26.819	126.9	.543	302
350	6.78	6.75	34.261	26.871	122.6	.605	352
400	6.36	6.32	34.288	26.949	115.6	.665	403
450	6.10	6.06	34.310	27.000	111.3	.721	453
500	5.97	5.93	34.317	27.022	109.7	.776	503

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
31 50.8 N	119 34.3 W	14/07/81	0412 GMT	2222 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
320	15 KT			1014.2 MB	16.2 C	15.3 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	17.50	17.50	33.725	24.418	350.2	.000	0
10	17.50	17.50	33.723	24.417	350.7	.035	10
20	15.54	15.54	33.560	24.745	319.7	.068	20
30	13.93	13.93	33.350	24.928	302.4	.099	30
40	12.97	12.96	33.549	25.276	269.5	.128	40
50	12.63	12.62	33.664	25.433	254.9	.154	50
75	10.95	10.94	33.631	25.720	228.0	.214	75
100	9.96	9.95	33.779	26.008	201.1	.267	100
125	9.12	9.11	33.864	26.212	182.1	.317	126
150	8.61	8.59	34.003	26.401	164.5	.360	151
175	8.33	8.31	34.056	26.487	156.7	.400	176
200	7.98	7.96	34.098	26.572	149.0	.438	201
225	7.68	7.66	34.128	26.639	142.9	.474	226
250	7.57	7.55	34.180	26.697	137.9	.509	251
275	7.59	7.56	34.222	26.727	135.5	.544	277
300	7.33	7.30	34.234	26.774	131.4	.577	302
350	6.82	6.79	34.245	26.853	124.3	.641	352
400	6.49	6.45	34.262	26.911	119.3	.702	403
450	6.24	6.20	34.289	26.966	114.7	.760	453
500	6.00	5.96	34.310	27.013	110.6	.816	503

STATION 93 70 RV DAVID STARR JORDAN CALCOFI CRUISE 8107 STATION 93 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
31 30.8 N	120 14.8 W	13/07/81	2105 GMT	3730 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
320	17 KT	330 04 04	2	1016.5 MB	17.1 C	15.6 C	8/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	17.62	17.62	33.699	24.369	354.9	.000	0
10	17.59	17.59	33.692	24.371	355.0	.035	10
20	16.75	16.75	33.470	24.400	352.5	.071	20
30	15.09	15.09	33.616	24.887	306.4	.103	30
40	14.14	14.13	33.567	25.052	290.9	.133	40
50	13.36	13.35	33.556	25.204	276.7	.161	50
75	12.21	12.20	33.619	25.479	251.1	.227	75
100	10.39	10.38	33.616	25.807	220.2	.286	100
125	9.64	9.63	33.746	26.036	199.0	.340	126
150	9.13	9.11	33.842	26.193	184.3	.387	151
175	8.64	8.62	33.933	26.342	170.6	.432	176
200	8.33	8.31	34.070	26.497	156.3	.472	201
225	8.07	8.05	33.132	25.800	222.5	.519	226
250	7.66	7.64	34.201	26.700	137.7	.564	251
275	7.87	7.84	34.183	26.656	142.4	.600	277
300	7.46	7.43	34.214	26.740	134.7	.634	302
350	6.99	6.96	34.205	26.799	129.6	.700	352
400	6.56	6.52	34.201	26.854	124.8	.763	402
450	6.27	6.23	34.262	26.940	117.1	.824	453
500	6.01	5.97	34.305	27.008	111.1	.881	503

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
31 10.8 N	120 55.2 W	13/07/81	1420 GMT	3918 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
340	23 KT	330 07 05	1	1015.9 MB	16.5 C	15.3 C	5/8 SC

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	17.90	17.90	33.570	24.203	370.7	.000	0
10	17.91	17.91	33.567	24.198	371.5	.037	10
20	17.92	17.92	33.567	24.196	372.0	.074	20
30	17.89	17.88	33.546	24.188	373.2	.111	30
40	16.70	16.69	33.508	24.442	349.2	.147	40
50	15.78	15.77	33.368	24.545	339.7	.181	50
75	13.43	13.42	33.428	25.092	288.1	.260	75
100	11.99	11.98	33.639	25.537	246.2	.326	100
125	10.30	10.29	33.661	25.858	215.9	.386	126
150	9.17	9.15	33.754	26.118	191.5	.436	151
175	8.75	8.73	33.853	26.262	178.2	.482	176
200	8.32	8.30	33.947	26.403	165.2	.525	201
225	8.04	8.02	34.018	26.500	156.3	.565	226
250	7.89	7.87	34.067	26.561	150.9	.603	251
275	7.60	7.57	34.090	26.622	145.4	.641	277
300	7.28	7.25	34.113	26.686	139.6	.677	302
350	6.77	6.74	34.134	26.772	131.9	.744	352
400	6.44	6.40	34.185	26.857	124.4	.808	402
450	6.13	6.09	34.222	26.927	118.2	.869	453
500	5.99	5.95	34.273	26.985	113.2	.926	503

STATION 93 90 RV DAVID STARR JORDAN CALCOFI CRUISE 8107

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
30 50.8 N	121 35.4 W	13/07/81	0825 GMT	4198 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
350	22 KT			1016.9 MB	16.8 C	14.9 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	18.48	18.48	33.575	24.064	384.0	.000	0
10	18.49	18.49	33.570	24.058	384.9	.038	10
20	18.50	18.50	33.558	24.047	386.3	.077	20
30	17.15	17.15	33.911	24.338	358.8	.114	30
40	16.54	16.53	33.426	24.416	351.7	.149	40
50	15.50	15.49	33.431	24.656	329.1	.183	50
75	13.66	13.65	33.475	25.082	289.1	.260	75
100	11.83	11.82	33.903	25.461	253.4	.328	100
125	10.36	10.35	33.637	25.830	218.7	.389	126
150	9.31	9.29	33.766	26.105	192.8	.440	151
175	8.80	8.78	33.892	26.285	176.0	.486	176
200	8.43	8.41	33.958	26.394	166.0	.528	201
225	8.10	8.08	33.994	26.473	159.0	.568	226
250	7.63	7.61	34.028	26.568	150.1	.607	251
275	7.28	7.25	34.037	26.625	144.9	.643	276
300	6.82	6.79	34.049	26.698	138.1	.680	302
350	6.54	6.51	34.083	26.763	132.6	.747	352
400	6.22	6.18	34.138	26.848	125.0	.811	402
450	5.82	5.78	34.199	26.948	115.9	.872	453
500	5.75	5.71	34.273	27.015	110.1	.928	503

RV NEW HORIZON STATION 100 29.2

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
31 42.4 N	116 43.7 W	28/07/81	0041 GMT	93 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
300	17 KT	300 03 04	1	1013.9 MB	19.8 C	18.0 C	1/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	18.33	18.33	33.574	24.100	380.5	.000	0
10	17.15	17.15	33.604	24.409	351.4	.036	10
20	14.58	14.58	33.643	25.018	293.7	.069	20
30	12.88	12.88	33.563	25.305	266.6	.096	30
40	12.31	12.30	33.961	25.414	256.4	.123	40
50	11.81	11.80	33.591	25.532	245.4	.147	50
75	10.98	10.97	33.722	25.786	221.8	.206	75
86	10.82	10.81	33.741	25.830	217.9	.230	86

STATION 100 30 RV NEW HORIZON

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
31 41.0 N	116 46.5 W	27/07/81	2150 GMT	390 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
300	15 KT	310 02 04	4	1015.2 MB	21.3 C	18.5 C	0/8

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	19.68	19.68	33.605	23.783	410.8	.000	0
10	17.72	17.72	33.614	24.280	363.7	.039	10
20	14.96	14.96	33.541	24.857	309.0	.072	20
30	13.19	13.19	33.548	25.232	273.5	.101	30
40	12.57	12.56	33.547	25.353	262.2	.128	40
50	11.96	11.95	33.574	25.491	249.3	.153	50
75	10.92	10.91	33.683	25.766	223.7	.212	75
100	10.55	10.54	33.789	25.915	210.1	.266	100
125	10.16	10.15	33.936	26.097	193.3	.318	126
150	9.88	9.86	34.058	26.240	180.2	.365	151
175	9.67	9.65	34.104	26.311	173.9	.408	176
200	9.32	9.30	34.177	26.426	163.4	.450	201
225	9.33	9.31	34.242	26.476	159.2	.490	226
250	9.06	9.03	34.255	26.530	154.6	.529	251
275	8.79	8.76	34.271	26.585	149.6	.569	277
300	8.60	8.57	34.278	26.621	146.7	.605	302
350	8.05	8.01	34.304	26.726	137.3	.676	352

CALCOFI CRUISE 8107 STATION 100 35

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
31 31.0 N	117 07.5 W	27/07/81	1720 GMT	1221 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
320	12 KT	310 02 08	1	1016.9 MB	20.3 C	17.9 C	7/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	20.73	20.73	33.710	23.586	429.5	.000	0
10	20.64	20.64	33.702	23.605	428.2	.043	10
20	20.24	20.24	33.685	23.698	419.6	.085	20
30	18.31	18.30	33.633	24.152	376.7	.125	30
40	16.22	16.21	33.566	24.597	334.4	.160	40
50	15.08	15.07	33.556	24.844	311.2	.192	50
75	12.70	12.69	33.599	25.369	261.6	.264	75
100	11.06	11.05	33.703	25.758	225.1	.324	100
125	10.33	10.32	33.809	25.969	205.5	.380	126
150	9.80	9.78	33.966	26.181	185.7	.428	151
175	9.35	9.33	34.049	26.321	172.9	.473	176
200	9.26	9.24	34.083	26.362	169.4	.515	201
225	9.03	9.01	34.134	26.440	162.5	.557	226
250	9.41	9.38	34.298	26.507	156.9	.596	251
275	8.65	8.62	34.240	26.583	149.8	.636	277
300	8.67	8.64	34.321	26.644	144.6	.672	302
350	7.69	7.66	34.233	26.722	137.4	.742	352
400	7.12	7.08	34.260	26.825	128.0	.808	402
450	6.88	6.84	34.315	26.902	121.4	.871	453
500	6.39	6.34	34.316	26.968	115.3	.930	503
543	6.25	6.20	34.349	27.013	111.6	.980	547

STATION 100 40 RV NEW HORIZON

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
31 20.6 N	117 27.6 W	27/07/81	1220 GMT	1905 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
300	15 KT			1015.9 MB	17.8 C	14.8 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	20.94	20.94	33.770	23.575	430.6	.000	0
10	20.94	20.94	33.767	23.574	431.1	.043	10
20	19.79	19.79	33.702	23.829	407.1	.085	20
30	17.98	17.97	33.637	24.236	368.6	.123	30
40	16.76	16.75	33.573	24.478	345.8	.159	40
50	16.14	16.13	33.555	24.607	333.8	.193	50
75	13.54	13.53	33.510	25.133	284.2	.270	75
100	12.43	12.42	33.522	25.363	262.9	.338	100
125	10.67	10.66	33.595	25.743	227.0	.401	126
150	9.64	9.62	33.725	26.020	201.0	.454	151
175	9.11	9.09	33.921	26.259	178.6	.501	176
200	8.88	8.86	34.038	26.388	166.9	.544	201
225	8.63	8.61	34.098	26.474	159.1	.585	226
250	8.48	8.45	34.149	26.537	153.5	.624	251
275	8.21	8.18	34.196	26.615	146.4	.662	277
300	7.90	7.87	34.214	26.676	141.0	.698	302
350	7.43	7.40	34.257	26.778	131.8	.766	352
400	6.99	6.95	34.284	26.862	124.5	.829	402
450	6.58	6.54	34.308	26.936	117.8	.891	453
500	6.28	6.24	34.328	26.992	113.0	.948	503

CALCOFI CRUISE 8107 STATION 100 45

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
31 10.8 N	117 47.2 W	27/07/81	0800 GMT	1707 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
320	08 KT			1015.2 MB	17.1 C	15.1 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	19.89	19.89	33.694	23.796	409.5	.000	0
10	19.89	19.89	33.694	23.796	409.9	.041	10
20	19.89	19.89	33.696	23.798	410.0	.082	20
30	18.85	18.84	33.648	24.029	388.4	.122	30
40	17.88	17.87	33.606	24.237	368.9	.159	40
50	16.96	16.95	33.580	24.437	350.1	.195	50
75	14.65	14.64	33.528	24.916	305.0	.277	75
100	12.68	12.67	33.532	25.322	266.8	.348	100
125	10.70	10.69	33.651	25.781	223.4	.411	126
150	9.79	9.77	33.759	26.021	200.9	.464	151
175	9.25	9.23	33.873	26.199	184.3	.512	176
200	9.05	9.03	33.956	26.297	175.6	.556	201
225	8.55	8.53	34.033	26.435	162.7	.598	226
250	8.23	8.20	34.079	26.520	155.0	.638	251
275	7.82	7.79	34.113	26.608	146.9	.675	276
300	7.62	7.59	34.162	26.676	140.8	.712	302
350	7.20	7.17	34.185	26.754	134.0	.781	352
400	6.54	6.50	34.171	26.833	126.7	.845	402
450	6.19	6.15	34.214	26.913	119.6	.908	453
500	5.90	5.86	34.249	26.977	113.9	.965	503
515	5.84	5.80	34.270	27.002	111.7	.982	518

STATION 100 50 RV NEW HORIZON

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
31 02.6 N	118 07.6 W	27/07/81	0139 GMT	1736 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
300	17 KT	320 03 03	1	1014.6 MB	17.4 C	15.1 C	7/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	19.97	19.97	33.698	23.778	411.2	.000	0
10	19.90	19.90	33.699	23.798	409.7	.041	10
20	19.81	19.81	33.696	23.819	408.0	.082	20
30	19.02	19.01	33.681	24.011	390.1	.121	30
40	17.60	17.59	33.626	24.320	360.9	.159	40
50	15.52	15.51	33.541	24.736	321.5	.193	50
75	13.09	13.08	33.562	25.264	271.7	.267	75
100	11.75	11.74	33.631	25.576	242.5	.331	100
125	10.74	10.72	33.784	25.878	214.2	.390	126
150	10.21	10.19	33.899	26.060	197.4	.441	151
175	9.85	9.83	34.027	26.221	182.5	.488	176
200	9.52	9.50	34.124	26.352	170.5	.532	201
225	8.67	8.65	34.061	26.439	162.4	.573	226
250	8.44	8.41	34.159	26.552	152.2	.612	251
275	8.22	8.19	34.204	26.620	146.0	.651	277
300	7.62	7.59	34.163	26.677	140.7	.686	302
350	7.50	7.47	34.245	26.759	133.7	.754	352
400	6.70	6.66	34.219	26.850	125.3	.819	402
450	6.24	6.20	34.235	26.923	118.7	.880	453
500	5.85	5.81	34.263	26.995	112.2	.938	503
538	5.79	5.74	34.297	27.030	109.4	.981	542

CALCOFI CRUISE 8107 STATION 100 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
30 40.9 N	118 47.1 W	26/07/81	1850 GMT	2962 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
300	10 KT	310 03 04	2	1018.0 MB	17.4 C	15.0 C	8/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	17.93	17.93	33.615	24.230	368.1	.000	0
10	17.86	17.86	33.604	24.239	367.6	.037	10
20	17.83	17.83	33.601	24.244	367.5	.073	20
30	17.71	17.70	33.591	24.266	365.7	.110	30
40	16.98	16.97	33.543	24.403	352.9	.146	40
50	15.27	15.26	33.459	24.728	322.2	.179	50
75	12.85	12.84	33.548	25.301	268.2	.253	75
100	11.18	11.17	33.606	25.661	234.4	.315	100
125	10.07	10.06	33.738	25.958	206.5	.372	126
150	9.51	9.49	33.840	26.131	190.4	.422	151
175	9.09	9.07	33.939	26.276	177.0	.467	176
200	8.77	8.75	34.007	26.381	167.5	.510	201
225	8.48	8.46	34.080	26.483	158.2	.550	226
250	8.36	8.33	34.130	26.541	153.1	.589	251
275	8.31	8.28	34.196	26.601	147.9	.628	277
300	8.18	8.15	34.255	26.667	142.0	.664	302
350	7.16	7.13	34.206	26.776	131.8	.732	352
400	6.75	6.71	34.221	26.844	125.8	.796	402
450	6.32	6.28	34.258	26.931	118.0	.858	453
500	5.96	5.92	34.287	27.000	111.8	.915	503
534	5.72	5.67	34.301	27.041	108.1	.953	538

STATION 100 70 RV NEW HORIZON

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
30 22.0 N	119 28.2 W	26/07/81	1210 GMT	3780 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
330	12 KT			1016.6 MB	16.1 C	14.3 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	18.41	18.41	33.643	24.133	377.3	.000	0
10	18.41	18.41	33.643	24.134	377.7	.038	10
20	18.41	18.41	33.643	24.134	378.0	.075	20
30	18.41	18.40	33.642	24.134	378.4	.113	30
40	18.38	18.37	33.641	24.141	378.0	.151	40
50	17.34	17.33	33.629	24.385	355.1	.187	50
75	14.74	14.73	33.552	24.915	305.1	.269	75
100	12.64	12.63	33.581	25.368	262.4	.340	100
125	10.69	10.68	33.666	25.795	222.1	.403	126
150	9.68	9.66	33.802	26.073	196.0	.455	151
175	9.14	9.12	33.947	26.275	177.2	.501	176
200	8.80	8.78	34.019	26.385	167.1	.544	201
225	8.48	8.46	34.084	26.486	157.9	.584	226
250	8.16	8.13	34.108	26.553	151.8	.622	251
275	7.90	7.87	34.144	26.621	145.7	.659	276
300	7.56	7.53	34.176	26.696	138.9	.696	302
350	7.10	7.07	34.182	26.765	132.8	.764	352
400	7.02	6.98	34.279	26.854	125.3	.828	402
450	6.38	6.34	34.258	26.923	118.8	.889	453
500	6.00	5.96	34.285	26.993	112.5	.947	503
513	6.01	5.96	34.312	27.014	110.8	.961	516

CALCOFI CRUISE 8107 STATION 100 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
30 01.5 N	120 07.0 W	26/07/81	0528 GMT	3832 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
350	15 KT			1015.9 MB	16.9 C	15.3 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	19.86	19.86	33.784	23.872	402.2	.000	0
10	19.86	19.86	33.785	23.874	402.5	.040	10
20	19.83	19.83	33.789	23.885	401.8	.080	20
30	19.72	19.71	33.780	23.907	400.0	.120	30
40	18.15	18.14	33.669	24.219	370.6	.159	40
50	17.21	17.20	33.628	24.415	352.2	.195	50
75	13.22	13.21	33.515	25.202	277.7	.273	75
100	11.28	11.27	33.611	25.646	235.7	.337	100
125	10.39	10.38	33.698	25.872	214.7	.395	126
150	9.52	9.50	33.830	26.121	191.3	.446	151
175	9.13	9.11	33.963	26.289	175.8	.491	176
200	8.92	8.90	34.044	26.386	167.0	.534	201
225	8.57	8.55	34.110	26.492	157.3	.574	226
250	8.19	8.16	34.120	26.558	151.3	.612	251
275	7.92	7.89	34.159	26.629	144.9	.649	276
300	7.44	7.41	34.122	26.670	141.2	.686	302
350	7.03	7.00	34.164	26.761	133.1	.754	352
400	6.68	6.64	34.238	26.867	123.6	.818	402
450	6.39	6.35	34.271	26.932	118.0	.879	453
500	6.03	5.99	34.301	27.002	111.7	.936	503
531	5.83	5.78	34.316	27.039	108.3	.970	534

STATION 100 90 RV NEW HORIZON

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
29 43.8 N	120 51.5 W	25/07/81	2155 GMT	3879 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
330	11 KT	350 05 08	2	1012.9 MB	18.1 C	16.8 C	8/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	19.10	19.10	33.688	23.994	390.6	.000	0
10	19.03	19.03	33.709	24.029	387.7	.039	10
20	18.99	18.99	33.709	24.039	387.0	.077	20
30	18.16	18.15	33.572	24.142	377.6	.116	30
40	16.60	16.59	33.432	24.407	352.6	.152	40
50	15.86	15.85	33.508	24.635	331.2	.186	50
75	14.42	14.41	33.516	24.955	301.2	.265	75
100	12.67	12.66	33.521	25.315	267.4	.335	100
125	11.09	11.07	33.624	25.691	232.0	.400	126
150	9.74	9.72	33.743	26.017	201.2	.454	151
175	9.08	9.06	33.852	26.210	183.2	.502	176
200	8.86	8.84	33.985	26.349	170.5	.546	201
225	8.58	8.56	34.065	26.456	160.8	.587	226
250	8.28	8.25	34.117	26.542	152.9	.626	251
275	8.04	8.01	34.157	26.610	146.8	.663	276
300	7.84	7.81	34.194	26.669	141.6	.700	302
350	7.34	7.31	34.229	26.769	132.6	.768	352
400	6.92	6.88	34.247	26.842	126.2	.832	402
450	6.61	6.57	34.285	26.914	119.9	.895	453
500	6.10	6.06	34.301	26.993	112.6	.952	503
537	5.89	5.84	34.319	27.034	109.0	.993	540

CALCOFI CRUISE 8107 STATION 110 33

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
29 50.2 N	115 50.1 W	31/07/81	1155 GMT	56 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
330	13 KT			1015.6 MB	17.6 C	16.3 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	16.44	16.44	33.547	24.531	339.5	.000	0
10	13.88	13.88	33.598	25.130	282.7	.031	10
20	12.92	12.92	33.638	25.355	261.5	.058	20
30	12.30	12.30	33.663	25.495	248.4	.083	30
40	11.81	11.80	33.708	25.623	236.5	.108	40

STATION 110 35 RV NEW HORIZON

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
29 46.8 N	116 00.0 W	31/07/81	1407 GMT	1101 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
340	15 KT	330 02 06	2	1016.6 MB	18.7 C	15.8 C	5/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	18.08	18.08	33.584	24.169	373.9	.000	0
10	18.08	18.08	33.584	24.170	374.2	.037	10
20	17.64	17.64	33.594	24.285	363.6	.074	20
30	15.32	15.32	33.572	24.803	314.5	.108	30
40	14.16	14.15	33.570	25.051	291.1	.138	40
50	13.06	13.05	33.614	25.309	266.7	.166	50
75	11.18	11.17	33.769	25.787	221.7	.226	75
100	10.47	10.46	33.883	26.002	201.8	.279	100
125	10.35	10.34	34.037	26.143	189.0	.330	126
150	9.78	9.76	34.067	26.264	177.9	.375	151
175	9.80	9.78	34.211	26.373	168.1	.418	176
200	10.07	10.05	34.381	26.461	160.5	.459	201
225	9.71	9.68	34.387	26.527	154.6	.498	226
250	9.51	9.48	34.420	26.586	149.4	.536	251
275	9.24	9.21	34.434	26.641	144.6	.574	277
300	8.89	8.86	34.406	26.676	141.7	.609	302
350	8.52	8.48	34.415	26.741	136.2	.678	352
400	7.98	7.94	34.379	26.796	131.6	.745	402
450	7.32	7.28	34.354	26.872	124.6	.810	453
500	6.95	6.90	34.359	26.927	119.8	.870	503
531	6.91	6.86	34.380	26.950	118.2	.908	535

CALCOFI CRUISE 8107 STATION 110 40

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
29 36.4 N	116 19.5 W	31/07/81	1752 GMT	2490 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
320	13 KT	330 03 06	1	1016.9 MB	20.1 C	17.9 C	6/8 CU

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	21.26	21.26	33.763	23.484	439.4	.000	0
10	21.17	21.17	33.759	23.505	437.6	.044	10
20	20.57	20.57	33.721	23.638	425.3	.087	20
30	18.58	18.57	33.659	24.104	381.1	.127	30
40	16.47	16.46	33.577	24.548	339.1	.163	40
50	14.93	14.92	33.533	24.859	309.7	.195	50
75	12.54	12.53	33.666	25.452	253.7	.265	75
100	11.09	11.08	33.714	25.760	224.8	.325	100
125	10.26	10.25	33.905	26.056	197.3	.379	126
150	10.22	10.20	34.048	26.175	186.5	.427	151
175	9.76	9.74	34.146	26.329	172.3	.472	176
200	9.73	9.71	34.259	26.423	163.9	.513	201
225	9.54	9.51	34.300	26.487	158.3	.553	226
250	9.64	9.61	34.385	26.538	154.1	.592	251
275	8.76	8.73	34.290	26.605	147.8	.630	276
300	8.38	8.35	34.281	26.657	143.1	.667	302
350	7.75	7.72	34.301	26.767	133.2	.736	352
400	7.25	7.21	34.300	26.838	126.9	.800	402
450	6.90	6.86	34.320	26.903	121.3	.863	453
500	6.54	6.49	34.347	26.973	115.1	.922	503

STATION 110 45 RV NEW HORIZON

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
29 27.1 N	116 38.4 W	31/07/81	2155 GMT	530 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
310	14 KT	320 03 05	1	1015.9 MB	19.8 C	17.2 C	6/8 CU

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	21.60	21.60	33.779	23.402	447.1	.000	0
10	21.48	21.48	33.777	23.434	444.4	.044	10
20	21.39	21.39	33.776	23.459	442.5	.089	20
30	19.61	19.60	33.641	23.829	407.5	.131	30
40	15.26	15.25	33.569	24.814	313.7	.167	40
50	13.13	13.12	33.560	25.254	272.0	.196	50
75	11.57	11.56	33.641	25.616	238.0	.260	75
100	10.38	10.37	33.803	25.955	206.2	.315	100
125	9.80	9.79	33.855	26.094	193.5	.367	126
150	9.77	9.75	34.036	26.241	180.1	.413	151
175	9.38	9.36	34.119	26.371	168.2	.456	176
200	9.36	9.34	34.179	26.421	163.9	.497	201
225	9.40	9.37	34.278	26.493	157.7	.537	226
250	9.07	9.04	34.300	26.563	151.4	.576	251
275	8.43	8.40	34.275	26.644	143.9	.614	277
300	7.93	7.90	34.268	26.714	137.4	.649	302
350	7.40	7.37	34.309	26.823	127.6	.715	352
400	7.09	7.05	34.328	26.883	122.6	.777	402
450	6.88	6.84	34.336	26.918	119.8	.838	453
500	6.74	6.69	34.343	26.943	118.1	.897	503
524	6.72	6.67	34.346	26.948	117.9	.925	527

CALCOFI CRUISE 8107 STATION 110 50

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
29 18.0 N	116 59.7 W	01/08/81	0217 GMT	2819 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
310	14 KT	320 03 04	1		19.0 C	16.8 C	7/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	21.51	21.51	33.794	23.439	443.6	.000	0
10	21.51	21.51	33.790	23.436	444.3	.044	10
20	21.27	21.27	33.782	23.496	438.9	.088	20
30	19.33	19.32	33.687	23.937	397.2	.130	30
40	16.01	16.00	33.582	24.657	328.7	.166	40
50	13.87	13.86	33.570	25.111	285.6	.197	50
75	11.51	11.50	33.642	25.628	236.9	.262	75
100	10.53	10.52	33.766	25.900	211.5	.318	100
125	9.93	9.92	33.906	26.112	191.8	.370	126
150	9.66	9.64	33.999	26.230	181.0	.416	151
175	9.40	9.38	34.087	26.342	170.9	.460	176
200	9.19	9.17	34.188	26.456	160.6	.501	201
225	8.94	8.92	34.213	26.515	155.3	.540	226
250	8.60	8.57	34.233	26.585	149.1	.578	251
275	8.15	8.12	34.215	26.640	144.1	.616	277
300	7.95	7.92	34.240	26.689	139.8	.651	302
350	7.61	7.58	34.277	26.768	132.9	.719	352
400	7.19	7.15	34.304	26.850	125.7	.783	402
450	6.61	6.57	34.311	26.935	118.0	.845	453
500	6.25	6.21	34.346	27.010	111.2	.901	503
531	6.08	6.03	34.351	27.036	109.0	.935	534

STATION 110 60 RV NEW HORIZON

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
28 56.7 N	117 38.4 W	01/08/81	0838 GMT	3594 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
330	14 KT			1017.3 MB	18.5 C	16.7 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	21.03	21.03	33.795	23.570	431.1	.000	0
10	21.02	21.02	33.794	23.573	431.2	.043	10
20	21.02	21.02	33.795	23.574	431.5	.086	20
30	20.62	20.61	33.760	23.655	424.1	.129	30
40	17.73	17.72	33.604	24.271	365.6	.166	40
50	16.36	16.35	33.523	24.532	340.9	.203	50
75	13.82	13.81	33.564	25.117	285.7	.281	75
100	11.62	11.61	33.660	25.622	238.1	.346	100
125	10.80	10.78	34.105	26.118	191.5	.402	126
150	10.97	10.95	34.248	26.199	184.4	.449	151
175	10.68	10.66	34.257	26.258	179.3	.494	176
200	10.57	10.55	34.284	26.299	176.0	.538	201
225	10.74	10.71	34.373	26.339	172.9	.581	226
250	10.50	10.47	34.381	26.388	168.7	.624	251
275	10.08	10.05	34.392	26.470	161.4	.665	276
300	9.37	9.34	34.328	26.538	155.0	.706	302
350	8.91	8.87	34.356	26.635	146.6	.781	352
400	8.19	8.15	34.351	26.742	136.8	.851	402
450	7.31	7.27	34.354	26.873	124.5	.917	453
500	7.04	6.99	34.360	26.916	121.0	.978	503
520	6.94	6.89	34.361	26.931	119.8	1.002	523

CALCOFI CRUISE 8107 STATION 110 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
28 36.9 N	118 18.3 W	01/08/81	1438 GMT	3559 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
350	13 KT	330 05 06	2	1018.0 MB	18.5 C	16.4 C	8/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	21.03	21.03	33.804	23.577	430.4	.000	0
10	21.05	21.05	33.811	23.578	430.8	.043	10
20	21.05	21.05	33.812	23.579	431.0	.086	20
30	18.71	18.70	33.583	24.014	389.8	.127	30
40	17.73	17.72	33.589	24.260	366.7	.165	40
50	16.76	16.75	33.518	24.436	350.1	.200	50
75	15.38	15.37	33.628	24.834	312.9	.283	75
100	13.43	13.42	33.679	25.287	270.3	.355	100
125	11.74	11.72	33.683	25.618	239.1	.419	125
150	10.26	10.24	33.685	25.885	214.0	.477	151
175	9.35	9.33	33.781	26.111	192.7	.528	176
200	8.85	8.83	33.893	26.279	177.2	.574	201
225	8.41	8.39	33.978	26.414	164.7	.616	226
250	8.07	8.04	34.018	26.496	157.1	.656	251
275	7.71	7.68	34.047	26.572	150.2	.694	276
300	7.55	7.52	34.103	26.639	144.1	.732	302
350	7.16	7.13	34.157	26.737	135.5	.802	352
400	6.44	6.40	34.130	26.813	128.4	.867	402
450	6.24	6.20	34.220	26.911	119.8	.930	453
500	6.16	6.12	34.295	26.981	113.8	.988	503
532	5.99	5.94	34.313	27.017	110.7	1.024	535

STATION 110 80 RV NEW HORIZON

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
28 16.7 N	118 57.0 W	01/08/81	2109 GMT	3879 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
340	15 KT	330 05 06	2	1016.9 MB	19.0 C	16.9 C	8/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	20.10	20.10	33.719	23.760	412.9	.000	0
10	20.09	20.09	33.721	23.765	412.9	.041	10
20	20.06	20.06	33.722	23.774	412.4	.082	20
30	19.26	19.25	33.749	24.002	391.0	.122	30
40	19.16	19.15	33.985	24.208	371.7	.160	40
50	18.35	18.34	34.019	24.438	350.1	.196	50
75	17.36	17.35	34.012	24.675	328.4	.281	75
100	15.51	15.49	33.905	25.020	296.0	.359	100
125	13.44	13.42	33.814	25.390	261.2	.428	125
150	11.11	11.09	33.672	25.726	229.3	.491	151
175	10.00	9.98	33.735	25.968	206.5	.545	176
200	9.11	9.09	33.785	26.153	189.2	.595	201
225	8.73	8.71	33.880	26.288	176.8	.640	226
250	8.31	8.28	33.967	26.420	164.4	.682	251
275	7.86	7.83	34.011	26.522	155.0	.722	276
300	7.43	7.40	34.041	26.608	147.1	.761	302
350	6.77	6.74	34.090	26.738	135.1	.831	352
400	6.42	6.38	34.143	26.826	127.2	.896	402
450	6.09	6.05	34.173	26.893	121.3	.959	453
500	5.96	5.92	34.274	26.990	112.8	1.017	503
526	5.89	5.84	34.300	27.019	110.3	1.046	529

CALCOFI CRUISE 8107 STATION 119 33

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
28 17.8 N	114 51.8 W	04/08/81	1743 GMT	104 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
320	17 KT	310 02 06	1	1013.5 MB	20.6 C	18.8 C	6/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	20.88	20.88	33.690	23.531	434.8	.000	0
10	20.81	20.81	33.694	23.553	433.1	.043	10
20	20.57	20.57	33.690	23.615	427.6	.086	20
30	18.20	18.19	33.654	24.195	372.5	.126	30
40	16.56	16.55	33.602	24.547	339.2	.162	40
50	14.71	14.70	33.576	24.939	302.1	.193	50
75	11.84	11.83	33.639	25.564	243.0	.261	75
100	10.82	10.81	33.828	25.898	211.8	.318	100

STATION 120 24 RV NEW HORIZON

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
28 25.0 N	114 11.2 W	04/08/81	0537 GMT	34 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
300	22 KT			1011.8 MB	20.0 C	18.6 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	22.71	22.71	33.819	23.123	473.8	.000	0
10	22.72	22.72	33.827	23.126	473.8	.047	10
20	17.72	17.72	33.610	24.278	364.3	.089	20
30	15.70	15.70	33.562	24.711	323.2	.123	30

CALCOFI CRUISE 8107 STATION 120 25

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
28 23.2 N	114 15.0 W	04/08/81	0757 GMT	60 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
300	17 KT			1011.2 MB	19.6 C	18.3 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	22.31	22.31	33.828	23.242	462.4	.000	0
10	22.27	22.27	33.823	23.250	462.0	.046	10
20	16.65	16.65	33.601	24.524	340.7	.086	20
30	15.78	15.78	33.575	24.703	324.0	.119	30
40	13.32	13.31	33.551	25.208	276.0	.149	40
50	12.12	12.11	33.645	25.516	247.0	.175	50
60	11.61	11.60	33.727	25.675	232.0	.199	60

STATION 120 30 RV NEW HORIZON

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
28 12.8 N	114 35.7 W	04/08/81	1110 GMT	97 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
320	13 KT			1010.8 MB	19.5 C	18.0 C	

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	21.96	21.96	33.796	23.316	455.3	.000	0
10	21.96	21.96	33.793	23.314	455.9	.045	10
20	17.03	17.03	33.596	24.432	349.6	.086	20
30	15.65	15.65	33.615	24.763	318.3	.119	30
40	15.24	15.23	33.631	24.866	308.7	.150	40
50	12.45	12.44	33.629	25.440	254.2	.173	50
75	11.45	11.44	33.718	25.698	230.2	.238	75
93	10.64	10.63	33.879	25.969	204.8	.277	93

CALCOFI CRUISE 8107 STATION 120 35

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM
28 03.3 N	114 53.5 W	04/08/81	1452 GMT	82 M

WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	CLOUDS
330	19 KT	340 03 06	2	1011.2 MB	20.3 C	18.6 C	8/8 ST

DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	PRESS D.BAR
0	21.07	21.07	33.700	23.487	439.0	.000	0
10	21.07	21.07	33.699	23.487	439.4	.044	10
20	21.08	21.08	33.700	23.485	439.9	.088	20
30	20.99	20.98	33.694	23.506	438.4	.131	30
40	18.76	18.75	33.649	24.052	386.5	.173	40
50	15.79	15.78	33.569	24.697	325.2	.208	50
75	12.28	12.27	33.710	25.537	245.7	.279	75

LINE	STA		Z	T	S	O2	O2 PCT	SIG TH	SVA
60	50	28/06/81 0856GMT 37 56.8N 122 52.9W WEATH BOTTOM 46M WIND 130 16 KT WAVES BAR 1008.8MB DRY 12.8C WET 11.9C CLOUDS	10	10.38	33.926			26.049	195.3
60	52.5	28/06/81 0655GMT 37 51.8N 123 03.8W WEATH BOTTOM 86M WIND 190 08 KT WAVES BAR 1008.8MB DRY 12.7C WET 11.5C CLOUDS	10	10.46	33.971			26.070	193.3
60	55	28/06/81 0447GMT 37 46.8N 123 14.7W WEATH BOTTOM 139M WIND 290 06 KT WAVES BAR 1008.5MB DRY 11.8C WET 10.6C CLOUDS	10	9.35	33.945			26.158	184.9
60	60	28/06/81 0020GMT 37 36.8N 123 36.5W WEATH 0 BOTTOM 3353M WIND 340 18 KT WAVES 330 15 08 BAR 1009.1MB DRY 13.2C WET 11.9C CLOUDS 0/8	10	10.63	33.786			25.896	209.8
60	80	26/06/81 1422GMT 36 56.8N 125 03.2W WEATH 2 BOTTOM 4302M WIND 340 38 KT WAVES 350 12 06 BAR 1019.6MB DRY 15.0C WET 13.7C CLOUDS 8/8 SC	10	15.69	32.814			24.137	377.3
60	90	26/06/81 0835GMT 36 36.8N 125 46.3W WEATH BOTTOM 4493M WIND 340 30 KT WAVES BAR 1020.7MB DRY 15.4C WET 13.8C CLOUDS	10	14.58	32.866			24.418	350.5
63	50	28/06/81 1925GMT 37 22.6N 122 28.4W WEATH 1 BOTTOM 29M WIND 190 16 KT WAVES 220 04 06 BAR 1011.9MB DRY 15.5C WET 13.7C CLOUDS 7/8 SC	10	10.03	33.979			26.150	185.6
63	52	28/06/81 2110GMT 37 18.6N 122 37.1W WEATH 2 BOTTOM 89M WIND 160 16 KT WAVES 160 04 03 BAR 1011.9MB DRY 14.3C WET 13.0C CLOUDS 8/8 ST	10	10.97	33.967			25.977	202.1
63	55	28/06/81 2340GMT 37 12.6N 122 50.1W WEATH 2 BOTTOM 314M WIND 160 12 KT WAVES 270 04 04 BAR 1012.2MB DRY 13.9C WET 12.8C CLOUDS 8/8 ST	10	11.15	33.816			25.827	216.3
63	60	29/06/81 0316GMT 37 02.6N 123 11.7W WEATH 2 BOTTOM 2595M WIND 180 11 KT WAVES BAR 1011.9MB DRY 13.6C WET 12.8C CLOUDS 8/8 ST	10	11.44	32.972			25.118	283.8
63	70	29/06/81 0913GMT 36 42.6N 123 54.8W WEATH BOTTOM 3918M WIND 190 08 KT WAVES BAR 1012.9MB DRY 13.3C WET 12.4C CLOUDS	10	15.38	33.565			24.783	315.7
63	80	29/06/81 1455GMT 36 22.6N 124 37.7W WEATH 2 BOTTOM 4206M WIND 190 04 KT WAVES 340 06 07 BAR 1013.9MB DRY 13.7C WET 12.5C CLOUDS 8/8 SC	10	14.56	32.917			24.462	346.3
63	90	29/06/81 2147GMT 36 02.6N 125 20.5W WEATH 2 BOTTOM 4588M WIND 120 03 KT WAVES 020 04 04 BAR 1015.6MB DRY 15.0C WET 13.4C CLOUDS 8/8 ST	10	14.61	32.922			24.455	347.0
67	49	01/07/81 0513GMT 36 49.2N 121 59.1W WEATH BOTTOM 461M WIND 310 05 KT WAVES BAR 1014.2MB DRY 12.3C WET 12.0C CLOUDS	10	12.23	33.823			25.632	234.9
67	50	01/07/81 0306GMT 36 47.2N 122 03.4W WEATH 2 BOTTOM 296M WIND 320 06 KT WAVES 290 01 02 BAR 1014.6MB DRY 12.9C WET 12.4C CLOUDS 8/8 ST	10	12.29	33.811			25.611	236.9
67	55	30/06/81 2320GMT 36 37.2N 122 24.9W WEATH 2 BOTTOM 2595M WIND 290 12 KT WAVES 300 01 03 BAR 1016.3MB DRY 13.7C WET 12.8C CLOUDS 8/8 ST	10	11.77	33.737			25.652	233.0
67	60	30/06/81 1950GMT 36 27.2N 122 46.4W WEATH 2 BOTTOM 3068M WIND 290 08 KT WAVES 310 02 06 BAR 1016.5MB DRY 14.2C WET 13.1C CLOUDS 8/8 SC	10	10.96	33.601			25.694	229.0
67	70	30/06/81 1345GMT 36 07.0N 123 29.3W WEATH 2 BOTTOM 3635M WIND 310 06 KT WAVES 310 02 04 BAR 1016.3MB DRY 14.0C WET 12.3C CLOUDS 8/8 SC	10	12.85	33.715			25.428	254.3
67	80	30/06/81 0830GMT 35 47.2N 124 11.7W WEATH BOTTOM 4100M WIND 220 03 KT WAVES BAR 1015.6MB DRY 14.0C WET 12.9C CLOUDS	10	13.44	33.758			25.343	262.4
67	90	30/06/81 0251GMT 35 27.2N 124 54.2W WEATH 1 BOTTOM 4493M WIND 360 03 KT WAVES 310 02 03 BAR 1015.2MB DRY 15.3C WET 13.4C CLOUDS 7/8 ST	10	16.04	33.043			24.235	368.0
70	51	01/07/81 1148GMT 36 10.9N 121 43.6W WEATH BOTTOM 276M WIND 130 05 KT WAVES BAR 1013.2MB DRY 12.0C WET 11.6C CLOUDS	10	12.37	33.837			25.616	236.4
70	53	01/07/81 1416GMT 36 06.9N 121 52.1W WEATH 2 BOTTOM 907M WIND 340 09 KT WAVES 310 04 04 BAR 1013.5MB DRY 12.0C WET 11.7C CLOUDS 8/8 SC	10	12.53	33.824			25.575	240.3
70	60	01/07/81 1840GMT 35 52.9N 122 21.9W WEATH 2 BOTTOM 3068M WIND 340 16 KT WAVES 310 06 06 BAR 1014.6MB DRY 14.3C WET 12.2C CLOUDS 8/8 SC	10	14.19	33.600			25.067	288.7
70	70	02/07/81 0101GMT 35 32.9N 123 04.4W WEATH 2 BOTTOM 3730M WIND 310 14 KT WAVES 320 05 05 BAR 1013.5MB DRY 15.3C WET 13.9C CLOUDS 8/8 ST	10	14.31	33.654			25.083	287.2
70	80	02/07/81 0717GMT 35 12.9N 123 46.7W WEATH BOTTOM 4110M WIND 320 14 KT WAVES BAR 1012.9MB DRY 15.5C WET 13.8C CLOUDS	10	15.80	33.015			24.268	364.9
70	90	02/07/81 1316GMT 34 52.9N 124 28.8W WEATH 2 BOTTOM 4493M WIND 340 16 KT WAVES 340 06 08 BAR 1013.2MB DRY 15.6C WET 13.8C CLOUDS 8/8 ST	10	15.60	33.071			24.355	356.5

LINE	STA		Z	T	S	O2	O2 PCT	SIG TH	SVA
73	50	03/07/81 2015GMT 35 38.6N 121 15.3W WEATH 2 BOTTOM 33M WIND 300 18 KT WAVES 300 01 02 BAR 1015.9MB DRY 14.6C WET 13.5C CLOUDS 8/8 ST	10	12.46	33.760			25.539	243.8
73	53	03/07/81 1725GMT 35 32.6N 121 28.1W WEATH 2 BOTTOM 488M WIND 330 08 KT WAVES 280 04 06 BAR 1015.9MB DRY 14.8C WET 13.8C CLOUDS 8/8 ST	10	13.25	33.632			25.284	268.0
73	60	03/07/81 1250GMT 35 18.6N 121 57.7W WEATH 1 BOTTOM 2502M WIND 260 03 KT WAVES 290 03 07 BAR 1015.2MB DRY 14.4C WET 13.0C CLOUDS 1/8 CU	10	14.53	33.535			24.945	300.3
73	70	03/07/81 0717GMT 34 58.6N 122 39.9W WEATH BOTTOM 4110M WIND 060 02 KT WAVES BAR 1014.2MB DRY 16.0C WET 13.2C CLOUDS	10	15.26	33.000			24.375	354.6
73	80	03/07/81 0115GMT 34 38.6N 123 21.9W WEATH 2 BOTTOM 4302M WIND 200 07 KT WAVES 330 03 04 BAR 1013.2MB DRY 16.7C WET 14.8C CLOUDS 8/8 ST	10	15.85	33.076			24.303	361.5
73	90	02/07/81 1911GMT 34 18.6N 124 03.7W WEATH 2 BOTTOM 3050M WIND 330 08 KT WAVES 320 06 10 BAR 1013.9MB DRY 18.6C WET 15.5C CLOUDS 8/8 SC	10	15.89	33.086			24.302	361.6
77	48	04/07/81 0145GMT 35 07.3N 120 42.4W WEATH 1 BOTTOM 29M WIND 300 10 KT WAVES 300 01 02 BAR 1014.9MB DRY 15.8C WET 14.9C CLOUDS 7/8 SC	10	11.96	33.750			25.627	235.4
77	51	04/07/81 0335GMT 35 01.3N 120 55.1W WEATH BOTTOM 238M WIND 330 13 KT WAVES BAR 1014.6MB DRY 15.0C WET 14.2C CLOUDS	10	14.49	33.708			25.087	286.8
77	55	04/07/81 0705GMT 34 53.3N 121 11.9W WEATH BOTTOM 574M WIND 320 16 KT WAVES BAR 1014.6MB DRY 15.2C WET 14.3C CLOUDS	10	14.89	33.685			24.983	296.7
77	60	04/07/81 1043GMT 34 43.3N 121 32.9W WEATH BOTTOM 998M WIND 320 18 KT WAVES BAR 1014.9MB DRY 15.5C WET 14.5C CLOUDS	10	12.95	33.717			25.410	256.1
77	70	04/07/81 1614GMT 34 23.3N 122 14.8W WEATH 1 BOTTOM 4110M WIND 340 15 KT WAVES 340 05 06 BAR 1015.2MB DRY 16.3C WET 15.5C CLOUDS 7/8 CI	10	15.20	33.068			24.440	348.4
77	80	04/07/81 2120GMT 34 03.3N 122 56.5W WEATH 2 BOTTOM 4302M WIND 340 13 KT WAVES 340 04 04 BAR 1016.5MB DRY 16.5C WET 15.7C CLOUDS 8/8 SC	10	15.30	33.402			24.676	326.0
77	90	05/07/81 0312GMT 33 43.3N 123 38.0W WEATH 1 BOTTOM 4493M WIND 350 18 KT WAVES 340 03 03 BAR 1014.9MB DRY 16.7C WET 15.7C CLOUDS 7/8 SC	10	16.84	33.311			24.257	365.9
80	51	06/07/81 0909GMT 34 27.0N 120 31.4W WEATH BOTTOM 75M WIND 300 18 KT WAVES BAR 1011.2MB DRY 16.3C WET 15.4C CLOUDS	10	16.12	33.666			24.696	324.1
80	55	06/07/81 0544GMT 34 19.0N 120 48.1W WEATH BOTTOM 814M WIND 310 18 KT WAVES BAR 1011.5MB DRY 16.3C WET 15.1C CLOUDS	10	14.70	33.674			25.016	293.6
80	60	06/07/81 0220GMT 34 09.0N 121 09.0W WEATH 1 BOTTOM 2222M WIND 330 14 KT WAVES 310 03 04 BAR 1011.9MB DRY 17.3C WET 16.0C CLOUDS 1/8 AC	10	15.27	33.554			24.800	314.2
80	70	05/07/81 2027GMT 33 49.0N 121 50.6W WEATH 1 BOTTOM 3824M WIND 330 15 KT WAVES 340 03 03 BAR 1014.2MB DRY 16.8C WET 16.0C CLOUDS 2/8 CC	10	15.66	33.481			24.657	327.8
80	80	05/07/81 1434GMT 33 29.0N 122 32.0W WEATH 1 BOTTOM 4110M WIND 330 18 KT WAVES 320 04 04 BAR 1013.2MB DRY 17.6C WET 16.5C CLOUDS 3/8 CC	10	17.24	33.387			24.221	369.3
80	90	05/07/81 0844GMT 33 09.0N 123 13.3W WEATH BOTTOM 4206M WIND 320 15 KT WAVES BAR 1015.2MB DRY 17.0C WET 16.2C CLOUDS	10	17.08	33.433			24.294	362.3
82	46	07/07/81 2158GMT 34 16.2N 119 56.3W WEATH 1 BOTTOM 516M WIND 270 08 KT WAVES 270 02 03 BAR 1011.2MB DRY 20.6C WET 18.7C CLOUDS 1/8 CI	10	16.89	33.689			24.535	339.4
83	40.6	07/07/81 1540GMT 34 13.5N 119 24.7W WEATH 2 BOTTOM 29M WIND 270 05 KT WAVES 280 03 08 BAR 1011.2MB DRY 21.0C WET 19.1C CLOUDS 8/8 ST	10	14.31	33.601			25.042	291.0
83	42	07/07/81 1709GMT 34 10.7N 119 30.5W WEATH 1 BOTTOM 155M WIND 330 03 KT WAVES 290 03 07 BAR 1011.2MB DRY 19.9C WET 18.0C CLOUDS 1/8 CI	10	18.62	33.675			24.106	380.3
83	51	08/07/81 0248GMT 33 52.7N 120 08.0W WEATH 1 BOTTOM 93M WIND 230 16 KT WAVES 270 02 03 BAR 1010.2MB DRY 18.5C WET 15.9C CLOUDS 1/8 CI	10	14.00	33.575			25.087	286.8
83	55	08/07/81 0536GMT 33 44.7N 120 24.6W WEATH BOTTOM 971M WIND 310 16 KT WAVES BAR 1010.5MB DRY 17.0C WET 15.1C CLOUDS	10	17.44	33.689			24.405	351.8
83	60	08/07/81 0918GMT 33 34.7N 120 45.3W WEATH BOTTOM 1368M WIND 310 13 KT WAVES BAR 1011.5MB DRY 16.1C WET 14.6C CLOUDS	10	16.20	33.685			24.692	324.4
83	70	08/07/81 1444GMT 33 14.7N 121 26.6W WEATH 1 BOTTOM 3918M WIND 320 11 KT WAVES 310 04 08 BAR 1011.2MB DRY 17.0C WET 16.4C CLOUDS 5/8 CC	10	15.52	33.415			24.637	329.6

LINE	STA		Z	T	S	O2	O2 PCT	SIG TH	SVA
83	80	08/07/81 2105GMT 32 54.7N 122 07.7W WEATH 1 BOTTOM 4187M WIND 360 11 KT WAVES 340 06 06 BAR 1016.3MB DRY 17.9C WET 15.9C CLOUDS 7/8 ST	10	17.25	33.403			24.231	368.4
83	90	09/07/81 0336GMT 32 34.7N 122 48.7W WEATH 2 BOTTOM 4398M WIND 340 14 KT WAVES 340 04 03 BAR 1016.3MB DRY 16.1C WET 14.9C CLOUDS 8/8 ST	10	17.11	33.379			24.246	367.0
87	33	11/07/81 0143GMT 33 53.4N 118 29.4W WEATH 2 BOTTOM 55M WIND 270 08 KT WAVES BAR 1012.5MB DRY 19.9C WET 18.5C CLOUDS 8/8 ST	10	16.74	33.594			24.498	342.9
87	35	11/07/81 0122GMT 33 49.4N 118 37.7W WEATH 1 BOTTOM 574M WIND 280 07 KT WAVES 280 01 01 BAR 1012.5MB DRY 21.0C WET 18.9C CLOUDS 1/8 ST	10	19.44	33.672			23.896	400.4
87	40	10/07/81 2045GMT 33 39.4N 118 58.5W WEATH 1 BOTTOM 824M WIND 250 02 KT WAVES 280 02 03 BAR 1014.2MB DRY 20.3C WET 18.0C CLOUDS 2/8 ST	10	18.52	33.693			24.145	376.6
87	45	10/07/81 1701GMT 33 29.4N 119 19.1W WEATH 1 BOTTOM 1700M WIND 240 10 KT WAVES 250 04 08 BAR 1014.2MB DRY 18.8C WET 17.8C CLOUDS 7/8 ST	10	19.29	33.695			23.952	395.0
87	50	10/07/81 1234GMT 33 19.4N 119 39.8W WEATH BOTTOM 73M WIND 310 15 KT WAVES BAR 1013.9MB DRY 16.8C WET 15.7C CLOUDS	10	16.54	33.722			24.642	329.2
87	55	10/07/81 0849GMT 33 09.4N 120 00.4W WEATH BOTTOM 1202M WIND 310 19 KT WAVES BAR 1014.9MB DRY 16.5C WET 15.4C CLOUDS	10	18.32	33.736			24.227	368.8
87	60	10/07/81 0452GMT 32 59.4N 120 21.0W WEATH BOTTOM 759M WIND 320 14 KT WAVES BAR 1015.2MB DRY 16.4C WET 15.4C CLOUDS	10	15.82	33.633			24.738	320.0
87	70	09/07/81 2226GMT 32 39.4N 121 02.0W WEATH 2 BOTTOM 3918M WIND 300 06 KT WAVES 330 03 03 BAR 1013.9MB DRY 17.0C WET 16.2C CLOUDS 8/8 ST	10	16.28	33.468			24.507	342.0
87	80	09/07/81 1548GMT 32 19.4N 121 42.9W WEATH 2 BOTTOM 4302M WIND 340 11 KT WAVES 320 03 06 BAR 1014.2MB DRY 15.6C WET 14.5C CLOUDS 8/8 SC	10	16.45	33.531			24.516	341.2
87	90	09/07/81 0930GMT 31 59.4N 122 23.6W WEATH BOTTOM 4014M WIND 360 10 KT WAVES BAR 1016.5MB DRY 16.2C WET 14.8C CLOUDS	10	17.12	33.578			24.396	352.6
90	28	11/07/81 0929GMT 33 29.1N 117 46.1W WEATH BOTTOM 55M WIND 00 WAVES BAR 1013.5MB DRY 20.5C WET 19.8C CLOUDS	10	18.27	33.583			24.122	378.7
90	30	11/07/81 1131GMT 33 25.1N 117 54.3W WEATH BOTTOM 620M WIND 080 07 KT WAVES BAR 1012.9MB DRY 20.7C WET 18.9C CLOUDS	10	20.64	33.677			23.586	430.0
90	37	11/07/81 1554GMT 33 11.1N 118 23.2W WEATH 2 BOTTOM 1202M WIND 230 06 KT WAVES 280 02 04 BAR 1014.6MB DRY 18.7C WET 17.2C CLOUDS 8/8 SC	10	18.97	33.645			23.995	390.9
90	45	11/07/81 2058GMT 32 55.1N 118 56.1W WEATH 2 BOTTOM 1812M WIND 290 11 KT WAVES 300 04 03 BAR 1014.6MB DRY 19.8C WET 17.9C CLOUDS 8/8 ST	10	19.31	33.688			23.942	396.0
90	53	12/07/81 0229GMT 32 39.1N 119 28.9W WEATH 0 BOTTOM 1387M WIND 310 25 KT WAVES 300 04 03 BAR 1012.5MB DRY 17.7C WET 16.2C CLOUDS 0/8	10	18.76	33.749			24.127	378.3
90	60	12/07/81 0703GMT 32 25.1N 119 57.6W WEATH BOTTOM 925M WIND 310 22 KT WAVES BAR 1013.9MB DRY 16.2C WET 15.1C CLOUDS	10	18.19	33.751			24.271	364.6
90	70	12/07/81 1307GMT 32 05.1N 120 38.3W WEATH 1 BOTTOM 4110M WIND 320 24 KT WAVES 330 06 06 BAR 1015.2MB DRY 15.5C WET 14.5C CLOUDS 6/8 CU	10	17.04	33.537			24.384	353.8
90	80	12/07/81 2000GMT 31 45.1N 121 18.9W WEATH 1 BOTTOM 3730M WIND 330 23 KT WAVES 330 07 05 BAR 1016.5MB DRY 16.5C WET 14.9C CLOUDS 2/8 CU	10	18.84	33.573			23.973	393.0
90	90	13/07/81 0258GMT 31 25.1N 121 59.4W WEATH 1 BOTTOM 4014M WIND 330 21 KT WAVES 340 08 05 BAR 1016.3MB DRY 16.8C WET 15.0C CLOUDS 4/8 SC	10	17.30	33.504			24.297	362.1
93	26.7	15/07/81 1113GMT 32 57.4N 117 18.3W WEATH BOTTOM 64M WIND 120 05 KT WAVES BAR 1011.5MB DRY 21.8C WET 19.7C CLOUDS	10	16.75	33.574			24.480	344.6
93	28	15/07/81 0914GMT 32 54.8N 117 23.7W WEATH BOTTOM 594M WIND 290 03 KT WAVES BAR 1011.9MB DRY 21.9C WET 20.8C CLOUDS	10	18.10	33.593			24.172	374.0
93	30	15/07/81 0637GMT 32 50.8N 117 31.9W WEATH BOTTOM 832M WIND 280 03 KT WAVES BAR 1011.5MB DRY 22.6C WET 20.8C CLOUDS	10	18.66	33.620			24.054	385.3
93	35	15/07/81 0254GMT 32 40.8N 117 52.4W WEATH 1 BOTTOM 611M WIND 260 09 KT WAVES 270 03 03 BAR 1011.5MB DRY 21.5C WET 20.0C CLOUDS 3/8 AC	10	20.24	33.692			23.703	418.8
93	40	14/07/81 2240GMT 32 30.8N 118 12.8W WEATH 1 BOTTOM 1664M WIND 300 12 KT WAVES 300 02 03 BAR 1012.2MB DRY 20.9C WET 19.3C CLOUDS 4/8 AC	10	17.62	33.678			24.354	356.7

RV DAVID STARR JORDAN — CALCOFI CRUISE 8107

LINE	STA		Z	T	S	10 METER DATA O2	O2 PCT	SIG TH	SVA
93	45	14/07/81 1739GMT 32 20.8N 118 33.3W WEATH 1 BOTTOM 1387M WIND 310 14 KT WAVES 290 03 05 BAR 1013.2MB DRY 19.9C WET 18.5C CLOUDS 6/8 CU	10	20.30	33.719			23.708	418.3
93	50	14/07/81 1308GMT 32 10.8N 118 53.6W WEATH 1 BOTTOM 1525M WIND 310 13 KT WAVES 290 03 06 BAR 1012.9MB DRY 17.4C WET 16.7C CLOUDS 4/8 SC	10	18.64	33.730			24.143	376.8
93	55	14/07/81 0839GMT 32 00.8N 119 14.0W WEATH BOTTOM 1627M WIND 310 14 KT WAVES BAR 1014.2MB DRY 16.8C WET 15.9C CLOUDS	10	18.12	33.739			24.279	363.8
93	60	14/07/81 0439GMT 31 50.8N 119 34.3W WEATH BOTTOM 2222M WIND 320 15 KT WAVES BAR 1014.2MB DRY 16.2C WET 15.3C CLOUDS	10	17.52	33.725			24.414	351.0
93	70	13/07/81 2130GMT 31 30.8N 120 14.8W WEATH 2 BOTTOM 3730M WIND 320 17 KT WAVES 330 04 04 BAR 1016.5MB DRY 17.1C WET 15.6C CLOUDS 8/8 ST	10	17.64	33.696			24.363	355.8
93	80	13/07/81 1444GMT 31 10.8N 120 55.2W WEATH 1 BOTTOM 3918M WIND 340 23 KT WAVES 330 07 05 BAR 1015.9MB DRY 16.5C WET 15.3C CLOUDS 5/8 SC	10	17.89	33.576			24.210	370.4
93	90	13/07/81 0845GMT 30 50.8N 121 35.4W WEATH BOTTOM 4198M WIND 350 22 KT WAVES BAR 1016.9MB DRY 16.8C WET 14.9C CLOUDS	10	18.49	33.577			24.063	384.4

RV NEW HORIZON — CALCOFI CRUISE 8107

LINE	STA		Z	T	S	10 METER DATA O2	O2 PCT	SIG TH	SVA
97	29	23/07/81 1913GMT 32 17.3N 117 04.8W WEATH 0 BOTTOM 52M WIND 310 08 KT WAVES 300 03 06 BAR 1013.5MB DRY 20.1C WET 18.2C CLOUDS 0/8	10	15.24	33.562			24.812	313.0
97	30	23/07/81 2348GMT 32 15.3N 117 09.0W WEATH 0 BOTTOM 63M WIND 300 07 KT WAVES 300 03 06 BAR 1013.9MB DRY 21.0C WET 19.0C CLOUDS 0/8	10	14.29	33.558			25.013	293.8
97	32	24/07/81 0218GMT 32 11.0N 117 17.6W WEATH 0 BOTTOM 1784M WIND 290 08 KT WAVES 300 02 06 BAR 1012.5MB DRY 20.0C WET 18.5C CLOUDS 0/8	10	17.14	33.594			24.404	351.9
97	35	24/07/81 0458GMT 32 05.1N 117 29.3W WEATH 4 BOTTOM 1095M WIND 290 08 KT WAVES BAR 1013.2MB DRY 20.1C WET 18.4C CLOUDS	10	20.73	33.717			23.592	429.4
97	40	24/07/81 0840GMT 31 55.0N 117 49.0W WEATH BOTTOM 1129M WIND 290 13 KT WAVES BAR 1013.5MB DRY 18.3C WET 17.0C CLOUDS	10	19.96	33.692			23.777	411.7
97	45	24/07/81 1204GMT 31 45.0N 118 10.0W WEATH BOTTOM 1535M WIND 340 17 KT WAVES BAR 1013.5MB DRY 17.5C WET 16.2C CLOUDS	10	19.78	33.709			23.836	406.0
97	50	24/07/81 1523GMT 31 35.7N 118 30.4W WEATH 2 BOTTOM 2749M WIND 330 14 KT WAVES 310 03 06 BAR 1014.9MB DRY 17.6C WET 16.1C CLOUDS 8/8 ST	10	18.63	33.751			24.161	375.0
97	55	24/07/81 1926GMT 31 26.1N 118 50.0W WEATH 2 BOTTOM 1169M WIND 310 17 KT WAVES 290 04 06 BAR 1015.6MB DRY 17.9C WET 16.2C CLOUDS 8/8 ST	10	19.04	33.745			24.054	385.3
97	60	24/07/81 2346GMT 31 14.7N 119 10.8W WEATH 2 BOTTOM 3719M WIND 310 19 KT WAVES 300 06 08 BAR 1014.2MB DRY 17.8C WET 15.8C CLOUDS 8/8 ST	10	18.42	33.762			24.222	369.2
97	70	25/07/81 0543GMT 30 55.1N 119 49.9W WEATH BOTTOM 3561M WIND 300 15 KT WAVES BAR 1014.2MB DRY 16.2C WET 14.8C CLOUDS	10	18.93	33.770			24.101	380.8
97	80	25/07/81 1128GMT 30 35.7N 120 30.3W WEATH BOTTOM 3870M WIND 350 18 KT WAVES BAR 1013.5MB DRY 16.3C WET 15.2C CLOUDS	10	19.07	33.731			24.035	387.0
97	90	25/07/81 1642GMT 30 15.9N 121 11.7W WEATH 2 BOTTOM 3832M WIND 330 13 KT WAVES 350 05 08 BAR 1014.9MB DRY 17.0C WET 15.2C CLOUDS 8/8 ST	10	18.84	33.715			24.081	382.7
100	29.2	28/07/81 0101GMT 31 42.4N 116 43.7W WEATH 1 BOTTOM 93M WIND 300 17 KT WAVES 300 03 04 BAR 1013.9MB DRY 19.8C WET 18.0C CLOUDS 1/8 ST	10	18.18	33.581			24.143	376.8
100	30	27/07/81 2223GMT 31 41.0N 116 46.5W WEATH 4 BOTTOM 390M WIND 300 15 KT WAVES 310 02 04 BAR 1015.2MB DRY 21.3C WET 18.5C CLOUDS 0/8	10	17.41	33.582			24.330	358.9
100	35	27/07/81 1758GMT 31 31.0N 117 07.5W WEATH 1 BOTTOM 1221M WIND 320 12 KT WAVES 310 02 08 BAR 1016.9MB DRY 20.3C WET 17.9C CLOUDS 7/8 ST	10	20.63	33.699			23.605	428.1
100	40	27/07/81 1304GMT 31 20.6N 117 27.6W WEATH BOTTOM 1905M WIND 300 15 KT WAVES BAR 1015.9MB DRY 17.8C WET 14.8C CLOUDS	10	20.65	33.759			23.645	424.3
100	45	27/07/81 0840GMT 31 10.8N 117 47.2W WEATH BOTTOM 1707M WIND 320 08 KT WAVES BAR 1015.2MB DRY 17.1C WET 15.1C CLOUDS	10	19.86	33.695			23.805	409.0

LINE	STA		10 METER DATA					
			Z	T	S	O2	O2 PCT	SIG TH	SVA
100	50	27/07/81 0231GMT 31 02.6N 118 07.6W WEATH 1 BOTTOM 1736M WIND 300 17 KT WAVES 320 03 03 BAR 1014.6MB DRY 17.4C WET 15.1C CLOUDS 7/8 ST	10	19.94	33.701			23.789	410.6
100	60	26/07/81 1936GMT 30 40.9N 118 47.1W WEATH 2 BOTTOM 2962M WIND 300 10 KT WAVES 310 03 04 BAR 1018.0MB DRY 17.4C WET 15.0C CLOUDS 8/8 ST	10	18.04	33.633			24.217	369.7
100	70	26/07/81 1309GMT 30 22.0N 119 28.2W WEATH BOTTOM 3780M WIND 330 12 KT WAVES BAR 1016.6MB DRY 16.1C WET 14.3C CLOUDS	10	18.41	33.644			24.135	377.6
100	80	26/07/81 0553GMT 30 01.5N 120 07.0W WEATH BOTTOM 3832M WIND 350 15 KT WAVES BAR 1015.9MB DRY 16.9C WET 15.3C CLOUDS	10	19.90	33.785			23.863	403.5
100	90	25/07/81 2248GMT 29 43.8N 120 51.5W WEATH 2 BOTTOM 3879M WIND 330 11 KT WAVES 350 05 08 BAR 1012.9MB DRY 18.1C WET 16.8C CLOUDS 8/8 ST	10	18.99	33.716			24.044	386.2
103	29	28/07/81 0712GMT 31 09.0N 116 20.8W WEATH BOTTOM 28M WIND 310 11 KT WAVES BAR 1016.3MB DRY 18.7C WET 17.5C CLOUDS	10	17.67	33.562			24.253	366.3
103	30	28/07/81 0950GMT 31 07.2N 116 24.3W WEATH BOTTOM 60M WIND 300 11 KT WAVES BAR 1015.6MB DRY 19.0C WET 17.8C CLOUDS	10	15.41	33.556			24.770	317.0
103	35	28/07/81 1254GMT 30 56.7N 116 45.3W WEATH 2 BOTTOM 1479M WIND 300 15 KT WAVES 300 03 06 BAR 1014.9MB DRY 19.7C WET 17.3C CLOUDS 8/8 ST	10	21.22	33.737			23.475	440.5
103	40	28/07/81 1604GMT 30 47.2N 117 05.4W WEATH 2 BOTTOM 1800M WIND 290 13 KT WAVES 310 04 06 BAR 1015.9MB DRY 19.4C WET 16.0C CLOUDS 8/8 ST	10	21.07	33.740			23.518	436.4
103	45	28/07/81 1917GMT 30 37.1N 117 24.8W WEATH 1 BOTTOM 1879M WIND 360 14 KT WAVES 310 04 06 BAR 1017.6MB DRY 19.9C WET 16.9C CLOUDS 6/8 ST	10	21.21	33.794			23.521	436.2
103	50	28/07/81 2302GMT 30 27.0N 117 44.0W WEATH 1 BOTTOM 2800M WIND 290 15 KT WAVES 310 04 06 BAR 1015.6MB DRY 18.8C WET 16.2C CLOUDS 4/8 AS	10	20.92	33.745			23.562	432.2
103	60	29/07/81 0508GMT 30 06.0N 118 24.1W WEATH BOTTOM 3410M WIND 310 11 KT WAVES BAR 1016.3MB DRY 17.7C WET 15.3C CLOUDS	10	20.52	33.802			23.713	417.8
103	70	29/07/81 1041GMT 29 46.0N 119 03.5W WEATH BOTTOM 3512M WIND 330 15 KT WAVES BAR 1014.9MB DRY 17.5C WET 15.6C CLOUDS	10	19.75	33.760			23.883	401.6
103	80	29/07/81 1553GMT 29 26.5N 119 44.5W WEATH 2 BOTTOM 3757M WIND 290 11 KT WAVES 310 02 06 BAR 1016.6MB DRY 18.3C WET 15.9C CLOUDS 8/8 ST	10	19.90	33.772			23.853	404.4
107	31	31/07/81 0203GMT 30 29.5N 116 06.0W WEATH 1 BOTTOM 19M WIND 280 10 KT WAVES 240 02 06 BAR 1014.6MB DRY 19.0C WET 17.3C CLOUDS 2/8 CU	10	18.44	33.581			24.079	382.9
107	32	31/07/81 0349GMT 30 27.5N 116 10.0W WEATH BOTTOM 177M WIND 280 10 KT WAVES BAR 1011.9MB DRY 18.7C WET 17.1C CLOUDS	10	18.60	33.590			24.046	386.0
107	35	31/07/81 0635GMT 30 21.5N 116 21.5W WEATH BOTTOM 1350M WIND 300 10 KT WAVES BAR 1016.3MB DRY 18.9C WET 16.9C CLOUDS	10	19.48	33.642			23.863	403.5
107	40	30/07/81 2056GMT 30 12.0N 116 42.0W WEATH 1 BOTTOM 2554M WIND 300 13 KT WAVES 330 03 06 BAR 1016.6MB DRY 20.3C WET 17.0C CLOUDS 6/8 ST	10	21.80	33.797			23.362	451.4
107	45	30/07/81 1743GMT 30 01.5N 117 02.1W WEATH 2 BOTTOM 1373M WIND 310 11 KT WAVES 320 03 06 BAR 1016.6MB DRY 18.8C WET 16.3C CLOUDS 8/8 ST	10	21.65	33.794			23.401	447.7
107	50	30/07/81 1420GMT 29 51.3N 117 21.9W WEATH 2 BOTTOM 2462M WIND 340 17 KT WAVES 320 03 05 BAR 1015.6MB DRY 18.0C WET 15.9C CLOUDS 8/8 ST	10	21.46	33.793			23.452	442.7
107	60	30/07/81 0851GMT 29 31.4N 118 01.8W WEATH BOTTOM 3613M WIND 300 13 KT WAVES BAR 1015.9MB DRY 17.8C WET 15.3C CLOUDS	10	20.43	33.762			23.706	418.5
107	70	30/07/81 0301GMT 29 12.0N 118 41.0W WEATH 2 BOTTOM 3179M WIND 300 12 KT WAVES 310 03 05 BAR 1015.6MB DRY 18.5C WET 15.9C CLOUDS 8/8 ST	10	20.81	33.797			23.631	425.6
107	80	29/07/81 2104GMT 28 51.7N 119 21.3W WEATH 2 BOTTOM 3594M WIND 300 12 KT WAVES 310 03 06 BAR 1016.6MB DRY 20.4C WET 16.9C CLOUDS 8/8 ST	10	20.91	33.841			23.638	425.0
110	33	31/07/81 1212GMT 29 50.2N 115 50.1W WEATH BOTTOM 56M WIND 330 13 KT WAVES BAR 1015.6MB DRY 17.6C WET 16.3C CLOUDS	10	14.21	33.593			25.057	289.7
110	35	31/07/81 1457GMT 29 46.8N 116 00.0W WEATH 2 BOTTOM 1101M WIND 340 15 KT WAVES 330 02 06 BAR 1016.6MB DRY 18.7C WET 15.8C CLOUDS 8/8 ST	10	18.34	33.573			24.097	381.1
110	40	31/07/81 1823GMT 29 36.4N 116 19.5W WEATH 1 BOTTOM 2490M WIND 320 13 KT WAVES 330 03 06 BAR 1016.9MB DRY 20.1C WET 17.9C CLOUDS 6/8 CU	10	21.00	33.749			23.544	434.0

LINE	STA		10 METER DATA Z	T	S	O2	O2 PCT	SIG TH	SVA
110	45	31/07/81 2238GMT 29 27.1N 116 38.4W WEATH 1 BOTTOM 530M WIND 310 14 KT WAVES 320 03 05 BAR 1015.9MB DRY 19.8C WET 17.2C CLOUDS 6/8 CU	10	21.42	33.780			23.453	442.6
110	50	01/08/81 0303GMT 29 18.0N 116 59.7W WEATH 1 BOTTOM 2819M WIND 310 14 KT WAVES 320 03 04 BAR DRY 19.0C WET 16.8C CLOUDS 7/8 ST	10	21.48	33.795			23.448	443.1
110	60	01/08/81 0925GMT 28 56.7N 117 38.4W WEATH BOTTOM 3594M WIND 330 14 KT WAVES BAR 1017.3MB DRY 18.5C WET 16.7C CLOUDS	10	21.01	33.796			23.577	430.8
110	70	01/08/81 1513GMT 28 36.9N 118 18.3W WEATH 2 BOTTOM 3559M WIND 350 13 KT WAVES 330 05 06 BAR 1018.0MB DRY 18.5C WET 16.4C CLOUDS 8/8 ST	10	21.05	33.814			23.580	430.6
110	80	01/08/81 2158GMT 28 16.7N 118 57.0W WEATH 2 BOTTOM 3879M WIND 340 15 KT WAVES 330 05 06 BAR 1016.9MB DRY 19.0C WET 16.9C CLOUDS 8/8 ST	10	20.09	33.718			23.762	413.1
113	29	03/08/81 1410GMT 29 25.3N 115 14.0W WEATH 2 BOTTOM 30M WIND 100 05 KT WAVES 290 02 05 BAR 1011.5MB DRY 18.1C WET 17.3C CLOUDS 8/8 ST	10	15.79	33.584			24.707	323.0
113	30	03/08/81 1121GMT 29 23.0N 115 18.0W WEATH BOTTOM 56M WIND 310 17 KT WAVES BAR 1011.2MB DRY 17.9C WET 16.2C CLOUDS	10	16.24	33.589			24.609	332.3
113	35	03/08/81 0704GMT 29 13.5N 115 36.5W WEATH BOTTOM 1165M WIND 310 21 KT WAVES BAR 1012.9MB DRY 18.9C WET 17.9C CLOUDS	10	18.69	33.619			24.046	386.1
113	40	03/08/81 0400GMT 29 04.2N 115 56.6W WEATH BOTTOM 3419M WIND 310 22 KT WAVES BAR 1012.9MB DRY 20.4C WET 18.5C CLOUDS	10	21.62	33.785			23.402	447.5
113	45	03/08/81 0015GMT 28 54.0N 116 16.5W WEATH 1 BOTTOM 3376M WIND 310 18 KT WAVES 330 05 06 BAR 1015.2MB DRY 21.9C WET 19.4C CLOUDS 5/8 ST	10	22.57	33.894			23.220	464.9
113	50	02/08/81 2037GMT 28 42.3N 116 36.7W WEATH 1 BOTTOM 3559M WIND 310 17 KT WAVES 330 04 05 BAR 1015.6MB DRY 22.1C WET 19.3C CLOUDS 6/8 ST	10	22.56	33.848			23.188	468.0
113	60	02/08/81 1456GMT 28 22.2N 117 16.5W WEATH 1 BOTTOM 3636M WIND 340 14 KT WAVES 330 03 06 BAR 1015.9MB DRY 19.7C WET 17.8C CLOUDS 7/8 ST	10	21.21	33.799			23.525	435.8
113	70	02/08/81 0935GMT 28 02.7N 117 55.4W WEATH BOTTOM 3113M WIND 330 14 KT WAVES BAR 1016.6MB DRY 19.5C WET 17.4C CLOUDS	10	21.25	33.812			23.524	435.9
113	80	02/08/81 0339GMT 27 43.4N 118 34.3W WEATH BOTTOM 3813M WIND 330 15 KT WAVES BAR 1016.9MB DRY 19.4C WET 17.2C CLOUDS	10	20.64	33.756			23.646	424.2
117	25	03/08/81 1947GMT 28 57.2N 114 35.7W WEATH 1 BOTTOM 48M WIND 270 16 KT WAVES 260 03 05 BAR 1012.5MB DRY 19.6C WET 18.5C CLOUDS 6/8 SC	10	17.50	33.642			24.355	356.6
117	30	03/08/81 2355GMT 28 47.5N 114 56.2W WEATH 1 BOTTOM 101M WIND 280 17 KT WAVES 290 04 05 BAR 1011.2MB DRY 20.0C WET 18.3C CLOUDS 5/8 AS	10	19.20	33.646			23.938	396.4
117	35	04/08/81 2211GMT 28 37.6N 115 15.6W WEATH 1 BOTTOM 192M WIND 280 15 KT WAVES 310 03 06 BAR 1012.9MB DRY 21.0C WET 18.5C CLOUDS 7/8 ST	10	21.03	33.729			23.521	436.2
117	40	05/08/81 0456GMT 28 27.1N 115 35.7W WEATH BOTTOM 1392M WIND 320 12 KT WAVES BAR 1013.9MB DRY 20.4C WET 18.5C CLOUDS	10	20.50	33.702			23.642	424.6
117	45	05/08/81 0833GMT 28 17.7N 115 54.9W WEATH BOTTOM 3377M WIND 290 10 KT WAVES BAR 1013.9MB DRY 20.0C WET 18.0C CLOUDS	10	21.06	33.748			23.527	435.6
117	50	05/08/81 1144GMT 28 07.6N 116 14.0W WEATH BOTTOM 4107M WIND 300 14 KT WAVES BAR 1013.5MB DRY 20.0C WET 17.9C CLOUDS	10	21.25	33.735			23.465	441.5
117	60	05/08/81 1638GMT 27 48.3N 116 54.5W WEATH 2 BOTTOM 3604M WIND 320 11 KT WAVES 320 02 06 BAR 1015.9MB DRY 20.1C WET 17.9C CLOUDS 8/8 ST	10	21.21	33.761			23.496	438.5
117	70	05/08/81 2150GMT 27 27.9N 117 32.1W WEATH 2 BOTTOM 3642M WIND 290 08 KT WAVES 270 03 06 BAR 1015.2MB DRY 21.1C WET 19.2C CLOUDS 8/8 ST	10	21.00	33.776			23.564	432.0
117	80	06/08/81 0312GMT 27 07.9N 118 10.7W WEATH BOTTOM 3983M WIND 320 12 KT WAVES BAR 1015.9MB DRY 19.9C WET 17.4C CLOUDS	10	21.10	33.790			23.548	433.6
118	39	05/08/81 0146GMT 28 16.0N 115 22.4W WEATH 2 BOTTOM 172M WIND 310 11 KT WAVES 310 03 05 BAR 1012.5MB DRY 20.7C WET 18.7C CLOUDS 8/8 ST	10	22.26	33.747			23.196	467.3
119	33	04/08/81 1759GMT 28 17.8N 114 51.8W WEATH 1 BOTTOM 104M WIND 320 17 KT WAVES 310 02 06 BAR 1013.5MB DRY 20.6C WET 18.8C CLOUDS 6/8 ST	10	20.81	33.696			23.555	432.9
120	24	04/08/81 0556GMT 28 25.0N 114 11.2W WEATH BOTTOM 34M WIND 300 22 KT WAVES BAR 1011.8MB DRY 20.0C WET 18.6C CLOUDS	10	22.68	33.840			23.147	471.8

LINE	STA		Z	T	S	O2	O2 PCT	SIG TH	SVA
120	25	04/08/81 0802GMT 28 23.2N 114 15.0W WEATH BOTTOM 60M WIND 300 17 KT WAVES BAR 1011.2MB DRY 19.6C WET 18.3C CLOUDS	10	22.24	33.825			23.260	461.1
120	30	04/08/81 1128GMT 28 12.8N 114 35.7W WEATH BOTTOM 97M WIND 320 13 KT WAVES BAR 1010.8MB DRY 19.5C WET 18.0C CLOUDS	10	21.90	33.786			23.326	454.8
120	35	04/08/81 1506GMT 28 03.3N 114 53.5W WEATH 2 BOTTOM 82M WIND 330 19 KT WAVES 340 03 06 BAR 1011.2MB DRY 20.3C WET 18.6C CLOUDS 8/8 ST	10	21.07	33.699			23.487	439.4
120	38.5	07/08/81 1242GMT 27 56.0N 115 07.0W WEATH BOTTOM 43M WIND 240 04 KT WAVES BAR 1012.9MB DRY 21.8C WET 19.8C CLOUDS	10	22.22	33.775			23.228	464.2
120	45	07/08/81 0828GMT 27 44.0N 115 32.3W WEATH BOTTOM 2117M WIND 320 12 KT WAVES BAR 1014.6MB DRY 21.3C WET 19.6C CLOUDS	10	22.81	33.946			23.191	467.7
120	50	07/08/81 0332GMT 27 33.7N 115 51.8W WEATH BOTTOM 3795M WIND 320 18 KT WAVES BAR 1015.2MB DRY 21.1C WET 19.1C CLOUDS	10	21.89	33.833			23.364	451.1
120	60	06/08/81 2131GMT 27 13.9N 116 30.7W WEATH 1 BOTTOM 3709M WIND 290 10 KT WAVES 330 02 08 BAR 1013.5MB DRY 21.6C WET 18.7C CLOUDS 7/8 ST	10	21.44	33.823			23.480	440.0
120	70	06/08/81 1515GMT 26 53.4N 117 10.3W WEATH 2 BOTTOM 3461M WIND 030 06 KT WAVES 340 03 08 BAR 1015.6MB DRY 20.1C WET 17.6C CLOUDS 8/8 ST	10	21.57	33.822			23.444	443.5
120	80	06/08/81 0935GMT 26 33.0N 117 48.8W WEATH BOTTOM 3757M WIND 320 13 KT WAVES BAR 1015.6MB DRY 19.8C WET 17.3C CLOUDS	10	21.18	33.823			23.551	433.3
123	36	07/08/81 1819GMT 27 26.8N 114 36.3W WEATH 1 BOTTOM 37M WIND 320 04 KT WAVES 210 01 04 BAR 1014.2MB DRY 20.9C WET 19.7C CLOUDS 1/8 AS	10	16.75	33.736			24.604	332.8
123	37	07/08/81 2000GMT 27 25.2N 114 40.4W WEATH 1 BOTTOM 63M WIND 310 08 KT WAVES 270 02 03 BAR 1013.2MB DRY 20.1C WET 19.0C CLOUDS 2/8 CU	10	15.26	33.701			24.915	303.2
123	42	07/08/81 2326GMT 27 14.5N 115 00.1W WEATH 1 BOTTOM 1841M WIND 310 21 KT WAVES 330 03 05 BAR 1011.5MB DRY 23.3C WET 21.2C CLOUDS 3/8 CU	10	22.99	33.873			23.084	477.9

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